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

MAY 2022

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Contract No. SPW 12/2021

Shek Wu Hui Effluent Polishing Plant – Main Work

Monthly Environmental Monitoring & Audit Report

May 2022

(June 2022)

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EXECUTIVE SUMMARY

i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – May 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 9th 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 May 2022 to 31 May 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
- Road works
- U channel formation
- 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
- Pre-bored H piles
- Demolition works
- Sheet piling

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 (Sidestream Treatment Facilities)
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
- SAT Procedure of Penstock and Stoplog
- Delivery and Installation of Temporary Container LV Switch Room for UV and Effluent Pumping Station
- HR and FH System Installation at Workshop No.2
- SPR System Installation at Workshop No.2
- MFA and AFA Installation at Workshop No.2
- Installation of CCTV at UV, EPS1 and Existing Control Room at SHWSTW
- Cabling and Installation of Metro Ethernet

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
- Installation works of Lightning Protection System for DOU3A

Air Quality Monitoring

iii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring was conducted at two monitoring station. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 day in the reporting month.

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

Noise Monitoring

v. Noise monitoring was conducted at one noise monitoring station once per week in the reporting month.

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

Ecological Monitoring

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

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

Site Inspections and Audit

ix. The Environmental Team (ET) conducted weekly site inspections on 3, 10 (DE/2018/03 & DE/2018/04), 17 (DC/2018/06 & DC/2018/07), 19 (DE/2018/03 & DE/2018/04), 24 and 31 May 2022 and biweekly landscape inspection on 10 and 24 May 2022. IEC attended the joint site inspection on 24 May 2022. No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

x. Due to adverse weather conditions on 12 May 2022, the weekly site inspection for DC/2018/06 and DC2018/07 was cancelled.

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
- Road 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
- Pre-bored H piles
- Demolition works
- Sheet piling

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 (Sidestream Treatment Facilities)
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
- SAT Procedure of Penstock and Stoplog
- Delivery and Installation of Temporary Container LV Switch Room for UV and Effluent Pumping Station
- HR and FH System Installation at Workshop No.2
- SPR System Installation at Workshop No.2
- MFA and AFA Installation at Workshop No.2
- Installation of CCTV at UV, EPS1 and Existing Control Room at SHWSTW
- Monorail Installation at SPS PS

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

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	Senior Resident Engineer	Mr. Eddie Lam	3907 1131
Kwan Lee - Chun Wo Joint Venture	Contractor (DC/2018/06)	Environmental Engineer	Ms. Ruby Hui	6218 6408
		Assistant Environmental Engineer	Mr. Eric Chan	6432 2581
	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)	Mr. W.K. Chiu	2859 5881
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 and key PME used for the works contracts are provided 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
- Road works
- U channel formation
- 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
- Pre-bored H piles
- Demolition works
- Sheet piling

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 (Sidestream Treatment Facilities)
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
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- Delivery and Installation of Temporary Container LV Switch Room for UV and Effluent Pumping Station
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- SPR System Installation at Workshop No.2
- MFA and AFA Installation at Workshop No.2
- Installation of CCTV at UV, EPS1 and Existing Control Room at SHWSTW
- Cabling and Installation of Metro Ethernet

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
- Installation works of Lightning Protection System for DOU3A

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	CHP, Footpath Construction near UV no.1
	Mobile crane	2	SDB, SD
	Tower Crane	2	Near Workshop No.2 & Gate 2
	Mobile generator	1	Near Workshop No.2
	Cherry picker	1	UV No.1
	Scissor lift platform	2	SDB
	Roller	1	UV1 Cable Draw Pit
DC/2018/07	Drilling rig	2	PST and Inlet
	Excavator	18	MFB, BR2, Inlet and SAS
	Generator	4	BR2 and MFB
	Air compressor	4	PST & Inlet
	Mobile Crane	2	PST & Inlet
	Drilling machine	1	MFB
DE/2018/03	Generator	4	UV No.1, Sidestream and Workshop No.2
	Excavator	4	Sidestream
	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
- Road 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
- Pre-bored H piles
- Demolition works
- Sheet piling

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 (Sidestream Treatment Facilities)
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
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- SPR System Installation at Workshop No.2
- MFA and AFA Installation at Workshop No.2
- Installation of CCTV at UV, EPS1 and Existing Control Room at SHWSTW
- Monorail Installation at SPS PS

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

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
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
Environmental Permit	FEP-02/474/2013	15 Feb 2018	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-RN0078-22	01 Mar 2022	28 Aug 2022	Valid
	GW-RN0231-22	01 Apr 2022	30 Sep 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
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210	23 Sep 2019	N/A	Valid
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Water Pollution Ordinance Licence	WT00035727-2020	01 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-RN0078-22	01 Mar 2022	28 Aug 2022	Valid
Admission Ticket for Special Waste	16757	07 Mar 2022	07 Sep 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
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
Environmental Permit	FEP-02/474/2013	15 Feb 2018	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-RN1008-21	28 Jan 2022	29 Jun 2022	Valid
	GW-RN0435-22	25 May 2022	24 Aug 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
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	460181	17/09/2020	N/A	Valid
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Billing Account for Disposal of Construction Waste	703621912	02 Jan 2020	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-B2592-01	07 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	LxT1	006345
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	Site boundary of the Shek Wu Hui STW (East), ground level of the control room of SWHSTW	24-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

- 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.

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 m3 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 831	B17942 B17940
High Volume Sampler	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler TE-5025A	HVS001 (Serial number: 0401-1105) HVS003 (Serial number: 1096-2305)
Wind Anemometer	YiGu	YGY-FSXY1

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

4.3.8. 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.

4.3.9. The monitoring should be conducted by the ET and supervised by a qualified ecologist who will be a member of the ET.

MONITORING LOCATIONS

4.3.10. 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

4.3.11. 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

4.3.12. 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.

4.3.13. 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.

4.3.14. 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).

4.3.15. 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

4.3.16. 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	普通鸬鹚
Ardea alba	Great Egret	大白鷺
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺

4.3.17. 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.

4.3.18. 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 environment 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 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***..

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

5.3.5 Nesting and breeding behaviours were observed during the monitoring in reporting month. There was at least one nest (Asian Koel). Although the location of the nest is near from the project site but there was no significant impact observed on the nest in the month reported.

5.3.6 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	0	0
Reused in this Contract (Inert) (in '000m^3)	0	0	0
Reused in other Projects (Inert) (in '000m^3)	0	0	0
Disposal as Public Fill (Inert) (in '000m^3)	1.624	0.354	4.028
Metals (in '000kg)	0	0	2.370
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0	0	0
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m^3)	0.088	0.090	0.542

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	0	0

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Reused in this Contract (Inert) (in '000m^3)	0	0	0
Reused in other Projects (Inert) (in '000m^3)	0.0112	0	1.637
Disposal as Public Fill (Inert) (in '000m^3)	1.925	1.076	12.905
Metals (in '000kg)	0	0	21.16
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0	0	0.004
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m^3)	0.016	0.016	0.073

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	0	0
Reused in this Contract (Inert) (in '000kg)	0	0	0
Reused in other Projects (Inert) (in '000kg)	0	0	0
Disposal as Public Fill (Inert) (in '000kg)	0	4029.56	4289.85
Metals (in '000kg)	0	0	0

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Paper / Cardboard Packing (in '000kg)	0.13	0	0.439
Plastics (in '000kg)	0.012	0	0.023
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	0	1.64	7.4

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	0	0
Reused in this Contract (Inert) (in '000kg)	0	0	0
Reused in other Projects (Inert) (in '000m^3)	0	0	0
Disposal as Public Fill (Inert) (in '000m^3)	0	0	0
Metals (in '000kg)	0	0	0
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0	0	0
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	0	0	0

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 3, 10 (DE/2018/03 & DE/2018/04), 17 (DC/2018/06 & DC/2018/07), 19 (DE/2018/03 & DE/2018/04), 24 and 31 May 2022 and biweekly landscape inspection on 10 and 24 May 2022. IEC attended the joint site inspection on 24 May 2022.

7.0.2. Due to adverse weather conditions on 12 May 2022, the weekly site inspection for DC/2018/06 and DC/2018/07 was cancelled.

7.0.3. 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
20220517_1	17 May 2022	The Contractor was reminded to properly store the chemical containers at Portion C.	As observed on 24 May 2022, the chemical containers were stored in a proper place.	Rectified
20220524_1	24 May 2022	The Contractor was requested to display valid NRMM label for the excavator at Portion C.	As observed on 31 May 2022, a valid NRMM label was provided.	Rectified
20220524_2	24 May 2022	The Contractor was requested to clean up the drip tray that was clogged with chemicals at Portion C.	As observed on 31 May 2022, the drip tray was properly maintained.	Rectified
20220524_3	24 May 2022	The Contractor was reminded to maintain the proper function of the sedimentation tank near SDB.	As observed on 9 Jun 2022, site surface runoff was properly treated.	Rectified

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20220503_2	3 May 2022	The Contractor was requested to display NRMM label for the excavator at PST.	As observed on 17 May 2022, a valid NRMM label was provided.	Rectified

20220517_2	17 May 2022	The Contractor was requested to replace the faded colour NRMM label for the operating excavator.	Pending	Pending
20220524_4	24 May 2022	The Contractor was requested to replace the faded colour NRMM label for the generator at MFB.	Pending	Pending

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20220503_3	3 May 2022	The Contractor was reminded to properly store the chemical containers at Sidestream.	As observed on 10 May 2022, the chemical containers were stored in a proper place.	Rectified

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

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

7.0.4. Further to the joint site inspection on 27 April 2022, the Temporary Drainage Management Plans for the three contracts (Contract Nos. DC/2018/06, DC/2018/07 and DE/2018/03) were available in ***Appendix 7.1***.

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
May 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 3 Months

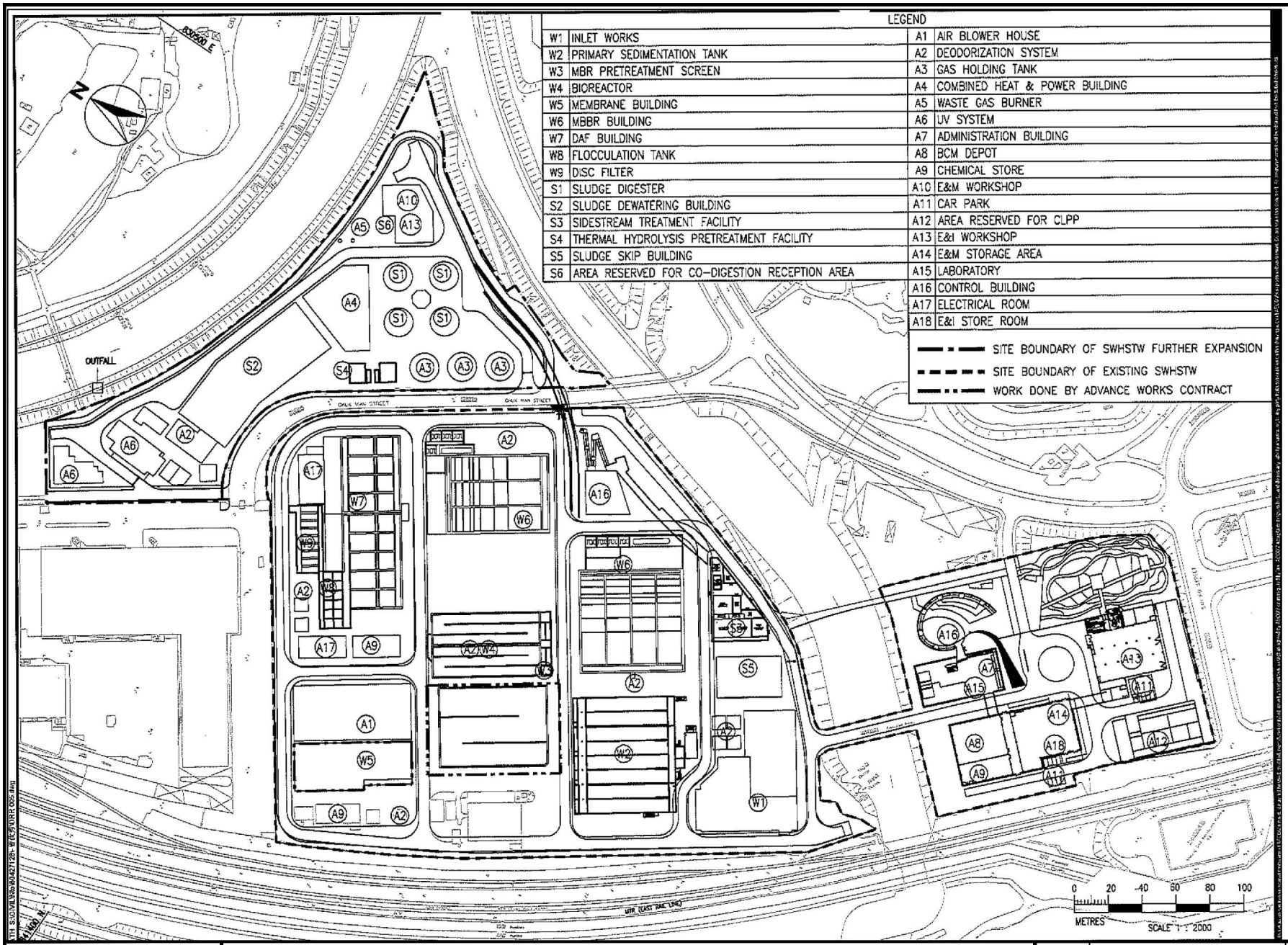
Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	• RC works • Road works • Backfilling • ABWF works	• Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • 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

Contract No.	Key Construction Works	Recommended Mitigation Measures
		application of ULSD as fuel for diesel-powered machinery.
DC/2018/07	• ELS works • Pre-bored H piles • Demolition works • Sheet piling	• 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, especially screening noise during piling related activities • 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 (Sidestream Treatment Facilities) • Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS • SAT Procedure of Penstock and Stoplog • Delivery and Installation of	• Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Good site practices should be adopted to

Contract No.	Key Construction Works	Recommended Mitigation Measures
	Temporary Container LV Switch Room for UV and Effluent Pumping Station • HR and FH System Installation at Workshop No.2 • SPR System Installation at Workshop No.2 • MFA and AFA Installation at Workshop No.2 • Installation of CCTV at UV, EPS1 and Existing Control Room at SHWSTW • Monorail Installation at SPS PS	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/2018/04	• Improvement Works for Temporary Primary Sludge Thickener and its accessories • E&M Installation works at Portion B-7, including DOU No.3A, Emergency Generator	• 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

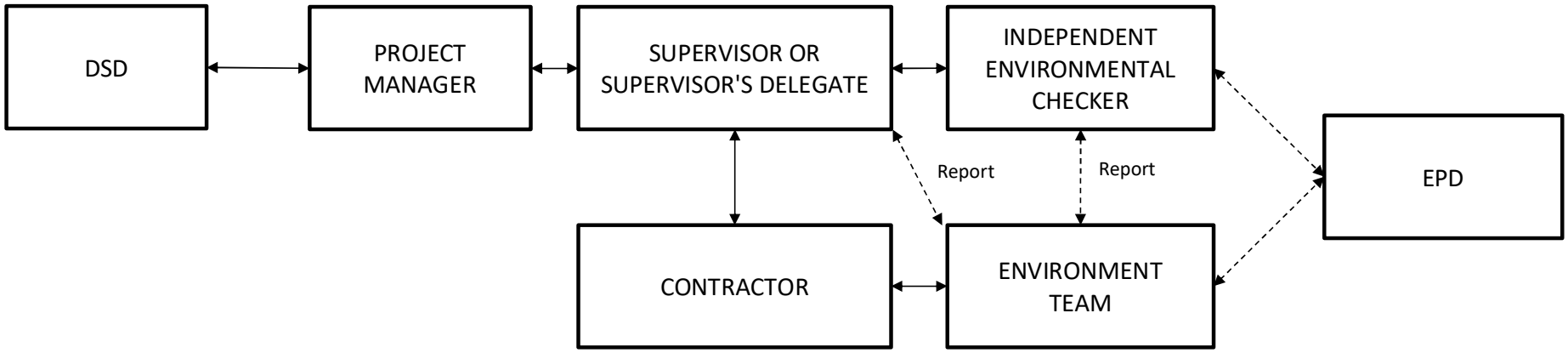
Project Layout



Shek Wu Hui E□luent Polishing Plant	SCALE	As Shown	DATE SEP 2019
	CHECK	JM	DRAWN SY
General Site Layout O□SWHEPP	JOB No.		FIGURE NO. 1.1 RE□ -

Figure 2.2

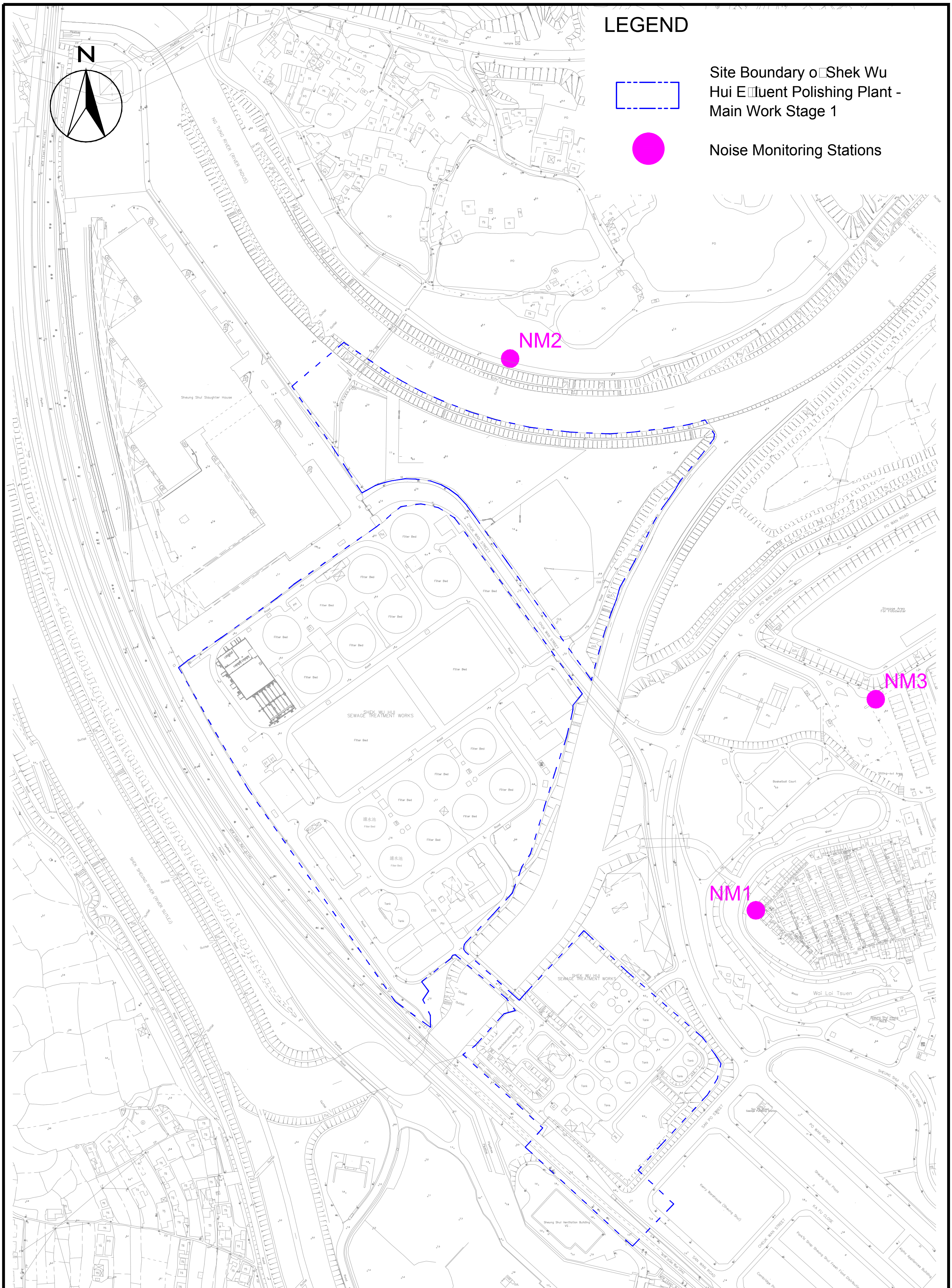
Project Organization Chart



	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

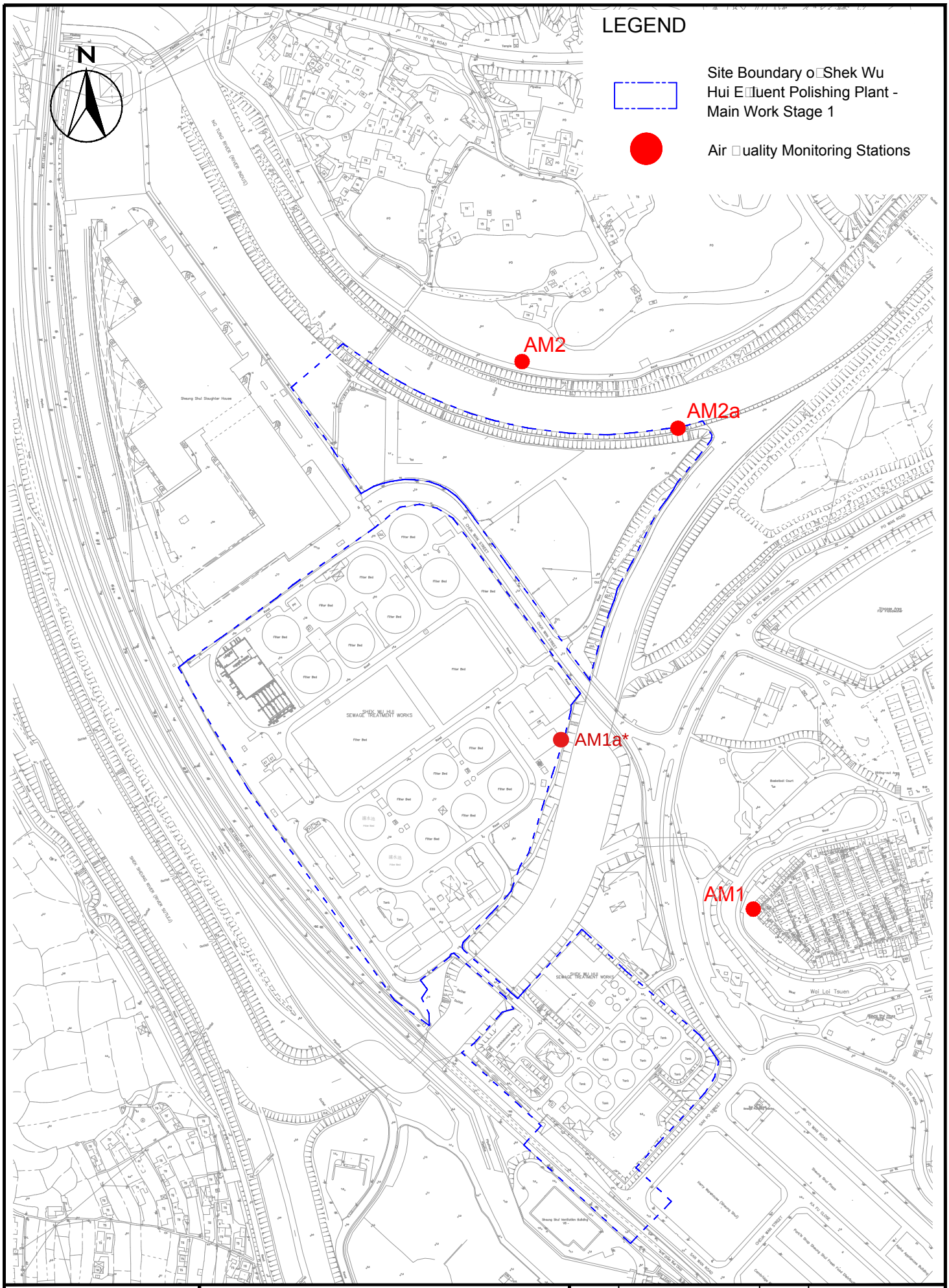
Locations of Noise Monitoring Stations



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

Figure 4.2

Locations of Air Quality Monitoring Stations



Shek Wu Hui 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□ -

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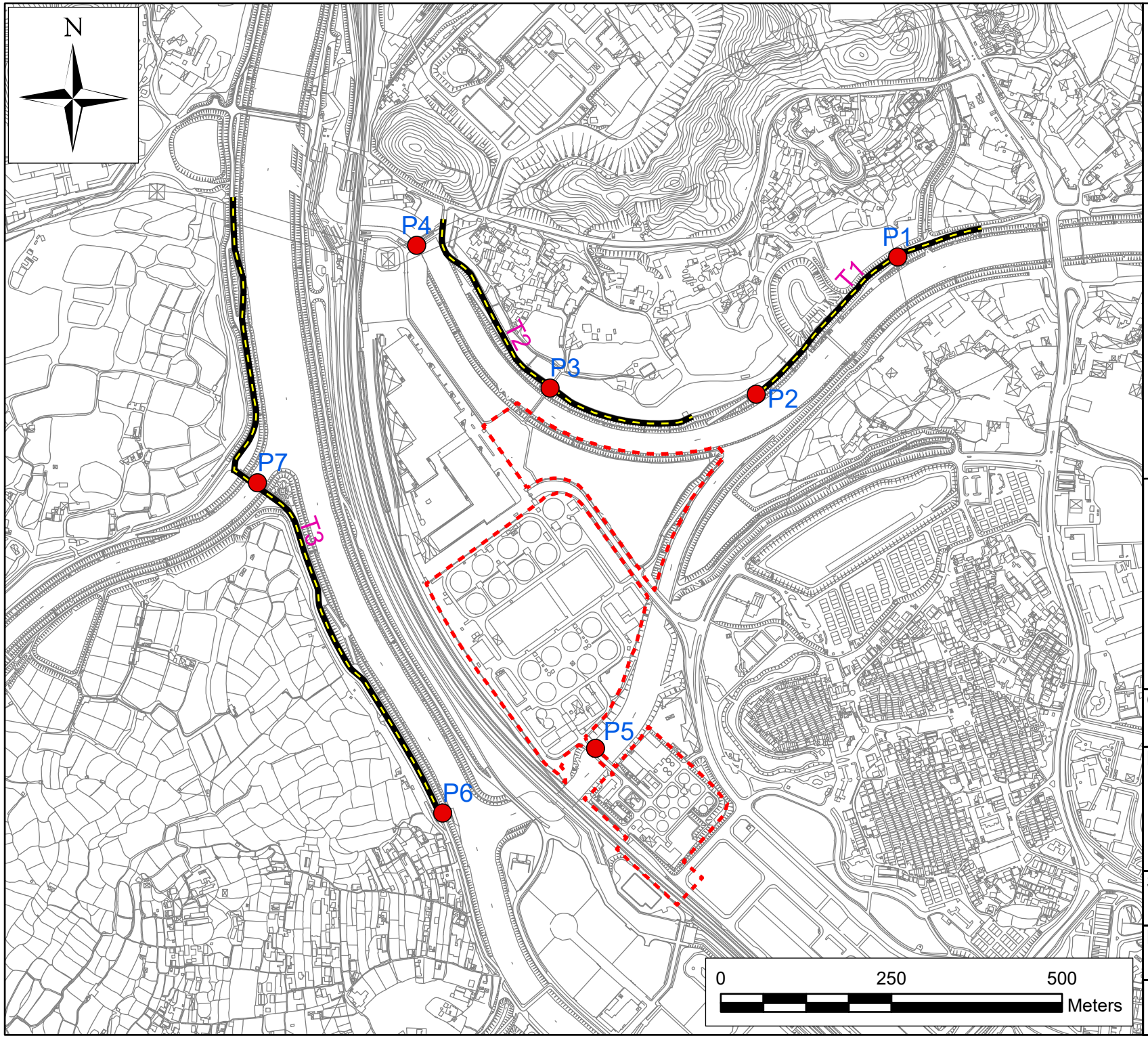
Figure 4.3

Locations of Ecological Monitoring Stations



Legend

- Project Site Boundary
- Walk Transects
- Point Count Locations

PREPARED BY

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Hong Kong

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Facsimile: (852) 2882-3331
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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***
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AL	***MC***
FIGURE NO.	REVISION NO.
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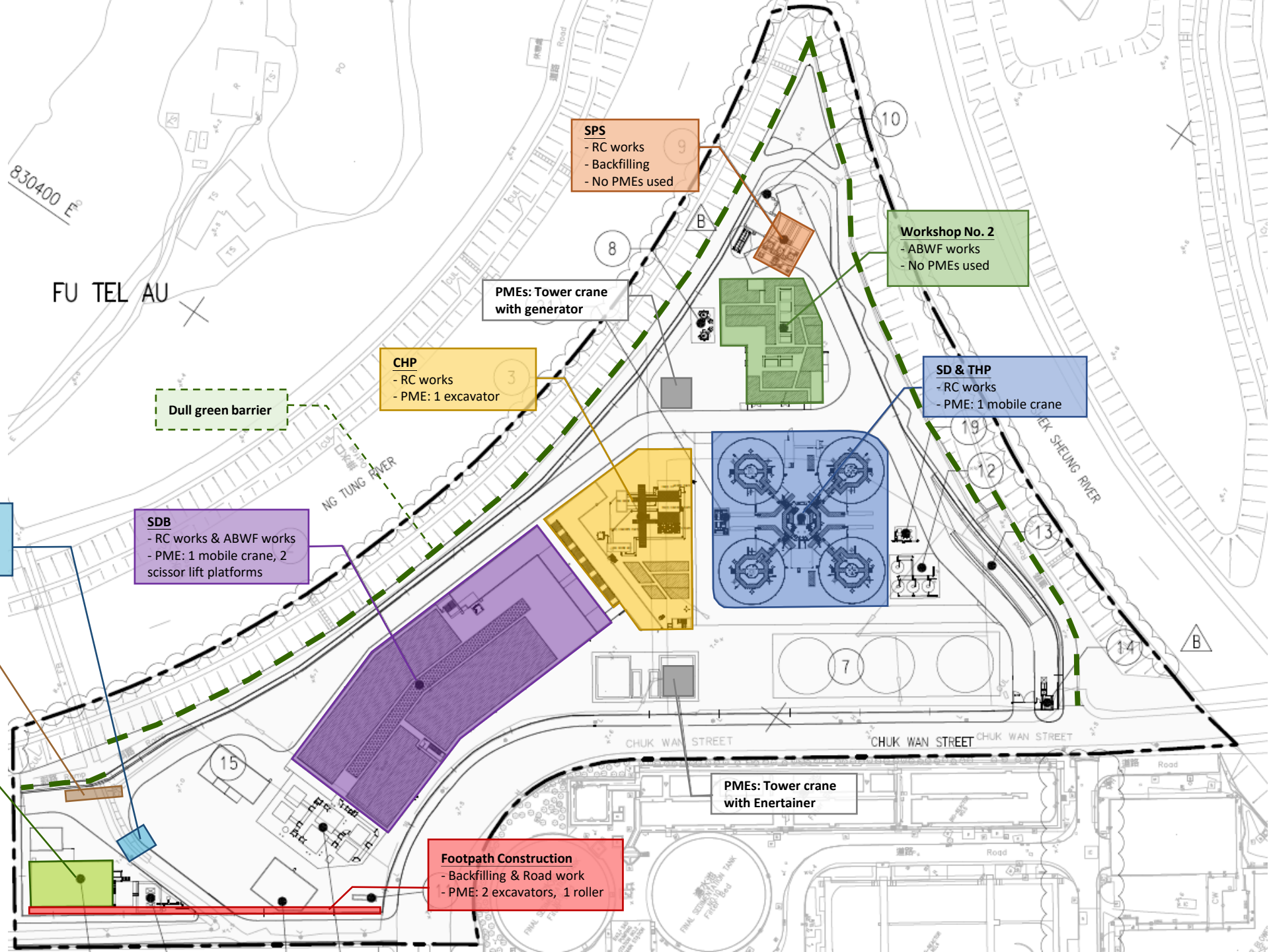
Appendix 2.1

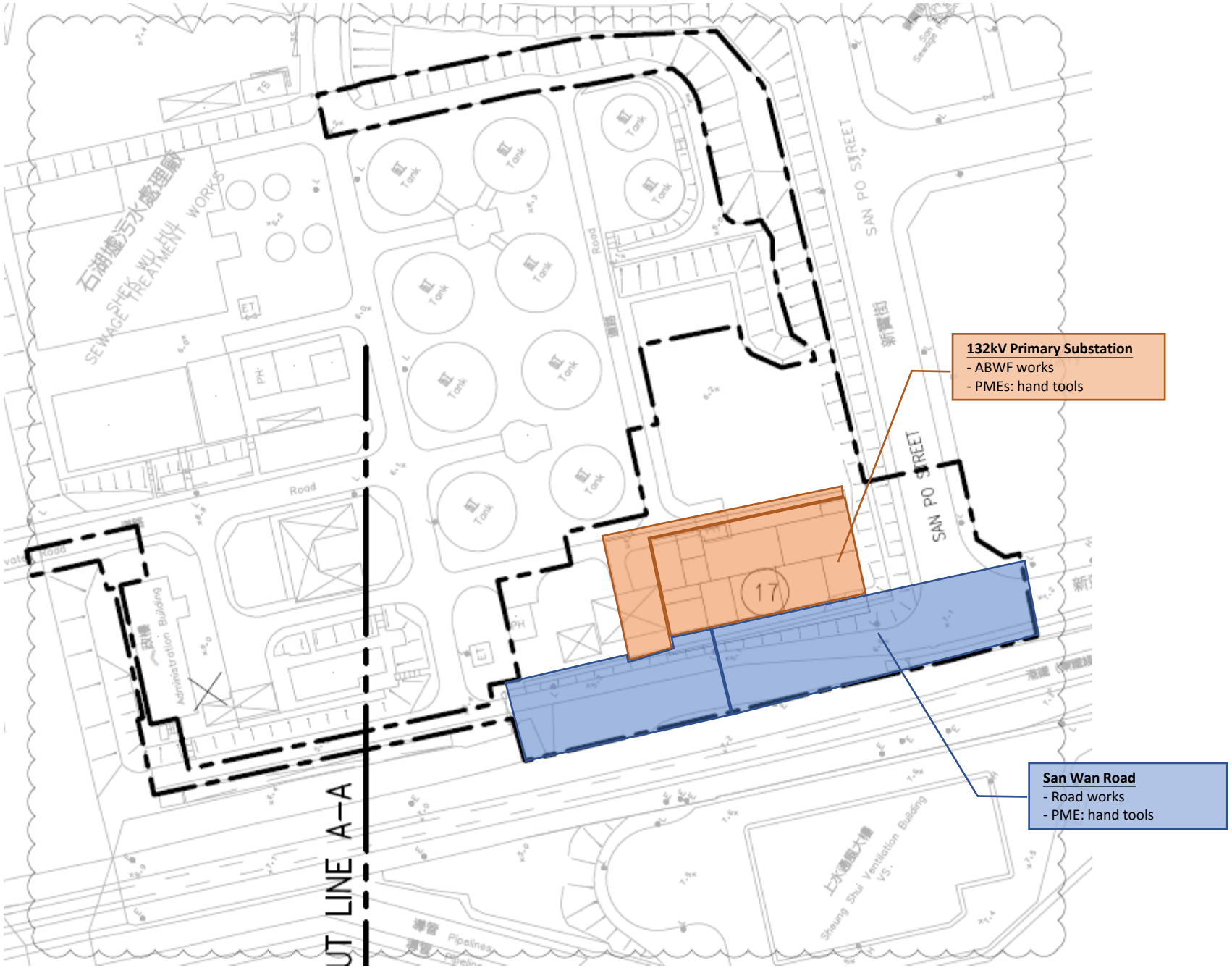
Layout plan of construction activities

Portion C

DC/2018/06

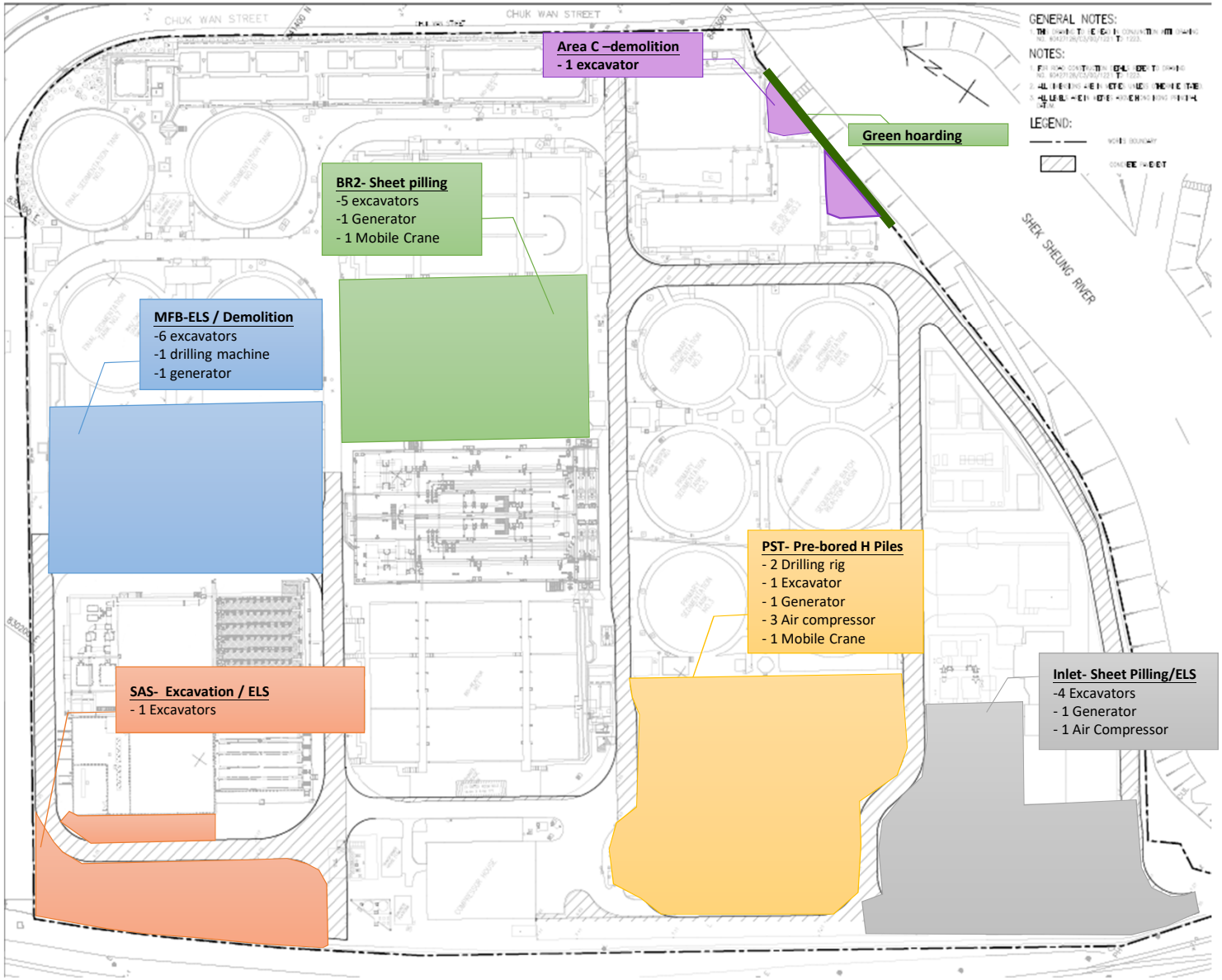


Portion A

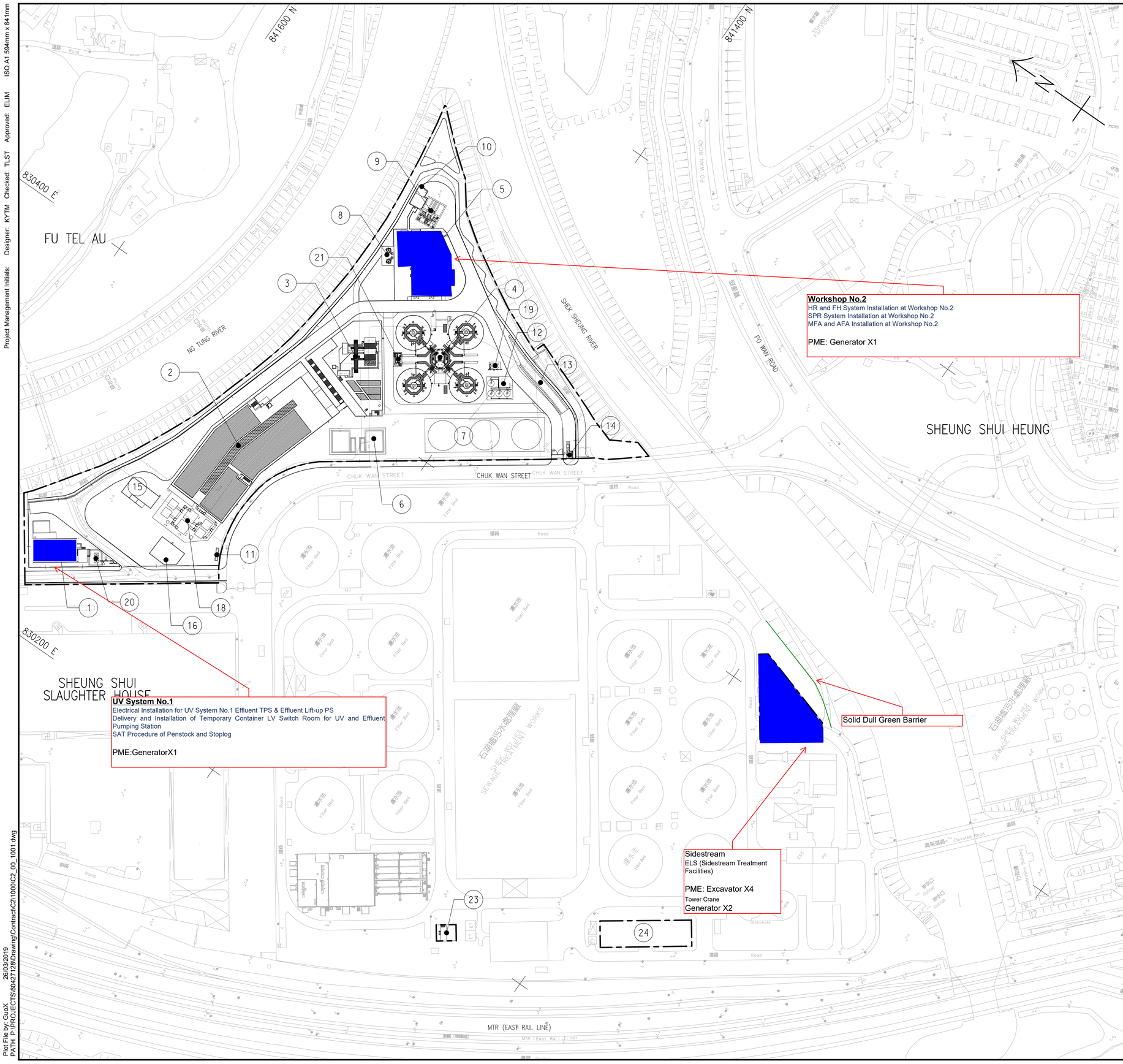

132kV Primary Substation
- ABWF works
- PMEs: hand tools
San Wan Road
- Road works
- PME: hand tools
SAN PO STREET
SAN PO STREET
SHEK WU HUI SEWAGE TREATMENT WORKS
石湖墟污水處理廠
Tank
Road
Administration Building
17
UT LINE A–A

Portion B

DC/2018/07



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



NOTES:

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6. THE LOCATION, ORIENTATIONS, ALIGNMENT, SIZES, LEVELS AND DETAILS OF THE SEWAGE AND DRAINAGE WORKS, INCLUDING THE PIPES CONNECTION, MANHOLES, EXISTING PIPES TO BE CONNECTED, EXISTING MANHOLES TO BE MODIFIED, THE CONSTRUCTION METHOD SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE AND FOR TENDER PURPOSE ONLY
7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

LEGEND:

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

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PROJECT 項目

SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT 業主

渠務署 Drainage Services Department

CONSULTANT 工程顧問公司

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

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	MAR. 19	TENDER DRAWING	TLST

STATUS 階段

SCALE 比例: A1 1 : 1000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60427128

CONTRACT NO. 合約編號: DE/2018/03

SHEET TITLE 圖紙名稱

SHEK WU HUI EFFLUENT POLISHING PLANT GENERAL LAYOUT PLAN

SHEET NUMBER 圖紙編號

60427128/C2/00/1001

Plot File by: GuoX 26/03/2019
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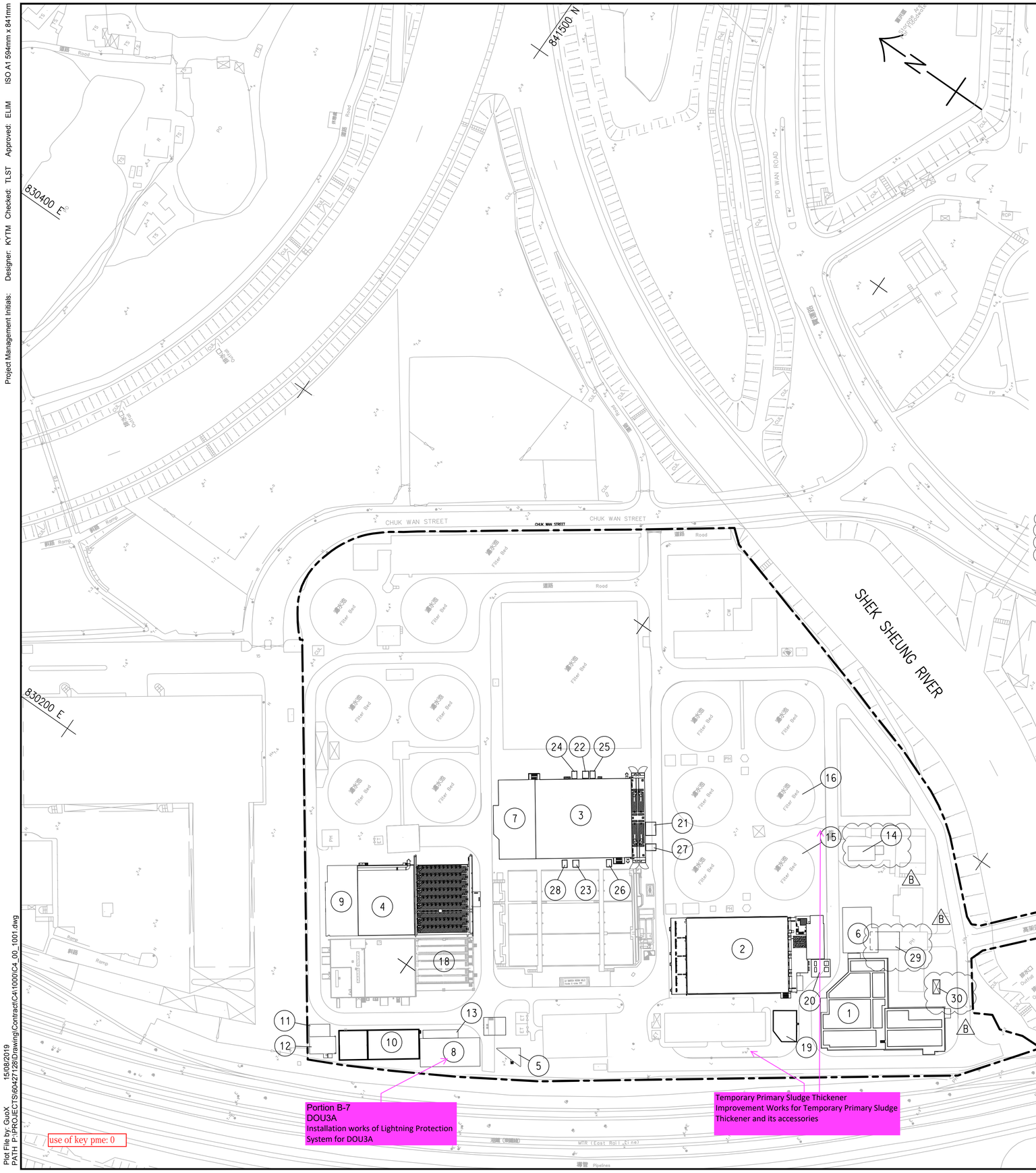

10	CHEMICAL SYSTEM NO. 1
11	EMERGENCY GENERATOR HOUSE
12	FS AND SPRINKLER PUMPING ROOM
13	CHEMICAL SYSTEM NO. 2
14	TEMPORARY FILTRATE LIFTING WELL AND EQUALISATION TANK
15	EXISTING PRIMARY SEDIMENTATION TANK NO.4
16	EXISTING PRIMARY SEDIMENTATION TANK NO.6
17	EXISTING SLUDGE PRESS HOUSE
18	EXISTING MBR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

NOTES:

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

LEGEND:

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

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PROJECT 項目

SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT 業主

渠務署 Drainage Services Department

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例: A1 1 : 1000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60427128

CONTRACT NO. 合約編號: DE/2018/04

SHEET TITLE 圖紙名稱

GENERAL LAYOUT PLAN

SHEET NUMBER 圖紙編號

60427128/C4/00/1001B

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

Plot File by: GuoX 15/08/2019
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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	Construction Site Runoff 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/m^3		24-hour TSP Level in μg/m^3	
	Action Level	Limit Level	Action Level	Limit Level
AM1	320	500	189	260
AM2	322	500	187	260

Noise Monitoring

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

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

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

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

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

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

Appendix 4.2

Copies of Calibration Certificates

TISCH Environmental

RECALIBRATION DUE DATE:
August 3, 2022

Certificate of Calibration

Calibration Certification Information					
Cal. Date:	August 3, 2021	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 750.3	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **3166**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3610	3.2	2.00
2	3	4	1	0.9540	6.4	4.00
3	5	6	1	0.8460	7.9	5.00
4	7	8	1	0.8070	8.7	5.50
5	9	10	1	0.6630	12.7	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)
0.9930	0.7296	1.4123	0.9957	0.7316	0.8868
0.9888	1.0365	1.9973	0.9915	1.0393	1.2541
0.9868	1.1664	2.2330	0.9895	1.1696	1.4021
0.9857	1.2215	2.3420	0.9884	1.2248	1.4705
0.9804	1.4788	2.8246	0.9831	1.4828	1.7735
QSTD	**m=**	**1.88375**	**QA**	**m=**	**1.17957**
	b=	**0.03970**		**b=**	**0.02493**
	r=	**0.99998**		**r=**	**0.99998**

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**	:	3-May-22
Equipment no.	:	HVS001 (0401-1105)	**Calbration Due Date**	:	3-Jul-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	295	Kelvin	**Pressure, P_a**	1015	mmHg

Orifice Transfer Standard Information					
Equipment No.	**3166**	**Slope, m_c**	1.88375	**Intercept, bc**	0.03970
Last Calibration Date	3-Aug-21	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	3-Aug-22	$= m_c \times Q_{std} + b_c$			

Calibration of TSP

Calibration Point	**Manometer Reading H (inches of water)** (up)	(down)	(difference)	**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** ($(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$) **Y-axis**
1	1.4	1.4	2.8	0.8725	22	22.1301
2	2.4	2.4	4.8	1.1489	34	34.2011
3	3.3	3.3	6.6	1.3508	42	42.2484
4	4.3	4.3	8.6	1.5449	51	51.3016
5	5.4	5.4	10.8	1.7338	60	60.3549

By Linear Regression of Y on X

Slope, m	=	48.9134	Intercept, b	=	-17.5531
Correlation Coefficient*	=	0.9995			
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	:	3-May-22	**Date**	:	3-May-22

Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	AM2a	**Calbration Date**	:	3-May-22
Equipment no.	:	HVS003 (1096-2305)	**Calbration Due Date**	:	3-Jul-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	295	Kelvin	**Pressure, P_a**	1015	mmHg

Orifice Transfer Standard Information					
Equipment No.	**3166**	**Slope, m_c**	1.88375	**Intercept, bc**	0.03970
Last Calibration Date	3-Aug-21	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	3-Aug-22	$= m_c \times Q_{std} + b_c$			

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	2.4	2.4	4.8	1.1489	23	23.1360
2	3.4	3.4	6.8	1.3714	32	32.1893
3	4.5	4.5	9.0	1.5809	42	42.2484
4	5.2	5.2	10.4	1.7010	47	47.2780
5	6.3	6.3	12.6	1.8744	55	55.3253

By Linear Regression of Y on X

Slope, m	=	47.3405	Intercept, b	=	-26.2467
Correlation Coefficient*	=	0.9996			
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	:	3-May-22	**Date**	:	3-May-22

Lam Environmental Services Limited

Portable Dust Meter Performance Check Record

Portable Dust Meter

Type	:	Particulare Monitor
Manufacturer	:	MET ONE INSTRUMENTS
Model Number	:	BT-645
Serial Number	:	B17940
Performance Check Date	:	02-Nov-21, 03-Nov-21

Standard Equipment

Type	:	High Volume Sampler
Manufacturer	:	TISCH
Model Number	:	TE-5170
Equipment Number	:	HVS002
Last Calibration Date	:	28-Oct-21

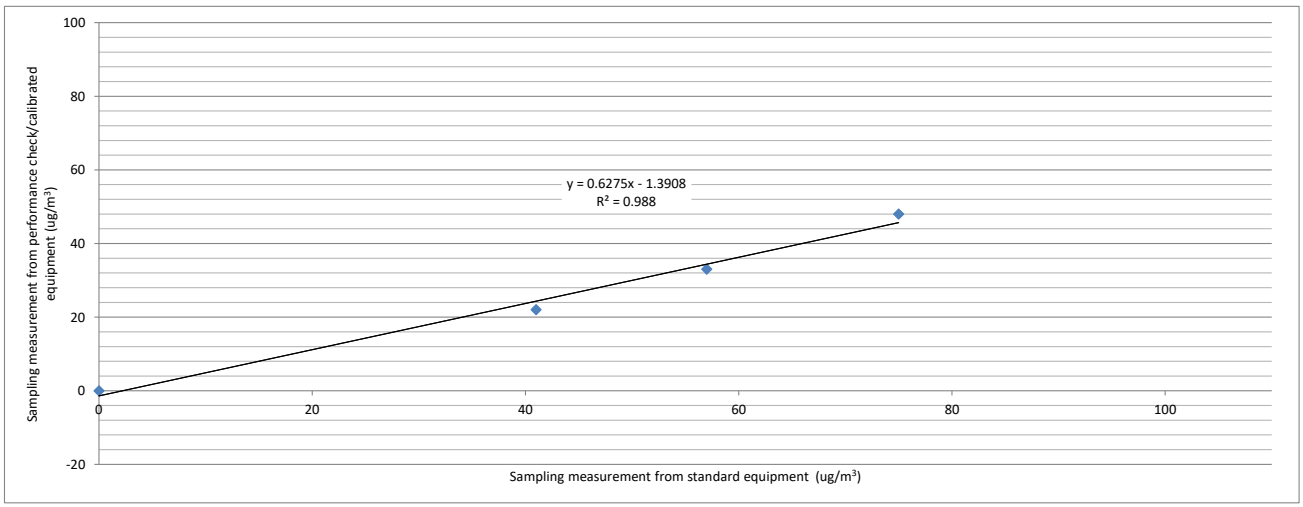
Portable Dust Meter Performance Check Results

Trial no. in 1-hr period	Time	Mean Pressure (hPa)	Mean Temp (˚C)	Concentration in ug/m^3 (Standard equipment) (X - Axis)	Concentration in ug/m^3 (Performance Check / Calibrated equipment) (Y - Axis)
Zero Check	02-11-21	1015	27	0	0
1	2-11-21 08:33	1016	24	41	22
2	2-11-21 10:37	1016	24	57	33
3	2-11-21 09:32	1018	22	75	48

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor)	:	1.6000
Correlation Coefficient	:	0.9940
Validity of Performance Check / Calibration Record	:	2-11-2022



Operator:	Garry Yu	Date:	02-Nov-21
Checked by:	Derek Lo	Date:	02-Nov-21

Lam Environmental Services Limited

Portable Dust Meter Performance Check Record

Portable Dust Meter

Type	:	Particulare Monitor
Manufacturer	:	MET ONE INSTRUMENTS
Model Number	:	BT-645
Serial Number	:	B17942
Performance Check Date	:	22-Nov-21, 3-Nov-21

Standard Equipment

Type	:	High Volume Sampler
Manufacturer	:	TISCH
Model Number	:	TE-5170
Equipment Number	:	HVS002
Last Calibration Date	:	28-Oct-21

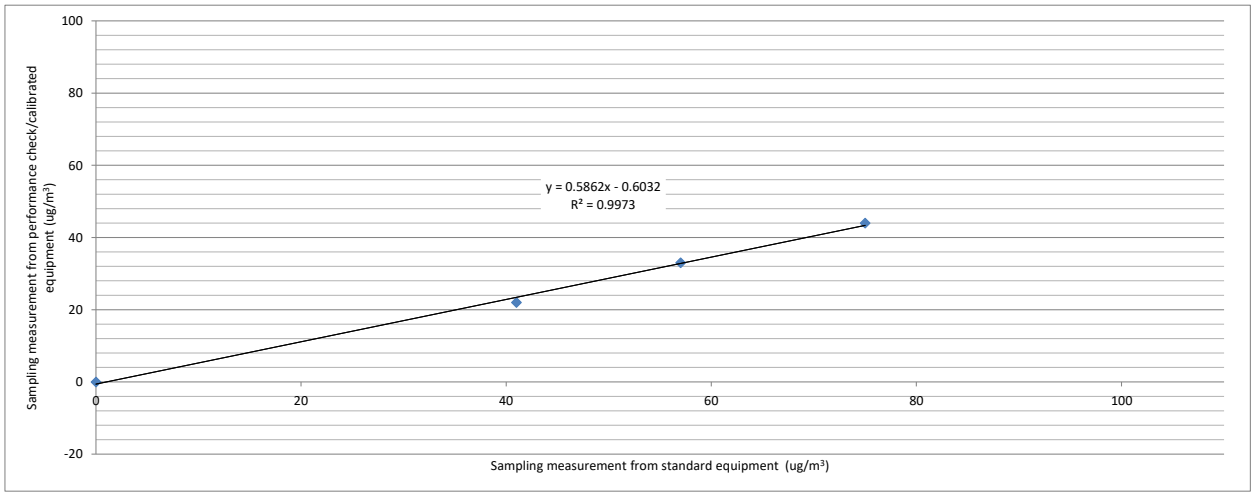
Portable Dust Meter Performance Check Results

Trial no. in 1-hr period	Time	Mean Pressure (hPa)	Mean Temp (˚C)	Concentration in ug/m^3 (Standard equipment) (X - Axis)	Concentration in ug/m^3 (Performance Check / Calibrated equipment) (Y - Axis)
Zero Check	2/11/2021	1015	27	0	0
1	2/11/21 08:33	1016	24	41	22
2	2/11/21 10:37	1016	24	57	33
3	2/11/21 09:32	1018	22	75	44

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor)	:	1.8000
Correlation Coefficient	:	0.9987
Validity of Performance Check / Calibration Record	:	12/11/2022



Operator:	Garry Yu	Date:	12-Nov-21
Checked by:	Derek Lo	Date:	12-Nov-21

綜合試驗有限公司
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CERTIFICATE OF CALIBRATION

Certificate No.: 21CA0706 02 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Class 1)	Microphone	Preamp
Manufacturer:	Larson Davis	PCB	PCB
Type/Model No.:	LxT1	377B02	PRMLxT1L
Serial/Equipment No.:	0005098	173736	042838
Adaptors used:	-	-	-

Item submitted by

Customer Name:	Lam Environmental Services Limited
Address of Customer:	-
Request No.:	-
Date of receipt:	06-Jul-2021

Date of test: 07-Jul-2021

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2021	CIGISMEC
Signal generator	DS 360	61227	31-Dec-2021	CEPREI

Ambient conditions

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

Test specifications

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

Test results

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

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

Actual Measurement data are documented on worksheets.

Approved Signatory: Feng Junqi **Date:** 08-Jul-2021 **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 Form No CARP152-1/Issue 1/Rev C/01/02/2007

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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CERTIFICATE OF CALIBRATION

(Continuation Page)

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 Uncertanity (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 Uncertanity (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: Date: 07-Jul-2021

Checked by: Chan Yuk Yiu Date: 08-Jul-2021

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

SMECLab

Test Data for Sound Level Meter

Sound level meter type:	LxT1	Serial No.	0005098	Date	07-Jul-2021
Microphone type:	377B02	Serial No.	173736		
Preamp type:	PRMLxT1L	Serial No.	042838	Report:	21CA0706 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	10.8	dB
Noise level in C weighting	13.7	dB
Noise level in Lin	21.3	dB

LINEARITY TEST

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

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	44.0	44.0	0.7	0.0	0.0
39.0	38.9	38.9	0.7	-0.1	-0.1
34.0	33.9	33.9	0.7	-0.1	-0.1
33.0	33.0	33.0	0.7	0.0	0.0

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SMECLab

Sound level meter type:	LxT1	Serial No.	0005098	Date	07-Jul-2021
Microphone type:	377B02	Serial No.	173736		
Preamp type:	PRMLxT1L	Serial No.	042838	Report:	21CA0706 02

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

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

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

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

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20-120	30.0	29.9	0.7	-0.1
	118.0	118.0	0.7	0.0

FREQUENCY WEIGHTING TEST

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

Frequency weighting A:

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

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	90.9	1.5	1.5	-0.1
63.1	94.0	93.2	93.2	1.5	1.5	0.0
125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0

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SMECLab

Test Data for Sound Level Meter

Sound level meter type: LxT1 Serial No. 0005098 Date 07-Jul-2021
Microphone type: 377B02 Serial No. 173736
Preamp type: PRMLxT1L Serial No. 042838 Report: 21CA0706 02

1995.0	94.0	93.8	93.9	1.0	1.0	0.1
3981.0	94.0	93.2	93.3	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	87.8	3.0	6.0	0.0

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	94.0	1.5	1.5	0.0
63.1	94.0	94.0	94.0	1.5	1.5	0.0
125.9	94.0	94.0	94.0	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	94.0	94.0	1.0	1.0	0.0
3981.0	94.0	94.0	94.1	1.0	1.0	0.1
7943.0	94.0	94.0	94.1	1.5	3.0	0.1
12590.0	94.0	94.0	94.0	3.0	6.0	0.0

TIME WEIGHTING FAST TEST

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

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
116.0	115.0	115.0	1.0	1.0	0.0

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

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	119.4	2.0	0.4

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SMECLab

Test Data for Sound Level Meter

Sound level meter type:	LxT1	Serial No.	0005098	Date	07-Jul-2021
Microphone type:	377B02	Serial No.	173736		
Preamp type:	PRMLxT1L	Serial No.	042838	Report:	21CA0706 02

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.4	2.0	0.4

RMS ACCURACY TEST

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

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

Time wighting	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
	dB	dB	indication(dB)	+/- dB	dB
Slow	118.0+6.6	118.0	118.0	0.5	0.0

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)
Test frequency: 2000 Hz
Amplitude: The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

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

Repeated at 100 Hz

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

TIME AVERAGING TEST

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

Frequency of tone burst: 4000 Hz
Duration of tone burst: 1 ms

Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	90.0	90.0	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

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SMECLab

Sound level meter type:		LxT1	Serial No.	0005098	Date	07-Jul-2021
Microphone	type:	377B02	Serial No.	173736		
Preamp	type:	PRMLxT1L	Serial No.	042838	Report:	21CA0706 02

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
116.1	115.1	112.1	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
122.8	121.8	81.8	81.8	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
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	91.9	1.5	3.0	-1.0

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

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

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

Customer: 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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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: Fung Chi Yip **Checked by:** Chan Yuk Yiu

Date: 29-Dec-2021 **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 Limited

Wind Station Performance Check Record

Type : Weather Station

Manufacturer : 武汉辰云科技有限公司

Model Number : YGY-FSXY1

Serial Number : YG 21071630T0924

Performance Check Date : 19-Mar-2022

Performance Check Results

Wind Speed Range (m/s)	Direct Reading average (V1, m/s)	Anemometer Value average (V2, m/s)	Difference (V1 - V2, m/s)
Zero Check	0.0	0	0
0 - 1	0.8	0.8	0
1 -2	1.5	1.7	-0.2
2 - 3	2.5	2.4	0.1

Wind Direction (^{o})	Direct Reading (W1, ^{o})	Compass Value (W2, ^{o})	Difference (W1 - W2, m/s)
0	0	0	0
90	90	90	0
180	180	179	1
270	270	271	-1

Test Reference:
1. Wind Speed Check - Wind speed reading checked on-site against the anemometer.
2. Wind Direction Check - Wind direction reading check against on-site the marine compass.

Conducted by: Patrick Yeung

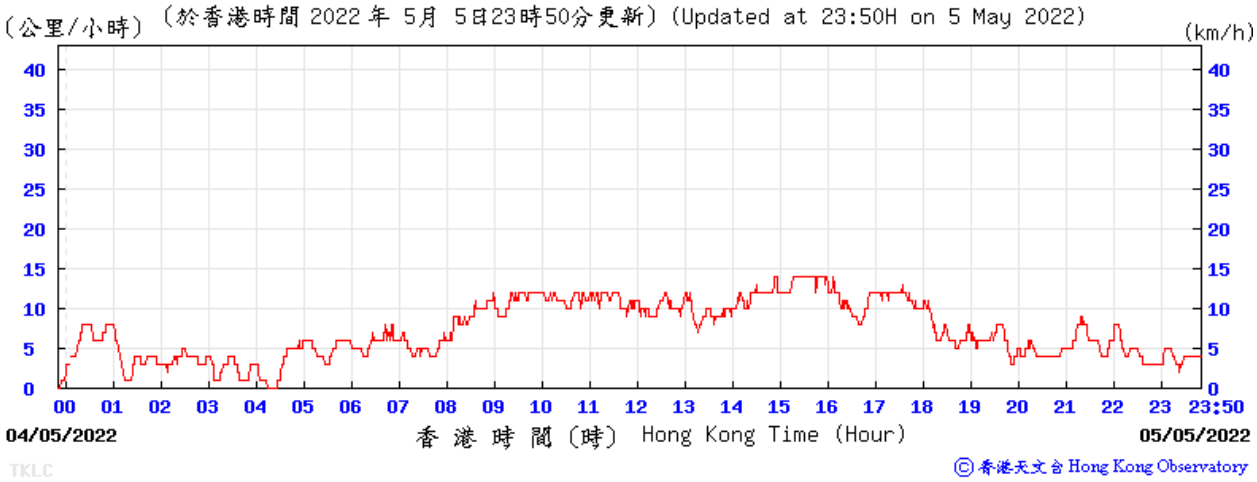
Checked by: Derek Lo

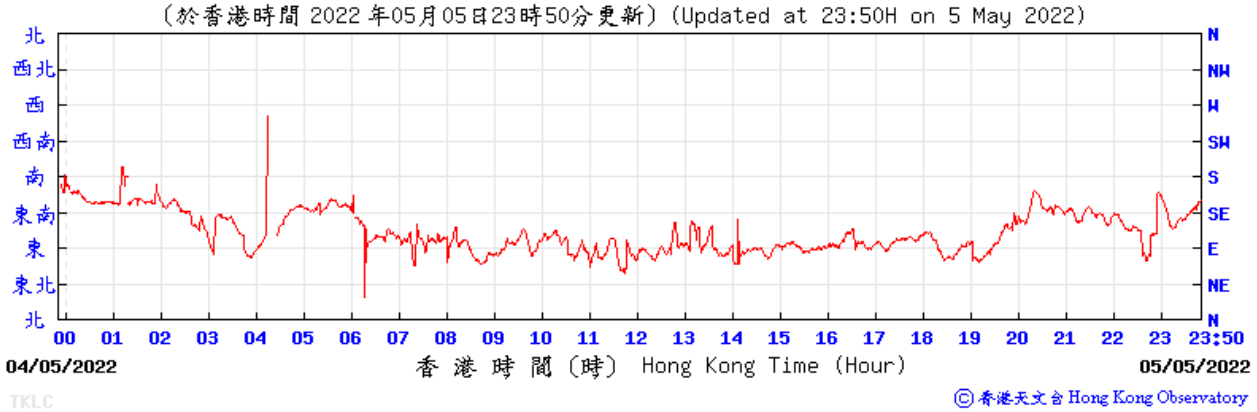
Appendix 4.3

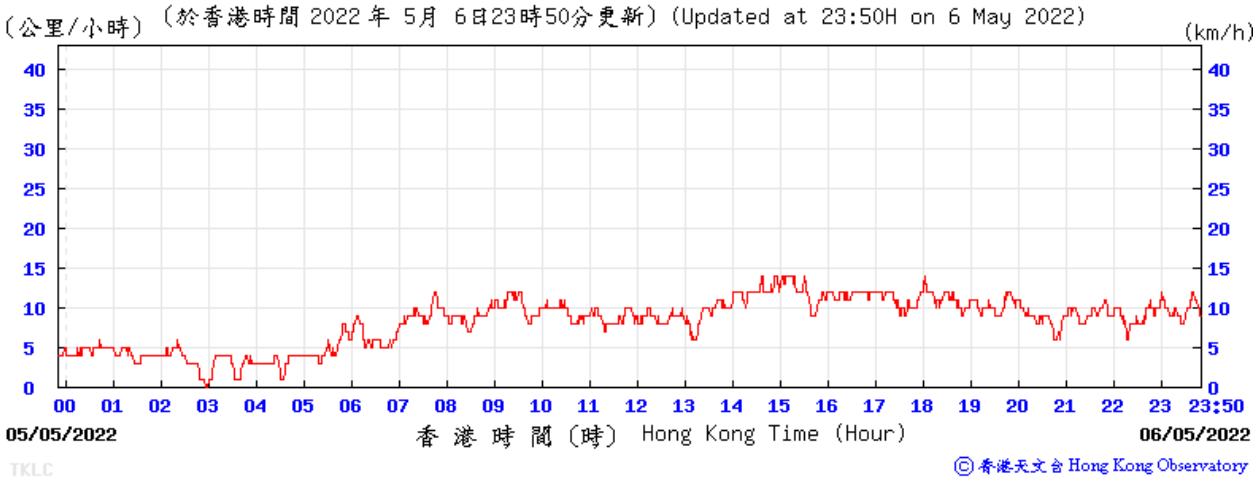
Wind Data

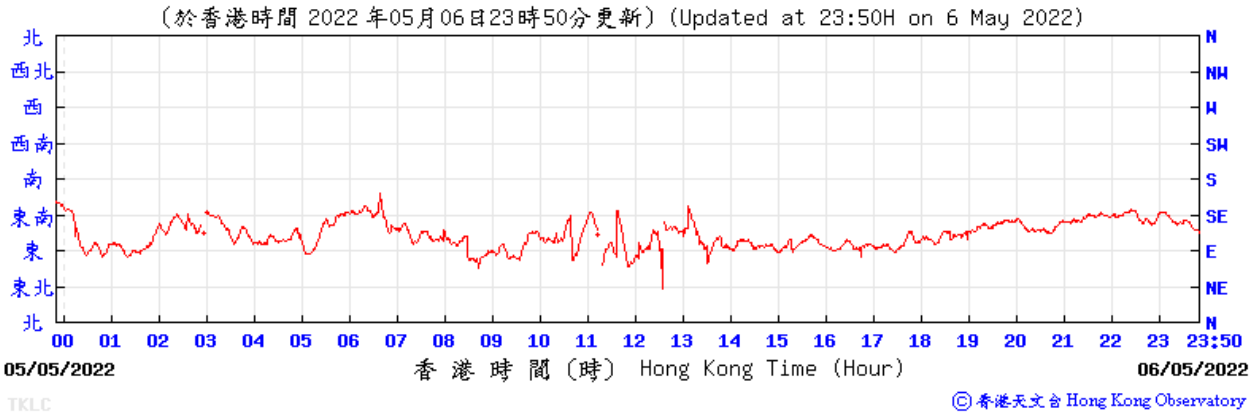
Wind data extraction from the Hong Kong Observatory (HKO)

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








(於香港時間 2022 年05月06日23時50分更新) (Updated at 23:50H on 6 May 2022)
北 西北 西 西南 南 東南 東 東北 北
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05/05/2022
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06/05/2022
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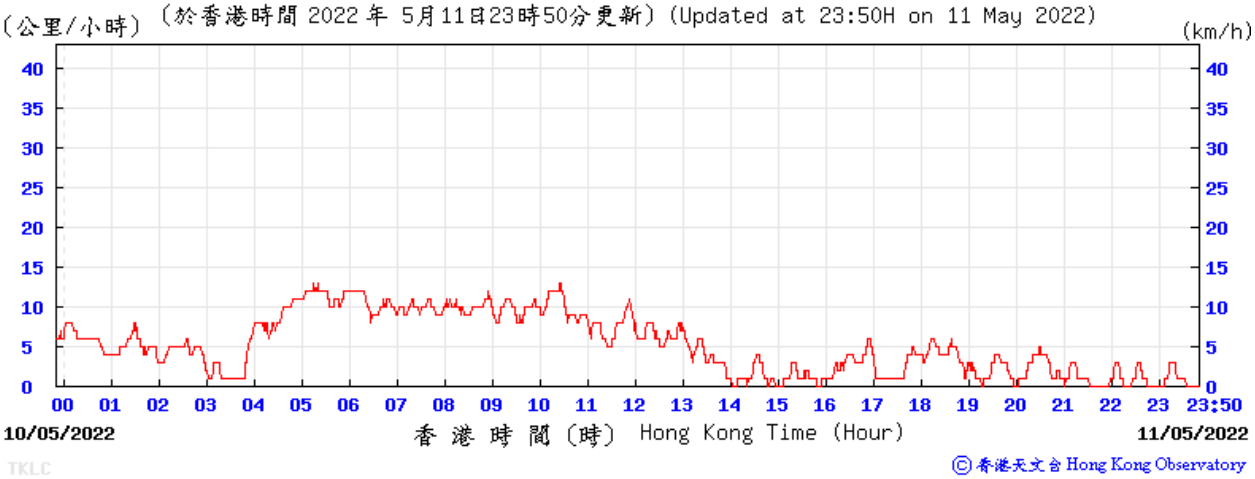
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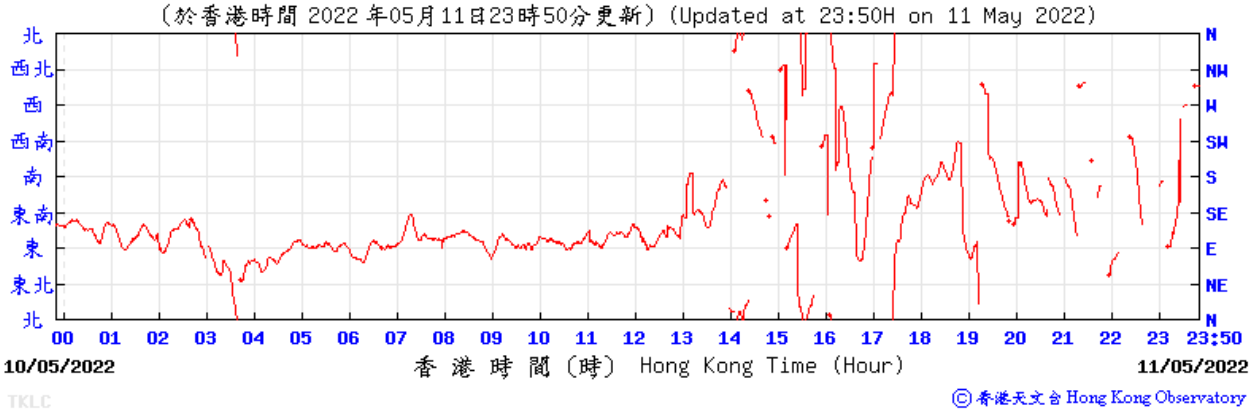
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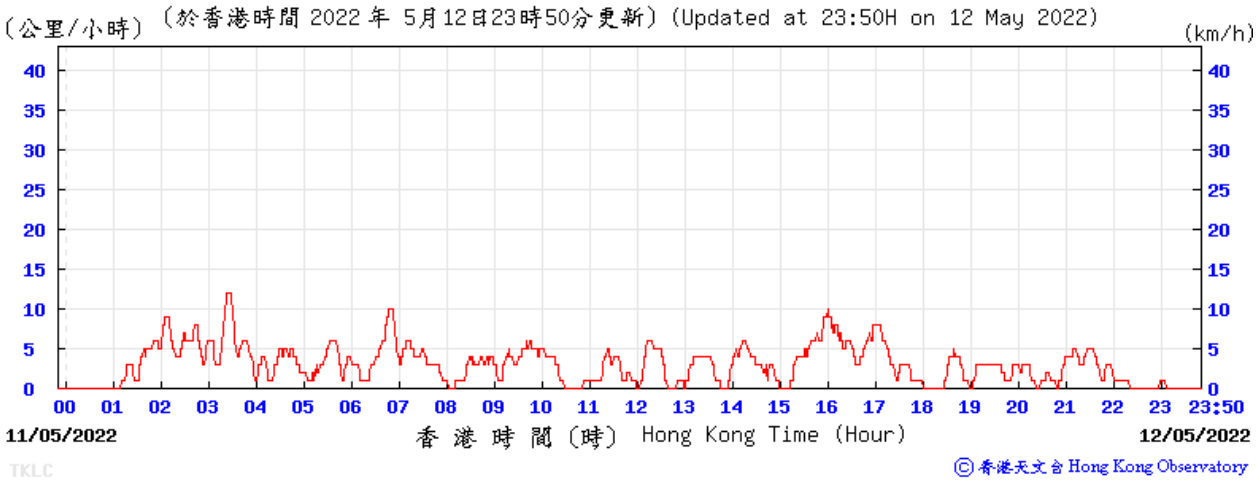
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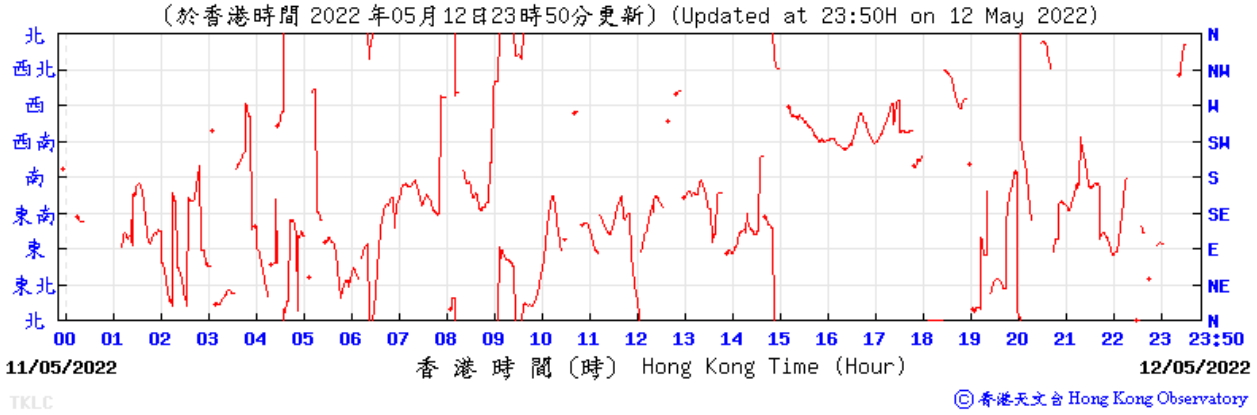
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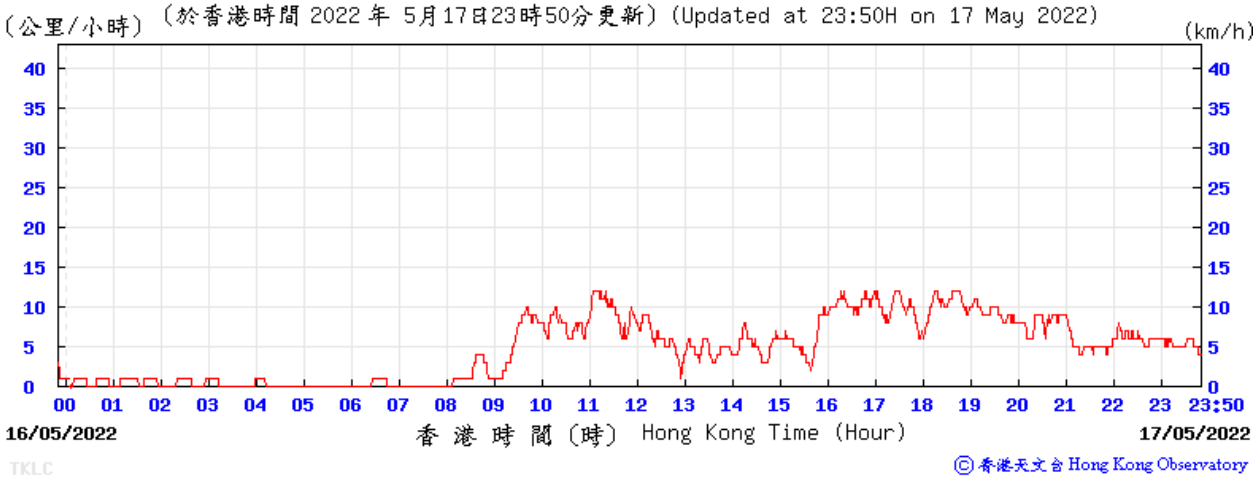
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17/05/2022
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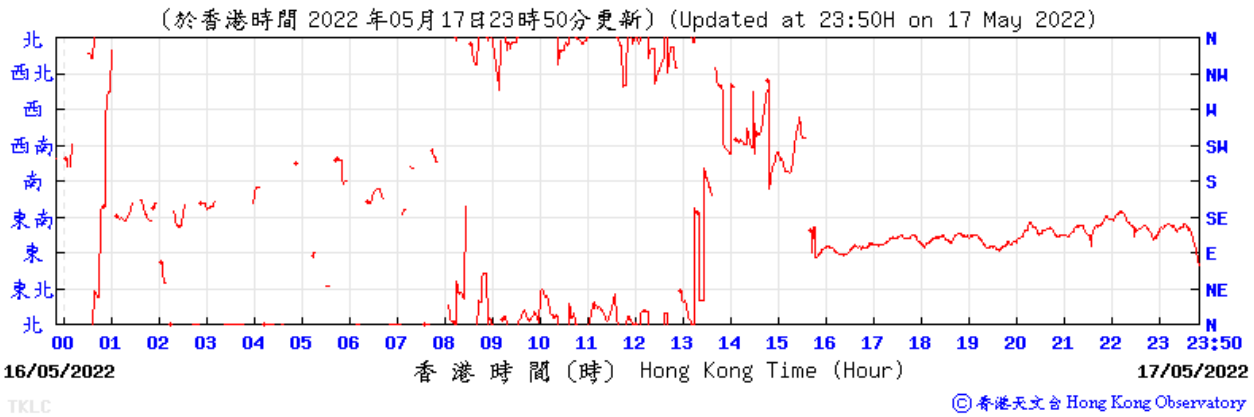
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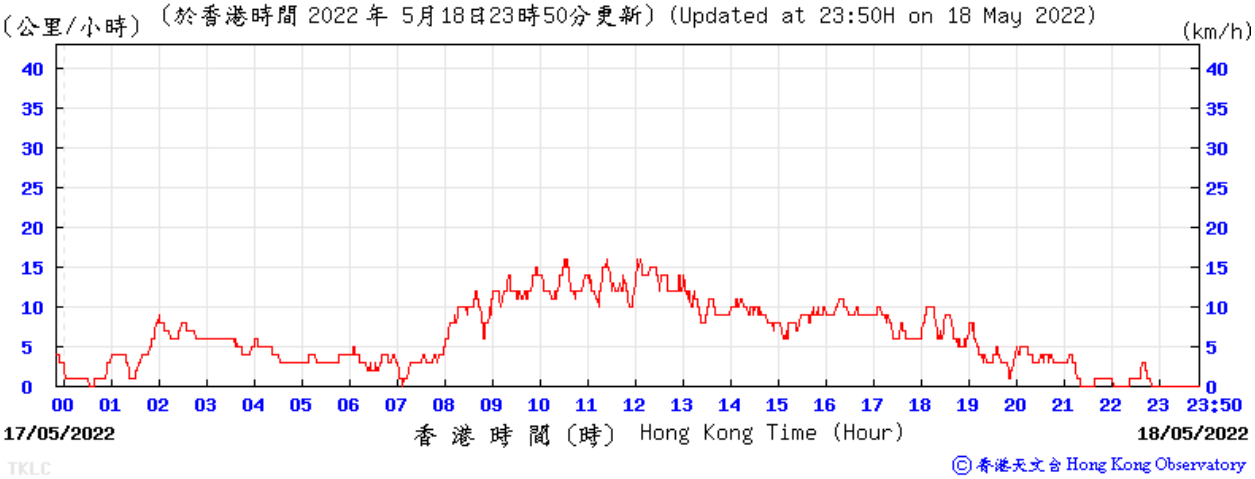
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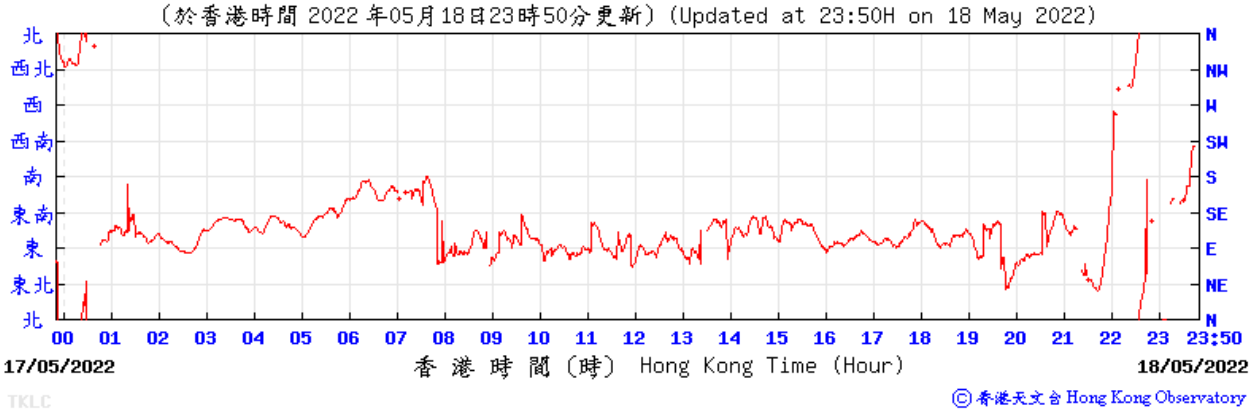
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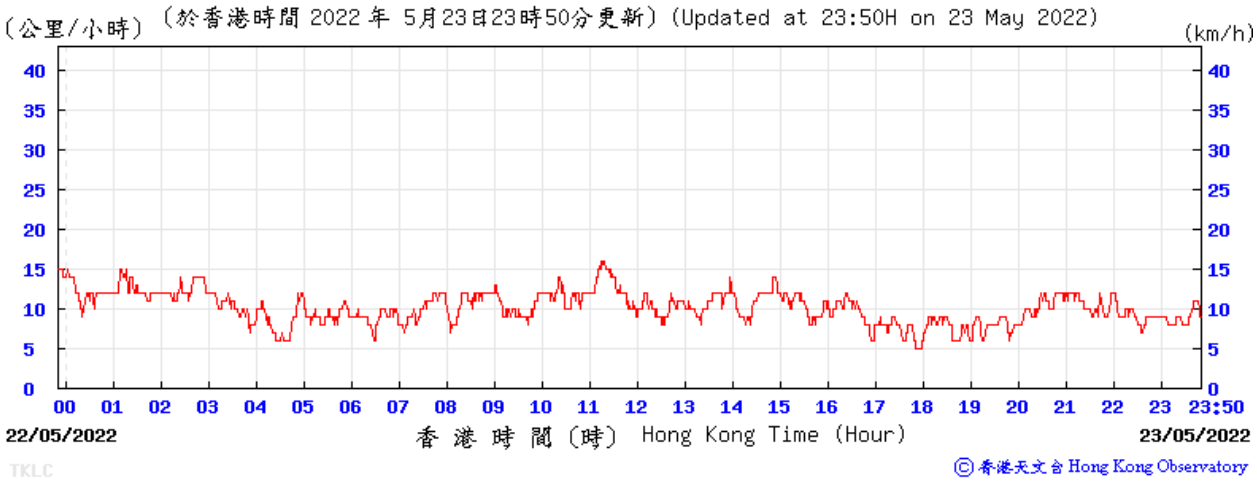
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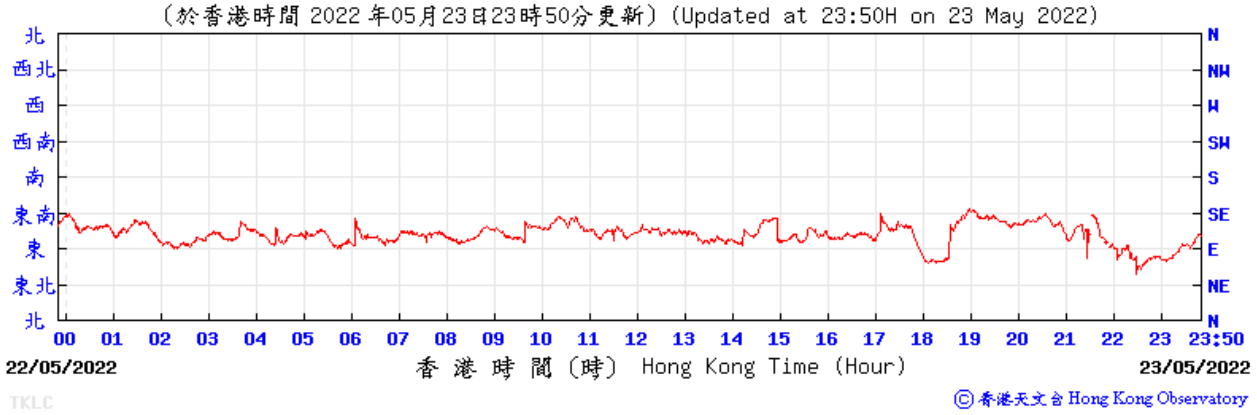
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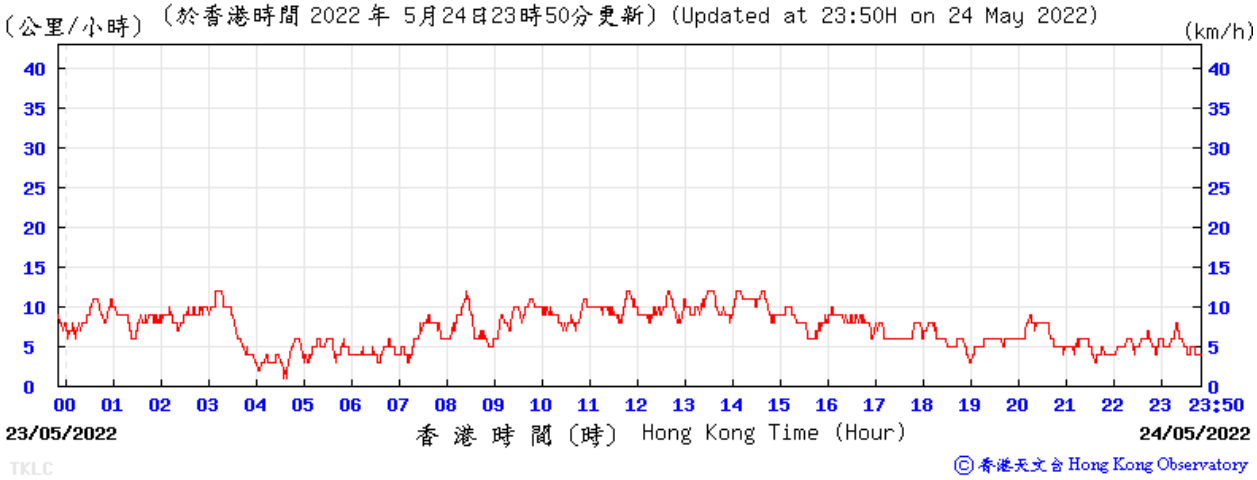
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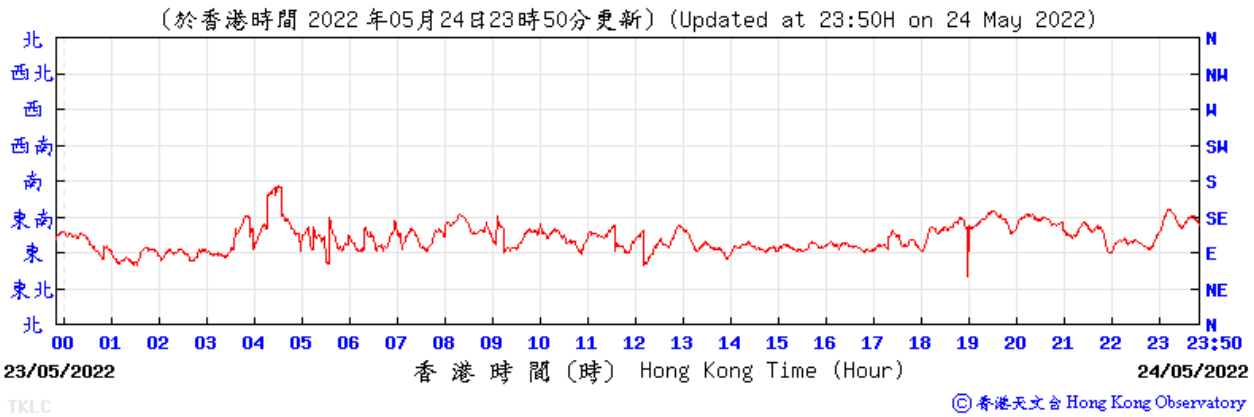
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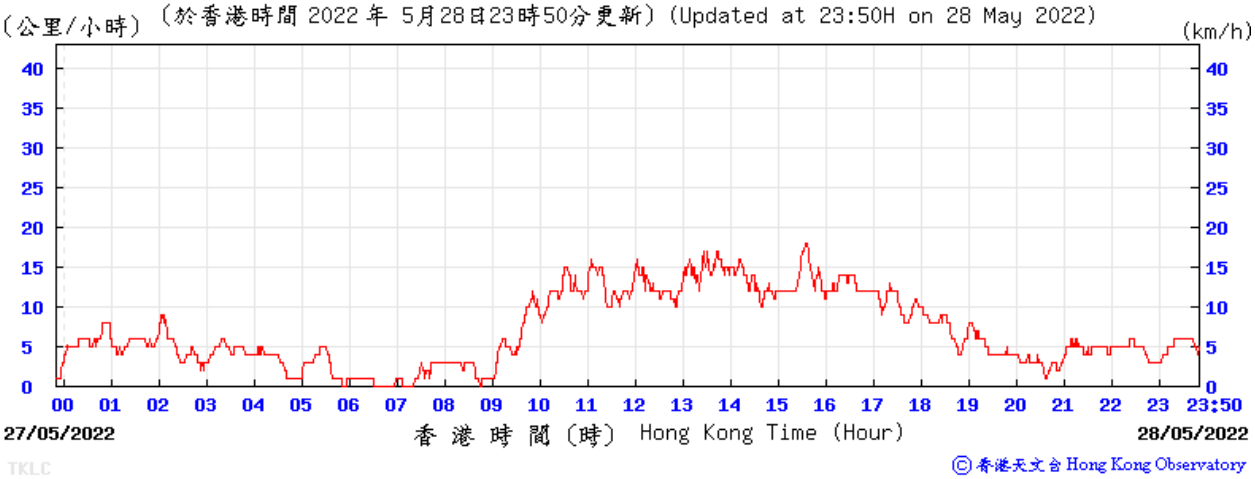
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TKLC
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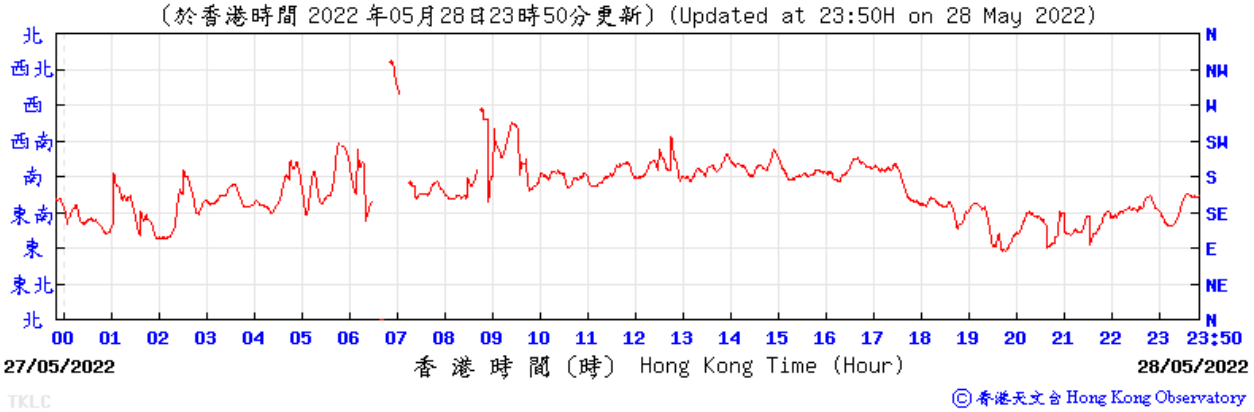
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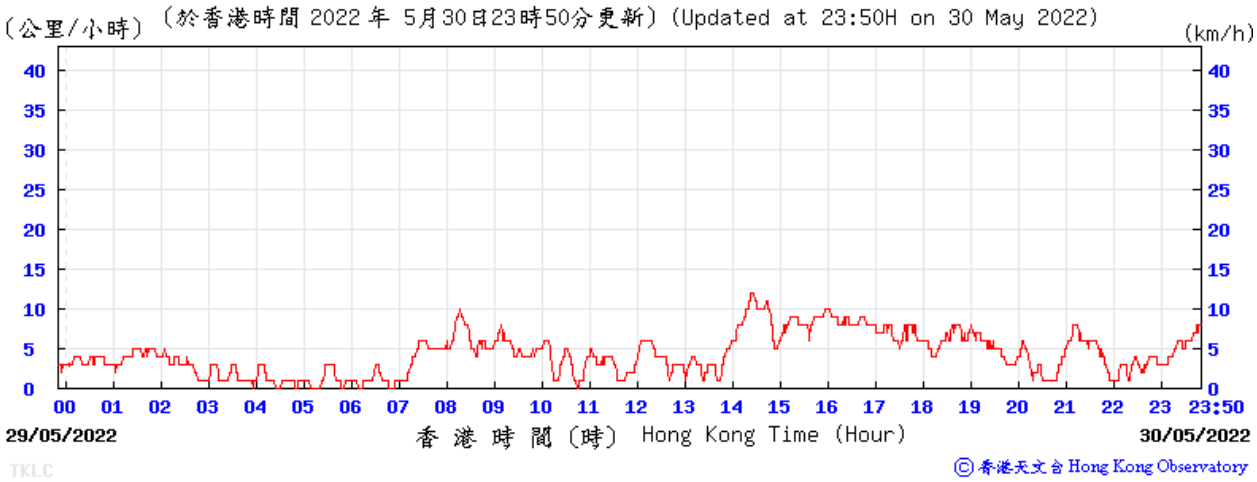
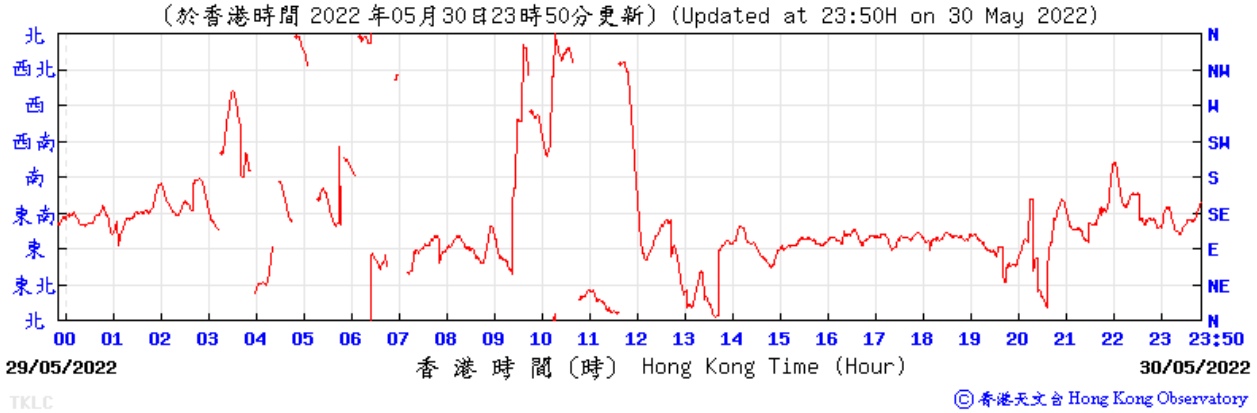




Remarks

1. Data unavailable during the period of May 2022 since the wind anemometer (Serial no. YGY-FSXY1) is under maintenance.
2. The wind data in the subsequent days 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
Tentative Impact Monitoring Schedule
May 2022

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

- 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
Jun 2022

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

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

Appendix 5.2

Noise Monitoring Results and Graphical Presentations

Noise Monitoring Result

Day Time (0700 - 1900hrs on weekday)

Location: NM1 - G/F, Wai Loi Tsuen

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
				Unit: dB(A), (30min)					
06/05/2022	8:30	Fine	0.0	53.3	54.7	48.2	63.4	53	75
12/05/2022	8:30	Drizzle	0.0	66.9	67.6	64.2	63.4	64	75
18/05/2022	8:10	Fine	0.0	59.2	60.8	47.9	63.4	59	75
23/05/2022	8:20	Cloudy	0.2	58.7	58.9	51.2	63.4	59	75
30/05/2022	8:15	Fine	0.2	59.0	62.3	49.6	63.4	59	75

Location: NM2 - G/F, Fu Tei Au

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
				Unit: dB(A), (30-min)					
06/05/2022	10:10	Fine	0.0	69.9	70.3	52.2	58.0	70	75
12/05/2022	10:20	Drizzle	0.0	68.9	70.4	65.9	58.0	69	75
18/05/2022	11:10	Fine	0.0	62.7	63.5	48.6	58.0	61	75
23/05/2022	9:57	Cloudy	0.2	61.5	62.2	47.9	58.0	59	75
30/05/2022	9:58	Fine	0.2	61.8	62.7	49.8	58.0	59	75

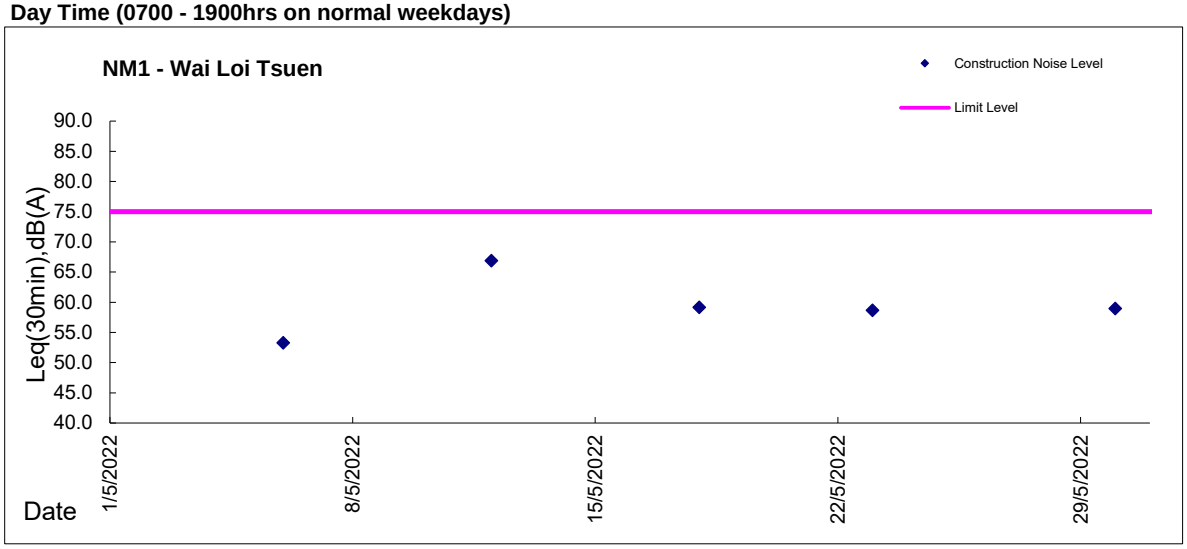
Location: NM3 - G/F, Man kok Village

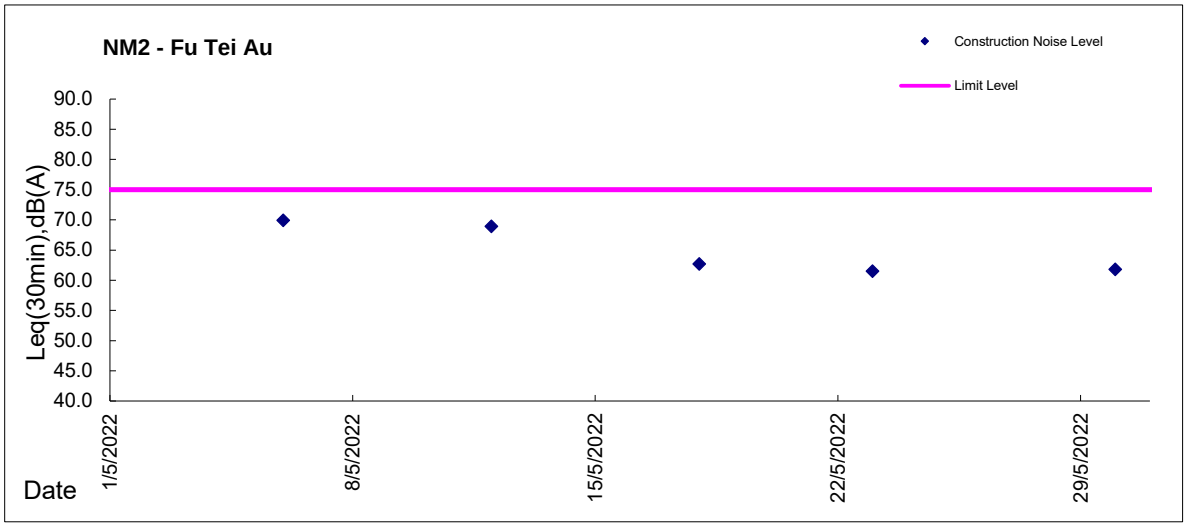
Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
06/05/2022	9:20	Fine	0.0	60.6	63.3	41.9	63.4	61	75
12/05/2022	9:25	Drizzle	0.0	67.7	69.5	65.4	63.4	66	75
18/05/2022	10:15	Fine	0.0	66.1	68.7	62.6	63.4	63	75
23/05/2022	9:08	Cloudy	0.2	65.7	66.2	61.6	63.4	62	75
30/05/2022	9:05	Fine	0.2	64.1	65.6	59.9	63.4	56	75

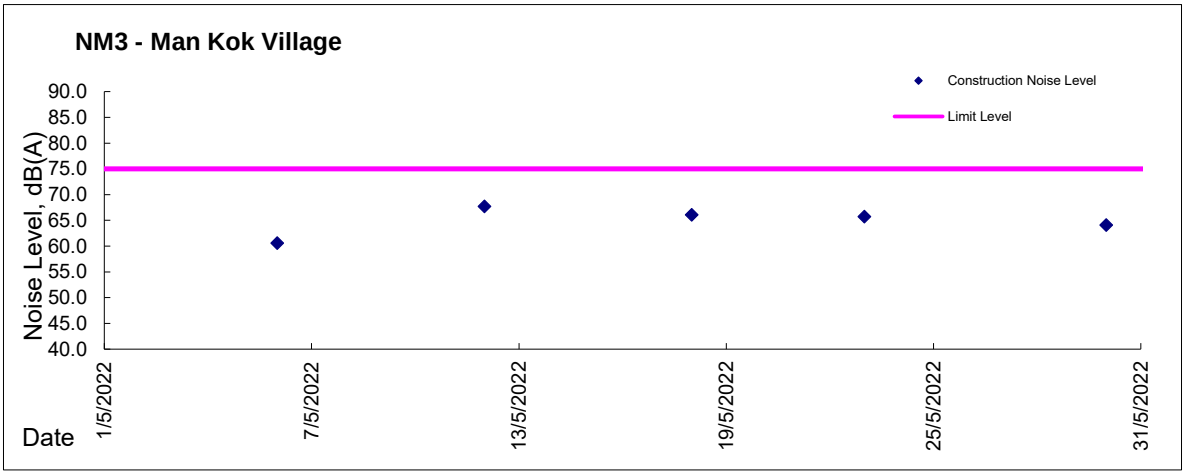
* Free field correction (Additional 3dB(A)) was made on NM1, NM2, and NM3 measurement result

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-May-22	Fine	9:00	27	BT-645	B17940
6-May-22	Fine	10:00	24		
6-May-22	Fine	11:00	51		
12-May-22	Drizzle	9:00	35		
12-May-22	Drizzle	10:00	42		
12-May-22	Drizzle	11:00	58		
18-May-22	Fine	9:00	67		
18-May-22	Fine	10:00	77		
18-May-22	Fine	11:00	78		
24-May-22	Cloudy	9:00	98		
24-May-22	Cloudy	10:00	83		
24-May-22	Cloudy	11:00	61		
30-May-22	Fine	9:00	60		
30-May-22	Fine	10:00	57		
30-May-22	Fine	11:00	110		

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-May-22	Fine	9:00	70	BT-645	B17942
6-May-22	Fine	10:00	90		
6-May-22	Fine	11:00	77		
12-May-22	Drizzle	9:00	38		
12-May-22	Drizzle	10:00	27		
12-May-22	Drizzle	11:00	18		
18-May-22	Fine	9:00	79		
18-May-22	Fine	10:00	72		
18-May-22	Fine	11:00	88		
24-May-22	Cloudy	9:00	133		
24-May-22	Cloudy	10:00	146		
24-May-22	Cloudy	11:00	112		
30-May-22	Fine	9:00	70		
30-May-22	Fine	10:00	90		
30-May-22	Fine	11:00	77		

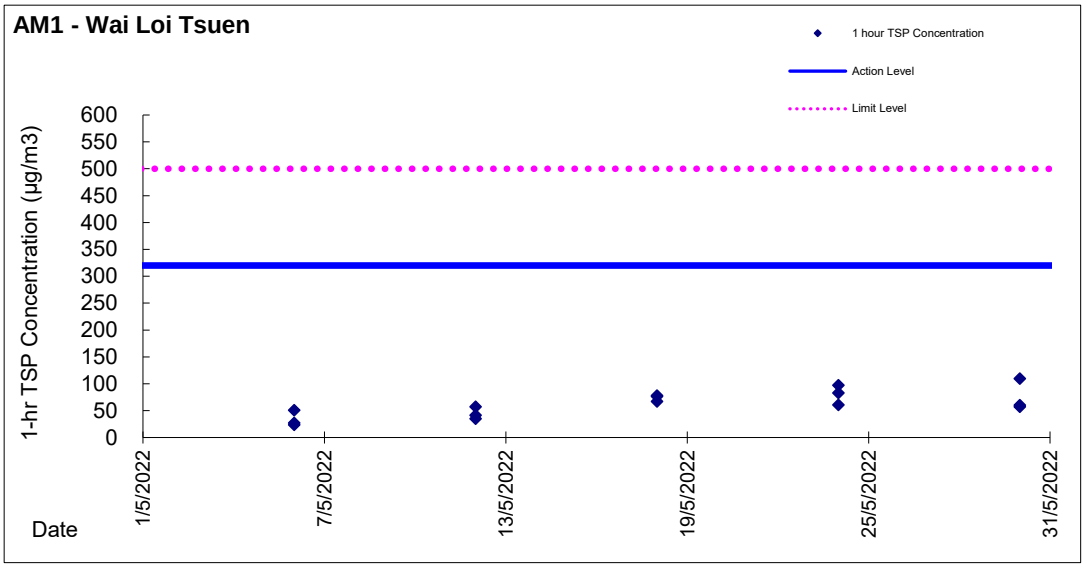
Location: AM1a - Site Boundary of the Shek Wu Hui STW (East)
Impact Monitoring Result on 24-hour TSP monitoring

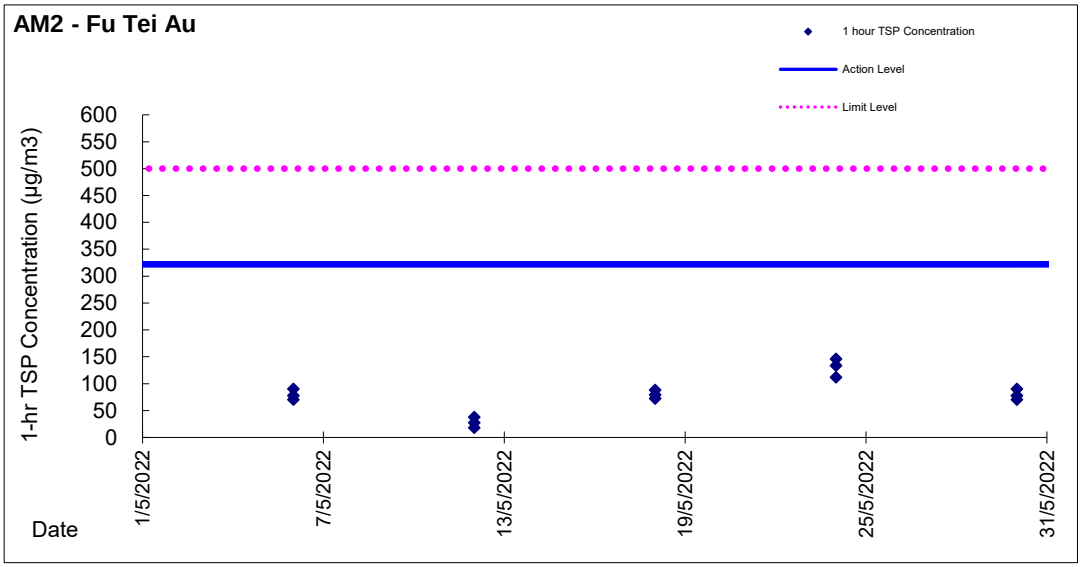
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
05-May-22	8:00	Fine	1012.6	1012.4	25.2	25.5	AM1a_24hr_010890	2.7895	2.8321	27032.35	27056.35	24.00	1.19	1.19	1.19	1715	25	G3101	0401-1105
11-May-22	8:00	Drizzle	1007.8	1006	25	25.8	AM1a_24hr_010887	2.7713	2.8430	27080.35	27104.35	24.00	1.23	1.25	1.24	1791	40		
17-May-22	8:00	Fine	1013.6	1013.6	22.4	23.9	AM1a_24hr_010882	2.776	2.8532	27104.35	27128.35	24.00	1.20	1.22	1.21	1736	44		
23-May-22	8:00	Cloudy	1007.6	1009.2	24	24.4	AM1a_24hr_010880	2.7849	2.8716	27128.35	27152.35	24.00	1.24	1.24	1.24	1779	49		
28-May-22	8:00	Cloudy	1005.5	1005.8	28.7	29.1	AM1a_24hr_010876	2.7349	3.0405	27152.35	27176.35	24.00	1.23	1.23	1.23	1768	173		

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

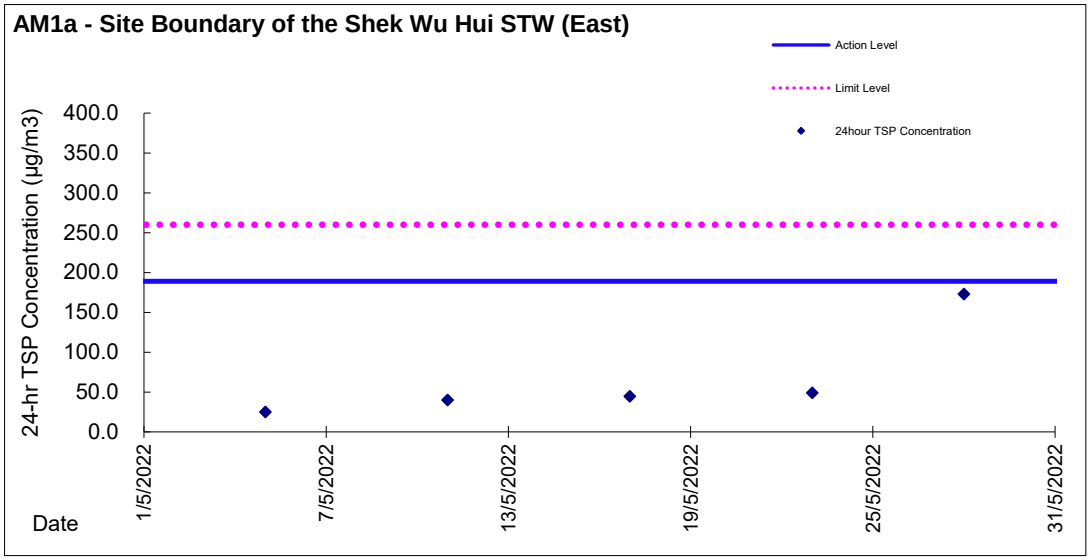
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
05-May-22	8:00	Fine	1012.6	1012.4	25.2	25.5	AM2a_24hr_009863	2.7797	2.8336	18109.93	18133.93	24.00	1.26	1.23	1.25	1793	30	G3101	1096-2305
11-May-22	8:00	Drizzle	1007.8	1006	25	25.8	AM2a_24hr_010799	2.7823	2.8820	18133.93	18157.93	24.00	1.53	1.53	1.53	2200	45		
17-May-22	8:00	Fine	1013.6	1013.6	22.4	23.9	AM2a_24hr_010883	2.7899	2.876	18157.93	18181.93	24.00	1.49	1.49	1.49	2144	40		
23-May-22	8:00	Cloudy	1007.6	1009.2	24	24.4	AM2a_24hr_010881	2.792	2.8905	18181.93	18205.93	24.00	1.48	1.48	1.48	2138	46		
28-May-22	8:00	Cloudy	1005.5	1005.8	28.7	29.1	AM2a_24hr_010877	2.7836	2.8695	18205.93	18229.93	24.00	1.43	1.43	1.43	2062	42		

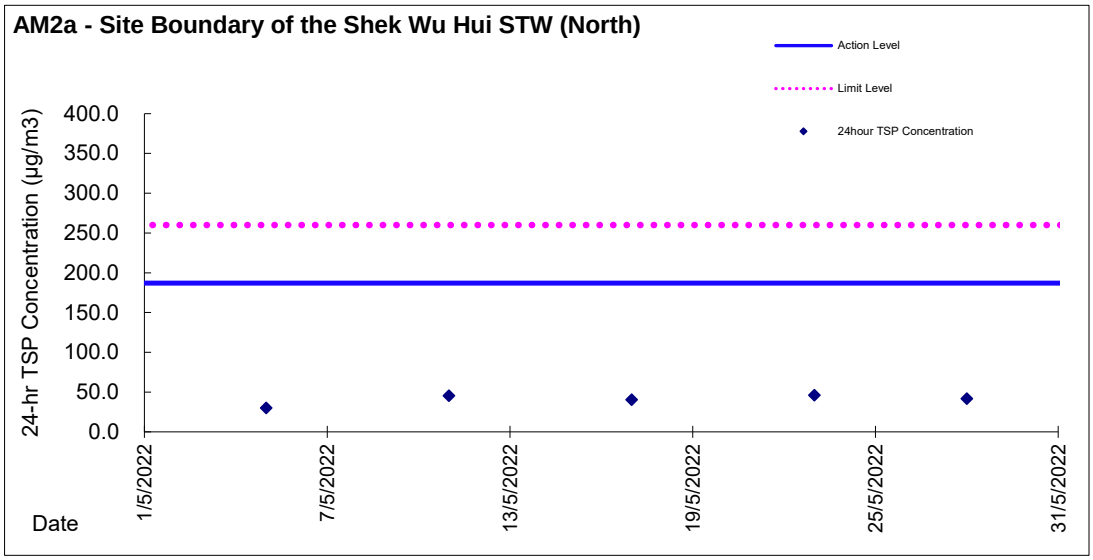
Graphic Presentation of TSP Result





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	40	907
Waterbirds	14	319

Table 2 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	159
Ardea cinerea	Grey Heron	蒼鷺	0
Ardeola bacchus	Chinese Pond Heron	池鷺	67
Phalacrocorax carbo	Great Cormorant	普通鸬鹚	0
Ardea alba	Great Egret	大白鷺	20
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	40
		Total	**286**

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	0.886	✓	✓
	Seasonal	0.778	✓	✓

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%	99%	Seasonal	95%	99%	
Little Egret	0.928	✓	✓	1.014	✓	✓	✓
Grey Heron	NA*						
Chinese Pond Heron	-0.117	✓	✓	-0.506	✓	✓	✓
Great Cormorant	NA*						
Great Egret	0.686	✓	✓	0.686	✓	✓	✓
Eastern Cattle Egret	0.191	✓	✓	0.956	✓	✓	✓

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 5.4c**.

5.4.5. In recent months, it is found that there are different constriction sites and human activities such as fishing around the project site. The photos are provided in **Appendix 5.4c.** 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.

5.4.6. Nesting and breeding behaviours were observed during the monitoring in reporting month. There was at least one nest (Asian Koel). Although the location of the nest is near from the project site but there was no significant impact observed on the nest in the month reported.

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

<u>Observations</u>

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

- Flying
- Foraging
- Soaring
- Resting
- Breeding

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

5.4.10.

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
T2 (PC3, PC4)	Construction activities such as Sheet-piling, generator & wielding works Scaffolding, sedimentation Tank, Excavation and crane	Human Activities such as Fishing, Landscape Planting Construction activities such as Sheet-piling, generator & wielding works Scaffolding, sedimentation Tank, Excavation and crane
PC5	Construction activities 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
Ardeola bacchus	Chinese Pond Heron	池鷺	X	67	+++++
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	X	40	+++++
Ardea cinerea	Grey Heron	蒼鷺	X	0	+
Ardea alba	Great Egret	大白鷺	X	20	+++
Egretta garzetta	Little Egret	小白鷺	X	159	+++++
Milvus migrans	Black Kite	黑鳶	X	6	+
Amaurornis phoenicurus	White-breasted Waterhen	白胸苦惡鳥	X	1	N/A
Himantopus himantopus	Black-winged Stilt	黑翅長腳鷸	X	1	+
Tringa stagnatilis	Marsh Sandpiper	澤鷸	X	3	+
Tringa nebularia	Common Greenshank	青腳鷸	X	3	+
Actitis hypoleucos	Common Sandpiper	磯鷸	X	7	+
Columba livia	Domestic Pigeon	原鴿		2	+
Spilopelia chinensis	Spotted Dove	珠頸斑鳩		62	+++++
Centropus sinensis	Greater Coucal	褐翅鴉鵑		1	N/A
Eudynamys scolopaceus	Asian Koel	噪鵑		10	+
Hierococcyx sparverioides	Large Hawk Cuckoo	大鷹鵑		1	N/A
Alcedo atthis	Common Kingfisher	普通翠鳥	X	1	+
Ceryle rudis	Pied Kingfisher	斑魚狗	X	10	+
Dicrurus macrocercus	Black Drongo	黑卷尾		1	+
Cyanopica cyanus	Azure-winged Magpie	灰喜鵲		1	N/A

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Urocissa erythroryncha	Red-billed Blue Magpie	紅嘴藍鵲		1	+
Pica pica	Eurasian Magpie	喜鵲		4	+
Corvus torquatus	Collared Crow	白頸鴉	X	1	N/A
Parus cinereus	Cinereous Tit	蒼背山雀		3	+
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯		41	+++
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		51	+++
Hirundo rustica	Barn Swallow	家燕		19	+++
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯		0	+
Prinia inornata	Plain Prinia	純色鷦鶯		7	N/A
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		12	+
Garrulax perspicillatus	Masked Laughingthrush	黑臉噪鶥		10	++
Zosterops japonicus	Japanese White-eye	暗綠繡眼鳥		51	++
Acridotheres cristatellus	Crested Myna	八哥		231	+++++
Acridotheres tristis	Common Myna	家八哥		2	N/A
Gracupica nigricollis	Black-collared Starling	黑領椋鳥		49	++++
Copsychus saularis	Oriental Magpie Robin	鵲鴝		1	+
Phoenicurus auroreus	Daurian Redstart	北紅尾鴝		0	+
Passer montanus	Eurasian Tree Sparrow	樹麻雀		15	+++++
Motacilla cinerea	Grey Wagtail	灰鶺鴒		1	N/A
Motacilla alba	White Wagtail	白鶺鴒		12	++

Remarks:

X: Waterbird ;

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

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

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

Waterbird Ecological Monitoring Result

Total Bird Abundance from Point Count						
Survey Information				Total Bird Abundance from Point Count		
No.	Date	Time	Tide Level	Individuals Recorded	Total	Species Recorded
1	6/5/2022	14:30	H	106	195	18
		17:00	L	89		20
2	13/5/2022	10:00	H	103	291	20
		12:30	L	188		22
3	17/5/2022	12:30	H	117	250	16
		15:00	L	133		21
4	27/5/2022	10:00	H	77	171	14
		12:30	L	94		14

Remarks: H: High Tide; L: Low Tide

Total Waterbird Abundance from Point Count					
Survey Information				Total Waterbird Abundance from Point Count	
No.	Date	Time	Tide Level	Individuals Recorded	Total
1	6/5/2022	14:30	H	38	58
		17:00	L	20	
2	13/5/2022	10:00	H	29	118
		12:30	L	89	
3	17/5/2022	12:30	H	54	112
		15:00	L	58	
4	27/5/2022	10:00	H	7	32
		12:30	L	25	

Remarks: H: High Tide; L: Low Tide

T-Test Analysis for All Waterbirds

Baseline Data

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

T-Test

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

H_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 = -2.132 (95% Confidence Level)

Crit. Value = -3.747 (99% Confidence Level)

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.132)	99% (-3.747)
Abundance	Monthly	0.886	✓	✓
	Seasonal	0.778	✓	✓

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					Average	Baseline Data	
Species Name	Common Name	Chinese Name	Week 1	Week2	Week 3	Week 4	Total		Avgrage (May)	Avg (Summer)
Egretta garzetta	Little Egret	小白鷺	29	54	55	21	159	40	21	20
Ardea cinerea	Grey Heron	蒼鷺	0	0	0	0	0	0	0	1
Ardeola bacchus	Chinese Pond Heron	池鷺	14	20	26	7	67	17	14	16
Phalacrocorax carbo	Great Cormorant	普通鸬鹚	0	0	0	0	0	0	0	0
Ardea alba	Great Egret	大白鷺	5	7	6	2	20	5	3	3
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	2	23	15	0	40	10	7	3

T-test Analysis for Representative Waterbirds from Point Count

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

H_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 = -2.132 (95% Confidence Level)

Crit. Value = -3747 (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	0.928	✓	✓	1.014	✓	✓	✓
Grey Heron	NA*						
Chinese Pond Heron	-0.117	✓	✓	-0.506	✓	✓	✓
Great Cormorant	NA*						
Great Egret	0.686	✓	✓	0.686	✓	✓	✓
Eastern Cattle Egret	0.191	✓	✓	0.956	✓	✓	✓

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 (Taken on 6 May 2022)	**Sheung Yue River – Survey Point 6 (Taken on 13 May 2022)**
Shek Sheung River (Taken on 17 May 2022)	**Ng Tung River - Survey Point 1 (Taken on 27 May 2022)**

Human Activities & Site Conditions

Construction Activities (Ng Tung River) **(Project-related, taken on 6 May 2022)**	**Construction Activities (Shek Sheung River)** **(Project-related, taken on 17 May 2022)**	**Construction Activities (Shek Sheung River)** **(Project-related, taken on 17 May 2022)**
Construction Activities (Sheung Yue River) **(Project-related, taken on 17 May 2022)**	**Human Activities (Ng Tung River)** **(Non-project-related, taken on 6 May 2022)**	**Human Activities (Ng Tung River)** **(Non-project-related, taken on 17 May 2022)**

Construction Activities (Ng Tung River) **(Non-Project-related, taken on 13 May 2022)**	**Construction Activities (Sheung Yue River)** **(Non-project-related, taken on 13 May 2022)**	**Human Activities (Sheung Yue River)** **(Non-project-related, taken on 6 May 2022)**
Construction Activities (Sheung Yue River) **(Non-project-related, taken on 6 May 2022)**	**Construction Activities (Sheung Yue River)** **(Non-project-related, taken on 27 May 2022)**	**Human Activities (Sheung Yue River)** **(Non-project-related, taken on 6 May 2022)**

Construction Activities (Ng Tung River) **(Non-project-related, taken on 6 May 2022)**	**Human Activities (Shek Sheung River)** **(Non- project-related, taken on 6 May 2022)**	**Construction Activities (Ng Tung River)** **(Non-project-related, taken on 13 May 2022)**

Waterbird Species

Great Egret	**Little Egret**	Eastern Cattle Egret
Waterbird in Sheung Yue River		

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	0.354	0.000	0.000	0.000	0.354	0.000	0.000	0.000	0.000	0.000	0.090
Jun											
Sub-total	4.028	0.000	0.000	0.000	4.028	1.118	2.370	0.000	0.000	0.000	0.542
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	4.028	0.000	0.000	0.000	4.028	1.118	2.370	0.000	0.000	0.000	0.542

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	0.00	0.000	0.000	0.000	0.016
Jun											
Sub-total	14.542	0.000	0.000	1.637	12.905	0.208	21.16	0.000	0.004	0.000	0.073
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	14.542	0.000	0.000	1.637	12.905	0.208	21.16	0.000	0.004	0.000	0.073

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											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	4289.85 T	0	0	0	4289.85 T	0	0	0.439	0.023	0	7.4T

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											
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0	0	0	0	0	0	0	0	0	0	0

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

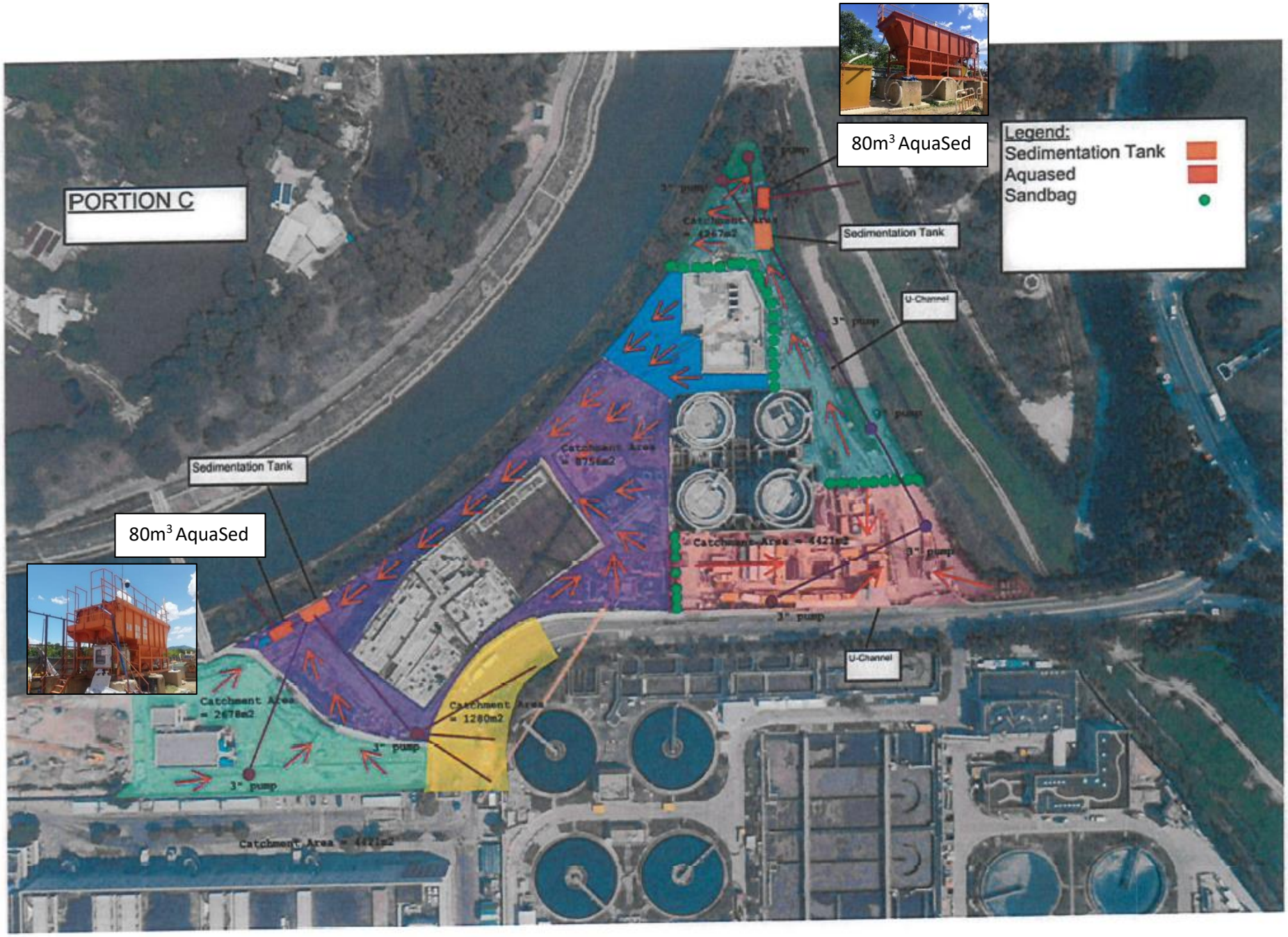
Reporting Period: May 2022

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
-	-	-	-	-	-	-	-	-

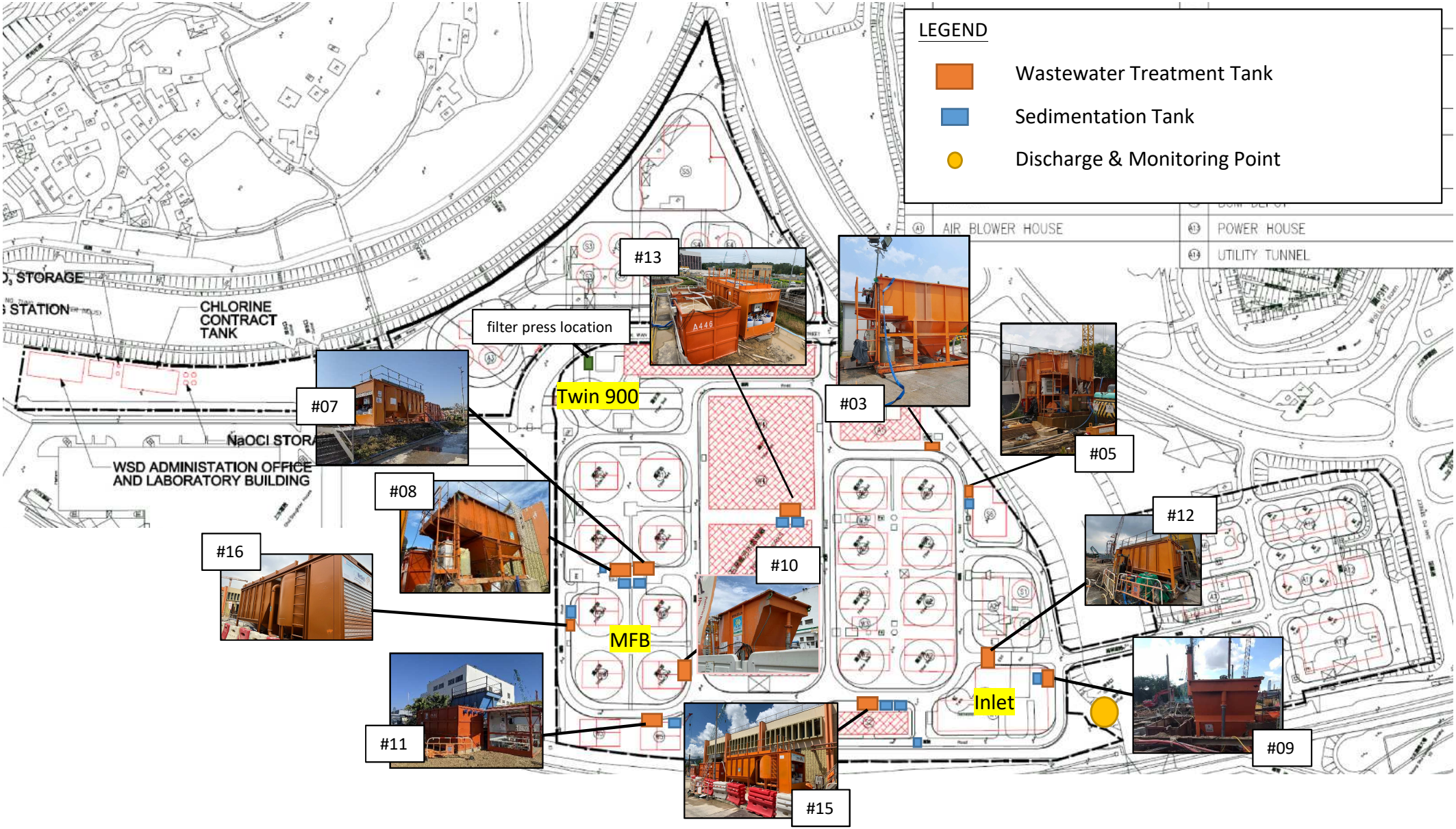
Appendix 7.1
Site Drainage Management Plans

DC/2018/06


PORTION C
80m³ AquaSed
Legend:
Sedimentation Tank
Aquased
Sandbag
Sedimentation Tank
U-Channel
Sedimentation Tank
80m³ AquaSed
U-Channel
Catchment Area = 2678m2
Catchment Area = 1280m2
3" pump
3" pump
3" pump
3" pump
3" pump
3" pump

DC/2018/07

Project: DC/2018/07
地盤廢水處理設施流程圖



DE/2018/03

Appendix G
Calculation of Dewatering Scheme

TDMP

Introduction

During the construction of the sidestream facilities, some waste water with mud might be created due to various reasons. Under the current regulations and other statutory requirements, it is not allowed to discharge waste water to the rainwater drains directly. In order to fulfil the requirement, a well-designed waste water discharge system is needed.

In this system, there are a pump and some pipelines to deliver the water to the discharge point from the collection points after treatments in the wetsep and precipitation points. This set of document is to describe the design of the system and other relevant information and it consists of 4 parts as follows:

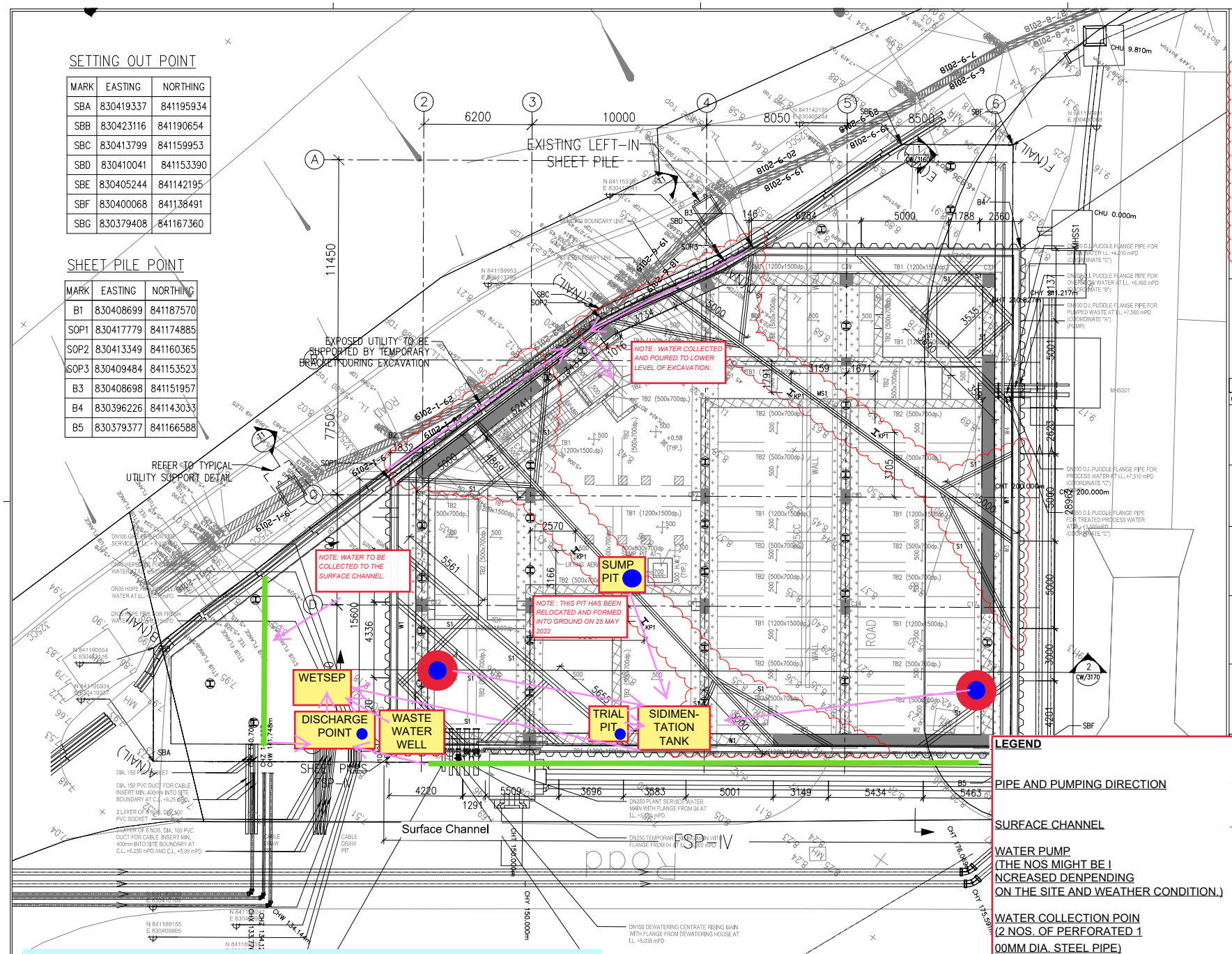
Page	Item(s)	Description
1	Cover Page	N/A
2	Introduction (this page)	
3	Plan for ELS work	It indicates -- via two perspectives-- the pipelines and the locations of pumps and wetsep. They are consistent to each other.
3	Aerial Photo	
4	Plan for ELS work	It indicates the area of catchment on the plan.
6	Calculation of Pumping Capacity of the Proposed Pump for Dewatering	By the Rational Method, the pumping capacity can be found thereby ensuring the pump selected is capable to deal with the dewatering requirement. Meanwhile, an operation point of the pump was pointed out on the pump curve, the pump head at the such flow rate can therefore be found.
7	Catalouge of Pump	It presents a set of information and characteristic of the pumps, I.c. the pump curve, input/output power, model, dimensions.
8	Conclusion	N/A

SETTING OUT POINT

MARK	EASTING	NORTHING
SBA	830419337	841195934
SBB	830423116	841190654
SBC	830413799	841159953
SBD	830410041	841153390
SBE	830405244	841142195
SBF	830400068	841138491
SBG	830379408	841167360

SHEET PILE POINT

MARK	EASTING	NORTHING
B1	830408699	841187570
SOP1	830417779	841174885
SOP2	830413349	841160365
SOP3	830409484	841153523
B3	830408698	841151957
B4	830396226	841143033
B5	830379377	841166588



*THIS PLAN IS FOR INDICATION ONLY

ELS WORKS PLAN
1:200

NOTES:
1. ALL SHEETPILE TO BE FSP-III UNLESS SPECIFIED OTHERWISE.

STEEL MEMBER SCHEDULE

STRUT/WALING LEVEL (mPD)	MARK	SIZE
+7.6	S1	203x203x86 kg/m UC
	W1	305x305x198 kg/m UC
	MS1	254x254x132 kg/m UC
+5.3	S2	254x254x132 kg/m UC
	W2	356x406x393 kg/m UC
	MS2	305x305x240 kg/m UC
+3.0	S3	254x254x132 kg/m UC
	W3	356x406x393 kg/m UC
	MS3	305x305x240 kg/m UC
+1.0	S4	254x254x132 kg/m UC
	W4	356x406x393 kg/m UC
	MS4	305x305x240 kg/m UC

NOTE: ALL STEEL MEMBER TO BE GRADE S355

Rev.	Description of Revision	Date	Ckd.
0	GENERAL ALTERNATIVE DESIGN	1/22	LKN

Client: DRAINAGE SERVICES DEPARTMENT GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

Supervisor: AECOM — AECOM Asia Company Ltd.

Contractor: JEC — The Jardine Engineering Corporation, Limited, 5/F Tower A Manulife Financial Centre, 223-231 Wai Yip Street Kwun Tong Kowloon Hong Kong

Sub-Contractor: 家榮雄記建築公司 Gar Wing Hung Kee Construction Co.

Sub-Contractor Designer: INFINIT— Infinite Engineering 無限工程

Date JAN 2022
Designed IR. YUEN TK
Checked PROF. LAM KONG NGAN
Date JAN 2022
Date JAN 2022

DE/2018/03

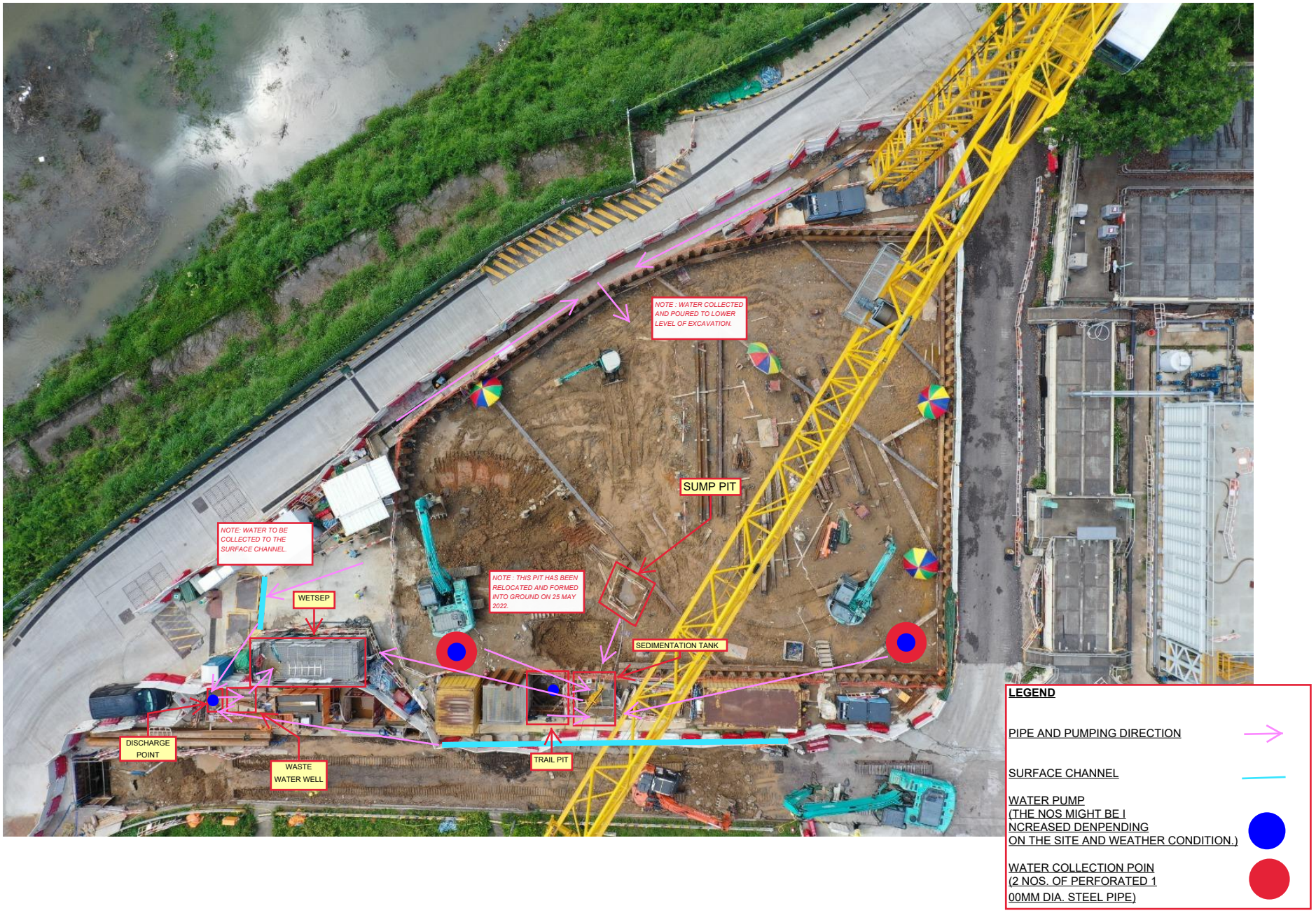
REATMENT FACILITIES
EFFLUENT POLISHING

LS WORKS

Drawing No.	Stage	Rev.
STF/ELS/00/006	D	1

5/27/2020 5:43:34 PM

AERIAL PHOTO

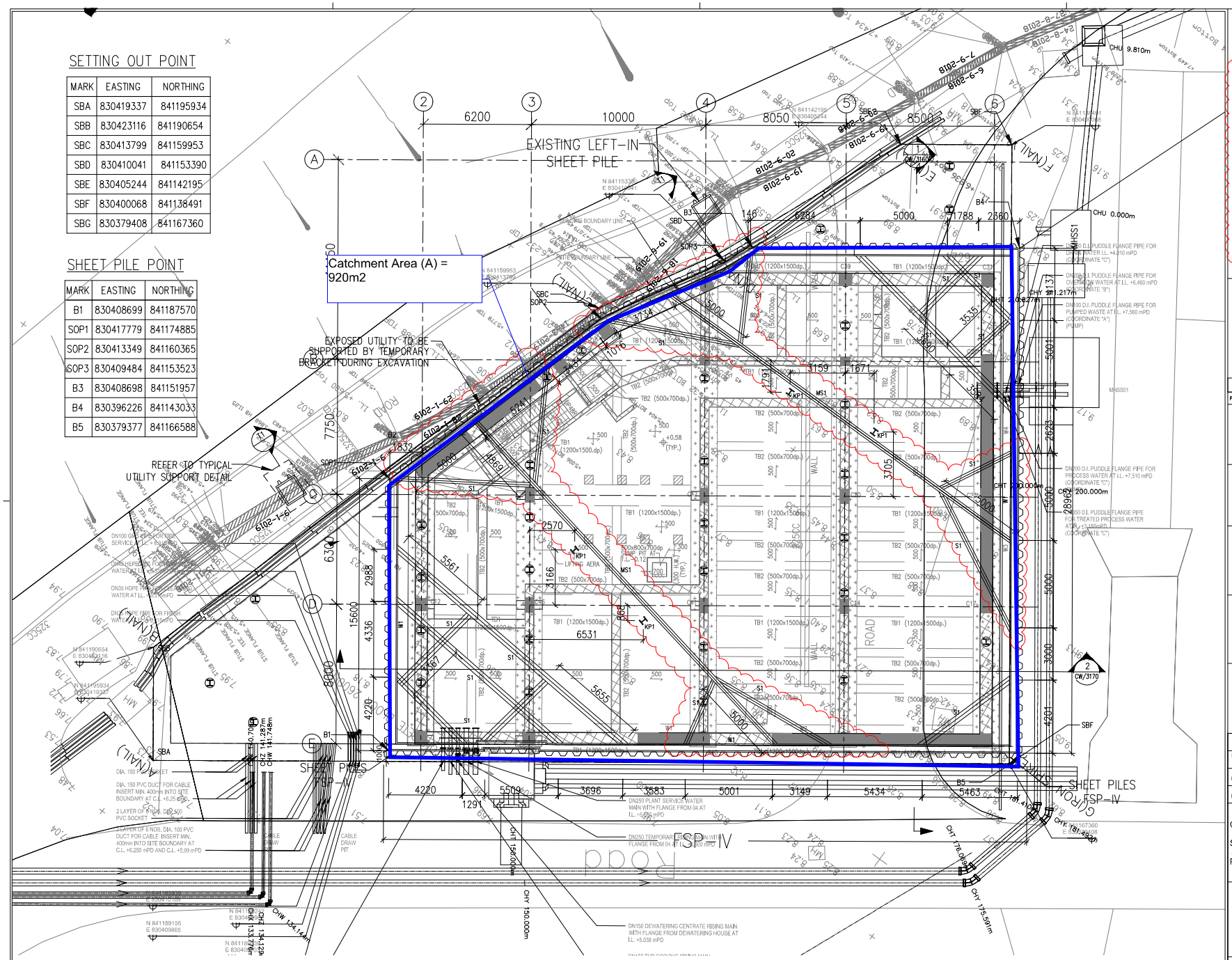


SETTING OUT POINT

MARK	EASTING	NORTHING
SBA	830419337	841195934
SBB	830423116	841190654
SBC	830413799	841159953
SBD	830410041	841153390
SBE	830405244	841142195
SBF	830400068	841138491
SBG	830379408	841167360

SHEET PILE POINT

MARK	EASTING	NORTHING
B1	830408699	841187570
SOP1	830417779	841174885
SOP2	830413349	841160365
SOP3	830409484	841153523
B3	830408698	841151957
B4	830396226	841143033
B5	830379377	841166588



ELS WORKS PLAN
1:200

NOTES:
1. ALL SHEETPILE TO BE FSP-III UNLESS SPECIFIED OTHERWISE.

STEEL MEMBER SCHEDULE

STRUT/WALING LEVEL (mPD)	MARK	SIZE
+7.6	S1	203x203x86 kg/m UC
	W1	305x305x198 kg/m UC
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	W2	356x406x393 kg/m UC
	MS2	305x305x240 kg/m UC
+3.0	S3	254x254x132 kg/m UC
	W3	356x406x393 kg/m UC
	MS3	305x305x240 kg/m UC
+1.0	S4	254x254x132 kg/m UC
	W4	356x406x393 kg/m UC
	MS4	305x305x240 kg/m UC

NOTE: ALL STEEL MEMBER TO BE GRADE S355

Rev.	Description of Revision	Date	Ckd.
0	GENERAL ALTERNATIVE DESIGN	1/22	LKN

Client
DRAINAGE SERVICES DEPARTMENT GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

Supervisor
AECOM
AECOM Asia Company Ltd.

Contractor
JEC
The Jardine Engineering Corporation, Limited
5/F Tower A Mantulin Financial Centre
22-24 Wai Yip Street Kwun Tong Kowloon Hong Kong

Sub-Contractor
家榮雄記建築公司
Gar Wing Hung Kee Construction Co.

Sub-Contractor Designer
INFINIT-
Infinite Engineering 無限工程

Scale in A1	Date
AS SHOWN	JAN 2022

Drawn & Prepared	Designed	Checked
JENSEN WONG	IR. YUEN TK	PROF. LAM KONG NGAN

Design Team Leader	Date
IR. SO ERIC	JAN 2022

Approved	Date
IR. TSANG YIN SANG	JAN 2022

Project
CONTRACT NO. DE/2018/03
SIDESTREAM TREATMENT FACILITIES SHEK WO HUI EFFLUENT POLISHING PLANT

Title
PLAN FOR ELS WORKS

Drawing No.	Stage	Rev.
STF/ELS/00/006	D	1

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Caculation of Pumping Capacity of Proposed Pump for Dewatering

The runoff estimation is done by the Rational Method.

$$Q_p = 0.278\ C\ i\ A$$

where Q_p = peak runoff in m^3/s
C = runoff coefficient (dimensionless)
i = rainfall intensity in mm/hr
A = catchment area in km^2

Surface Characteristics	*Runoff coefficient, C**
Asphalt	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Grassland (heavy soil**)	
Flat	0.13 - 0.25
Steep	0.25 - 0.35
Grassland (sandy soil)	
Flat	0.05 - 0.15
Steep	0.15 - 0.20

(Stormwater Drainage Manual Section 7.5.2)

Runoff Coefficient (C)	Rainfall Intensity (i)	Catchment Area (A)	Q_p
0.8	70mm/hr (Black hoist)	920m^2	0.23m^3/min

Qp=0.23 m^3/min << Qc = 0.75m^3/min

Therefore, min. <u>one</u> pump (KTZ33.7) is provided for the temporary drainage system.

KTZ –Flagship Line–

The KTZ-series is a submersible three-phase cast iron high head heavy-duty drainage pump. The cast iron body with high-chromium cast iron impeller enables it to withstand demanding conditions found in construction, aggregate and mining applications. The top discharge, side flow design assures efficient motor cooling even when it operates with its motor exposed to air. The slim design allows the pump to be placed in a confined space. The discharge direction is selectable between vertical and inclined, which prevents folding or bending of the discharge hose. The pump with 7.5 to 15kW motor incorporates seal pressure relief ports that prevent the pumping pressure from applying to the shaft seal.

KTZ32.2 KTZ33.7 KTZ47.5 KTZ611

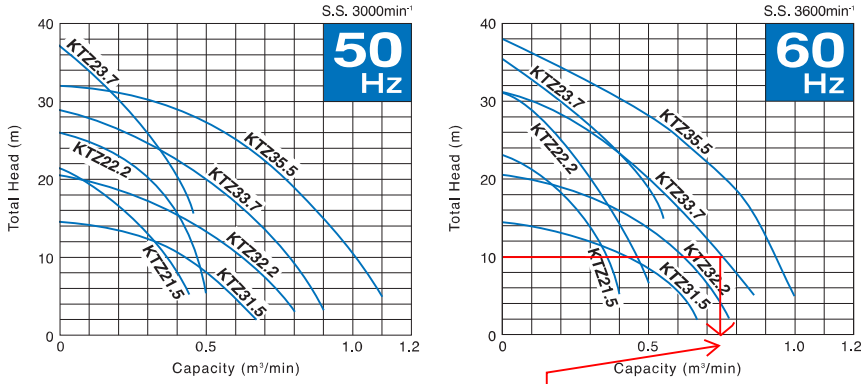
Discharge Bore mm	Model	Motor Output kW	Phase	Starting Method	Solids Passage mm	Dry Weight*2 kg	Cable Length m
50	**KTZ21.5**	1.5	Three	D.O.L.	8.5	34	8
50	**KTZ22.2**	2.2		D.O.L.	8.5	35	8
50	**KTZ23.7**	3.7		D.O.L.*1	8.5	60	8
80	**KTZ31.5**	1.5		D.O.L.	8.5	33	8
80	**KTZ32.2**	2.2		D.O.L.	8.5	34	8
80	**KTZ33.7**	3.7		D.O.L.*1	8.5	60	8
80	**KTZ35.5**	5.5		D.O.L.*1	8.5	74	8
100	**KTZ43.7**	3.7		D.O.L.*1	8.5	60	8
100	**KTZ45.5**	5.5		D.O.L.*1	8.5	74	8
100	**KTZ47.5**	7.5		D.O.L.*1	12	101	8
100	**KTZ411**	11		D.O.L.*1	12	133	8
100	**KTZ415**	15		D.O.L.*1	12	146	8
150	**KTZ67.5**	7.5		D.O.L.*1	20	100	8
150	**KTZ611**	11		D.O.L.*1	20	133	8
150	**KTZ615**	15		D.O.L.*1	20	147	8

*1 Star-Delta available upon request
*2 Weights excluding cable

Performance Curves

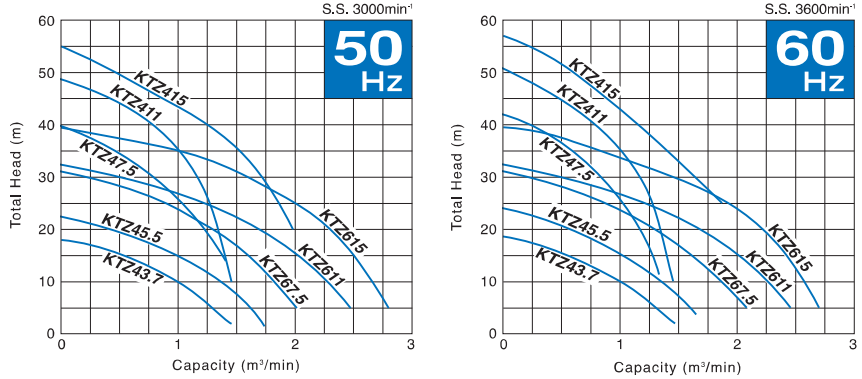
KTZ33.7 is proposed for the temporary drainage system

< 50·80mm >



Qc = 0.75m3/min

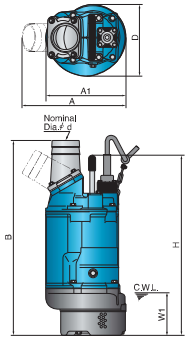
< 100·150mm >



Dimensions

Unit: mm

Model	d	A	A1	B	D	H	W1
KTZ21.5	50	270	235	543	216	548	120
KTZ22.2	50	270	235	563	216	568	120
KTZ23.7	50	342	283	675	252	637	150
KTZ31.5	80	276	235	543	216	548	120
KTZ32.2	80	276	235	563	216	568	120
KTZ33.7	80	347	283	675	252	637	150
KTZ35.5	80	358	306	719	258	688	150
KTZ43.7	100	367	283	690	252	637	150
KTZ45.5	100	377	306	734	258	688	150
KTZ47.5	100	399	330	812	314	697	190
KTZ411	100	428	374	864	350	740	190
KTZ415	100	428	374	934	350	810	190
KTZ67.5	150	445	361	875	314	697	190
KTZ611	150	457	374	884	350	740	190
KTZ615	150	457	374	954	350	810	190



Conclusion
In this set of document, the design of waste water discharge system is presented.

After the assessment of the pump with all practical and environment factors taken into account, we found a pump (model: KTZ33.7) suitable for discharging the waster water created during the construction.

For any enquire, please contact GWHK.

This is the end of the report.

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

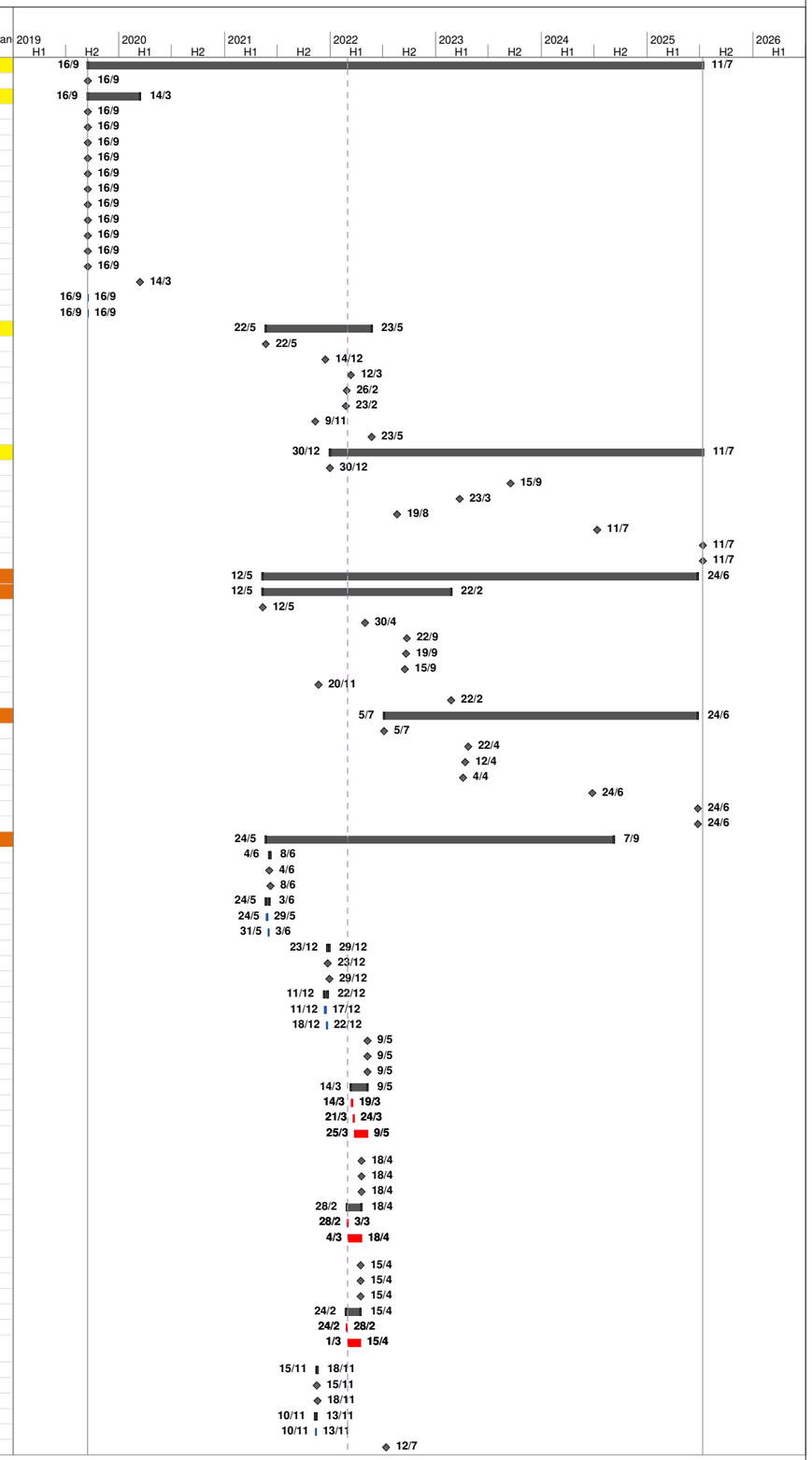
Construction Programme of Individual Contracts

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

Updated Programme (Status Date: 31/03/2022)

群利－俊和聯營體
KL－CW JV

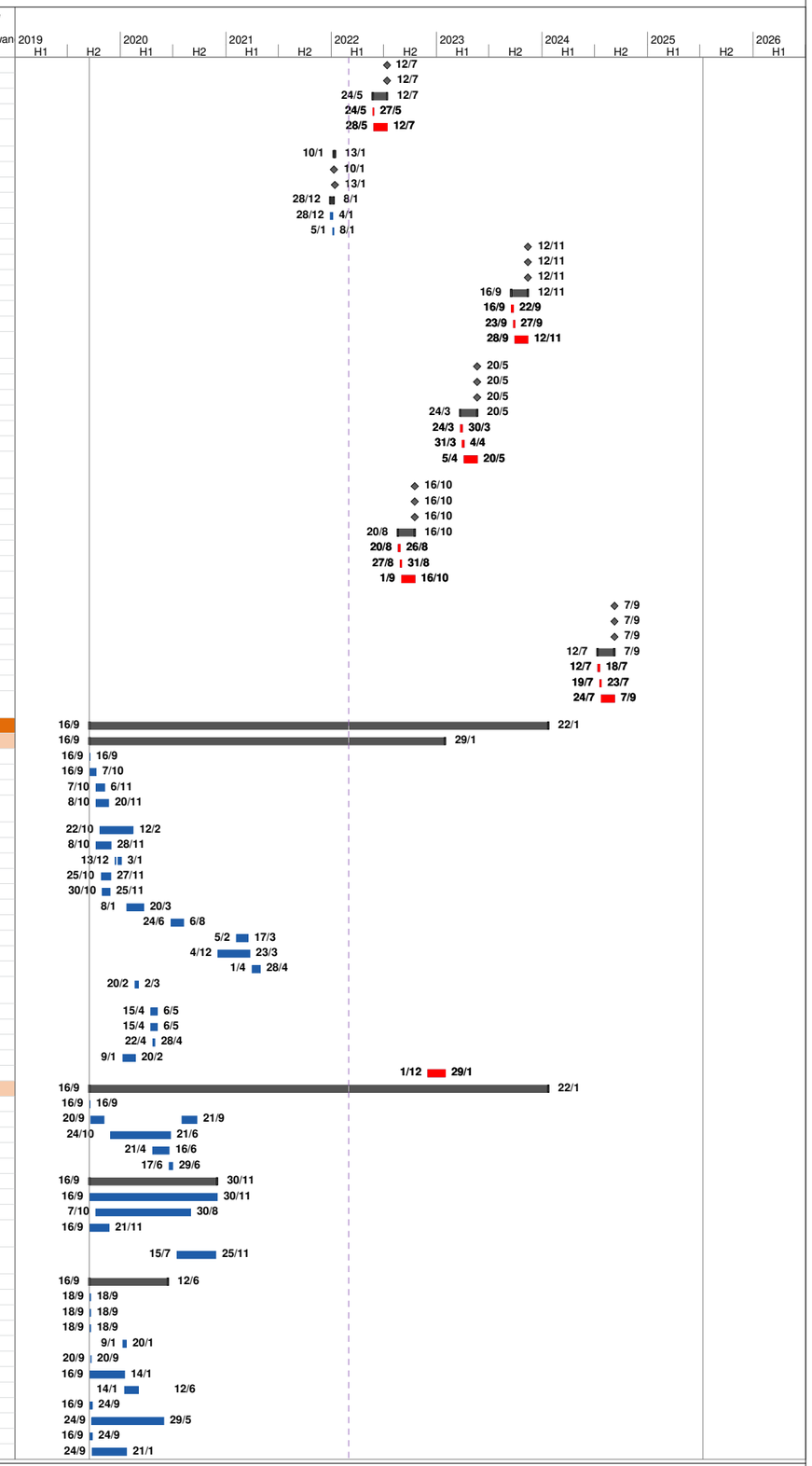
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successc	% Comple	Time Risk Allowan
1	**CD-00000**		**Contract Dates**			**2126 days**	**Mon 16/9/19**	**Fri 11/7/25**	**Mon 16/9/19**	**NA**	**0 days**			**0%**	
2	CD-01000		Starting Date			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days		4,5FS+181	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**	**0 days**			**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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	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	0 days	2FS+181 days	477	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	0 days	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	0 days	2		100%	
18	**CKD-00000**		**Key Date (cal. day)**			**366 days**	**Sat 22/5/21**	**Mon 23/5/22**	**NA**	**NA**	**0 days**			**0%**	
19	CKD-01000		KD1A (613.5days after starting date)			0 days	Sat 22/5/21	Sat 22/5/21	NA	NA	0 days	2FS+614.5 days,36FF	56	0%	
20	CKD-02000		KD2A (820 days after starting date)			0 days	Tue 14/12/21	Tue 14/12/21	NA	NA	-137 days	2FS+821 days,37FF	62	0%	
21	CKD-03000		KD3A (908 days after starting date)			0 days	Sat 12/3/22	Sat 12/3/22	NA	NA	-194 days	2FS+909 days,38FF	68	0%	
22	CKD-04000		KD3B (894 days after starting date)			0 days	Sat 26/2/22	Sat 26/2/22	NA	NA	-205 days	2FS+895 days,39FF	75	0%	
23	CKD-05000		KD3C (891 days after starting date)			0 days	Wed 23/2/22	Wed 23/2/22	NA	NA	-204 days	2FS+892 days,40FF	81	0%	
24	CKD-06000		KD3D (785 days after starting date)			0 days	Tue 9/11/21	Tue 9/11/21	NA	NA	-11 days	2FS+786 days,41FF	87	0%	
25	CKD-07000		KD3E (980 days after starting date)			0 days	Mon 23/5/22	Mon 23/5/22	NA	NA	-275 days	2FS+981 days,42FF	92	0%	
26	**CCD-00000**		**Completion Date (cal. day)**			**1289 days**	**Thu 30/12/21**	**Fri 11/7/25**	**NA**	**NA**	**0 days**			**0%**	
27	CCD-01000		Section 1 of Works (836 days after starting date)			0 days	Thu 30/12/21	Thu 30/12/21	NA	NA	-187 days	2FS+837 days,44FF	98	0%	
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	0 days	2FS+1461 days,45FF	104	0%	
29	CCD-03000		Section 3 of Works (1,284 days after starting date)			0 days	Thu 23/3/23	Thu 23/3/23	NA	NA	-20 days	2FS+1285 days,46FF	111	0%	
30	CCD-04000		Section 4 of Works (1,068 days after starting date)			0 days	Fri 19/8/22	Fri 19/8/22	NA	NA	-228 days	2FS+1069 days,47FF	118	0%	
31	CCD-05000		Section 5 of Works (1,760 days after starting date)			0 days	Thu 11/7/24	Thu 11/7/24	NA	NA	0 days	2FS+1761 days,48FF	32,33,125	0%	
32	CCD-06000		Defect Liability Period			365 days	Fri 12/7/24	Fri 11/7/25	NA	NA	0 days	31		0%	
33	CCD-07000		Soft Landscape Establishment Works			365 days	Fri 12/7/24	Fri 11/7/25	NA	NA	0 days	31		0%	
34	**PD-00000**	*	**Planned Completion - Key Date (cal. day)**			**1505 days**	**Wed 12/5/21**	**Tue 24/6/25**	**Wed 12/5/21**	**NA**	**0 days**			**3%**	
35	**PKD-00000**	*	**Planned Completion - Key Dates**			**652 days**	**Wed 12/5/21**	**Wed 22/2/23**	**Wed 12/5/21**	**NA**	**-288 days**			**99%**	
36	PKD-01000	KD1A	KD1A			1 day	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	0 days	258FF	19FF	100%	
37	PKD-02000	KD2A	KD2A			0 days	Sat 30/4/22	Sat 30/4/22	NA	NA	-151 days	588FF,592FF,614FF,610FF,606FF,601FF,596FF	20FF	0%	
38	PKD-03000	KD3A	KD3A			0 days	Thu 22/9/22	Thu 22/9/22	NA	NA	-207 days	284FF	21FF	0%	
39	PKD-04000	KD3B	KD3B			0 days	Mon 19/9/22	Mon 19/9/22	NA	NA	-277 days	310FF	22FF	0%	
40	PKD-05000	KD3C	KD3C			0 days	Thu 15/9/22	Thu 15/9/22	NA	NA	-212 days	331FF	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	0 days	363FF	24FF	100%	
42	PKD-07000	KD3E	KD3E			0 days	Wed 22/2/23	Wed 22/2/23	NA	NA	-288 days	378FF,386FF,394FF,402FF,430FF,436FF,444FF,451FF,458FF,464FF,346FF	25FF	0%	
43	**PCD-00000**	*	**Planned Completion - Section of the Works (cal. day)**			**1085 days**	**Tue 5/7/22**	**Tue 24/6/25**	**NA**	**NA**	**-203 days**			**0%**	
44	PCD-01000	SW1	Section 1 of Works			0 days	Tue 5/7/22	Tue 5/7/22	NA	NA	-203 days	474FF,515FF,523FF,542FF,259FF	27FF	0%	
45	PCD-02000	SW2	Section 2 of Works			0 days	Sat 22/4/23	Sat 22/4/23	NA	NA	132 days	594FF,615FF	28FF	0%	
46	PCD-03000	SW3	Section 3 of Works			0 days	Wed 12/4/23	Wed 12/4/23	NA	NA	-103 days	179FF,333FF,347FF,365FF,387FF,395FF,403FF,287FF,312FF	558,29FF	0%	
47	PCD-04000	SW4	Section 4 of Works			0 days	Tue 4/4/23	Tue 4/4/23	NA	NA	-242 days	423FF,475FF,505FF,507FF,508FF,549FF,506FF,504FF,288FF,313FF,334FF	30FF	0%	
48	PCD-05000	SW5	Section 5 of Works			0 days	Mon 24/6/24	Mon 24/6/24	NA	NA	0 days	261FF,289FF,314FF,335FF,349FF,367FF,379FF,388FF,396FF,404FF,410FF	49,50,31FF	0%	
49	PCD-06000	DLP	Defect Liability Period			365 days	Tue 25/6/24	Tue 24/6/25	NA	NA	0 days	48		0%	
50	PCD-07000		Soft Landscape Establishment Works			365 days	Tue 25/6/24	Tue 24/6/25	NA	NA	0 days	48		0%	
51	**DE-00000**		**Delaying Events Other than Change of Works Information to be considered**			**972 days**	**Mon 24/5/21**	**Sat 7/9/24**	**Mon 24/5/21**	**NA**	**0 days**			**7%**	
52	**IWKD1A-01000**		**Inclement Weather to KD1A**			**3 days**	**Fri 4/6/21**	**Tue 8/6/21**	**Fri 4/6/21**	**Tue 8/6/21**	**0 days**			**100%**	
53	IWKD1A-01010		Delay and Disruption of Works before March 2022			0 days	Fri 4/6/21	Fri 4/6/21	Fri 4/6/21	Fri 4/6/21	0 days	57	54	100%	
54	IWKD1A-01020	KD1A	Delay and Disruption of Works for the month of March 2022			0 days	Tue 8/6/21	Tue 8/6/21	Tue 8/6/21	Tue 8/6/21	0 days	53		100%	
55	**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**	**0 days**			**100%**	
56	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	0 days	19	57	100%	
57	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	0 days	56	53	100%	
58	**IWKD2A-01000**		**Inclement Weather to KD2A**			**3 days**	**Thu 23/12/21**	**Wed 29/12/21**	**Thu 23/12/21**	**Wed 29/12/21**	**0 days**			**100%**	
59	IWKD2A-01010		Delay and Disruption of Works before March 2022			0 days	Thu 23/12/21	Thu 23/12/21	Thu 23/12/21	Thu 23/12/21	0 days	63	60	100%	
60	IWKD2A-01020	KD2A	Delay and Disruption of Works for the month of March 2022			0 days	Wed 29/12/21	Wed 29/12/21	Wed 29/12/21	Wed 29/12/21	0 days	59		100%	
61	**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**	**0 days**			**100%**	
62	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	0 days	20	63	100%	
63	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	0 days	62	59	100%	
64	**IWKD3A-01000**		**Inclement Weather to KD3A**			**0 days**	**Mon 9/5/22**	**Mon 9/5/22**	**NA**	**NA**	**-55 days**			**0%**	
65	IWKD3A-01010		Delay and Disruption of Works before March 2022			0 days	Mon 9/5/22	Mon 9/5/22	NA	NA	-55 days	70	66	0%	
66	IWKD3A-01020	KD3A	Delay and Disruption of Works for the month of March 2022			0 days	Mon 9/5/22	Mon 9/5/22	NA	NA	-55 days	65		0%	
67	**OEKD3A-01000**		**Other Events affected to KD3A**			**43 days**	**Mon 14/3/22**	**Mon 9/5/22**	**NA**	**NA**	**-58 days**			**0%**	
68	OEKD3A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Mon 14/3/22	Sat 19/3/22	NA	NA	-58 days	21	69	0%	
69	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	NA	NA	-58 days	68	70	0%	
70	OEKD3A-01030		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Fri 25/3/22	Mon 9/5/22	NA	NA	-71 days	69	65	0%	
71	**IWKD3B-01000**		**Inclement Weather to KD3B**			**0 days**	**Mon 18/4/22**	**Mon 18/4/22**	**NA**	**NA**	**-57 days**			**0%**	
72	IWKD3B-01010		Delay and Disruption of Works before March 2022			0 days	Mon 18/4/22	Mon 18/4/22	NA	NA	-57 days	76	73	0%	
73	IWKD3B-01020	KD3B	Delay and Disruption of Works for the month of March 2022			0 days	Mon 18/4/22	Mon 18/4/22	NA	NA	-57 days	72		0%	
74	**OEKD3B-01000**		**Other Events affected to KD3B**			**39 days**	**Mon 28/2/22**	**Mon 18/4/22**	**NA**	**NA**	**-57 days**			**0%**	
75	OEKD3B-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Mon 28/2/22	Thu 3/3/22	NA	NA	-56 days	22	76	0%	
76	OEKD3B-01020		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Fri 4/3/22	Mon 18/4/22	NA	NA	-72 days	75	72	0%	
77	**IWKD3C-01000**		**Inclement Weather to KD3C**			**0 days**	**Fri 15/4/22**	**Fri 15/4/22**	**NA**	**NA**	**-49 days**			**0%**	
78	IWKD3C-01010		Delay and Disruption of Works before March 2022			0 days	Fri 15/4/22	Fri 15/4/22	NA	NA	-49 days	82	79	0%	
79	IWKD3C-01020	KD3C	Delay and Disruption of Works for the month of March 2022			0 days	Fri 15/4/22	Fri 15/4/22	NA	NA	-49 days	78		0%	
80	**OEKD3C-01000**		**Other Events affected to KD3C**			**42 days**	**Thu 24/2/22**	**Fri 15/4/22**	**NA**	**NA**	**-49 days**			**0%**	
81	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	NA	NA	-46 days	23	82	0%	
82	OEKD3C-01020		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Tue 1/3/22	Fri 15/4/22	NA	NA	-59 days	81	78	0%	
83	**IWKD3D-01000**		**Inclement Weather to KD3D**			**3 days**	**Mon 15/11/21**	**Thu 18/11/21**	**Mon 15/11/21**	**Thu 18/11/21**	**0 days**			**100%**	
84	IWKD3D-01010		Delay and Disruption of Works before March 2022			0 days	Mon 15/11/21	Mon 15/11/21	Mon 15/11/21	Mon 15/11/21	0 days	87	85	100%	
85	IWKD3D-01020	KD3D	Delay and Disruption of Works for the month of March 2022			0 days	Thu 18/11/21	Thu 18/11/21	Thu 18/11/21	Thu 18/11/21	0 days	84		100%	
86	**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**	**0 days**			**100%**	
87	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	0 days	24	84	100%	
88	**IWKD3E-01000**		**Inclement Weather to KD3E**			**0 days**	**Tue 12/7/22**	**Tue 12/7/22**	**NA**	**NA**	**-52 days**			**0%**	



Critical Split Task Milestone Summary Critical

Updated Programme (Status Date: 31/03/2022)

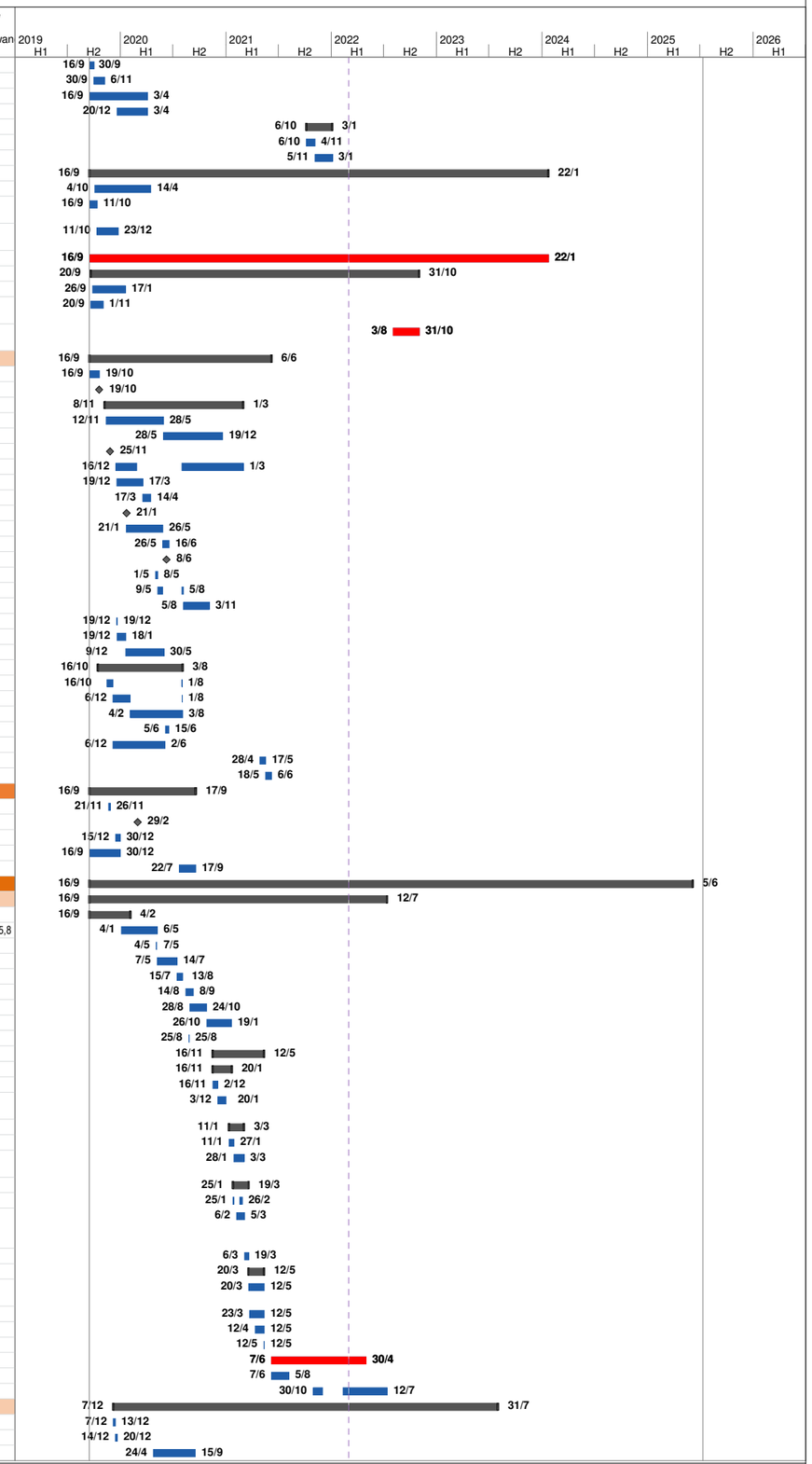
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successc	% Comple	Time Risk Allowan
89	IWKD3E-01010		Delay and Disruption of Works before March 2022			0 days	Tue 12/7/22	Tue 12/7/22	NA	NA	-52 days	93	90	0%	
90	IWKD3E-01020	KD3E	Delay and Disruption of Works for the month of March 2022			0 days	Tue 12/7/22	Tue 12/7/22	NA	NA	-52 days	89		0%	
91	**OEKD3E-01000**		**Other Events affected to KD3E**			**41 days**	**Tue 24/5/22**	**Tue 12/7/22**	**NA**	**NA**	**-52 days**			**0%**	
92	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	NA	NA	-48 days	25	93	0%	
93	OEKD3E-01020		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Sat 28/5/22	Tue 12/7/22	NA	NA	-63 days	92	89	0%	
94	**IWSW1-01000**		**Inclement Weather to Section 1 of the Works**			**3 days**	**Mon 10/1/22**	**Thu 13/1/22**	**Mon 10/1/22**	**Thu 13/1/22**	**0 days**			**100%**	
95	IWSW1-01010		Delay and Disruption of Works before March 2022			0 days	Mon 10/1/22	Mon 10/1/22	Mon 10/1/22	Mon 10/1/22	0 days	99	96	100%	
96	IWSW1-01020	SW1	Delay and Disruption of Works for the month of March 2022			0 days	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	0 days	95		100%	
97	**OESW1-01000**		**Other Events affected to Section 1 of the Works**			**10 days**	**Tue 28/12/21**	**Sat 8/1/22**	**Tue 28/12/21**	**Sat 8/1/22**	**0 days**			**100%**	
98	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	0 days	27	99	100%	
99	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	0 days	98	95	100%	
100	**IWSW2-01000**		**Inclement Weather to Section 2 of the Works**			**0 days**	**Sun 12/11/23**	**Sun 12/11/23**	**NA**	**NA**	**-58 days**			**0%**	
101	IWSW2-01010		Delay and Disruption of Works before March 2022			0 days	Sun 12/11/23	Sun 12/11/23	NA	NA	-58 days	106	102	0%	
102	IWSW2-01020	SW2	Delay and Disruption of Works for the month of March 2022			0 days	Sun 12/11/23	Sun 12/11/23	NA	NA	-58 days	101		0%	
103	**OESW2-01000**		**Other Events affected to Section 2 of the Works**			**46 days**	**Sat 16/9/23**	**Sun 12/11/23**	**NA**	**NA**	**-62 days**			**0%**	
104	OESW2-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 16/9/23	Fri 22/9/23	NA	NA	-62 days	28	105	0%	
105	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	-62 days	104	106	0%	
106	OESW2-01030		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Thu 28/9/23	Sun 12/11/23	NA	NA	-72 days	105	101	0%	
107	**IWSW3-01000**		**Inclement Weather to Section 3 of the Works**			**0 days**	**Sat 20/5/23**	**Sat 20/5/23**	**NA**	**NA**	**-57 days**			**0%**	
108	IWSW3-01010		Delay and Disruption of Works before March 2022			0 days	Sat 20/5/23	Sat 20/5/23	NA	NA	-57 days	113	109	0%	
109	IWSW3-01020	SW3	Delay and Disruption of Works for the month of March 2022			0 days	Sat 20/5/23	Sat 20/5/23	NA	NA	-57 days	108		0%	
110	**OESW3-01000**		**Other Events affected to Section 3 of the Works**			**45 days**	**Fri 24/3/23**	**Sat 20/5/23**	**NA**	**NA**	**-59 days**			**0%**	
111	OESW3-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Fri 24/3/23	Thu 30/3/23	NA	NA	-59 days	29	112	0%	
112	OESW3-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Fri 31/3/23	Tue 4/4/23	NA	NA	-59 days	111	113	0%	
113	OESW3-01030		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Wed 5/4/23	Sat 20/5/23	NA	NA	-72 days	112	108	0%	
114	**IWSW4-01000**		**Inclement Weather to Section 4 of the Works**			**0 days**	**Sun 16/10/22**	**Sun 16/10/22**	**NA**	**NA**	**-139 days**			**0%**	
115	IWSW4-01010	SW4	Delay and Disruption of Works before March 2022			0 days	Sun 16/10/22	Sun 16/10/22	NA	NA	-139 days	120	116	0%	
116	IWSW4-01020		Delay and Disruption of Works for the month of March 2022			0 days	Sun 16/10/22	Sun 16/10/22	NA	NA	-139 days	115		0%	
117	**OESW4-01000**		**Other Events affected to Section 4 of the Works**			**46 days**	**Sat 20/8/22**	**Sun 16/10/22**	**NA**	**NA**	**-139 days**			**0%**	
118	OESW4-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 20/8/22	Fri 26/8/22	NA	NA	-139 days	30	119	0%	
119	OESW4-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 27/8/22	Wed 31/8/22	NA	NA	-139 days	118	120	0%	
120	OESW4-01030		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Thu 1/9/22	Sun 16/10/22	NA	NA	-171 days	119	115	0%	
121	**IWSW5-01000**		**Inclement Weather to Section 5 of the Works**			**0 days**	**Sat 7/9/24**	**Sat 7/9/24**	**NA**	**NA**	**-62 days**			**0%**	
122	IWSW5-01010		Delay and Disruption of Works before March 2022			0 days	Sat 7/9/24	Sat 7/9/24	NA	NA	-62 days	127	123	0%	
123	IWSW5-01020	SW5	Delay and Disruption of Works for the month of March 2022			0 days	Sat 7/9/24	Sat 7/9/24	NA	NA	-62 days	122		0%	
124	**OESW5-01000**		**Other Events affected to Section 5 of the Works**			**50 days**	**Fri 12/7/24**	**Sat 7/9/24**	**NA**	**NA**	**-62 days**			**0%**	
125	OESW5-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Fri 12/7/24	Thu 18/7/24	NA	NA	-59 days	31	126	0%	
126	OESW5-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Fri 19/7/24	Tue 23/7/24	NA	NA	-59 days	125	127	0%	
127	OESW5-01030		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Wed 24/7/24	Sat 7/9/24	NA	NA	-73 days	126	122	0%	
128	**SUB-00000**		**Submissions (cal. day)**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**	**0 days**			**88%**	
129	**SUBS-00000**		**Subletting Package**			**1232 days**	**Mon 16/9/19**	**Sun 29/1/23**	**Mon 16/9/19**	**NA**	**0 days**			**92%**	
130	SUBS-01000		Prepare & Submit Subletting Procedures			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2	131	100%	
131	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	0 days	130	133,135,13	100%	
132	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	0 days	131		100%	
133	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	0 days	131	470	100%	
134	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	0 days	131	222	100%	
135	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	0 days	131	136SS+15	100%	
136	SUBS-07000		Subletting for Pre-bored Socketed Steel H-Pile			13.98 days	Fri 13/12/19	Fri 3/1/20	Fri 13/12/19	Fri 3/1/20	0 days	135SS+15 days	570,270,29	100%	
137	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	0 days	135SS+15 days	141,139,15	100%	
138	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	0 days	131	240,275,30	100%	
139	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	0 days	137	240,275,30	100%	
140	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	0 days	137	243	100%	
141	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	0 days	137	324,576,38	100%	
142	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	0 days	2	246,249,25	100%	
143	SUBS-14000		Subletting for ABWF & BS Works	268 , 338, (204)		28 days	Thu 1/4/21	Wed 28/4/21	Thu 1/4/21	Wed 28/4/21	0 days	131	259,287,31	100%	
144	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	0 days	131	470,145	100%	
145	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	0 days	144		100%	
146	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	0 days	137	509,506,50	100%	
147	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	0 days	131	477	100%	
148	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	0 days	131	160	100%	
149	SUBS-20000		Subletting for Hard Landscape and Soft Landscape			60 days	Thu 1/12/22	Sun 29/1/23	NA	NA	0 days	131	559,551,55	0%	
150	**SUBA-00000**		**Statutory Submission, Submission & Approval**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**	**0 days**			**82%**	
151	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	0 days	2	266	100%	
152	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	0 days	2	222	100%	
153	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	0 days	137	240,275,30	100%	
154	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	0 days	2	155,470	100%	
155	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	0 days	154	470	100%	
156	SUBA-06000		TTA Management			442 days	Mon 16/9/19	Mon 30/11/20	Mon 16/9/19	Mon 30/11/20	0 days			100%	
157	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	0 days		595	100%	
158	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	0 days	2FS+21 days		100%	
159	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	0 days	2	470	100%	
160	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	0 days	148	597	100%	
161	**SUBA-07000**		**Environmental Aspect Submissions**			**271 days**	**Mon 16/9/19**	**Fri 12/6/20**	**Mon 16/9/19**	**Fri 12/6/20**	**0 days**	**2**		**100%**	
162	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	0 days	2	266	100%	
163	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	0 days	2	266	100%	
164	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	0 days	2	266	100%	
165	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	0 days	2	266	100%	
166	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	0 days	2	266	100%	
167	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	0 days	2	168	100%	
168	SUBA-07070		Approval of Construction Noise Permits			48 days	Tue 14/1/20	Fri 12/6/20	Tue 14/1/20	Fri 12/6/20	0 days	167	266	100%	
169	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	0 days	2		100%	
170	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	0 days		266	100%	
171	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	0 days	2	172	100%	
172	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	0 days	171	266	100%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/03/2022)

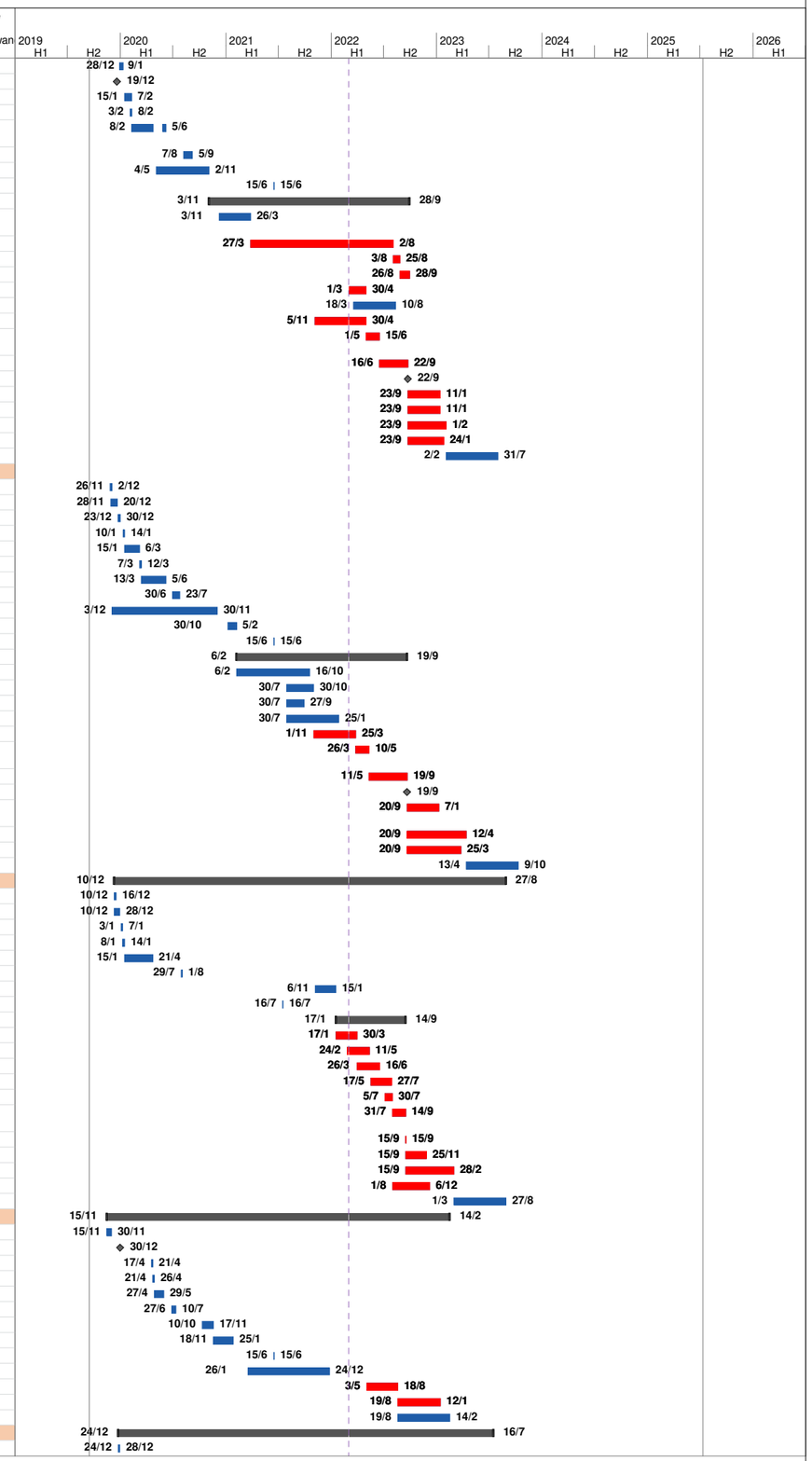
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successo	% Comple	Time Risk Allowan
173	SUBA-07120		Prepare & submit Environmental Management Plan			15 days	Mon 16/9/19	Mon 30/9/19	Mon 16/9/19	Mon 30/9/19	0 days	2	174	100%	
174	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	0 days	173	266	100%	
175	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	0 days	2	176	100%	
176	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	0 days	175	470	100%	
177	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	0 days			100%	
178	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	0 days	179SS-1 emon		100%	
179	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	0 days	591SS-2 emons	46FF,178S	100%	
180	**SUBA-09000**		**Trees Related Submissions**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**	**0 days**			**62%**	
181	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	0 days	2	219	100%	
182	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	0 days	2	219	100%	
183	SUBA-09030		Prepare and submit and approve the Method Statement of Tree felling, Preservation, Prunning works & Transplanting			74 days	Fri 11/10/19	Mon 23/12/19	Fri 11/10/19	Mon 23/12/19	0 days	2	219,265	100%	
184	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	0 days	2		55%	
185	**SUBA-10000**		**Others**			**1138 days**	**Fri 20/9/19**	**Mon 31/10/22**	**Fri 20/9/19**	**NA**	**0 days**			**64%**	
186	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	0 days	2	232	100%	
187	SUBA-10020		Prepare, submit & approve for commencement of Works near MTRCL protection zone at Sun Wan Road from MTRCL			43 days	Fri 20/9/19	Fri 1/11/19	Fri 20/9/19	Fri 1/11/19	0 days	2	567	100%	
188	SUBA-10030		Prepare, submit & approve for commencement Works along the riverbank by DSD			90 days	Wed 3/8/22	Mon 31/10/22	NA	NA	0 days		554,555,55	0%	
189	**SUBP-00000**		**Procurement**			**630 days**	**Mon 16/9/19**	**Sun 6/6/21**	**Mon 16/9/19**	**Sun 6/6/21**	**0 days**			**100%**	
190	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	0 days	2	191	100%	
191	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	0 days	190	192,209,21	100%	
192	SUBP-03000		Pipe works material			480 days	Fri 8/11/19	Mon 1/3/21	Fri 8/11/19	Mon 1/3/21	0 days	191		100%	
193	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	0 days	2	194	100%	
194	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	0 days	193	195	100%	
195	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	0 days	194	469,470	100%	
196	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	0 days		506	100%	
197	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	0 days	2	198	100%	
198	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	0 days	197	199	100%	
199	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	0 days	198	508	100%	
200	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	0 days	2FS+120 days	201	100%	
201	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	0 days	200	202	100%	
202	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	0 days	201	507,508	100%	
203	SUBP-03110		Prepare & submit stainless steel pipe material particular			8 days	Fri 1/5/20	Fri 8/5/20	Fri 1/5/20	Fri 8/5/20	0 days	2	204	100%	
204	SUBP-03120		Approval of stainless steel pipe material			21 days	Sat 9/5/20	Wed 5/8/20	Sat 9/5/20	Wed 5/8/20	0 days	203	205	100%	
205	SUBP-03130		Procurement, deliver & testing of stainless steel pipe material			90 days	Wed 5/8/20	Tue 3/11/20	Wed 5/8/20	Tue 3/11/20	0 days	204	505	100%	
206	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	0 days	2	207	100%	
207	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	0 days	206	208	100%	
208	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	0 days	207	505	100%	
209	**SUBP-04000**		**Prefabricated steel reinforcement**			**292.61 day**	**Wed 16/10/19**	**Mon 3/8/20**	**Wed 16/10/19**	**Mon 3/8/20**	**0 days**	**191**		**100%**	
210	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	0 days	2FS+60 days	211	100%	
211	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	0 days	210	212	100%	
212	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	0 days	211	576,423,40	100%	
213	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	0 days	191	302,324,57	100%	
214	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	0 days	191	302,324,57	100%	
215	SUBP-07000		Prepare, submit and approve the metal works material			20 days	Wed 28/4/21	Mon 17/5/21	Wed 28/4/21	Mon 17/5/21	0 days	191	216	100%	
216	SUBP-08000		Prepare, submit and approve the ABWF works material			20 days	Tue 18/5/21	Sun 6/6/21	Tue 18/5/21	Sun 6/6/21	0 days	215,191	259,287,31	100%	
217	**CPW-00000**		**Site Preliminary Works**			**300 days**	**Mon 16/9/19**	**Thu 17/9/20**	**Mon 16/9/19**	**Thu 17/9/20**	**0 days**			**100%**	
218	CPW-01000		Mobilization for Hoarding			5 days	Thu 21/11/19	Tue 26/11/19	Thu 21/11/19	Tue 26/11/19	0 days	2	219	100%	
219	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	0 days	218,181,182,183,220,138		100%	
220	CPW-03000		Project Signboard Erection			11 days	Sun 15/12/19	Mon 30/12/19	Sun 15/12/19	Mon 30/12/19	0 days	191	219	100%	
221	CPW-04000		Utility applications and Connection			87 days	Mon 16/9/19	Mon 30/12/19	Mon 16/9/19	Mon 30/12/19	0 days	2	222FF	100%	
222	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	0 days	152,221FF,134		100%	
223	**CWPC-00000**	*	**Construction Works of Portion C of the Site**			**1696 days**	**Mon 16/9/19**	**Thu 5/6/25**	**Mon 16/9/19**	**NA**	**0 days?**			**37%**	
224	**CUV1-00000**	*	**UV System No. 1 & Effluent Pumping Station No. 1 (1)**			**834 days**	**Mon 16/9/19**	**Tue 12/7/22**	**Mon 16/9/19**	**NA**	**571 days**			**84%**	
225	**CUV1-01000**		**Preliminary Works**			**114 days**	**Mon 16/9/19**	**Tue 4/2/20**	**Mon 16/9/19**	**Tue 4/2/20**	**0 days**			**100%**	
235	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	0 days	234	237,239	100%	6.5,2.5,8
236	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	0 days	234,237SS-5 days		100%	
237	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	0 days	136,472,235	238,354,23	100%	40
238	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	0 days	237,342FS+5 days	375FS+5 d	100%	
239	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	0 days	238,235	240FS-10 c	100%	17
240	CUV1-07000		ELS Works (incl. Strut (4-layers) Installation & Excavation (3,700 cu.m)	46, 257, 258, 333	26, (34)	48 days	Fri 28/8/20	Sat 24/10/20	Fri 28/8/20	Sat 24/10/20	0 days	153,139,138,239FS-10 days	241,242FF-	100%	8
241	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	0 days	240	245	100%	15,2
242	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	0 days	240FF-2 emons	243SS-2 er	100%	
243	**CUV1-09000**		**R.C. Structure (370sq.m) (CE no. 26)**		**288**	**142 days**	**Mon 16/11/20**	**Wed 12/5/21**	**Mon 16/11/20**	**Wed 12/5/21**	**0 days**	**140,242SS-2 emons**		**100%**	
244	**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**	**0 days**			**100%**	**5**
245	CUV1-09011		Base slab Construction (162 sq.m)	(92)	24/27, 224, (38), (46),	15 days	Mon 16/11/20	Wed 2/12/20	Mon 16/11/20	Wed 2/12/20	0 days	241	246	100%	
246	CUV1-09012		Walls and Slabs Construction @-1.10mPD to +2.50mPD [CHAX puddle (DN 1200 -> DN1600)	(112)	(38), (46), (100)	39 days	Thu 3/12/20	Wed 20/1/21	Thu 3/12/20	Wed 20/1/21	0 days	245,142	248SS+30 days	100%	
247	**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**	**0 days**			**100%**	**5**
248	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	0 days	246SS+30 days	249	100%	
249	CUV1-09022		Walls and Slabs Construction @+1.5mPD to +4.9mPD [Additional CHA & CHL puddle (DN350), Additional CHLA puddle (DN150)	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	0 days	248,142	251SS+14 days,473	100%	33
250	**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**	**0 days**			**100%**	**5**
251	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	0 days	249SS+14 days	252	100%	14
252	CUV1-09032		Walls and Slabs Construction @+3.80mPD to +7.4mPD [CHAW puddle (DN1200-> DN1400), CHBA puddle (DN300), CHAY puddle (DN700 -> DN800)	268, 338	(38), (46), (100), (108), (115), (120), (130), (148), (163),	21 days	Sat 6/2/21	Fri 5/3/21	Sat 6/2/21	Fri 5/3/21	0 days	142,251	253,255	100%	21
253	CUV1-09033		Extraction of Sheetpiles	338		12 days	Sat 6/3/21	Fri 19/3/21	Sat 6/3/21	Fri 19/3/21	0 days	252		100%	
254	**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**	**0 days**			**100%**	**4**
255	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	0 days	252	258,259,25	100%	
256	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	0 days			100%	
257	CUV1-10900		Additional slab and beam for external staircase		288	26 days	Mon 12/4/21	Wed 12/5/21	Mon 12/4/21	Wed 12/5/21	0 days	255	515	100%	
258	**CUV1-11000**	**KD1A**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**1 day**	**Wed 12/5/21**	**Wed 12/5/21**	**Wed 12/5/21**	**Wed 12/5/21**	**0 days**	**255**	**36FF**	**100%**	
259	CUV1-12000	SW1	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining		(95), (296), (367), 359	267 days	Mon 7/6/21	Sat 30/4/22	Mon 7/6/21	NA	-95 days	216,143,255	44FF,551,5	74%	
260	CUV1-12500		Underground utilities works			60 days	Mon 7/6/21	Thu 5/8/21	Mon 7/6/21	Thu 5/8/21	0 days	259SS	261SS+30	100%	
261	CUV1-13000	SW5	Surrounding Site formation works and road works			150 days	Sat 30/10/21	Tue 12/7/22	Sat 30/10/21	NA	571 days	260SS+30 days	48FF	18%	
262	**CSDC-00000**	*	**Sludge Digesters and Distribution Chamber (4)**			**1077 days**	**Sat 7/12/19**	**Mon 31/7/23**	**Sat 7/12/19**	**NA**	**259 days**			**42%**	
263	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	0 days	264SF		100%	
264	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	0 days	266SF	263SF	100%	
265	CSDC-03000		Tree Transplanting Works (TC080)	21, 22, 33, 45, 46	(50), (51)	120 days	Fri 24/4/20	Tue 15/9/20	Fri 24/4/20	Tue 15/9/20	0 days	183	275FS-8 da	100%	



Critical Split Task Milestone Summary Critical

Updated Programme (Status Date: 31/03/2022)

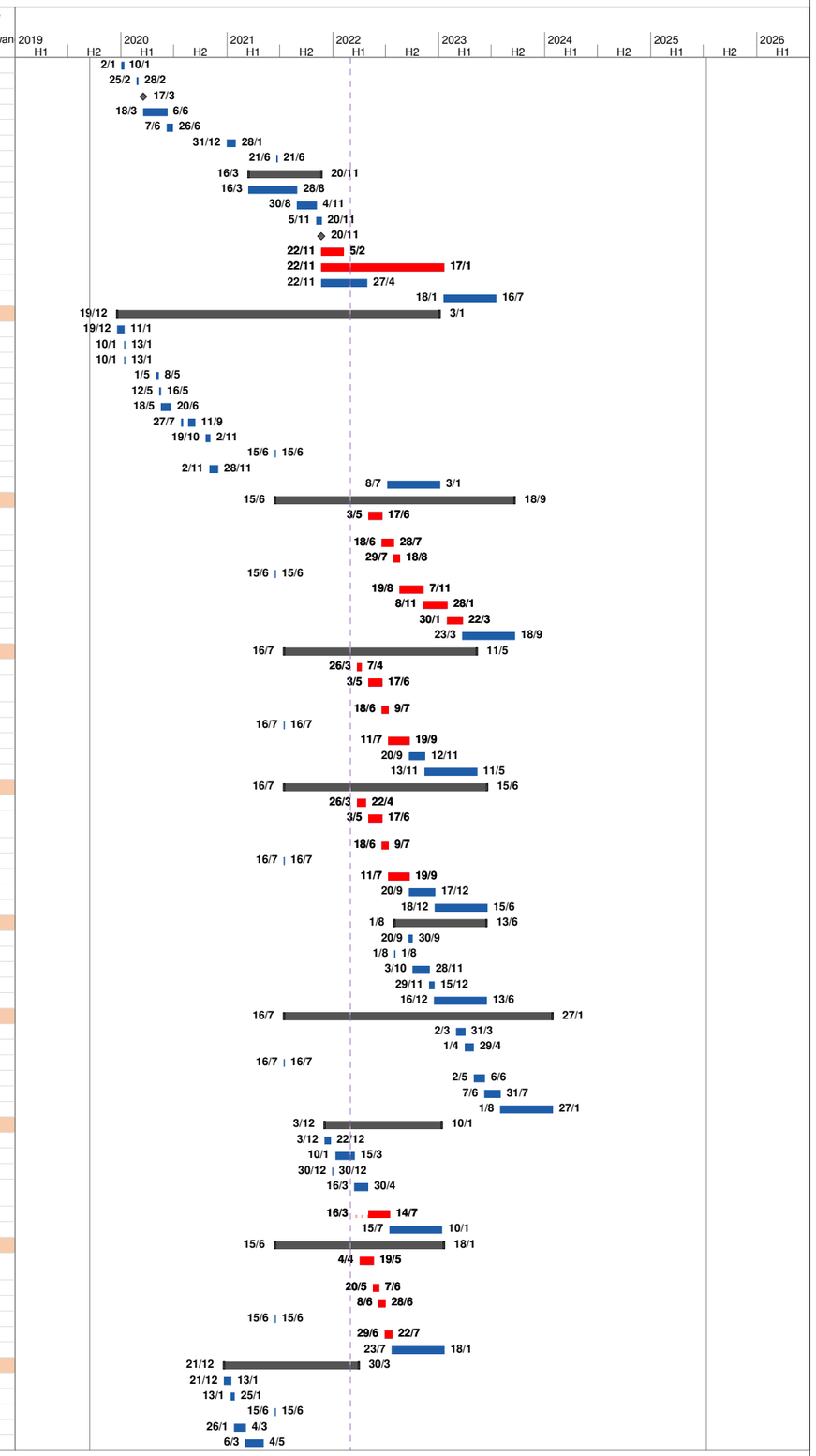
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successc	% Comple	Time Risk Allowan
266	CSDC-04000		Predrilling Works (50no., 4rig, 3 days/drillhole/rig)		(10)	10 days	Sat 28/12/19	Thu 9/1/20	Sat 28/12/19	Thu 9/1/20	0 days	135,151,162,163,164,166,165,168,170,172,174	267,264SF	100%	
267	CSDC-05000		Installation of Monitoring Points			0 days	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	0 days	266	270	100%	
268	CSDC-06000		Sheetpile Installation- stage 1			24 days	Wed 15/1/20	Fri 7/2/20	Wed 15/1/20	Fri 7/2/20	0 days			100%	
269	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	0 days		270	100%	
270	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	0 days	136,267,272SS+20 days,269	271	100%	6
271	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	0 days	270,375SS+10 days	275	100%	
272	CSDC-10000		Sheetpile Installation- stage 2 (NCE no. 24 40)	22, 33, 45, 46, 25	(33), (47)	152 days	Mon 4/5/20	Mon 2/11/20	Mon 4/5/20	Mon 2/11/20	0 days	266	270SS+20	100%	
273	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	0 days	275FF-2 emons	276SS-2 er	100%	
274	CSDC-11000		Construction of Digestors			564 days	Tue 3/11/20	Wed 28/9/22	Tue 3/11/20	NA	0 days		378	42%	
275	CSDC-11010		ELS Works (incl. Strut (4-layers) Installation & Excavation (17,600 cu.m)) (NCE no.92,131,165)	(112), 268, 338	(76)	88 days	Tue 3/11/20	Fri 26/3/21	Tue 3/11/20	Fri 26/3/21	0 days	153,139,271,138,265FS-8 days,272	276,273FF-emons	100%	2,3
276	CSDC-11020		Construction of Digesters Tank no.1,2,3,4	(204),(228)	(125), (306), (233)	398 days	Sat 27/3/21	Tue 2/8/22	Sat 27/3/21	NA	-238 days	275,212,142,273SS-2 emons	277,281SS	63%	30
277	CSDC-11030		Water Test			20 days	Wed 3/8/22	Thu 25/8/22	NA	NA	0 days	276	278	0%	
278	CSDC-11040		Apply Internal Anti-corrosion Protective Lining			28 days	Fri 26/8/22	Wed 28/9/22	NA	NA	0 days	277		0%	
279	CSDC-11050a	KD3A	Construction the Roof Slab of SD No.1		PMI	49 days	Tue 1/3/22	Sat 30/4/22	NA	NA	-50 days	276FS-125 days	280SS+15	0%	
280	CSDC-11050b	KD3A	Construction the Roof Slab of SD No.3, No.4 and No.2		PMI	117 days	Fri 18/3/22	Wed 10/8/22	NA	NA	12 days	279SS+15 days	287	0%	
281	CSDC-11060		Construction of Digestors & Distribution Chamber to Ground Level		PMI	142 days	Fri 5/11/21	Sat 30/4/22	Fri 5/11/21	NA	-170 days	276SS+180 days	282	51%	
282	CSDC-11070		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Sun 1/5/22	Wed 15/6/22	NA	NA	-212 days	281	283	0%	
283	CSDC-11080		Construction of Digestors & Distribution Chamber (from Ground Level)		PMI	83 days	Thu 16/6/22	Thu 22/9/22	NA	NA	-169 days	282	505,506,50	0%	
284	**CSDC-12000**	**KD3A**	**Allow access to Contarctor DE/2018/03 for E&M Installation**			**0 days**	**Thu 22/9/22**	**Thu 22/9/22**	**NA**	**NA**	**-169 days**	**283**	**38FF,285,2**	**0%**	
285	CSDC-13000		Drainage System (within Bldg/ Structure) Installation			90 days	Fri 23/9/22	Wed 11/1/23	NA	NA	0 days	284		0%	
286	CSDC-14000		FRP Walkway & Miscellanous Installation			90 days	Fri 23/9/22	Wed 11/1/23	NA	NA	0 days	284		0%	
287	CSDC-15000	SW3	ABWF Works & BS Works		(173)	105 days	Fri 23/9/22	Wed 1/2/23	NA	NA	-24 days	216,143,280,284	289,46FF	0%	
288	CSDC-15500	SW4	Surrounding sewerage, utility and process pipe works			124 days	Fri 23/9/22	Tue 24/1/23	NA	NA	-172 days	284	47FF,551F	0%	
289	CSDC-16000	SW5	Surrounding Site formation works and road works			180 days	Thu 2/2/23	Mon 31/7/23	NA	NA	329 days	287	48FF	0%	
290	**CSDB-00000**	*****	**Sludge Dewatering Building (2)**			**875 days?**	**Tue 26/11/19**	**Wed 9/11/22**	**Tue 26/11/19**	**NA**	**471 days?**			**58%**	
291	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	0 days	2	292	100%	
292	CSDB-02000		Predrilling Works (39no.4rig, 3days/drillhole/rig)		(10)	20 days	Thu 28/11/19	Fri 20/12/19	Thu 28/11/19	Fri 20/12/19	0 days	135,291	294,293	100%	
293	CSDB-03000		Additional Predrilling Works (11no.)			8 days	Mon 23/12/19	Mon 30/12/19	Mon 23/12/19	Mon 30/12/19	0 days	292	294	100%	
294	CSDB-04000		Installation of Monitoring Points			4 days	Fri 10/1/20	Tue 14/1/20	Fri 10/1/20	Tue 14/1/20	0 days	292,293	299FS-3 da	100%	
295	CSDB-05000		Sheet Pile Installation- stage1 (NCE NO. 22, PMI no.005)	17		52 days	Wed 15/1/20	Fri 6/3/20	Wed 15/1/20	Fri 6/3/20	0 days	294	297,296	100%	
296	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	0 days	295	297	100%	
297	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	0 days	136,296,295	340,298	100%	24
298	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	0 days	297	300	100%	
299	CSDB-09000		Sheet Pile Installation- stage2	17, 21, 22, 33, 45	(14), (24), (33), (113),	295 days	Tue 3/12/19	Mon 30/11/20	Tue 3/12/19	Mon 30/11/20	0 days	294FS-3 days	300	100%	56
300	CSDB-10000		ELS Works (incl. Strut (3-layers) Installation & Excavation (25,000 cu.m))	258, (92), (112)	239, (40), (113), (153),	25.5 days	Fri 30/10/20	Fri 5/2/21	Fri 30/10/20	Fri 5/2/21	0 days	153,139,298,138,299	302,303,50	100%	10,2
301	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	0 days	300FF-2 emons	302SS-2 er	100%	
302	CSDB-11000		R.C. Structure			477 days	Sat 6/2/21	Mon 19/9/22	Sat 6/2/21	NA	-143 days	213,214,300,212,301SS-2 emons	312,311	75%	10
303	CSDB-11010		Basement Construction & external waterproofing works	268, 338, (204),(2	239, (53), (110), (113),	203 days	Sat 6/2/21	Sat 16/10/21	Sat 6/2/21	Sat 16/10/21	0 days	300	322,304FS-	100%	30
304	CSDB-11020		Ground Floor Construction @ +7.55mPD		(184), (327), (328), (3	277 days	Fri 30/7/21	Sat 30/10/21	Fri 30/7/21	Sat 30/10/21	0 days	303FS-90 days	307,305SS	100%	
305	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	0 days	304SS	306SS	100%	
306	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	0 days	305SS		100%	
307	CSDB-11050		1/F Construction @ +15.3mPD			119 days	Mon 1/11/21	Fri 25/3/22	Mon 1/11/21	NA	-228 days	304	390,398,30	64%	
308	CSDB-11055		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Sat 26/3/22	Tue 10/5/22	NA	NA	-277 days	307	309	0%	
309	CSDB-11060	KD3B	Roof Construction @ +25.65mPD			110 days	Wed 11/5/22	Mon 19/9/22	NA	NA	-222 days	308	441,310,31	0%	
310	**CSDB-12000**	**KD3B**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Mon 19/9/22**	**Mon 19/9/22**	**NA**	**NA**	**-222 days**	**309**	**39FF**	**0%**	
311	CSDB-13000		Allow access to Contarctor DE/2018/03 for Drainage System (within Bldg/ structure) installation			90 days	Tue 20/9/22	Sat 7/1/23	NA	NA	-48 days	302		0%	
312	CSDB-14000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining		(95), (173)	164 days	Tue 20/9/22	Wed 12/4/23	NA	NA	-80 days	302,216,143	314,46FF	0%	
313	CSDB-14500	SW4	Surrounding sewerage, utility and process pipe works		(335)	153 days	Tue 20/9/22	Sat 25/3/23	NA	NA	-190 days	309	47FF,551F	0%	
314	CSDB-15000	SW5	Surrounding Site formation works and road works			180 days	Thu 13/4/23	Mon 9/10/23	NA	NA	259 days	312	48FF	0%	
315	**CHPB-00000**	*****	**Combined Heat Power Building (3)**			**1098 days**	**Tue 10/12/19**	**Sun 27/8/23**	**Tue 10/12/19**	**NA**	**236 days**			**19%**	
316	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	0 days	2,317SF		100%	
317	CHPB-02000		Predrilling Works (15no. 2rig, 3days/drillhole/rig)		(10)	15 days	Tue 10/12/19	Sat 28/12/19	Tue 10/12/19	Sat 28/12/19	0 days	135FS+28 days	318,316SF	100%	
318	CHPB-03000		Installation of Monitoring Points			4 days	Fri 3/1/20	Tue 7/1/20	Fri 3/1/20	Tue 7/1/20	0 days	317	320	100%	
319	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	0 days		320	100%	
320	CHPB-05000		Pre-bored Socketed H-Pile Installation (50 Nos, 2 Rig 3days/rig/pile) (PMI no.005)	17, 21	(10)	77 days	Wed 15/1/20	Tue 21/4/20	Wed 15/1/20	Tue 21/4/20	0 days	136,318,319,570	321	100%	6
321	CHPB-06000		Pile Loading Test			4 days	Wed 29/7/20	Sat 1/8/20	Wed 29/7/20	Sat 1/8/20	0 days	320	322	100%	
322	CHPB-07000		Excavation for Pile Cap (2,060 cu.m)		595	58 days	Sat 6/11/21	Sat 15/1/22	Sat 6/11/21	Sat 15/1/22	0 days	153,139,321,138,303	324,323FF-	100%	10
323	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	0 days	322FF-2 emons	324SS-2 er	100%	
324	CHPB-08000	KD3C	R.C. Structure		595	195 days	Mon 17/1/22	Wed 14/9/22	Mon 17/1/22	NA	-75 days	213,214,141,322,212,323SS-2 emons	332,333	4%	10
325	CHPB-08100		Lower Ground Floor @+7.55mPD		PMI	60 days	Mon 17/1/22	Wed 30/3/22	Mon 17/1/22	NA	0 days		326FS-30 c	22%	
326	CHPB-08200		Upper Ground Floor @13.05mPD			60 days	Thu 24/2/22	Wed 11/5/22	Thu 24/2/22	NA	0 days	325FS-30 days	327FS-30 c	0%	
327	CHPB-08300		First Floor @19.60mPD			64 days	Sat 26/3/22	Thu 16/6/22	Sat 26/3/22	NA	-170 days	326FS-30 days	328FS-26 c	0%	
328	CHPB-08400		Podium @24.15mPD			60 days	Tue 17/5/22	Wed 27/7/22	NA	NA	-170 days	327FS-26 days	329FS-20 c	0%	
329	CHPB-08500		Roof @27.15mPD			23 days	Tue 5/7/22	Sat 30/7/22	NA	NA	-170 days	328FS-20 days	334,505,50	0%	
330	CHPB-08550		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Sun 31/7/22	Wed 14/9/22	NA	NA	-212 days	329	331	0%	
331	**CHPB-09000**	**KD3C**	**Allow access to Contarctor DE/2018/03 for E&M Installation**			**1 day**	**Thu 15/9/22**	**Thu 15/9/22**	**NA**	**NA**	**-173 days**	**330**	**40FF**	**0%**	
332	CHPB-10000		Drainage System (within Bldg/ Structure) Installation			60 days	Thu 15/9/22	Fri 25/11/22	NA	NA	0 days	324		0%	
333	CHPB-11000	SW3	ABWF Works & BS Works		(95), (173)	135 days	Thu 15/9/22	Tue 28/2/23	NA	NA	-47 days	324,216,143	335,46FF	0%	
334	CHPB-11500	SW4	Surrounding sewerage, utility and process pipe works			107 days	Mon 1/8/22	Tue 6/12/22	NA	NA	-102 days	329	47FF,551F	0%	
335	CHPB-12000	SW5	Surrounding Site formation works and road works			180 days	Wed 1/3/23	Sun 27/8/23	NA	NA	302 days	333	48FF	0%	
336	**CSPS-00000**	*****	**Sewage Pumping Station (9)**			**961 days**	**Fri 15/11/19**	**Tue 14/2/23**	**Fri 15/11/19**	**NA**	**394 days**			**50%**	
337	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	0 days	2	338	100%	
338	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	0 days	135FS+14 days,337	339	100%	
339	CSPS-03000		Installation of Monitoring Points			4 days	Fri 17/4/20	Tue 21/4/20	Fri 17/4/20	Tue 21/4/20	0 days	338		100%	
340	CSPS-04000		Setting up plant for pre-bored socked H-pile Installation	25		5 days	Tue 21/4/20	Sun 26/4/20	Tue 21/4/20	Sun 26/4/20	0 days	297	341	100%	
341	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	0 days	136,340	342	100%	6
342	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	0 days	341,356FS+5 days	344,238FS	100%	
343	CSPS-07000		Sheet Pile Installation	258		0 days	Sat 10/10/20	Tue 17/11/20	Sat 10/10/20	Tue 17/11/20	0 days	342,272FS+8 days	344	100%	
344	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	0 days	153,139,342,138,343	345FF-2 er	100%	10
345	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	0 days	344FF-2 emons	346SS-2 er	100%	
346	CSPS-09000	KD3E	R.C. Structure & waterproofing works	268, 338, (204),(2	(63), (303), (341)	272 days	Tue 26/1/21	Fri 24/12/21	Tue 26/1/21	Fri 24/12/21	0 days	344,141,212,213,214,345SS-2 emons	347,42FF,5	100%	
347	CSPS-10000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining			90 days	Tue 3/5/22	Thu 18/8/22	NA	NA	-131 days	216,143,142,346	349,46FF,3	0%	3
348	CSPS-10500	SW4	Surrounding sewerage, utility and process pipe works		386	120 days	Fri 19/8/22	Thu 12/1/23	NA	NA	-131 days	347	47FF,551F	0%	
349	CSPS-11000	SW5	Surrounding Site formation works and road works			180 days	Fri 19/8/22	Tue 14/2/23	NA	NA	496 days	347	48FF	0%	
350	**CWS2-00000**	*****	**Workshop No. 2 (5)**			**1050 days**	**Tue 24/12/19**	**Sun 16/7/23**	**Tue 24/12/19**	**NA**	**272 days**			**48%**	
351	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	0 days	2	352	100%	



Critical Split · Task · Milestone · Summary · Critical

Updated Programme (Status Date: 31/03/2022)

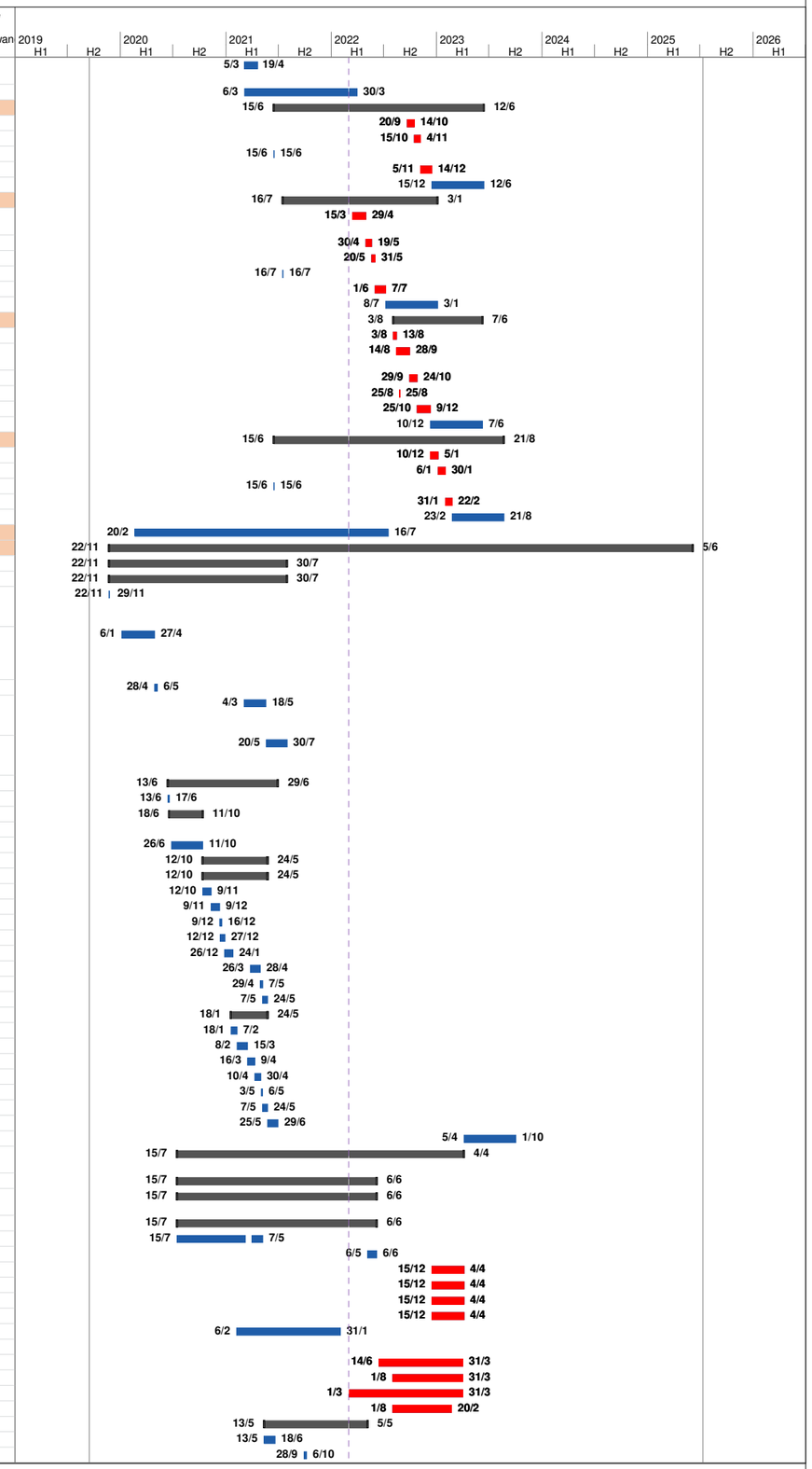
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successc	% Comple	Time Risk Allowan
352	CWS2-02000		Predrilling Works (10no.1rig, 3days/drillhole/rig)		16, (10)	8 days	Thu 2/1/20	Fri 10/1/20	Thu 2/1/20	Fri 10/1/20	0 days	135,351	353	100%	
353	CWS2-03000		Installation of Monitoring Points			4 days	Tue 25/2/20	Fri 28/2/20	Tue 25/2/20	Fri 28/2/20	0 days	352	355,354	100%	
354	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	0 days	353,237	355	100%	
355	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	0 days	136,353,354	356,374	100%	6
356	CWS2-06000		Pile Loading Test	33		16 days	Sun 7/6/20	Fri 26/6/20	Sun 7/6/20	Fri 26/6/20	0 days	355,571FS+5 days	357,342FS	100%	
357	CWS2-07000		Excavation for Pile Cap (1,800 cu.m)	268, 338	(85), (169)	24 days	Thu 31/12/20	Thu 28/1/21	Thu 31/12/20	Thu 28/1/21	0 days	153,139,356,138	360,505,50	100%	56
358	CWS2-07900		Receiving of Civil Requirements from PM		548, 557	1 day	Mon 21/6/21	Mon 21/6/21	Mon 21/6/21	Mon 21/6/21	0 days	357FF-2 emons	359SS-2 er	100%	
359	CWS2-08000		R.C. Structure		(303), 374	204 days	Tue 16/3/21	Sat 20/11/21	Tue 16/3/21	Sat 20/11/21	0 days	358SS-2 emons		100%	10
360	CWS2-08010		Ground Floor Construction @ +6.30mpD	(204), (228)	(169), (185), (195), (2	135 days	Tue 16/3/21	Sat 28/8/21	Tue 16/3/21	Sat 28/8/21	0 days	357,212	361	100%	
361	CWS2-08020		First Floor Construction @ +13.50mpD		(266), (299), (300)	55 days	Mon 30/8/21	Thu 4/11/21	Mon 30/8/21	Thu 4/11/21	0 days	360	362	100%	
362	CWS2-08030	KD3D	Roof Construction @+19.00mPD		(302)	14 days	Fri 5/11/21	Sat 20/11/21	Fri 5/11/21	Sat 20/11/21	0 days	361	364,365,36	100%	
363	**CWS2-09000**	**KD3D**	**Allow access to Contarctor 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**	**0 days**	**362**	**41FF**	**100%**	
364	CWS2-10000		Drainage System (within Bldg/ Structure) Installation		(265), 366	60 days	Mon 22/11/21	Sat 5/2/22	Mon 22/11/21	NA	0 days	362		97%	
365	CWS2-11000	SW3	ABWF Works & BS Works		(95), (173), (436)	342 days	Mon 22/11/21	Tue 17/1/23	Mon 22/11/21	NA	-14 days	216,143,362	367,46FF	17%	
366	CWS2-11500	SW4	Surrounding sewerage, utility and process pipe works			125 days	Mon 22/11/21	Wed 27/4/22	Mon 22/11/21	NA	82 days	362	47FF,551F	46%	
367	CWS2-12000	SW5	Surrounding Site formation works and road works			180 days	Wed 18/1/23	Sun 16/7/23	NA	NA	344 days	365	48FF	0%	
368	**CTHP-00000**	*	**Thermal Hydrolysis Pretreatment (6)**			**899 days**	**Thu 19/12/19**	**Tue 3/1/23**	**Thu 19/12/19**	**NA**	**427 days**			**35%**	
369	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	0 days	2	370,371	100%	
370	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	0 days	135FS+24 days,369	372	100%	
371	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	0 days	369	372	100%	
372	CTHP-04000		Installation of Monitoring Points			6 days	Fri 1/5/20	Fri 8/5/20	Fri 1/5/20	Fri 8/5/20	0 days	370,371	374	100%	
373	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	0 days		374	100%	
374	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	0 days	136,372,373,355	375	100%	6
375	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	0 days	374,238FS+5 days	376,271SS	100%	
376	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	0 days	153,139,375,357	378,377FF-	100%	
377	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	0 days	376FF-2 emons	378SS-2 er	100%	
378	CTHP-09000	KD3E	R.C. Plinth	268, 338	225, (115),(236)	0 days	Mon 2/11/20	Sat 28/11/20	Mon 2/11/20	Sat 28/11/20	0 days	376,274,377SS-2 emons	379,42FF	100%	
379	CTHP-10000	SW5	Surrounding Site formation works and road works			180 days	Fri 8/7/22	Tue 3/1/23	NA	NA	538 days	378,452SS	48FF	0%	
380	**CFCD-00000**	*	**Ferric Chloride Dosing Facilities (10)**			**673 days**	**Tue 15/6/21**	**Mon 18/9/23**	**Tue 15/6/21**	**NA**	**217 days**			**0%**	
381	CFCD-01000		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak			46 days	Tue 3/5/22	Fri 17/6/22	NA	NA	-268 days	391SS	382	0%	
382	CFCD-01000		Excavation & ELS for Raft Footing (105 cu.m)			34 days	Sat 18/6/22	Thu 28/7/22	NA	NA	-215 days	381	383	0%	
383	CFCD-02000		Plate Load Test			18 days	Fri 29/7/22	Thu 18/8/22	NA	NA	-215 days	382	385,384FF-	0%	
384	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	0 days	383FF-2 emons	385SS-2 er	100%	
385	CFCD-03000		R.C. Structure			66 days	Fri 19/8/22	Mon 7/11/22	NA	NA	-215 days	383,141,212,384SS-2 emons	386	0%	5
386	CFCD-04000	KD3E	Steel Roof Structure (On-site Fabrication)			65 days	Tue 8/11/22	Sat 28/1/23	NA	NA	-215 days	385	387,42FF	0%	
387	CFCD-05000	SW3	ABWF Works & BS Works			45 days	Mon 30/1/23	Wed 22/3/23	NA	NA	-66 days	386,216,143	388,46FF,5	0%	
388	CFCD-06000	SW5	Surrounding Site formation works and road works			180 days	Thu 23/3/23	Mon 18/9/23	NA	NA	280 days	387	48FF	0%	
389	**CFHB-00000**	*	**Fire Hydrant and Booster Pump Room (16)**			**539 days**	**Fri 16/7/21**	**Thu 11/5/23**	**Fri 16/7/21**	**NA**	**325 days**			**0%**	
390	CFHB-01000		Excavation for Raft Footing (160 cu.m)			10 days	Sat 26/3/22	Thu 7/4/22	NA	NA	-198 days	2,307	391	0%	
391	CFHB-01050		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Tue 3/5/22	Fri 17/6/22	NA	NA	-268 days	390	392,381SS	0%	
392	CFHB-02000		Plate Load Test			18 days	Sat 18/6/22	Sat 9/7/22	NA	NA	-126 days	391	394,393FF-	0%	
393	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	0 days	392FF-2 emons		100%	
394	CFHB-03000	KD3E	R.C. Structure & waterproofing works			60 days	Mon 11/7/22	Mon 19/9/22	NA	NA	-126 days	392	395,42FF,5	0%	5
395	CFHB-04000	SW3	ABWF Works & BS Works			45 days	Tue 20/9/22	Sat 12/11/22	NA	NA	39 days	394,216,143	396,46FF,5	0%	
396	CFHB-05000	SW5	Surrounding Site formation works and road works			180 days	Sun 13/11/22	Thu 11/5/23	NA	NA	410 days	395	48FF	0%	
397	**CTFS-00000**	*	**Transformer and Switchroom (15)**			**568 days**	**Fri 16/7/21**	**Thu 15/6/23**	**Fri 16/7/21**	**NA**	**296 days**			**0%**	
398	CTFS-01000		Excavation for Raft Footing (310 cu.m)		386	20 days	Sat 26/3/22	Fri 22/4/22	NA	NA	-117 days	2,307	399	0%	
399	CTFS-01050		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Tue 3/5/22	Fri 17/6/22	NA	NA	-158 days	398	400	0%	
400	CTFS-02000		Plate Load Test			18 days	Sat 18/6/22	Sat 9/7/22	NA	NA	-126 days	399	402,401FF-	0%	
401	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	0 days	400FF-2 emons	402SS-2 er	100%	
402	CTFS-03000	KD3E	R.C. Structure			60 days	Mon 11/7/22	Mon 19/9/22	NA	NA	-126 days	400,141,436,212,401SS-2 emons	403,42FF,5	0%	5
403	CTFS-04000	SW3	ABWF Works & BS Works		(95)	75 days	Tue 20/9/22	Sat 17/12/22	NA	NA	9 days	402,216,143	404,46FF	0%	
404	CTFS-05000	SW5	Surrounding Site formation works and road works			180 days	Sun 18/12/22	Thu 15/6/23	NA	NA	375 days	403	48FF	0%	
405	**CWMC-00000**	*	**Water Meter Cabinet (11)**		**204**	**257 days**	**Mon 1/8/22**	**Tue 13/6/23**	**NA**	**NA**	**298 days**			**0%**	
406	CWMC-01000		Excavation for Raft Footing (6 cu.m)			10 days	Tue 20/9/22	Fri 30/9/22	NA	NA	304 days	309	408,407FF-	0%	
407	CWMC-01900		Receiving of Civil Requirements from PM			1 day	Mon 1/8/22	Mon 1/8/22	NA	NA	403 days	406FF-2 emons	408SS-2 er	0%	
408	CWMC-02000		R.C. Structure			48 days	Mon 3/10/22	Mon 28/11/22	NA	NA	304 days	141,212,406,407SS-2 emons	409	0%	3
409	CWMC-03000		ABWF Works & BS Works			15 days	Tue 29/11/22	Thu 15/12/22	NA	NA	304 days	408,216,143	410	0%	
410	CWMC-04000	SW5	Surrounding Site formation works and road works			180 days	Fri 16/12/22	Tue 13/6/23	NA	NA	377 days	409	48FF	0%	
411	**CGH-00000**	*	**Guard House (14)**			**754 days**	**Fri 16/7/21**	**Sat 27/1/24**	**Fri 16/7/21**	**NA**	**110 days**			**0%**	
412	CGH-00500		Design and Construction of Utility Corridor		411	30 days	Thu 2/3/23	Fri 31/3/23	NA	NA	153 days		413	0%	
413	CGH-01000		Excavation to Formation			21 days	Sat 1/4/23	Sat 29/4/23	NA	NA	123 days	2,412	414FF-2 er	0%	
414	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	0 days	413FF-2 emons	415SS-2 er	100%	
415	CGH-02000		R.C. Structure			30 days	Tue 2/5/23	Tue 6/6/23	NA	NA	123 days	414SS-2 emons,141,413,212	416	0%	3
416	CGH-03000		ABWF Works & BS Works		(95)	45 days	Wed 7/6/23	Mon 31/7/23	NA	NA	123 days	415,216,143	417	0%	
417	CGH-04000	SW5	Surrounding Site formation works and road works			180 days	Tue 1/8/23	Sat 27/1/24	NA	NA	149 days	416	48FF	0%	
418	**CCPS-00000**	*	**THP Coolers Pumping Station (21)**			**326 days**	**Fri 3/12/21**	**Tue 10/1/23**	**Fri 3/12/21**	**NA**	**421 days**			**20%**	
419	CCPS-01010		Sheet Pile Installation			20 days	Fri 3/12/21	Wed 22/12/21	Fri 3/12/21	Wed 22/12/21	0 days			100%	
420	CCPS-01000		Excavation & ELS (185 cu.m)			52.6 days	Mon 10/1/22	Tue 15/3/22	Mon 10/1/22	Tue 15/3/22	0 days		423,421FF-	100%	
421	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	0 days	420FF-2 emons	423SS-2 er	100%	
422	CCPS-01950		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Wed 16/3/22	Sat 30/4/22	NA	NA	2 days	420	423	0%	
423	CCPS-02000	KD3E	R.C. Structure			60 days	Wed 16/3/22	Thu 14/7/22	Wed 16/3/22	NA	-54 days	420,141,212,421SS-2 emons,422	424,47FF	0%	5
424	CCPS-03000	SW5	Surrounding Site formation works and road works			180 days	Fri 15/7/22	Tue 10/1/23	NA	NA	531 days	423	48FF	0%	
425	**CWGB-00000**	*	**Waste Gas Burner (8)**			**476 days**	**Tue 15/6/21**	**Wed 18/1/23**	**Tue 15/6/21**	**NA**	**414 days**			**0%**	
426	CWGB-00500		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Mon 4/4/22	Thu 19/5/22	NA	NA	-101 days	362	427	0%	
427	CWGB-01000		Excavation for Raft Rooting (75cu.m)			15 days	Fri 20/5/22	Tue 7/6/22	NA	NA	-81 days	426	428	0%	
428	CWGB-02000		Plate Load Test			18 days	Wed 8/6/22	Tue 28/6/22	NA	NA	-81 days	427	430,429FF-	0%	
429	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	0 days	428FF-2 emons	430SS-2 er	100%	
430	CWGB-03000	KD3E	R.C. Plinth			20 days	Wed 29/6/22	Fri 22/7/22	NA	NA	-81 days	428,141,429SS-2 emons	464,431,42	0%	
431	CWGB-04000	SW5	Surrounding Site formation works and road works			180 days	Sat 23/7/22	Wed 18/1/23	NA	NA	523 days	430	48FF	0%	
432	**CPSW-00000**	*	**Plant Services Water System (20)**			**376 days**	**Mon 21/12/20**	**Wed 30/3/22**	**Mon 21/12/20**	**NA**	**652 days**			**81%**	
433	CPSW-01000		Excavation for Raft Footing (800 cu.m)		(34), (81)	18 days	Mon 21/12/20	Wed 13/1/21	Mon 21/12/20	Wed 13/1/21	0 days	2	434	100%	
434	CPSW-02000		Plate Load Test			10 days	Wed 13/1/21	Mon 25/1/21	Wed 13/1/21	Mon 25/1/21	0 days	433	436,435FF-	100%	
435	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	0 days	434FF-2 emons	436SS-2 er	100%	
436	CPSW-03000	KD3E	Basement Construction @+1.20mPD		(136), (117)	30 days	Tue 26/1/21	Thu 4/3/21	Tue 26/1/21	Thu 4/3/21	0 days	434,141,435SS-2 emons	402,42FF,4	100%	
437	CPSW-03500		ABWF Works & BS Works			60 days	Sat 6/3/21	Tue 4/5/21	Sat 6/3/21	Tue 4/5/21	0 days	436		100%	



Critical Split Task Milestone Summary Critical

Updated Programme (Status Date: 31/03/2022)

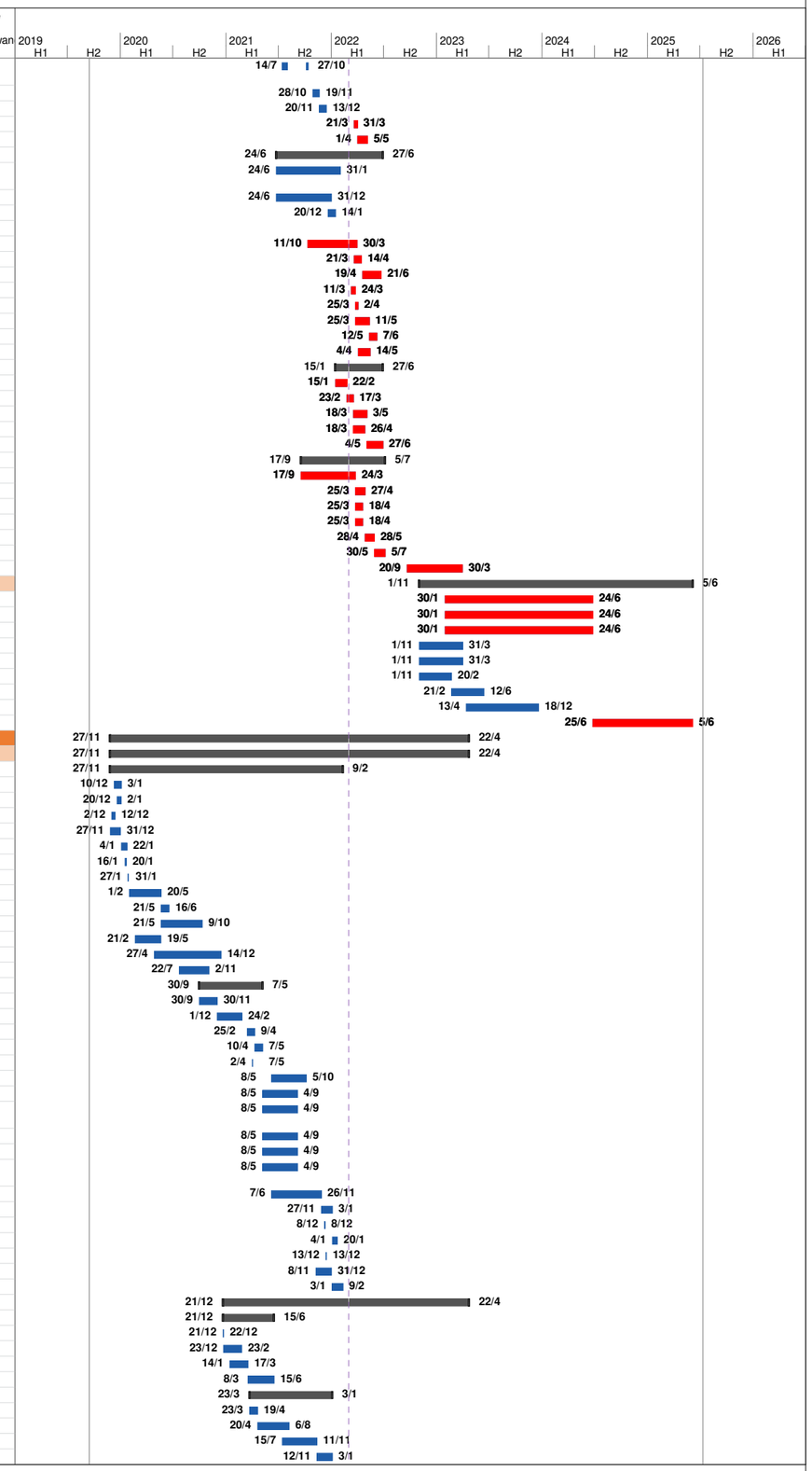
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successo	% Comple	Time Risk Allowan
438	CPSW-03800		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Fri 5/3/21	Mon 19/4/21	NA	NA	287 days	436	439	0%	
439	CPSW-04000	SW5	Surrounding Site formation works and road works	338,(204), (228)		390 days	Sat 6/3/21	Wed 30/3/22	Sat 6/3/21	NA	817 days	438	48FF	85%	
440	**CDS11-00000**	*	**Deodorization System No. 11 (18)**			**591 days**	**Tue 15/6/21**	**Mon 12/6/23**	**Tue 15/6/21**	**NA**	**299 days**			**0%**	
441	CDS11-01000		Excavation for Raft Footing (1,280 cu.m)			20 days	Tue 20/9/22	Fri 14/10/22	NA	NA	-198 days	2,309	442	0%	
442	CDS11-02000		Plate Load Test			18 days	Sat 15/10/22	Fri 4/11/22	NA	NA	-198 days	441	444,443FF-	0%	
443	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	0 days	442FF-2 emons	444SS-2 er	100%	
444	CDS11-03000	KD3E	R.C. Plinth			34 days	Sat 5/11/22	Wed 14/12/22	NA	NA	-198 days	442,141,443SS-2 emons	445,42FF,5	0%	
445	CDS11-04000	SW5	Surrounding Site formation works and road works			180 days	Thu 15/12/22	Mon 12/6/23	NA	NA	378 days	444	48FF	0%	
446	**CBGH-00000**	*	**Biogas Holder (7)**			**437 days**	**Fri 16/7/21**	**Tue 3/1/23**	**Fri 16/7/21**	**NA**	**427 days**			**0%**	
447	CBGH-00500		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Tue 15/3/22	Fri 29/4/22	NA	NA	-79 days	2	448	0%	
448	CBGH-01000		Excavation for Raft Footing (1,120 cu.m)			15 days	Sat 30/4/22	Thu 19/5/22	NA	NA	-64 days	2,447	449	0%	
449	CBGH-02000		Plate Load Test			10 days	Fri 20/5/22	Tue 31/5/22	NA	NA	-64 days	448	451,450FF-	0%	
450	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	0 days	449FF-2 emons	451SS-2 er	100%	
451	CBGH-03000	KD3E	R.C. Plinth			30 days	Wed 1/6/22	Thu 7/7/22	NA	NA	-64 days	449,141,450SS-2 emons	452,42FF,5	0%	
452	CBGH-04000	SW5	Surrounding Site formation works and road works			180 days	Fri 8/7/22	Tue 3/1/23	NA	NA	538 days	451	48FF,379S	0%	
453	**CH2S-00000**	*	**H2S Removal System (12)**			**250 days**	**Wed 3/8/22**	**Wed 7/6/23**	**NA**	**NA**	**-238 days**			**0%**	
454	CH2S-01000		Excavation for Raft Footing (396 cu.m)			10 days	Wed 3/8/22	Sat 13/8/22	NA	NA	-238 days	276	455	0%	
455	CH2S-01050		Special Arrangement for Work After CNY due to the 5th wave of COVID-19 Outbreak		(436)	46 days	Sun 14/8/22	Wed 28/9/22	NA	NA	-293 days	454	456	0%	
456	CH2S-02000		Plate Load Test			20 days	Thu 29/9/22	Mon 24/10/22	NA	NA	-236 days	455	458,457FF-	0%	
457	CH2S-02900		Receiving of Civil Requirements from PM			1 day	Thu 25/8/22	Thu 25/8/22	NA	NA	-139 days	456FF-2 emons	458SS-2 er	0%	
458	CH2S-03000	KD3E	R.C. Plinth			40 days	Tue 25/10/22	Fri 9/12/22	NA	NA	-236 days	456,457SS-2 emons	459,42FF,4	0%	
459	CH2S-04000	SW5	Surrounding Site formation works and road works			180 days	Sat 10/12/22	Wed 7/6/23	NA	NA	383 days	458	48FF	0%	
460	**CDS12-00000**	*	**Deodorization System No. 12 (19)**			**649 days**	**Tue 15/6/21**	**Mon 21/8/23**	**Tue 15/6/21**	**NA**	**241 days**			**0%**	
461	CDS12-01000		Excavation to Formation			20 days	Sat 10/12/22	Thu 5/1/23	NA	NA	-236 days	458	462	0%	
462	CDS12-02000		Plate Load Test			18 days	Fri 6/1/23	Mon 30/1/23	NA	NA	-236 days	461	464,463FF-	0%	
463	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	0 days	462FF-2 emons	464SS-2 er	100%	
464	CDS12-03000	KD3E	R.C. Plinth			20 days	Tue 31/1/23	Wed 22/2/23	NA	NA	-236 days	462,141,430,463SS-2 emons	465,42FF	0%	
465	CDS12-04000	SW5	Surrounding Site formation works and road works			180 days	Thu 23/2/23	Mon 21/8/23	NA	NA	308 days	464	48FF	0%	
466	CUPH-00000	SW5	Underpass & Pump House			711 days	Thu 20/2/20	Sat 16/7/22	Thu 20/2/20	NA	17 days		47FF	81%	
467	**CPWU-00000**	*	**Pipe Works and Utility Installation**			**1640 days**	**Fri 22/11/19**	**Thu 5/6/25**	**Fri 22/11/19**	**NA**	**0 days**			**29%**	
468	**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**	**0 days**			**100%**	
469	**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**	**0 days**	**232,195**		**100%**	
470	CPWU-01110		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and Reconstructed Storm Water Manhole MHD33 - A			7 days	Fri 22/11/19	Fri 29/11/19	Fri 22/11/19	Fri 29/11/19	0 days	133,154,159,155,144,176,195	471	100%	
471	CPWU-01120		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and Reconstructed Storm Water Manhole MHD33 - A and Additional concrete surround at MH18, MH16 and additional manhole (Type 1)	17, 21	23, 26, (8), (17), (34), (39)	90 days	Mon 6/1/20	Mon 27/4/20	Mon 6/1/20	Mon 27/4/20	0 days	470		100%	
472	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	0 days		237	100%	
473	CPWU-01140	KD1A	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage Culvert (1 Cell, 1000mm x 1150mm) within Portion C-1A & C-1B - Part 1	338, (204), (228)		60 days	Thu 4/3/21	Tue 18/5/21	Thu 4/3/21	Tue 18/5/21	0 days	249	474	100%	
474	CPWU-01150	SW1	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage Culvert (1 Cell, 1000mm x 1150mm) outside Portion C-1A & C-1B - Part 2			60 days	Thu 20/5/21	Fri 30/7/21	Thu 20/5/21	Fri 30/7/21	0 days	473	44FF	100%	
475	**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**	**0 days**		**47FF**	**100%**	
476	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	0 days		478	100%	
477	**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**	**0 days**	**15,147**		**100%**	
478	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	0 days	2,476	479	100%	
479	CPWU-01222		Pit Construction (11m x 9m)	33, 45, 46, 257, 3		89 days	Fri 26/6/20	Sun 11/10/20	Fri 26/6/20	Sun 11/10/20	0 days	478	482	100%	
480	**CPWU-01230**		**Pipe Jacking Operation**			**180 days**	**Mon 12/10/20**	**Mon 24/5/21**	**Mon 12/10/20**	**Mon 24/5/21**	**0 days**			**100%**	
481	CPWU-01231		Twin DN900 DI pipe (CHAT & CHAU)		(26), (128)	180 days	Mon 12/10/20	Mon 24/5/21	Mon 12/10/20	Mon 24/5/21	0 days			100%	
482	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	0 days	479	483	100%	
483	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	0 days	482	486,485,48	100%	6
484	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	0 days	483	485	100%	
485	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	0 days	483,484	486	100%	
486	CPWU-01231e		Installation of grouting pipe and rail			23 days	Sat 26/12/20	Sun 24/1/21	Sat 26/12/20	Sun 24/1/21	0 days	483,485	487	100%	
487	CPWU-01231f		Pipe Laying Works			25 days	Fri 26/3/21	Wed 28/4/21	Fri 26/3/21	Wed 28/4/21	0 days	486	488	100%	
488	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	0 days	487		100%	
489	CPWU-01231h		Backfilling works			14 days	Fri 7/5/21	Mon 24/5/21	Fri 7/5/21	Mon 24/5/21	0 days	496SS		100%	
490	**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**	**0 days**			**100%**	
491	CPWU-01232a		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment		(62)	18 days	Mon 18/1/21	Sun 7/2/21	Mon 18/1/21	Sun 7/2/21	0 days		492	100%	
492	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	0 days	491	493	100%	6
493	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	0 days	492	494	100%	
494	CPWU-01232d		Pipe Laying Works	(204)		18 days	Sat 10/4/21	Fri 30/4/21	Sat 10/4/21	Fri 30/4/21	0 days	493	495	100%	
495	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	0 days	494	497,496	100%	
496	CPWU-01232f		Backfilling works			14 days	Fri 7/5/21	Mon 24/5/21	Fri 7/5/21	Mon 24/5/21	0 days	495	497,489SS	100%	
497	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	0 days	495,496	498	100%	
498	CPWU-01020	SW5	Surrounding Site formation works and road works			180 days	Wed 5/4/23	Sun 1/10/23	NA	NA	267 days	497,505,506,507,508,509,510	48FF	0%	
499	**CPWU-02000**		**Process Pipeworks, All Sewerage, Utilities & Roadworks in Portion C of the Site**			**809 days**	**Wed 15/7/20**	**Tue 4/4/23**	**Wed 15/7/20**	**NA**	**-198 days**			**66%**	
500	CPWU-02100		Process Pipeworks			560 days	Wed 15/7/20	Mon 6/6/22	Wed 15/7/20	NA	51 days			90%	
501	**CPWU-02110**		**Connection pipe at UV System no.1 & Effluent Pumping Stataion no.1**			**560 days**	**Wed 15/7/20**	**Mon 6/6/22**	**Wed 15/7/20**	**NA**	**51 days**			**90%**	
502	**CPWU-02111**	**SW1**	**Effluent Pipe(approx. 70m, dia 300-1600)**			**692 days**	**Wed 15/7/20**	**Mon 6/6/22**	**Wed 15/7/20**	**NA**	**60 days**			**90%**	
503	CPWU-02111a		Twin DN900 +DN2200 (CHAT, CHAU, CHAV) (+0.2mPD)	45, 46, 257, 333,	(60), (62), (66),(152)	220 days	Wed 15/7/20	Fri 7/5/21	Wed 15/7/20	Fri 7/5/21	0 days	237		100%	
504	CPWU-02111c		CHAM, CHAN Pipe Laying (+2.0mPD)			25 days	Fri 6/5/22	Mon 6/6/22	NA	NA	51 days	522	47FF	0%	
505	CPWU-02120	SW4	Remaining Effluent Pipes & testing works			89 days	Thu 15/12/22	Tue 4/4/23	NA	NA	-198 days	146,300,357,205,208,309,329,346,362,394,402,444,451,283	47FF,498	0%	
506	CPWU-02130	SW4	Stormdrain Pipeworks & testing works			89 days	Thu 15/12/22	Tue 4/4/23	NA	NA	-198 days	146,300,357,196,309,329,346,362,394,402,451,444,283	47FF,498	0%	
507	CPWU-02140	SW4	Sewerage Pipeworks, manhole, protective lining & testing works		210	89 days	Thu 15/12/22	Tue 4/4/23	NA	NA	-198 days	146,300,357,202,309,329,346,362,394,402,451,444,283	47FF,498	0%	
508	CPWU-02150	SW4	Watermain Pipeworks & testing works		205, 206, 207, 216, 218	89 days	Thu 15/12/22	Tue 4/4/23	NA	NA	-198 days	146,300,357,199,202,309,329,346,362,394,402,451,444,283	47FF,498	0%	
509	CPWU-02160	SW4	Cable & Other Underground Utility Pipeworks	17, 21, 22, 33, 45	(283)	291 days	Sat 6/2/21	Mon 31/1/22	Sat 6/2/21	Mon 31/1/22	0 days	146,300,357	498	100%	
510		**SW4**	**Cable & Other Underground Utility Pipeworks**	**17, 21, 22, 33, 45**	**(283)**	**396 days**	**Tue 1/3/22**	**Fri 31/3/23**	**NA**	**NA**	**0 days**	**146,300,357**	**498,47FF**	**0%**	
511	CPWU-02160d		Cable works			291 days	Tue 14/6/22	Fri 31/3/23	NA	NA	0 days			0%	
512	CPWU-02160a		Trench No.1 and associated utilities and pipeworks		297	243 days	Mon 1/8/22	Fri 31/3/23	NA	NA	0 days			0%	
513	CPWU-02160b		Trench No.2 and associated utilities and pipeworks		298	396 days	Tue 1/3/22	Fri 31/3/23	NA	NA	0 days			0%	
514	CPWU-02160c		Trench No.3 and associated utilities and pipeworks		299	204 days	Mon 1/8/22	Mon 20/2/23	NA	NA	0 days			0%	
515	**CPWU-02161**	**SW1**	**Portion C1-B, Area 1**			**290 days**	**Thu 13/5/21**	**Thu 5/5/22**	**Thu 13/5/21**	**NA**	**-111 days**	**257**	**44FF**	**83%**	
516	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	0 days			100%	
517	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	0 days		518	100%	



Critical Split Task Milestone Summary Critical

Updated Programme (Status Date: 31/03/2022)

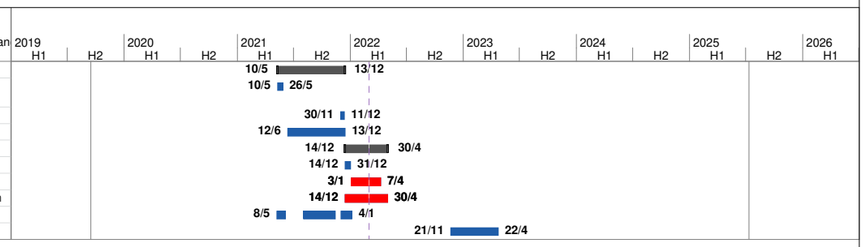
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successc	% Comple	Time Risk Allowan
518	CPWU-02161c		Sewage & Drainage system & Concrete Pipe between MHD26 and SMH1003177A (+3.6mPD)			88 days	Wed 14/7/21	Wed 27/10/21	Wed 14/7/21	Wed 27/10/21	0 days	517	519	100%	
519	CPWU-02161d		Process pipe DN800 (CHAY)			20 days	Thu 28/10/21	Fri 19/11/21	Thu 28/10/21	Fri 19/11/21	0 days	518	520	100%	
520	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	0 days	519	521	100%	
521	CPWU-02161f		Irrigation System		218	10 days	Mon 21/3/22	Thu 31/3/22	NA	NA	-111 days	520	522	0%	
522	CPWU-02161g	SW1	Road works (footpath 25m)			25 days	Fri 1/4/22	Thu 5/5/22	NA	NA	-111 days	521	504	0%	
523	**CPWU-02162**	**SW1**	**Portion C1-1B, Area 2**			**299 days**	**Thu 24/6/21**	**Mon 27/6/22**	**Thu 24/6/21**	**NA**	**-5 days**		**44FF**	**57%**	
524	CPWU-02162a		Watermain works DN450, 350, 300, 150 & 100 (CHL, CHA, CHC, CHLA) (60m)		216, 248, 276,318, PMI, (295), (305)	183 days	Thu 24/6/21	Mon 31/1/22	Thu 24/6/21	Mon 31/1/22	0 days		525SS	100%	
525	CPWU-02162b		AC DN150 pipe (CHR)		216, PMI	191 days	Thu 24/6/21	Fri 31/12/21	Thu 24/6/21	Fri 31/12/21	0 days	524SS		100%	
526	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	0 days		536	100%	
527	CPWU-02162d		Area between Fence wall and UV no.1			123 days	Mon 11/10/21	Thu 10/3/22	Mon 11/10/21	NA	17 days		531	44%	
528	CPWU-02162d1		Draiange system			140 days	Mon 11/10/21	Wed 30/3/22	Mon 11/10/21	NA	0 days			66%	
529	CPWU-02162d2		Irrigation System		218	21 days	Mon 21/3/22	Thu 14/4/22	NA	NA	-218 days		530	0%	
530	CPWU-02162d3		Road works (footpath 30m)			52 days	Tue 19/4/22	Tue 21/6/22	NA	NA	-218 days	529		0%	
531	CPWU-02162e		Fence Wall near PSW (10m)			12 days	Fri 11/3/22	Thu 24/3/22	NA	NA	-137 days	527	532,533	0%	
532	CPWU-02162f		Gate Footing			8 days	Fri 25/3/22	Sat 2/4/22	NA	NA	-118 days	531	535	0%	
533	CPWU-02162g		Fence Wall (40m)			35 days	Fri 25/3/22	Wed 11/5/22	NA	NA	-137 days	531	534	0%	
534	CPWU-02162h		Irrigation System			22 days	Thu 12/5/22	Tue 7/6/22	NA	NA	-137 days	533		0%	
535	CPWU-02162i		Fire Hydrant		207	30 days	Mon 4/4/22	Sat 14/5/22	NA	NA	-118 days	532		0%	
536	CPWU-02162j		Area between Fence wall and SSSH			130 days	Sat 15/1/22	Mon 27/6/22	Sat 15/1/22	NA	-100 days	526		9%	
537	CPWU-02162j0		300 Uchannel (50m)			30 days	Sat 15/1/22	Tue 22/2/22	Sat 15/1/22	NA	-154 days		538	47%	
538	CPWU-02162j1		HyD Lightng pole and drawpits		PMI	20 days	Wed 23/2/22	Thu 17/3/22	NA	NA	-154 days	537	539,540	0%	
539	CPWU-02162j2		Road light & drawpit		PMI	35 days	Fri 18/3/22	Tue 3/5/22	NA	NA	-154 days	538	541	0%	
540	CPWU-02162j3		Cable Drawpit & ducts		PMI	30 days	Fri 18/3/22	Tue 26/4/22	NA	NA	-149 days	538	541	0%	
541	CPWU-02162j4	SW1	Road works (footpath & carriageway)		(343)	45 days	Wed 4/5/22	Mon 27/6/22	NA	NA	-154 days	540,539		0%	
542	CPWU-02163	SW1	Portion C1-1B, Area 3			233 days	Fri 17/9/21	Tue 5/7/22	Fri 17/9/21	NA	-80 days		44FF	39%	
543	CPWU-02163a		Effluent Chamber		PMI	153 days	Fri 17/9/21	Thu 24/3/22	Fri 17/9/21	NA	-160 days		544	73%	
544	CPWU-02163b		Process Pipe DN1400 (CHAW) (35m)		273	25 days	Fri 25/3/22	Wed 27/4/22	NA	NA	-160 days	543	547,545SS	0%	
545	CPWU-02163c		Process Pipe DN300 (CHBA) (35m)			25 days	Fri 25/3/22	Mon 18/4/22	NA	NA	-190 days	544SS	547	0%	
546	CPWU-02163d		Process Pipe DN300 (CHAX) (10m)			25 days	Fri 25/3/22	Mon 18/4/22	NA	NA	-190 days	544SS	547	0%	
547	CPWU-02163e		Cable drawpit and ducts		PMI	25 days	Thu 28/4/22	Sat 28/5/22	NA	NA	-160 days	544,545,546	548	0%	
548	CPWU-02163f	SW1	Road Works (footpath & carriageway)			30 days	Mon 30/5/22	Tue 5/7/22	NA	NA	-160 days	547		0%	
549	CPWU-02200	SW4	Pipe Bridge No.1		297	157 days	Tue 20/9/22	Thu 30/3/23	NA	NA	-194 days	309	47FF	0%	
550	**CRWL-00000**	*****	**Remaining Works & Landscape Works**			**770 days**	**Tue 1/11/22**	**Thu 5/6/25**	**NA**	**NA**	**0 days**			**0%**	
551	CRWL-01000	SW5	Irrigation System		218	408 days	Mon 30/1/23	Mon 24/6/24	NA	NA	0 days	149,259,288FS-360 days,313FS-367 days,334FS-428 days,348FS-148 days,	48FF	0%	
552	CRWL-02000	SW5	Hard Landscape Works			408 days	Mon 30/1/23	Mon 24/6/24	NA	NA	0 days	149,259,288FS-360 days,313FS-367 days,334FS-428 days,348FS-148 days,	48FF	0%	
553	CRWL-03000	SW5	Soft Landscape Works			408 days	Mon 30/1/23	Mon 24/6/24	NA	NA	0 days	149,259,288FS-360 days,313FS-367 days,334FS-428 days,348FS-148 days,	559,48FF	0%	
554	CRWL-04000	SW5	Outfall for Effluent Pipes			124 days	Tue 1/11/22	Fri 31/3/23	NA	NA	355 days	188	48FF	0%	
555	CRWL-05000	SW5	Slope Formation Works near Outfall			124 days	Tue 1/11/22	Fri 31/3/23	NA	NA	355 days	188	48FF	0%	
556	CRWL-06000	SW5	Removal of invasive trees along River Embankment		(37)	90 days	Tue 1/11/22	Mon 20/2/23	NA	NA	299 days	188	557	0%	
557	CRWL-07000	SW5	Retaining Wall along River Embankment, street furniture & road works			90 days	Tue 21/2/23	Mon 12/6/23	NA	NA	299 days	188,556	48FF	0%	
558	CRWL-08000	SW5	Remaining Site formation works, road works and boundary fence wall		(348), 299	250 days	Thu 13/4/23	Mon 18/12/23	NA	NA	189 days	46	48FF	0%	
559	CRWL-09000		Establishment Works (365 Calendar Days)			291 days	Tue 25/6/24	Thu 5/6/25	NA	NA	0 days	553,149		0%	
560	**CWPA-00000**	*****	**Construction of Portion A of the Site**			**1005 days**	**Wed 27/11/19**	**Sat 22/4/23**	**Wed 27/11/19**	**NA**	**109 days**			**92%**	
561	**C132S-00000**	*****	**132kV Substation**			**1005 days**	**Wed 27/11/19**	**Sat 22/4/23**	**Wed 27/11/19**	**NA**	**109 days**			**92%**	
562	**C132SI-00000**		**Internal Works**			**651 days**	**Wed 27/11/19**	**Wed 9/2/22**	**Wed 27/11/19**	**NA**	**463 days**			**99%**	
563	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	0 days	2	564	100%	
564	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	0 days	563	566	100%	
565	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	0 days	2	567	100%	
566	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	0 days	564	567	100%	
567	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	0 days	135,565,187,566	568	100%	
568	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	0 days	567	569	100%	
569	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	0 days	568	570	100%	
570	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	0 days	136,569	571,320,57	100%	6
571	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	0 days	570	572,356FS	100%	
572	C132SI-10000		Sheetpile Installation Stage 1	45	234, (19), (23), (36), (5	118 days	Thu 21/5/20	Fri 9/10/20	Thu 21/5/20	Fri 9/10/20	0 days	571,138	575	100%	6
573	C132SI-11000		CHP Cable Diversion Works	22, 33, 45, 46, 25	31/35, (23), (137)	70 days	Fri 21/2/20	Tue 19/5/20	Fri 21/2/20	Tue 19/5/20	0 days	570		100%	
574	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	0 days	571		100%	
575	C132SI-13000		Excavation Works Stage 1	45, 46, 257, 333,	(16), (23), (36)	86 days	Wed 22/7/20	Mon 2/11/20	Wed 22/7/20	Mon 2/11/20	0 days	572	576	100%	8
576	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	0 days	213,214,141,212,575	614	100%	10
577	C132SI-14020		Basement	(92), (112)	39/43, (30), (56), (59),	50 days	Wed 30/9/20	Mon 30/11/20	Wed 30/9/20	Mon 30/11/20	0 days		578	100%	
578	C132SI-14030		Ground Floor	268	(79), (88), (91), (101),	68 days	Tue 1/12/20	Wed 24/2/21	Tue 1/12/20	Wed 24/2/21	0 days	577	579	100%	
579	C132SI-14040		First Floor	338	(104), (143)	19 days	Thu 25/2/21	Fri 9/4/21	Thu 25/2/21	Fri 9/4/21	0 days	578	580	100%	
580	C132SI-14050		Roof Floor (461sq.m)	(204), (228)	(105), (126), (143)	23 days	Sat 10/4/21	Fri 7/5/21	Sat 10/4/21	Fri 7/5/21	0 days	579	581	100%	
581	C132SI-14060		Parapet			26 days	Fri 2/4/21	Fri 7/5/21	Fri 2/4/21	Fri 7/5/21	0 days	580	582,588,58	100%	
582	C132SI-22000		ABWF Works + Additional Works		(269), (271), (274), (32	100 days	Sat 8/5/21	Tue 5/10/21	Sat 8/5/21	Tue 5/10/21	0 days	216,143,581	588FF	100%	
583	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	0 days	143,581	588FF	100%	
584	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	0 days	581	588FF	100%	
585	C132SI-25000		Backfilling reinstatement & road works			100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	0 days	581	588FF	100%	
586	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	0 days	581,590		100%	
587	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	0 days	581		100%	
588	C132SI-28000		Architectual Works			144 days	Mon 7/6/21	Fri 26/11/21	Mon 7/6/21	Fri 26/11/21	0 days	582FF,583FF,584FF,585FF,581	37FF,589	100%	
589	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	0 days	588	591,590SS	100%	
590	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	0 days	589SS+5 days	586,592FS	100%	
591	C132SI-30000		FSD Inspection & FS Certificate			15 days	Tue 4/1/22	Thu 20/1/22	Tue 4/1/22	Thu 20/1/22	0 days	589	179SS-2 er	100%	
592	**C132SI-31000**	**KD2A**	**Handover to CLP for Electrical System Installation**			**1 day**	**Mon 13/12/21**	**Mon 13/12/21**	**Mon 13/12/21**	**Mon 13/12/21**	**0 days**	**590FS+5 days**	**593SS-30 (**	**100%**	
593	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	0 days	592SS-30 days,216,143	594,615	100%	
594	C132SI-33000	SW2	Inspection and Handover to DSD			30 days	Mon 3/1/22	Wed 9/2/22	Mon 3/1/22	NA	463 days	593	45FF	83%	
595	**C132SE-00000**		**External Works**			**688 days**	**Mon 21/12/20**	**Sat 22/4/23**	**Mon 21/12/20**	**NA**	**109 days**	**157**		**81%**	
596	**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**	**0 days**		**37FF**	**100%**	
597	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	0 days	160	598	100%	
598	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	0 days	597	599SS+20	100%	
599	C132SI-17000		Dismantle existing boundary wall	268, 338	(21), (90), 370	63 days	Thu 14/1/21	Wed 17/3/21	Thu 14/1/21	Wed 17/3/21	0 days	598SS+20 days	600SS+40	100%	
600	C132SI-19000		Sheetpile Installation Stage 2	338, (204), (228)	(35), (151), (155), (166	70 days	Mon 8/3/21	Tue 15/6/21	Mon 8/3/21	Tue 15/6/21	0 days	599SS+40 days		100%	
601	C132SE-02000		Drainage & Sewerage Works		245	232 days	Tue 23/3/21	Mon 3/1/22	Tue 23/3/21	Mon 3/1/22	0 days		37FF	100%	
602	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	0 days		603	100%	
603	C132SE-02010		Trench Excavation and ELS works	(204), (228)	(162), (308), (312), (33	90 days	Tue 20/4/21	Fri 6/8/21	Tue 20/4/21	Fri 6/8/21	0 days	602	604	100%	
604	C132SE-02020		Pipe Laying Works		(312), (314), (332), (32	100 days	Thu 15/7/21	Thu 11/11/21	Thu 15/7/21	Thu 11/11/21	0 days	603	605	100%	
605	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	0 days	604		100%	



Critical Split Task Milestone Summary Critical

Updated Programme (Status Date: 31/03/2022)

ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successc	% Comple	Time Risk Allowan
606	C132SE-02040	KD2A	CLP Cable & Other Underground Utility Pipeworks			181 days	Mon 10/5/21	Mon 13/12/21	Mon 10/5/21	Mon 13/12/21	0 days		37FF	100%	
607	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	0 days			100%	
608	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	0 days			100%	
609	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	0 days		610,611	100%	
610	C132SE-02050		Road Works		(307), (309), (313), (33	109 days	Tue 14/12/21	Sat 30/4/22	Tue 14/12/21	NA	0 days	609	37FF	63%	
611	C132SE-02060		Road Carriageway Works			18 days	Tue 14/12/21	Fri 31/12/21	Tue 14/12/21	Fri 31/12/21	0 days	609	612SS+20	100%	
612	C132SE-02070		Footpath works			95 days	Mon 3/1/22	Thu 7/4/22	Mon 3/1/22	NA	-17 days	611SS+20 days		90%	
613	C132SE-02080		Road Lighting Works			138 days	Tue 14/12/21	Sat 30/4/22	Tue 14/12/21	NA	0 days	611SS		40%	1month
614	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	0 days	576	37FF	100%	
615	C132SE-04000	SW2	Remaining Works after CLP Plant and Power Cables Installation			122 days	Mon 21/11/22	Sat 22/4/23	NA	NA	109 days	593	45FF	0%	

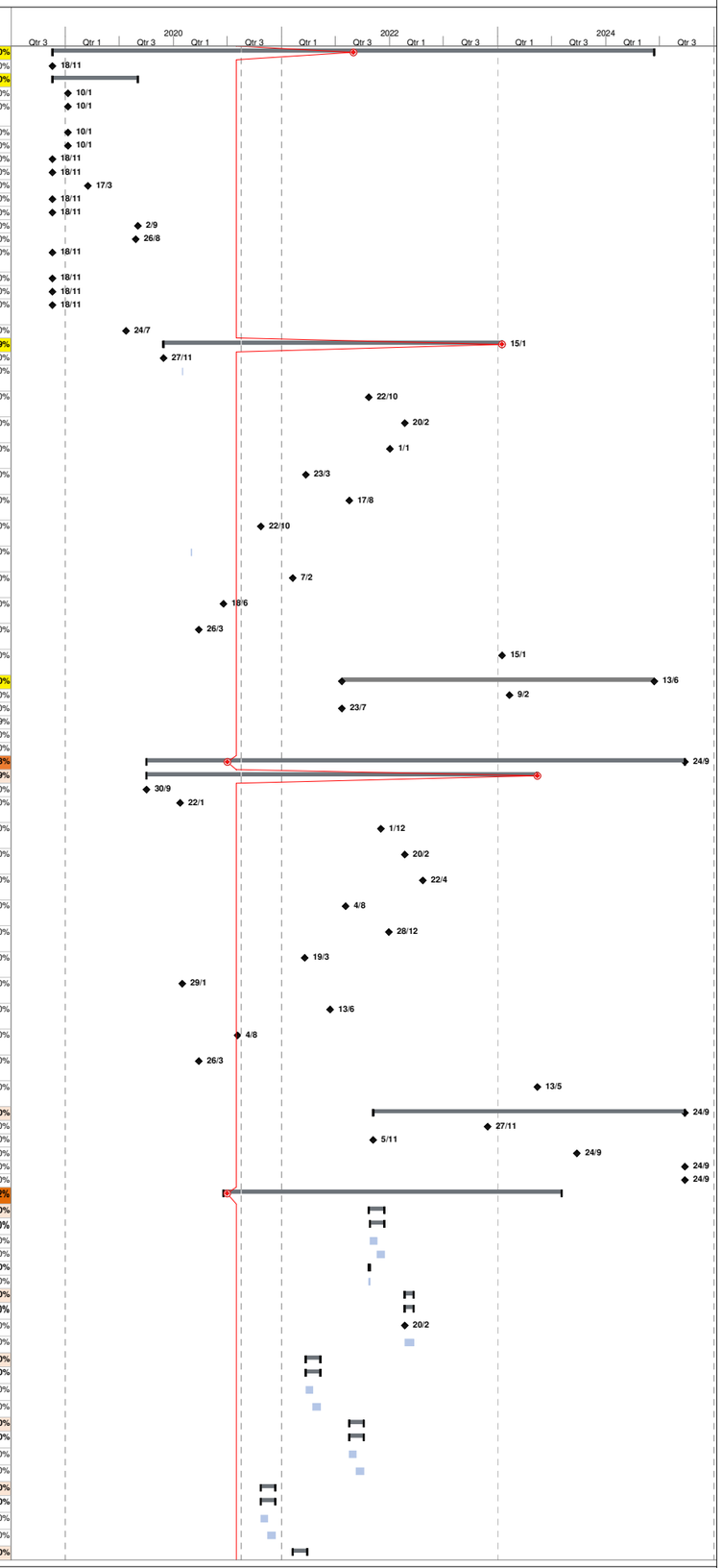


Critical Split Task Milestone Summary Critical

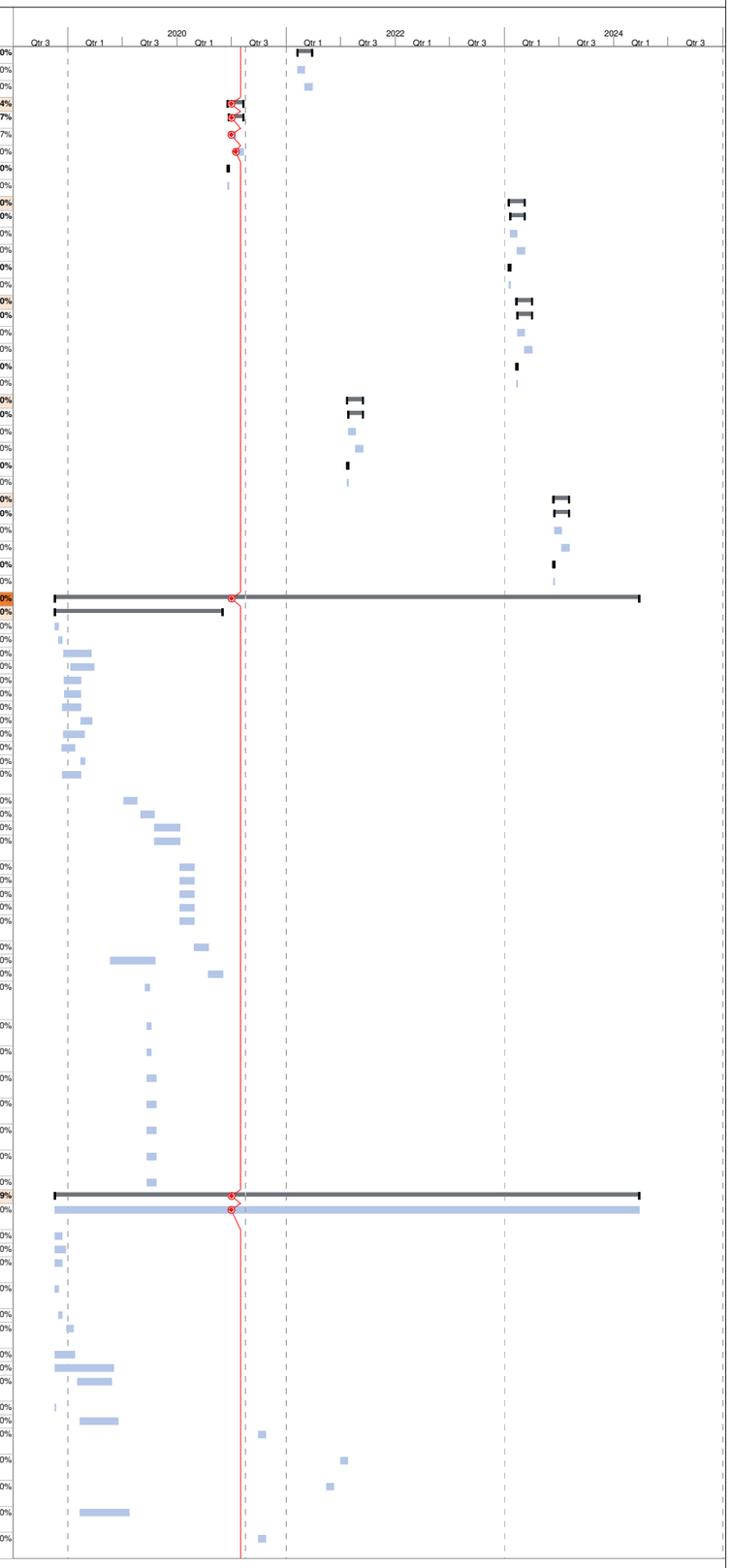
Contract No. DC/2018/07
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1

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

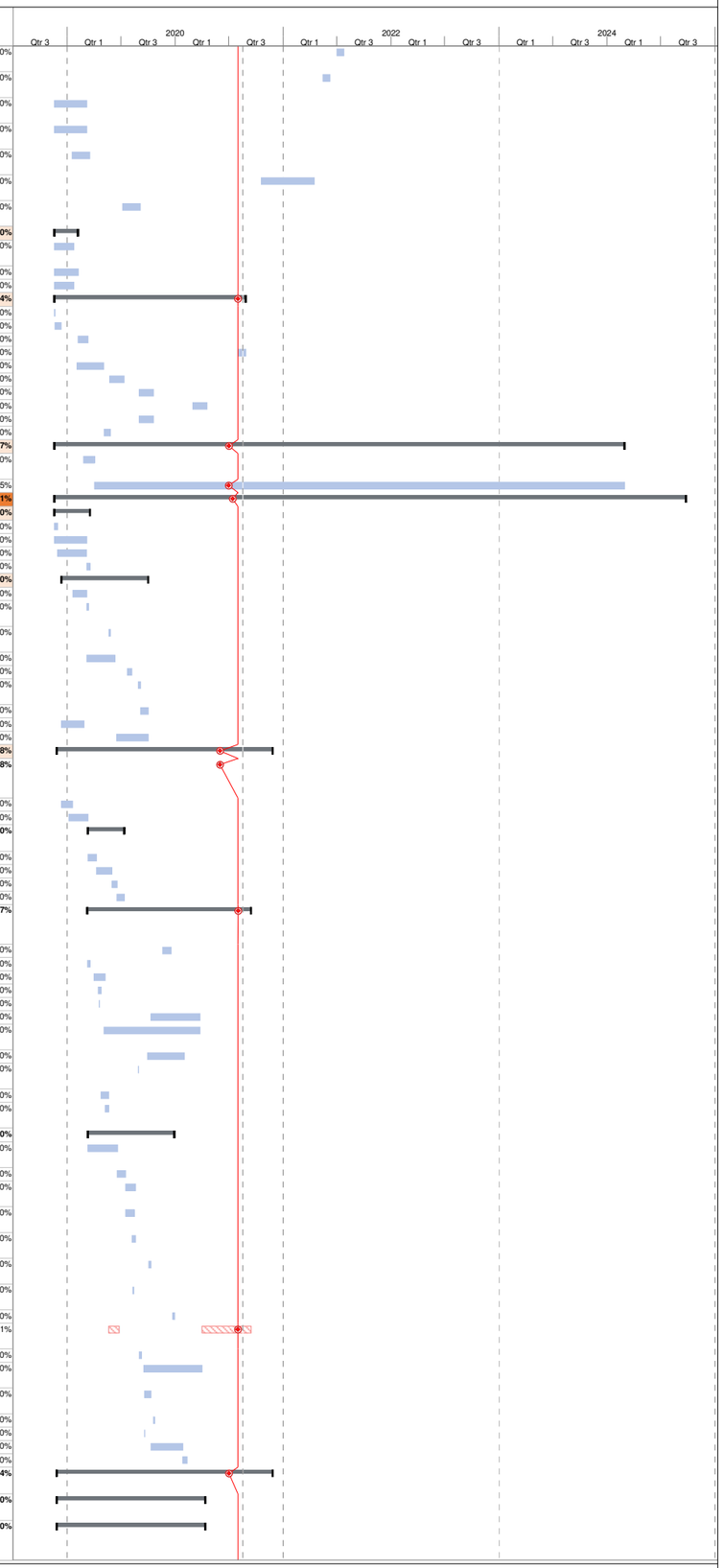
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
1	**CD-1000**		**Contract Dates**			**1585 days**	**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%**



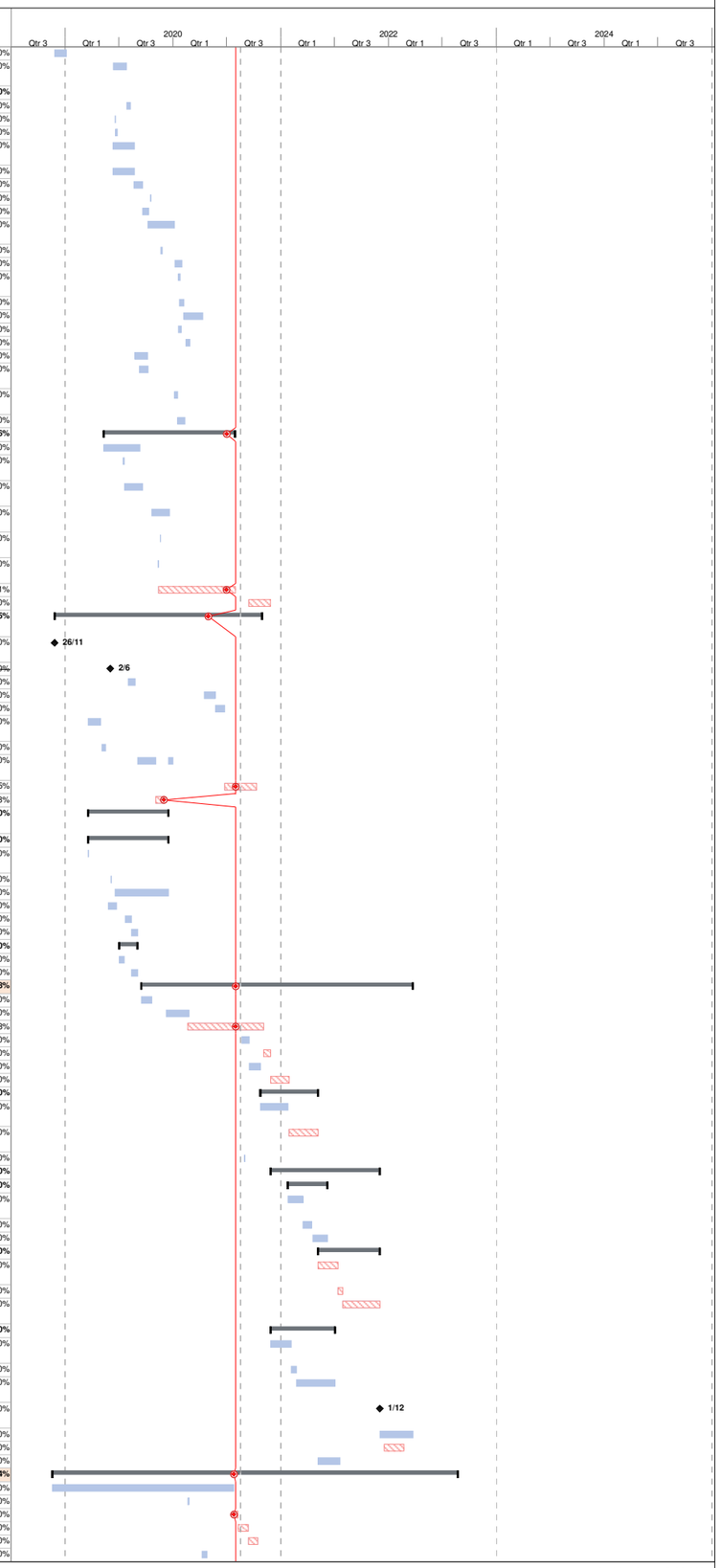
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
85	**ET1H-1100**		**Inclement Weather to KD1J (cal. 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,	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%



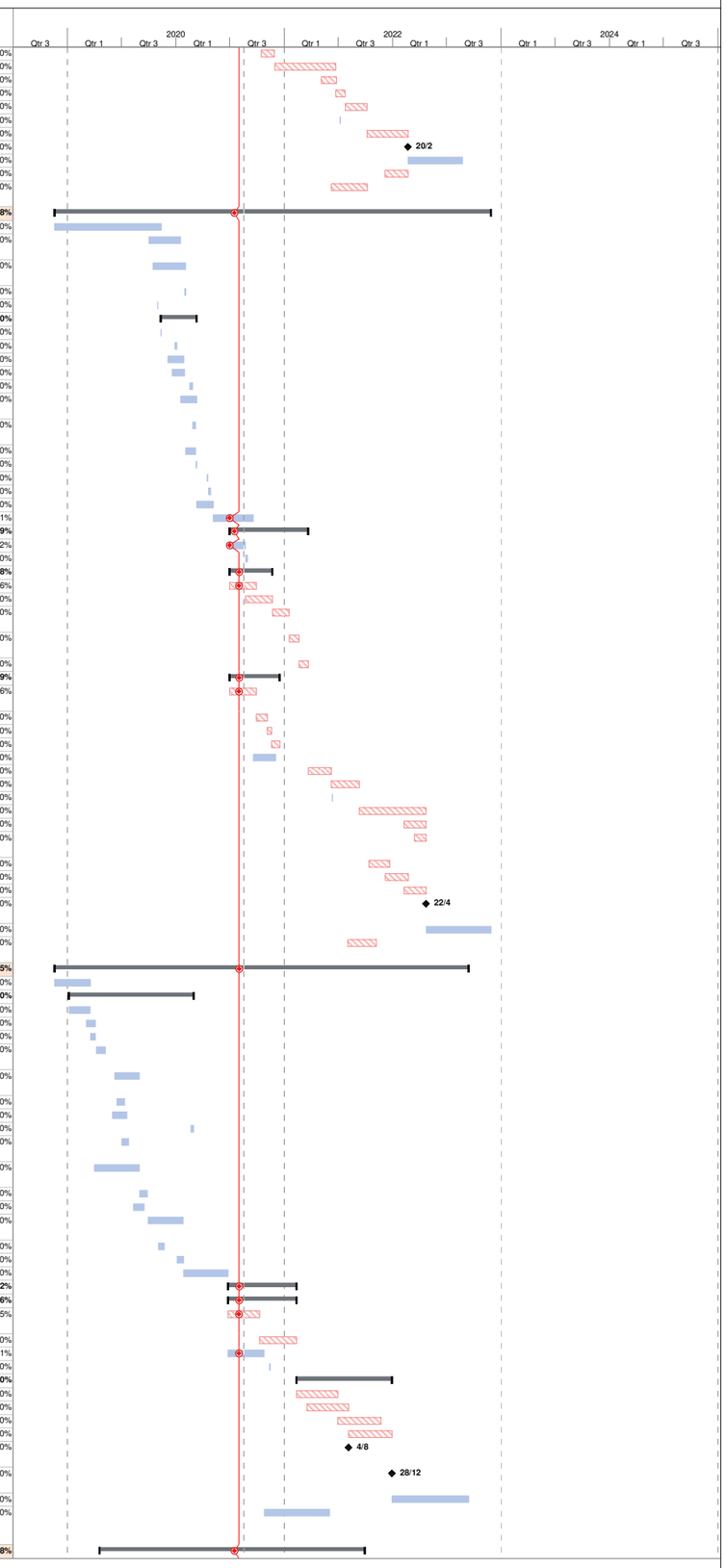
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
170	SUBA-1130b		Prepare and submit Dewatering proposal 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		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	212,532,551,552,554,553,549,557,1	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%**



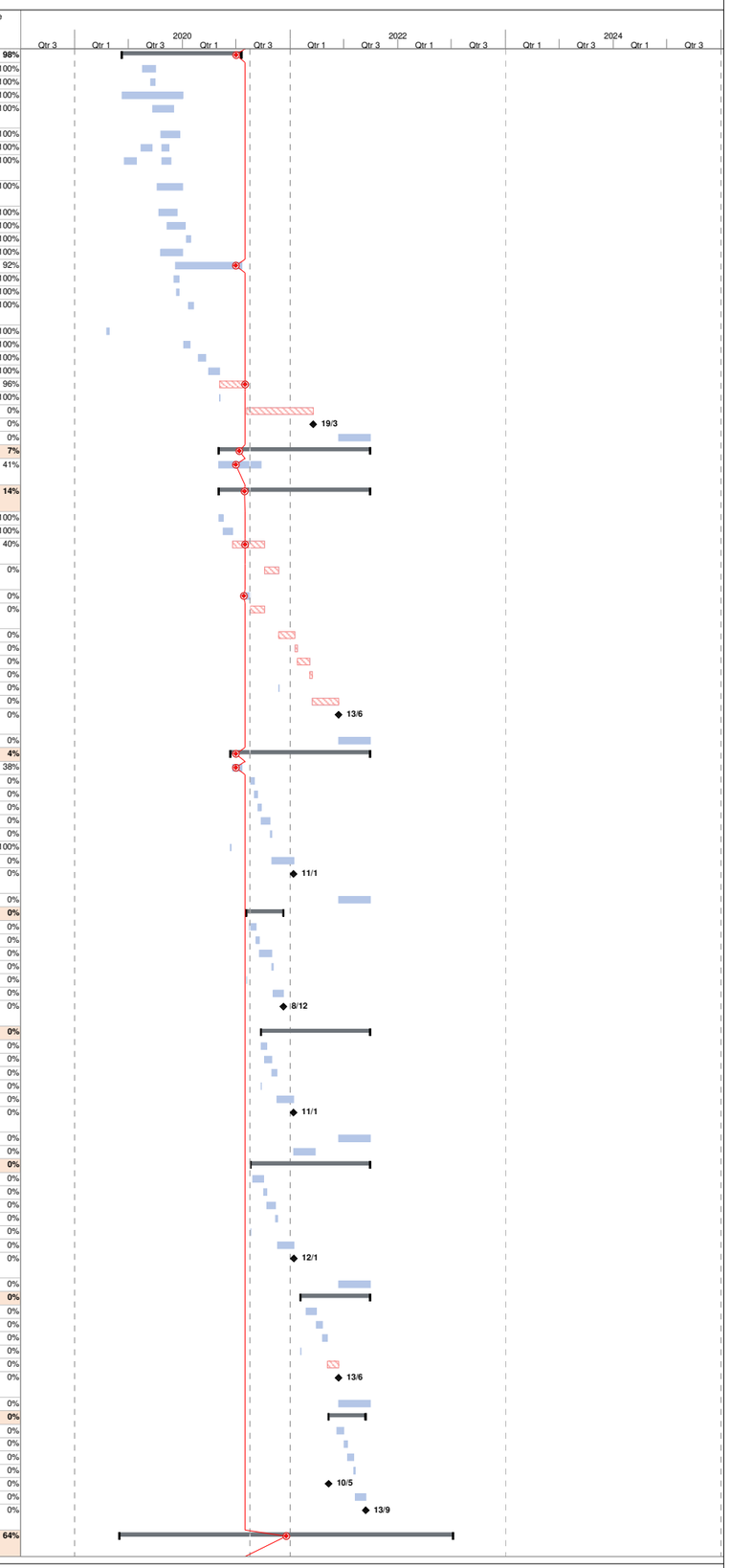
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
252	CIW-1500b		Joint Initial Survey arrangement with 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 Facilitates 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 Primiary 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	426	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 chaiange 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%**

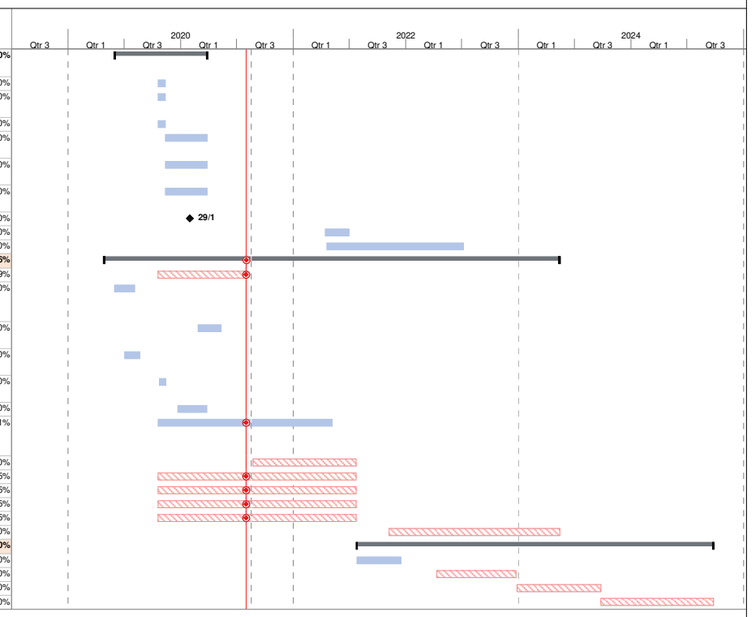


ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
435	**CSA-1000**		**Additional Preliminary Works**			**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, 1	61	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, 3(	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, 3(	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, 3	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	322	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%**

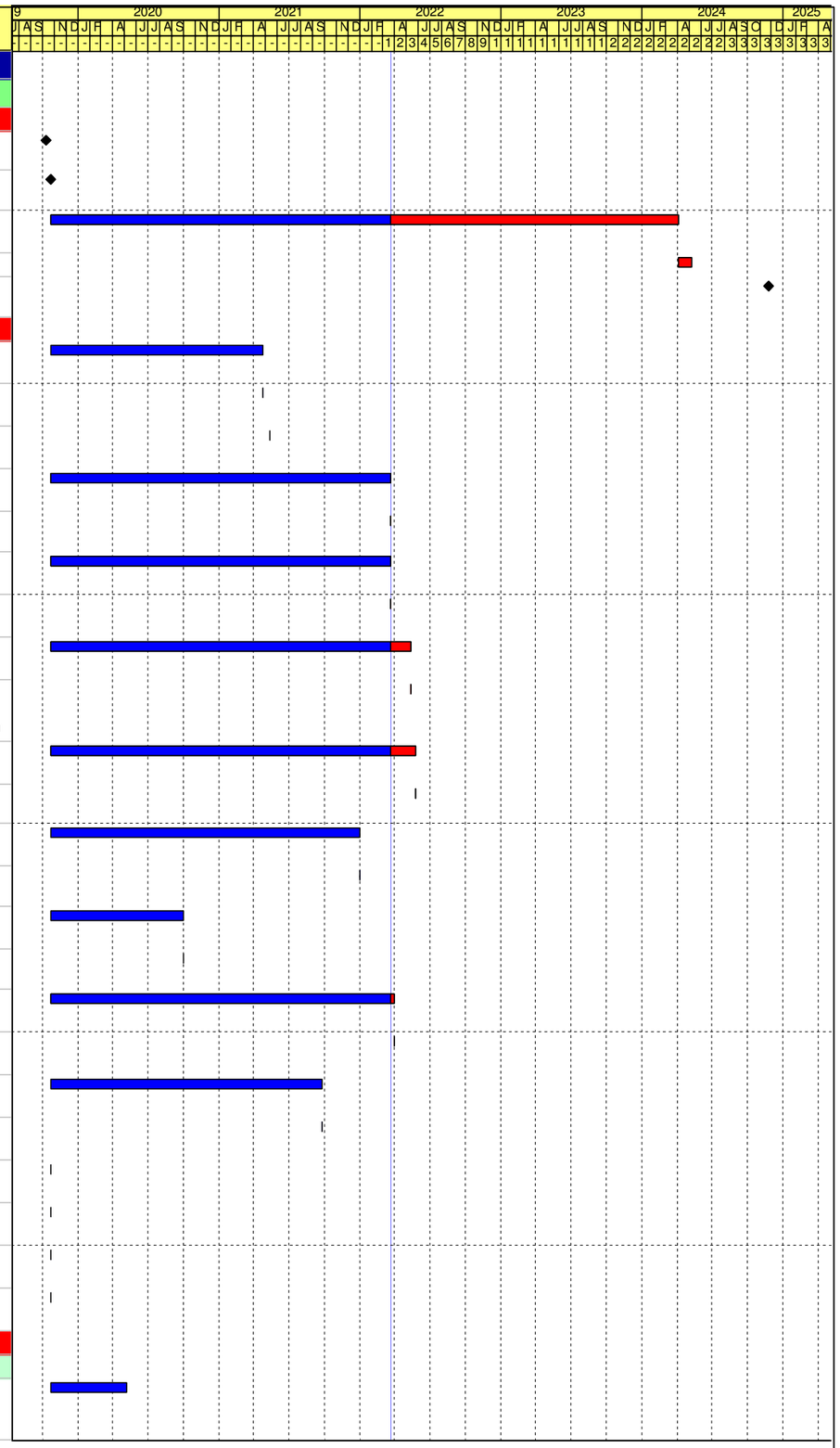


Revised Works Programme (Status Date: 31/07/2021)

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
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 S		1872	11-Oct-19 A	24-Nov-24	31-Dec-21	24-Nov-24	0		
Contract Data		1872	11-Oct-19 A	24-Nov-24	30-Jan-22	24-Nov-24	0		
Starting Date & Completion Date		1872	11-Oct-19 A	24-Nov-24	30-Jan-22	24-Nov-24	0		
AS000010	Contract Date (LOA)	0	11-Oct-19 A		30-Jan-22				AS000020, AS103100,
AS000020	Starting Date	0	23-Oct-19 A		30-Jan-22			AS000010	AS102100, AS001300,
AS000110	Whole Contract Period (1626 days from starting date)	1626	23-Oct-19 A	04-Apr-24	21-Mar-22	04-Apr-24	0	AS000020	AS000220, AS000120l
AS000120l	Extension of Time Granted (Total 34.5days)	35	05-Apr-24	09-May-24*	05-Apr-24	09-May-24	0	AS000110	AS000220
AS000220	Completion Date for the whole of the Works	0		24-Nov-24		24-Nov-24	0	AS000110, AS000020,	
Access Date		1434	23-Oct-19 A	24-May-22	30-Jan-22	24-Nov-24	915		
AS001100	Portion C-1A (within 480 to 550 days from starting date)	550	23-Oct-19 A	24-Apr-21 A	03-Feb-22	03-Feb-22		AS000020	AS001120
AS001120	Planned Access Date for Portion C-1A (Partial Access)	1	24-Apr-21 A	24-Apr-21 A	03-Feb-22	03-Feb-22		AS000020, AS001100	AS013300, AS106100
AS001130	Planned Access Date for Portion C-1A (Access for Remaining Area)	1	12-May-21 A	12-May-21 A	03-Feb-22	03-Feb-22			AS106100
AS001200	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	21-Mar-22	30-Jan-22	30-Jan-22	-50	AS000020	AS001220
AS001220	Planned Access Date for Portion C-2A	1	21-Mar-22	21-Mar-22*	30-Jan-22	30-Jan-22	-50	AS000020, AS001200	AS502160, AS502440,
AS001300	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	21-Mar-22	20-Mar-22	20-Mar-22	-1	AS000020	AS001320
AS001320	Planned Access Date for Portion C-2B	1	21-Mar-22	21-Mar-22*	20-Mar-22	20-Mar-22	-1	AS000020, AS001300	AS503100, AS503160
AS001400	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	21-Mar-22	13-May-22	0	AS000020	AS001420
AS001420	Planned Access Date for Portion C2-C	1	13-May-22	13-May-22*	13-May-22	13-May-22	0	AS000020, AS001400	AS503500, AS503600, AS503490m
AS001500	Portion C-2D (within 825 to 945 days from starting date)	945	23-Oct-19 A	24-May-22	21-Mar-22	24-May-22	0	AS000020	AS001520
AS001520	Planned Access Date for Portion C-2D	1	24-May-22	24-May-22*	24-May-22	24-May-22	0	AS001500	AS504500, AS504520,
AS001600	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	21-Mar-22	21-Mar-22		AS000020	AS001620
AS001620	Planned Access Date for Portion C-3 (SS by NCE-NCE-273)	1	31-Dec-21 A	31-Dec-21 A	21-Mar-22	21-Mar-22		AS001600, AS020230	AS002060, AS504000,
AS001700	Portion B-1 (within 285 to 345 days from starting date)	345	23-Oct-19 A	30-Sep-20 A	14-Feb-22	14-Feb-22		AS000020	AS001720
AS001720	Planned Access Date for Portion B-1	1	30-Sep-20 A	30-Sep-20 A	14-Feb-22	14-Feb-22		AS001700	AS002050, AS161120,
AS001800	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	31-Mar-22	21-Mar-22	31-Mar-22	0	AS000020	AS001820
AS001820	Planned Access Date for Portion B-2a (SS by NCE-NCE-219)	1	31-Mar-22	31-Mar-22*	31-Mar-22	31-Mar-22	0	AS001800	AS505600, AS505590
AS001830	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	24-Nov-24	24-Nov-24			
AS001840	Planned Access Date for Portion B-2b (SS by NCE-NCE-219)	1	24-Sep-21 A	24-Sep-21 A	24-Nov-24	24-Nov-24			
AS001900	Works Area WA1-B (starting date)	1	23-Oct-19 A	23-Oct-19 A	20-Apr-22	20-Apr-22		AS000020	AS001910
AS001910	Planned Access Date for Works Area WA1-B	1	23-Oct-19 A	23-Oct-19 A	20-Apr-22	20-Apr-22		AS000020, AS001900	AS010100, AS010205a
AS001920	Works Area WA3 (starting date)	1	23-Oct-19 A	23-Oct-19 A	20-Apr-22	20-Apr-22		AS000020	AS001930
AS001930	Planned Access Date for Works Area WA3	1	23-Oct-19 A	23-Oct-19 A	20-Apr-22	20-Apr-22		AS000020, AS001920	AS010100, AS010210
Key Dates		1554	23-Oct-19 A	23-Jan-24	03-Feb-22	24-Nov-24	307		
Contractual Completion (Include Implemented CE)		1536	23-Oct-19 A	18-Dec-23	03-Feb-22	24-Nov-24	343		
AS002010	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	03-Feb-22	03-Feb-22		AS000020, AS102100, AS102150	AS000220, AS104100



File Name: DE/2018/03 RP R20
Layout: DE1803 RP (Mar 2022) - WBS
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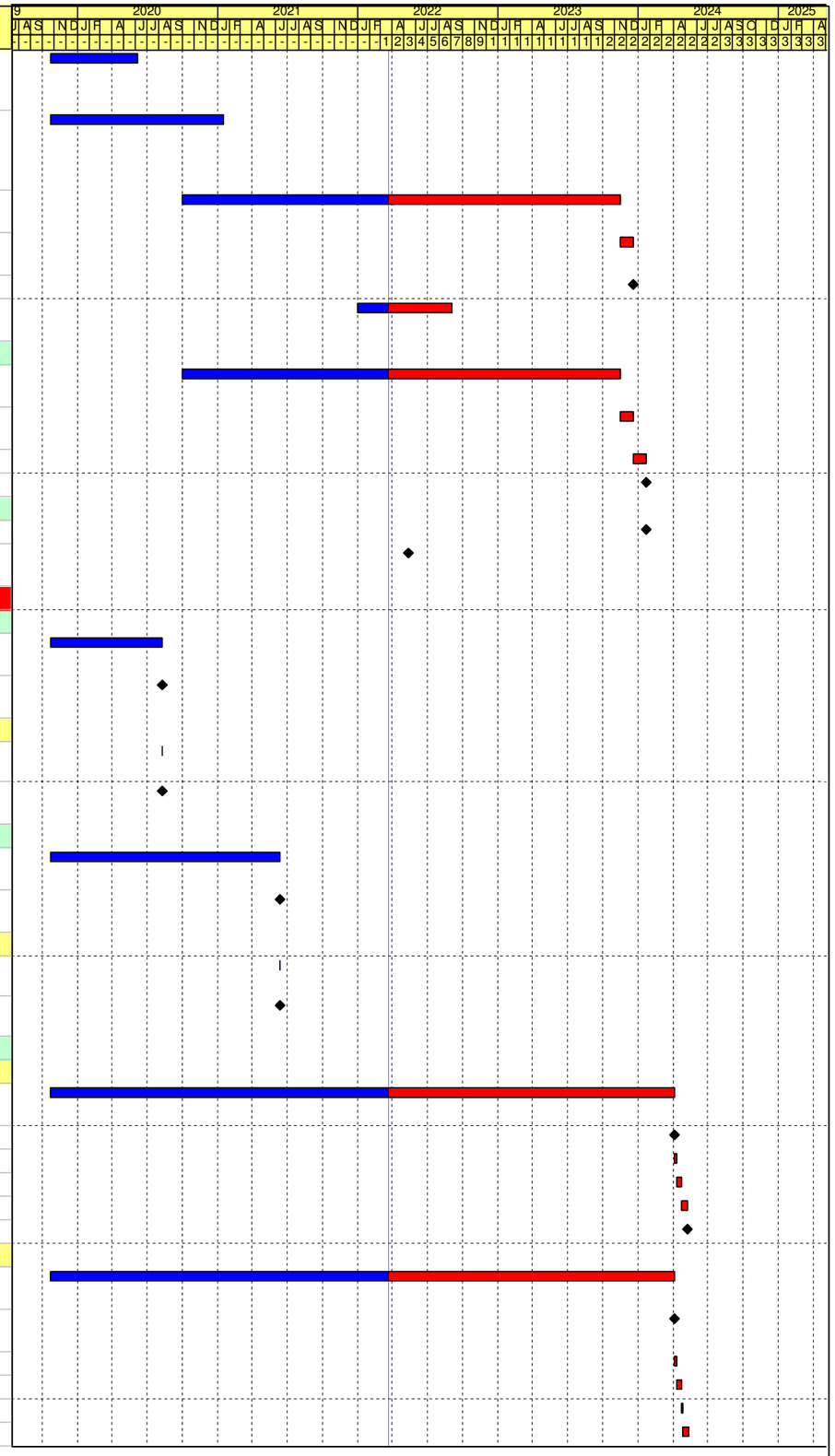
Remaining Work
Critical Activity
Milestone
Actual Progress

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 Mar 2022

Date	Revision	Checked	Approved
30-Nov-21	Rev.16	LT	KM
31-Dec-21	Rev.17	LT	KM
31-Jan-22	Rev.18	LT	KM
28-Feb-22	Rev.19	LT	KM
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS002020	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	24-Nov-24	24-Nov-24		AS000020, AS020200, AS021200	AS002040
AS002040	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	24-Nov-24	24-Nov-24		AS000020, AS020300, AS021300, AS002020	AS003220
AS002050	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-Mar-22	14-Nov-23	0	AS001720	AS002051
AS002051	Extension of Time Granted for KD3A (Total 33.5days)	34	15-Nov-23	18-Dec-23	15-Nov-23	18-Dec-23	0	AS002050	AS003900, AS002052
AS002052	Revised Completion Date for KD3A	0		18-Dec-23*		18-Dec-23	0	AS002051	
AS002060	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*	21-Mar-22	02-Sep-22	0	AS001620, AS504100	
Expected Completion (Include Non-implemented CE)		1158	30-Sep-20 A	22-Jan-24	21-Mar-22	22-Jan-24	0		
AS002050a	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-Mar-22	14-Nov-23	0	AS001720	AS002051a
AS002051a	Extension of Time Granted for KD3A (Total 33.5days)	34	15-Nov-23	18-Dec-23	15-Nov-23	18-Dec-23	0	AS002050a	AS003900, AS002051b
AS002051b	Extension of Time for KD3A - Non-implemented (Total 35days)	35	18-Dec-23	22-Jan-24	18-Dec-23	22-Jan-24	0	AS002051a	AS002052a
AS002052a	Expected Completion Date for KD3A	0		22-Jan-24*		22-Jan-24	0	AS002051b	
Planned Completion		621	12-May-22	23-Jan-24	02-Sep-22	18-Dec-23	-36		
AS002052c	Planned Completion Date for KD3A	0		23-Jan-24*		18-Dec-23	-36	AS155210e	AS003900
AS002060b	Planned Completion Date for KD5A	0		12-May-22*		02-Sep-22	113	AS001620, AS504100	
Completion Date		1860	23-Oct-19 A	24-Nov-24	21-Mar-22	24-Nov-24	0		
Section 1 - Complete All Design at UV System No.1 & EP Station No. 1		312	23-Oct-19 A	08-Aug-20 A	24-Nov-24	24-Nov-24			
AS003100	Contract Duration of Section 1	291	23-Oct-19 A	08-Aug-20 A	24-Nov-24	24-Nov-24		AS000020	AS003110
AS003110	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20 A		24-Nov-24		AS003100	AS003130
Time Risk Allowance and Planned Completion		1	08-Aug-20 A	08-Aug-20 A	24-Nov-24	24-Nov-24			
AS003105	Time Risk Allowance for Section 1	1	08-Aug-20 A	08-Aug-20 A	24-Nov-24	24-Nov-24		AS103100, AS103200,	AS003130
AS003130	Planned Completion for Section 1	0		08-Aug-20 A		24-Nov-24		AS003105, AS003110	AS000220
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		632	23-Oct-19 A	11-Jun-21 A	24-Nov-24	24-Nov-24			
AS003200	Contract Duration of Section 2	601	23-Oct-19 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS000020	AS003210
AS003210	Completion date - Section 2 (600 days after starting date)	0		11-Jun-21 A		24-Nov-24		AS003200	AS003230
Time Risk Allowance and Planned Completion		9	11-Jun-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24			
AS003220	Time Risk Allowance for Section 2	6	11-Jun-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS023100, AS023120,	AS003230
AS003230	Planned Completion for Section 2	0		11-Jun-21 A		24-Nov-24		AS003220, AS003210,	AS000220
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		1860	23-Oct-19 A	24-Nov-24	21-Mar-22	24-Nov-24	-1		
Contractual Completion (Include Implemented CE)		1661	23-Oct-19 A	09-May-24	21-Mar-22	09-May-24	0		
AS003300	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Mar-22	04-Apr-24	0		AS003310
AS003310	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	AS003300	AS003311
AS003311	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	AS003310	AS003312
AS003312	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	AS003311	AS003314
AS003314	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	24-Apr-24	09-May-24	24-Apr-24	09-May-24	0	AS003312	AS004000
AS004000	Revised Completion for Section 3	0		09-May-24*		09-May-24	0	AS003314	
Expected Completion (Include Non-implemented CE)		1860	23-Oct-19 A	24-Nov-24	21-Mar-22	24-Nov-24	0		
AS003300a	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Mar-22	04-Apr-24	0	AS000020	AS003310a
AS003310a	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	AS003300a	AS003900, AS003311a
AS003311a	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	AS003310a	AS003312a
AS003312a	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	AS003311a	AS003313a
AS003313a	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1	24-Apr-24	25-Apr-24	24-Apr-24	25-Apr-24	0	AS003312a	AS003314a
AS003314a	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	25-Apr-24	10-May-24	25-Apr-24	10-May-24	0	AS003313a	AS003315a



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Layout: DE1803 RP (Mar 2022) - WBS

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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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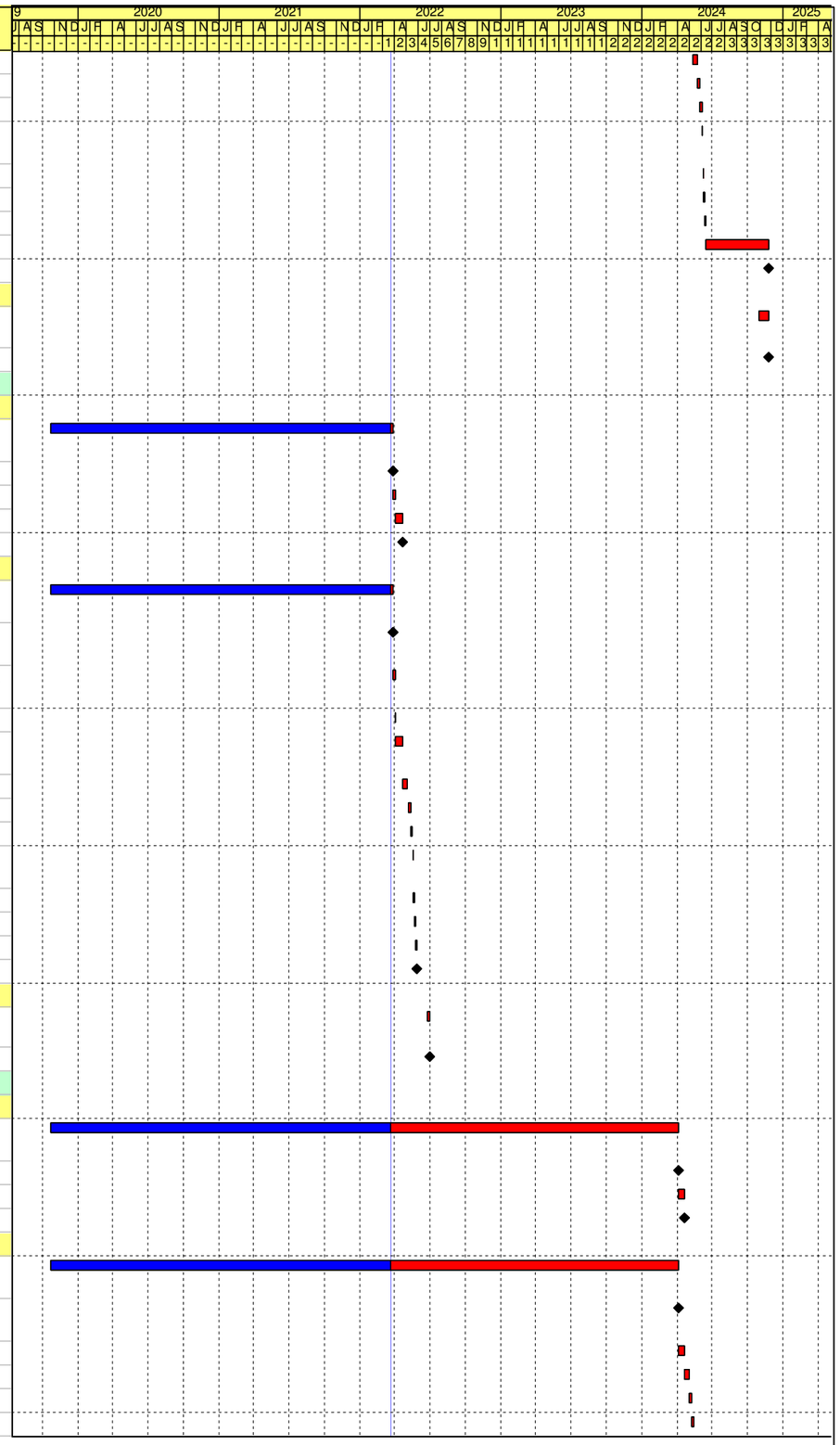
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS003315a	CNE-013 Inclement Weather (August 2021) - 12.5days	13	10-May-24	22-May-24	10-May-24	22-May-24	0	AS003314a	AS003316a
AS003316a	CNE-017 Inclement Weather (September 2021) - 7.5days	8	23-May-24	30-May-24	23-May-24	30-May-24	0	AS003315a	AS003317a
AS003317a	CNE-019 Inclement Weather (October 2021) - 4.5days	5	30-May-24	03-Jun-24	30-May-24	03-Jun-24	0	AS003316a	AS003318a
AS003318a	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 3 days	3	04-Jun-24	06-Jun-24	04-Jun-24	06-Jun-24	0	AS003317a	AS003319a
AS003319a	CNE-027 Inclement Weather (November 2021) - 1.5days	2	07-Jun-24	08-Jun-24	07-Jun-24	08-Jun-24	0	AS003318a	AS003320a
AS003320a	CNE-031 Inclement Weather (December 2021) - 2.5days	3	08-Jun-24	10-Jun-24	08-Jun-24	10-Jun-24	0	AS003319a	AS003321a
AS003321a	CNE-036 Inclement Weather (January 2022) - 2.5days	3	11-Jun-24	13-Jun-24	11-Jun-24	13-Jun-24	0	AS003320a	AS003999a
AS003999a	EWN-0314 Extention of Time for change of access date	164	13-Jun-24	24-Nov-24	13-Jun-24	24-Nov-24	0	AS003321a	AS004000a
AS004000a	Expected Completion for Section 3	0		24-Nov-24*		24-Nov-24	0	AS003999a	
Time Risk Allowance and Planned Completion		26	30-Oct-24	24-Nov-24	13-Apr-24	09-May-24	-200		
AS003900	Time Risk Allowance for Section 3	26	30-Oct-24	24-Nov-24	13-Apr-24	09-May-24	-200	AS003310a, AS161260,	AS004000b
AS004000b	Planned Completion for Section 3	0		24-Nov-24*		09-May-24	-200	AS003900	AS000220
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		981	23-Oct-19 A	29-Jun-22	21-Mar-22	26-May-22	-35		
Contractual Completion (Include Implemented CE)		912	23-Oct-19 A	21-Apr-22	21-Mar-22	21-Apr-22	0		
AS003400	Contract Duration of Section 4	886	23-Oct-19 A	26-Mar-22	21-Mar-22	26-Mar-22	0		AS003410
AS003410	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22*		26-Mar-22	0	AS003400	AS003411
AS003411	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	7	27-Mar-22	02-Apr-22	27-Mar-22	02-Apr-22	0	AS003410	AS106113
AS106113	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19	02-Apr-22	21-Apr-22	02-Apr-22	21-Apr-22	0	AS003411	AS107000
AS107000	Revised Completion for Section 4	0		21-Apr-22*		21-Apr-22	0	AS106113	
Expected Completion (Include Non-implemented CE)		947	23-Oct-19 A	26-May-22	21-Mar-22	26-May-22	0		
AS003400a	Contract Duration of Section 4	886	23-Oct-19 A	26-Mar-22	21-Mar-22	26-Mar-22	0	AS000020	AS003410a
AS003410a	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22*		26-Mar-22	0	AS003400a	AS003420, AS003411a
AS003411a	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	7	27-Mar-22	02-Apr-22	27-Mar-22	02-Apr-22	0	AS003410a	AS106113a, AS003412a
AS003412a	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1	02-Apr-22	03-Apr-22	02-Apr-22	03-Apr-22	0	AS003411a	AS106113a
AS106113a	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19	03-Apr-22	22-Apr-22	03-Apr-22	22-Apr-22	0	AS003411a, AS003412a	AS106114a
AS106114a	CNE-013 Inclement Weather (August 2021) - 12.5days	13	22-Apr-22	04-May-22	22-Apr-22	04-May-22	0	AS106113a	AS106115a
AS106115a	CNE-017 Inclement Weather (September 2021) - 7.5days	8	05-May-22	12-May-22	05-May-22	12-May-22	0	AS106114a	AS106116a
AS106116a	CNE-019 Inclement Weather (October 2021) - 4.5days	5	12-May-22	16-May-22	12-May-22	16-May-22	0	AS106115a	AS106117a
AS106117a	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 3 days	3	17-May-22	19-May-22	17-May-22	19-May-22	0	AS106116a	AS106118a
AS106118a	CNE-027 Inclement Weather (November 2021) - 1.5days	2	20-May-22	21-May-22	20-May-22	21-May-22	0	AS106117a	AS106119a
AS106119a	CNE-031 Inclement Weather (December 2021) - 2.5days	3	21-May-22	23-May-22	21-May-22	23-May-22	0	AS106118a	AS106120a
AS106120a	CNE-036 Inclement Weather (January 2022) - 2.5days	3	24-May-22	26-May-22	24-May-22	26-May-22	0	AS106119a	AS107000a
AS107000a	Expected Completion for Section 4	0		26-May-22*		26-May-22	0	AS106120a	
Time Risk Allowance and Planned Completion		7	23-Jun-22	29-Jun-22	14-Apr-22	21-Apr-22	-70		
AS003420	Time Risk Allowance for Section 4	7	23-Jun-22	29-Jun-22	14-Apr-22	21-Apr-22	-70	AS003410a, AS106240,	AS107000b
AS107000b	Planned Completion for Section 4	0		29-Jun-22*		21-Apr-22	-70	AS003420	AS000220
Section 5 - Complete all remaining Works (incl. T&C)		1846	23-Oct-19 A	10-Nov-24	21-Mar-22	10-Nov-24	0		
Contractual Completion (Include Implemented CE)		1640	23-Oct-19 A	18-Apr-24	21-Mar-22	18-Apr-24	0		
AS003500	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Mar-22	04-Apr-24	0		AS003510
AS003510	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	AS003500	AS003511
AS003511	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	AS003510	AS003600
AS003600	Revised Completion for Section 5	0		18-Apr-24*		18-Apr-24	0	AS003511	
Expected Completion (Include Non-implemented CE)		1846	23-Oct-19 A	10-Nov-24	21-Mar-22	10-Nov-24	0		
AS003500a	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Mar-22	04-Apr-24	0	AS000020	AS003510a
AS003510a	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	AS003500a	AS003520, AS003511a
AS003511a	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	AS003510a	AS003512a
AS003512a	CNE-013 Inclement Weather (August 2021) - 12.5days	13	19-Apr-24	01-May-24	19-Apr-24	01-May-24	0	AS003511a	AS003513a
AS003513a	CNE-017 Inclement Weather (September 2021) - 7.5days	8	01-May-24	08-May-24	01-May-24	08-May-24	0	AS003512a	AS003514a
AS003514a	CNE-019 Inclement Weather (October 2021) - 4.5days	5	09-May-24	13-May-24	09-May-24	13-May-24	0	AS003513a	AS003515a



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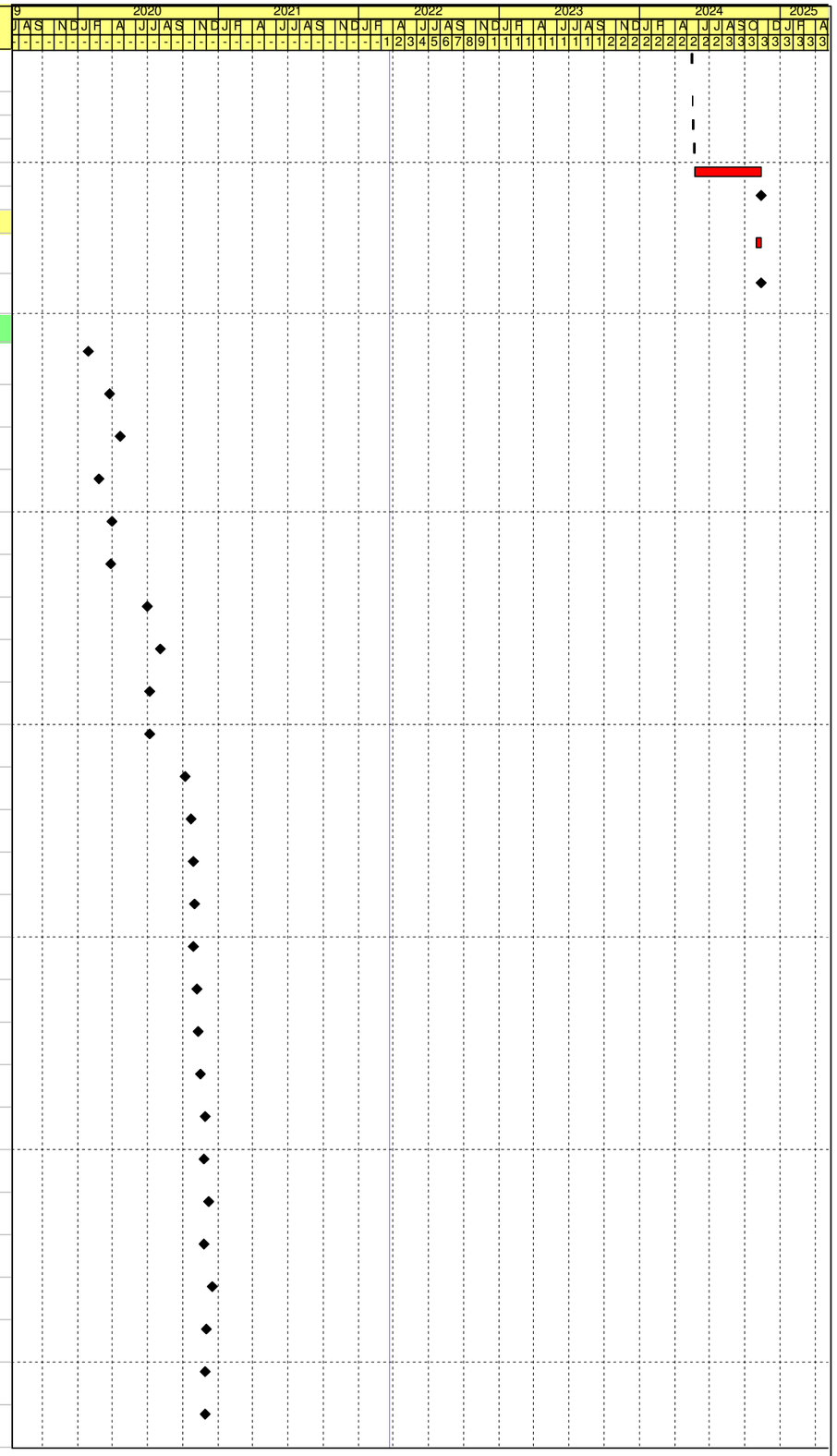
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS003515a	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 3 days	3	13-May-24	16-May-24	13-May-24	16-May-24	0	AS003514a	AS003516a
AS003516a	CNE-027 Inclement Weather (November 2021) - 1.5days	2	16-May-24	17-May-24	16-May-24	17-May-24	0	AS003515a	AS003517a
AS003517a	CNE-031 Inclement Weather (December 2021) - 2.5days	3	18-May-24	20-May-24	18-May-24	20-May-24	0	AS003516a	AS003518a
AS003518a	CNE-036 Inclement Weather (January 2022) - 2.5days	3	20-May-24	22-May-24	20-May-24	22-May-24	0	AS003517a	AS003599a
AS003599a	EWN-0314 Extention of Time for change of access date	172	23-May-24	10-Nov-24	23-May-24	10-Nov-24	0	AS003518a	AS003600a
AS003600a	Expected Completion for Section 5	0		10-Nov-24*		10-Nov-24	0	AS003599a	
Time Risk Allowance and Planned Completion		12	30-Oct-24	10-Nov-24	07-Apr-24	18-Apr-24	-206		
AS003520	Time Risk Allowance for Section 5	12	30-Oct-24	10-Nov-24	07-Apr-24	18-Apr-24	-206	AS003510a, AS509200,	AS003600b
AS003600b	Planned Completion for Section 5	0		10-Nov-24*		18-Apr-24	-206	AS003520, AS013440f,	AS000220
Compensation Event		1621	23-Oct-19 A	13-May-22	30-Jan-22	24-Nov-24	926		
CE000001	CE No.001 - Special Work Arrangement in Reducing the Risk of the Spread of Novel Coronavirus	0		30-Jan-20 A		24-Nov-24			
CE000002	CE No.002 - The Contractor's Site Accomodation by Modular Integrated Construction (MIC) Method	0		23-Mar-20 A		24-Nov-24			
CE000003	CE No.003 - Flowmeter Relocation & Pipework Rearrangement at Effluent Transfer Pumping Station	0		20-Apr-20 A		24-Nov-24			
CE000004	CE No.004 - Designated Area for the Contractor's Site Accommodation in Works Area WA1	0		26-Feb-20 A		24-Nov-24			
CE000005	CE No.005 - Revised Size of Penstock at UV System No.1 & Effluent Pumping Station No.1 for Ex. Outfall	0		30-Mar-20 A		24-Nov-24			
CE000006	CE No.006 - Additional Duty Point for Effluent Transfer Pumps	0		27-Mar-20 A		24-Nov-24			
CE000007	CE No.007 - Additional Adjustable Weir at UV System No.1 & Effluent Pumping Station No.1	0		30-Jun-20 A		24-Nov-24			
CE000008	CE No.008 - Provision of Additional 2nd Temp. Power Supply for UV System No.1 & Effluent Pumping Station No.1	0		03-Aug-20 A		24-Nov-24			
CE000009	CE No.009 - Employment of Temporary Staff under Anti-Epidemic Fund	0		07-Jul-20 A		24-Nov-24			
CE000010	CE No.010 - Revised Setting Out Plan for Sidestream Treatment Facilities	0		07-Jul-20 A		24-Nov-24			
CE000012	CE No.012 - Provision of Touchscreen Display System for the Project Manager's Office	0		06-Oct-20 A		24-Nov-24			
CE000013	CE No.013 - Feasibility Study for Adopting emMiC & DfMA	0		22-Oct-20 A		24-Nov-24			
CE000014	CE No.014 - Revised FS Water Supply Arrangement for CHP, Guard House, Workshop No.2, SludgeDigester&DistributionChamber	0		28-Oct-20 A		24-Nov-24			
CE000015	CE No.015 - Revised Plumbing Arranagement for Workshop No.2, UV & Effluent No.1, CHP, SPS&FCDF, DOU No.11&12, H2S, SDDC	0		30-Oct-20 A		24-Nov-24			
CE000016	CE No.016 - Elect. Provisions for Addit. 800A ACB w/ CMPD as Standby Supply for MBBR for UV No.2 for Future Expansion	0		28-Oct-20 A		24-Nov-24			
CE000018	CE No.018 - MVAC Layout for Plant Service Water System	0		05-Nov-20 A		24-Nov-24			
CE000020	CE No.020 - Addit. set of 11kV power feeder panel at 11kV SB in CHP for future connection to Zone B in Stage 2	0		09-Nov-20 A		24-Nov-24			
CE000201	NCE-PMI-0201 - Provision of Access Platform for EOT cranes in UV System No.1 & Effluent Pumping Station No.1	0		16-Nov-20 A		24-Nov-24			
CE000202	NCE-PMI-0202 - Revised Plumbing Arrangement for Sludge Dewatering Building	0		26-Nov-20 A		24-Nov-24			
CE000203	NCE-PPMI-0203 - MVAC Layout for SAS Pumping Station	0		25-Nov-20 A		24-Nov-24			
CE000204	NCE-PMI-0204 - CHP - Provisional of Additional ATS for Power Supply for UPS	0		08-Dec-20 A		24-Nov-24			
CE000205	NCE-PPMI-0205 - Fibre Optics Network Connection for SCADA Systems between Zone B & Zone C	0		23-Nov-20 A		24-Nov-24			
CE000206	NCE-PMI-0206 - SDB - Provisional of Additional ATS for Power Supply for UPS	0		15-Dec-20 A		24-Nov-24			
CE000207	NCE-PMI-0207 - TX Rm & Switch Rm - Provision of ATS for Power Supply for UPS	0		01-Dec-20 A		24-Nov-24			
CE000208	NCE-PPMI-0208 - Provision of Drainage service Layout for SAS Pumping Station	0		26-Nov-20 A		24-Nov-24			
CE000209	NCE-PPMI-0209 - Drainage System for Plant Service Water System	0		26-Nov-20 A		24-Nov-24			



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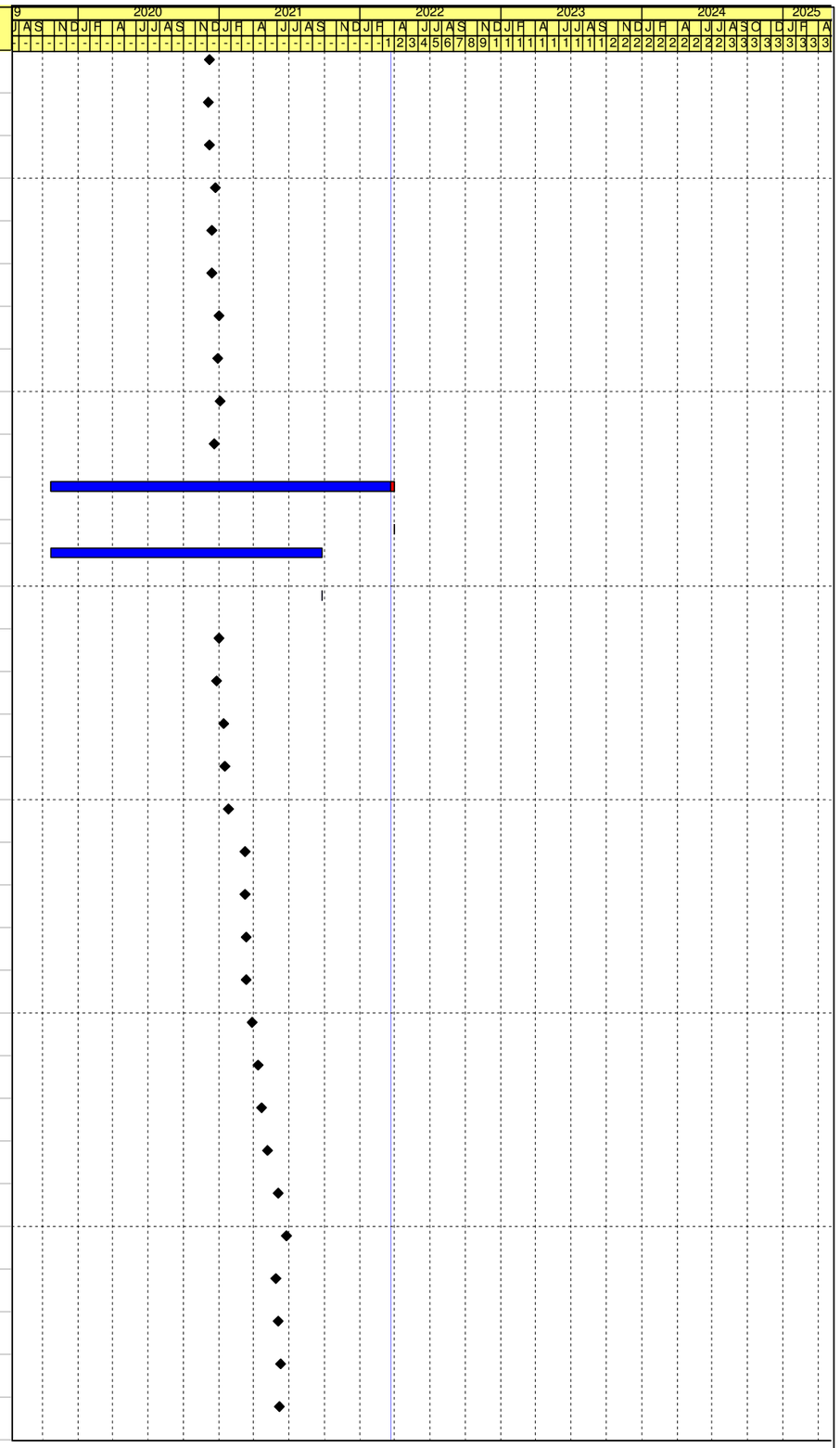
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE000210	NCE-PPMI-0210 - Electrical provisions for MVAC & Drainage Systems in SAS Pumping Station	0		08-Dec-20 A		24-Nov-24			
CE000211	NCE-PPMI-0211 - Revised MVAC Layout & Electrical Provisions for MVAC in TX and Switch Rm	0		02-Dec-20 A		24-Nov-24			
CE000212	NCE-PMI-0212 - Provision of Louvre Panel for Outdoor AC Units at Contractor's Site Accomodation	0		07-Dec-20 A		24-Nov-24			
CE000213	NCE-PPMI-0213 - Electrical provisions for MVAC & Drainage System in UV System No.1 & Effluent Pumping Station No.1	0		21-Dec-20 A		24-Nov-24			
CE000214	NCE-PPMI-0214 - Additional Sump Pump & Drain Pipes at UV System No.1 & Effluent Pumping Station	0		14-Dec-20 A		24-Nov-24			
CE000215	NCE-PPMI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-20 A		24-Nov-24			
CE000216	NCE-PPMI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water System	0		31-Dec-20 A		24-Nov-24			
CE000217	NCE-PMI-0217 - Revised Duty Points for Effluent Transfer Pumps	0		29-Dec-20 A		24-Nov-24			
CE000218	NCE-PMI-0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of SWHEPP	0		04-Jan-21 A		24-Nov-24			
CE000219	NCE-NCE-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of Portion B-2 of the Site	0		19-Dec-20 A		24-Nov-24			
CE000219a	NCE-NCE-0219 - Portion B-2a (within 771 to 891 days from starting date)	891	23-Oct-19 A	31-Mar-22	21-Mar-22	31-Mar-22	0	AS000020	CE000219b
CE000219b	NCE-NCE-0219 - Revised Access Date for Portion B-2a	1	31-Mar-22	31-Mar-22*	31-Mar-22	31-Mar-22	0	CE000219a	AS505600
CE000219c	NCE-NCE-0219 - Portion B-2b (within 615 to 705 days from starting date)	705	23-Oct-19 A	24-Sep-21 A	08-Aug-22	08-Aug-22			CE000219d
CE000219d	NCE-NCE-0219 - Revised Access Date for Portion B-2b	1	24-Sep-21 A	24-Sep-21 A	08-Aug-22	08-Aug-22		CE000219c	AS506500
CE000220	NCE-PMI-0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River	0		30-Dec-20 A		24-Nov-24			
CE000221	NCE-PPMI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room	0		24-Dec-20 A		24-Nov-24			
CE000222	NCE-PMI-0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering Building	0		12-Jan-21 A		24-Nov-24			
CE000223	NCE-PMI-0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0		15-Jan-21 A		24-Nov-24			
CE000224	NCE-PMI-0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for UV Disinfeciton System	0		25-Jan-21 A		24-Nov-24			
CE000225	NCE-PMI-0225 - Supply of Ductile Iron Puddle Pipes at the Basement of Sludge Dewatering Building	0		09-Mar-21 A		24-Nov-24			
CE000226	NCE-PMI-0226 - Provision of Solar Water Heating System at the Contractor's Site Accomodation	0		09-Mar-21 A		24-Nov-24			
CE000227	NCE-PMI-0227 - Dual Power Fedder for LV Switch Panel at Sewage Pumping Station	0		11-Mar-21 A		24-Nov-24			
CE000228	NCE-PMI-0228 - Provision of Effluent Pipes and Associated Valve and Supply of Supports for Effluent to Shek Sheung River	0		11-Mar-21 A		24-Nov-24			
CE000230	NCE-PMI-0230 - Provision of Project Jackets with Fleece Vests	0		26-Mar-21 A		24-Nov-24			
CE000231	NCE-PMI-0231 - Extension of Sampling Pipe From Low Level on Sludge Digesters	0		12-Apr-21 A		24-Nov-24			
CE000232	NCE-PMI-0232 - Dual Power Fedder for LV Switch Panel at 1/F LV Switch Room of Combined Heat and Power (CHP) Building	0		22-Apr-21 A		24-Nov-24			
CE000233	NCE-PMI-0233 - Sampling, Simulating and Testing of Existing Sludge for Obtaining the Viscosity of the Mixed Sludge	0		06-May-21 A		24-Nov-24			
CE000234	NCE-PMI-0234 - Provision of FRP Walkway, Access Platform & Handrailing for Sludge Digester No. 2	0		02-Jun-21 A		24-Nov-24			
CE000237	NCE-CNE-0237 - Provision of Inspectin Windows for Sludge Digester	0		25-Jun-21 A		24-Nov-24			
CE000238	NCE-PMI-0238 - Supply of Stainless Steel Puddle Pipes for Surplus Activated Sludge (SAS) Pumping Station	0		27-May-21 A		24-Nov-24			
CE000239	NCE-PMI-0239 - Revised the Arrangement for Process Water Supply and Plant Services Water System	0		01-Jun-21 A		24-Nov-24			
CE000240	NCE-PMI-0240 - Revised Coping and Invert Levels for Penstock and Stoplog of SAS Pumping Station	0		09-Jun-21 A		24-Nov-24			
CE000241	NCE-PMI-0241 - Revised Diesel Fuel Tank at Combined Heat and Power (CHP) Building	0		04-Jun-21 A		24-Nov-24			



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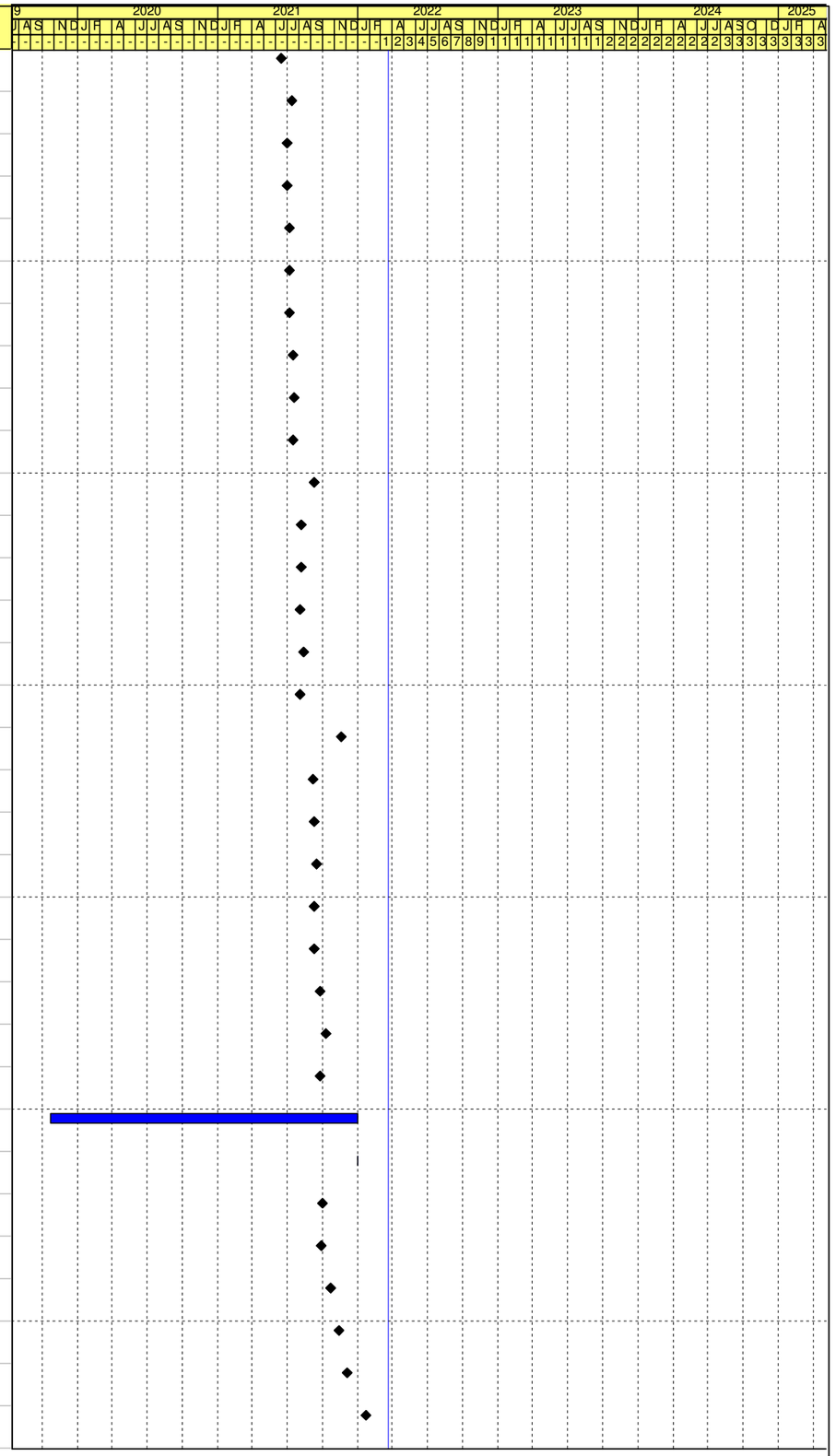
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE000242	NCE-PMI-0242 - Revised Fire Services Provision of UV System No. 1 and Effluent Pumping Station No. 1	0		15-Jun-21 A		24-Nov-24			
CE000243	NCE-PMI-0243 - Provision of Flow Signal Inputs for UV Disinfection System	0		12-Jul-21 A		24-Nov-24			
CE000244	RCNE-CNE-0244 - Access to and use of portion C-1A	0		29-Jun-21 A		24-Nov-24			
CE000245	NCE-PMI-0245 - Provision of Augmented Reality (AR) Mobile Application	0		30-Jun-21 A		24-Nov-24			
CE000246	NCE-PMI-0246 - Revised HV Remote Control Panels at CHP & Workshop No. 2	0		06-Jul-21 A		24-Nov-24			
CE000247	NCE-PMI-0247 - Temporary 4G System for SCADA System Monitoring	0		07-Jul-21 A		24-Nov-24			
CE000248	NCE-PMI-0248 - Inclement Weather - May 2021 (Time Implication)	0		05-Jul-21 A		24-Nov-24			
CE000250	NCE-PMI-0250 - Provision of Front Access LV Switch Panel in the LV Switch Room on G/F Workshop No. 2	0		14-Jul-21 A		24-Nov-24			
CE000252	NCE-PMI-0252 - Provision of Neutral Earthing Resistor (NER) at Workshop No. 2	0		19-Jul-21 A		24-Nov-24			
CE000253	NCE-PMI-0253 - Provision of Building Services Systems in New LV Switch Room on the G/F Workshop No. 2	0		16-Jul-21 A		24-Nov-24			
CE000254	NCE-CNE-0254 - Removal of Obstructions at Trail Pit No. 3 at Sidestreamt Facilities	0		10-Sep-21 A		24-Nov-24			
CE000256	RCNE-CNE-0256 - Amber Rainstrom Warning and Inclement Weather - June 2021 (Time Implication)	0		05-Aug-21 A		24-Nov-24			
CE000257	RCNE-CNE-0257 - Black and Red Rainstrom Warning - June 2021 (Time & Cost Implication)	0		05-Aug-21 A		24-Nov-24			
CE000258	NCE-PMI-0258 - Provision of FRP Cover for Overflow Chambers of Sludge Digesters	0		04-Aug-21 A		24-Nov-24			
CE000259	NCE-PMI-0259 - Provision of Virtual Reality (VR) Safety Training Platform	0		13-Aug-21 A		24-Nov-24			
CE000260	NCE-PMI-0260 - Provision of Chequer Plates at UV System No. 1 & Effluent Pumping Station No. 1	0		04-Aug-21 A		24-Nov-24			
CE000262	NCE-PMI-0262 - Emergency Access Door for Lift at Sludge Dewatering Building	0		18-Nov-21 A		24-Nov-24			
CE000263	NCE-PMI-0263 - Upgrade of the Supporting Frame of 1st and 2nd Stage Heat Exchangers for Future Expansion of THP System	0		07-Sep-21 A		24-Nov-24			
CE000264	RCNE-CNE-0264 - Inclement Weather - July 2021 (Time Implication)	0		10-Sep-21 A		24-Nov-24			
CE000265	NCE-PMI-0265 - Water Supply to Emergency Drench Shower and Eye Fountain at Deodorization System No. 11	0		16-Sep-21 A		24-Nov-24			
CE000269	NCE-PMI-0269 - Additional Cleansing Points at Sludge Skip Area of Sludge Dewatering Building	0		10-Sep-21 A		24-Nov-24			
CE000270	NCE-CNE-0270 - Extra sampling, simulating & testing of exiting sludge for obtaining the viscosity of the existing sludge	0		10-Sep-21 A		24-Nov-24			
CE000271	NCE-PMI-0271 - Provision of Access Platform for the EOT Crane (LA-01-02) in Sludge Dewatering Building	0		23-Sep-21 A		24-Nov-24			
CE000272	NCE-PMI-0272 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		08-Oct-21 A		24-Nov-24			
CE000273	NCE-NCE-0273 - Change of Site Access Date to Workshop No. 2 Forming Part of Portion C-3 of the Site	0		24-Sep-21 A		24-Nov-24			
CE000273a	NCE-NCE-0273 - Portion C-3 (within 615 to 815 days from starting date)	815	23-Oct-19 A	31-Dec-21 A	24-Nov-24	24-Nov-24			CE000273b
CE000273b	NCE-NCE-0273 - Revised Access Date for Portion C-3	1	31-Dec-21 A	31-Dec-21 A	24-Nov-24	24-Nov-24		CE000273a	
CE000275	NCE-PMI-0275 - Additional Lighting Fittings for UV System No.1 & Effluent Pumping Station No.1	0		29-Sep-21 A		24-Nov-24			
CE000277	NCE-PMI-0277 - Provision of Access Platform for the EOT Crane (LA-01-03) in Sludge Dewatering Building	0		27-Sep-21 A		24-Nov-24			
CE000280	NCE-PMI-0280 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		21-Oct-21 A		24-Nov-24			
CE000283	NCE-PMI-0283 - Provision of Metal Base Plate,Stopper&Guide Rail for Loading&Unloading of Sludge Skip at Skip Rm of SDB	0		11-Nov-21 A		24-Nov-24			
CE000284	NCE-PMI-0284 - Revised Road Lighting System for Zone C	0		03-Dec-21 A		24-Nov-24			
CE000286	NCE-NCE-0286 - Change of Site Access Date to Combined Heat and Power Building Forming Part of Portion C-2B of the Site	0		21-Jan-22 A		24-Nov-24			



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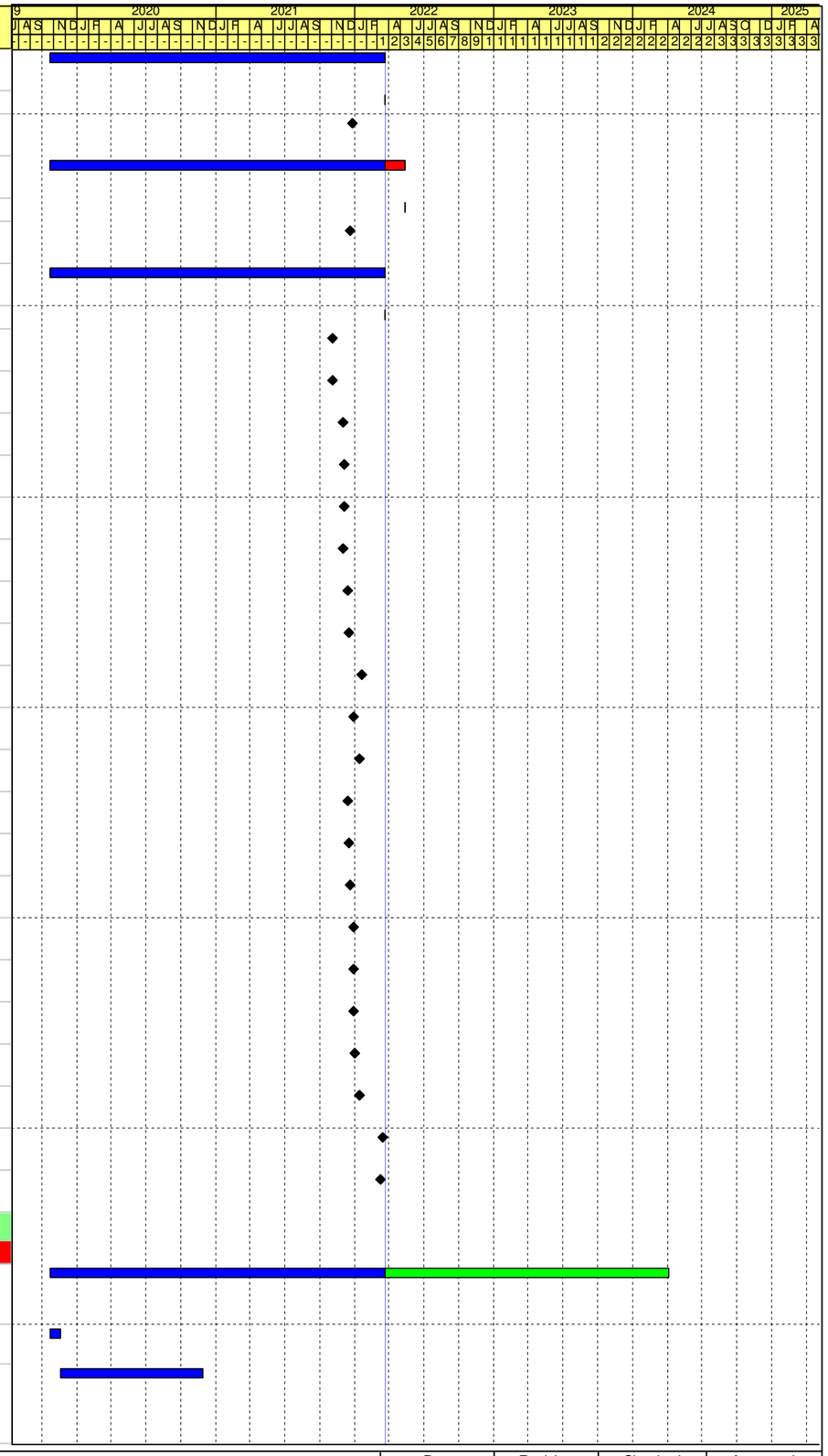
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE000286a	NCE-NCE-0286 - Portion C-2B (within 765 to 880 days from starting date)	880	23-Oct-19 A	21-Mar-22	20-Mar-22	20-Mar-22	-1		CE000286b
CE000286b	NCE-NCE-0286 - Revised Access Date for Portion C2-B	1	21-Mar-22	21-Mar-22*	20-Mar-22	20-Mar-22	-1	CE000286a	
CE000287	NCE-NCE-0287 - Change of Site Access Date to Sludge Digester & Distribution Chamber Forming Part of Portion C- 2C	0		24-Dec-21 A		24-Nov-24			
CE000287a	NCE-NCE-0287 - Portion C-2C (within 715 to 934 days from starting date)	934	23-Oct-19 A	13-May-22	21-Mar-22	13-May-22	0		CE000287b
CE000287b	NCE-NCE-0287 - Revised Access Date for Portion C2-C	1	13-May-22	13-May-22*	13-May-22	13-May-22	0	CE000287a	
CE000288	NCE-NCE-0288 - Change of Site Access Date to Sludge Dewatering Building Forming Part of the Portion C- 2A of the site	0		18-Dec-21 A		24-Nov-24			
CE000288a	NCE-NCE-0288 - Portion C-2A (within 705 to 831 days from starting date)	831	23-Oct-19 A	21-Mar-22	30-Jan-22	30-Jan-22	-50		CE000288b
CE000288b	NCE-NCE-0288 - Revised Access Date for Portion C-2A	1	21-Mar-22	21-Mar-22*	30-Jan-22	30-Jan-22	-50	CE000288a	
CE000292	RCNE-CNE-0292 - Inclement Weather - August 2021 (Time Implication)	0		02-Nov-21 A		24-Nov-24			
CE000293	RCNE-CNE-0293 - Inclement Weather - September 2021 (Time Implication)	0		02-Nov-21 A		24-Nov-24			
CE000294	NCE-PMI-0294 - IIB for FAT for THP System	0		30-Nov-21 A		24-Nov-24			
CE000296	NCE-PMI-0296 - Provision of emMiC Adoption of FRP Walkway and Platform for Sludge Digesters	0		03-Dec-21 A		24-Nov-24			
CE000297	NCE-PMI-0297-Provision of Addit. Module BIM Collaboration Pro to existing CDE&Omission of Procurement Maintenance of CDE	0		03-Dec-21 A		24-Nov-24			
CE000298	NCE-PMI-0298 - Additional Light Fittings at Roof Floor of UV System No.1 & Effluent Pumping Station No.1	0		30-Nov-21 A		24-Nov-24			
CE000299	NCE-PMI-0299 - Revised Plumbing Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-21 A		24-Nov-24			
CE000302	NCE-PMI-0302 - Revised Lighting Layout Plan for Workshop No.2	0		17-Dec-21 A		24-Nov-24			
CE000303	NCE-CNE-0303 - Revise Fire Services Provision for Server Room of Workshop No.2	0		19-Jan-22 A		24-Nov-24			
CE000304	NCE-PMI-0304 - Provision of Digital Displaying Screen and Softwarewithin Portion B Area	0		29-Dec-21 A		24-Nov-24			
CE000305	NCE-PMI-0305 - Process Review for Advance Works	0		12-Jan-22 A		24-Nov-24			
CE000307	NCE-PMI-0307 - Revised Quantity for Stoplogs of Sewage Pumping Station	0		13-Dec-21 A		24-Nov-24			
CE000309	RCNE-CNE-0309 - Inclement Weather - October 2021 (Time Implication)	0		16-Dec-21 A		24-Nov-24			
CE000310	NCE-PMI-0310 - Temp. Leased Line for UV System No.1, Effluent PS No.1 & existing Control Room at Zone B	0		20-Dec-21 A		24-Nov-24			
CE000311	NCE-PMI-0311 - Temp. Setup for SCADA System Monitoring & CCTV System Surveillance	0		29-Dec-21 A		24-Nov-24			
CE000312	CNE-0312 - Weather Condition Affecting the Site in Oct due to Typhoon Signal No.8 or above, Red/Black Rainstorm Warning	0		29-Dec-21 A		24-Nov-24			
CE000313	CNE-0313 - Inclement Weather - November 2021 (Time Implication)	0		29-Dec-21 A		24-Nov-24			
CE000315	NCE-PMI-0315 - Modification of Monorali LA-01-04 in Sludge Dewatering Building	0		30-Dec-21 A		24-Nov-24			
CE000317	NCE-PMI-0317 - Revised CCTV Layout Plan & Addition of CCTV Camera for UV System No.1 & Effluent Pumping Station	0		11-Jan-22 A		24-Nov-24			
CE000325	NCE-PMI-0325 - Provision of 2 Nos. of 3 Tons Mobile A-frame with Electrical Hoist in Sludge Dewatering Building	0		14-Mar-22 A		24-Nov-24			
CE000327	NCE-PMI-0327 - Change of Material for Electrical Wiring Accessories	0		08-Mar-22 A		24-Nov-24			
Preliminaries		1834	23-Oct-19 A	29-Oct-24	22-Jan-22	24-Nov-24	26		
Mobilisation		1625	23-Oct-19 A	03-Apr-24	03-Feb-22	24-Nov-24	235		
AS010100	Provison of Equipment / Facilities for the PM's Office	1625	23-Oct-19 A	03-Apr-24	11-Nov-22	24-Nov-24	235	AS001910, AS001930, AS000020	AS000220
AS010200	Mobilisation	28	23-Oct-19 A	19-Nov-19 A	03-Feb-22	03-Feb-22		AS000020	AS011800, AS023120,
AS010205a	Design, Procurement & PO & Construction of Contractor's Site Office (Works Area WA1-B)	270	20-Nov-19 A	27-Nov-20 A	20-Apr-22	20-Apr-22		AS001910, AS010200	AS010220, AS211100, AS211700, AS510080



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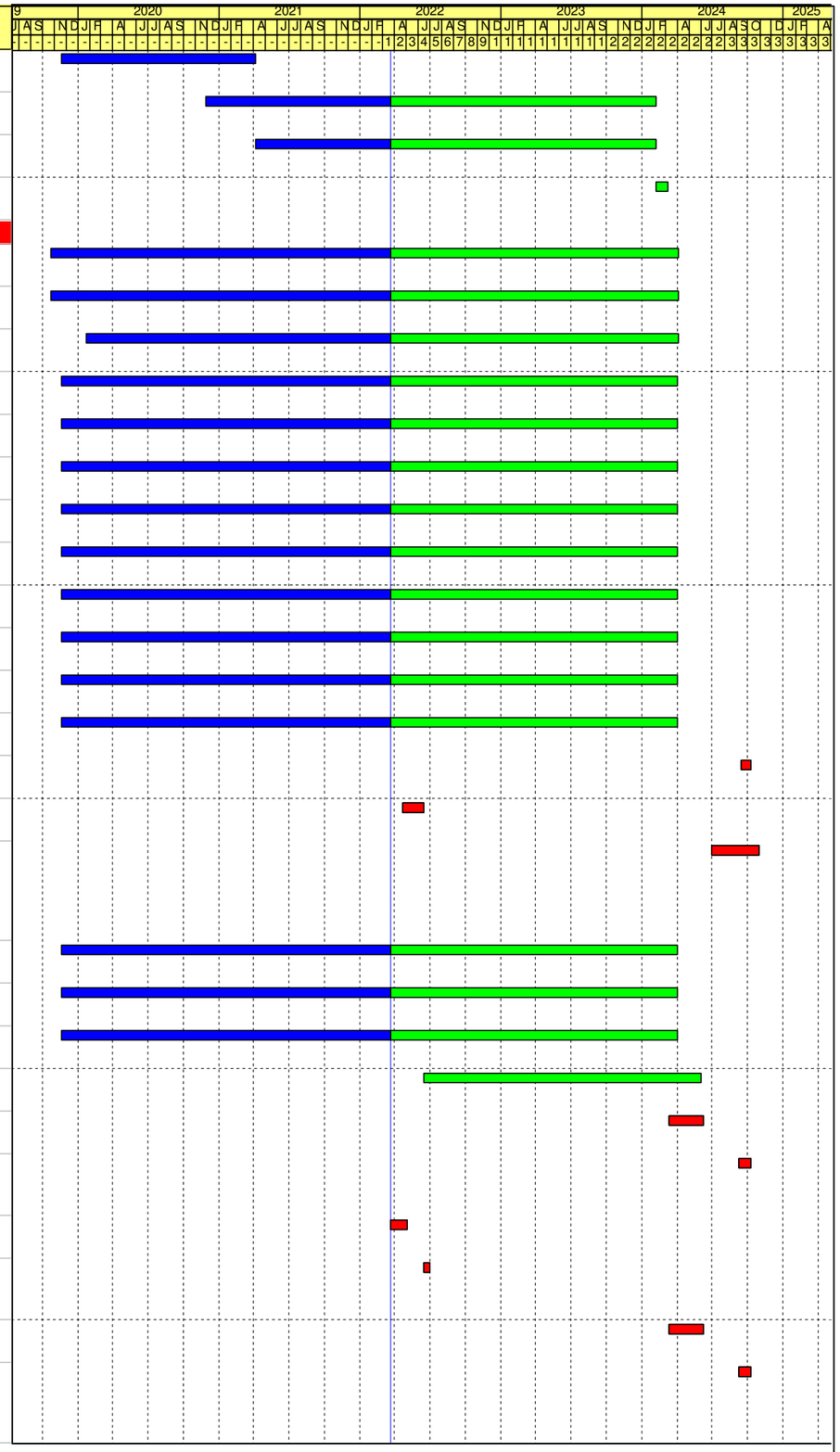
AS010210	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	503	20-Nov-19 A	05-Apr-21 A	20-Apr-22	20-Apr-22		AS001930, AS010200	AS010230a
AS010220	Maintain Contractor's Site Office	1166	28-Nov-20 A	06-Feb-24	20-Apr-22	08-Mar-24	31	AS010205a	AS010240
AS010230a	Maintain Contractor's Storage Area	1037	06-Apr-21 A	06-Feb-24	20-Apr-22	08-Mar-24	31	AS010210	AS010240
AS010240	Removal of Site Office, Storage & Relevant Facilities	30	07-Feb-24	07-Mar-24	08-Mar-24	07-Apr-24	31	AS010220, AS010230a	AS003520
Site Preliminaries		1834	23-Oct-19 A	29-Oct-24	22-Jan-22	24-Nov-24	26		
AS010300	Provision of Insurance, Third Party Insurances & PII	1625	23-Oct-19 A	03-Apr-24	11-Nov-22	24-Nov-24	235	AS000020	AS000220
AS010400	Provision of 2 Contract Car for the Use of the PM & Supervisor	1625	23-Oct-19 A	03-Apr-24	11-Nov-22	24-Nov-24	235	AS000020	AS000220
AS010420a	Provision of 1 Electric Car for the Use of the PM & Supervisor	1534	22-Jan-20 A	03-Apr-24	11-Nov-22	24-Nov-24	235	AS000020, AS010200	AS000220
AS010600	Provision of Photographs	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS010700	Provision of Environmental Mitigation Measures	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS010800	Provision of Air Pollution Abatment	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS010900	Provision of Noise Pollution Abatment	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011000	Provision of Wastewater Pollution Abatement	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011100	Provision of Wastement Management	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011200	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011300	Provision of Environmental Management	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011400	Provision of Site Management Plan for Trip Ticket System	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011500	Provision of As-constructed Drawings for Section 3	24	14-Sep-24	07-Oct-24	20-Mar-24	13-Apr-24	-178	AS000020, AS155340a	AS000220, AS003900
AS011520a	Provision of As-constructed Drawings for Section 4	55	22-Apr-22	15-Jun-22	25-Feb-22	21-Apr-22	-56	AS000020, AS107500	AS000220, AS003420
AS011540a	Provision of As-constructed Drawings for Section 5	124	28-Jun-24	29-Oct-24	05-Dec-23	07-Apr-24	-206	AS000020, AS512100, AS512800a, AS513000a, AS503500	AS000220, AS003520
AS011600	Provision of Systematic Risk Management	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011700	Provision of Site Liaison Group & Community Liaison Group	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS011800	Provision of 24-Hour Telephone Line	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
AS012000	Provision of Upkeeping and Protection of Completed Works	718	16-Jun-22	02-Jun-24	08-Dec-22	24-Nov-24	175	AS000020, AS107500	AS000220
AS012090m	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 3	90	12-Mar-24	09-Jun-24	16-Sep-23	15-Dec-23	-178		AS012100
AS012100	Provision of Training for Employer's Staff for Section 3	30	08-Sep-24	07-Oct-24	14-Mar-24	13-Apr-24	-178	AS000020, AS155300, AS012090m	AS000220, AS003900
AS012110m	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 4	45	21-Mar-22	04-May-22	22-Jan-22	08-Mar-22	-58		AS012120a
AS012120a	Provision of Training for Employer's Staff for Section 4	14	16-Jun-22	29-Jun-22	07-Apr-22	21-Apr-22	-70	AS000020, AS107500, AS012110m	AS000220, AS003420
AS012130m	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 5	90	12-Mar-24	09-Jun-24	10-Sep-23	09-Dec-23	-184		AS012140a
AS012140a	Provision of Training for Employer's Staff for Section 5	30	08-Sep-24	07-Oct-24	08-Mar-24	07-Apr-24	-184	AS000020, AS512800a, AS503500, AS012130m	AS000220, AS003520



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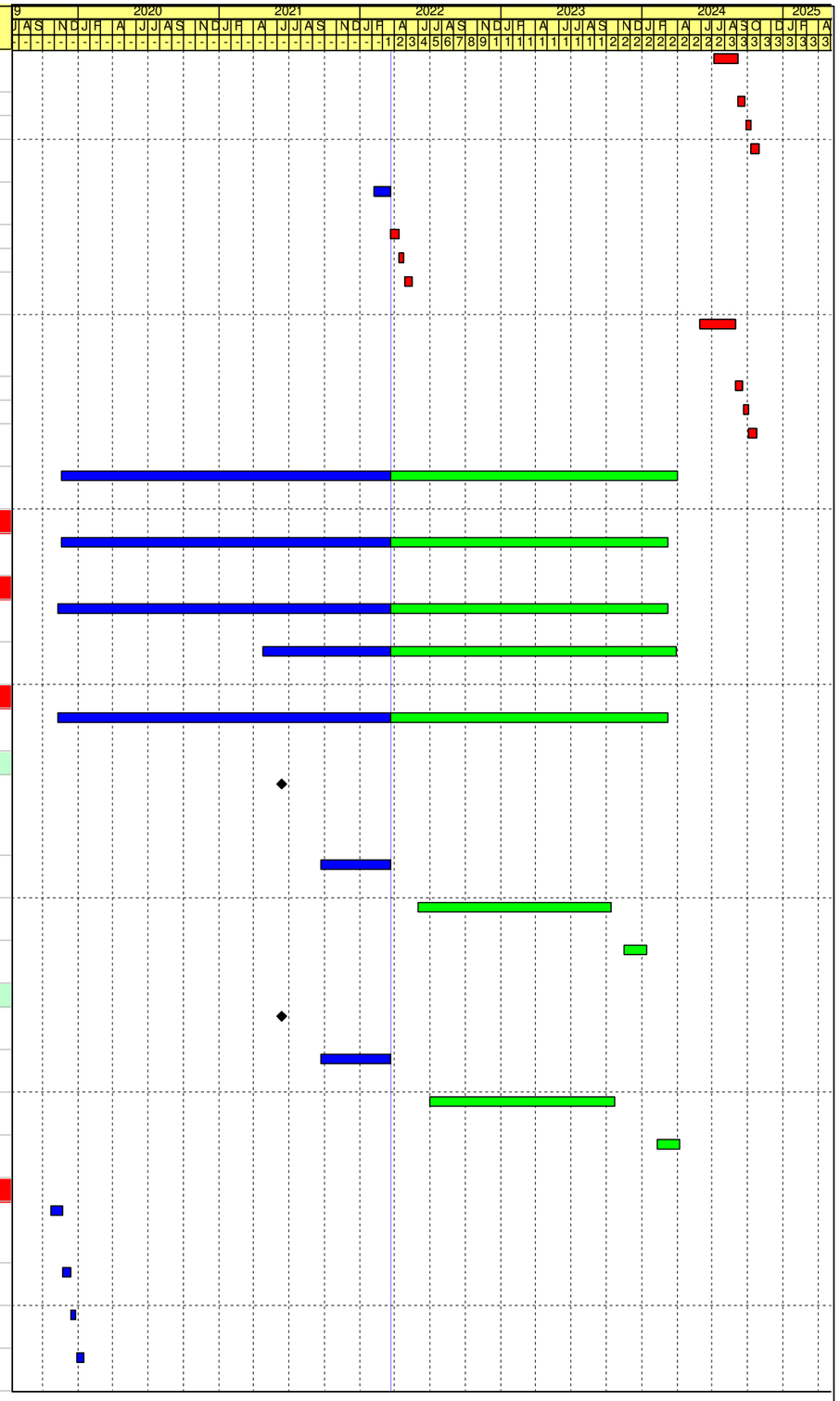
AS012300	Prepare & Submit O&M Manual for Section 3	60	06-Jul-24	03-Sep-24	19-Dec-23	17-Feb-24	-200	AS000020, AS155240a	AS000220, AS012302a
AS012302a	PM Reivew & Comment O&M Manual for Section 3	21	04-Sep-24	24-Sep-24	17-Feb-24	09-Mar-24	-200	AS012300	AS012304a
AS012304a	Revise & Re-submit O&M Manual for Section 3	14	25-Sep-24	08-Oct-24	09-Mar-24	23-Mar-24	-200	AS012302a	AS012306a
AS012306a	PM Reivew & Approval of O&M Manual for Section 3	21	09-Oct-24	29-Oct-24	23-Mar-24	13-Apr-24	-200	AS012304a	AS000220, AS003900
AS012320a	Prepare & Submit O&M Manual for Section 4	30	07-Feb-22 A	21-Mar-22	23-Feb-22	24-Feb-22	-26	AS000020	AS000220, AS012322a
AS012322a	PM Reivew & Comment O&M Manual for Section 4	21	22-Mar-22	11-Apr-22	24-Feb-22	17-Mar-22	-26	AS012320a	AS012324a
AS012324a	Revise & Re-submit O&M Manual for Section 4	14	12-Apr-22	25-Apr-22	17-Mar-22	31-Mar-22	-26	AS012322a	AS012326a
AS012326a	PM Reivew & Approval of O&M Manual for Section 4	21	26-Apr-22	16-May-22	31-Mar-22	21-Apr-22	-26	AS012324a	AS000220, AS003420
AS012340a	Prepare & Submit O&M Manual for Section 5	90	31-May-24	28-Aug-24	13-Nov-23	11-Feb-24	-200	AS000020, AS512200a, AS503500	AS000220, AS012342a
AS012342a	PM Reivew & Comment O&M Manual for Section 5	21	29-Aug-24	18-Sep-24	11-Feb-24	03-Mar-24	-200	AS012340a	AS012344a
AS012344a	Revise & Re-submit O&M Manual for Section 5	14	19-Sep-24	02-Oct-24	03-Mar-24	17-Mar-24	-200	AS012342a	AS012346a
AS012346a	PM Reivew & Approval of O&M Manual for Section 5	21	03-Oct-24	23-Oct-24	17-Mar-24	07-Apr-24	-200	AS012344a	AS000220, AS003520
AS012400	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	1596	20-Nov-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236	AS000020, AS010200	AS000220
Site Upkeeping		1570	20-Nov-19 A	07-Mar-24	20-Apr-22	07-Apr-24	31		
AS013100	General Site Upkeeping of the Site	1570	20-Nov-19 A	07-Mar-24	20-Apr-22	07-Apr-24	31	AS000020, AS010200	AS003520
Safety and Environmental Management		1608	10-Nov-19 A	29-Mar-24	20-Apr-22	24-Nov-24	240		
AS013200	Construction Health and Safety Plan	1580	10-Nov-19 A	07-Mar-24	20-Apr-22	07-Apr-24	31	AS000010	AS003520
AS013300	Site Traffic Safety Management Plan	1070	25-Apr-21 A	29-Mar-24	16-Nov-22	24-Nov-24	240	AS001120	AS000220
Compliance with BEAM Requirements		1611	10-Nov-19 A	07-Apr-24	20-Apr-22	18-Apr-24	11		
AS013400	BEAM Plus	1580	10-Nov-19 A	07-Mar-24	20-Apr-22	07-Apr-24	31	AS000020, AS000010	AS003520
Sludge Dewatering Building		916	11-Jun-21 A	13-Jan-24	06-Oct-22	18-Apr-24	96		
AS013410f	Material Submission & Design Calculation Approved	0		11-Jun-21 A		06-Oct-22		AS022310, AS032310, AS052310, AS062310	AS013420f, AS003230
AS013420f	Issued approved submission & Calculation to Cinotech	161	21-Sep-21 A	21-Mar-22	06-Oct-22	06-Oct-22	199	AS013410f	AS013430f
AS013430f	Monthly Review & Submission	500	01-Jun-22	13-Oct-23	07-Oct-22	18-Feb-24	128	AS502100, AS013420f	AS013440f
AS013440f	Submission & Approval of Test Record	60	15-Nov-23	13-Jan-24	19-Feb-24	18-Apr-24	96	AS013430f, AS510400	AS003600b
CHP Building		1001	11-Jun-21 A	07-Apr-24	26-Oct-22	18-Apr-24	11		
AS013450f	Material Submission & Design Calculation Approved	0		11-Jun-21 A		26-Oct-22		AS082330	AS013460f, AS003230
AS013460f	Issued approved submission & Calculation to Cinotech	168	21-Sep-21 A	21-Mar-22	26-Oct-22	26-Oct-22	219	AS013450f	AS013470f
AS013470f	Monthly Review & Submission	480	01-Jul-22	23-Oct-23	27-Oct-22	18-Feb-24	118	AS503100, AS013460f	AS013480f
AS013480f	Submission & Approval of Test Record	60	08-Feb-24	07-Apr-24	19-Feb-24	18-Apr-24	11	AS013470f, AS511200	AS003600b
BIM		1623	24-Oct-19 A	02-Apr-24	12-Nov-22	24-Nov-24	236		
AS011820a	Prepare & Submit Construction Stage BIM Execution Plan	30	24-Oct-19 A	22-Nov-19 A	12-Nov-22	12-Nov-22		AS000020	AS011830a, AS011920a, AS011900
AS011830a	PM Reivew & Comment Construction Stage BIM Execution Plan	21	23-Nov-19 A	13-Dec-19 A	12-Nov-22	12-Nov-22		AS011820a	AS011840a
AS011840a	Revise & Re-submit Construction Stage BIM Execution Plan	14	14-Dec-19 A	27-Dec-19 A	12-Nov-22	12-Nov-22		AS011830a	AS011850a
AS011850a	PM Reivew & Approval of Construction Stage BIM Execution Plan	21	28-Dec-19 A	17-Jan-20 A	12-Nov-22	12-Nov-22		AS011840a	AS011920a, AS011900



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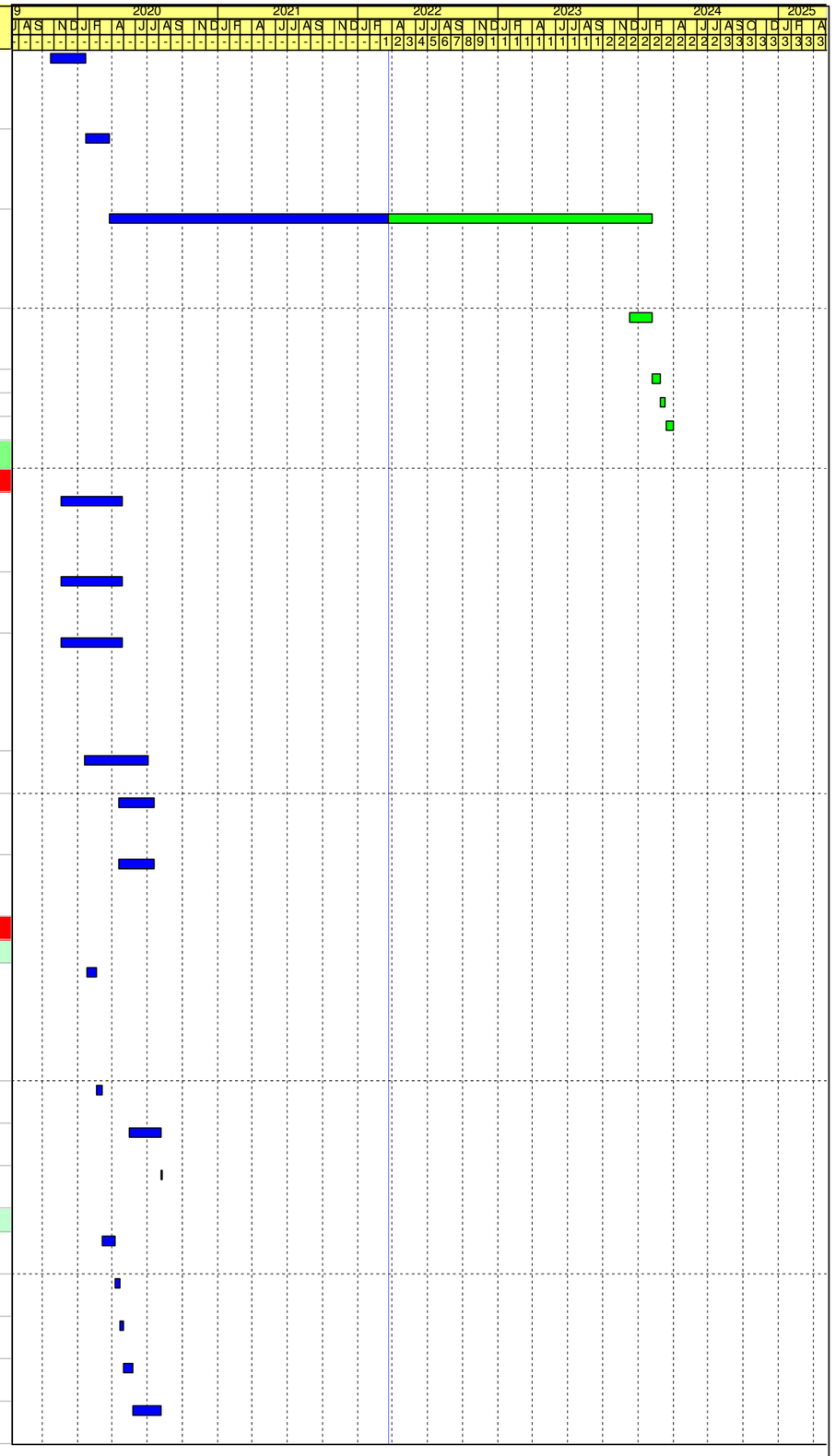
AS011880b	Contractor Review & Study Design Stage BIM	92	24-Oct-19 A	23-Jan-20 A	12-Nov-22	12-Nov-22		AS000020	AS000220, AS011960, AS011920a, AS011900
AS011900	Contractor Develop 1st Construction Stage BIM	60	24-Jan-20 A	23-Mar-20 A	12-Nov-22	12-Nov-22		AS011850a, AS011820a, AS011880b	AS000220, AS011960, AS011920a, AS011920a
AS011920a	Review & Update BIM Execution Plan & BIM Model	1415	24-Mar-20 A	06-Feb-24	12-Nov-22	29-Sep-24	236	AS011820a, AS011900, AS011850a, AS011880b, AS011900	AS000220, AS011960
AS011960	Prepare & Submit the Fully Coordinated BIM	60	09-Dec-23	06-Feb-24	01-Aug-24	29-Sep-24	236	AS011900, AS011920a, AS011880b	AS011961
AS011961	PM Reivew & Comment Fully Coordinated BIM	21	07-Feb-24	27-Feb-24	30-Sep-24	20-Oct-24	236	AS011960	AS011962
AS011962	Revise & Re-submit Fully Coordinated BIM	14	28-Feb-24	12-Mar-24	21-Oct-24	03-Nov-24	236	AS011961	AS011963
AS011963	PM Reivew & Approval of Fully Coordinated BIM	21	13-Mar-24	02-Apr-24	04-Nov-24	24-Nov-24	236	AS011962	AS000220
Section 1 - Design for UV System No. 1 & Effluent Pumping Station No.1		284	21-Nov-19 A	08-Aug-20 A	03-Feb-22	24-Nov-24			
Major Plant & Materials Procurement		240	21-Nov-19 A	17-Jul-20 A	03-Feb-22	03-Feb-22			
AS103100	Procurement & PO for UV Disinfection System (S10)	150	21-Nov-19 A	28-Apr-20 A	03-Feb-22	03-Feb-22		AS000010, AS000020, AS010200	AS003105, AS104100, AS101100, AS103180
AS103120	Procurement & PO for Lift-up Pumps (S11)	150	21-Nov-19 A	28-Apr-20 A	03-Feb-22	03-Feb-22		AS000020, AS010200	AS003105, AS104120, AS101100
AS103140	Procurement & PO for Transfer Pumps (S13)	150	21-Nov-19 A	28-Apr-20 A	03-Feb-22	03-Feb-22		AS000020, AS010200	AS003105, AS104140, AS103200, AS103220, AS101100, AS104160
AS103180	Procurement & PO for EOT Cranes (2T & 5T) (S19)	150	19-Jan-20 A	03-Jul-20 A	03-Feb-22	03-Feb-22		AS103100	AS003105, AS104180
AS103200	Procurement & PO for Stoplogs (S21)	90	18-Apr-20 A	17-Jul-20 A	03-Feb-22	03-Feb-22		AS103140, AS010200	AS003105, AS104200, AS023440
AS103220	Procurement & PO for Penstocks (S21)	90	18-Apr-20 A	17-Jul-20 A	03-Feb-22	03-Feb-22		AS103140, AS010200	AS003105, AS104220, AS023460
Design & Submission		217	27-Jan-20 A	08-Aug-20 A	03-Feb-22	24-Nov-24			
General Arrangement Drawings		217	27-Jan-20 A	08-Aug-20 A	03-Feb-22	01-Sep-22			
AS101100	Prepare & Submit General Arrangement Drawings	90	27-Jan-20 A	19-Feb-20 A	03-Feb-22	03-Feb-22		AS103100, AS103120, AS103140, AS010200	AS101110, AS102100, AS102150, AS102300, AS112300, AS103300
AS101110	Review & Comment on General Arrangement Drawings by PM	21	20-Feb-20 A	04-Mar-20 A	01-Sep-22	01-Sep-22		AS101100	AS101120
AS101120	Revise & Re-submit General Arrangement Drawings	14	16-May-20 A	05-Aug-20 A	01-Sep-22	01-Sep-22		AS101110	AS101130
AS101130	Review & Accept of General Arrangement Drawings by PM	5	06-Aug-20 A	08-Aug-20 A	01-Sep-22	01-Sep-22		AS101120	AS003105, AS154100
Civil & Dimensional / Tolerance Requirement Drawings		176	07-Mar-20 A	08-Aug-20 A	03-Feb-22	24-Nov-24			
AS102100	Prepare & Submit Civil Requirement Drawings	60	07-Mar-20 A	08-Apr-20 A	03-Feb-22	03-Feb-22		AS000020, AS101100	AS102110, AS002010
AS102110	Review & Comment on Civil Requirement Drawings by PM	21	09-Apr-20 A	20-Apr-20 A	24-Nov-24	24-Nov-24		AS102100	AS102120
AS102120	Revise & Re-submit Civil Requirement Drawings	14	21-Apr-20 A	29-Apr-20 A	24-Nov-24	24-Nov-24		AS102110	AS102130
AS102130	Review & Comment of Civil Requirement Drawings by PM	21	30-Apr-20 A	25-May-20 A	24-Nov-24	24-Nov-24		AS102120	AS003105, AS512140
AS512140	Revise & Re-submit Civil Requirement Drawings	28	26-May-20 A	05-Aug-20 A	24-Nov-24	24-Nov-24		AS102130	AS512150



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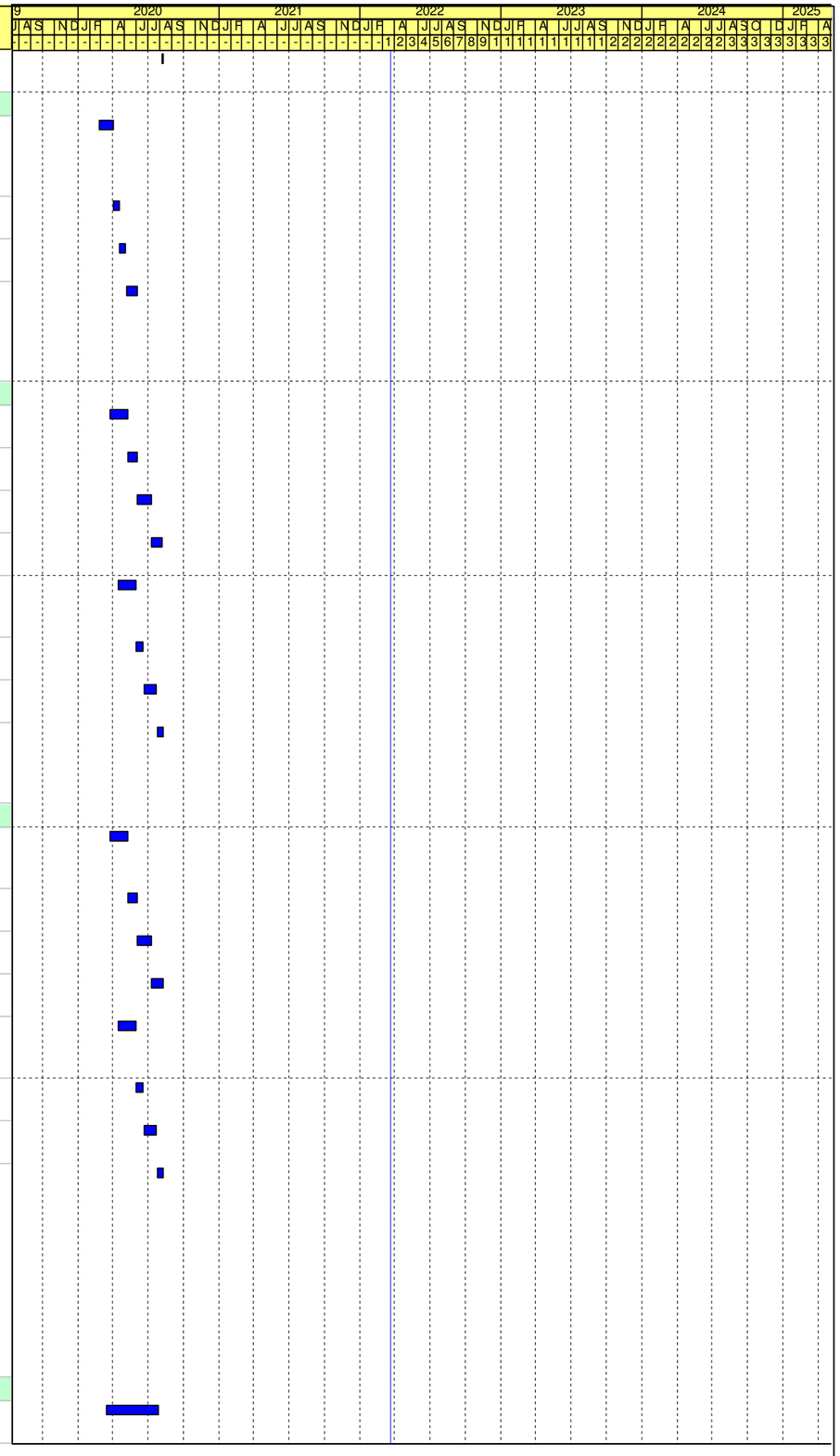
AS512150	Review & Accept of Civil Requirement Drawings by PM	5	06-Aug-20 A	08-Aug-20 A	24-Nov-24	24-Nov-24		AS512140	AS003105
Electrical Schematic Drawings		116	25-Feb-20 A	03-Jun-20 A	03-Feb-22	03-Feb-22			
AS102150	Prepare & Submit Elec. Schematic Drawings	60	25-Feb-20 A	03-Apr-20 A	03-Feb-22	03-Feb-22		AS000020, AS101100	AS102160, AS002010, AS102200, AS112200
AS102160	Review & Comment on Elec. Schematic Drawings by PM	21	04-Apr-20 A	16-Apr-20 A	03-Feb-22	03-Feb-22		AS102150	AS102170
AS102170	Revise & Re-submit Elec. Schematic Drawings	14	17-Apr-20 A	04-May-20 A	03-Feb-22	03-Feb-22		AS102160	AS102180
AS102180	Review & Accept of Elec. Schematic Drawings by PM	21	05-May-20 A	03-Jun-20 A	03-Feb-22	03-Feb-22		AS102170	AS104240, AS105100, AS106100, AS103320, AS003105
UV System No. 1		146	24-Mar-20 A	08-Aug-20 A	03-Feb-22	24-Nov-24			
AS102200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20 A	08-May-20 A	03-Feb-22	03-Feb-22		AS000020, AS102150	AS102210, AS102300
AS102210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	09-May-20 A	01-Jun-20 A	24-Nov-24	24-Nov-24		AS102200	AS102220
AS102220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	02-Jun-20 A	10-Jul-20 A	24-Nov-24	24-Nov-24		AS102210	AS102230
AS102230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	11-Jul-20 A	06-Aug-20 A	24-Nov-24	24-Nov-24		AS102220	AS003105
AS102300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20 A	29-May-20 A	03-Feb-22	03-Feb-22		AS000020, AS102200, AS101100	AS102310, AS106120
AS102310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	30-May-20 A	19-Jun-20 A	03-Feb-22	03-Feb-22		AS102300	AS102320
AS102320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	20-Jun-20 A	23-Jul-20 A	03-Feb-22	03-Feb-22		AS102310	AS102330
AS102330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14	24-Jul-20 A	08-Aug-20 A	03-Feb-22	03-Feb-22		AS102320	AS104100, AS104240, AS104260, AS003105
Effluent Pumping Station No. 1		139	24-Mar-20 A	08-Aug-20 A	03-Feb-22	24-Nov-24			
AS112200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20 A	08-May-20 A	03-Feb-22	03-Feb-22		AS000020, AS102150	AS112210, AS112300, AS113100
AS112210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	09-May-20 A	01-Jun-20 A	24-Nov-24	24-Nov-24		AS112200	AS112220
AS112220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	02-Jun-20 A	10-Jul-20 A	24-Nov-24	24-Nov-24		AS112210	AS112230
AS112230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	11-Jul-20 A	08-Aug-20 A	24-Nov-24	24-Nov-24		AS112220	AS003105
AS112300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20 A	29-May-20 A	03-Feb-22	03-Feb-22		AS000020, AS112200, AS101100	AS112310, AS106120
AS112310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	30-May-20 A	19-Jun-20 A	03-Feb-22	03-Feb-22		AS112300	AS112320
AS112320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	20-Jun-20 A	23-Jul-20 A	03-Feb-22	03-Feb-22		AS112310	AS112330
AS112330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14	24-Jul-20 A	08-Aug-20 A	03-Feb-22	03-Feb-22		AS112320	AS104200, AS104220, AS104120, AS104140, AS104160, AS104180, AS104240, AS104260, AS104280, AS104300, AS003105
Building Services		147	15-Mar-20 A	06-Aug-20 A	23-Feb-22	10-Apr-22			
AS113100	Prepare & Submit BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	90	15-Mar-20 A	27-Jul-20 A	23-Feb-22	23-Feb-22		AS112200	AS113200, AS113160c



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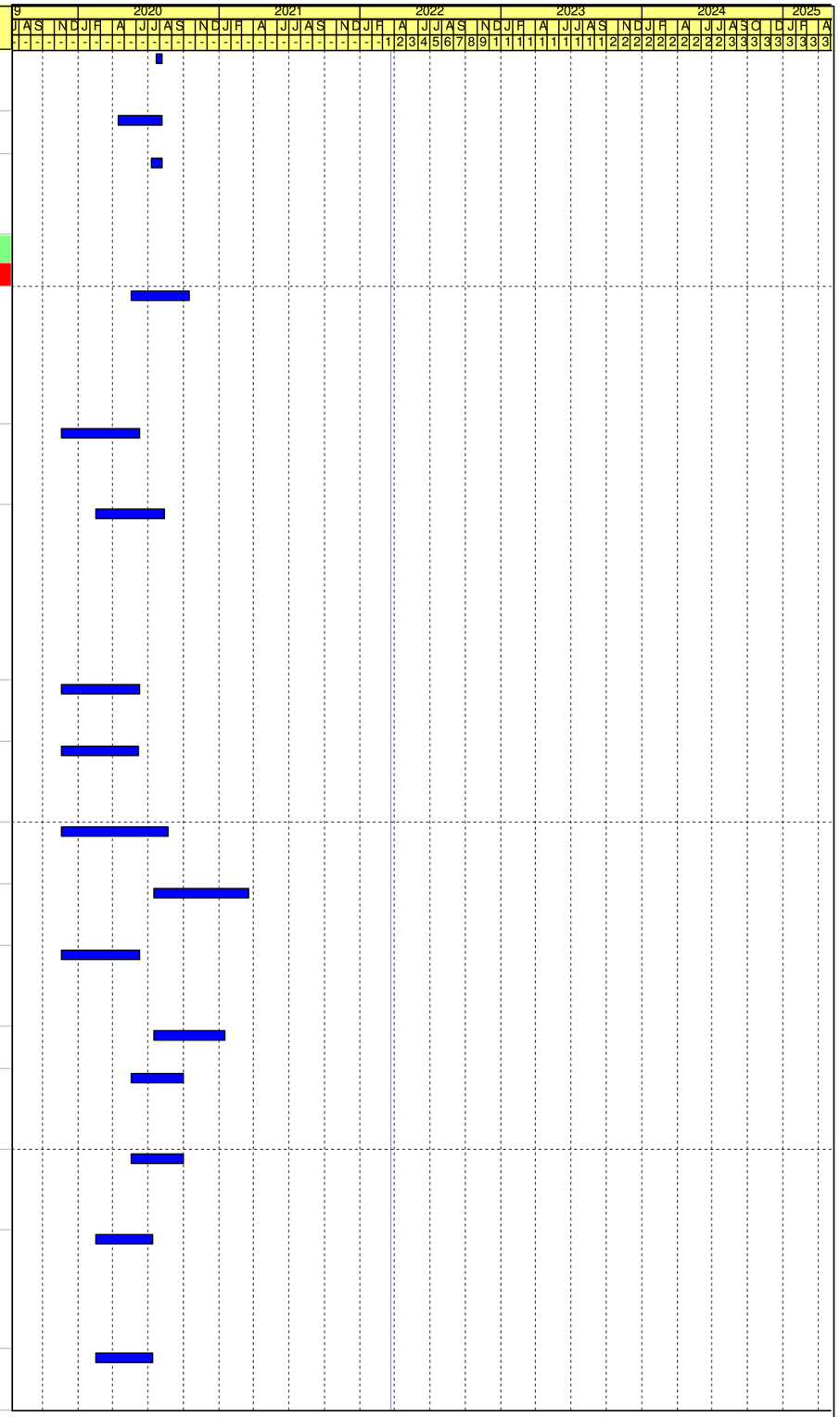
AS113160c	Review & Accept of BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8	21-Jul-20 A	05-Aug-20 A	10-Apr-22	10-Apr-22		AS113100	AS003105, AS105140, AS106260
AS113200	Prepare & Submit FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	60	14-Apr-20 A	05-Aug-20 A	23-Feb-22	23-Feb-22		AS113100	AS113260c
AS113260c	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	23-Feb-22	23-Feb-22		AS113200	AS003105, AS103400, AS104320, AS104400
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		943	20-Nov-19 A	31-May-22	31-Dec-21	24-Nov-24	908		
Major Plant & Materials Procurement		571	20-Nov-19 A	23-Apr-21 A	22-Feb-22	25-Apr-23			
AS023100	Procurement & PO for Sludge Screening System (S2)	150	18-May-20 A	16-Oct-20 A	02-Apr-22	02-Apr-22		AS023140	AS003220, AS501100, AS022200, AS023200, AS023210, AS023420, AS023560
AS023120	Procurement & PO for Sludge Thickening System (S3)	180	20-Nov-19 A	08-Jun-20 A	02-Apr-22	02-Apr-22		AS010200, AS000020	AS003220, AS501120, AS032200, AS023160
AS023140	Procurement & PO for Sludge Digestion System (S5)	150	18-Feb-20 A	12-Aug-20 A	10-Mar-22	10-Mar-22		AS000020, AS023180	AS003220, AS501140, AS052200, AS501150a, AS023480, AS023540, AS023580, AS023100, AS023400
AS023160	Procurement & PO for Sludge Dewatering System (S6)	180	20-Nov-19 A	08-Jun-20 A	02-Apr-22	02-Apr-22		AS010200, AS000020, AS023120	AS003220, AS501160, AS062200
AS023180	Procurement & PO for THP System (S4)	180	20-Nov-19 A	05-Jun-20 A	10-Mar-22	10-Mar-22		AS000020, AS010200	AS003220, AS501180, AS042200, AS023140
AS023190a	Procurement & PO for Biogas Holding Tanks(S7)	180	20-Nov-19 A	20-Aug-20 A	02-Apr-22	02-Apr-22		AS010200	AS003220, AS501240, AS072200
AS023210	Procurement & PO for H2S Removal System (S7)	234	17-Jul-20 A	17-Mar-21 A	02-Apr-22	02-Apr-22		AS023100	AS003220, AS501780, AS072200
AS023220	Procurement & PO for CHP System (S8)	180	20-Nov-19 A	08-Jun-20 A	22-Feb-22	22-Feb-22		AS010200	AS003220, AS501260, AS082200, AS023300
AS023240	Procurement & PO for Waste Gas Burning System (S9)	150	17-Jul-20 A	15-Jan-21 A	08-May-22	08-May-22			AS003220, AS501320
AS023260	Procurement & PO for Plant Service Water System (S12)	150	18-May-20 A	30-Sep-20 A	02-Apr-22	02-Apr-22			AS003220, AS501380, AS122200, AS023500
AS023280	Procurement & PO for SAS Pumping System (S14)	150	18-May-20 A	30-Sep-20 A	21-Aug-22	21-Aug-22			AS003220, AS501400, AS142200, AS023600
AS023300	Procurement & PO for Transfomers (S17)	150	18-Feb-20 A	13-Jul-20 A	22-Feb-22	22-Feb-22		AS023220	AS003220, AS501420, AS501480, AS023320, AS023380, AS104240
AS023320	Procurement & PO for 11 kV Switchboard (S17)	150	18-Feb-20 A	13-Jul-20 A	02-Apr-22	02-Apr-22		AS023300	AS003220, AS501540, AS023340



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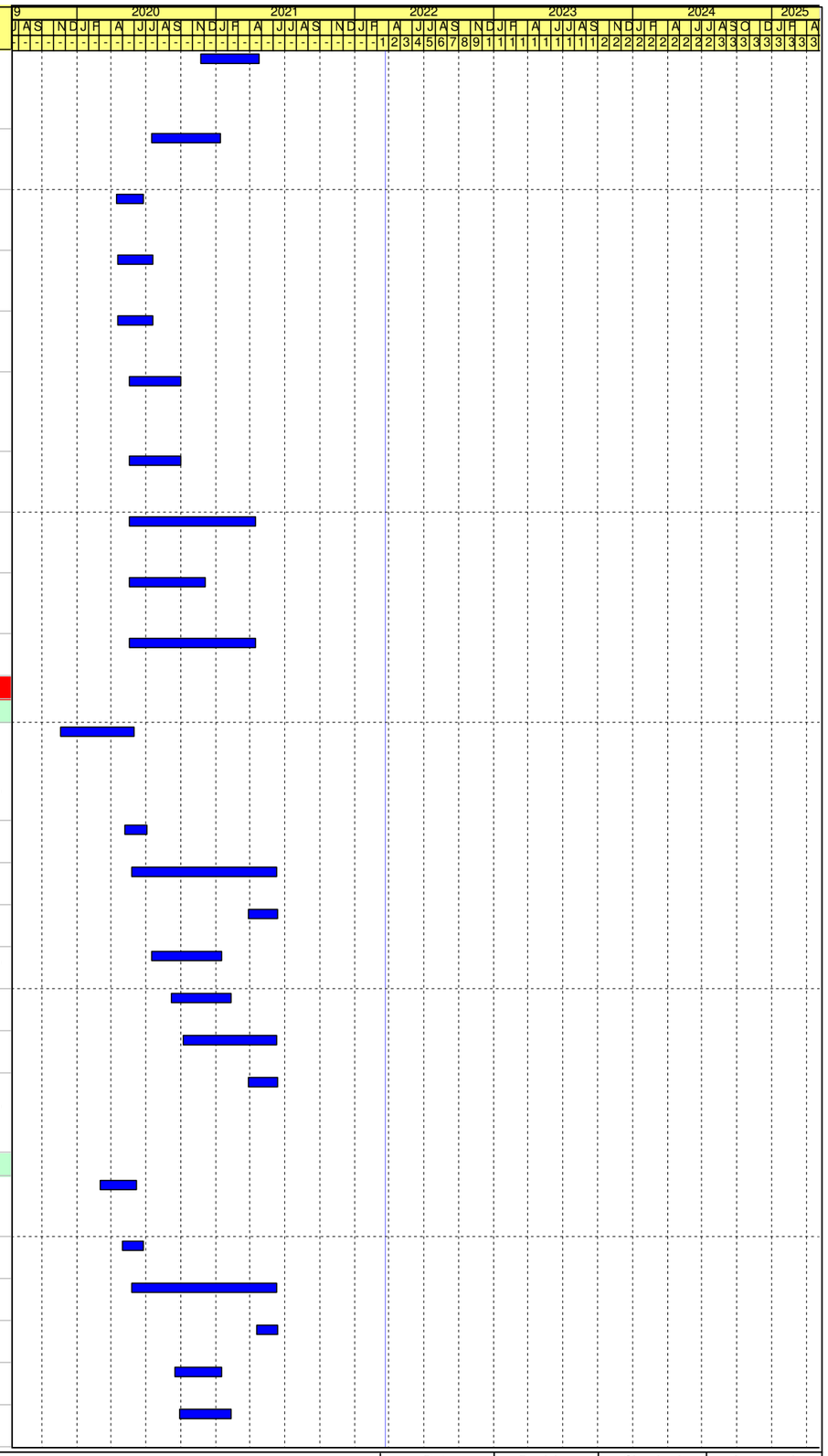
AS023340	Procurement & PO for 380V Switchboard (S17)	174	21-Nov-20 A	23-Apr-21 A	02-Apr-22	02-Apr-22		AS023320, AS021300	AS003220, AS501600, AS023620, AS104260
AS023380	Procurement & PO for Control & Monitoring System (S18)	183	17-Jul-20 A	11-Jan-21 A	22-Feb-22	22-Feb-22		AS010200, AS023300	AS003220, AS501680, AS104280
AS023420	Procurement & PO for DO System (S21)	150	15-Apr-20 A	24-Jun-20 A	21-Sep-22	21-Sep-22		AS023100	AS003220, AS501800, AS211100
AS023440	Procurement & PO for Stoplog (S21)	90	18-Apr-20 A	17-Jul-20 A	25-Apr-23	25-Apr-23		AS010200, AS103200	AS003220, AS501820, AS023460
AS023460	Procurement & PO for Penstock (S21)	90	18-Apr-20 A	17-Jul-20 A	25-Apr-23	25-Apr-23		AS010200, AS023440, AS103220	AS003220, AS501840
AS023480	Procurement & PO for Sewage Pump (S21)	120	18-May-20 A	30-Sep-20 A	07-Aug-22	07-Aug-22		AS023140	AS003220, AS501860, AS211200, AS023520
AS023500	Procurement & PO for Process Water Pump (S21)	120	18-May-20 A	30-Sep-20 A	23-Apr-22	23-Apr-22		AS023260	AS003220, AS501880, AS211300
AS023520	Procurement & PO for External Sludge Transfer Pump (S21)	348	18-May-20 A	14-Apr-21 A	25-Oct-22	25-Oct-22		AS023480	AS003220, AS501900, AS211400
AS023540	Procurement & PO for THP Cooling Pump (S21)	150	18-May-20 A	04-Dec-20 A	25-Oct-22	25-Oct-22		AS023140	AS003220, AS501920, AS211500
AS023600	Procurement & PO for Temporary Primary Sludge Pump (S21)	348	18-May-20 A	14-Apr-21 A	21-Aug-22	21-Aug-22		AS010200, AS023280	AS003220, AS501980
Design & Submission		860	20-Nov-19 A	11-Jun-21 A	16-Feb-22	24-Nov-24			
General Arrangement Drawings		715	20-Nov-19 A	11-Jun-21 A	16-Feb-22	24-Nov-24			
AS020100	Prepare & Submit General Arrangement Drawings (from formation level up to +8mPD)	180	20-Nov-19 A	29-May-20 A	16-Feb-22	16-Feb-22		AS010200	AS020110, AS020200, AS021200, AS020140a, AS042200
AS020110	Review & Comment on General Arrangement Drawings by PM (from formation level up to +8mPD)	21	07-May-20 A	02-Jul-20 A	24-Nov-24	24-Nov-24		AS020100	AS020120
AS020120	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	381	26-May-20 A	10-Jun-21 A	24-Nov-24	24-Nov-24		AS020110	AS020130
AS020130	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	77	26-Mar-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS020120	AS003220
AS020140a	Prepare & Submit General Arrangement Drawings (remaining)	177	17-Jul-20 A	15-Jan-21 A	19-Mar-22	19-Mar-22		AS010200, AS020100	AS020150a, AS020300
AS020150a	Review & Comment on General Arrangement Drawings by PM (remaining)	21	05-Sep-20 A	08-Feb-21 A	19-Mar-22	19-Mar-22		AS020140a	AS020160a
AS020160a	Revise & Re-submit General Arrangement Drawings (remaining)	248	06-Oct-20 A	10-Jun-21 A	19-Mar-22	19-Mar-22		AS020150a	AS020170a
AS020170a	Review & Accept of General Arrangement Drawings by PM (remaining)	77	26-Mar-21 A	11-Jun-21 A	19-Mar-22	19-Mar-22		AS020160a	AS003220, AS509400a, AS023290, AS509380b
Civil & Dimensional / Tolerance Requirement Drawings		522	04-Mar-20 A	11-Jun-21 A	21-Mar-22	24-Nov-24			
AS020200	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	90	04-Mar-20 A	04-Jun-20 A	21-Mar-22	21-Mar-22		AS020100	AS020210, AS122200, AS002020
AS020210	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	30-Apr-20 A	23-Jun-20 A	21-Mar-22	21-Mar-22		AS020200	AS020220
AS020220	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	381	26-May-20 A	10-Jun-21 A	21-Mar-22	21-Mar-22		AS020210	AS020230
AS020230	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	55	17-Apr-21 A	11-Jun-21 A	21-Mar-22	21-Mar-22		AS020220	AS003220, AS001620
AS020300	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	120	15-Sep-20 A	15-Jan-21 A	24-Nov-24	24-Nov-24		AS020140a	AS020310, AS002040
AS020310	Review & Comment on Civil Requirement Drawings by PM (remaining)	21	28-Sep-20 A	08-Feb-21 A	24-Nov-24	24-Nov-24		AS020300	AS020320



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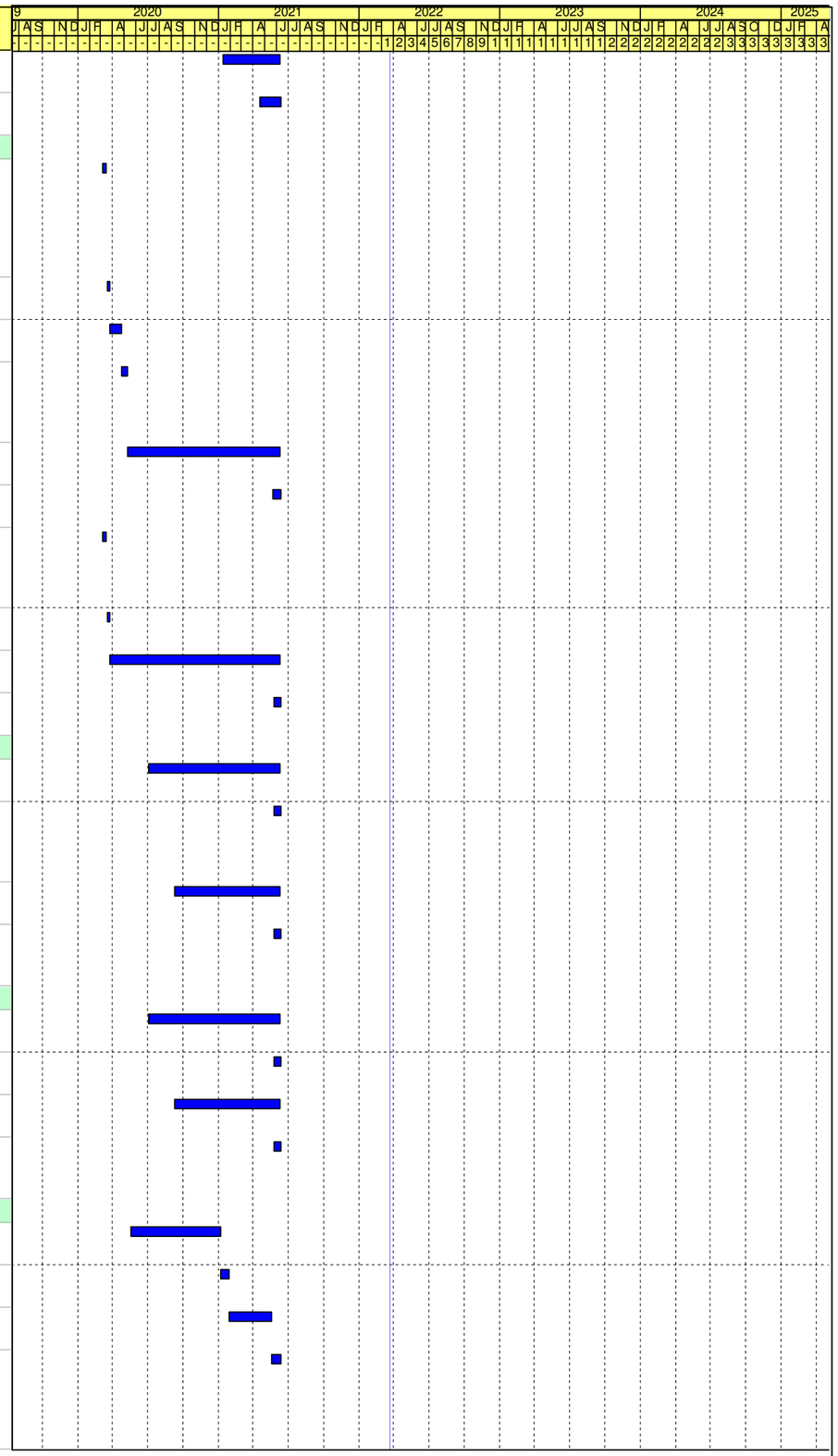
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS020320	Revise & Re-submit Civil Requirement Drawings (remaining)	150	12-Jan-21 A	10-Jun-21 A	24-Nov-24	24-Nov-24		AS020310	AS020330
AS020330	Review & Accept of Civil Requirement Drawings by PM (remaining)	55	17-Apr-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS020320	AS003220
Electrical Schematic Drawings		754	05-Mar-20 A	11-Jun-21 A	16-Feb-22	24-Nov-24			
AS021200	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	90	05-Mar-20 A	16-Mar-20 A	16-Feb-22	16-Feb-22		AS020100	AS021210, AS022200, AS122200, AS002020, AS021300, AS023620b
AS021210	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	17-Mar-20 A	24-Mar-20 A	17-Feb-22	17-Feb-22		AS021200	AS021220
AS021220	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	28	25-Mar-20 A	23-Apr-20 A	17-Feb-22	17-Feb-22		AS021210	AS021230, AS021300
AS021230	Review & Comment of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	24-Apr-20 A	08-May-20 A	17-Feb-22	17-Feb-22		AS021220	AS021330, AS501600, AS021300, AS021240
AS021240	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	398	09-May-20 A	10-Jun-21 A	24-Nov-24	24-Nov-24		AS021230	AS021250
AS021250	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	21-May-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS021240	AS003220
AS021300	Prepare & Submit Elec. Schematic Drawings (remaining) -KD2B	120	05-Mar-20 A	16-Mar-20 A	17-Feb-22	17-Feb-22		AS021200, AS021220, AS021230	AS021310, AS002040, AS023340, AS023620b
AS021310	Review & Comment on Elec. Schematic Drawings by PM (remaining)	21	17-Mar-20 A	24-Mar-20 A	21-Apr-22	21-Apr-22		AS021300	AS021320
AS021320	Revise & Re-submit Elec. Schematic Drawings (remaining)	443	25-Mar-20 A	10-Jun-21 A	21-Apr-22	21-Apr-22		AS021310	AS021330
AS021330	Review & Accept of Elec. Schematic Drawings by PM (remaining)	21	24-May-21 A	11-Jun-21 A	21-Apr-22	21-Apr-22		AS021320, AS021230	AS003220, AS501600
Sludge Screening (SSc)		357	02-Jul-20 A	11-Jun-21 A	02-Apr-22	08-Jun-22			
AS022200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22		AS021200, AS023100	AS022210
AS022210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS022200	AS501480, AS501600, AS023620, AS003220
AS022300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274	10-Sep-20 A	10-Jun-21 A	08-Jun-22	08-Jun-22			AS022310
AS022310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	08-Jun-22	08-Jun-22		AS022300	AS003220, AS501100, AS013410f
Sludge Thickening (STh)		357	02-Jul-20 A	11-Jun-21 A	02-Apr-22	07-May-22			
AS032200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22		AS023120	AS032210
AS032210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS032200	AS003220, AS023620
AS032300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274	10-Sep-20 A	10-Jun-21 A	07-May-22	07-May-22			AS032310
AS032310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	07-May-22	07-May-22		AS032300	AS501120, AS003220, AS013410f
Thermal Hydrolysis Process (THP)		416	18-May-20 A	11-Jun-21 A	01-Apr-22	20-Sep-22			
AS042200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	241	18-May-20 A	07-Jan-21 A	01-Apr-22	01-Apr-22		AS023180, AS020100	AS042210, AS211500
AS042210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	08-Jan-21 A	27-Jan-21 A	01-Apr-22	01-Apr-22		AS042200	AS042220
AS042220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	117	28-Jan-21 A	17-May-21 A	01-Apr-22	01-Apr-22		AS042210	AS042230
AS042230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	24	18-May-21 A	11-Jun-21 A	01-Apr-22	01-Apr-22		AS042220	AS003220, AS501180, AS501920, AS510060, AS023620



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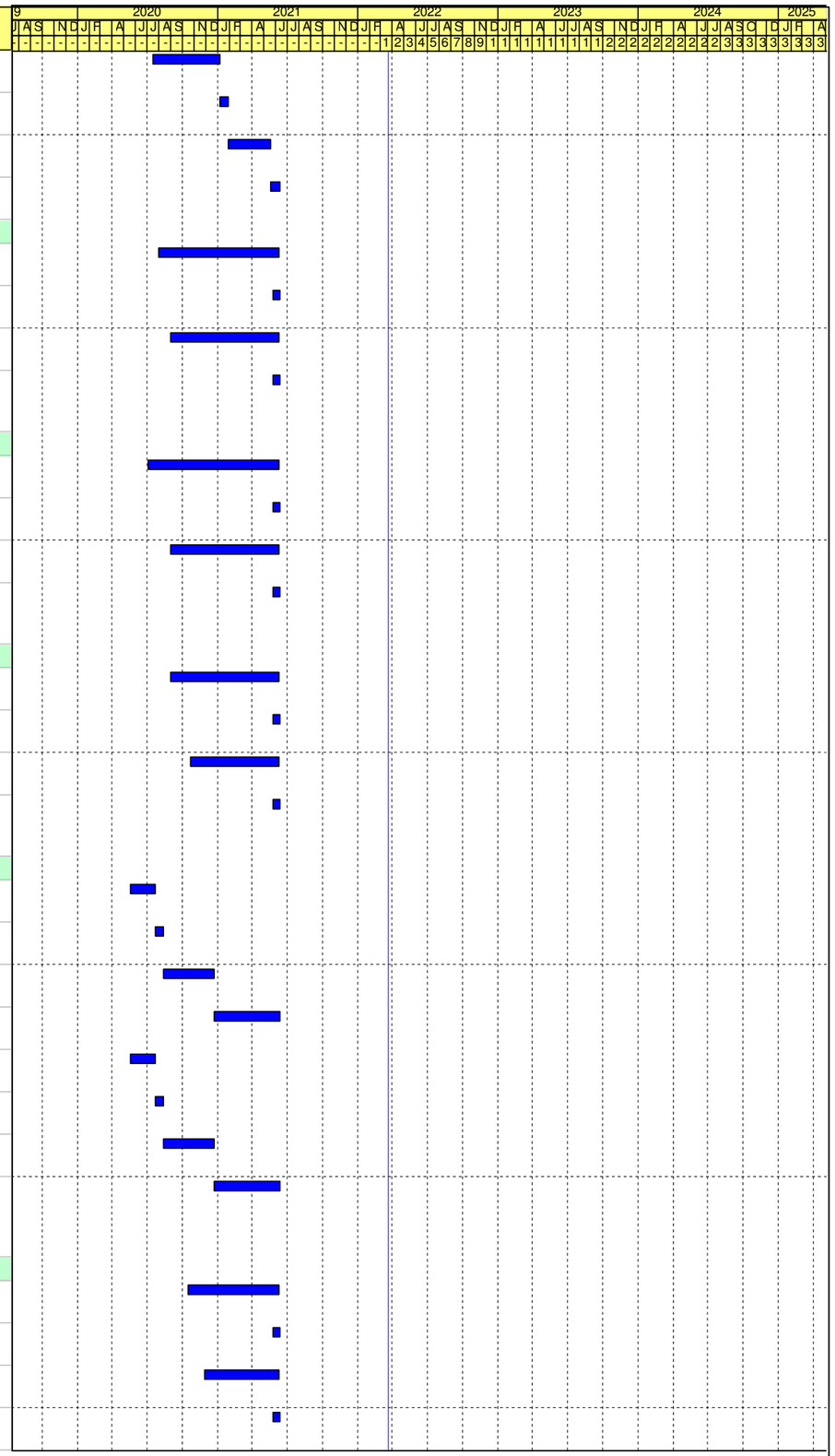
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS042300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	17-Jul-20 A	07-Jan-21 A	20-Sep-22	20-Sep-22			AS042310
AS042310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	08-Jan-21 A	27-Jan-21 A	20-Sep-22	20-Sep-22		AS042300	AS042320
AS042320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	117	28-Jan-21 A	17-May-21 A	20-Sep-22	20-Sep-22		AS042310	AS042330
AS042330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	24	18-May-21 A	11-Jun-21 A	20-Sep-22	20-Sep-22		AS042320	AS501180, AS003220
Sludge Digestion (SDi)		325	01-Aug-20 A	11-Jun-21 A	02-Apr-22	07-Jun-22			
AS052200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	314	01-Aug-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22		AS023140	AS052210
AS052210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS052200	AS003220, AS023620
AS052300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284	31-Aug-20 A	10-Jun-21 A	07-Jun-22	07-Jun-22			AS052310
AS052310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	07-Jun-22	07-Jun-22		AS052300	AS501140, AS003220, AS013410f
Sludge Dewatering (SDe)		357	02-Jul-20 A	11-Jun-21 A	02-Apr-22	16-Jun-22			
AS062200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22		AS023160	AS062210
AS062210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS062200	AS003220, AS023620
AS062300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284	31-Aug-20 A	10-Jun-21 A	16-Jun-22	16-Jun-22			AS062310
AS062310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	16-Jun-22	16-Jun-22		AS062300	AS501160, AS003220, AS013410f
Biogas Storage & Pre-Treatment (BSPT)		295	31-Aug-20 A	11-Jun-21 A	02-Apr-22	24-Apr-22			
AS072200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	284	31-Aug-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22		AS023210, AS023190a	AS072210
AS072210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS072200	AS003220, AS023620
AS072300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	232	22-Oct-20 A	10-Jun-21 A	24-Apr-22	24-Apr-22			AS072310
AS072310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	24-Apr-22	24-Apr-22		AS072300	AS501240, AS501780, AS003220
Combined Heat & Power Generation (CHP)		512	18-May-20 A	11-Jun-21 A	02-Apr-22	08-Apr-22			
AS082200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	233	18-May-20 A	21-Jul-20 A	02-Apr-22	02-Apr-22		AS023220	AS082210
AS082210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	22-Jul-20 A	11-Aug-20 A	02-Apr-22	02-Apr-22		AS082200	AS082220, AS201200
AS082220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	12-Aug-20 A	21-Dec-20 A	02-Apr-22	02-Apr-22		AS082210	AS082230
AS082230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	171	22-Dec-20 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS082220	AS003220, AS023620
AS082300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	18-May-20 A	21-Jul-20 A	08-Apr-22	08-Apr-22			AS082310
AS082310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	22-Jul-20 A	11-Aug-20 A	08-Apr-22	08-Apr-22		AS082300	AS082320
AS082320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	12-Aug-20 A	21-Dec-20 A	08-Apr-22	08-Apr-22		AS082310	AS082330
AS082330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	171	22-Dec-20 A	11-Jun-21 A	08-Apr-22	08-Apr-22		AS082320	AS501260, AS003220, AS509520a, AS013450f
Waste Gas Burning System (WGB)		264	15-Oct-20 A	11-Jun-21 A	02-Apr-22	08-May-22			
AS092200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	239	15-Oct-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22			AS092210
AS092210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS092200	AS003220, AS023620
AS092300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	194	29-Nov-20 A	10-Jun-21 A	08-May-22	08-May-22			AS092310
AS092310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	08-May-22	08-May-22		AS092300	AS501320, AS003220



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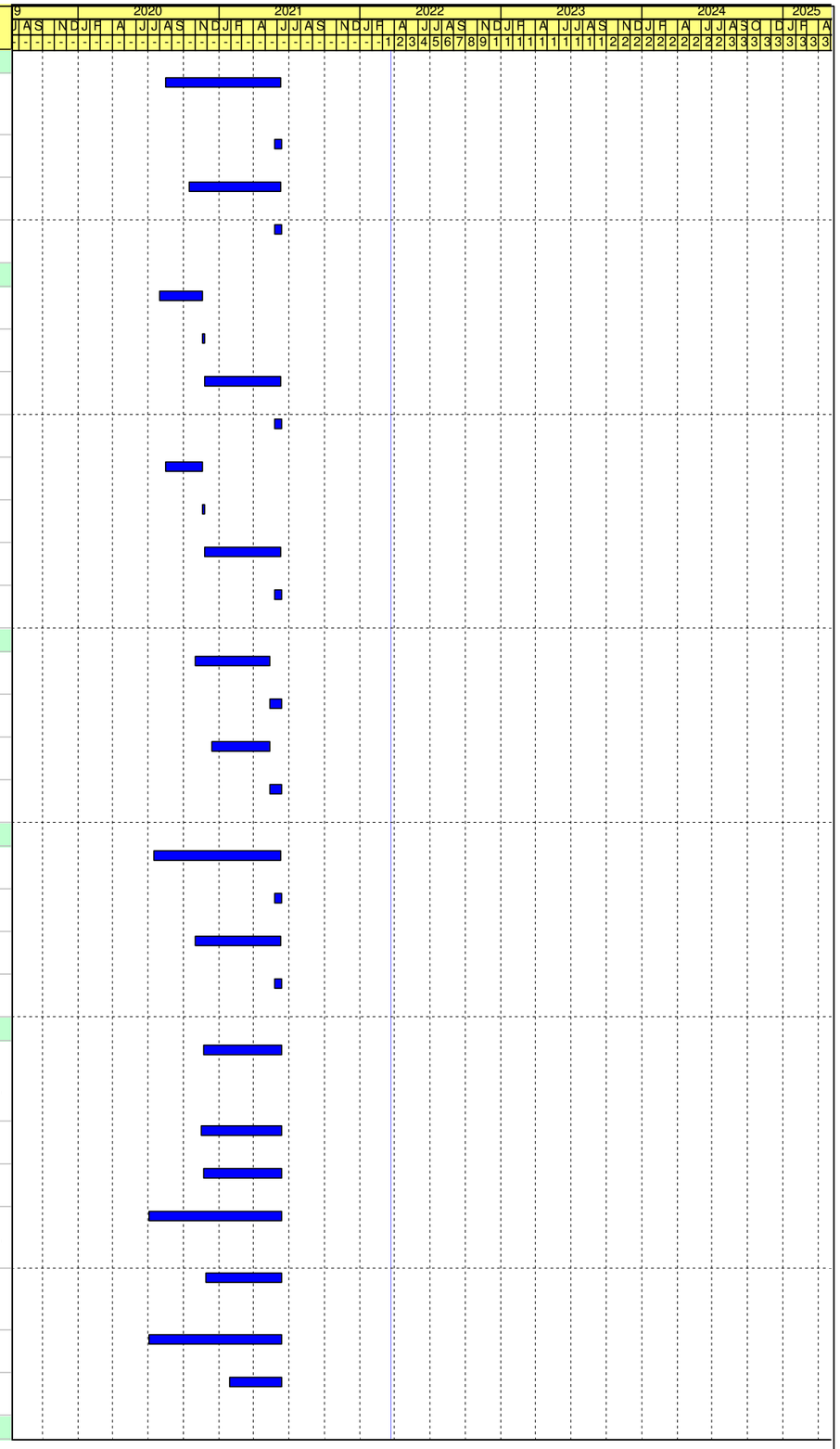
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
Plant Service Water System (PSW)		325	16-Aug-20 A	11-Jun-21 A	02-Apr-22	04-Nov-22			
AS122200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	299	16-Aug-20 A	10-Jun-21 A	02-Apr-22	02-Apr-22		AS020200, AS021200, AS023260	AS122210
AS122210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	02-Apr-22	02-Apr-22		AS122200	AS003220, AS023620
AS122300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	239	15-Oct-20 A	10-Jun-21 A	04-Nov-22	04-Nov-22			AS122310
AS122310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	04-Nov-22	04-Nov-22		AS122300	AS501380, AS003220
Surplus Activated Sludge Pumping Station (SAS)		440	01-Aug-20 A	11-Jun-21 A	02-Feb-23	24-Nov-24			
AS142200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	202	01-Aug-20 A	17-Nov-20 A	24-Nov-24	24-Nov-24		AS023280	AS142210
AS142210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Nov-20 A	24-Nov-20 A	24-Nov-24	24-Nov-24		AS142200	AS142220
AS142220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	198	25-Nov-20 A	10-Jun-21 A	24-Nov-24	24-Nov-24		AS142210	AS142230
AS142230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS142220	AS003220
AS142300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	183	16-Aug-20 A	17-Nov-20 A	02-Feb-23	02-Feb-23			AS142310
AS142310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	18-Nov-20 A	24-Nov-20 A	02-Feb-23	02-Feb-23		AS142300	AS142320
AS142320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	198	25-Nov-20 A	10-Jun-21 A	02-Feb-23	02-Feb-23		AS142310	AS142330
AS142330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	02-Feb-23	02-Feb-23		AS142320	AS501400, AS003220
Control and Monitoring System		211	30-Oct-20 A	11-Jun-21 A	22-Feb-22	24-Nov-24			
AS182200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	193	30-Oct-20 A	11-May-21 A	24-Nov-24	24-Nov-24			AS182210
AS182210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	30	12-May-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS182200	AS003220
AS182300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	148	14-Dec-20 A	11-May-21 A	22-Feb-22	22-Feb-22			AS182310
AS182310	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	30	12-May-21 A	11-Jun-21 A	22-Feb-22	22-Feb-22		AS182300	AS501680, AS003220
Lifting Appliances		358	17-Jul-20 A	11-Jun-21 A	18-Apr-22	18-Apr-22			
AS192200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	329	17-Jul-20 A	10-Jun-21 A	18-Apr-22	18-Apr-22			AS192210
AS192210	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	18-Apr-22	18-Apr-22		AS192200	AS003220, AS501740
AS192300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	224	30-Oct-20 A	10-Jun-21 A	18-Apr-22	18-Apr-22			AS192310
AS192310	Review & Acceptt on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	18-Apr-22	18-Apr-22		AS192300	AS501740, AS003220
Building Services		357	02-Jul-20 A	11-Jun-21 A	23-Feb-22	24-Nov-24			
AS201100	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	202	21-Nov-20 A	11-Jun-21 A	23-Feb-22	23-Feb-22			AS003220, AS509220, AS509500a, AS509300
AS201200	Submit & Accept BS Works Design & Dwgs for CHP Building	209	14-Nov-20 A	11-Jun-21 A	07-Jul-22	07-Jul-22		AS082210	AS003220, AS509300
AS201300	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	202	21-Nov-20 A	11-Jun-21 A	07-Jul-22	07-Jul-22			AS003220, AS509300
AS201500	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	344	02-Jul-20 A	11-Jun-21 A	25-Apr-22	25-Apr-22			AS003220, AS509370b, AS509300
AS201700	Submit & Accept BS Works Design & Dwgs for Other Facilities	194	29-Nov-20 A	11-Jun-21 A	07-Jul-22	07-Jul-22			AS201900, AS003220, AS509300
AS201800	Submit & Accept BS Works Design & Dwgs for FS Installation	344	02-Jul-20 A	11-Jun-21 A	07-Jul-22	07-Jul-22			AS003220, AS509300
AS201900	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	134	28-Jan-21 A	11-Jun-21 A	24-Nov-24	24-Nov-24		AS201700	AS003220
Miscellaneous		264	05-Oct-20 A	11-Jun-21 A	23-Apr-22	24-Nov-24			



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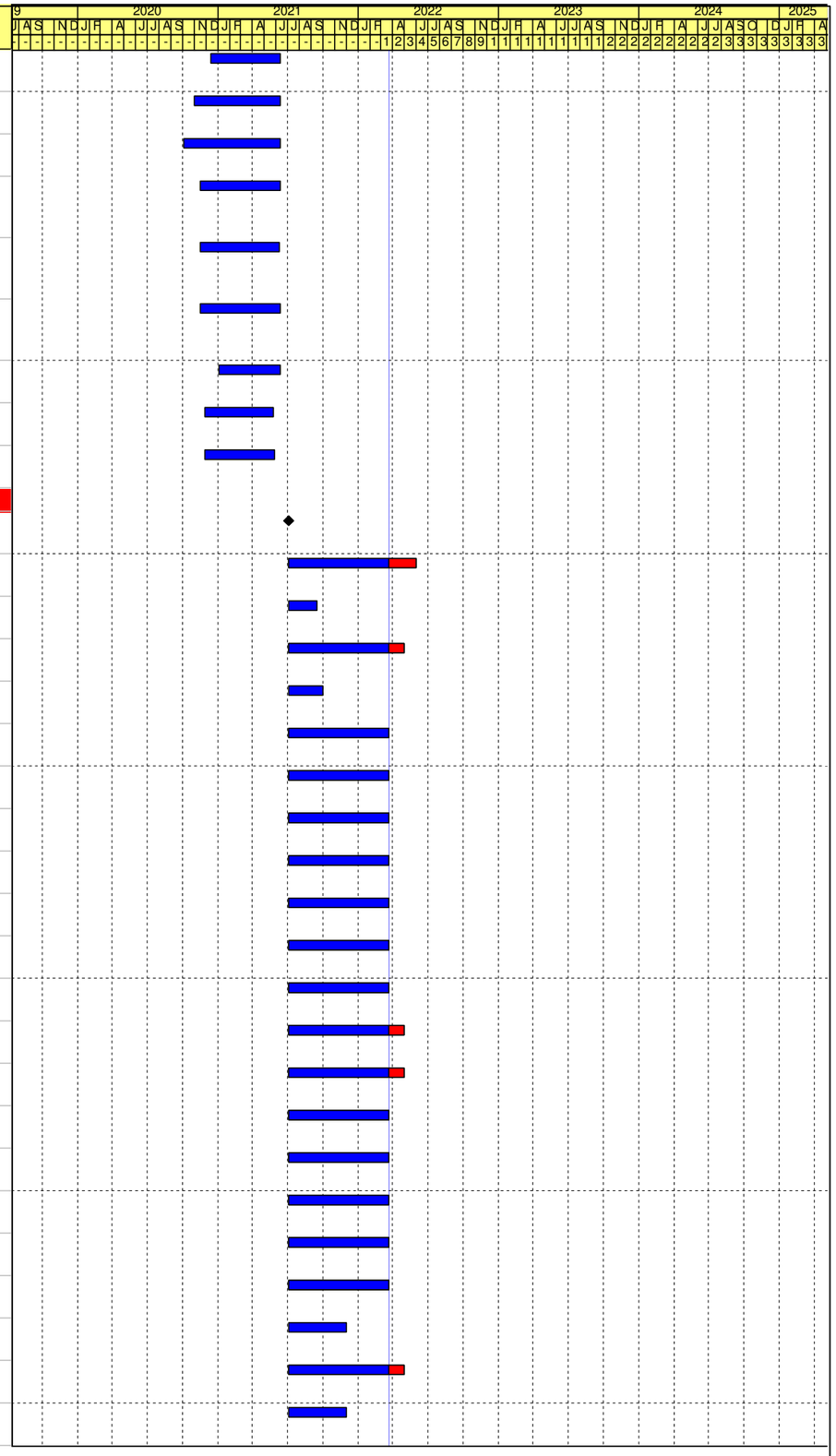
28-Feb-22	Rev.19	LT	KM
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS211100	Submit & Accept Design & Dwgs for DO System	179	14-Dec-20 A	11-Jun-21 A	21-Sep-22	21-Sep-22		AS023420, AS010205a	AS501800, AS003220
AS211200	Submit & Accept Design & Dwgs for Sewage Pumping Station	224	30-Oct-20 A	11-Jun-21 A	07-Aug-22	07-Aug-22		AS023480	AS501860, AS003220
AS211300	Submit & Accept Design & Dwgs for Process Water Pumping System	249	05-Oct-20 A	11-Jun-21 A	23-Apr-22	23-Apr-22		AS023500	AS501880, AS003220
AS211400	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	209	14-Nov-20 A	11-Jun-21 A	25-Oct-22	25-Oct-22		AS023520	AS211500, AS501900, AS003220
AS211500	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	209	14-Nov-20 A	10-Jun-21 A	25-Oct-22	25-Oct-22		AS042200, AS211400, AS023540	AS501920, AS003220
AS211600	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	209	14-Nov-20 A	11-Jun-21 A	05-Nov-22	05-Nov-22			AS501940, AS501960, AS003220
AS211700	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	158	04-Jan-21 A	11-Jun-21 A	21-Aug-22	21-Aug-22		AS010205a	AS501980, AS003220
AS211800	Submit & Accept Design & Dwgs for Gas Detection System	194	29-Nov-20 A	24-May-21 A	21-Sep-22	21-Sep-22			AS003220, AS510080
AS211900	Submit & Accept Design & Dwgs for CCTV System	194	29-Nov-20 A	26-May-21 A	24-Nov-24	24-Nov-24			AS003220
Outstanding Works		334	02-Jul-21 A	31-May-22	31-Dec-21	24-Nov-24	908		
AS211950i	Certifiate of Completion - Section 2 of the works (Ref: RCYK:ccm:60427128/92-2021004626w)	0	02-Jul-21 A		24-Nov-24				
AS212000i	Provide ICE Certificate for all design, calculations, drawings, plans & relevant documents	334	02-Jul-21 A	31-May-22*	21-Mar-22	31-May-22	0		
AS212010i	Submit finalized design calculations, drawings & material submissions for BS systems (Workshop No.2)	76	02-Jul-21 A	15-Sep-21 A	24-Nov-24	24-Nov-24			
AS212015j	Submit finalized design calculations, drawings & material submissions for BS systems (except Workshop No.2)	303	02-Jul-21 A	30-Apr-22*	21-Mar-22	30-Apr-22	0		
AS212020i	Submit finalized sizing calculations for the actuators and stems for penstocks	91	02-Jul-21 A	30-Sep-21 A	24-Nov-24	24-Nov-24			
AS212021j	Submit finalized cable schedules & sizing calculation (LV System)	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212022j	Submit finalized pumps and associated motor and VSD calculations	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212023j	Submit finalized electrical loads to verify the rating of the switchgears, transformers and protective devices	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212024j	Submit finalized material submissions of the cables, cable tray, ladder and accessories	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212025j	Submit finalized cable route drawings	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212026j	Submit finalized layout and control wiring diagrams for switchboard, MCC, control panel, etc	214	02-Jul-21 A	21-Mar-22*	31-Jan-22	31-Jan-22	-49		
AS212027j	Submit finalized design submissions of the CHP system	214	02-Jul-21 A	21-Mar-22*	31-Jan-22	31-Jan-22	-49		
AS212028j	Submit finalized interlock devices for electrical equipment and system	303	02-Jul-21 A	30-Apr-22*	21-Mar-22	30-Apr-22	0		
AS212029j	Submit finalized calculations for total harmonic distortion, electrical faults and touch voltage	303	02-Jul-21 A	30-Apr-22*	21-Mar-22	30-Apr-22	0		
AS212030i	Submit finalized design calculations, drawings & material submissions for ELV systems	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212040i	Submit finalized design submissions of SCADA, PMS, CMMS, IDMS, UPS for FCS	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212042j	Submit finalized configuration of SCADA / PLC system, CMMS & PMS	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212044j	Submit finalized PLC and MCC panel design	242	02-Jul-21 A	21-Mar-22*	28-Feb-22	28-Feb-22	-21		
AS212050i	Submit finalized design & philosophy of the process instrument	183	02-Jul-21 A	21-Mar-22*	31-Dec-21	31-Dec-21	-80		
AS212060i	Submit finalized Process Design Submission	152	02-Jul-21 A	30-Nov-21 A	24-Nov-24	24-Nov-24			
AS212070i	Submit finalized acoustic and noise calculations for all equipment	303	02-Jul-21 A	30-Apr-22*	21-Mar-22	30-Apr-22	0		
AS212080i	Submit finalized design of THP feeding system	122	02-Jul-21 A	30-Nov-21 A	24-Nov-24	24-Nov-24			



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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 Mar 2022

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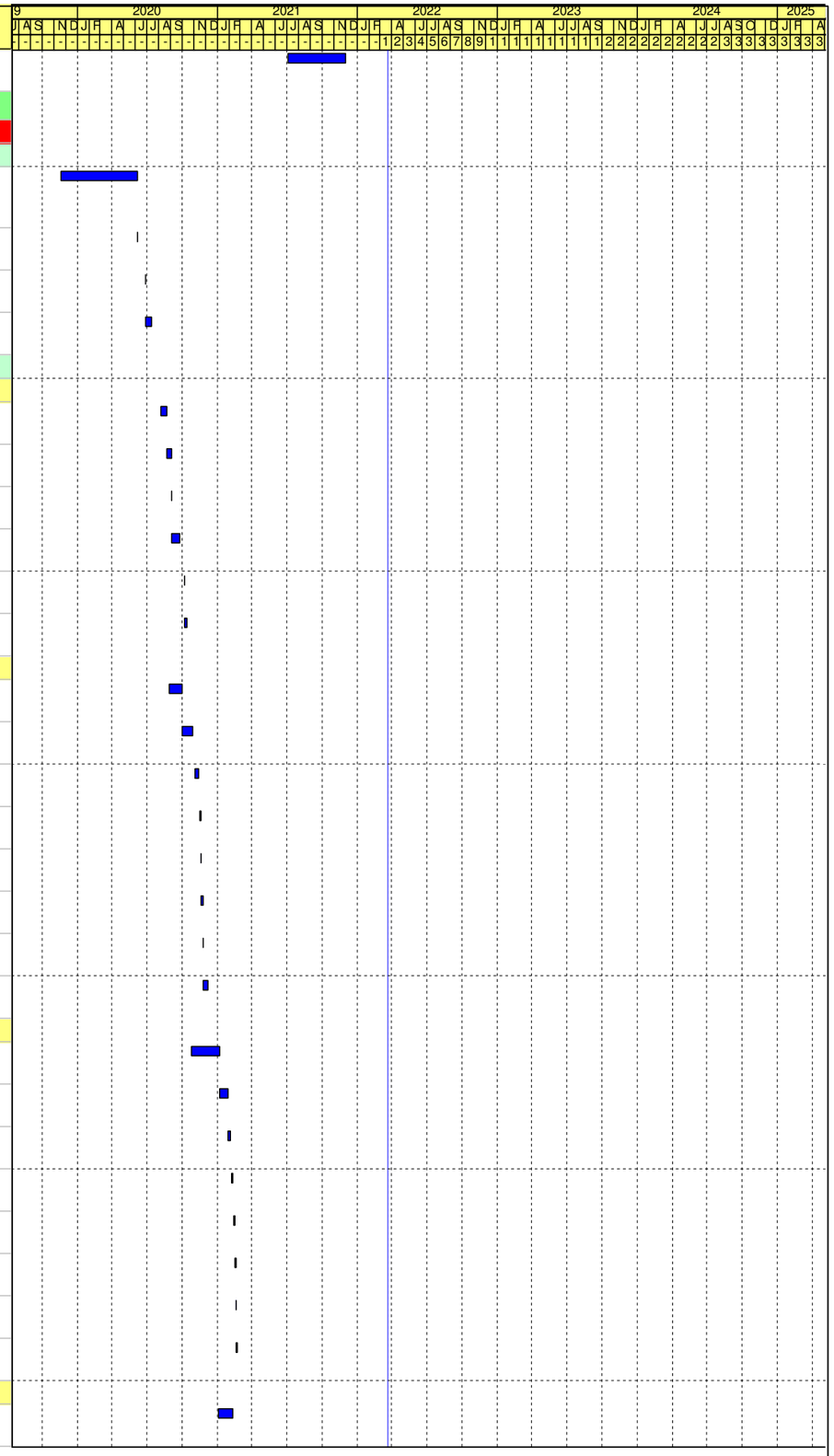
30-Nov-21	Rev.16	LT	KM
31-Dec-21	Rev.17	LT	KM
31-Jan-22	Rev.18	LT	KM
28-Feb-22	Rev.19	LT	KM
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS212090i	Submit finalized design of the centrifuge discharge system	152	02-Jul-21 A	30-Nov-21 A	24-Nov-24	24-Nov-24			
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		1806	20-Nov-19 A	29-Oct-24	13-Feb-22	24-Nov-24	26		
Major Subcontractor / Supplier Procurement		633	20-Nov-19 A	06-Sep-21 A	13-Feb-22	24-Nov-24			
Design		320	20-Nov-19 A	12-Jul-20 A	14-Feb-22	24-Nov-24			
AS160020	Procurement & PO for Deammonification Sidestream Treatment Facilities	200	20-Nov-19 A	05-Jun-20 A	14-Feb-22	14-Feb-22		AS000020, AS010200	AS160100, AS151100, AS153100
AS512260e	E&M (Process) Designer Award	1	05-Jun-20 A	05-Jun-20 A	24-Nov-24	24-Nov-24			
AS512270e	Civil & BS Designer Award	1	26-Jun-20 A	26-Jun-20 A	24-Nov-24	24-Nov-24			AS512280e
AS512280e	Mobilisation	14	27-Jun-20 A	12-Jul-20 A	24-Nov-24	24-Nov-24		AS512270e	
Civil & Building Contractor		327	05-Aug-20 A	06-Sep-21 A	13-Feb-22	14-Feb-22			
For Site Clearance & Survey		36	05-Aug-20 A	12-Oct-20 A	14-Feb-22	14-Feb-22			
AS512290e	Submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	05-Aug-20 A	20-Aug-20 A	14-Feb-22	14-Feb-22			AS512300e
AS512300e	Review & Comment the Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	21-Aug-20 A	01-Sep-20 A	14-Feb-22	14-Feb-22		AS512290e	AS512310e
AS512310e	Re-submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	02-Sep-20 A	02-Sep-20 A	14-Feb-22	14-Feb-22		AS512300e	AS512320e
AS512320e	Review & Accept Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	03-Sep-20 A	23-Sep-20 A	14-Feb-22	14-Feb-22		AS512310e	AS512330e
AS512330e	Civil Contractor (Site Clearance & Survey) Award	1	07-Oct-20 A	07-Oct-20 A	14-Feb-22	14-Feb-22		AS512320e	AS512340e
AS512340e	Mobilisation	5	08-Oct-20 A	12-Oct-20 A	14-Feb-22	14-Feb-22		AS512330e	AS161100
For Ground Investigation		98	29-Aug-20 A	08-Dec-20 A	14-Feb-22	14-Feb-22			
AS512350e	Submit Tender proprosal of Civil Contractor (Ground Investigation)	14	29-Aug-20 A	29-Sep-20 A	14-Feb-22	14-Feb-22			AS512360
AS512360	Review & Accept the Tender proprosal of Civil Contractor (Ground Investigation)	21	30-Sep-20 A	27-Oct-20 A	14-Feb-22	14-Feb-22		AS512350e	AS512370e
AS512370e	Tender Invitation of Civil Contractor (Ground Investigation)	7	02-Nov-20 A	13-Nov-20 A	14-Feb-22	14-Feb-22		AS512360	AS512380e
AS512380e	Submission of Tender Report	7	14-Nov-20 A	18-Nov-20 A	14-Feb-22	14-Feb-22		AS512370e	AS512390e
AS512390e	Review & Accept the Tender Report by PM	21	19-Nov-20 A	19-Nov-20 A	14-Feb-22	14-Feb-22		AS512380e	AS512400e
AS512400e	Contract Preparation	3	20-Nov-20 A	23-Nov-20 A	14-Feb-22	14-Feb-22		AS512390e	AS512410e
AS512410e	Civil Contractor (Ground Investigation) Award	1	24-Nov-20 A	24-Nov-20 A	14-Feb-22	14-Feb-22		AS512400e	AS512420e
AS512420e	Mobilisation	7	25-Nov-20 A	08-Dec-20 A	14-Feb-22	14-Feb-22		AS512410e	AS161120
For Pre-drilling & Post-drilling		116	26-Oct-20 A	21-Feb-21 A	14-Feb-22	14-Feb-22			
AS512430e	Submit Tender proprosal of Civil Contractor (Pre-drilling & Post-drilling)	74	26-Oct-20 A	06-Jan-21 A	14-Feb-22	14-Feb-22		AS160400, AS160300	AS512440e
AS512440e	Review & Accept the Tender proprosal of Civil Contractor (Predrill & Proof drill)	21	07-Jan-21 A	27-Jan-21 A	14-Feb-22	14-Feb-22		AS512430e	AS512450e
AS512450e	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	14	28-Jan-21 A	04-Feb-21 A	14-Feb-22	14-Feb-22		AS512440e	AS512460e
AS512460e	Submission of Tender Report	4	05-Feb-21 A	10-Feb-21 A	14-Feb-22	14-Feb-22		AS512450e	AS512470e
AS512470e	Review & Accept the Tender Report by PM	21	11-Feb-21 A	16-Feb-21 A	14-Feb-22	14-Feb-22		AS512460e	AS512480e
AS512480e	Contract Preparation	3	17-Feb-21 A	17-Feb-21 A	14-Feb-22	14-Feb-22		AS512470e	AS512490e
AS512490e	Civil Contractor (Pre-drilling & Post-drilling) Award	1	18-Feb-21 A	18-Feb-21 A	14-Feb-22	14-Feb-22		AS512480e	AS512500e
AS512500e	Mobilisation	3	19-Feb-21 A	21-Feb-21 A	14-Feb-22	14-Feb-22		AS512490e	AS161140
For Piling		90	04-Jan-21 A	01-Apr-21 A	14-Feb-22	14-Feb-22			
AS512510f	Submit Tender proprosal of Civil Contractor (Piling)	39	04-Jan-21 A	10-Feb-21 A	14-Feb-22	14-Feb-22			AS512520f



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30-Nov-21	Rev.16	LT	KM
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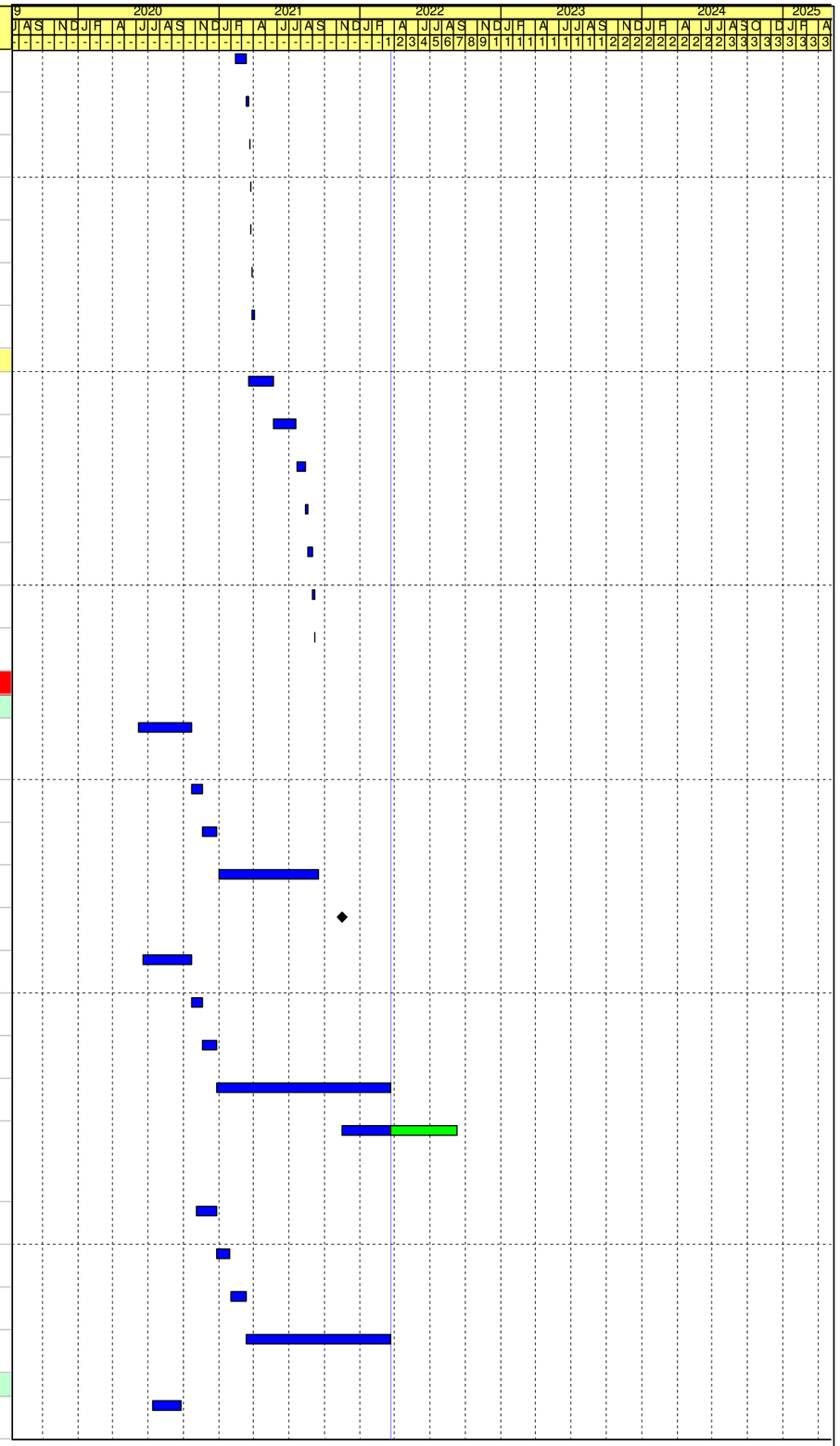
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS512520f	Review & Accept the Tender proprosal of Civil Contractor (Piling)	25	11-Feb-21 A	12-Mar-21 A	14-Feb-22	14-Feb-22		AS512510f	AS512530f
AS512530f	Tender Invitation of Civil Contractor (Piling)	14	12-Mar-21 A	19-Mar-21 A	14-Feb-22	14-Feb-22		AS512520f	AS512540f
AS512540f	Submission of Tender Report	7	20-Mar-21 A	22-Mar-21 A	14-Feb-22	14-Feb-22		AS512530f	AS512550f
AS512550f	Review & Accept the Tender Report by PM	21	23-Mar-21 A	23-Mar-21 A	14-Feb-22	14-Feb-22		AS512540f	AS512560f
AS512560f	Contract Preparation	3	24-Mar-21 A	25-Mar-21 A	14-Feb-22	14-Feb-22		AS512550f	AS512570f
AS512570f	Civil Contractor (Piling) Award	1	26-Mar-21 A	26-Mar-21 A	14-Feb-22	14-Feb-22		AS512560f	AS512580f
AS512580f	Mobilisation	3	26-Mar-21 A	01-Apr-21 A	14-Feb-22	14-Feb-22		AS512570f	AS161140
For Main Civil Works		146	17-Mar-21 A	06-Sep-21 A	13-Feb-22	13-Feb-22			
AS512590f	Submit Tender proprosal of Civil Contractor (Main Civil Works)	30	17-Mar-21 A	21-May-21 A	13-Feb-22	13-Feb-22			AS512600f
AS512600f	Review & Accept the Tender proprosal of Civil Contractor (Main Civil Works)	42	22-May-21 A	19-Jul-21 A	13-Feb-22	13-Feb-22		AS512590f	AS512610f
AS512610f	Tender Invitation of Civil Contractor (Main Civil Works)	14	21-Jul-21 A	11-Aug-21 A	13-Feb-22	13-Feb-22		AS512600f	AS512620f
AS512620f	Submission of Tender Report	1	12-Aug-21 A	19-Aug-21 A	13-Feb-22	13-Feb-22		AS512610f	AS512630f
AS512630f	Review & Accept the Tender Report by PM	6	20-Aug-21 A	31-Aug-21 A	13-Feb-22	13-Feb-22		AS512620f	AS512640f
AS512640f	Contract Preparation	1	01-Sep-21 A	05-Sep-21 A	13-Feb-22	13-Feb-22		AS512630f	AS512650f
AS512650f	Civil Contractor (Main Civil Works) Award	1	06-Sep-21 A	06-Sep-21 A	13-Feb-22	13-Feb-22		AS512640f	AS512160e, AS161157i
Design & Submission		883	07-Jun-20 A	10-Sep-22	13-Feb-22	24-Nov-24	806		
Architectural		883	07-Jun-20 A	10-Sep-22	27-Oct-22	19-Apr-23	221		
AS160100	Prepare & Submit Building Layout Plan	60	07-Jun-20 A	21-Oct-20 A	27-Oct-22	27-Oct-22		AS000020, AS160020	AS160110, AS160200, AS160500
AS160110	Review & Comment on Buildingl Layout Plan by PM	67	22-Oct-20 A	17-Nov-20 A	27-Oct-22	27-Oct-22		AS160100	AS160120
AS160120	Revise & Re-submit Building Layout Plan	28	18-Nov-20 A	24-Dec-20 A	27-Oct-22	27-Oct-22		AS160110	AS160130
AS160130	Review & Accept of Building Layout Plan by PM	214	01-Jan-21 A	16-Sep-21 A	27-Oct-22	27-Oct-22		AS160120	AS160240
AS160190e	Coordination Meeting with DSD (Employer) for the Architectural Drawing	0		15-Nov-21 A		27-Oct-22			AS160240
AS160200	Prepare & Submit Architectural Design / Drawings	60	17-Jun-20 A	21-Oct-20 A	18-Apr-23	18-Apr-23		AS160100	AS160210
AS160210	Review & Comment on Architectural Design / Drawings by PM	67	22-Oct-20 A	17-Nov-20 A	18-Apr-23	18-Apr-23		AS160200	AS160220
AS160220	Revise & Re-submit Architectural Design / Drawings	28	18-Nov-20 A	24-Dec-20 A	18-Apr-23	18-Apr-23		AS160210	AS160230
AS160230	Review & Accept of Architectural Design / Drawings by PM	411	25-Dec-20 A	21-Mar-22	18-Apr-23	19-Apr-23	394	AS160220	AS160240
AS160240	Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD	300	15-Nov-21 A	10-Sep-22	27-Oct-22	19-Apr-23	221	AS160230, AS160530, AS160130, AS160190e	AS161220, AS512370f
AS160500	Prepare & Submit ABWF Works Drawings	68	03-Nov-20 A	24-Dec-20 A	18-Apr-23	18-Apr-23		AS160100	AS160510
AS160510	Review & Comment on ABWF Works Drawings by PM	21	25-Dec-20 A	29-Jan-21 A	18-Apr-23	18-Apr-23		AS160500	AS160520
AS160520	Revise & Re-submit ABWF Works Drawings	41	30-Jan-21 A	11-Mar-21 A	18-Apr-23	18-Apr-23		AS160510	AS160530
AS160530	Review & Accept of ABWF Works Drawings by PM	336	12-Mar-21 A	21-Mar-22	18-Apr-23	19-Apr-23	394	AS160520	AS161220, AS160240
Civil / Structural		610	13-Jul-20 A	21-Mar-22	14-Feb-22	24-Nov-24	979		
AS160240e	Prepare & Submit Loading Plan to ICE	60	13-Jul-20 A	25-Sep-20 A	14-Mar-22	14-Mar-22			AS160250e



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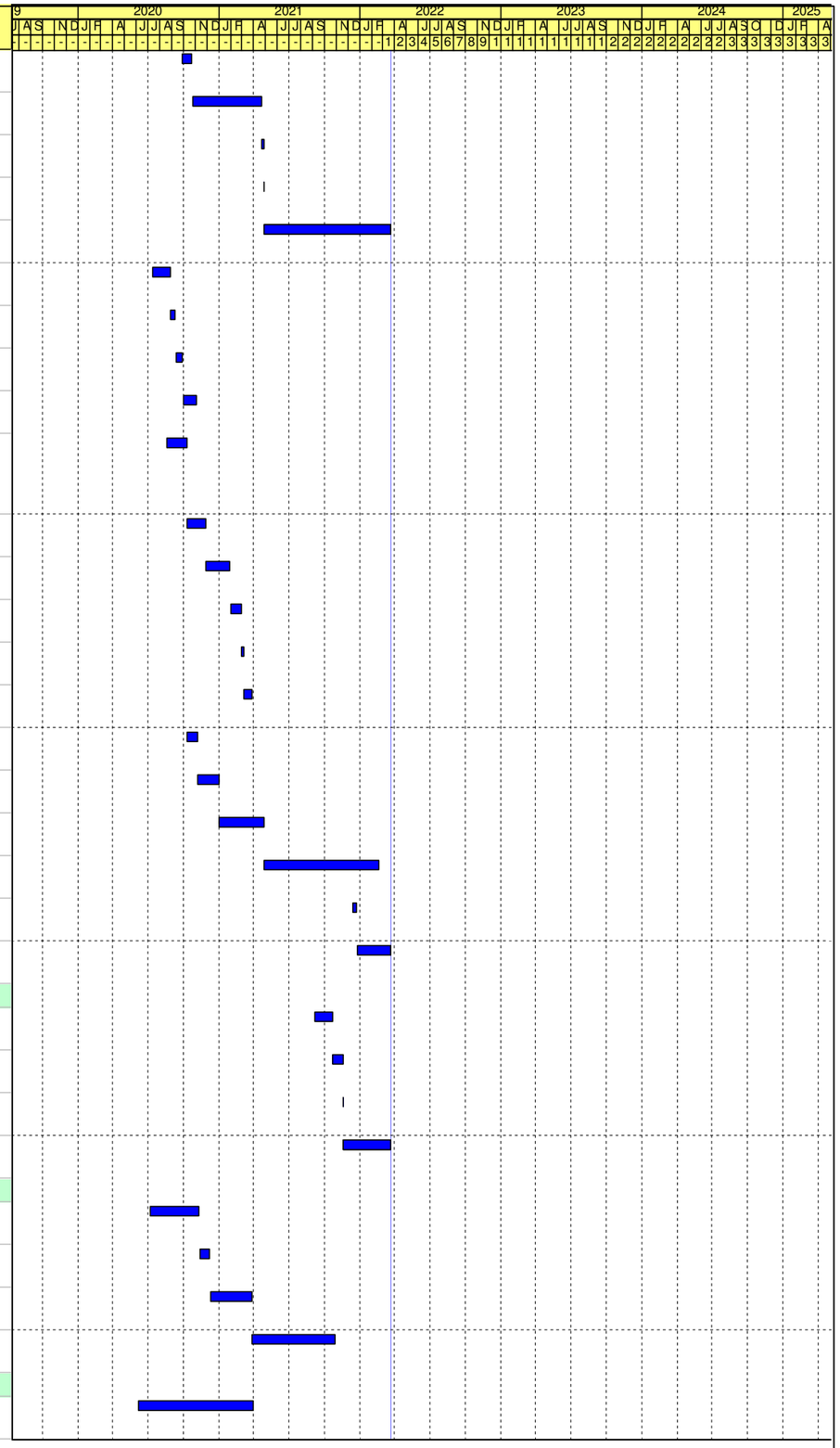
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS160250e	Review & Comment on Loading Plan by ICE	14	26-Sep-20 A	23-Oct-20 A	14-Mar-22	14-Mar-22		AS160240e	AS160260e
AS160260e	Revise & Re-submit Loading Plan to ICE	175	24-Oct-20 A	20-Apr-21 A	14-Mar-22	14-Mar-22		AS160250e	AS160270e
AS160270e	Review & Accept of Loading Plan by ICE	7	21-Apr-21 A	26-Apr-21 A	14-Mar-22	14-Mar-22		AS160260e	AS160280e
AS160280e	Prepare & Submit Loading Plan to PM	7	27-Apr-21 A	27-Apr-21 A	14-Mar-22	14-Mar-22		AS160270e	AS160290e
AS160290e	Review & Accept of Loading Plan by PM & DSD (incl. BCM)	275	28-Apr-21 A	21-Mar-22	14-Mar-22	15-Mar-22	-7	AS160280e	AS161182n
AS160292e	Prepare & Submit GI Plan	60	13-Jul-20 A	26-Aug-20 A	14-Feb-22	14-Feb-22			AS160294e
AS160294e	Review & Comment on GI Plan by PM	14	27-Aug-20 A	10-Sep-20 A	14-Feb-22	14-Feb-22		AS160292e	AS160296e
AS160296e	Revise & Re-submit GI Plan	7	11-Sep-20 A	28-Sep-20 A	14-Feb-22	14-Feb-22		AS160294e	AS160298e
AS160298e	Review & Accept of GI Plan by PM	21	29-Sep-20 A	02-Nov-20 A	14-Feb-22	14-Feb-22		AS160296e	AS161120
AS160300	Prepare & Submit Foundation Design / Drawings to ICE & PM	60	20-Aug-20 A	09-Oct-20 A	14-Feb-22	14-Feb-22			AS160310, AS161100, AS160400, AS512430e
AS160310	Review & Comment on Foundation Design / Drawings by ICE & PM	79	10-Oct-20 A	27-Nov-20 A	24-Nov-24	24-Nov-24		AS160300	AS160320
AS160320	Revise & Re-submit Foundation Design / Drawings to ICE & PM	14	28-Nov-20 A	29-Jan-21 A	24-Nov-24	24-Nov-24		AS160310	AS160330
AS160330	Review & Accept of Foundation Design / Drawings by ICE & PM	10	30-Jan-21 A	26-Feb-21 A	24-Nov-24	24-Nov-24		AS160320	AS160340e
AS160340e	Prepare & Submit Foundation Design / Drawings to DSD (incl. BCM)	7	27-Feb-21 A	05-Mar-21 A	24-Nov-24	24-Nov-24		AS160330	AS160350e
AS160350e	Review & Accept of Foundation Design / Drawings by DSD (incl. BCM)	45	06-Mar-21 A	26-Mar-21 A	24-Nov-24	24-Nov-24		AS160340e	
AS160400	Prepare & Submit Substructure / Superstructure Design / Drawings to ICE & PM	25	10-Oct-20 A	05-Nov-20 A	14-Feb-22	14-Feb-22		AS160300	AS160410, AS512430e
AS160410	Review & Comment on Substructure / Superstructure Design / Drawings by ICE & PM	55	06-Nov-20 A	30-Dec-20 A	30-Apr-22	30-Apr-22		AS160400	AS160420
AS160420	Revise & Re-submit Substructure / Superstructure Design / Drawings to ICE & PM	72	31-Dec-20 A	26-Apr-21 A	30-Apr-22	30-Apr-22		AS160410	AS160430
AS160430	Review & Accept of Substructure / Superstructure Design / Drawings by ICE & PM	271	27-Apr-21 A	18-Feb-22 A	30-Apr-22	30-Apr-22		AS160420	AS160440e
AS160440e	Prepare & Submit Substructure / Superstructure Design / Drawings to DSD (incl. BCM)	2	13-Dec-21 A	23-Dec-21 A	30-Apr-22	30-Apr-22		AS160430	AS160450e
AS160450e	Review & Accept of Substructure / Superstructure Design / Drawings by DSD (incl. BCM)	90	24-Dec-21 A	21-Mar-22	30-Apr-22	01-May-22	41	AS160440e	AS161184n
ELS		125	07-Sep-21 A	21-Mar-22	13-Feb-22	13-Feb-22	-36		
AS512160e	Prepare & Submit ELS Plan to ICE	45	07-Sep-21 A	20-Oct-21 A	13-Feb-22	13-Feb-22		AS512650f	AS512190e
AS512190e	Review & Accept of ELS Plan by ICE	5	21-Oct-21 A	18-Nov-21 A	13-Feb-22	13-Feb-22		AS512160e	AS512200e
AS512200e	Prepare & Submit ELS Plan to PM	3	19-Nov-21 A	19-Nov-21 A	13-Feb-22	13-Feb-22		AS512190e	AS512210e
AS512210e	Review & Accept of ELS Plan by PM	64	20-Nov-21 A	21-Mar-22	13-Feb-22	13-Feb-22	-36	AS512200e	AS161160
Process Design		454	06-Jul-20 A	29-Oct-21 A	01-Sep-22	01-Sep-22			
AS512220e	Prepare & Submit E&M Works (Process) Design Drawings	198	06-Jul-20 A	10-Nov-20 A	01-Sep-22	01-Sep-22			AS512230e
AS512230e	Review & Comment on E&M Works (Process) Design Drawings by PM	21	11-Nov-20 A	08-Dec-20 A	01-Sep-22	01-Sep-22		AS512220e	AS512240e
AS512240e	Revise & Re-submit E&M Works (Process) Design Drawings	87	09-Dec-20 A	26-Mar-21 A	01-Sep-22	01-Sep-22		AS512230e	AS512250e
AS512250e	Review & Accept of E&M Works (Process) Design Drawings by PM	278	27-Mar-21 A	29-Oct-21 A	01-Sep-22	01-Sep-22		AS512240e	AS154100
E&M Design		631	07-Jun-20 A	21-Mar-22	14-Feb-22	01-Sep-22	164		
AS151100	Prepare & Submit General Arrangement Drawings	298	07-Jun-20 A	31-Mar-21 A	14-Feb-22	14-Feb-22		AS160020	AS151110, AS161160



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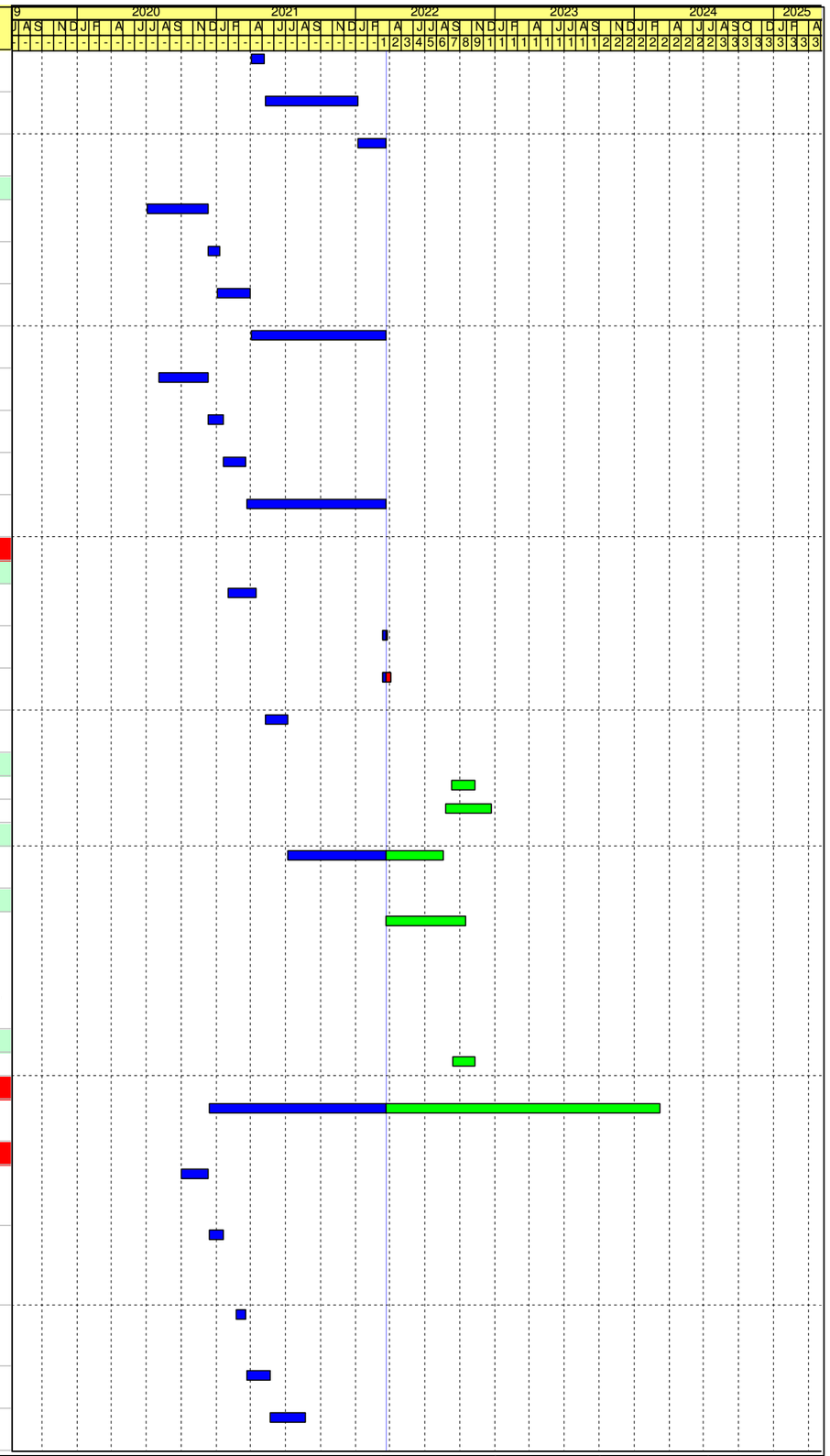
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS151110	Review & Comment on General Arrangement Drawings by PM	37	01-Apr-21 A	07-May-21 A	31-Aug-22	31-Aug-22		AS151100	AS151120
AS151120	Revise & Re-submit General Arrangement Drawings	247	08-May-21 A	06-Jan-22 A	31-Aug-22	31-Aug-22		AS151110	AS151130
AS151130	Review & Accept of General Arrangement Drawings by PM	21	07-Jan-22 A	21-Mar-22	31-Aug-22	01-Sep-22	164	AS151120	AS154100
BS		527	03-Jul-20 A	21-Mar-22	06-Nov-22	01-Dec-22	255		
AS201400	Prepare & Submit BS Works Design & Dwgs for Sidestream Treatment Facilities	264	03-Jul-20 A	10-Dec-20 A	06-Nov-22	06-Nov-22			AS201405e
AS201405e	Review & Comment on BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	11-Jan-21 A	06-Nov-22	06-Nov-22		AS201400	AS201410e
AS201410e	Revise & Re-submit BS Works Design & Dwgs for Sidestream Treatment Facilities	102	05-Jan-21 A	31-Mar-21 A	06-Nov-22	06-Nov-22		AS201405e	AS201415e
AS201415e	Review & Accept of BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	315	01-Apr-21 A	21-Mar-22	06-Nov-22	07-Nov-22	231	AS201410e	AS154200
AS201420	Submission & Submit FS Works Design & Dwgs for Sidestream Treatment Facilities	182	03-Aug-20 A	10-Dec-20 A	30-Nov-22	30-Nov-22			AS201430e
AS201430e	Review & Comment on FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	19-Jan-21 A	30-Nov-22	30-Nov-22		AS201420	AS201440e
AS201440e	Revise & Re-submit FS Works Design & Dwgs for Sidestream Treatment Facilities	66	20-Jan-21 A	19-Mar-21 A	30-Nov-22	30-Nov-22		AS201430e	AS201450e
AS201450e	Review & Accept of FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	327	20-Mar-21 A	21-Mar-22	30-Nov-22	01-Dec-22	255	AS201440e	AS154160
Major Plant & Materials Procurement		641	01-Feb-21 A	23-Dec-22	14-Feb-22	18-Jun-23	177		
Civil & Structure		378	01-Feb-21 A	01-Apr-22	14-Feb-22	15-Mar-22	-18		
AS153130e	Procurement, Manufacture & Delivery of Piling	60	01-Feb-21 A	14-Apr-21 A	14-Feb-22	14-Feb-22			AS161145g
AS153140e	Procurement, Manufacture & Delivery of Concrete Mix	15	11-Mar-22 A	25-Mar-22	10-Mar-22	15-Mar-22	-11		AS161182n
AS153150e	Procurement, Manufacture & Delivery of Steel Reinforcement	15	11-Mar-22 A	01-Apr-22	03-Mar-22	15-Mar-22	-18		AS161182n
AS153160e	Procurement, Manufacture & Delivery of Metal Works Material	80	09-May-21 A	07-Jul-21 A	14-Feb-22	14-Feb-22			AS161160
ABWF		120	25-Aug-22	23-Dec-22	18-Feb-23	18-Jun-23	177		
AS153170	Procurement, Manufacture & Delivery of Water Proofing Material	60	09-Sep-22	08-Nov-22	05-Mar-23	04-May-23	177		AS161200
AS153180	Procurement, Manufacture & Delivery of ABWF Works Material	120	25-Aug-22	23-Dec-22	18-Feb-23	18-Jun-23	177		AS161220
E&M Process		360	07-Jul-21 A	17-Aug-22	04-Apr-22	01-Sep-22	15		
AS153100	Procurement, Manufacture & Delivery of Deammonification Sidestream Treatment Facilities	360	07-Jul-21 A	17-Aug-22	04-Apr-22	01-Sep-22	15	AS160020	AS154100
BS		210	21-Mar-22	16-Oct-22	11-Apr-22	07-Nov-22	22		
AS153190	Procurement, Manufacture & Delivery of BS Works Material	210	21-Mar-22	16-Oct-22	11-Apr-22	07-Nov-22	22		AS154120, AS154160, AS154200, AS154240, AS155120a, AS154270
Fitting-out		60	11-Sep-22	09-Nov-22	19-Apr-23	18-Jun-23	221		
AS512370f	Procurement, Manufacture & Delivery of Fit-out Works Material	60	11-Sep-22	09-Nov-22	19-Apr-23	18-Jun-23	221	AS160240	AS161220
Ground Settlement, Tilting & Utility Monitoring		1184	12-Dec-20 A	09-Mar-24	24-Apr-22	13-Apr-24	35		
AS153200f	Ground Settlement, Tilting & Utility Monitoring	1184	12-Dec-20 A	09-Mar-24	24-Apr-22	13-Apr-24	35	AS161100	AS155360a
Civil Works Construction		1470	30-Sep-20 A	29-Oct-24	14-Feb-22	13-Apr-24	-200		
AS161100	Site Clearance & Survey	50	30-Sep-20 A	11-Dec-20 A	14-Feb-22	14-Feb-22		AS160300, AS001720, AS512340e	AS161120, AS153200f
AS161120	Ground Investigation	65	12-Dec-20 A	18-Jan-21 A	14-Feb-22	14-Feb-22		AS001720, AS161100, AS512420e, AS160298e	AS161140
AS161140	Pre-drilling Works	180	22-Feb-21 A	19-Mar-21 A	14-Feb-22	14-Feb-22		AS161120, AS512500e, AS512580f	AS161145g
AS161145g	Minor Civil Works & Preperation Works for Piling	31	20-Mar-21 A	20-May-21 A	14-Feb-22	14-Feb-22		AS161140, AS153130e	AS161150g
AS161150g	Piling Works (Impacted by Inclement Weather)	69	21-May-21 A	21-Aug-21 A	14-Feb-22	14-Feb-22		AS161145g	AS161155g



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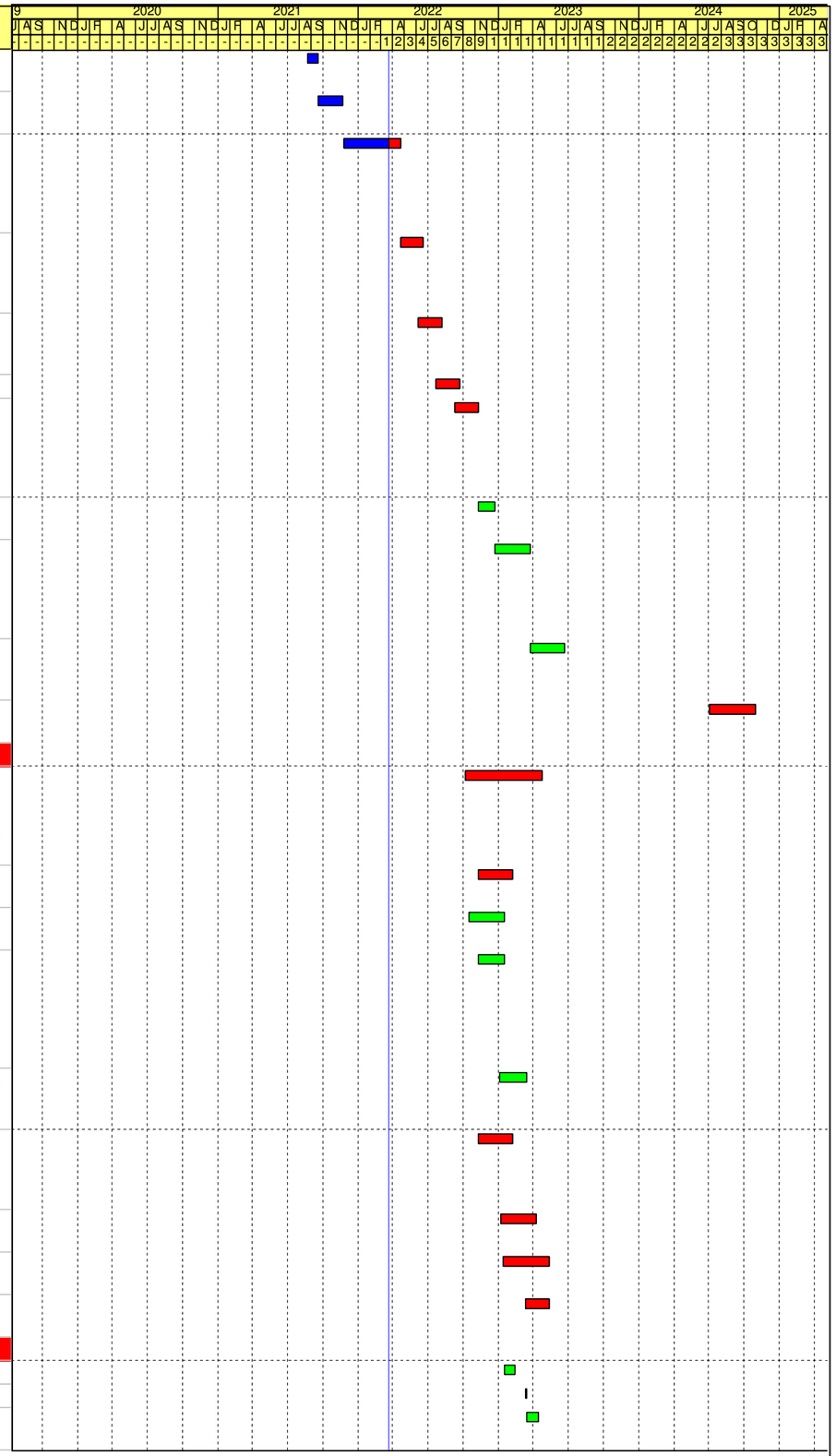
AS161155g	Post-drilling, Proof test & remaining works (Impacted by Inclement Weather)	23	22-Aug-21 A	17-Sep-21 A	14-Feb-22	14-Feb-22		AS161150g	AS161160, AS161157i
AS161157i	Site Set-up / Mobilisation (Impacted by Inclement Weather)	51	18-Sep-21 A	20-Nov-21 A	14-Feb-22	14-Feb-22		AS161155g, AS512650f	AS161160
AS161160	Excavation / ELS (Impacted by Inclement Weather)	148	24-Nov-21 A	20-Apr-22	14-Feb-22	15-Mar-22	-36	AS151100, AS153160e, AS512210e, AS161155g, AS161157i	AS161182n
AS161182n	Pile Caps installation	60	20-Apr-22	19-Jun-22	15-Mar-22	14-May-22	-36	AS161160, AS153140e, AS153150e, AS160290e	AS161184n
AS161184n	Construction of Basement up to G/F Slab	60	06-Jun-22	05-Aug-22	01-May-22	30-Jun-22	-36	AS161182n, AS160450e, AS201460	AS161186n
AS161186n	Construction of G/F up to 1/F Slab	60	23-Jul-22	21-Sep-22	17-Jun-22	16-Aug-22	-36	AS161184n	AS161188n
AS161188n	Construction of 1/F up to Roof	60	09-Sep-22	08-Nov-22	04-Aug-22	03-Oct-22	-36	AS161186n	AS154100, AS161200, AS154110e, AS154160, AS154200
AS161200	Waterproofing	45	08-Nov-22	23-Dec-22	04-May-23	18-Jun-23	177	AS153170, AS161188n	AS161220
AS161220	External & Internal Finishes - 1st Fix (Blockwork, Plastering, Wet Trade)	90	23-Dec-22	23-Mar-23	18-Jun-23	16-Sep-23	177	AS161200, AS153180, AS160240, AS160530, AS512370f	AS161240, AS161260
AS161240	External & Internal Finishes - 2nd Fix (Ceiling / Wall / Floor Finishing, Door)	90	23-Mar-23	21-Jun-23	16-Sep-23	15-Dec-23	177	AS161220	AS003900, AS201540a, AS161260
AS161260	Landscaping Works	120	02-Jul-24	29-Oct-24	15-Dec-23	13-Apr-24	-200	AS161220, AS161240	AS003900
E&M Installation		217	07-Oct-22	12-May-23	01-Sep-22	06-Apr-23	-36		
AS154100	E&M Installation of Deammonification Sidestream Treatment Facilities	200	07-Oct-22	25-Apr-23	01-Sep-22	20-Mar-23	-36	AS153100, AS512250e, AS161188n, AS101130, AS151130	AS154120, AS155100, AS154240, AS155120a, AS154270
AS154110e	E&M installation of DG Plant Room	90	08-Nov-22	06-Feb-23	27-Oct-22	25-Jan-23	-12	AS201489g, AS161188n	AS201490e
AS154120	Installation of Electrical Supply Systems (TX, LV Switchboard & Temp. Power)	90	17-Oct-22	14-Jan-23	16-Dec-22	16-Mar-23	61	AS154100, AS153190	AS155100, AS155000d
AS154160	FS Installation - Conduits, Trunking, & Pipeworks	70	08-Nov-22	17-Jan-23	01-Dec-22	09-Feb-23	23	AS201440, AS201460, AS201470e, AS153190, AS201450e, AS161188n	AS154180, AS201472e
AS154180	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	70	03-Jan-23	14-Mar-23	26-Jan-23	06-Apr-23	23	AS154160	AS155120a, AS201510a, AS155040d
AS154200	BS Fitting Installation - Conduits, Trunking, & Ductworks	90	08-Nov-22	06-Feb-23	07-Nov-22	05-Feb-23	-1	AS201470e, AS153190, AS201415e, AS161188n	AS154220, AS201472e
AS154220	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	07-Jan-23	07-Apr-23	06-Jan-23	06-Apr-23	-1	AS154200	AS155100
AS154240	Installation of Control & Monitoring System	120	12-Jan-23	12-May-23	07-Dec-22	06-Apr-23	-36	AS154100, AS153190	AS155100
AS154270	Installation of Gas Detection System	60	13-Mar-23	12-May-23	05-Feb-23	06-Apr-23	-36	AS154100, AS153190	AS155120a
Testing & Commissioning		737	24-Oct-22	29-Oct-24	18-Sep-22	13-Apr-24	-200		
AS155000d	SAT for TX & LV Switchboard	30	15-Jan-23	13-Feb-23	12-Oct-23	11-Nov-23	271	AS154120	AS155020d
AS155020d	Power Energization (Power Provision from DE/2018/04 Contract)	1	13-Mar-23	14-Mar-23	11-Nov-23	12-Nov-23	243	AS155000d	AS155040d
AS155040d	Essential T&C for FSD Inspection	30	14-Mar-23	13-Apr-23	12-Nov-23	12-Dec-23	243	AS155020d, AS154180	AS201510a



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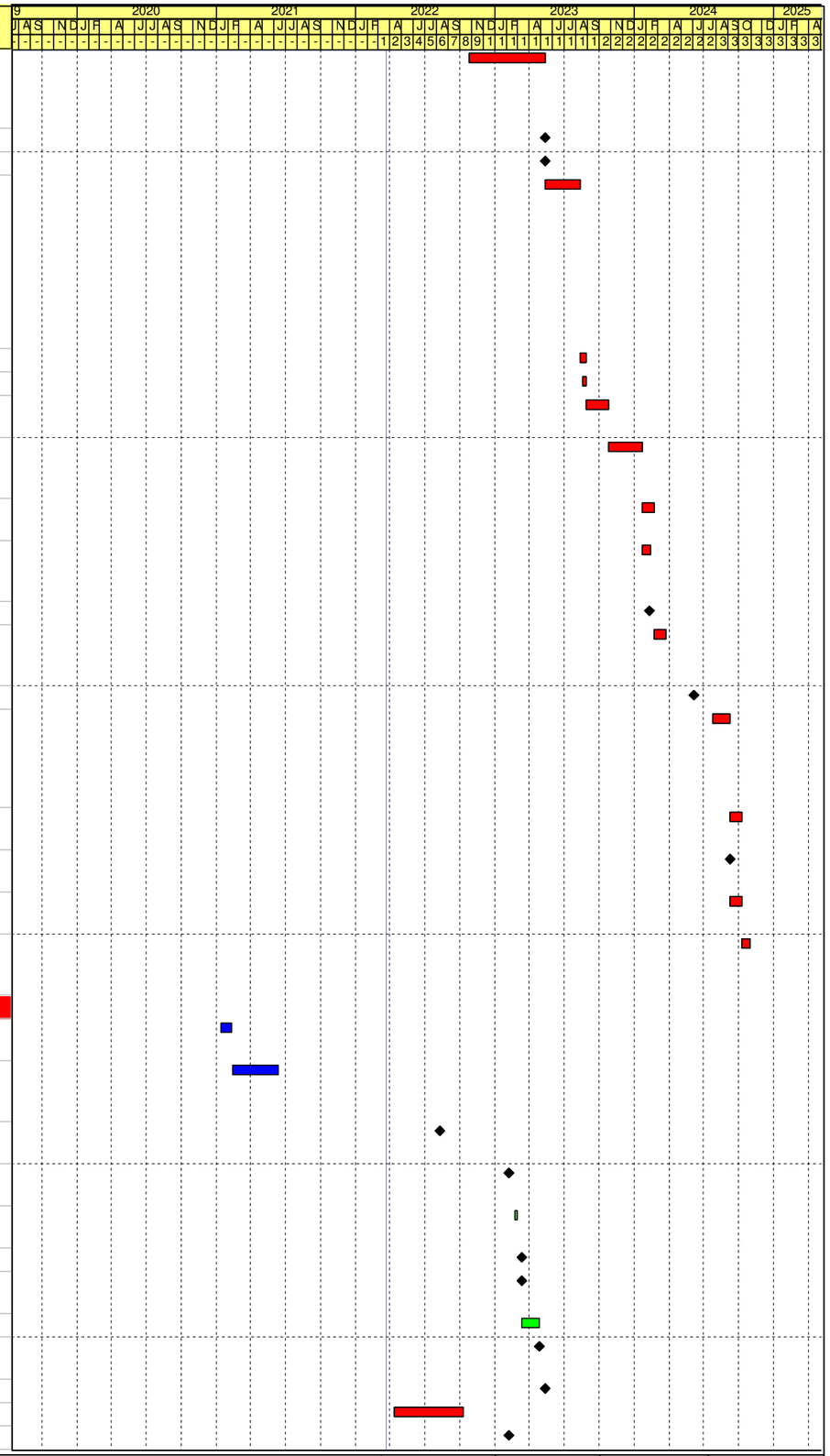
AS155100	SAT for Deammonification Sidestream Treatment Facilities (Ref. to PS6B.1.18.3)	200	24-Oct-22	12-May-23	18-Sep-22	06-Apr-23	-36	AS154100, AS154120, AS154240, AS154220	AS155120a, AS155120a
AS155105e	Existing sludge dewatering facilities Ready (by DE/2018/04 Contract)	0		12-May-23		06-Apr-23	-36		AS155120a
AS155110e	Plant service water from zone B/C Ready (Zone B by DE/2018/04 Contract)	0		12-May-23		06-Apr-23	-36		AS155120a
AS155120a	Process Start Up	92	12-May-23	12-Aug-23	06-Apr-23	07-Jul-23	-36	AS155100, AS154180, AS155110e, AS155105e, AS201505e, AS154270, AS154100, AS153190, AS155100	AS155140a
AS155140a	Submission & Acceptance of Process Start Up Report	14	12-Aug-23	26-Aug-23	07-Jul-23	21-Jul-23	-36	AS155120a	AS155160a
AS155160a	Notice for Commencement of Phase 1 Commissioning Tests	7	19-Aug-23	26-Aug-23	14-Jul-23	21-Jul-23	-36	AS155140a	AS155200
AS155200	Phase 1 Commissioning Tests with daily result to PM	60	26-Aug-23	25-Oct-23	21-Jul-23	19-Sep-23	-36	AS155160a	AS155220a, AS155210e
AS155210e	Phase 1 Re-commissioning Tests with daily result to PM (If Failure)	90	25-Oct-23	23-Jan-24	19-Sep-23	18-Dec-23	-36	AS155200	AS155220a, AS155240a, AS002052c
AS155220a	Submission & Acceptance of Phase 1 Commissioning Tests Report	30	23-Jan-24	22-Feb-24	23-Dec-23	22-Jan-24	-31	AS155200, AS155210e	AS155260a
AS155240a	Phase 1 Post Commissioning with daily result to PM	19	23-Jan-24	11-Feb-24	19-Dec-23	07-Jan-24	-35	AS155210e	AS155260a, AS012300, AS155300
AS155250e	Ready to Process start up of the first Anaerobic Digester in Zone C	0	08-Feb-24		22-Jan-24		-17	AS512200a	AS155260a
AS155260a	Submission & Acceptance of Phase 1 Post Commissioning Report	30	22-Feb-24	23-Mar-24	22-Jan-24	21-Feb-24	-31	AS155240a, AS155250e, AS155220a	AS155320a
AS155270e	THP digested sludge centrate from Zone C Ready	0		06-Jun-24		07-Jan-24	-152	AS512200a	AS155300
AS155300	Phase 2 Commissioning Tests with daily result to PM	45	25-Jul-24	07-Sep-24	07-Jan-24	21-Feb-24	-200	AS155270e, AS155240a, AS512800a	AS155320a, AS012100, AS155330e, AS155340a, AS513000a
AS155320a	Submission & Acceptance of Phase 2 Commissioning Tests Report	30	08-Sep-24	07-Oct-24	21-Feb-24	22-Mar-24	-200	AS155300, AS155260a	AS155360a
AS155330e	Commissioning of new Anaerobic Digesters (2 nos.) in Zone C Finished	0		07-Sep-24		21-Feb-24	-200	AS512800a, AS155300	AS155340a
AS155340a	Phase 3 Commissioning Tests with daily result to PM	30	08-Sep-24	07-Oct-24	21-Feb-24	22-Mar-24	-200	AS155330e, AS155300	AS155360a, AS011500
AS155360a	Submission & Acceptance of Phase 3 Commissioning Tests Report	22	08-Oct-24	29-Oct-24	22-Mar-24	13-Apr-24	-200	AS155340a, AS153200f, AS155320a	AS003900
Statutory Submission / Inspection (FSD)		**970**	**12-Jan-21 A**	**17-Sep-23**	**31-Mar-22**	**13-Apr-24**	**209**		
AS201440	Prepare & Submit GBP for FSD approval	90	12-Jan-21 A	10-Feb-21 A	01-May-22	01-May-22			AS154160, AS201460
AS201460	FSD Review & Approval of GBP	180	11-Feb-21 A	11-Jun-21 A	01-May-22	01-May-22		AS201440	AS154160, AS201510a, AS161184n
AS201470e	Submit WWO46 Part I/II to WSD (FS / PD)	0	10-Aug-22		09-Aug-22		-1		AS154160, AS154200
AS201472e	Submit WWO46 Part IV to WSD (FS / PD)	0	06-Feb-23		07-Nov-23		274	AS154160, AS154200	AS201475e
AS201475e	WSD Inspection	7	20-Feb-23	27-Feb-23	21-Nov-23	28-Nov-23	274	AS201472e	AS201480e, AS201477e
AS201477e	Issuance of FS Water Certificate	0		13-Mar-23		12-Dec-23	274	AS201475e	AS201510a
AS201480e	Issuance of Form WWO46 Part Va	0		13-Mar-23		14-Feb-24	338	AS201475e	AS201485e, AS201482f
AS201482f	System Flushing / Sampling	45	13-Mar-23	27-Apr-23	14-Feb-24	30-Mar-24	338	AS201480e	AS201485e
AS201485e	Issuance of Form WWO46 Part Vb	0		27-Apr-23		30-Mar-24	338	AS201480e, AS201482f	AS201487f
AS201487f	Issuance of Water Certificate	0		11-May-23		13-Apr-24	338	AS201485e	AS003900
AS201489g	Submission & Approval of DG Application to FSD	180	12-Apr-22	09-Oct-22	31-Mar-22	27-Sep-22	-12		AS154110e
AS201490e	Submit Application to FSD for DG Licence	0	06-Feb-23		25-Jan-23		-12	AS154110e	AS201495e



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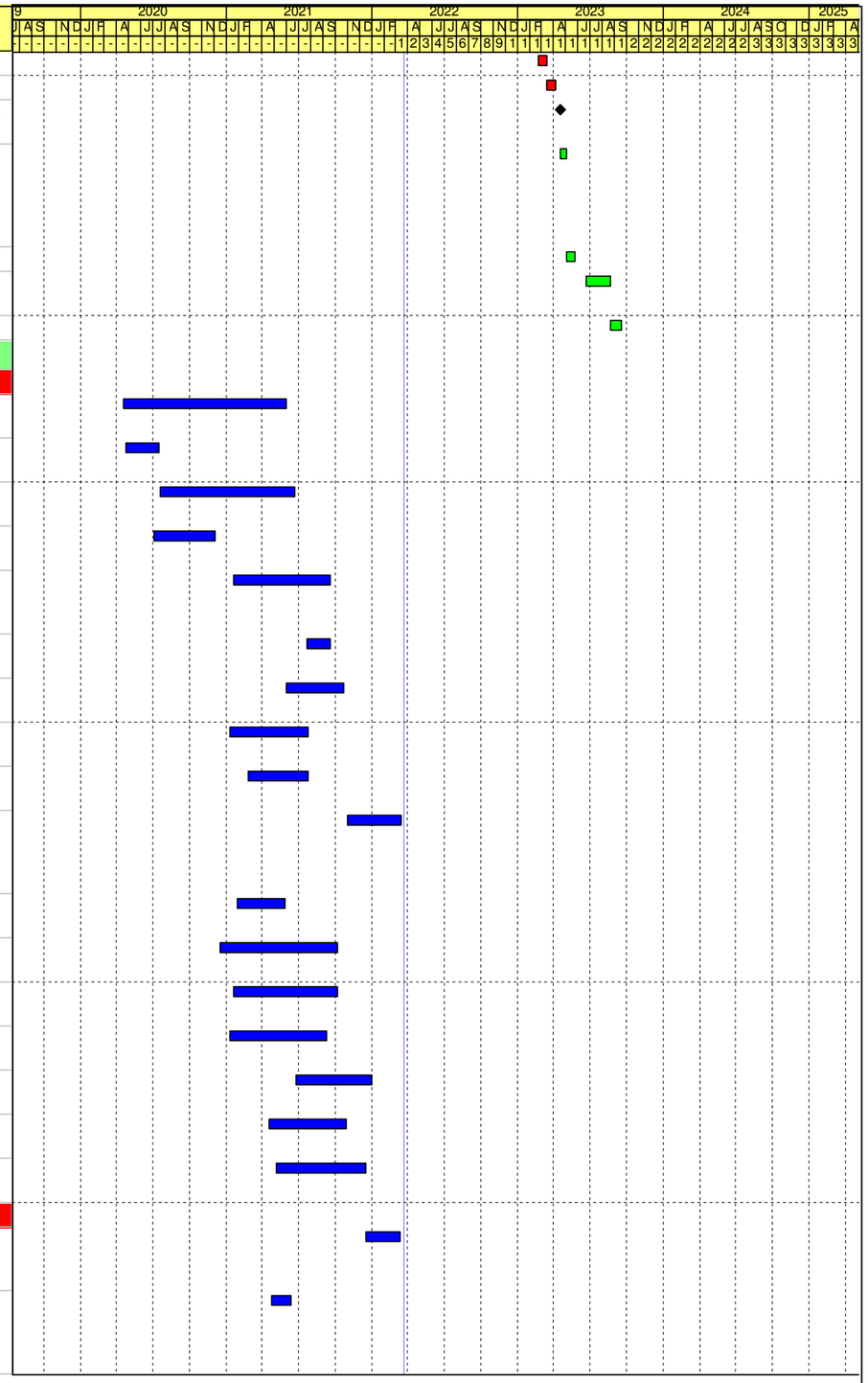
AS201495e	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	21-Feb-23	14-Mar-23	09-Feb-23	02-Mar-23	-12	AS201490e	AS201500e
AS201500e	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	21	14-Mar-23	04-Apr-23	02-Mar-23	23-Mar-23	-12	AS201495e	AS201505e
AS201505e	DG Licence issued	0		18-Apr-23		06-Apr-23	-12	AS201500e	AS201510a, AS155120a
AS201510a	Prepare & Submit FS/314, FS/501 & FS/501a	14	18-Apr-23	02-May-23	12-Dec-23	26-Dec-23	238	AS201460, AS154180, AS155040d, AS201505e, AS201477e	AS201520a
AS201520a	FSD Review & Approval of FS/314, FS/501 & FS/501a	21	02-May-23	23-May-23	26-Dec-23	16-Jan-24	238	AS201510a	AS201540a
AS201540a	F.S. Inspection, Defects Rectification & Re-inspection	60	21-Jun-23	20-Aug-23	16-Jan-24	16-Mar-24	209	AS201520a, AS161240	AS201560a
AS201560a	Issuance of Acceptance Letter	28	20-Aug-23	17-Sep-23	16-Mar-24	13-Apr-24	209	AS201540a	AS003900
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station N		791	18-Apr-20 A	15-Jun-22	10-Jan-22	24-Nov-24	893		
Major Plant & Materials Fabrication & Delivery		725	18-Apr-20 A	16-Mar-22 A	03-Feb-22	19-Dec-22			
AS103160	Procurement & PO for FRP Cover (S11)	409	18-Apr-20 A	31-May-21 A	03-Feb-22	03-Feb-22		AS010200	AS104160
AS103300	Procurement & PO for Pipeworks & Associated Valves	90	25-Apr-20 A	15-Jul-20 A	03-Feb-22	03-Feb-22		AS101100	AS104300
AS103320	Procurement & PO for Elec. Materials	365	18-Jul-20 A	22-Jun-21 A	10-Apr-22	10-Apr-22		AS102180	AS104320
AS103400	Procurement & PO for FS System (S20)	60	02-Jul-20 A	04-Dec-20 A	23-Feb-22	23-Feb-22		AS113260c	AS104400
AS104100	Fabrication of UV Disinfection System (S10)	239	18-Jan-21 A	17-Sep-21 A	03-Feb-22	03-Feb-22		AS103100, AS002010, AS102330	AS106210, AS104105c
AS104105c	FAT for UV Disinfection System (S10)	71	23-Jul-21 A	17-Sep-21 A	03-Feb-22	03-Feb-22		AS104100	AS104110c
AS104110c	Delivery of UV Disinfection System (S10)	149	01-Jun-21 A	22-Oct-21 A	03-Feb-22	03-Feb-22		AS104105c	AS106210
AS104120	Fabrication & Delivery of Lift-up Pumps (S11)	225	11-Jan-21 A	26-Jul-21 A	03-Feb-22	03-Feb-22		AS103120, AS112330	AS106160
AS104140	Fabrication & Delivery of Transfer Pumps (S13)	218	26-Feb-21 A	26-Jul-21 A	19-Dec-22	19-Dec-22		AS103140, AS112330	AS106180
AS104160	Fabrication & Delivery of FRP Cover (S11)	89	01-Nov-21 A	16-Mar-22 A	03-Feb-22	03-Feb-22		AS112330, AS103160, AS103140, AS010200	AS107400
AS104180	Fabrication & Delivery of EOT Cranes (2T & 5T) (S19)	170	28-Jan-21 A	27-May-21 A	03-Feb-22	03-Feb-22		AS103180, AS112330	AS106120
AS104200	Fabrication & Delivery of Stoplogs (S21)	289	16-Dec-20 A	07-Oct-21 A	03-Feb-22	03-Feb-22		AS103200, AS112330	AS106200
AS104220	Fabrication & Delivery of Penstocks (S21)	256	18-Jan-21 A	07-Oct-21 A	03-Feb-22	03-Feb-22		AS103220, AS112330	AS106200
AS104300	Fabrication & Delivery of Pipeworks & Associated Valves	200	11-Jan-21 A	08-Sep-21 A	03-Feb-22	03-Feb-22		AS103300, AS112330	AS106160
AS104320	Fabrication & Delivery of Elec. Materials	190	24-Jun-21 A	31-Dec-21 A	10-Apr-22	10-Apr-22		AS103320, AS113260c	AS106280
AS104400	Fabrication & Delivery of FS System (S20)	187	18-Apr-21 A	28-Oct-21 A	23-Feb-22	23-Feb-22		AS103400, AS113260c	AS106240
AS104410h	Fabrication & Delivery of Temp. Switchboard	194	05-May-21 A	15-Dec-21 A	03-Feb-22	03-Feb-22		AS107090g	AS105100
E&M Installation		371	25-Apr-21 A	06-May-22	10-Jan-22	24-Nov-24	933		
AS105100	Provision of Temporary Power for UV System No.1 & Effluent Transfer Pumping Station	45	15-Dec-21 A	11-Mar-22 A	03-Feb-22	03-Feb-22		AS106100, AS102180, AS104410h	AS107400, AS106290g
AS106100	Mobilisation (Partial Access on 24 Apr 2021, Remaining Access on 12 May 2021)	30	25-Apr-21 A	12-Jun-21 A	03-Feb-22	03-Feb-22		AS001120, AS102180, AS001130	AS106120, AS105140, AS106220, AS105100



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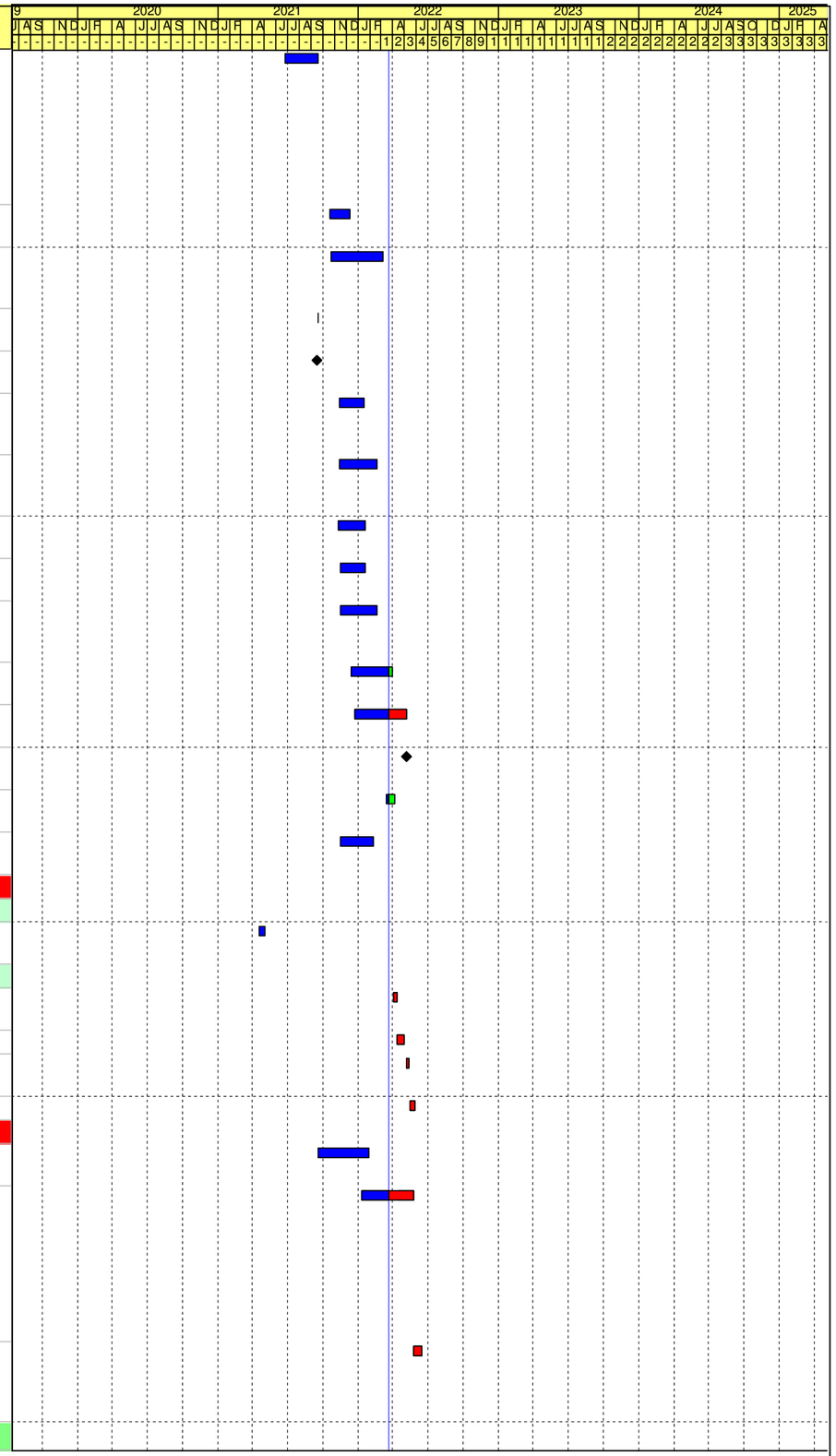
AS106120	E&M Installation of EOT Cranes (2T)	46	25-Jun-21 A	17-Sep-21 A	03-Feb-22	03-Feb-22		AS102300, AS112300, AS106100, AS104180	AS107400, AS106140, AS106160, AS106260, AS106220, AS107350f, AS106210, AS106200
AS106140	E&M Installation of EOT Cranes (5T)	60	20-Oct-21 A	11-Dec-21 A	17-Mar-22	17-Mar-22		AS106120	AS106180, AS107350f
AS106160	E&M Installation of Transfer Pumps & Associated Pipeworks / Valves	103	21-Oct-21 A	05-Mar-22 A	03-Feb-22	03-Feb-22		AS106120, AS104120, AS104300	AS106300, AS107400
AS106180k	Preperation Works for E&M Installation of Penstocks & Stoplogs	3	17-Sep-21 A	19-Sep-21 A	24-Nov-24	24-Nov-24			
AS106190l	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		24-Nov-24				
AS106200	E&M Installation of Penstocks & Stoplogs (Impacted by CNE-014)	66	11-Nov-21 A	15-Jan-22 A	03-Feb-22	03-Feb-22		AS104200, AS104220, AS106120	AS107400, AS106300
AS106210	E&M Installation of UV System	44	11-Nov-21 A	19-Feb-22 A	03-Feb-22	03-Feb-22		AS104100, AS104110c, AS106120	AS107400, AS106300
AS106220	FS Installation - Conduits, Trunking, & Pipeworks	74	08-Nov-21 A	18-Jan-22 A	23-Feb-22	23-Feb-22		AS106100, AS106120	AS106240
AS106240	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	67	15-Nov-21 A	18-Jan-22 A	23-Feb-22	23-Feb-22		AS104400, AS106220	AS003420, AS107100
AS106260	BS Fitting Installation - Conduits, Trunking, & Ductworks	111	15-Nov-21 A	19-Feb-22 A	10-Apr-22	10-Apr-22		AS106120, AS113160c, AS107090g	AS106280
AS106280	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	83	13-Dec-21 A	31-Mar-22	30-Mar-22	10-Apr-22	10	AS106260, AS104320	AS106320
AS106285l	Excavation Works & Cable Laying - by CLP (Impacted by CNE-035)	93	22-Dec-21 A	06-May-22	10-Jan-22	26-Feb-22	-70		AS106290g
AS106290g	Ready for Power Energization	0		06-May-22		26-Feb-22	-70	AS105100, AS106285l	AS107200, AS107400
AS106320	Installation of CCTV System	9	14-Mar-22 A	04-Apr-22	30-Mar-22	14-Apr-22	10	AS106280	AS003420
AS106330l	Installation of FS Link	73	17-Nov-21 A	08-Feb-22 A	23-Feb-22	23-Feb-22			AS107100
Statutory Submission / Inspection		372	17-Apr-21 A	27-May-22	03-Feb-22	14-Apr-22	-44		
CLP Submission		60	17-Apr-21 A	04-May-21 A	03-Feb-22	03-Feb-22			
AS107090g	Submission & Approval of Electrical Schematic Wiring Diagram to CLP (Temp. Power)	60	17-Apr-21 A	04-May-21 A	03-Feb-22	03-Feb-22			AS106260, AS104410h
FSD Submission & Inspection		57	01-Apr-22	27-May-22	23-Feb-22	14-Apr-22	-44		
AS107100	Prepare & Submit FS/314, FS/501 & FS/501a	10	01-Apr-22*	10-Apr-22	23-Feb-22	05-Mar-22	-37	AS106240, AS106330l	AS107110a
AS107110a	FSD Review & Approval of FS/314, FS/501 & FS/501a	19	11-Apr-22	29-Apr-22	05-Mar-22	24-Mar-22	-37	AS107100	AS107200
AS107200	F.S. Inspection, Defects Rectification & Re-inspection	7	07-May-22	13-May-22	24-Mar-22	31-Mar-22	-44	AS107110a, AS106290g	AS107300
AS107300	Issuance of Acceptance Letter	14	14-May-22	27-May-22	31-Mar-22	14-Apr-22	-44	AS107200	AS003420
Testing & Commissioning		188	18-Sep-21 A	15-Jun-22	03-Feb-22	07-Apr-22	-70		
AS107350f	T&C and R.P.E inspection for EOT Cranes	163	18-Sep-21 A	28-Jan-22 A	17-Mar-22	17-Mar-22		AS106120, AS106140	AS107400
AS107400	SAT for UV System No. 1 & Effluent Transfer Pumping Station No. 1 (Impacted by CNE-035)	87	10-Jan-22 A	25-May-22	03-Feb-22	17-Mar-22	-70	AS106120, AS106200, AS106210, AS105100, AS107350f, AS106160, AS104160, AS106290g	AS107500
AS107500	System Commissioning Tests	21	26-May-22	15-Jun-22	17-Mar-22	07-Apr-22	-70	AS107400	AS003420, AS011520a, AS012120a, AS012000
Section 5 - Complete all remaining Works (incl. T&C)		1626	18-May-20 A	29-Oct-24	11-Feb-22	24-Nov-24	26		



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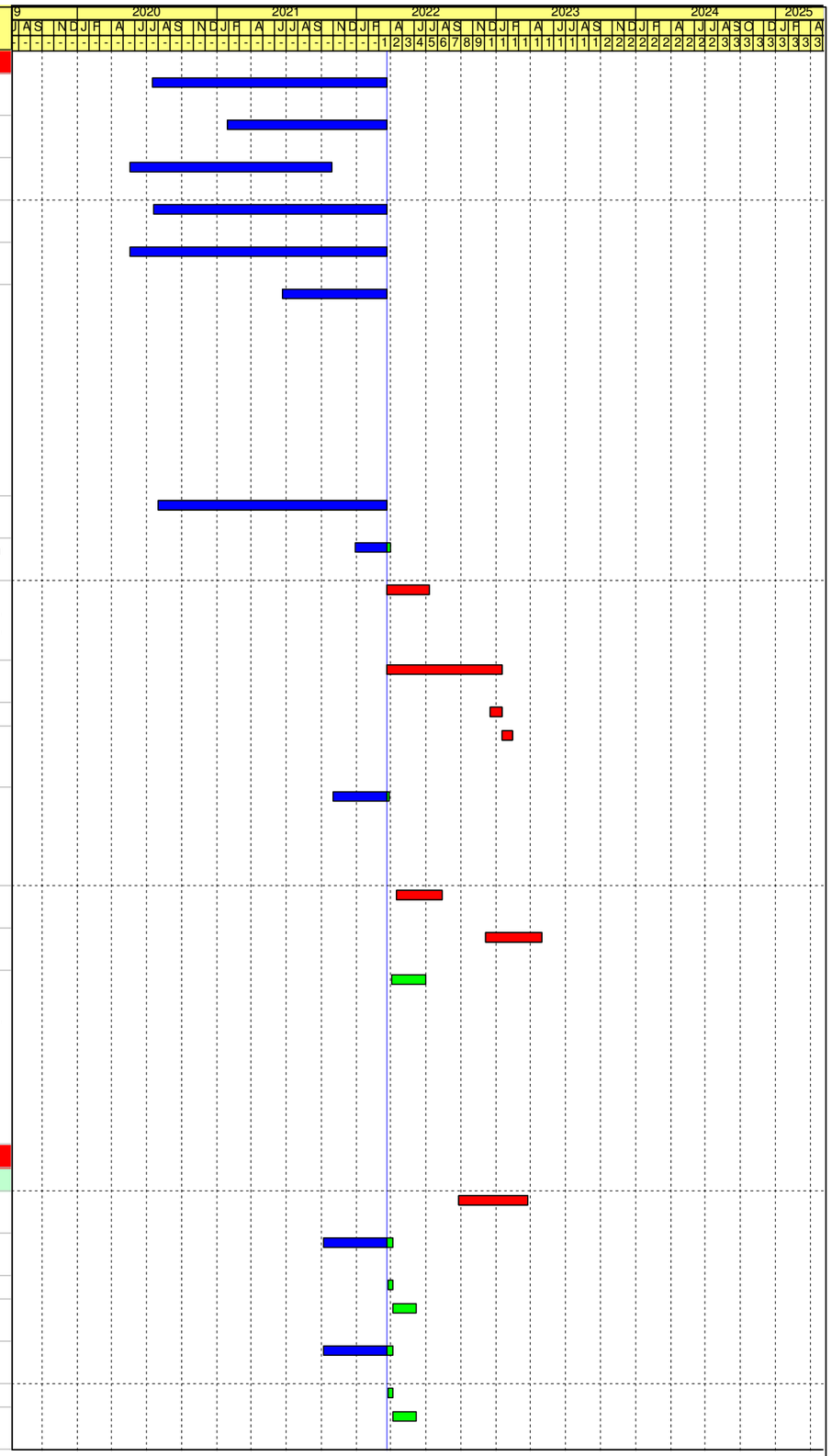
Fabrication, FAT & Delivery of Major Plant & Materials		**1079**	**18-May-20 A**	**01-May-23**	**16-Feb-22**	**18-Feb-23**	**-73**		
AS023200	Procurement & PO for Biogas Booster and Transfer Pumps (S7)	558	17-Jul-20 A	21-Mar-22	20-Aug-22	21-Aug-22	153	AS023100	AS501230k
AS023290	Procurement & PO for Pipeworks & Associated Valves	368	29-Jan-21 A	21-Mar-22	18-Mar-22	19-Mar-22	-3	AS020170a	AS501660b
AS023400	Procurement & PO for Lifting Appliances (S19)	537	18-May-20 A	29-Oct-21 A	18-Apr-22	18-Apr-22		AS023140	AS501740
AS023560	Procurement & PO for Ferric Chloride Storage Tank (S21)	591	20-Jul-20 A	21-Mar-22	04-Dec-22	05-Dec-22	259	AS023100	AS501940
AS023580	Procurement & PO for Ferric Chloride Dosing Pump (S21)	635	18-May-20 A	21-Mar-22	04-Nov-22	05-Nov-22	229	AS023140	AS501960
AS023620	Procurement & PO for Elec. Materials	236	21-Jun-21 A	21-Mar-22	01-Apr-22	02-Apr-22	12	AS010200, AS023340, AS042230, AS082230, AS022210, AS032210, AS052210, AS062210, AS072210, AS092210, AS122210	AS510060
AS023620b	Procurement & PO for Genset	573	31-Jul-20 A	21-Mar-22	16-Feb-22	17-Feb-22	-33	AS021200, AS021300	AS501990b
AS023630m	Procurement & PO for mechanical ventilation system	90	28-Dec-21 A	31-Mar-22	26-Jun-22	07-Jul-22	98		AS510090m
AS501660b	Fabrication & Delivery of Pipeworks & Associated Valves	110	22-Mar-22	09-Jul-22	19-Mar-22	07-Jul-22	-3	AS023290	AS502160, AS502120n, AS502180n, AS502340n
AS501680	Fabrication of Control & Monitoring System (S18)	300	21-Mar-22*	14-Jan-23	22-Feb-22	19-Dec-22	-27	AS023380, AS182310	AS501700
AS501700	FAT for SCADA System (S18)	30	16-Dec-22	14-Jan-23	19-Nov-22	19-Dec-22	-27	AS501680	AS501720
AS501720	Delivery of SCADA System (S18)	30	15-Jan-23	13-Feb-23	19-Dec-22	18-Jan-23	-27	AS501700	AS507200, AS503260, AS502380
AS501740	Fabrication & Delivery of Lifting Appliances (S19)	150	30-Oct-21 A	28-Mar-22	18-Apr-22	26-Apr-22	29	AS023400, AS192210, AS192310	AS502140, AS502150, AS502180, AS503120, AS502250n
AS510060	Fabrication & Delivery of Elec. Materials	120	16-Apr-22	13-Aug-22	02-Apr-22	31-Jul-22	-14	AS023620, AS042230	AS502460
AS510080	Fabrication & Delivery of Gas Detection System	150	03-Dec-22	01-May-23	21-Sep-22	18-Feb-23	-73	AS211800, AS010205a	AS503290
AS510090m	Fabrication & Delivery of Ventilation Fans	90	01-Apr-22	29-Jun-22	07-Jul-22	05-Oct-22	98	AS023630m	AS502340, AS503220, AS504420a, AS507700, AS507800, AS507900, AS508000, AS508100, AS508110g
Sludge Dewatering Building		**725**	**08-Oct-21 A**	**15-Oct-23**	**11-Feb-22**	**02-Nov-23**	**18**		
Fabrication, FAT & Delivery of Major Plant & Materials		**624**	**08-Oct-21 A**	**06-Jul-23**	**17-Feb-22**	**28-Mar-23**	**-101**		
AS501100	Fabrication & Delivery of Sludge Screening System (S2)	180	25-Sep-22	23-Mar-23	08-Jun-22	05-Dec-22	-109	AS023100, AS022310	AS502200
AS501120	Fabrication of Sludge Thickening System (S3)	180	08-Oct-21 A	05-Apr-22	07-May-22	23-May-22	48	AS023120, AS032310	AS501125c
AS501125c	FAT for Sludge Thickening System (S3)	14	23-Mar-22	05-Apr-22	09-May-22	23-May-22	48	AS501120	AS501130c
AS501130c	Delivery of Sludge Thickening System (S3)	60	06-Apr-22	04-Jun-22	23-May-22	22-Jul-22	48	AS501125c	AS502280, AS502290n
AS501160	Fabrication of Sludge Dewatering System (S6)	180	08-Oct-21 A	05-Apr-22	16-Jun-22	02-Jul-22	88	AS023160, AS062310	AS501165c
AS501165c	FAT for Sludge Dewatering System (S6)	14	23-Mar-22	05-Apr-22	18-Jun-22	02-Jul-22	88	AS501160	AS501170c
AS501170c	Delivery of Sludge Dewatering System (S6)	60	06-Apr-22	04-Jun-22	02-Jul-22	31-Aug-22	88	AS501165c	AS502160, AS502300n



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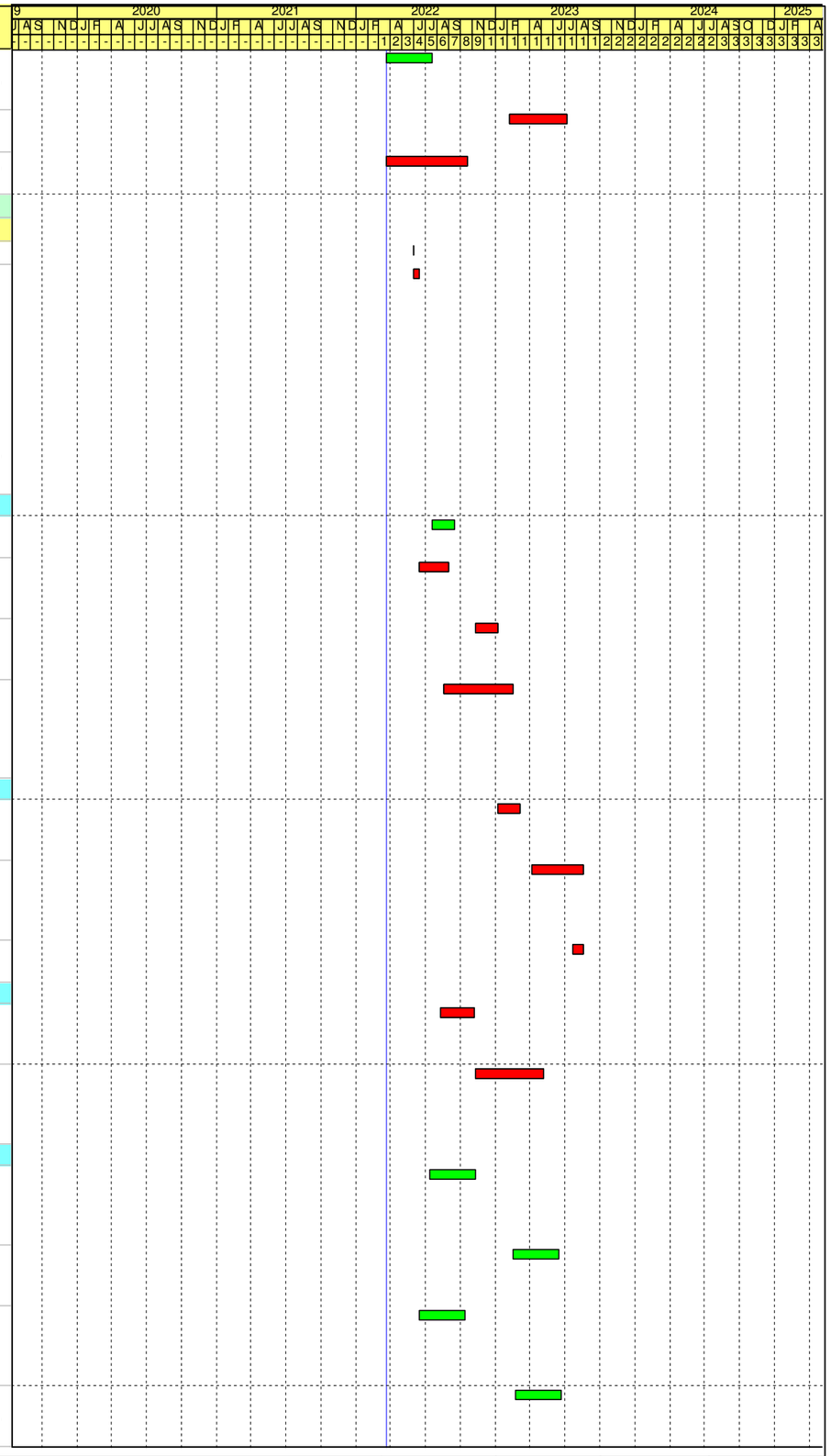
AS501880	Fabrication & Delivery of Process Water Pump (S21)	120	21-Mar-22*	18-Jul-22	23-Apr-22	21-Aug-22	34	AS023500, AS211300	AS502120, AS502170n, AS502330n
AS501900	Fabrication & Delivery of External Sludge Transfer Pump (S21)	150	07-Feb-23	06-Jul-23	29-Oct-22	28-Mar-23	-101	AS023520, AS211400	AS502220
AS501990b	Fabrication & Delivery of Genset	210	22-Mar-22	17-Oct-22	17-Feb-22	15-Sep-22	-33	AS023620b	AS506500b, AS502220n
Installation		488	31-May-22	30-Sep-23	11-Feb-22	02-Nov-23	33		
Original		488	31-May-22	30-Sep-23	11-Feb-22	03-Oct-23	3		
AS502000	Access to Sludge Dewatering Building (Impacted by EWN-0314)	1	31-May-22*	31-May-22	11-Feb-22	12-Feb-22	-109		AS502100
AS502100	Mobilisation	15	01-Jun-22	15-Jun-22	12-Feb-22	27-Feb-22	-109	AS001220, AS502000	AS502140, AS502150, AS502180, AS502120, AS502460, AS502300, AS502340, AS503160, AS503180, AS503220, AS506500b, AS013430f
Sludge Dewatering (SDe)		245	16-Jun-22	15-Feb-23	27-Feb-22	03-Apr-23	47		
AS502120	E&M Installation of Process Water Pump (S21)	60	19-Jul-22	16-Sep-22	02-Feb-23	03-Apr-23	199	AS502100, AS501880	AS510300
AS502140	E&M Installation of EOT Crane LA-01-02	75	16-Jun-22	29-Aug-22	27-Feb-22	13-May-22	-109	AS502100, AS501740	AS502260, AS502160, AS510300
AS502150	E&M Installation of Monorail LA-01-04	60	08-Nov-22	06-Jan-23	21-Aug-22	20-Oct-22	-79	AS502100, AS502260, AS501740	AS502180, AS510300
AS502160	E&M Installation of Sludge Dewatering System (S6)	180	20-Aug-22	15-Feb-23	03-May-22	30-Oct-22	-109	AS001220, AS501660b, AS502140, AS501170c	AS502280, AS502200, AS502320, AS502380, AS510300
Sludge Screening (SSc)		225	07-Jan-23	19-Aug-23	20-Oct-22	11-May-23	-101		
AS502180	E&M Installation of Monorail LA-01-01	60	07-Jan-23	07-Mar-23	20-Oct-22	19-Dec-22	-79	AS502100, AS502150, AS501740	AS502200, AS510300
AS502200	E&M Installation of Sludge Screening System (S2)	135	07-Apr-23	19-Aug-23	19-Dec-22	03-May-23	-109	AS502160, AS502280, AS502180, AS501100	AS502220, AS502380, AS502400
AS502220	E&M Installation of External Sludge Transfer Pump (S21)	30	21-Jul-23	19-Aug-23	11-Apr-23	11-May-23	-101	AS502200, AS501900	AS502380, AS511300b
Sludge Thickening (STh)		270	10-Aug-22	06-May-23	23-Apr-22	18-Jan-23	-109		
AS502260	E&M Installation of EOT Crane LA-01-03	90	10-Aug-22	07-Nov-22	23-Apr-22	22-Jul-22	-109	AS502140	AS502150, AS502280, AS510300
AS502280	E&M Installation of Sludge Thickening System (S3)	180	08-Nov-22	06-May-23	22-Jul-22	18-Jan-23	-109	AS502160, AS502260, AS501130c	AS502200, AS502360, AS505100, AS510300
Building Services		445	16-Jun-22	03-Sep-23	22-Aug-22	03-Oct-23	30		
AS502300	FS Installation - Conduits, Trunking, & Pipeworks	120	13-Jul-22	09-Nov-22	06-Feb-23	05-Jun-23	208	AS001220, AS502100, AS503180, AS509300	AS502320, AS509340
AS502320	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	16-Feb-23	15-Jun-23	06-Jun-23	03-Oct-23	110	AS502300, AS502160, AS503200	AS509120, AS507100
AS502340	BS Fitting Installation - Conduits, Trunking, & Ductworks	120	16-Jun-22	13-Oct-22	19-Nov-22	19-Mar-23	157	AS001220, AS502100, AS509300, AS510090m	AS502360, AS509370f
AS502360	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	21-Feb-23	20-Jun-23	19-Mar-23	17-Jul-23	27	AS502340, AS502280	AS502410, AS512200a, AS504430a



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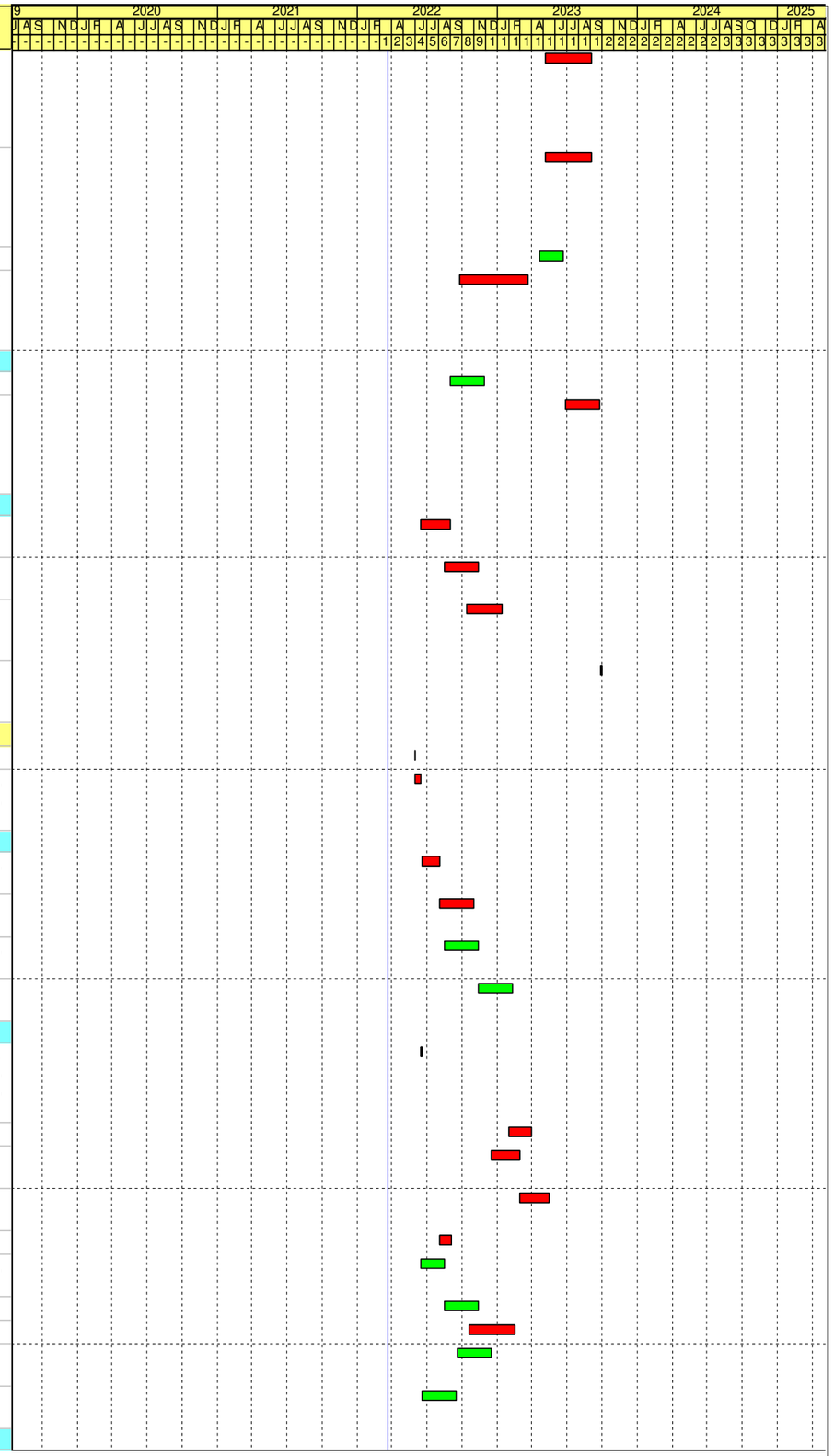
AS502380	Installation of Control & Monitoring System	120	07-May-23	03-Sep-23	18-Jan-23	18-May-23	-109	AS502160, AS502200, AS502220, AS501720	AS510400, AS512380f, AS512390f, AS512400f, AS512410f
AS502400	Installation of CCTV System	120	07-May-23	03-Sep-23	18-Jan-23	18-May-23	-109	AS502200	AS510400, AS512380f, AS512390f, AS512400f, AS512410f
AS502410	Installation of Gas Detection System	60	22-Apr-23	20-Jun-23	18-May-23	17-Jul-23	27	AS502360	AS512200a
AS506500b	E&M Installation of Genset	180	24-Sep-22	22-Mar-23	22-Aug-22	18-Feb-23	-33	AS501990b, AS502100, AS509500a, AS509240	AS511300b, AS509250b
Tx Rm		392	30-Aug-22	25-Sep-23	30-Sep-22	29-Mar-23	-181		
AS502420	BS Fitting Intallation	90	30-Aug-22	27-Nov-22	30-Sep-22	29-Dec-22	32	AS502460	AS502440
AS502440	E&M Installation of 380V Transformers (S17)	90	28-Jun-23	25-Sep-23	29-Dec-22	29-Mar-23	-181	AS001220, AS502420, AS502500, AS501520, AS504280	AS502520
LV Switchroom		472	16-Jun-22	30-Sep-23	02-Jun-22	03-Apr-23	-181		
AS502460	BS Fitting Intallation	75	16-Jun-22	29-Aug-22	02-Jun-22	16-Aug-22	-14	AS502100, AS510060	AS502420, AS502480
AS502480	E&M Installation of LVSB at G/F (S17)	90	15-Aug-22	12-Nov-22	01-Aug-22	30-Oct-22	-14	AS502460, AS501640	AS502500, AS502520
AS502500	E&M Installation of LVSB at 1/F (S17)	90	14-Oct-22	11-Jan-23	30-Sep-22	29-Dec-22	-14	AS502480	AS502520, AS502440, AS503420
AS502520	Ready for Energisation	5	26-Sep-23	30-Sep-23	29-Mar-23	03-Apr-23	-181	AS502480, AS502440, AS502500	AS510300, AS511300b
NCE-PMI-0325 - Provision of 2 nos of 3 Tons Mobile A-frame with Electrical Hoist in SDB		349	31-May-22	14-May-23	19-Apr-22	02-Nov-23	172		
AS502000n	Access to Sludge Dewatering Building (Impacted by EWN-0314)	1	31-May-22*	31-May-22	19-Apr-22	20-Apr-22	-42		AS502100n
AS502100n	Mobilisation	15	01-Jun-22	15-Jun-22	20-Apr-22	05-May-22	-42	AS502000n	AS502150n, AS502200n, AS502240n
Basement		237	19-Jun-22	10-Feb-23	08-May-22	04-Aug-23	175		
AS502110n	Installation of PC Pump	45	19-Jun-22	02-Aug-22	08-May-22	22-Jun-22	-42	AS502150n	AS502120n, AS502190n
AS502120n	Installation of Process Pipe	90	03-Aug-22	31-Oct-22	07-Jul-22	05-Oct-22	-27	AS502110n, AS501660b	AS502340n
AS502130n	FS Installation	90	15-Aug-22	12-Nov-22	06-Feb-23	06-May-23	175	AS502200n	AS502140n, AS502360n
AS502140n	BS Installation	90	13-Nov-22	10-Feb-23	07-May-23	04-Aug-23	175	AS502130n, AS502210n	AS502370n
Ground Floor		333	16-Jun-22	14-May-23	05-May-22	06-May-23	-8		
AS502150n	Installation of A-Frame (Effected by NCE-PMI-0325)	3	16-Jun-22	18-Jun-22	05-May-22	08-May-22	-42	AS502100n	AS502110n, AS502280n, AS502310n, AS502250n
AS502160n	Installation of Monorail LA-01-01	60	30-Jan-23	30-Mar-23	02-Feb-23	03-Apr-23	4	AS502270n	AS510300
AS502170n	Installation of Silo , Conveyor & PC Pump	75	16-Dec-22	28-Feb-23	04-Nov-22	18-Jan-23	-42	AS502340n, AS501880	AS502180n
AS502180n	Installation of Process Pipe	75	01-Mar-23	14-May-23	18-Jan-23	03-Apr-23	-42	AS502170n, AS501660b	AS510300
AS502190n	Installation of Polymer	30	03-Aug-22	01-Sep-22	22-Jun-22	22-Jul-22	-42	AS502110n	AS502350n
AS502200n	FS Installation	60	16-Jun-22	14-Aug-22	08-Dec-22	05-Feb-23	175	AS502100n	AS502210n, AS502130n
AS502210n	BS Installation	90	15-Aug-22	12-Nov-22	06-Feb-23	06-May-23	175	AS502200n	AS502140n
AS502220n	Generator & Fuel Room Installation	120	18-Oct-22	14-Feb-23	21-Oct-22	18-Feb-23	4	AS501990b	AS509250b
AS502230n	TX Room Installation	90	17-Sep-22	15-Dec-22	03-Jan-23	03-Apr-23	109	AS502240n, AS501520	AS510300
AS502240n	LV Switch Room Installation	90	17-Jun-22	14-Sep-22	05-Oct-22	03-Jan-23	111	AS501640, AS502100n	AS502230n
First Floor		327	19-Jun-22	11-May-23	07-Jun-22	02-Nov-23	175		



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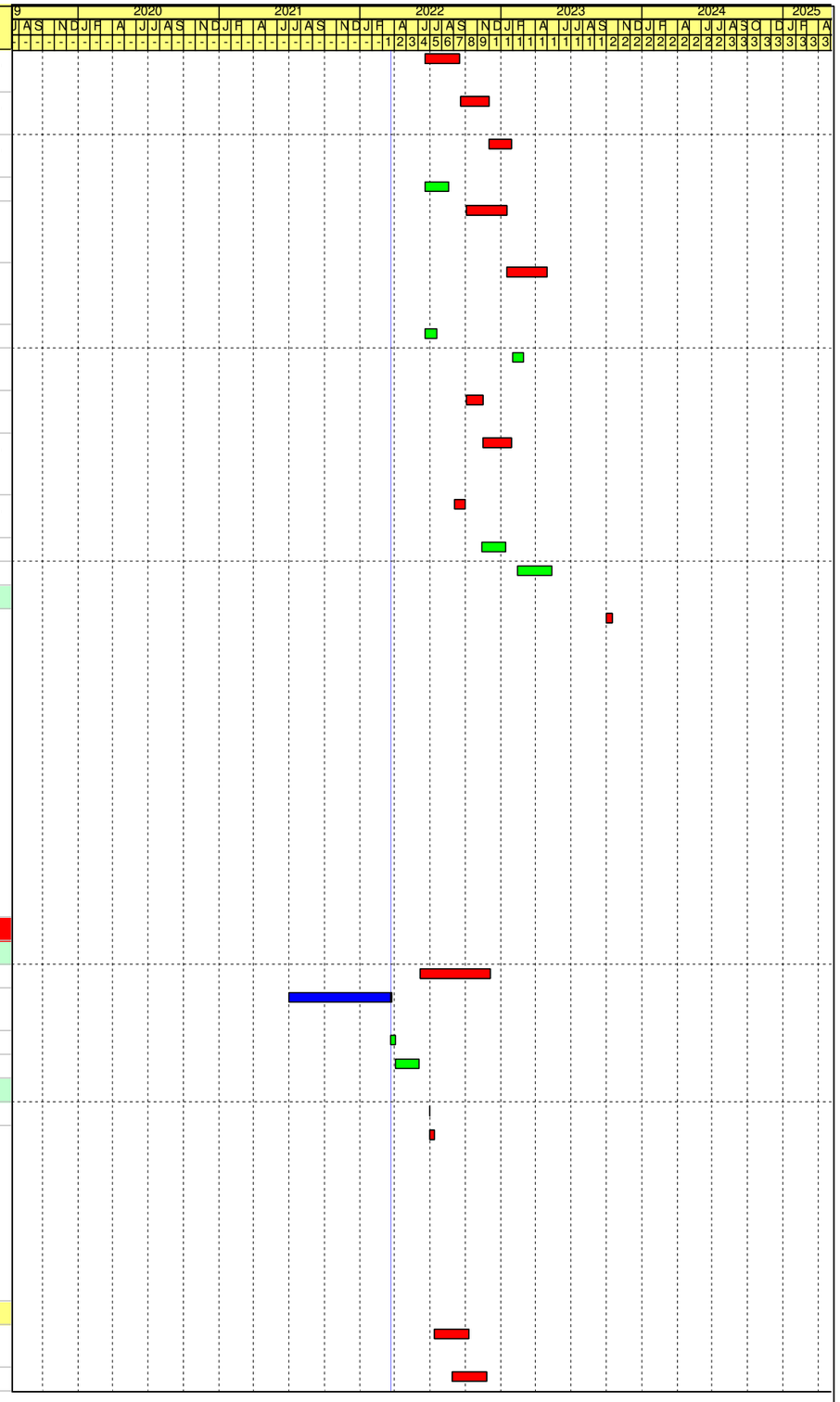
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS502250n	Installation of EOT Crane LA-01-03	90	19-Jun-22	16-Sep-22	07-Jun-22	05-Sep-22	-12	AS502150n, AS501740	AS502260n, AS502290n
AS502260n	Installation of EOT Crane LA-01-02	75	17-Sep-22	30-Nov-22	20-Sep-22	04-Dec-22	4	AS502250n	AS502270n, AS502300n
AS502270n	Installation of Monorail LA-01-04	60	01-Dec-22	29-Jan-23	04-Dec-22	02-Feb-23	4	AS502260n	AS502160n, AS502320n
AS502280n	Installation of Polymer Tank	60	19-Jun-22	17-Aug-22	02-Feb-23	03-Apr-23	229	AS502150n	AS510300
AS502290n	Installation of Sludge Thickening Centrifuges	105	02-Oct-22	14-Jan-23	05-Sep-22	19-Dec-22	-27	AS502350n, AS502250n, AS501130c	AS502300n
AS502300n	Installation of Sludge Dewatering Centrifuges	105	15-Jan-23	29-Apr-23	19-Dec-22	03-Apr-23	-27	AS502290n, AS502260n, AS501170c	AS510300
AS502310n	Installation of Screen Press	30	19-Jun-22	18-Jul-22	04-Mar-23	03-Apr-23	259	AS502150n	AS510300
AS502320n	Installation of Mixer	30	30-Jan-23	28-Feb-23	04-Mar-23	03-Apr-23	34	AS502340n, AS502270n	AS510300
AS502330n	Installation of PC Pump	45	02-Oct-22	15-Nov-22	21-Aug-22	05-Oct-22	-42	AS502350n, AS501880	AS502340n
AS502340n	Installation of Process Pipe	75	16-Nov-22	29-Jan-23	05-Oct-22	19-Dec-22	-42	AS502330n, AS502120n, AS501660b	AS502320n, AS502170n
AS502350n	Installation of Polymer	30	02-Sep-22	01-Oct-22	22-Jul-22	21-Aug-22	-42	AS502190n	AS502330n, AS502290n
AS502360n	FS Installation	60	13-Nov-22	11-Jan-23	04-Sep-23	02-Nov-23	295	AS502130n	AS509120
AS502370n	BS Installation	90	11-Feb-23	11-May-23	05-Aug-23	02-Nov-23	175	AS502140n	AS509120
Testing and Commissioning		15	01-Oct-23	15-Oct-23	03-Apr-23	18-Apr-23	-181		
AS510300	SAT for Sludge Dewatering System	15	01-Oct-23	15-Oct-23	03-Apr-23	18-Apr-23	-181	AS502520, AS502120, AS105180, AS502140, AS502150, AS502160, AS502180, AS502260, AS502280, AS502160n, AS502180n, AS502230n, AS502280n, AS502300n, AS502310n, AS502320n	AS510400, AS510700
Combined Heat & Power Building		800	29-Jun-21 A	28-Sep-23	15-Mar-22	17-Jun-23	-104		
Fabrication, FAT & Delivery of Major Plant & Materials		500	29-Jun-21 A	02-Dec-22	15-Mar-22	11-Sep-22	-83		
AS501250	Fabrication & Delivery of Pre-Treatment	180	06-Jun-22	02-Dec-22	15-Mar-22	11-Sep-22	-83		AS503160
AS501260	Fabrication of CHP System (S8)	270	29-Jun-21 A	25-Mar-22	15-May-22	20-May-22	56	AS023220, AS082330	AS501280
AS501280	FAT for CHP Generators (S8)	14	21-Mar-22	03-Apr-22	06-May-22	20-May-22	47	AS501260	AS501300
AS501300	Delivery of CHP Generators (S8)	60	04-Apr-22	02-Jun-22	20-May-22	19-Jul-22	47	AS501280	AS503160
Installation		426	30-Jun-22	29-Aug-23	08-Apr-22	05-Jun-23	-85		
AS503000	Access to CHP Building (Impacted by EWN-0314)	1	30-Jun-22*	30-Jun-22	08-Apr-22	09-Apr-22	-83		AS503100
AS503100	Mobilisation	12	01-Jul-22	12-Jul-22	09-Apr-22	21-Apr-22	-83	AS001320, AS509520a, AS503000	AS503120, AS503320, AS503360, AS503160, AS503180, AS503220, AS503400, AS503300, AS013470f
Combined Heat & Power Generation (CHP) & Pre-treatment System		307	13-Jul-22	15-May-23	21-Apr-22	22-Feb-23	-83		
AS503120	E&M Installation of EOT Crane No. 1	89	13-Jul-22	09-Oct-22	21-Apr-22	19-Jul-22	-83	AS503100, AS501740	AS503140, AS503160
AS503140	E&M Installation of EOT Crane No. 2	89	27-Aug-22	23-Nov-22	28-Jun-22	25-Sep-22	-60	AS503120	AS503160



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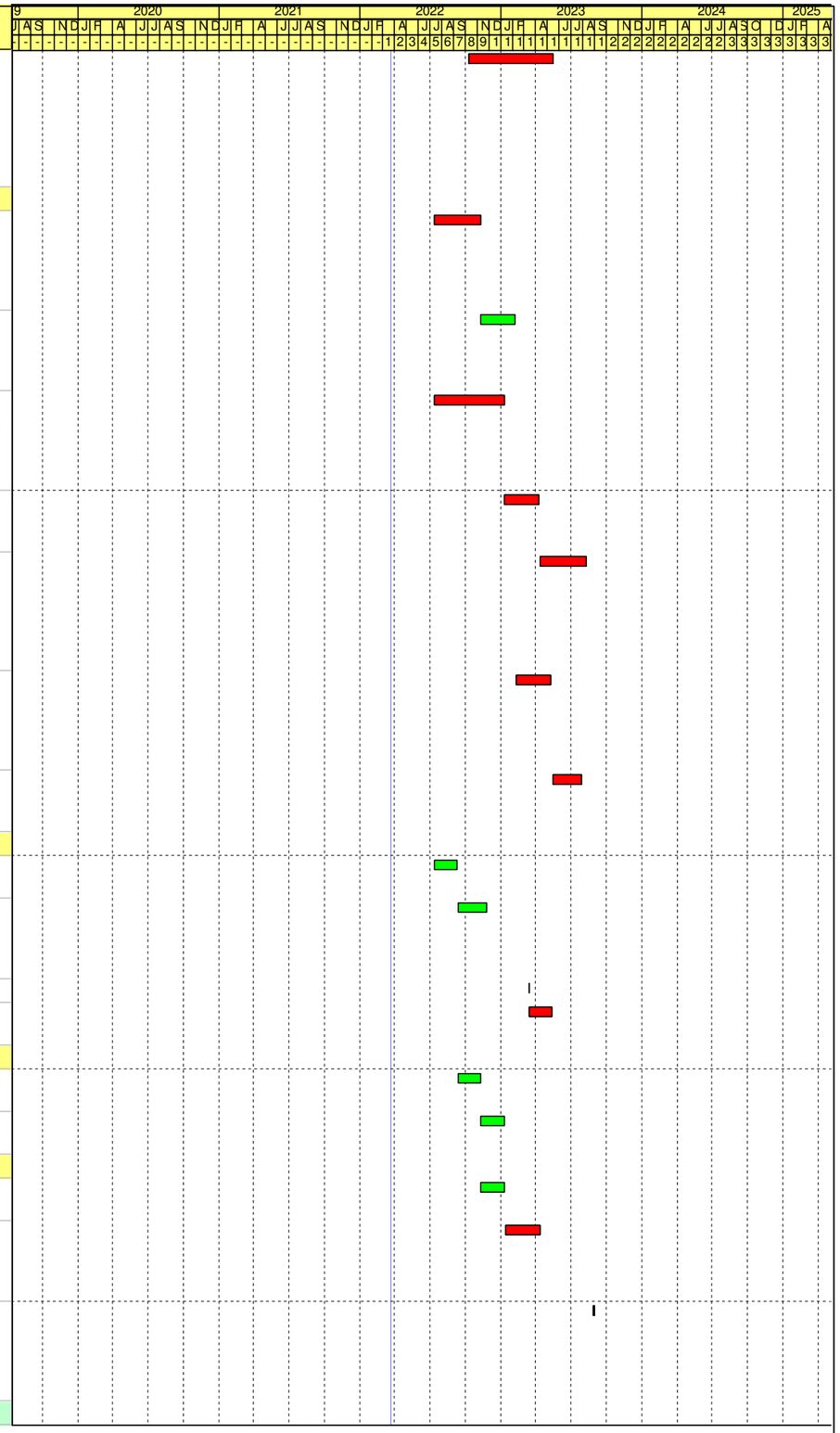
AS503160	E&M Installation of CHP System (S8)	218	10-Oct-22	15-May-23	19-Jul-22	22-Feb-23	-83	AS001320, AS503100, AS503120, AS503140, AS501300, AS502100, AS501250	AS503260, AS511100, AS510500, AS503290
Building Services		392	13-Jul-22	08-Aug-23	07-Jul-22	05-Jun-23	-64		
AS503180	FS Installation - Conduits, Trunking, & Pipeworks	120	13-Jul-22	09-Nov-22	11-Jul-22	07-Nov-22	-2	AS001220, AS503100, AS502100, AS509300	AS503200, AS507000, AS502300, AS504400a, AS509340
AS503200	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	10-Nov-22	07-Feb-23	08-Mar-23	05-Jun-23	118	AS503180	AS507100, AS509120, AS504410a, AS502320
AS503220	BS Fitting Installation - Conduits, Trunking, & Ductworks	180	13-Jul-22	08-Jan-23	07-Jul-22	03-Jan-23	-6	AS001220, AS503100, AS502100, AS509300, AS510090m	AS503240, AS504420a, AS509370f
AS503240	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	09-Jan-23	08-Apr-23	03-Jan-23	03-Apr-23	-6	AS503220	AS503280, AS503290, AS504430a
AS503260	Installation of Control & Monitoring System	120	11-Apr-23	08-Aug-23	18-Jan-23	18-May-23	-83	AS503160, AS501720	AS507200, AS511100, AS512380f, AS512390f, AS512400f, AS512410f
AS503280	Installation of CCTV System	90	08-Feb-23	08-May-23	02-Feb-23	03-May-23	-6	AS503240	AS507300, AS512380f, AS512390f, AS512400f, AS512410f
AS503290	Installation of Gas Detection System	75	16-May-23	29-Jul-23	04-Mar-23	18-May-23	-73	AS503240, AS510080, AS503160	AS511100
11kV Switchroom		305	13-Jul-22	13-May-23	19-Jul-22	15-Apr-23	-29		
AS503300	BS Fitting Installation	60	13-Jul-22	10-Sep-22	19-Jul-22	17-Sep-22	7	AS503100	AS503320, AS503360
AS503320	E&M Installation of 11kV Switchboard (S17)	75	11-Sep-22	24-Nov-22	02-Jan-23	18-Mar-23	114	AS503100, AS503300, AS501580, AS504240	AS503340, AS503440
AS503330	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	13-Feb-23	14-Feb-23	-29		AS503340
AS503340	Main Cables Laying between 11kV SwitchRoom of CHP Bldg to Tx Rm of Workshop No.2	60	15-Mar-23	13-May-23	14-Feb-23	15-Apr-23	-29	AS503320, AS503330	AS511100, AS504300
Tx Rm		120	11-Sep-22	08-Jan-23	17-Sep-22	16-Mar-23	67		
AS503360	BS Fitting Installation	60	11-Sep-22	09-Nov-22	17-Sep-22	16-Nov-22	7	AS503100, AS503300	AS503400, AS503380
AS503380	E&M Installation of 11kV Transfomers (S17)	60	10-Nov-22	08-Jan-23	15-Jan-23	16-Mar-23	67	AS503360, AS501460	AS503440, AS503420
LV Switchroom		293	10-Nov-22	29-Aug-23	16-Nov-22	18-Apr-23	-134		
AS503400	BS Fitting Intallation	60	10-Nov-22	08-Jan-23	16-Nov-22	15-Jan-23	7	AS503100, AS503360	AS503420
AS503420	E&M Installation of LVSB at 1/F (S17)	90	12-Jan-23	11-Apr-23	15-Jan-23	15-Apr-23	4	AS503400, AS501640, AS502500, AS503380	AS503440
AS503440	Ready for Energisation	3	27-Aug-23	29-Aug-23	15-Apr-23	18-Apr-23	-134	AS503420, AS503380, AS503320, AS504300	AS511100, AS510500, AS510700, AS510100, AS511300b
Testing and Commissioning		30	30-Aug-23	28-Sep-23	18-May-23	17-Jun-23	-104		



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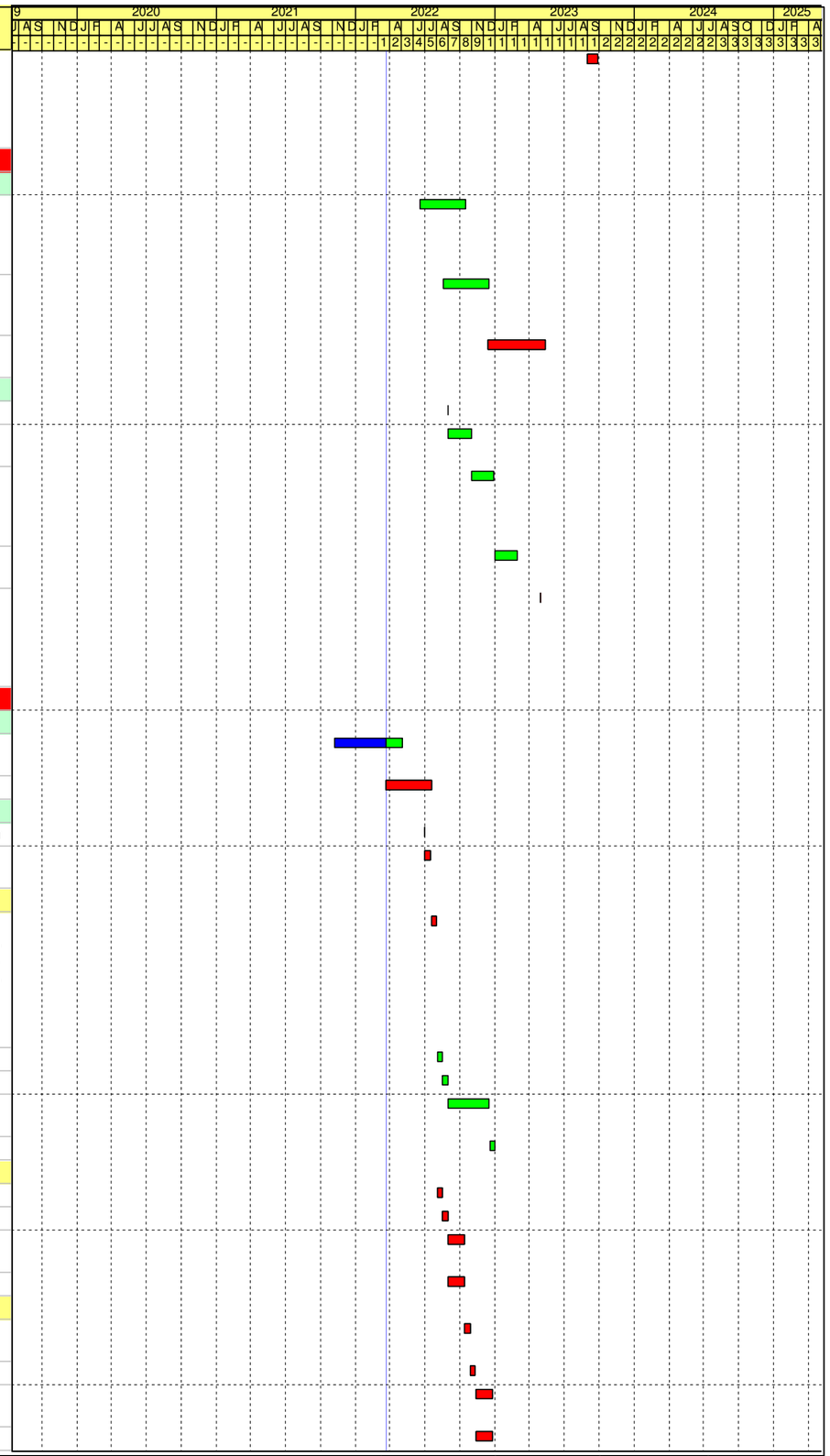
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS511100	SAT for CHP System	30	30-Aug-23	28-Sep-23	18-May-23	17-Jun-23	-104	AS503440, AS503260, AS503160, AS503340, AS503290	AS511200
Tx Rm & LV Switchroom (for UV)		**327**	**19-Jun-22**	**11-May-23**	**20-Jul-22**	**14-Apr-23**	**-28**		
Fabrication, FAT & Delivery of Major Plant & Materials		**327**	**19-Jun-22**	**11-May-23**	**20-Jul-22**	**14-Apr-23**	**-28**		
AS104240	Fabrication & Delivery of Transfomers -UV (Tx 07 & 08) (S17)	120	19-Jun-22	16-Oct-22	20-Jul-22	17-Nov-22	32	AS102180, AS112330, AS102330, AS023300	AS105140
AS104260	Fabrication & Delivery of LVSB -UV (S17)	120	18-Aug-22	15-Dec-22	18-Sep-22	16-Jan-23	32	AS102330, AS112330, AS023340	AS105160
AS104280	Fabrication & Delivery of Control & Monitoring System -UV (S18)	150	13-Dec-22	11-May-23	15-Nov-22	14-Apr-23	-28	AS112330, AS023380	AS106300
Installation		**244**	**31-Aug-22**	**01-May-23**	**01-Oct-22**	**03-Apr-23**	**-29**		
AS105110	Access to TX Rm & LV Switchroom (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	01-Oct-22	02-Oct-22	32		AS105120
AS105120	BS Fitting Intallation (at Tx Rm & LV Switchroom)	60	01-Sep-22	30-Oct-22	02-Oct-22	01-Dec-22	32	AS001520, AS105110	AS105180, AS105140
AS105140	E&M Installation of Transfomers in Tx Rm	60	31-Oct-22	29-Dec-22	01-Dec-22	30-Jan-23	32	AS105120, AS106100, AS104240, AS113160c	AS105160
AS105160	E&M Installation of LVSB	60	30-Dec-22	27-Feb-23	30-Jan-23	31-Mar-23	32	AS105140, AS104260	AS105180
AS105180	Ready for Permanet Power Energisation	3	29-Apr-23	01-May-23	31-Mar-23	03-Apr-23	-29	AS105120, AS105160, AS504240, AS509980, AS504260	AS003520, AS510100, AS510300
Sludge Digesters & Distribution Chamber		**739**	**06-Nov-21 A**	**29-Nov-23**	**10-Mar-22**	**24-Nov-24**	**361**		
Fabrication, FAT & Delivery of Major Plant & Materials		**240**	**06-Nov-21 A**	**18-Jul-22**	**10-Mar-22**	**22-Jul-22**	**4**		
AS501140	Fabrication & Delivery of Sludge Digestion System (S5)	180	06-Nov-21 A	04-May-22	07-Jun-22	22-Jul-22	79	AS023140, AS052310	AS503600
AS501150a	Fabrication & Delivery of FRP Walkway / Cover (S5)	120	21-Mar-22	18-Jul-22	10-Mar-22	08-Jul-22	-11	AS023140	AS503500
Installation		**303**	**30-Jun-22**	**28-Apr-23**	**22-Jun-22**	**24-Nov-24**	**576**		
AS503480	Access to Sludge Digesters & Distribution Chamber (Impacted by EWN-0314)	1	30-Jun-22*	30-Jun-22	22-Jun-22	23-Jun-22	-8		AS503490m
AS503490m	Mobilisation	15	01-Jul-22	15-Jul-22	23-Jun-22	08-Jul-22	-8	AS001420, AS503480	AS503600, AS503500
FRP Walkway / Cover Installation		**166**	**19-Jul-22**	**31-Dec-22**	**08-Jul-22**	**24-Nov-24**	**694**		
AS503500	Installation of Working Platform for Digester 1 (Roof)	14	19-Jul-22	01-Aug-22	08-Jul-22	22-Jul-22	-11	AS001420, AS501150a, AS503490m	AS003520, AS012340a, AS011540a, AS012140a, AS503510, AS512370, AS503600
AS503510	Installation of Working Platform for Digester 3 (Roof)	14	02-Aug-22	15-Aug-22	26-Jun-24	09-Jul-24	694	AS503500	AS503520
AS503520	Installation of Working Platform for Digester 4 (Roof)	14	16-Aug-22	29-Aug-22	10-Jul-24	23-Jul-24	694	AS503510	AS503530
AS503530	Installation of Working Platform for Distribution Chamber & Overflow Chamber	110	30-Aug-22	17-Dec-22	24-Jul-24	10-Nov-24	694	AS503520	AS503540
AS503540	Installation of Working Platform for Digester 2 (Roof)	14	18-Dec-22	31-Dec-22	11-Nov-24	24-Nov-24	694	AS503530	
Sludge Digester 1		**73**	**02-Aug-22**	**13-Oct-22**	**28-Jul-22**	**09-Oct-22**	**-5**		
AS512370	Installation of Sludge Mixer (4 nos.)	14	02-Aug-22	15-Aug-22	28-Jul-22	11-Aug-22	-5	AS503500	AS512380
AS512380	Installation of Motor with Belt adjustment	14	16-Aug-22	29-Aug-22	11-Aug-22	25-Aug-22	-5	AS512370	AS512390
AS512390	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	30-Aug-22	13-Oct-22	25-Aug-22	09-Oct-22	-5	AS512380	AS512400, AS512410
AS512400	Installation of Electrical System	45	30-Aug-22	13-Oct-22	25-Aug-22	09-Oct-22	-5	AS512390	AS512410
Sludge Digester 3		**73**	**14-Oct-22**	**25-Dec-22**	**09-Oct-22**	**21-Dec-22**	**-5**		
AS512410	Installation of Sludge Mixer (4 nos.)	14	14-Oct-22	27-Oct-22	09-Oct-22	23-Oct-22	-5	AS512400, AS512390	AS512420
AS512420	Installation of Motor with Belt adjustment	14	28-Oct-22	10-Nov-22	23-Oct-22	06-Nov-22	-5	AS512410	AS512430
AS512430	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	11-Nov-22	25-Dec-22	06-Nov-22	21-Dec-22	-5	AS512420	AS512440, AS512450
AS512440	Installation of Electrical System	45	11-Nov-22	25-Dec-22	06-Nov-22	21-Dec-22	-5	AS512430	AS512450



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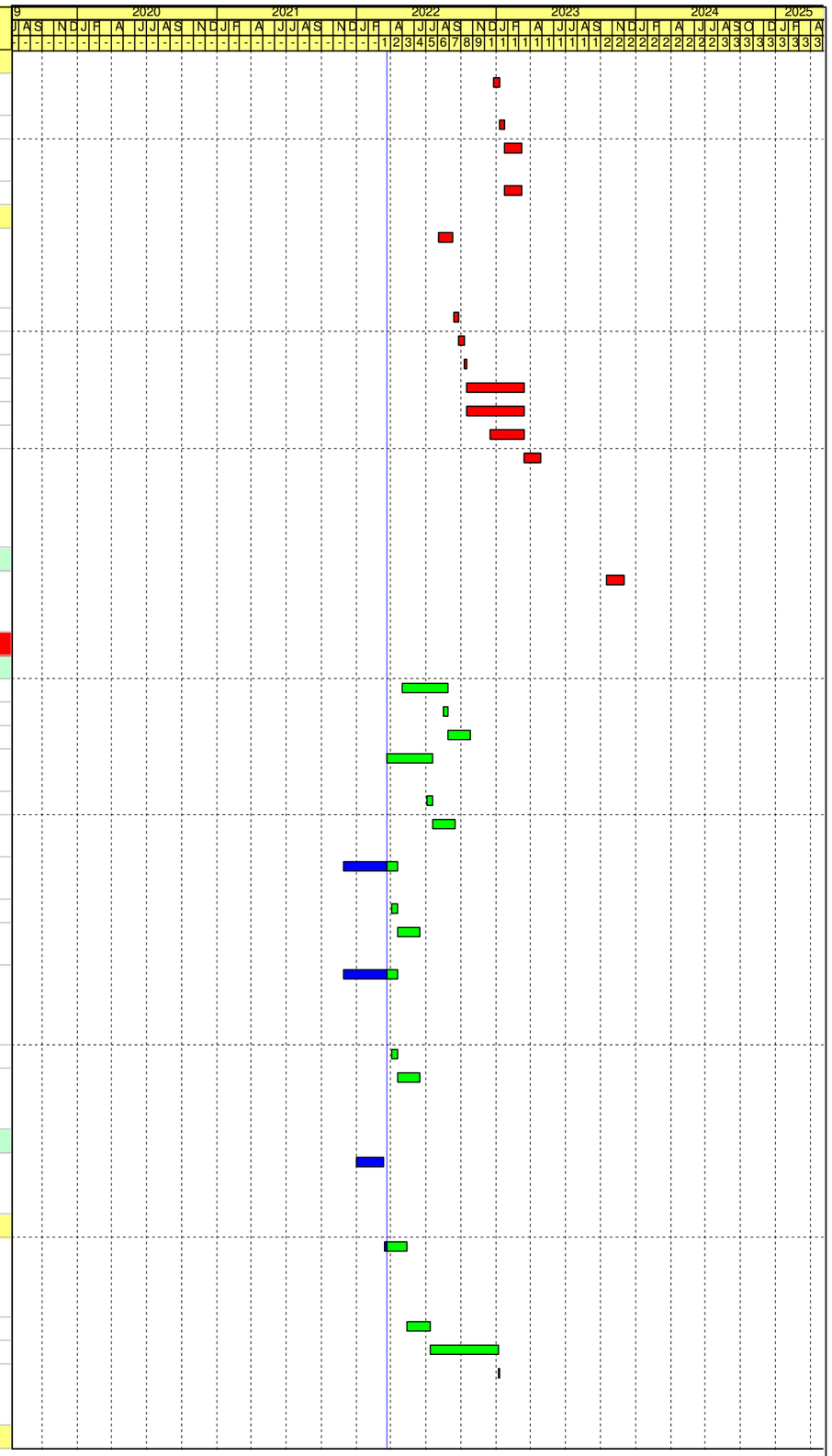
Sludge Digester 4		73	26-Dec-22	08-Mar-23	21-Dec-22	04-Mar-23	-5		
AS512450	Installation of Sludge Mixer (4 nos.)	14	26-Dec-22	08-Jan-23	21-Dec-22	04-Jan-23	-5	AS512430, AS512440	AS512460
AS512460	Installation of Motor with Belt adjustment	14	09-Jan-23	22-Jan-23	04-Jan-23	18-Jan-23	-5	AS512450	AS512470
AS512470	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	23-Jan-23	08-Mar-23	18-Jan-23	04-Mar-23	-5	AS512460	AS512480, AS507700
AS512480	Installation of Electrical System	45	23-Jan-23	08-Mar-23	18-Jan-23	04-Mar-23	-5	AS512470	AS507700
Distribution Chamber		270	02-Aug-22	28-Apr-23	22-Jul-22	18-Apr-23	-11		
AS503600	Installation of Sludge Recirculation Pumps (5 nos.)	40	02-Aug-22	10-Sep-22	22-Jul-22	31-Aug-22	-11	AS001420, AS501140, AS503490m, AS503500	AS503610
AS503610	Installation of Heat Exchanger (3 nos.)	14	11-Sep-22	24-Sep-22	31-Aug-22	14-Sep-22	-11	AS503600	AS503620
AS503620	Installation of Sludge Transfer Pump (2 nos.)	14	25-Sep-22	08-Oct-22	14-Sep-22	28-Sep-22	-11	AS503610	AS503630
AS503630	Installation of Vertical Mixer at Sludge Buffer Tank (2 nos.)	7	09-Oct-22	15-Oct-22	28-Sep-22	05-Oct-22	-11	AS503620	AS503640
AS503640	Installation of Pipework, Valve & Instruments	150	16-Oct-22	14-Mar-23	05-Oct-22	04-Mar-23	-11	AS503630	AS503650
AS503650	Installation of Electrical System	150	16-Oct-22	14-Mar-23	05-Oct-22	04-Mar-23	-11	AS503640	AS503660
AS503660	Installation of SCADA & PLC System	90	15-Dec-22	14-Mar-23	04-Dec-22	04-Mar-23	-11	AS503650	AS507700
AS507700	BS Installation for Sludge Digester	45	15-Mar-23	28-Apr-23	04-Mar-23	18-Apr-23	-11	AS509300, AS510090m, AS512480, AS512470, AS503660	AS507800, AS510700, AS509370f
Testing and Commissioning		45	16-Oct-23	29-Nov-23	18-Apr-23	02-Jun-23	-181		
AS510700	SAT for Sludge Digestion System	45	16-Oct-23	29-Nov-23	18-Apr-23	02-Jun-23	-181	AS503440, AS510300, AS507700	AS510800
Workshop No. 2		636	29-Nov-21 A	18-Oct-23	21-Apr-22	09-Dec-23	52		
Fabrication, FAT & Delivery of Major Plant & Materials		279	29-Nov-21 A	26-Oct-22	21-Apr-22	01-Jan-23	67		
AS501420	Fabrication of 11kV Transformers (S17)	120	30-Apr-22	27-Aug-22	05-Jul-22	02-Nov-22	67	AS023300	AS501440
AS501440	FAT for 11kV Transformers (S17)	14	14-Aug-22	27-Aug-22	19-Oct-22	02-Nov-22	67	AS501420	AS501460
AS501460	Delivery of 11kV Transformers (S17)	60	28-Aug-22	26-Oct-22	02-Nov-22	01-Jan-23	67	AS501440	AS503380
AS501480	Fabrication of 380V Transformers (S17)	120	21-Mar-22	18-Jul-22	18-Jun-22	16-Oct-22	90	AS023300, AS022210	AS501500
AS501500	FAT for 380V Transformers (S17)	14	05-Jul-22	18-Jul-22	02-Oct-22	16-Oct-22	90	AS501480	AS501520
AS501520	Delivery of 380V Transformers (S17)	60	19-Jul-22	16-Sep-22	16-Oct-22	15-Dec-22	90	AS501500	AS502440, AS502230n
AS501540	Fabrication of 11 kV Switchboard (S17)	120	29-Nov-21 A	17-Apr-22	05-May-22	02-Jun-22	46	AS023320	AS501560
AS501560	FAT for 11 kV Switchboard (S17)	14	04-Apr-22	17-Apr-22	19-May-22	02-Jun-22	46	AS501540	AS501580
AS501580	Delivery of 11 kV Switchboard (S17)	60	18-Apr-22	16-Jun-22	02-Jun-22	01-Aug-22	46	AS501560	AS503320, AS504240
AS501600	Fabrication of 380V Switchboard (S17)	120	29-Nov-21 A	17-Apr-22	21-Apr-22	19-May-22	32	AS023340, AS021330, AS021230, AS022210	AS501620
AS501620	FAT for 380V Switchboard (S17)	14	04-Apr-22	17-Apr-22	05-May-22	19-May-22	32	AS501600	AS501640
AS501640	Delivery of 380V Switchboard (S17)	60	18-Apr-22	16-Jun-22	19-May-22	18-Jul-22	32	AS501620	AS502480, AS503420, AS502240n
Installation		636	31-Dec-21 A	18-Oct-23	25-Apr-22	09-Dec-23	52		
AS504000	Mobilisation	14	31-Dec-21 A	12-Mar-22 A	25-Apr-22	25-Apr-22		AS001620, AS509370b	AS504100, AS504200, AS504460
CLP Substation		294	14-Mar-22 A	08-Jan-23	25-Apr-22	03-Apr-23	85		
AS504100	BS Fitting Installation (at CLP Sub-station in Workshop No.2)	60	14-Mar-22 A	12-May-22	25-Apr-22	17-Jun-22	36	AS504000, AS001620	AS002060, AS509940a, AS504200, AS002060b
AS509940a	Inspections, Rectification & H/O to CLP	60	13-May-22	11-Jul-22	05-Aug-22	04-Oct-22	85	AS504100	AS509960
AS509960	E&M Installation of HV Transformer (By CLP)	180	12-Jul-22	07-Jan-23	04-Oct-22	02-Apr-23	85	AS509940a	AS509980
AS509980	Energisation (By CLP)	1	08-Jan-23	08-Jan-23	02-Apr-23	03-Apr-23	85	AS509960, AS504240, AS512375f	AS105180
11kV HV Switchroom		501	13-Apr-22	26-Aug-23	18-May-22	15-Apr-23	-134		



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Remaining Work
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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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30-Nov-21	Rev.16	LT	KM
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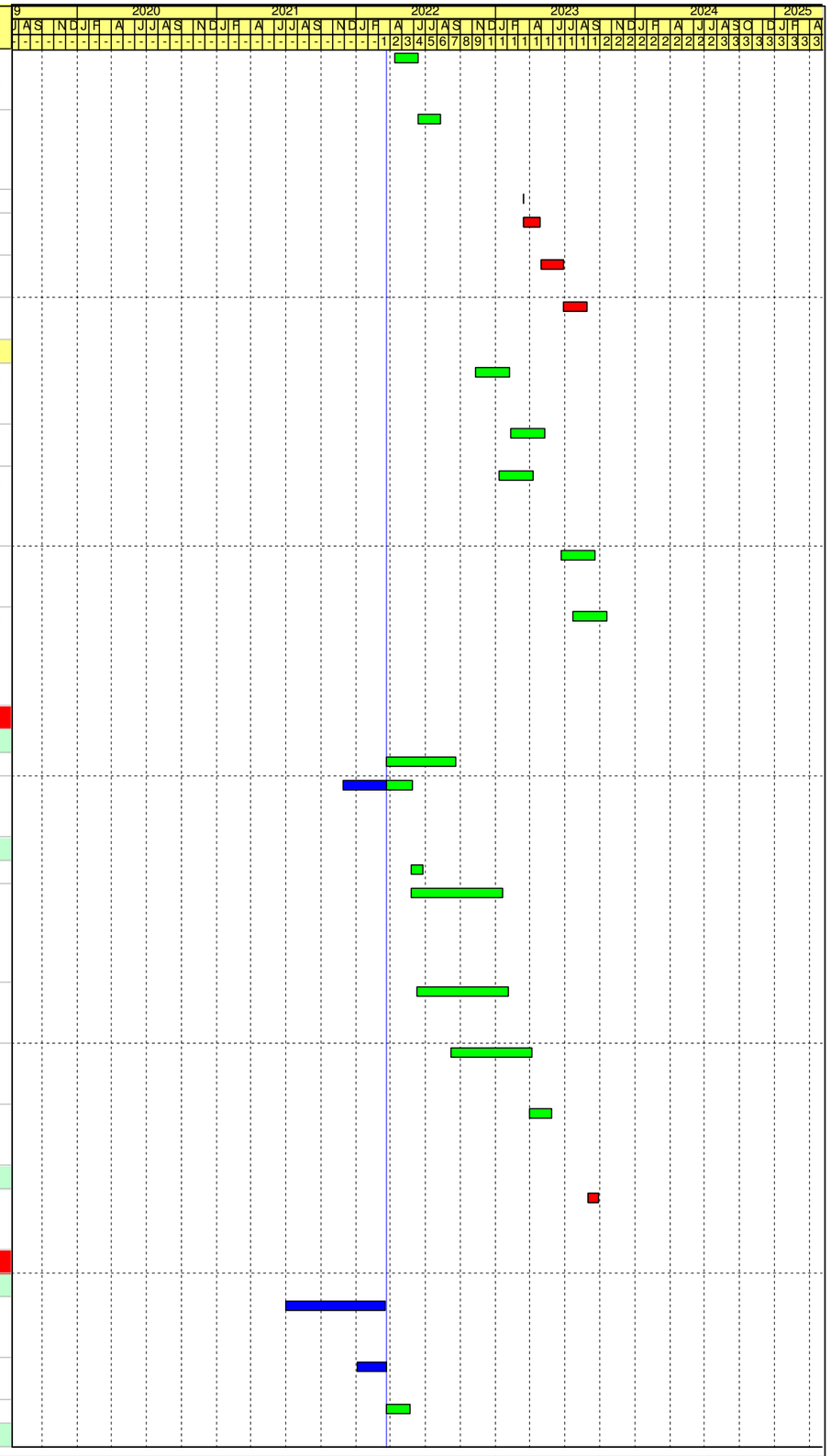
28-Feb-22	Rev.19	LT	KM
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS504200	BS Fitting Intallation	60	13-Apr-22	11-Jun-22	18-May-22	17-Jul-22	36	AS504000, AS504100	AS504240, AS504420a, AS504400a
AS504240	E&M Installation of 11kV HVSB (at Workshop No.2)	60	12-Jun-22	10-Aug-22	17-Jul-22	15-Sep-22	36	AS504200, AS501580	AS504260, AS105180, AS503320, AS509980
AS504250	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	14-Sep-22	15-Sep-22	-181		AS504260
AS504260	Main Cables Laying between Workshop No.2 & Tx Rm for UV System No.1	45	15-Mar-23	28-Apr-23	15-Sep-22	30-Oct-22	-181	AS504240, AS504250	AS504280, AS105180
AS504280	Main Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg	60	29-Apr-23	27-Jun-23	30-Oct-22	29-Dec-22	-181	AS504260	AS504300, AS502440
AS504300	Main Cables Laying between Workshop No.2 & Tx Rm for CHP Bldg	60	28-Jun-23	26-Aug-23	14-Feb-23	15-Apr-23	-134	AS504280, AS503340	AS503440
Building Services		343	10-Nov-22	18-Oct-23	07-Mar-23	09-Dec-23	52		
AS504400a	FS Installation - Conduits, Trunking, & Pipeworks	90	10-Nov-22	07-Feb-23	07-May-23	04-Aug-23	178	AS504200, AS503180, AS509300	AS504410a, AS509340
AS504410a	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	08-Feb-23	08-May-23	05-Aug-23	02-Nov-23	178	AS504400a, AS503200	AS509120, AS507100
AS504420a	BS Fitting Installation - Conduits, Trunking, & Ductworks	90	09-Jan-23	08-Apr-23	07-Mar-23	05-Jun-23	58	AS504200, AS503220, AS509300, AS510090m	AS504430a, AS504460, AS509370f
AS504430a	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	21-Jun-23	18-Sep-23	11-Aug-23	09-Nov-23	52	AS504420a, AS503240, AS502360	AS504450
AS504450	Installation of CCTV System	90	21-Jul-23	18-Oct-23	10-Sep-23	09-Dec-23	52	AS504430a	AS513000a, AS512380f, AS512390f, AS512400f, AS512410f
Biogas Storage		647	29-Nov-21 A	28-Sep-23	24-Apr-22	17-Jun-23	-104		
Fabrication, FAT & Delivery of Major Plant & Materials		271	29-Nov-21 A	17-Sep-22	24-Apr-22	17-Feb-23	153		
AS501230k	Fabrication & Delivery of Biogas Booster and Transfer Pumps	180	22-Mar-22	17-Sep-22	21-Aug-22	17-Feb-23	153	AS023200	AS504500
AS501240	Fabrication & Delivery of Biogas Storage	180	29-Nov-21 A	27-May-22	24-Apr-22	01-Jul-22	35	AS023190a, AS072310	AS504500, AS504520, AS504540
Installation		369	25-May-22	28-May-23	22-Jun-22	17-Jun-23	20		
AS504490m	Mobilisation	30	25-May-22	23-Jun-22	22-Jun-22	22-Jul-22	29	AS001520	AS504500
AS504500	E&M Installation of Biogas Storage Tank 1	240	25-May-22	19-Jan-23	22-Jun-22	17-Feb-23	29	AS001520, AS501240, AS509400a, AS501230k, AS504490m	AS504520
AS504520	E&M Installation of Biogas Storage Tank 2	240	09-Jun-22	03-Feb-23	07-Jul-22	04-Mar-23	29	AS001520, AS504500, AS501240	AS504540, AS505300
AS504540	E&M Installation of Biogas Storage Tank 3	210	07-Sep-22	04-Apr-23	05-Oct-22	03-May-23	29	AS001520, AS504520, AS501240	AS510500, AS507900
AS507900	BS Installation for Biogas Holding Tanks	60	30-Mar-23	28-May-23	18-Apr-23	17-Jun-23	20	AS507800, AS504540, AS510090m	AS508000, AS509370f
Testing and Commissioning		30	30-Aug-23	28-Sep-23	18-Apr-23	18-May-23	-134		
AS510500	SAT for Biogas Storage System	30	30-Aug-23	28-Sep-23	18-Apr-23	18-May-23	-134	AS503440, AS503160, AS504540	AS510600
THP Area		765	29-Jun-21 A	13-Sep-23	19-Sep-22	17-Jun-23	-89		
Fabrication, FAT & Delivery of Major Plant & Materials		300	29-Jun-21 A	20-May-22	19-Sep-22	19-Nov-22	183		
AS501180	Fabrication of THP System (S4)	300	29-Jun-21 A	18-Mar-22 A	20-Sep-22	20-Sep-22		AS023180, AS042330, AS042230	AS501200
AS501200	FAT for THP System (S4)	14	03-Jan-22 A	21-Mar-22	19-Sep-22	20-Sep-22	183	AS501180	AS501220
AS501220	Delivery of THP System (S4)	60	22-Mar-22	20-May-22	20-Sep-22	19-Nov-22	183	AS501200	AS505000
Installation		386	30-Jun-22	20-Jul-23	18-Nov-22	17-Jun-23	-34		



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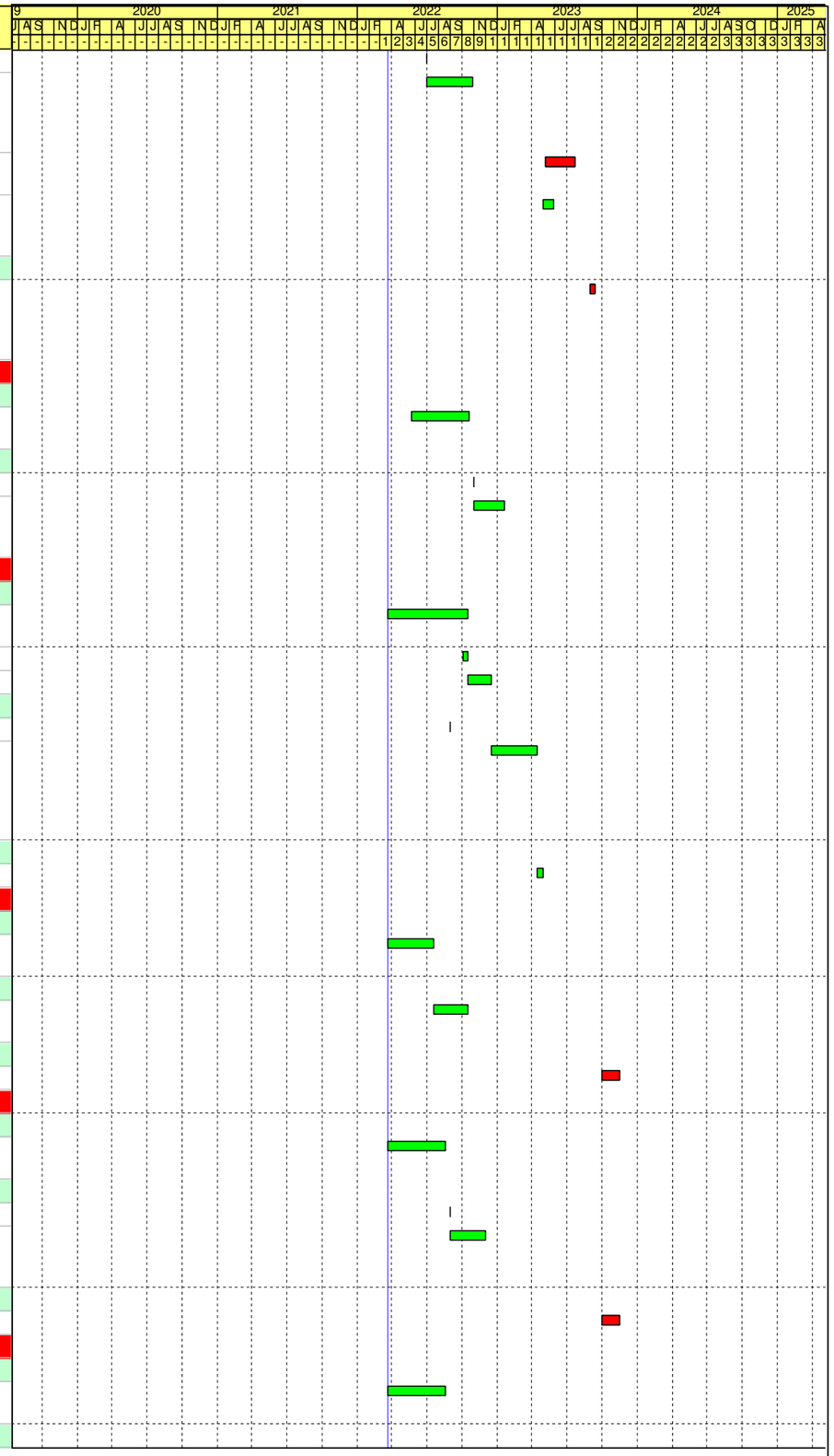
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS504990	Access to THP Area (Impacted by EWN-0314)	1	30-Jun-22*	30-Jun-22	18-Nov-22	19-Nov-22	142		AS505000
AS505000	E&M Installation of THP System (S4)	120	01-Jul-22	28-Oct-22	19-Nov-22	19-Mar-23	142	AS001520, AS501220, AS509520a, AS504990	AS505100, AS510100, AS507800, AS505300
AS505100	E&M Installation of Thickened Sludge Feed Pipe to THP System	75	07-May-23	20-Jul-23	17-Feb-23	03-May-23	-79	AS505000, AS502280	AS510100
AS507800	BS Installation for THP Facilities	30	29-Apr-23	28-May-23	18-May-23	17-Jun-23	20	AS507700, AS505000, AS510090m	AS507900, AS509370f
Testing and Commissioning		15	30-Aug-23	13-Sep-23	03-May-23	18-May-23	-119		
AS510100	SAT of THP System	15	30-Aug-23	13-Sep-23	03-May-23	18-May-23	-119	AS505000, AS505100, AS503440, AS105180	AS511300b, AS510200a
H2S Removal Area		244	21-May-22	19-Jan-23	01-Oct-22	02-Jun-23	134		
Fabrication, FAT & Delivery of Major Plant & Materials		150	21-May-22	17-Oct-22	01-Oct-22	28-Feb-23	134		
AS501780	Fabrication & Delivery of H2S Removal System (S7)	150	21-May-22	17-Oct-22	01-Oct-22	28-Feb-23	134	AS023210, AS072310	AS505200
Installation		81	31-Oct-22	19-Jan-23	13-Mar-23	02-Jun-23	134		
AS505190	Access to H2S Removal Area (Impacted by EWN-0314)	1	31-Oct-22*	31-Oct-22	13-Mar-23	14-Mar-23	134		AS505200
AS505200	E&M Installation of H2S Removal System (S7)	80	01-Nov-22	19-Jan-23	14-Mar-23	02-Jun-23	134	AS001520, AS501780, AS505190	AS511300b
Waste Gas Burning Area		405	21-Mar-22	29-Apr-23	08-May-22	17-Jun-23	49		
Fabrication, FAT & Delivery of Major Plant & Materials		270	21-Mar-22	15-Dec-22	08-May-22	02-Feb-23	49		
AS501320	Fabrication of Waste Gas Burning System (S9)	210	21-Mar-22	16-Oct-22	08-May-22	04-Dec-22	49	AS023240, AS092310	AS501340
AS501340	FAT for Waste Gas Burning System (S9)	14	03-Oct-22	16-Oct-22	20-Nov-22	04-Dec-22	49	AS501320	AS501360
AS501360	Delivery of Waste Gas Burning System (S9)	60	17-Oct-22	15-Dec-22	04-Dec-22	02-Feb-23	49	AS501340	AS505300
Installation		227	31-Aug-22	14-Apr-23	01-Feb-23	02-Jun-23	49		
AS505290	Access to Waste Gas Burning Area (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	01-Feb-23	02-Feb-23	155		AS505300
AS505300	E&M Installation of Waste Gas Burning System (S9)	120	16-Dec-22	14-Apr-23	02-Feb-23	02-Jun-23	49	AS001520, AS501360, AS504520, AS505000, AS505290	AS510900
Testing and Commissioning		15	15-Apr-23	29-Apr-23	02-Jun-23	17-Jun-23	49		
AS510900	SAT for Gas Burning System	15	15-Apr-23	29-Apr-23	02-Jun-23	17-Jun-23	49	AS505300	AS511000
Plant Service Water Area		604	21-Mar-22	14-Nov-23	04-Nov-22	17-Jul-23	-121		
Fabrication, FAT & Delivery of Major Plant & Materials		120	21-Mar-22	18-Jul-22	04-Nov-22	04-Mar-23	229		
AS501380	Fabrication & Delivery of Plant Service Water System (S12)	120	21-Mar-22	18-Jul-22	04-Nov-22	04-Mar-23	229	AS023260, AS122310	AS505400
Installation		90	19-Jul-22	16-Oct-22	04-Mar-23	02-Jun-23	229		
AS505400	E&M Installation of Plant Service Water System (S12)	90	19-Jul-22	16-Oct-22	04-Mar-23	02-Jun-23	229	AS001520, AS501380	AS511300b
Testing and Commissioning		45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121		
AS511320n	SAT & System Commissioning Tests for Plant Services Water System	45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121	AS511310n	AS511330n
DO Area		604	21-Mar-22	14-Nov-23	21-Sep-22	17-Jul-23	-121		
Fabrication, FAT & Delivery of Major Plant & Materials		150	21-Mar-22	17-Aug-22	21-Sep-22	18-Feb-23	185		
AS501800	Fabrication & Delivery of DO System (S21)	150	21-Mar-22	17-Aug-22	21-Sep-22	18-Feb-23	185	AS023420, AS211100	AS505700
Installation		91	31-Aug-22	29-Nov-22	03-Mar-23	02-Jun-23	185		
AS505690	Access to DO Area (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	03-Mar-23	04-Mar-23	185		AS505700
AS505700	E&M Installation of DO System (S21)	90	01-Sep-22	29-Nov-22	04-Mar-23	02-Jun-23	185	AS001520, AS501800, AS505690	AS511300b
Testing and Commissioning		45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121		
AS511310n	SAT & System Commissioning Tests for DO System	45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121	AS511300b	AS511320n
Sewage Pump Station		604	21-Mar-22	14-Nov-23	07-Aug-22	17-Jul-23	-121		
Fabrication, FAT & Delivery of Major Plant & Materials		150	21-Mar-22	17-Aug-22	07-Aug-22	04-Jan-23	140		
AS501860	Fabrication & Delivery of Sewage Pump (S21)	150	21-Mar-22	17-Aug-22	07-Aug-22	04-Jan-23	140	AS023480, AS211200	AS506000
Installation		270	01-Sep-22	28-May-23	18-Jan-23	17-Jun-23	20		



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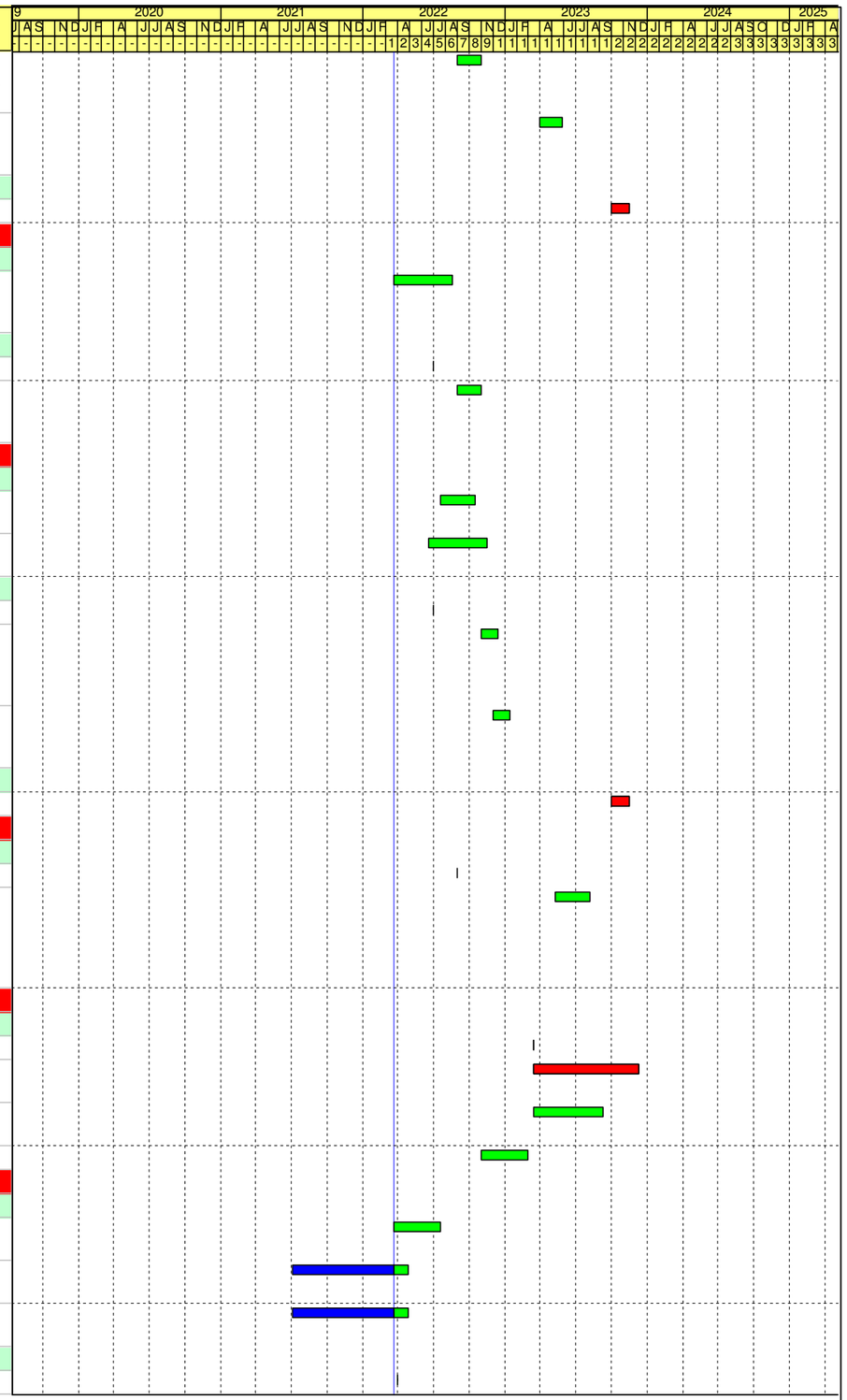
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS506000	E&M Installation of Sewage Pump (S21)	60	01-Sep-22	30-Oct-22	18-Jan-23	19-Mar-23	140	AS001520, AS501860, AS106180	AS506200, AS511300b, AS508000
AS508000	BS Installation for Sewage Pumping Station	60	30-Mar-23	28-May-23	18-Apr-23	17-Jun-23	20	AS507900, AS506000, AS510090m	AS508100, AS509370f
Testing and Commissioning		45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121		
AS511340n	SAT & System Commissioning Tests for Sewage Pumping Station	45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121	AS511330n	AS511350n
THP Cooling Water Transfer Pumping Station		224	21-Mar-22	30-Oct-22	25-Oct-22	06-Jun-23	219		
Fabrication, FAT & Delivery of Major Plant & Materials		150	21-Mar-22	17-Aug-22	25-Oct-22	24-Mar-23	219		
AS501920	Fabrication & Delivery of THP Cooling Pump (S21)	150	21-Mar-22	17-Aug-22	25-Oct-22	24-Mar-23	219	AS023540, AS211500, AS042230	AS506100
Installation		123	30-Jun-22	30-Oct-22	06-Apr-23	06-Jun-23	219		
AS506090	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314)	1	30-Jun-22*	30-Jun-22	06-Apr-23	07-Apr-23	281		AS506100
AS506100	E&M Installation of THP Cooling Pump (S21)	60	01-Sep-22	30-Oct-22	07-Apr-23	06-Jun-23	219	AS001520, AS501920, AS506090	AS511300b
Ferric Chloride Dosing Facility		514	19-Jun-22	14-Nov-23	05-Nov-22	17-Jul-23	-121		
Fabrication, FAT & Delivery of Major Plant & Materials		150	19-Jun-22	15-Nov-22	05-Nov-22	04-Apr-23	140		
AS501940	Fabrication & Delivery of Ferric Chloride Storage Tank (S21)	90	19-Jul-22	16-Oct-22	05-Dec-22	05-Mar-23	140	AS023560, AS211600	AS506200
AS501960	Fabrication & Delivery of Ferric Chloride Dosing Pump (S21)	150	19-Jun-22	15-Nov-22	05-Nov-22	04-Apr-23	140	AS023580, AS211600	AS506300
Installation		198	30-Jun-22	13-Jan-23	18-Mar-23	02-Jun-23	140		
AS506190	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314)	1	30-Jun-22*	30-Jun-22	18-Mar-23	19-Mar-23	262		AS506200
AS506200	E&M Installation of Ferric Chloride Storage Tank (S21)	45	31-Oct-22	14-Dec-22	19-Mar-23	03-May-23	140	AS001520, AS506000, AS501940, AS506190	AS506300, AS511300b
AS506300	E&M Installation of Ferric Chloride Dosing Pump (S21)	45	30-Nov-22	13-Jan-23	18-Apr-23	02-Jun-23	140	AS001520, AS506200, AS501960	AS511300b
Testing and Commissioning		45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121		
AS511330n	SAT & System Commissioning Tests for FeCl3 Dosing Facility	45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121	AS511320n	AS511340n
Fire Hydrant and Booster Pump Room		341	31-Aug-22	06-Aug-23	26-May-23	24-Aug-23	18		
Installation		341	31-Aug-22	06-Aug-23	26-May-23	24-Aug-23	18		
AS508105	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	26-May-23	26-May-23	268		AS508110g
AS508110g	BS Installation for Fire Hydrant and Booster Pump Room	90	09-May-23	06-Aug-23	27-May-23	24-Aug-23	18	AS507000, AS509300, AS001520, AS510090m, AS508105	AS509340
External Area		404	01-Nov-22	09-Dec-23	20-Aug-22	02-Nov-23	-37		
Installation		404	01-Nov-22	09-Dec-23	20-Aug-22	02-Nov-23	-37		
AS506590	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	20-Aug-22	21-Aug-22	-206		AS506600
AS506600	E&M Installation of Pipe Trench No.1, No.2 & No.3	270	15-Mar-23	09-Dec-23	21-Aug-22	18-May-23	-206	AS001520, AS506590	AS510200a
AS508120g	Road Lighting Installation	180	15-Mar-23	10-Sep-23	07-May-23	02-Nov-23	53	AS001520, AS508115	AS509120
AS508130g	Landscape Lighting Installation	120	01-Nov-22*	28-Feb-23	14-Mar-23	12-Jul-23	134		AS512380f
SAS Pumping Station		785	04-Jul-21 A	14-Nov-23	03-Nov-22	17-Jul-23	-121		
Fabrication, FAT & Delivery of Major Plant & Materials		301	04-Jul-21 A	18-Jul-22	02-Feb-23	02-Jun-23	319		
AS501400	Fabrication & Delivery of SAS Pumping System (S14)	120	21-Mar-22	18-Jul-22	02-Feb-23	02-Jun-23	319	AS023280, AS142330	AS505600
AS501820	Fabrication & Delivery of Stoplog (S21)	270	04-Jul-21 A	27-Apr-22	25-Apr-23	02-Jun-23	401	AS023440	AS505600
AS501840	Fabrication & Delivery of Penstock (S21)	270	04-Jul-21 A	27-Apr-22	25-Apr-23	02-Jun-23	401	AS023460	AS505600
Installation		211	31-Mar-22	27-Oct-22	03-Nov-22	02-Jun-23	218		
AS505590	Access to SAS Pumping Station (Impacted by NCE-NCE-219)	1	31-Mar-22	31-Mar-22	03-Nov-22	04-Nov-22	218	AS001820	AS505600



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Remaining Work
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Contract No. DE/2018/03
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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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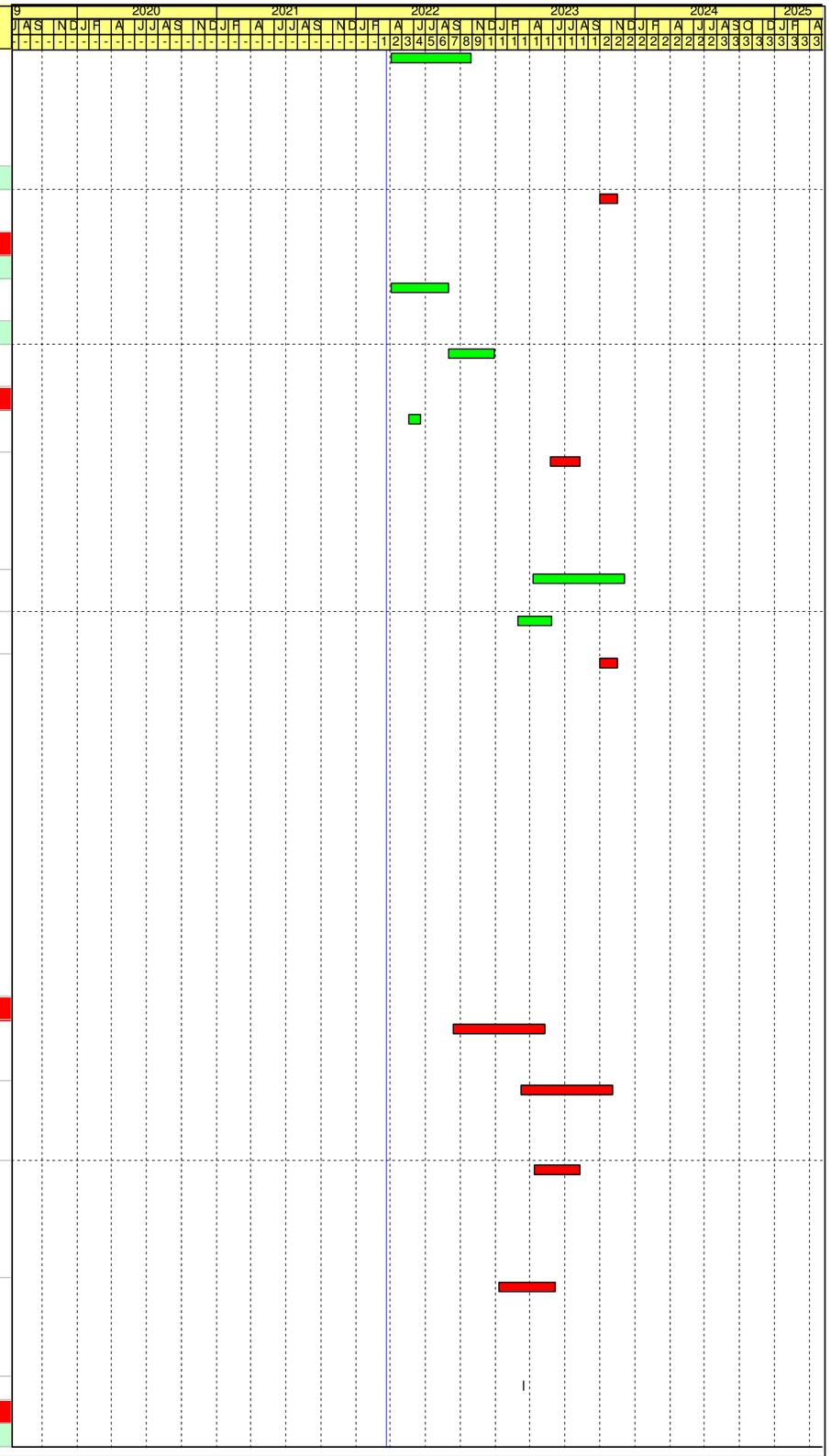
31-Mar-22	Rev.20	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS505600	E&M Installation of SAS Pumping System (S14)	210	01-Apr-22	27-Oct-22	04-Nov-22	02-Jun-23	218	AS001820, AS501400, CE000219b, AS501820, AS501840, AS505590	AS511300b
Testing and Commissioning		45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121		
AS511350n	SAT & System Commissioning Tests for SAS Pumping Station	45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121	AS511340n	AS512100, AS512200a
Existing Consolidation House		270	03-Apr-22	28-Dec-22	21-Aug-22	18-May-23	141		
Fabrication, FAT & Delivery of Major Plant & Materials		150	03-Apr-22	30-Aug-22	21-Aug-22	18-Jan-23	141		
AS501980	Fabrication & Delivery of Temporary Primary Sludge Pump (S21)	150	03-Apr-22	30-Aug-22	21-Aug-22	18-Jan-23	141	AS023600, AS211700	AS511300b, AS506500
Installation		120	31-Aug-22	28-Dec-22	18-Jan-23	18-May-23	141		
AS506500	E&M Installation of Existing Consolidation House	120	31-Aug-22	28-Dec-22	18-Jan-23	18-May-23	141	CE000219d, AS501980	AS511300b, AS510400
Miscellaneous		565	19-May-22	04-Dec-23	19-Dec-22	31-Jan-24	58		
AS106180	E&M Installation of Lift-up Pumps & Associated Pipeworks / Valves	30	19-May-22*	17-Jun-22	19-Dec-22	18-Jan-23	215	AS106140, AS104140	AS506000
AS106300	Installation of Control & Monitoring System - UV	75	26-May-23	08-Aug-23	28-Apr-23	12-Jul-23	-28	AS106160, AS104280, AS106200, AS106210, AS507200	AS513000a, AS512200a, AS512380f, AS512390f, AS512400f, AS512410f
AS504460	Installation of Lift	240	09-Apr-23	04-Dec-23	05-Jun-23	31-Jan-24	58	AS504000, AS504420a	AS003520, AS509450f
AS508100	BS Installation for Other Facilities	90	28-Feb-23	28-May-23	19-Mar-23	17-Jun-23	20	AS508000, AS510090m	AS511300b, AS509370f
AS511300b	SAT & System Commissioning Tests for Other Facilities	45	01-Oct-23	14-Nov-23	02-Jun-23	17-Jul-23	-121	AS510100, AS505200, AS505700, AS506000, AS506100, AS506200, AS506300, AS505400, AS505600, AS508100, AS507200, AS507300, AS502220, AS503440, AS502520, AS506500b, AS506500, AS501980	AS512200a, AS512100, AS511310n
Building Services		420	11-Sep-22	04-Nov-23	09-Sep-22	02-Nov-23	-2		
AS507000	FS Installation - Conduits, Trunking, & Pipeworks	240	11-Sep-22	08-May-23	09-Sep-22	06-May-23	-2	AS503180, AS509300	AS507100, AS509340, AS508110g
AS507100	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	240	10-Mar-23	04-Nov-23	08-Mar-23	02-Nov-23	-2	AS507000, AS503200, AS504410a, AS502320	AS509120
AS507200	Installation of Control & Monitoring System	120	11-Apr-23	08-Aug-23	02-Feb-23	02-Jun-23	-68	AS503260, AS501720	AS511300b, AS106300, AS512380f, AS512390f, AS512400f, AS512410f
AS507300	Installation of CCTV System	150	09-Jan-23	07-Jun-23	03-Jan-23	02-Jun-23	-6	AS503280	AS511300b, AS512380f, AS512390f, AS512400f, AS512410f
AS508115	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	06-May-23	06-May-23	53		AS508120g
Testing & Commissioning		422	04-Sep-23	29-Oct-24	18-May-23	07-Apr-24	-206		
T&C of Control Monitoring System		270	04-Sep-23	30-May-24	12-Jul-23	07-Apr-24	-54		



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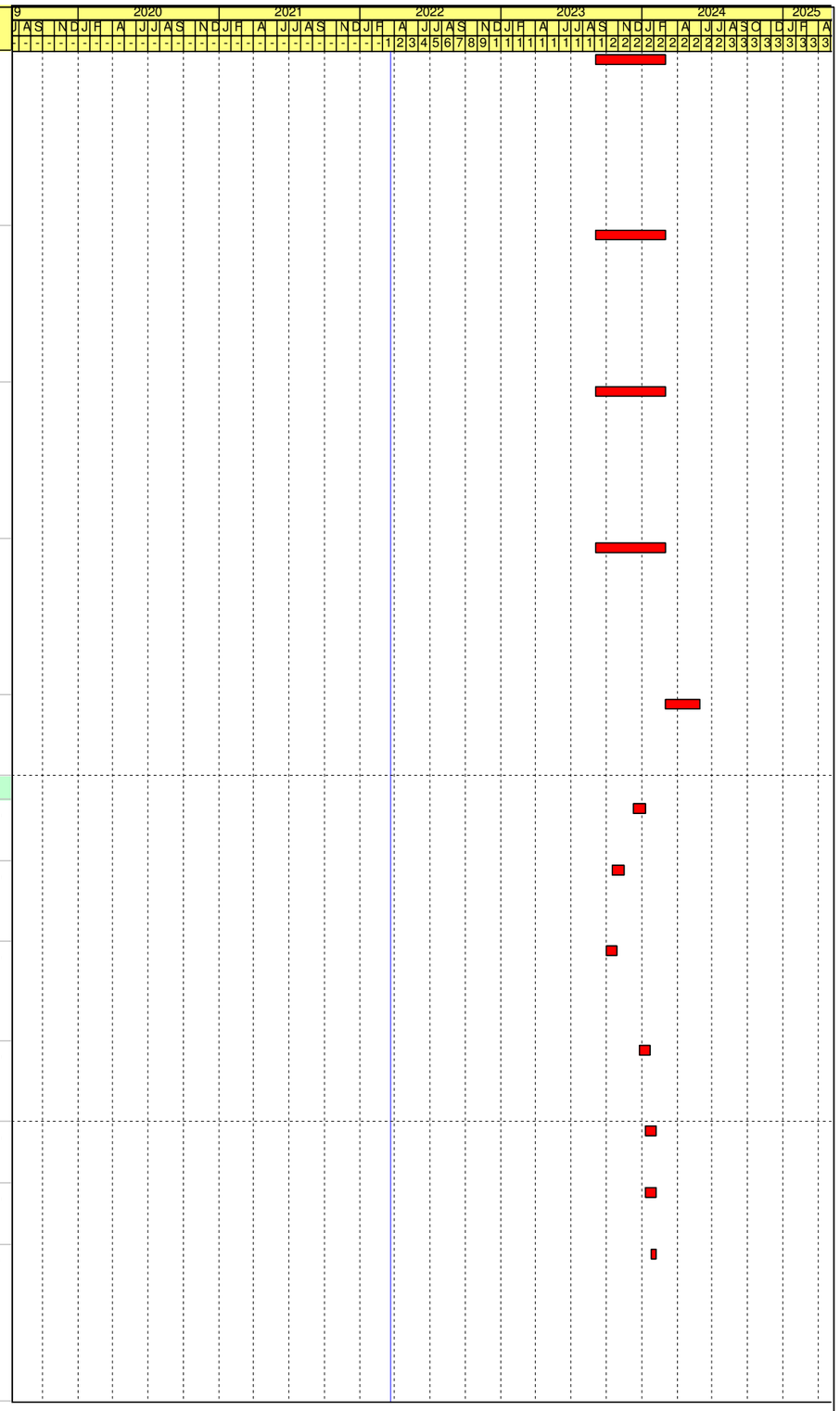
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS512380f	SAT of SCADA System	180	04-Sep-23	01-Mar-24	12-Jul-23	08-Jan-24	-54	AS507200, AS507300, AS106300, AS504450, AS503280, AS503260, AS502400, AS502380, AS508130g	AS512420f
AS512390f	SAT of PMS	180	04-Sep-23	01-Mar-24	12-Jul-23	08-Jan-24	-54	AS507200, AS507300, AS106300, AS504450, AS503280, AS503260, AS502400, AS502380	AS512420f
AS512400f	SAT of CMMS	180	04-Sep-23	01-Mar-24	12-Jul-23	08-Jan-24	-54	AS507200, AS507300, AS106300, AS504450, AS503280, AS503260, AS502400, AS502380	AS512420f
AS512410f	SAT of IDMS	180	04-Sep-23	01-Mar-24	12-Jul-23	08-Jan-24	-54	AS507200, AS507300, AS106300, AS504450, AS503280, AS503260, AS502400, AS502380	AS512420f
AS512420f	Overall Testing for Whole System	90	02-Mar-24	30-May-24	08-Jan-24	07-Apr-24	-54	AS512380f, AS512390f, AS512400f, AS512410f	AS003520
T&C of E&M Process		397	29-Sep-23	29-Oct-24	18-May-23	07-Apr-24	-206		
AS510200a	System Commissioning Tests for THP System	30	10-Dec-23	08-Jan-24	18-May-23	17-Jun-23	-206	AS510100, AS506600	AS512200a, AS510800, AS512100
AS510400	System Commissioning Tests for Sludge Dewatering System	30	16-Oct-23	14-Nov-23	18-May-23	17-Jun-23	-151	AS510300, AS502400, AS502380, AS506500	AS512200a, AS510800, AS512100, AS013440f
AS510600	System Commissioning Tests for Biogas Storage System	30	29-Sep-23	28-Oct-23	18-May-23	17-Jun-23	-134	AS510500	AS512200a, AS510800, AS511000, AS512100, AS509420a
AS510800	System Commissioning Tests for Sludge Digestion System	30	25-Dec-23	23-Jan-24	02-Jun-23	02-Jul-23	-206	AS510700, AS510400, AS510600, AS510200a	AS512200a, AS511000, AS511200, AS512100
AS511000	System Commissioning Tests for Gas Burning System	30	09-Jan-24	07-Feb-24	17-Jun-23	17-Jul-23	-206	AS510900, AS510600, AS510800	AS512200a, AS512100
AS511200	System Commissioning Tests for CHP System	30	09-Jan-24	07-Feb-24	17-Jun-23	17-Jul-23	-206	AS511100, AS510800, AS509300b	AS512200a, AS512100, AS013480f
AS512100	Seeding	14	25-Jan-24	07-Feb-24	03-Jul-23	17-Jul-23	-206	AS511300b, AS511000, AS510600, AS510800, AS511200, AS510400, AS510200a, AS511350n	AS011540a, AS512200a



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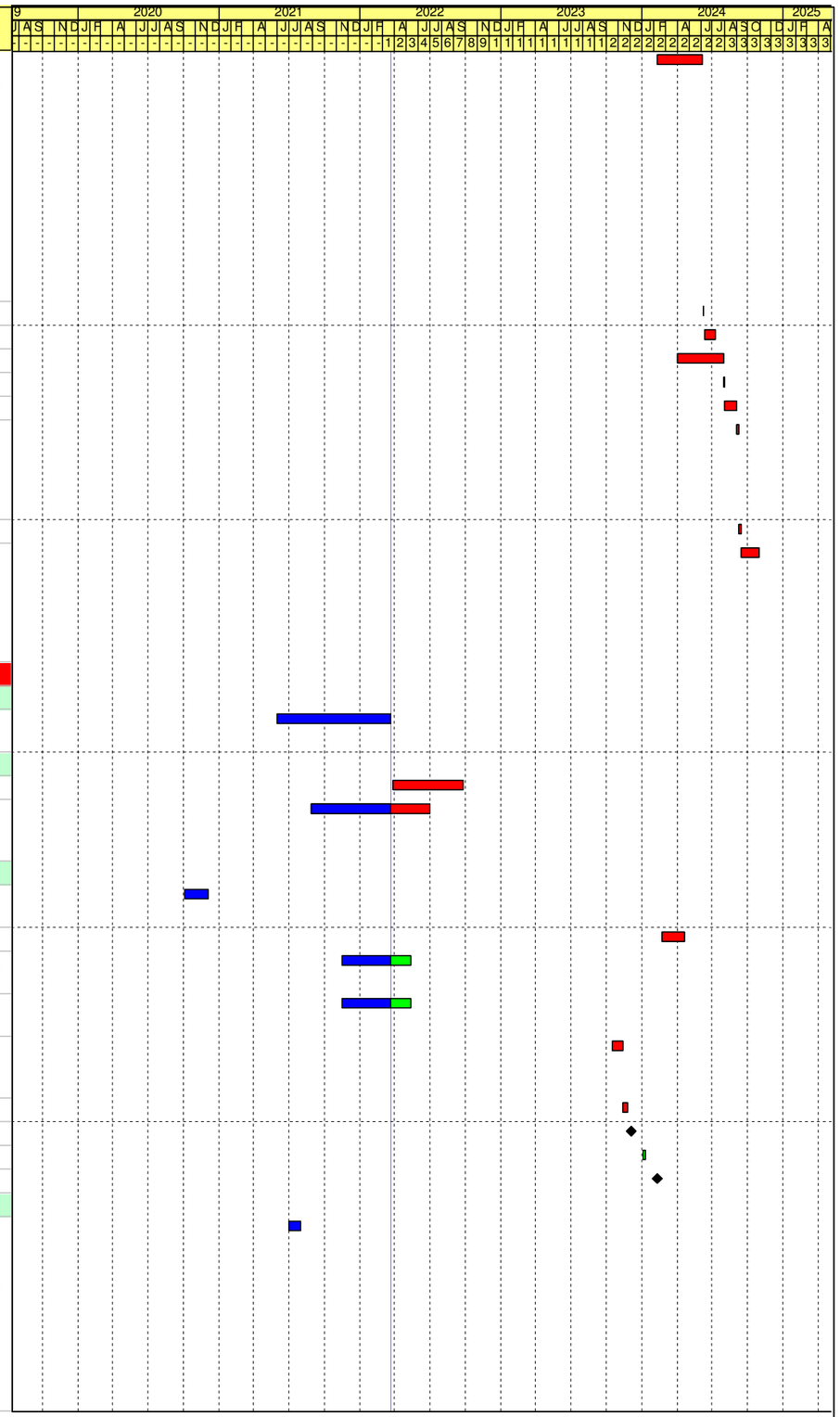
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS512200a	Process Start Up - Digester 1	120	08-Feb-24	06-Jun-24	17-Jul-23	14-Nov-23	-206	AS511300b, AS511000, AS510600, AS510800, AS511200, AS510400, AS510200a, AS512100, AS509440a, AS502360, AS502410, AS106300, AS511350n	AS512500a, AS512300a, AS012340a, AS155250e, AS155270e
AS512300a	Notice to Commence Phase 1 System Commissioning - Digester 1	3	07-Jun-24	09-Jun-24	06-Jan-24	09-Jan-24	-153	AS512200a	AS512400a
AS512400a	Phase 1 System Commissioning - Digester 1	30	10-Jun-24	09-Jul-24	09-Jan-24	08-Feb-24	-153	AS512300a	AS512800a
AS512500a	Process Start Up - Digester 2	120	01-Apr-24	29-Jul-24	08-Sep-23	06-Jan-24	-206	AS512200a	AS512600a
AS512600a	Notice to Commence Phase 1 System Commissioning - Digester 2	3	30-Jul-24	01-Aug-24	06-Jan-24	09-Jan-24	-206	AS512500a	AS512700a
AS512700a	Phase 1 System Commissioning - Digester 2	30	02-Aug-24	31-Aug-24	09-Jan-24	08-Feb-24	-206	AS512600a	AS512800a
AS512800a	Phase 2 System Commissioning - Digester 1 & 2	7	01-Sep-24	07-Sep-24	08-Feb-24	15-Feb-24	-206	AS512700a, AS512400a	AS512900a, AS011540a, AS012140a, AS155330e, AS155300
AS512900a	Notice to Commence Plant Commissioning	7	08-Sep-24	14-Sep-24	15-Feb-24	22-Feb-24	-206	AS512800a	AS513000a
AS513000a	Plant Commissioning Tests	45	15-Sep-24	29-Oct-24	22-Feb-24	07-Apr-24	-206	AS512900a, AS509520a, AS106300, AS504450, AS509362b, AS155300	AS003520, AS011540a
Statutory Submission / Inspection		1079	03-Oct-20 A	20-Apr-24	23-Feb-22	18-Apr-24	-2		
CLP Submission		275	30-May-21 A	21-Mar-22	01-Jan-23	02-Jan-23	287		
AS512375f	Submission & Approval of Electrical Schematic Wiring Diagram to CLP	275	30-May-21 A	21-Mar-22	01-Jan-23	02-Jan-23	287		AS509980
EPD Submission / Inspection		392	28-Aug-21 A	23-Sep-22	23-Feb-22	22-Aug-22	-33		
AS509500a	EPD Submission & Approval for Air Pollution Control - Genset	180	28-Mar-22	23-Sep-22	23-Feb-22	22-Aug-22	-33	AS201100	AS506500b
AS509520a	EPD Submission & Approval for Air Pollution Control - CHP & THP	180	28-Aug-21 A	30-Jun-22	08-Apr-22	09-Apr-22	-83	AS082330	AS513000a, AS505000, AS503100
EMSD Submission / Inspection		1079	03-Oct-20 A	20-Apr-24	25-Apr-22	18-Apr-24	-2		
AS509370b	BEEO Stage one: Submit EE1 & EE-SU to EMSD	60	03-Oct-20 A	02-Dec-20 A	25-Apr-22	25-Apr-22		AS201500	AS504000
AS509375f	BEEO Stage two: Submit EE2 & EE-SU to EMSD	60	21-Feb-24	20-Apr-24	19-Feb-24	18-Apr-24	-2	AS509200	AS003600b
AS509380b	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	180	15-Nov-21 A	13-May-22	29-Apr-22	22-Jun-22	40	AS020170a	AS509420a, AS509400a
AS509400a	Application for Construction Approval of Notifiable Gas Installation (Form 104)	180	15-Nov-21 A	13-May-22	29-Apr-22	22-Jun-22	40	AS020170a, AS509380b	AS509420a, AS504500
AS509420a	Application for Approval of Use of Notifiable Gas Installation (Form 105)	28	15-Oct-23	11-Nov-23	05-Jun-23	03-Jul-23	-132	AS509400a, AS510600, AS509380b	AS509440a
AS509440a	EMSD Inspection - Gas Holding Tanks	14	12-Nov-23	25-Nov-23	03-Jul-23	17-Jul-23	-132	AS509420a	AS512200a
AS509450f	Form 5 Submission to EMSD - Lift Installation	0	05-Dec-23		31-Jan-24		58	AS504460	AS509460f
AS509460f	EMSD Inspection - Lift Installation	7	04-Jan-24	10-Jan-24	01-Mar-24	08-Mar-24	58	AS509450f	AS509470f
AS509470f	Issuance of Form 6 - Lift Installation	0		09-Feb-24		07-Apr-24	58	AS509460f	AS003520
WSD Submission / Inspection		837	01-Jul-21 A	15-Oct-23	07-Jul-22	07-Apr-24	175		
AS509300	Submit WWO46 Part I / II to WSD (FS/PD)	30	01-Jul-21 A	30-Jul-21 A	07-Jul-22	07-Jul-22		AS201800, AS201100, AS201200, AS201300, AS201500, AS201700	AS509340, AS507000, AS503180, AS504400a, AS502300, AS502340, AS503220, AS504420a, AS507700, AS508110g



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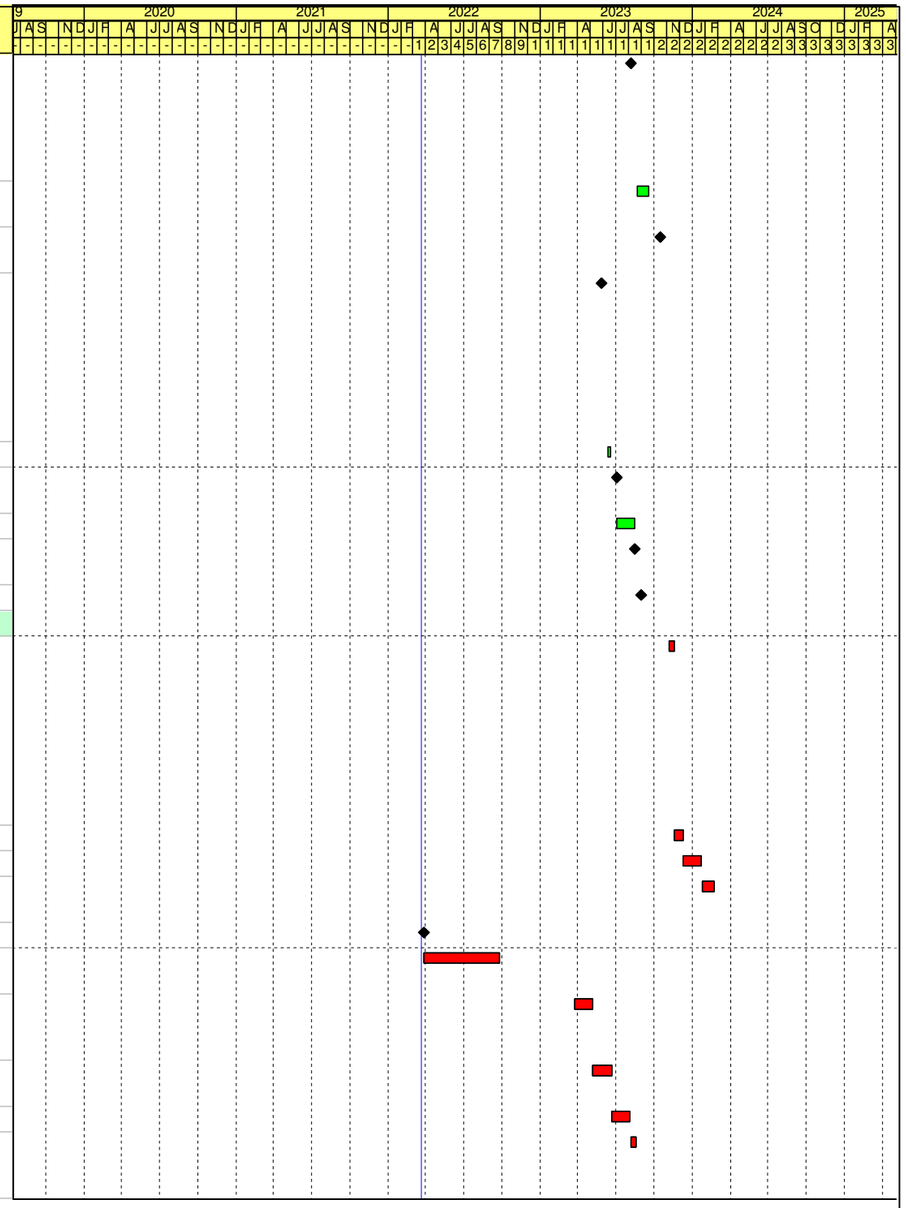
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
AS509340	Submit WWO46 Part IV to WSD (FS)	0	07-Aug-23		25-Aug-23		18	AS509300, AS507000, AS504400a, AS503180, AS502300, AS508110g	AS509360, AS509362b
AS509360	WSD Inspection (FS)	28	21-Aug-23	17-Sep-23	08-Sep-23	05-Oct-23	18	AS509340	AS509200, AS509362b
AS509362b	Issuance of FS Water Certificate	0		15-Oct-23		02-Nov-23	18	AS509340, AS509360	AS513000a, AS509120
AS509370f	Submit WWO46 Part IV to WSD (PD)	0	29-May-23		04-Jan-24		221	AS507700, AS507800, AS507900, AS508000, AS508100, AS504420a, AS503220, AS502340	AS509380f
AS509380f	WSD Inspection	7	12-Jun-23	18-Jun-23	18-Jan-24	25-Jan-24	221	AS509370f	AS509390f
AS509390f	Issuance of Form WWO46 Part Va	0		02-Jul-23		08-Feb-24	221	AS509380f	AS509410f, AS509400f
AS509400f	System Flushing / Sampling	45	03-Jul-23	16-Aug-23	08-Feb-24	24-Mar-24	221	AS509390f	AS509410f
AS509410f	Issuance of Form WWO46 Part Vb	0		16-Aug-23		24-Mar-24	221	AS509390f, AS509400f	AS509420f
AS509420f	Issuance of Water Certificate	0		30-Aug-23		07-Apr-24	221	AS509410f	AS003520
FSD Submission / Inspection		695	28-Mar-22	20-Feb-24	23-Feb-22	18-Feb-24	-2		
AS509120	Prepare & Submit FSI/314 & FSI/501	14	05-Nov-23	18-Nov-23	03-Nov-23	16-Nov-23	-2	AS502320, AS503200, AS507100, AS504410a, AS509300b, AS509362b, AS508120g, AS502370n, AS502360n	AS509120a
AS509120a	FSD Review & Approval of FSI/314 & FSI/501	21	19-Nov-23	09-Dec-23	17-Nov-23	07-Dec-23	-2	AS509120	AS509140a
AS509140a	F.S. Inspection, Defects Rectification & Re-inspection	45	10-Dec-23	23-Jan-24	08-Dec-23	21-Jan-24	-2	AS509120a	AS509200
AS509200	Issuance of Acceptance Letter	28	24-Jan-24	20-Feb-24	22-Jan-24	18-Feb-24	-2	AS509140a, AS509360	AS003520, AS509375f
AS509220	Application of D.G. Licence	0	28-Mar-22		23-Feb-22		-33	AS201100	AS509240
AS509240	Processing of D.G. Licence Application	180	28-Mar-22	23-Sep-22	23-Feb-22	22-Aug-22	-33	AS509220	AS509250b, AS506500b
AS509250b	Apply for D.G. Inspection	45	23-Mar-23	06-May-23	18-Feb-23	04-Apr-23	-33	AS509240, AS506500b, AS502220n	AS509300b, AS509260
AS509260	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	45	07-May-23	20-Jun-23	04-Apr-23	19-May-23	-33	AS509250b	AS509300b, AS509280b
AS509280b	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	45	21-Jun-23	04-Aug-23	19-May-23	03-Jul-23	-33	AS509260	AS509300b
AS509300b	Issue D.G. Licence	14	05-Aug-23	18-Aug-23	03-Jul-23	17-Jul-23	-33	AS509260, AS509280b, AS509250b	AS509120, AS511200



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Contract No. DE/2018/04
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
- E&M Works for Sewage Treatment Facilities
3 Month Rolling Programme (From 01/04/2022 to 01/07/2022)

Updated on: **20-May-22**

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
Drawing Submisssion for Key Dates												
KD1A: Submission of civil and dimensional requirement drawing, electrical schematic drawings, etc. from formation level up to +8mPD in accordance with the contract requirement of Contract No. DC/2018/07 to carry out civil works construction	KD1A: Submission of Civil Requirement Drawing (Final)	8/28/2020	9/18/2020	11/5/2020	11/5/2020	Task Completed	no.	26	26	100%		
	KD1A: Submission of Electrical Schematic Drawing (Final)	7/15/2020	7/15/2020	11/5/2020	11/5/2020	Task Completed	no.	11	11	100%		
	KD1A: 6 November 2020											
KD1B: Submission of remaining civil and dimenssional requirement drawings, electrical schematic drawing, etc. in accordance with the contract requirement of Contract No. DC/2018/07 to carry out civil works construction	KD1B: Submission of Civil Requirement Drawing (First Draft)	9/30/2020	9/28/2020	12/30/2020	3/31/2021	Task Completed	no.	47	47	100%		
	KD1B: Submission of Civil Requirement Drawing (Final)	11/6/2020	11/5/2020	6/4/2021	6/4/2021	Task Completed	no.	47	47	100%		All the CWR Drawings were submitted.
	KD1B: 4 June 2021											
KD3A: 04SC010 - Dismantle & Removal of Emergency Generators in existing Power House	Submission of subletting package for acceptance (C9)	3/1/2020	2/24/2020	3/14/2020	4/22/2020	Task Completed				100%	-	Bestwise resubmitted on 22 April 2020
	Acceptance of subletting package (C9)	3/14/2020	5/6/2020	4/1/2020	5/5/2020	Task Completed				100%	-	AECOM accepted subletting package on 5 May 2020
	Tender invitation (C9)	4/1/2020	5/15/2020	4/15/2020	5/22/2020	Task Completed				100%	-	Invitation to tender was commenced on 12 May 2020 and tender returned on 22 May 2020
	Tender award (C9)	4/15/2020	5/22/2020	4/29/2020	5/26/2020	Task Completed				100%	-	Bestwise submitted tender report on 26 May 2020
	Acceptance of tender award (C9)	-	-	-	6/6/2020	Task Completed				100%	-	AECOM accepted tender report on 2 June 2020, Letter of Acceptance was issued on 6 June
	Dismantle of existing BS equipment		6/15/2020		7/25/2020	Task Completed				100%		
	Removal of emergency generators	6/1/2020	6/15/2020	6/30/2020	7/25/2020	Task Completed				100%		
KD3A: 04SC010 - Dismantle & Removal of Emergency Generators in existing Power House	KD3A: Testing and Comissioning	7/1/2020	7/3/2020	7/29/2020	7/29/2020	Task Completed				100%		First test was conducted on 3 July 2020. Remaining test would be subjected to completion of civil works. KD3A - 29 July 2020. Joint Site Inspection was conducted on 24 July 2020 and Notice of completion of work was submitted on 28 July 2020
	KD3A: 29 July 2020											
	Submission of onsite survey plan on E&M aspects for	3/1/2020	3/25/2020	3/30/2020	4/27/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 27 April 2020
	Acceptance of submission of onsite survey plan	3/1/2020	3/25/2020	3/30/2020	5/22/2020	Task Completed				100%	-	AECOM accepted the onsite survey plan on 22 May 2020. Onsite coordination with ST1
KD3B: 6B.2.15 Operation Restoration of Existing Primary Sedimentation Tank (PST) No. 4 and 6	KD3B: Submission of onsite survey report	7/11/2020	7/20/2020	7/16/2020	7/30/2021	Task Completed				100%	Bestwise	- Onsite survey conducted from 20 July 2020 to 22 July 2020. Bestwise submitted survey report on 5 August 2020. AECOM commented on 19 Aug 2020. Bestwise to resubmit upon conducting the remaining onsite survey. (Done) - Bestwise revised survey plan for remaining onsite checking of PST No. 6 on 1 Sep 2020. After discussion with plant operator, the remaining survey would be conducted after the dismantling work of PSTs. Formal survey record for PST No.4 was submitted on 24 May 2021. - Remaining survey (level of bridge & scraper) for PST 6 completed. - Formal survey report shall be submitted on 30 Jul 2021.
	KD3B: Acceptancce of onsite survey report	7/17/2020	8/6/2020	7/23/2020	8/6/2021	Task Completed				-		Acceptance for the center point, vertical and horizontal alignment of ductfoot installation of PST No.4 shall subject to joint site meeting conducted on 2 June 2021. Refer to E-RISC no. 000014A & 000016 result for details.
	KD3B: Preparation of procurement package (C11)	12/2/2019	8/1/2020	4/13/2020	8/7/2020	Task Completed				100%		
	KD3B: Tender invitation - Clarifier (C11)	12/2/2019	8/14/2020	4/13/2020	8/26/2020	Task Completed				100%		
	KD3B: Tender Award - Clarifier (C11)	12/2/2019	8/26/2020	4/13/2020	9/25/2020	Task Completed				100%		
	KD3B: Acceptance of tender award (C11)	12/2/2019	9/11/2020	4/13/2020	9/18/2020	Task Completed				-		
	KD3B: Tender invitation - DI Pipe (C11)	12/2/2019	1/13/2021	4/13/2020	1/19/2021	Task Completed				100%		
	KD3B: Tender Award - DI Pipe (C11)	12/2/2019	1/21/2021	4/13/2020	1/23/2021	Task Completed				100%		
	KD3B: Tender invitation - LCP (C11)	12/2/2019	2/3/2021	4/13/2020	2/5/2021	Task Completed						
	KD3B: Tender Award - LCP (C11)	12/2/2019	2/6/2021	4/13/2020	2/8/2021	Task Completed				100%		
	KD3B: Preparation of subletting package for dismantling work (C9)	12/2/2019	9/21/2020	4/13/2020	10/21/2020	Task Completed				100%		
	KD3B: Tender invitation for dismantling work (C9)	12/2/2019	11/12/2020	4/13/2020	11/19/2020	Task Completed				100%		
	KD3B: Tender Award for dismantling work (C9)	12/2/2019	11/20/2020	4/13/2020	11/22/2020	Task Completed				100%		
	KD3B: Acceptance of tender award for dismantling work (C9)	12/2/2019	11/23/2020	4/13/2020	12/1/2020	Task Completed				100%		

	KD3B: Preparation and Acceptance of subletting package for installation work (C9)	12/2/2019	12/15/2020	4/13/2020	3/1/2021	Task Completed				100%		
	KD3B: Tender invitation for installation work (C9)	12/2/2019	3/3/2021	4/13/2020	3/10/2021	Task Completed				100%		
	KD3B: Tender Award for installation work (C9)	12/2/2019	3/12/2021	4/13/2020	3/15/2021	Task Completed				100%		
	KD3B: Acceptance of tender award for installation work (C9)	12/2/2019	3/15/2021	4/13/2020	3/19/2021	Task Completed				100%		
	Submission and Acceptance of Drawing Submission	4/14/2020	8/5/2020	9/10/2020	1/11/2021	Task Completed				100%		
	Submission and Acceptance of P&M Submission	4/14/2020	8/5/2020	9/10/2020	6/30/2021	Task Completed						Formal resubmission of P&M for Rotating Bridge Scraper P&M-0024 (Rev.1) was submitted to AECOM on 24 June 2021 and is accepted by AECOM. P&M submission for Local Control Panel Rev.3 was submitted on 20 Mar 2021 and AECOM accepted on 26 Mar 2021.
	Submission and Acceptance of FAT Plan	12/1/2020	1/27/2021	12/15/2020	2/16/2021	Task Completed				100%		
	Submission and Acceptance of SAT Plan	3/1/2021	3/1/2021	4/1/2021	5/5/2021	Task Completed				100%		Bestwise submitted on 13 Apr 2021. AECOM accepted with comments on 5 May 2021.
	Submission and Acceptance of Design Submission (Support to DN700 Feed Pipe)	N/A	2/22/2021	N/A	5/13/2021	Task Completed						Advanced Calculation was provided on 17 Mar 2021 and revised on 18 Mar 2021. Bestwise proposed to use the existing support. Calculation was provided on 1 Apr 2021 via email. Dimension of support column was checked again on 14 Apr 2021. Proposal submitted on 30 Apr 2021. AECOM accepted with comments on 13 May 2021.
	Submission and Acceptance of Design Submission (Stainless steel support to FRP Cover of Effluent	N/A	2/24/2021	N/A	4/19/2021	Task Completed				100%		Advanced Calculation was provided on 17 Mar 2021 and revised on 18 Mar 2021. Bestwise formal submitted on 26 Mar 2021. AECOM accepted with comment on 19 Apr 2021.
	KD3B: Dismantle and Removal of E&M Equipment at PST No. 6	2/9/2021	12/21/2020	2/19/2021	1/15/2021	Task Completed				100%		
	Flow Diversion and drain out PST No.4	N/A	1/25/2021	N/A	3/26/2021	Task Completed				100%		
	KD3B: Dismantle and Removal of E&M Equipment at PST No. 4	2/9/2021	3/5/2021	2/19/2021	4/1/2021	Task Completed				100%		
	KD3B: Material Manufacturing (Clarifier)	9/12/2020	12/16/2020	12/12/2020	2/20/2021	Task Completed				100%		The clarifier would be manufactured in 2 batches (rotating bridge related and FRP launder cover). Manufaturing instruction was issued on 16 Dec 2020. Jash suggested 1st batch of material (clarifier) would be ready for shipping on 20 Feb 2021 and 2nd batch of material (FRP Launder Cover) would be ready for shipping on 13 Mar 2021. (To be confirmed by Jash by providing shipment booking, but supplier cannot provide updated information at thie moment due to second surge of COVID-19 in india)
	KD3B: FAT of the Clarifier	N/A	2/24/2021	N/A	3/1/2021	Task Completed				100%		FAT Report submitted on 24 Feb 2021 and AECOM accepted subject to comment on 1 Mar 2021
	KD3B: Material Delivery (Clarifier)	12/13/2020	2/27/2021	1/18/2021	4/6/2021	Task Completed				100%		
	KD3B: Material Deliver to Site (Clarifier)	N/A	4/6/2021	N/A	4/8/2021	Task Completed				100%		
	KD3B: Material Manufacturing (DI pipes and fittings)	9/11/2020	1/26/2021	1/18/2021	3/15/2021	Task Completed				100%		Extracted from C9 package to C11 package to suit the installation programme
	KD3B: Material Delivery (DI pipes and fittings)	9/11/2020	3/16/2021	1/18/2021	3/24/2021	Task Completed				100%		
	KD3B: Material Delivery (FRP Cover)	N/A	3/26/2021	N/A	6/21/2021	Task Completed				100%		All the FRP covers were delivered to site.
	KD3B: Material Manufacturing (LCP)	9/11/2020	3/4/2021	1/18/2021	4/16/2021	Task Completed				100%		
	KD3B: Material Delivery (LCP)	9/11/2020	4/17/2021	1/18/2021	4/30/2021	Task Completed				100%		
	KD3B: Retrofitting Concrete Structure of PST No. 4	N/A	4/2/2021	N/A	4/22/2021	Task Completed				100%		
	KD3B: Installation of E&M Equipment at PST No. 4	2/27/2021	4/5/2021	5/10/2021	5/17/2021	Task Completed						
	KD3B: Testing and Comisssioning for PST No. 4	5/11/2021	4/19/2021	6/9/2021	7/26/2021	Task Completed						Wet test for PST 4 completed on 26 July 2021.
	Flow Diversion from PST No.6 to Temporary Filtrate Equalization Tank	N/A	5/19/2021	N/A	5/20/2021	Task Completed				100%		Filtrate feeding to TFES was resumed on 19/5/2021 with fine-tuned control.
	Removal of Accumulated Sludge Inside PST No. 6	N/A	5/19/2021	N/A	5/30/2021	Task Completed				100%		NCE-0229, this includes removal of floating scum/ sludge and clearance of blockage of drain pipe
	KD3B: Retrofitting Concrete Structure of PST No. 6	N/A	5/28/2021	N/A	6/24/2021	Task Completed				100%		
	KD3B: Mechanical Installation of E&M Equipment at PST No. 6	2/27/2021	5/31/2021	5/10/2021	7/21/2021	Task Completed				100%		This includes PST Influent feed pipe, center bearing & slip ring assembly, motor & gearbox assembly, rotating bridge sludge & scum scraper assembly, circular baffle diffuser box, v-notched weir plate, scum baffle plate, scum collection box and FRP cover.
	KD3B: Electrical Installation of E&M Equipment at PST No. 6	2/27/2021	6/9/2021	5/10/2021	7/21/2021	Task Completed				100%		This includes installation of LCP, cable laying & terminations.
	KD3B: Testing and Comisssioning for PST No. 6	5/11/2021	6/22/2021	6/9/2021	8/20/2021	Task Completed				100%		Wet test (1st) completed on 20 Aug 2021 and wet test (2nd) completed on 3 Sep 2021.
KD3B: 6B.2.15 Operation Restoration of Existing Primary Sedimentation Tank (PST) No. 4 and 6	KD3B: System Commissioning for PST No. 4 & 6	N/A	6/22/2021	N/A	9/3/2021	Task Completed				100%		Wet test (2nd) for PST#6 completed on 3 Sep 2021 and pre-handover inspection arranged on 30 Aug 2021. Defect list (final) received on 17 Sep 2021 and defect rectification was completed. Site training/ demonstration shall be conducted by end Feb and PMI modification work shall be completed by end March.
	KD3B: 9 June 2021											
Section 1 of Works (outstanding works list)												

6B.2.12 Provision of New Replacement Filter Plates	Submission of onsite survey plan for acceptance	3/1/2020	3/25/2020	3/30/2020	4/21/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 21 April 2020
	Acceptance of submission of onsite survey plan	3/1/2020	3/25/2020	3/30/2020	5/12/2020	Task Completed				100%	-	Survey plan acceptance received on 12 May 2020. Onsite discussion with ST1 was
	Submission of onsite survey report	5/21/2020	5/21/2020	5/29/2020	5/29/2020	Task Completed				100%		
	Acceptancce of onsite survey report	5/30/2020	5/30/2020	6/15/2020	6/15/2020	Task Completed				-		
	Preparation of procurement package (C11)	6/22/2020	6/22/2020	7/6/2020	7/14/2020	Task Completed				100%		
	Tender invitation (C11)	7/15/2020	7/15/2020	7/22/2020	7/24/2020	Task Completed				100%		
	Tender Award (C11)	7/23/2020	7/25/2020	7/29/2020	7/31/2020	Task Completed				100%		Revised survey report (second draft) was sent to AECOM on 21 Oct 2020. Technical
	Material Submission	8/21/2020	8/21/2020	8/28/2020	12/7/2020	Task Completed				100%		Material submission (Rev.1) resubmitted on 7 Dec 2020. AECOM accepted subject to comments on 24 Dec 2020. Material submission (Rev. 2) resubmitted on 12 Jan 2021. AECOM accepted subject to comment on 22 Jan 2021.
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Delivery	12/1/2020	12/1/2020	8/8/2021	8/8/2021	Task Completed				-		"Filter Press Plates and Cloths" were handed over to DSD.
6B.2.12 Provision of Membrane Filter Press System at Existing Sludge Press House	Submission of onsite survey plan for acceptance	3/1/2020	3/25/2020	3/30/2020	Task to be deleted	Task to be deleted				-	-	PPMI No.5 was issused by PM on 24 April 2020. Bestwise is requested to submit quotation on delete the provision of one (1) no. of membrane filter press system in pursuant to Particular Specification Clause 6B.2.12.
6B.2.16 Temporary Filtrate Equalisation System (Sub-programme was provided by Bestwise)	Submission of onsite survey plan on E&M aspects for acceptance	3/1/2020	4/1/2020	3/30/2020	5/7/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 7 May 2020
	Acceptance of submission of onsite survey plan	3/1/2020	4/1/2020	3/30/2020	5/23/2020	Task Completed				100%	-	AECOM accepted the onsite survey plan on 23 May 2020
6B.2.16 Temporary Filtrate Equalisation System (Sub-programme was provided by Bestwise)	Submission and Acceptance of ELS Design for Lifting Well	15/06/2020 -> 17/08/2020*	9/2/2020	30/07/2020 -> 30/11/2020*	2/9/2021	Task Completed				100%	Bestwise	- * = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. Bestwise submitted Rev.0 on 21 Oct 2020 and resubmitted Rev.2 on 23 Jan 2021. - AECOM provide consent for the ELS temporary works on 9 Feb 2021. AECOM accepted on 9 Feb 2021.
	Submission and Acceptance of Design for Filtrate Lifting Well Construction	15/06/2020 -> 17/08/2020*	9/2/2020	30/07/2020 -> 30/11/2020*	1/15/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. AECOM commented on 21 Dec 2020. Bestwise submitted Rev.0 on 2 Nov 2020 and Rev.1 on 8 Jan 2021.
	Submission and Acceptance of Design of FRP Filtrate Equalization Tank	15/06/2020 -> 07/09/2020**	9/2/2020	30/07/2020 -> 22/10/2020**	1/15/2021	Task Completed				100%		** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. - Bestwise submitted Rev.0 on 08 Jan 2020.
	Submission and Acceptance of Design of footing for FRP Filtrate Equalization Tank	15/06/2020 -> 07/09/2020**	9/2/2020	30/07/2020 -> 22/10/2020**	2/19/2021	Task Completed				100%		** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. - Design of Footing was submitted on 8 Feb 2021.
	Submission and Acceptance of Design of Formwork & Flasework Design for Construction of Lifting Well	15/06/2020 -> 17/08/2020*	9/2/2020	30/07/2020 -> 30/11/2020*	1/15/2021	Task Completed				100%		- * = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020. - Bestwise submitted Rev.0 on 12 Jan 2020.
	Submission and Acceptance of Contractor's Design for Temporary Filtrate Equalisation System (E&M Works) (CDS010-2)	01/06/2020 -> 7/9/2020**	7/5/2020	30/07/2020 -> 30/11/2020**	7/30/2021	Task Completed				-	Bestwise	** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - Bestwise submitted (CDS 0010 Rev.0) on 6 August 2020, AECOM commented on 27 Aug 2020. Bestwise to resubmit (Separate submissions P&M0049, DWG0038, CDS0026, P&M0008, P&M0004, CDS0037, CDS0027, DWG0040 were submitted) - Control philosophy (CDS0027 Rev.0) was submitted on 22 Dec 2020. AECOM commented on 13 Jan 2021, Bestwise resubmitted on 27 May 2021 formally, AECOM accepted with comments on 4 Jun 2021.
	Drawing Submission	01/06/2020 -> 17/08/2020*	9/29/2020	30/07/2020 -> 30/11/2020*	3/5/2021	Task Completed				100%	Bestwise	- '* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020. - Bestwise submitted (rev.0) on 29 Oct 2020 and resubmitted (rev.2) on 25 Jan 2021, AECOM accepted on 5 Feb 2021.
	Material Submission	01/06/2020 -> 17/08/2020*	11/29/2020	30/07/2020 -> 30/11/2020*	2/25/2021	Task Completed				100%	Bestwise	** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - P&M submission of temporary filtrate equalization tank (P&M 0030 Rev.1) on 29 Jan 2021. AECOM accepted subject to comments on 25 Feb 2021.
Subletting Package for Temporary Filtrate Equalization System	Tender invitation (C11) (EQT-002 & EQT-004)	4/17/2020	4/17/2020	5/7/2020	5/7/2020	Task Completed				100%		
	Tender award (C11) (EQT-002 & EQT-004)	4/14/2020	4/24/2020	5/13/2020	5/13/2020	Task Completed				100%	Bestwise	Bestwise submitted tender report on 29 April 2020 for filtrate pumps, AECOM commented on 29 May 2020, Bestwise to resubmit. Bestwise submitted tender report of instrument on 13 May 2020, AECOM noted on 26 May
	Acceptance of tender award (C11) (EQT-002 & EQT-	4/25/2020	4/25/2020	5/21/2020	5/21/2020	Task Completed				100%	Bestwise	
	Material Submission	20/07/2020 ->	10/16/2020	20/08/2020 -	2/5/2021	Task Completed				-	Bestwise	** = Change of material of temporary filtrate equalization tank from concrete to FRP on 18

	Submission of subletting package for acceptance (C9)	3/1/2020	7/13/2020	3/14/2020	7/13/2020	Task Completed				100%		
	Acceptance of subletting package (C9)	3/15/2020	7/14/2020	3/28/2020	7/14/2020	Task Completed				100%		
	Tender invitation (C9)	3/29/2020	7/15/2020	4/11/2020	7/22/2020	Task Completed				100%		
	Tender award (C9)	4/12/2020	7/23/2020	4/25/2020	8/13/2020	Task Completed				100%		
	Acceptance of tender award for civil construction work (C9)	26/04/2020	8/14/2020	5/5/2020	9/2/2020	Task Completed				100%		
	Preparation of subletting package for mech work (C9)	01/08/2020 -> 01/12/2020*	1/25/2021	08/08/20 -> 08/12/2020*	3/1/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020. Subletting package would was submitted on 25 Feb 2021 and AECOM accepted on 1 Mar
	Tender invitation for mech work (C9)	08/08/20 ->	3/2/2021	15/08/2020 -	3/9/2021	Task Completed				100%		Tender invitation was conducted on 2 Mar 2021 and returned on 9 Mar 2021
	Tender Award for mech work (C9)	15/08/2020 ->	3/10/2021	22/08/2020 -	3/15/2021	Task Completed				100%		Tender report was submitted on 15 Mar 2021
	Acceptance of tender award for mech work (C9)	22/08/2020 ->	3/15/2021	29/08/2020 -	3/19/2021	Task Completed				100%		Tender award on 19 Mar 2021.
	Preparation of subletting package for elect work (C9)	01/08/2020 -> 01/12/2020*	2/2/2021	08/08/20 -> 08/12/2020*	3/1/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020. Subletting package resubmitted on 26 Feb 2021 and AECOM accepted on 1 Mar 2021..
	Tender invitation for elect work (C9)	01/08/2020 ->	3/2/2021	15/08/2020 -	3/9/2021	Task Completed				100%		Tender invitation was conducted on 2 Mar 2021 and returned on 9 Mar 2021
	Tender Award for elect work (C9)	08/08/20 ->	3/10/2021	22/08/2020 -	3/15/2021	Task Completed				100%		Tender report was submitted on 15 Mar 2021
	Acceptance of tender award for elect work (C9)	15/08/2020 -> 15/12/2020*	3/15/2021	29/08/2020 - > 29/12/2020*	3/19/2021	Task Completed				100%		Tender award on 19 Mar 2021.
Construction of Temporary Filtrate Equalisation System	Construction of minor civil works under PMI 014	22/08/2020 -> 22/12/2020*	10/5/2020	10/15/2020	3/31/2021	Task Completed				100%	Bestwise	Utilities survey report of lifting well and EQ tank were submitted on 23 Sept 2020 and 29 Sept 2020. AECOM commented lifting well on 29 Sept 2020.
	RC Structure Works of lifting well	11/7/2020	1/12/2021	12/30/2020	2/25/2021	Task Completed				100%		
	Construction of concrete plinth for filtrate EQ tank	1/23/2021	2/8/2021	2/1/2021	2/26/2021	Task Completed				100%		
	Offsite fabrication and delivery of filtrate EQ tank	10/31/2020	1/16/2021	2/2/2021	3/4/2021	Task Completed				100%		First batch of filtrate EQ tank panel was delivered on 4 Mar 2021.
	Onsite assembly of filtrate EQ tank	2/2/2021	3/1/2021	3/12/2021	4/16/2021	Task Completed				100%		
6B.2.16 Temporary Filtrate Equalisation System	Mechanical Installation	3/17/2021	3/30/2021	4/12/2021	5/14/2021	Task Completed				-		
	Electrical Installation	3/13/2021	3/29/2021	4/15/2021	12/10/2021	Task Completed				-		PLC programme for water spray system (stage 1) is on-going, motorized gate valve for stage 2 under PMI is being fabricated and the delivery lead time is by end November.
	Testing and Comissioning	4/15/2021	4/22/2021	5/1/2021	6/15/2022	94%				-		Site Acceptance Test (72 hours) and defect rectification for BCM comments shall be completed by 15 June 2022.
6B.1.17 Overall plant treatment process review by the Treatment Process Specialist	Submission of Treatment Process Specialist's review report	6/1/2020	6/1/2020	6/30/2020	7/2/2020	Task Completed				-	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial process design evaluation was submitted on 20 May 2020. Design calculation submitted on
	Acceptance of submission for further design	6/14/2020	7/3/2020	6/30/2020	7/17/2020	Task Completed				-		
6B Overall plant process equipment sizing review	Submission of Contractor's Design Calculation for	6/1/2020	6/1/2020	6/30/2020	7/2/2020	Task Completed				-	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial
	Acceptance of submission for further detail design	6/14/2020	7/3/2020	6/30/2020	7/17/2020	Task Completed				-		
6B.2.1 Inlet Works	Submission of Contractor's Design for Inlet Works No. 1	9/6/2020	11/16/2020	5/14/2021	6/30/2022	93%				-	Bestwise	All finalized design calculations for Inlet Works no.1 shall be submitted by 30 June 2022.
	Submission of P&M Submission	9/6/2020	9/7/2020	5/14/2021	6/30/2022	94%						P&M0022 - Inlet Pumps (status: B) P&M0003 - Coarse Screens & Fine Screens (status: B) P&M0085 - Grit Traps (status: B) P&M0084 - Screw Compactor (status: B) P&M0042 - Screw Conveyors for Coarse Screens and Fine Screens (status: B) All P&M for Inlet Works no.1 shall be submitted by 30 June 2022.
	Submission of P&ID Drawing	9/6/2020	9/6/2020	5/14/2021	12/29/2020	Task Completed						PID (rev.B) submitted on 13 Nov 2020. AECOM accepted subject to comments on 29 Dec 2020.
	Submission of GA Drawing	9/6/2020	1/5/2021	5/14/2021	6/30/2022	92%						E&M GA submission DWG0082 resubmitted on 9 July 2021. AECOM commented on 19 Feb 2021. Bestwise reviewed GA in BIM with AECOM on 12 Jan 2022. Electrical GA DWG0095 resubmitted on 3 July 2021. AECOM commented on 21 Apr 2021. Bestwise reviewed GA in BIM with AECOM on 12 Jan 2022. All finalized drawings for Inlet Works no.1 shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 5, 12, 19/5/2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	6/30/2022	92%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for Inlet Works no.1 shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		
	Submission of detailed design for electrical installation for Inlet Works No. 1 (CDS021)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for Inlet Works No. 1 (CDS025-1)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						

	Submission of detailed design for electrical installation BS for Inlet Works No. 1 (CDS034-1)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of civil work requirements for Inlet Works No. 1 up to +8.0 mPD (CDS080-1)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for Inlet Works No. 1 up to +8.0 mPD (First Draft))	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	3	3	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for Inlet Works No. 1 up to +8.0 mPD (Final)	8/28/2020	9/18/2020	11/5/2020	11/5/2020	Task Completed	no.	3	3	100%	Bestwise	Bestwise resubmitted (rev.A) on 27 Oct 2020.
	KD1A: Submission of electrical schematic drawings for Inlet Works No. 1 (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	2	2	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for Inlet Works No. 1 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	2	2	100%	Bestwise	Bestwise submitted on 20 Oct 2020
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.2 Primary Sedimentation Tank No. 1-4	Submission of Contractor's Design for Primary Sedimentation Tanks No. 1-4	9/6/2020	12/28/2020	5/14/2021	6/30/2022	93%				-	Bestwise	PFD (rev.B) under DWG0004 submitted on 22 June 2021. Finalized design calculations for PST shall be submitted by 30 June 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	6/30/2022	93%						P&M0058 - Lamella Plate Settler (status: B) P&M0097 - Scum Skimmer and Scum Collection Pipe (status: C) P&M0086 - Sludge Bottom Scraper (status: C) P&M0051 - Drain Pump (status: C) P&M0044 - Primary Sludge Pump (status: B) Finalized material submissions for PST shall be submitted by 30 June 2022.
	Submission of P&ID Drawing	9/6/2020	10/2/2020	5/14/2021	6/24/2021	Task Completed						PID under DWG0037 (rev.1) submitted on 24 June 2021 and is accepted by AECOM.
	Submission of GA Drawing	9/6/2020	2/3/2021	5/14/2021	6/30/2022	92%						Mechanical GA was submitted on 19 Jun 2021. Electrical GA under DWG0103 (rev.1) was submitted on 6 Jul 2021 and is accepted by AECOM. Finalized drawings for PST shall be submitted by 30 June 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	6/30/2022	92%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawings for PST shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	4/2/2021	5/29/2021	6/30/2022	91%				-		Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for Primary Sedimentation Tanks (CDS025-2)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of civil work requirements for Primary Sedimentation Tanks up to +8.0 mPD (CDS080-2)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	4	4	100%		1st part of drafted drawing (2 nos.) was submitted on 23 Sept 2020. Remaining drawings (2 nos.) were submitted on 30 Sept 2020.
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	4	4	100%	Bestwise	Bestwise resubmitted (Rev.A) on 27 Oct & 13 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise submitted on 20 Oct 2020
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.3 Chemical Storage and Dosing System	Submission of Contractor's Design for Chemical Dosing System (CDS006)	9/6/2020	1/7/2021	5/14/2021	10/29/2021	Task Completed				-	Bestwise	Design calculation (rev.0) of CHS1 and TCHS submitted on 2 Sep 2020 and 28 Aug 2020, AECOM commented on 24 Sep and 6 Oct 2020, Bestwise submitted CDS0060 on 15 Jul 2021 and CDS0044 on 19 Jul 2021. Finalized design calculation for chemical systems was submitted on 29 Oct 2021.
	Submission of P&M Submission	9/6/2020	9/6/2020	5/14/2021	10/30/2021	Task Completed						Finalized material submissions for chemical system was submitted on 30 Oct 2021.
	Submission of P&ID Drawing	9/6/2020	12/11/2020	5/14/2021	6/29/2021	Task Completed						PID resubmitted under DWG0053 (rev.1) on 28 Jun 2021, DWG0057 (rev.1) on 29 Jun 2021 and DWG0058 (rev.1) on 29 Jun 2021.

	Submission of GA Drawing	9/6/2020	2/8/2021	5/14/2021	6/30/2022	92%						Electrical GA drawings for CS1 under DWG0096 submitted on 10 April 2021. AECOM accepted subject to comments on 17 Apr 2021. Mechanical GA drawings for CS1 submitted on 1 April 2021. AECOM commented on 24 April 2021. Bestwise resubmitted DWG0093 (rev.1) on 30 Jun 2021 and is accepted by AECOM. Mechanical GA for Temp CS submitted on 12 Jun 2021. All finalized drawings for chemical systems shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 17, 21, 28/4/2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	6/30/2022	92%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for chemical system shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/16/2020	Task Completed	no.	2	2	100%		1st draft of drawing submitted on 15 September for CHS1 and 16 September 2020 for
	KD1A: Submission of civil requirement drawing for	9/7/2020	9/17/2020	11/5/2020	11/5/2020	Task Completed	no.	2	2	100%		Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed				-		1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for Chemical System No. 1 and No. 2 (Final)	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (First	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 15 September 2020
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (Final)	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Temporary Chemical System (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed				-		1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.4 Membrane Bioreactor (MBR) System - Bio Reactor 2A and 2B	Submission of Contractor's Design for Bioreactor 2A and 2B (CDS004)	9/6/2020	1/12/2021	5/14/2021	6/30/2022	92%				-	Bestwise	PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 7 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Electrical CDS submitted on 23 Jun 2021. Finalized design calculations shall be submitted by 30 June 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	6/30/2022	93%						P&M0060 - Pre-treatment Fine Screen (status: C) P&M0053 - MLR Pump (status: B) P&M0118 - Scum Skimmer & Scum Pump (status: C) P&M0088 - Fine Bubble Air Diffuser (status: B) P&M0xxx - Wash Compactor (status: B) P&M0041 - Submersible Mixer (status: C) Finalized material submission shall be submitted by 30 June 2022.
	Submission of P&ID Drawing	9/6/2020	11/2/2020	5/14/2021	7/2/2021	Task Completed						PID (Rev.1) under DWG0042 resubmitted on 6 July 2021.
	Submission of GA Drawing	9/6/2020	2/17/2021	5/14/2021	6/30/2022	92%						Mechanical GA under DWG0132 submitted on 26 Jun 2021 and is accepted by AECOM. Electrical GA submitted on 23 Jun 2021. Finalized drawing shall be submitted by 30 June 2022. BIM GA review meeting is scheduled on 1, 8, 15/6/2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	6/30/2022	92%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for BR 2A and 2B (CDS025-3)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of civil work requirements for BR 2A and 2B up to +8.0 mPD (CDS080-3)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	2	2	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (Final)	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	2	2	100%	Bestwise	AECOM commented on 23 Oct 2020, Bestwise resubmitted on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for BR 2A and 2B (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed				-		1st draft of drawing was sent to AECOM via email on 15 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.4 Membrane Bioreactor (MBR) System - Membrane Filtration System No. 2 (MFB No. 2)	Submission of Contractor's Design for Membrane Filtration System (CDS005)	9/6/2020	1/11/2021	5/14/2021	6/30/2022	92%				-	Bestwise	PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 10 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Finalized design calculations shall be submitted by 30 June 2022.

	Submission of P&M Submission	9/6/2020	11/19/2020	5/14/2021	6/30/2022	93%						P&M0072 - Membrane Module (status: B) P&M0069 - Permeate Pump (status: B) P&M0047 - RAS Pump (status: B) P&M0050 - Drain Pump (status: B) P&M0074 - Air Scour Blower (status: C) P&M0073 - Aeration Blower (status: C) P&M0093 - Air Compressor (status: C) P&M0091 - Chemical Pump (status: under RSS review) P&M0xxx - Chemical Tank (to be submitted) Finalized material submission shall be submitted by 30 June 2022.
	Submission of P&ID Drawing	9/6/2020	10/30/2020	5/14/2021	7/2/2021	Task Completed						DWG0049 (Rev.1) was resubmitted on 2 Jul 2021.
	Submission of GA Drawing	3/31/2021	2/18/2021	5/14/2021	6/30/2022	92%						DWG0121 (rev.1) was resubmitted to AECOM on 17 Jul 2021 Finalized drawings shall be submitted by 30 June 2022. BIM GA review meeting is scheduled on 19, 26/5/2022 and 2/6/2022 (Lower part) BIM GA review meeting is scheduled on 16, 23, 30/6/2022 (Upper part)
	Submission of Electrical Drawing	4/15/2021	1/15/2021	5/14/2021	6/30/2022	92%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Electrical GA under DWG0079 (rev.1) was resubmitted on 8 Jul 2021. Finalized drawings shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation BS for MFB (CDS034-4)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of civil work requirements for MFB up to	9/1/2020	9/1/2020	9/30/2020	9/30/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	7	7	100%		1st draft of drawing submitted on 30 September
	KD1A: Submission of civil requirement drawing for MFB No. 2 up to +8.0 mPD (Final)	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	7	7	100%	Bestwise	Bestwise resubmitted (Rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	3	3	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for MFB No. 2 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	3	3	100%	Bestwise	Bestwise submitted (Rev.1) on 20 Oct 2020
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.6 Deodorisation System (EQT-001 - Deodorization Unit)	Tender invitation (C11)	4/17/2020	4/17/2020	4/24/2020	4/24/2020	Task Completed				100%		
6B.2.6 Deodorisation System (EQT-001 - Deodorization Unit)	Tender award (C11)	4/25/2020	4/25/2020	5/12/2020	5/12/2020	Task Completed				100%	Bestwise	Bestwise submitted tender report on 13 May 2020. AECOM commented on 23 July 2020, Bestwise to resubmit.
	Acceptance of tender award (C11)	5/13/2020	5/13/2020	5/21/2020	5/21/2020	Task Completed				100%		
	Submission of Contractor's Design for Deodorisation System , DOU No. 1 (CDS0019 & CDS0045)	9/6/2020	9/6/2020	5/14/2021	12/31/2021	Task Completed				-		Design Calculation (Rev.0) was submitted on 24 Nov 2020. AECOM commented on 6 Jan 2021, Bestwise to resubmit. Bestwise submitted CDS0045 on 3 June 2021. Finalized design was completed.
	Submission of P&ID Drawing of DOU No. 1	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 1	9/6/2020	9/6/2020	5/14/2021	6/30/2022	94%						GA submitted on 21 Jun 2021 Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 11, 18, 25/5/2022.
	Submission of Electrical Drawing of DOU No. 1	3/21/2021	1/30/2021	5/14/2021	6/30/2022	92%						Control wiring diagrams was resubmitted on 1 April 2021. AECOM commented on 23 Apr 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/28/2020	Task Completed	no.	1	1	100%		1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (Final)	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 2A (CDS0019 & CDS0048)	9/6/2020	9/6/2020	5/14/2021	12/10/2021	Task Completed				-		CDS0019: Design Calculation for Deodorisation System (status: B) CDS0048: Design Calculation on DOU2A - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 2A	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 2A	9/6/2020	8/3/2020	5/14/2021	6/30/2022	94%				-	Bestwise	Bestwise submitted (rev.1) on 30 Oct 2020. AECOM commented on 16 Dec 2020. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 1, 8, 15/6/2022.
	Submission of Electrical Drawing of DOU No. 2A	3/21/2021	1/26/2021	5/14/2021	6/30/2022	92%						Bestwise submitted (rev.0) on 26 Jan 2021, AECOM commented on 4 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		

	Submission of Contractor's Design for Deodorisation System , DOU No. 3A (CDS0019 & CDS0055)	9/6/2020	9/6/2020	5/14/2021	12/10/2021	Task Completed				-		CDS0019: Design Calculation for Deodorisation System (status: B) CDS0055: Design Calculation on DOU3A - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 3A	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 3A	9/6/2020	7/8/2020	5/14/2021	6/30/2022	94%				-	Bestwise	Bestwise submitted (rev.1) on 28 Oct 2020. AECOM commeneted on 16 Dec 2020. Bestwise resubmitted on 24 June 2021. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 27/4/2022, 4, 11/5/2022.
	Submission of Electrical Drawing of DOU No. 3A	3/21/2021	2/26/2021	5/14/2021	6/30/2022	92%						Bestwise submitted on 17 Apr 2021. AECOM commented on 27 Apr 2021. Bestwise to resubmit. GA submitted on 24 Jun 2021 Finalized drawing shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%						
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 3A up to +8.0 mPD	7/15/2020	7/15/2020	8/15/2020	9/28/2020	Task Completed	no.	1	1	100%		1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 3B (CDS0019 & CDS0049)	9/6/2020	9/6/2020	5/14/2021	12/10/2021	Task Completed						CDS0019: Design Calculation for Deodorisation System (status: B) CDS0049: Design Calculation on DOU3B - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 3B	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 3B	9/6/2020	9/6/2020	5/14/2021	6/30/2022	94%						Bestwise submitted DWG0081 (rev.0) on 5 Feb 2021. AECOM commeneted on 12 Mar 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA revew meeting is scheduled on 16, 23, 30/6/2022.
	Submission of Electrical Drawing of DOU No. 3B	3/21/2021	2/22/2021	5/14/2021	6/30/2022	92%						GA submitted on 24 Jun 2021 Finalized drawing shall be submitted by 30 June 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	90%				-		
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of civil work requirements for MFB up to	9/1/2020	9/1/2020	9/30/2020	9/30/2020	Task Completed						
	Submission of civil requirement drawing for MFB up to	8/28/2020	8/28/2020	11/2/2020	11/2/2020	Task Completed						
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed				-		1st draft of drawing to be submitted by 30 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
04SC008 - Design, Supply and Installation of detailed design for lifting appliances	Acceptance of tender award (C9)	-	-	-	7/6/2020	Task Completed				100%	-	AECOM accepted tender report on 6 July 2020.
	Submission of detailed design for lifting appliances for Inlet Works No. 1 (CDS050-1)	9/6/2020	12/5/2020	9/6/2020	6/30/2022	93%						DWG 0055 (Rev.0) was submitted on 13 Mar 2021. AECOM commented on 20 Apr 2021. Bestwise to resubmit. Bestwise submitted P&M0025 on 15 June 2021. Finalized design shall be submitted by 30 June 2022.
	Submission of detailed design for lifting appliances for Primary Sedimentation Tanks (CDS050-2)	9/6/2020	12/5/2020	9/6/2020	6/30/2022	93%						DWG 0054 (Rev.0) was submitted on 18 Jan 2021. AECOM commented on 9 Mar 2021. Bestwise to resubmit. Finalized design shall be submitted by 30 June 2022.
	Submission of detailed design for lifting appliances for BR 2A and 2B (CDS050-3)	9/6/2020	12/5/2020	9/6/2020	6/30/2022	93%						DWG 0065 (Rev.0) was submitted on 18 Jan 2021. AECOM commented on 9 Mar 2021. Bestwise to resubmit. P&M-0026 (Rev.1) received status B. Finalized design calculation shall be submitted by 30 June 2022.
	Submission of detailed design for lifting appliances for MFB (CDS050-4)	9/6/2020	12/5/2020	9/6/2020	6/30/2022	93%						DWG 0066 (Rev.1) was submitted on 1 Mar 2021. AECOM commented on 5 Mar 2021. Bestwise to resubmit. P&M-0027 (Rev.1) received status B. Finalized design calculation shall be submitted by 30 June 2022.
	Submission of detailed design for lifting appliances for Temporary Filtration Tank (CDS050-5)	9/6/2020	12/5/2020	9/6/2020	5/21/2021	Task Completed						DWG 0051 (Rev.2) was resubmitted on 7 May 2021 and acceptance by AECOM subject to condition on 21 May 2021. Bestwise submitted P&M0021 on 21 June 2021.
Building Services System	Submission for MVAC system	N/A	12/10/2020	N/A	6/30/2022	93%						Design calculations and drawings for inlet works was submitted on 16 Dec 2020. AECOM commented on 15 Jan 2021 and 20 Jan 2021. Design calculations and drawings for PST was submitted on 30 Dec 2020. AECOM commented on 22 Jan 2021 and 26 Jan 2021. Design calculations and drawings for MFB2 was submitted on 29 Jan 2021. AECOM commented on 26 Mar 2021. Subletting package resubmitted by 18 Mar 2021. AECOM accepted on 19 Mar 2021. Finalized design shall be submitted by 30 June 2022.
	Submission for Fire Services System	N/A	3/15/2021	N/A	6/30/2022	91%						Subletting Package to be resubmitted by 31 Mar 2021. AECOM accepted on 9 Apr 2021. Drawings: Inlet Works: submitted on 8 June 2021. PST 1-4: submitted on 23 Jun 2021 BR2A &2B: submitted on 8 Jun 2021 MFB 2: submitted on 8 Jun 2021 Finalized design shall be submitted by 30 June 2022.

	Submission for Plumbing and Drainage System	N/A	3/15/2021	N/A	6/30/2022	91%						Subletting Package resubmitted by 10 Mar 2021. AECOM accepted on 12 Mar 2021. Tender invitation was conducted on 15 Mar 2021 and closed on 26 Mar 2021. Finalized design shall be submitted by 30 June 2022.
	Submission for Electrical Services System	N/A	12/10/2020	N/A	6/30/2022	93%						GA for lighting was submitted on 18 Dec 2020. AECOM commented on 6 Jan 2021. Bestwise to resubmit. GA for small power system was submitted in 8 Feb 2021. AECOM commented on 3 Mar 2021. Bestwise to resubmit. Finalized design shall be submitted by 30 June 2022.
	Submission of ELV system	N/A	1/8/2021	N/A	6/30/2022	92%						GA for CCTV was resubmitted on 16 Mar 2021. AECOM commented on 30 Mar 2021. Bestwise resubmitted on 25 Jun 2021. Finalized design shall be submitted by 30 June 2022.
	Submission for PV system	N/A	3/15/2021	N/A	6/30/2022	91%						Tender package was submitted to AECOM. Finalized design shall be submitted by 30 June 2022.
SCADA System & PMS	Submission for SCADA system	N/A	2/11/2021	N/A	6/30/2022	92%						Revised SCADA structure was provided via email on 9 Apr 2021 and tender package is under preparation. Finalized design shall be submitted by 30 June 2022.
	Submission for PMS system	N/A	3/8/2021	N/A	6/30/2022	91%						Tender package to be resubmitted on 29 June 2021. Finalized design shall be submitted by 30 June 2022.
	Submission for CMMS & IDMS system	N/A	6/1/2021	N/A	6/30/2022	90%						Finalized design shall be submitted by 30 June 2022.
Section 2 of Works												
Street Fire Hydrant Pump Room	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for	8/28/2020	9/18/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed						1st draft of drawing to be submitted by 30 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
FS & Sprinkler Pump Room	KD1A: Submission of civil requirement drawing for FS	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for FS	8/28/2020	9/18/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed						
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
Emergency Generator House	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (First	7/15/2020	7/15/2020	8/15/2020	9/18/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 18 September 2020
	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (Final)	8/28/2020	9/19/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020							
	KD1A: Submission of electrical schematic drawings for Street Fire Hydrant Pump Room (Final)	9/7/2020	10/1/2020	11/5/2020	11/5/2020							
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
Lightning Protection System for DOU3A (underground)	Submission and Acceptance for Lightning Protection System Design	12/6/2021	12/6/2021	1/31/2022	1/31/2022	Task Completed						
	Material Delivery	2/7/2022	2/7/2022	2/28/2022	2/28/2022	Task Completed						Material Delivery was by End Feb 2022.
	Installation Work	3/31/2022	4/26/2022	5/5/2022	5/5/2022	Task Completed						The installation work was completed on 5 May 2022.
	Testing & Commissioning	1/7/2023	1/7/2023	1/31/2023	1/31/2023							
Lightning Protection System for Inlet Works (underground)	Submission and Acceptance for Lightning Protection System Design	12/20/2021	12/20/2021	1/31/2022	1/31/2022							
	Material Delivery	12/15/2022	12/15/2022	3/31/2022	5/31/2022							
	Installation Work	3/15/2022	7/15/2022	10/30/2022	10/30/2022							Underground works subject to site coordination with JV.
	Testing & Commissioning	11/1/2022	11/1/2022	11/15/2022	11/15/2022							
Section 3 of Works												
6B.2.12 Provision of New Replacement Filter Plates	Submission of onsite survey plan for acceptance	3/1/2020	3/25/2020	3/30/2020	4/21/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 21 April 2020
	Acceptance of submission of onsite survey plan	3/1/2020	3/25/2020	3/30/2020	5/12/2020	Task Completed				100%	-	Survey plan acceptance received on 12 May 2020. Onsite discussion with ST1 was
	Submission of onsite survey report	5/21/2020	5/21/2020	5/29/2020	5/29/2020	Task Completed				100%		
	Acceptancce of onsite survey report	5/30/2020	5/30/2020	6/15/2020	6/15/2020	Task Completed				-		
	Preparation of procurement package (C11)	6/22/2020	6/22/2020	7/6/2020	7/14/2020	Task Completed				100%		
	Tender invitation (C11)	7/15/2020	7/15/2020	7/22/2020	7/24/2020	Task Completed				100%		
	Tender Award (C11)	7/23/2020	7/25/2020	7/29/2020	7/31/2020	Task Completed				100%		Revised survey report (second draft) was sent to AECOM on 21 Oct 2020. Technical
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Submission	8/21/2020	8/21/2020	8/28/2020	12/7/2020	Task Completed				100%		Material submission (Rev.1) resubmitted on 7 Dec 2020. AECOM accepted subject to comments on 24 Dec 2020. Material submission (Rev. 2) resubmitted on 12 Jan 2021. AECOM accepted subject to comment on 22 Jan 2021.

6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Delivery	12/1/2020	12/1/2020	8/8/2021	7/13/2021	Task Completed				-		Handed over to DSD.
	Completion Date of Section 3: 22 September 2021											
Subcontracting												
	Submission of subletting package for acceptance	1/1/2020	3/6/2020	3/30/2020	3/6/2020	Task Completed				100%	-	
	Acceptance of subletting package	3/1/2020	3/21/2020	3/30/2020	3/21/2020	Task Completed				100%	-	
	Tender invitation	3/1/2020	3/24/2020	4/1/2020	3/30/2020	Task Completed				100%	-	
	Tender award	3/22/2020		4/14/2020	4/6/2020	Task Completed				100%	-	Bestwise submitted tender report on 6 April 2020
	Acceptance of tender award	-	-	-	4/15/2020	Task Completed				100%		AECOM accepted tender report on 15 April 2020
Construction of *Contractor*'s site accommodation in WA1-C	Design of MiC	4/15/2020	4/16/2020	6/1/2020	8/15/2020	Task Completed				100%		Revised layout drawings received from AluHouse on 28 May 2020. Comments provided to AluHouse on 2 June 2020.
	Submission of detailed design including foundation works, septic tank	7/1/2020	7/1/2020	7/14/2020	9/4/2020	Task Completed				100%		Design calculation of foundation work was submitted on 7 July 2020, comment received on 27 July 2020. Bestwise to resubmit.
	Site Clearence Work	7/15/2020	7/20/2020	7/31/2020	8/15/2020	Task Completed				100%		Tender invitation commenced on 29 May 2020 and tenders received on 4 June 2020. Tender
	Off-site fabrication of Septic tank	7/15/2020	7/20/2020	7/31/2020	7/31/2020	Task Completed				100%		Site clearence work started on 20 July 2020
	Submission of method statement with ICE certificate	8/1/2020	8/1/2020	8/7/2020	10/8/2020	Task Completed				100%		CV of ICE was submitted on 4 August 2020 and accepted on 25 August 2020
	Submission of design calculation with ICE certificate	8/1/2020	8/1/2020	8/7/2020	10/8/2020	Task Completed				100%		Design calculation of foundation work was submitted on 7 July 2020, comment received on
	Acceptance of method statement and design calculation	8/8/2020	10/9/2020	8/14/2020	10/16/2020	Task Completed				100%		Method Statement and Design Calculation was submitted on 8 Oct 2020.
	Submission of method statement with ICE certificate	8/1/2020	8/1/2020	8/7/2020	11/23/2020	Task Completed				100%		
	Submission of design calculation with ICE certificate	8/1/2020	8/1/2020	8/7/2020	11/23/2020	Task Completed				100%		
	Acceptance of method statement and design calculation	8/8/2020	11/24/2020	8/14/2020	11/27/2020	Task Completed				100%		
	Excavation work	8/17/2020	10/21/2020	8/18/2020	10/21/2020	Task Completed				100%		
	Installation of septic tank	8/19/2020	10/21/2020	8/20/2020	10/22/2020	Task Completed				100%		
	Construction of RC foundation	8/21/2020	10/23/2020	8/31/2020	11/12/2020	Task Completed				100%		
	Off-site fabrication and delivery of MiC Office	6/1/2020	9/30/2020	7/31/2020	12/4/2020	Task Completed				100%		
	On-site installation of MiC Office	8/1/2020	12/4/2020	8/30/2020	1/5/2021	Task Completed				100%		
	Installation of car park shelter	1/4/2021	1/7/2021	1/11/2021	1/9/2021	Task Completed				100%		Subject to the completion of car park shelter of PM office and JEC office.
04SC003 - Building Information Modeling (BIM)	Submission of subletting package for acceptance (C9)	3/1/2020	3/25/2020	3/14/2020	3/25/2020	Task Completed				100%	-	
	Acceptance of subletting package (C9)	3/14/2020	4/2/2020	3/30/2020	4/2/2020	Task Completed				100%	-	
	Tender invitation (C9)	4/1/2020	4/1/2020	4/8/2020	4/9/2020	Task Completed				100%	-	
	Tender award (C9)	-	-	-	4/15/2020	Task Completed				100%	-	Bestwise submitted tender report on 15 April 2020
	Submission of subletting package for acceptance	3/14/2020	3/16/2020	3/30/2020	4/20/2020	Task Completed				100%	-	Bestwise resubmitted on 20 April 2020
	Acceptance of subletting package	3/28/2020	5/4/2020	4/13/2020	5/13/2020	Task Completed				100%	-	AECOM accepted subletting package on 13 May 2020
	Tender invitation	4/11/2020	6/19/2020	4/27/2020	6/26/2020	Task Completed				-		Invitation to tender was commenced on 19 June 2020 and tender returned on 26 June 2020
	Tender award	4/25/2020	6/27/2020	5/11/2020	7/4/2020	Task Completed				-		Bestwise submitted tender report on 30 June 2020
	Acceptance of tender award	-	-	-	7/18/2020					-		
04SC007 - Independent Beam Plus Consultant	Submission of subletting package for acceptance	3/1/2020	3/30/2020	3/14/2020	3/30/2020	Task Completed				100%	-	
	Acceptance of subletting package	3/14/2020	4/3/2020	3/30/2020	4/3/2020	Task Completed				100%	-	
	Tender invitation	3/30/2020	3/30/2020	4/9/2020	4/9/2020	Task Completed				100%	-	
	Tender award	-	-	-	4/15/2020	Task Completed				100%	-	Bestwise submitted tender report on 15 April 2020
	Acceptance of tender award	-	-	-	4/17/2020	Task Completed				100%	-	AECOM accepted tender report on 17 April 2020
	Introduction meeting with IBPC, Cinotech	-	-	-	4/28/2020	Task Completed				100%	-	Meeting completed on 28 April 2020 followed by planning work progress
04SC008 - Design, Supply and Installation of detailed	Submission of subletting package for acceptance (C9)	4/1/2020	3/17/2020	4/14/2020	3/17/2020	Task Completed				100%	-	Bestwise submitted subletting package on 3 April 2020
	Acceptance of subletting package (C9)	4/14/2020	4/17/2020	4/30/2020	4/28/2020	Task Completed				100%	-	AECOM accepted subletting package on 28 April 2020
	Tender invitation (C9)	4/30/2020	5/6/2020	5/14/2020	5/28/2020	Task Completed				100%	-	Invitation to tender was commenced on 6 May 2020 and tender returned on 28 May 2020
	Tender award (C9)	5/14/2020	5/29/2020	5/30/2020	6/9/2020	Task Completed				100%	-	Bestwise submitted tender report on 9 June 2020.
Temporary Primary Sludge Thickener and its	Submission of subletting package (C9) for acceptance	15/05/2020 ->	8/14/2020	15/05/2020 -	8/27/2020	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020.
	Acceptance of subletting package (C9) (Mech)	30/05/2020 -> 30/7/2020*	8/15/2020	15/06/2020-> 15/8/2020*	9/16/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
	Tender invitation (C9) (Mech)	15/06/2020-> 15/8/2020*	9/9/2020	22/06/2020-> 22/8/2020*	10/14/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation for FRP Tank was conducted on 9 Sep 2020, tender returned on 16 Sep 2020. - Tender invitation for mechanical installation was conducted on 29 Sept 2020, tender returned on 14 Oct 2020,

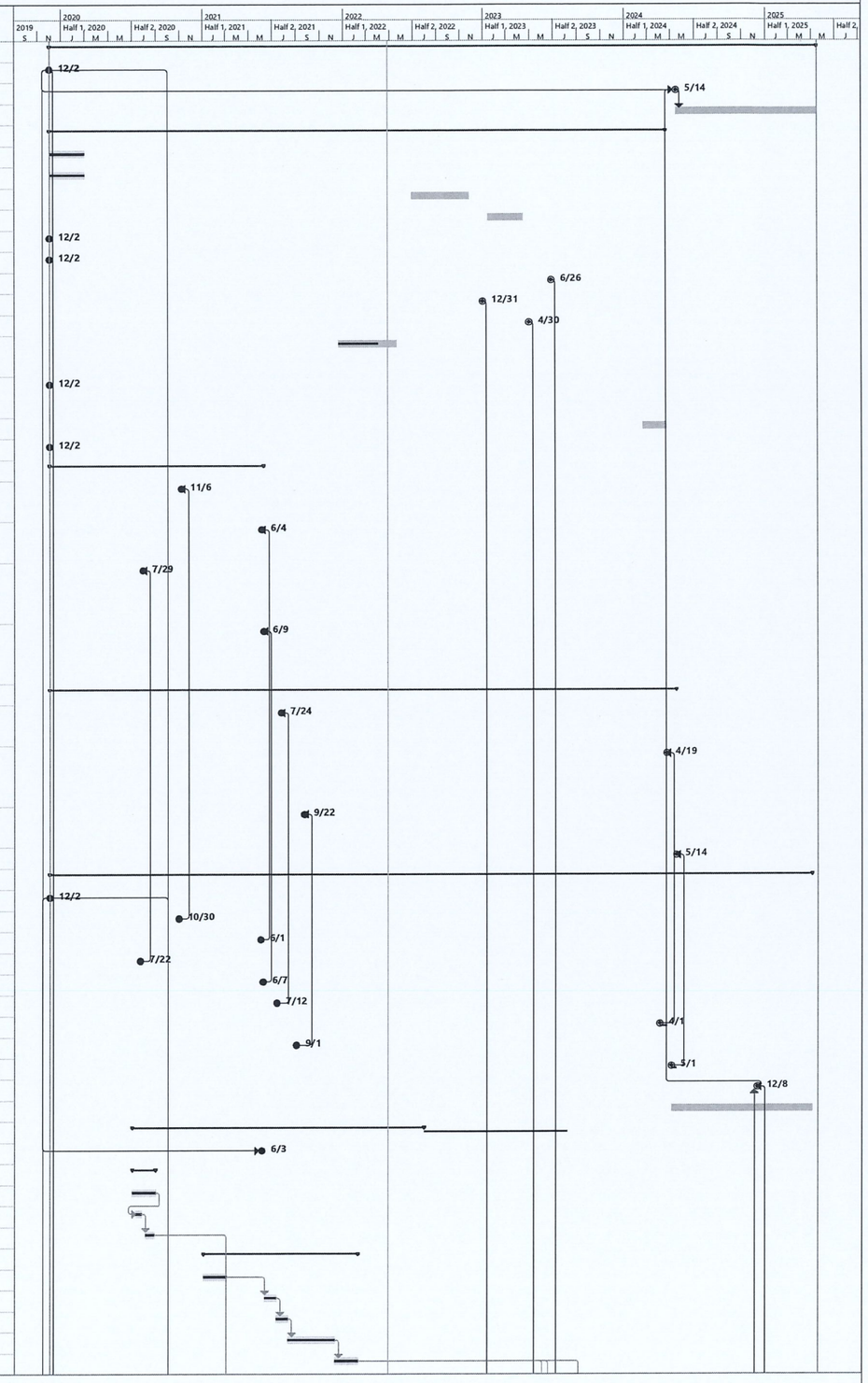
Tender award (C9) (Mech)	22/06/2020-> 22/8/2020*	9/17/2020	29/06/2020-> 29/8/2020*	10/22/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender report for FRP Tank was submitted on 24 Sep 2020 and accepted on 9 Oct 2020. - Tender report for mechanical installation submitted on 22 Oct 2020 and accepted on 16 Nov 2020.
Acceptance of tender award (C9) (Mech)	-	-	-	11/16/2020	Task Completed				100%		
Submission of subletting package (C9) for acceptance (Elect)	15/05/2020 -> 15/7/2020*	12/9/2020	15/05/2020 -> 30/11/2020*	1/28/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Bestwise resubmitted subcontracting package of electrical installation on 28 Jan 2021
Acceptance of subletting package (C9) (Elect)	30/05/2020 -> 30/7/2020*	1/29/2021	15/06/2020-> 15/8/2020*	2/1/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
Tender invitation (C9) (Elect)	15/06/2020-> 15/8/2020*	2/1/2021	22/06/2020-> 22/8/2020*	2/11/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation commenced on 1 Feb 2021 and returned on 11 Feb 2021
Tender award (C9) (Elect)	22/06/2020-> 22/8/2020*	2/11/2021	29/06/2020-> 29/8/2020*	2/23/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender report target submitted on 23 Feb 2021 and accepted on 24 Feb 2021
Acceptance of tender award (C9) (Elect)	-	-	-	2/26/2021	Task Completed				100%		
Tender invitation (C11)	30/04/2020-> 15/07/2020*	4/30/2020	30/06/2020-> 15/09/2020*	11/18/2020	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. -Tender invitation of Primary Sludge Thickener commenced on 22 April 2020 and tender was received on 29 April 2020. Tender queries was requested on 5 May 2020 and received on 7 May 2020. Tender report was commented by PM and resubmitted on 22 May 2020. Accepted by AECOM on 12 Jun 2020. - Tender Invitation of process pumps for the thickening system was commenced on 5 Jun 2020 and tenders were received on 10 June 2020. Tender report submitted to PM on 2 July 2020. - Tender Invitation of activated carbon filter was commenced on 22 Oct 2020 and to be returned on 2 Nov 2020. Tender report submitted on 5 Nov 2020 and accepted on 16 Nov 2020 - Tender Invitation of FRP platform was commenced on 13 Nov 2020 and to be returned on 20 Nov 2020. Tender report submitted on 30 Nov 2020 and accepted on 11 Jan 2020 - Tender Invitation of instrument was commenced on 18 Nov 2020 and to be returned on 25 Nov 2020. Tender report submitted on 30 Nov 2020 - Based on the control philosophy agreed on 23 Dec 2020, motorized and solenoid valves were selected
Tender award (C11)	15/05/2020-> 29/07/2020*	5/30/2020	15/07/2020->	11/30/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
Acceptance of tender award (C11)	-	-	-	9/18/2020					-		
Design Submission	03/07/2020 -> 15/07/2020*	8/5/2020	21/09/2020-> 02/10/2020*	5/10/2021	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. -Design submission of Process Pumps (Rev.3) resubmitted on14 Apr 2021, AECOM accepted with comments on 7 May 2021. -Design submission of electrical calculation (rev.2) was resubmitted on 29 Apr 2021. AECOM accepted with comments on 10 May 2021. -Control Philosophy (Rev.2) resubmitted on 5 Mar 2021. AECOM accepted subject to comments on 26 Mar 2021.
Plant and Material Submission	21/07/2020 -> 30/07/2020*	7/21/2020	31/08/2020 -> 31/10/2020*	6/30/2021	Task Completed					Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Plant and Material submission of primary sludge thickener was resubmitted on 1 Sep 2020 (Rev. 3) and AECOM accepted on 8 Sep 2020. - Plant and Material submission P&M0002 (Rev.2) of process pumps was submitted on 5 August 2020 and AECOM commented on 26 Aug 2020, Bestwise to re-submitted to AECOM. - Plant and Material submission (Rev.0) for valves was submitted on 16 Nov 2020. AECOM accepted on 14 Dec 2020 subject to comments - Plant and Material submission (Rev.1) for DI pipes and fittings was resubmitted on 3 Dec 2020. AECOM accepted on 14 Dec 2020 - Plant and Material submission (Rev.0) for primary sludge equalization tank was submitted on 5 Feb 2021. AECOM accepted subject to comments on 25 Feb 2021. - Plant and Material submission (Rev.0) for activated carbon filter was submitted on 28 Jan 2021. AECOM accepted subject to comments on 5 Feb 2021. - Plant and Material submission (Rev. 1) for instruments was resubmitted on 13 Mar 2021. AECOM accepted subject to comments on 7 Apr 2021.
Drawing Submission	03/07/2020 -> 30/07/2020*	8/3/2020	21/09/2020 -> 21/11/2020*	2/10/2021	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - PFD, P&ID, Schematic GA (Rev.3) resubmitted on 22 Jan 2021 according to the finallized control philosophy. AECOM accepted subject to comment on 29 Jan 2021. - Electrical drawing - Bestwise resubmitted electrical drawing (Rev.5) on 22 Mar 2021. AECOM accepted on 16 Apr 2021.

	Material Manufacturing	31/07/2020 -> 30/09/2020*	8/4/2020	21/10/2020 -> 21/12/2020*	4/20/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Manufacturing instruction of PS thickener was issued on 3 August 2020. - Manufacturing instruction of process pumps was issued on 24 September 2020 - Electrical sub-contractor is awarded and manufacturing LCP
	Material Delivery	05/09/2020 ->	11/4/2020	16/11/2020 -	6/21/2021	Task Completed						
	Mechanical Installation	01/10/2020 -> 01/12/2020*	2/2/2021	15/11/2020 -> 15/01/2021*	5/17/2021	Task Completed				-		
	Offsite Fabrication and Delivery of FRP Tank		1/16/2021		4/7/2021	Task Completed				100%		First batch to be delivered on 23 Mar 2021
	Onsite Installation of FRP Tank		4/7/2021		7/30/2021	Task Completed						Water filling to tank completed; Tank hydraulic test completed.
	Electrical Installation	01/10/2020 -> 01/12/2020*	3/19/2021	15/11/2020 -> 15/01/2021*	7/19/2021	Task Completed				-		Energize of all LCPs on 24 May 2021 and isolated prior to system commissioning.
Temporary Primary Sludge Thickener and its accessories (Sub-programme was provided by Bestwise)	Testing and Comissioning	15/11/2020 -> 15/01/2021*	5/8/2021	22/11/2020 -> 22/01/2021*	6/15/2022	94%				-		Improvement works under PMI and defect rectification for BCM comments are on-going. - Replacement of butterfly valves by knife gate valves - Installation of air-conditioned enclosures for Alfa Laval LCPs - Replacement of existing thickened sludge transfer pumps by larger capacity ones - Testing and Commissioning
Modification of Existing Emergency Generator Electrical Works	Submission of subletting package (C9) for acceptance	10/15/2020	10/15/2020	10/31/2020	12/11/2020	Task Completed				100%		
	Acceptance of subletting package (C9)	11/1/2020	11/5/2020	11/15/2020	1/2/2021	Task Completed				100%		
	Tender invitation (C9)	11/16/2020	1/26/2021	11/30/2020	2/5/2021	Task Completed				100%		Tender invitation commenced on 26 Jan 2021, and returned on 5 Feb 2021
	Tender award (C9)	11/30/2020	2/18/2021	12/7/2020	2/18/2021	Task Completed				100%		Tender report was submitted on 18 Feb 2021 and accepted on 26 Feb 2021
	Acceptance of tender award (C9)	12/8/2020	2/18/2021	12/15/2020	2/26/2021	Task Completed				100%		
	Design Submission	12/15/2020	3/15/2021	1/15/2021	4/23/2021	Task Completed				100%		DWG-0100 was submitted on 23 Apr 2021. AECOM accepted with comments on 30 Apr
	Transportation of existing dismantled genset no. 2 (Genset No.2) to subcontractor (Click Ltd.)'s workshop	3/9/2021	3/9/2021	3/9/2021	3/9/2021	Task Completed				100%		
	Drawing submission (Drawing of General Layout for Existing 600kVA Genset Container)	4/23/2021	4/23/2021	4/30/2021	4/30/2021	Task Completed				100%		
	Drawing submission (Cable route ,general arrangement, etc)	5/14/2021	5/28/2021	5/21/2021	5 July 2021	Task Completed				100%		
	Material submission P431 P&M-0087	21 May 2021	19 June 2021	28 May 2021	12 July 2021	Task Completed				100%		
	Fabrication of container at PRC	21 June 2021	21 June 2021	TBC	8/12/2021	Task Completed				100%		
	Container deliver to HK	TBC	8/12/2021	8/10/2021	8/12/2021	Task Completed				100%		
	Off site modification work at HK factory	TBC	8/16/2021	8/24/2021	8/24/2021	Task Completed				100%		
	FAT plan of modified Genset No.2 P431 MS-036	7/12/2021	7/12/2021	8/20/2021	8/20/2021	Task Completed				100%		
	FAT of Genset No.2 after modification works	8/25/2021	8/25/2021	8/25/2021	8/25/2021	Task Completed				100%		
	Installation Work of I-beam Support	8/26/2021	8/26/2021	8/26/2021	8/26/2021	Task Completed				100%		
	Transportation of Genset No. 2 to existing power house in SWHSTW and completion of the Genset No.2 installation on I-beam supporting frame	8/27/2021	8/27/2021	8/27/2021	8/27/2021	Task Completed				100%		
	Provision of one (1) can of 160L diesel and a diesel hand pump placed at diesel daily tank of Genset No.1 for standby top up (PPMI-012 item L) Location to be coordinated and advised by SWHSTW operator DSD/ST1	7/27/2021	7/27/2021	8/31/2021								Location to be further coordinated with DSD.
	Modification works of existing switchboard	9/1/2021	9/1/2021	9/8/2021	9/8/2021	Task Completed				100%		
	Cables (including control cable and power cables) laying and installation of cable containment, busbar chamber	7/21/2021	7/30/2021	9/8/2021	9/8/2021	Task Completed				100%		
	Supply of busbar chamber/ connection box	8/10/2021	8/10/2021	9/3/2021	9/3/2021	Task Completed				100%		
	Completion of all Genset cables and cable termination work to existing power house in SWHSTW after the completion of Genset No. 2 installation work	9/1/2021	9/1/2021	9/8/2021	9/8/2021	Task Completed				100%		
	Delivery of dummy load and self-test	9/9/2021	9/9/2021	9/14/2021	9/15/2021	Task Completed				100%		
	SAT and T&C (witness by AECOM and DSD/ST1) Please allow 1 week advance notice for coordination with DSD/ST1, e.g. genset signal start, etc.)	9/15/2021	9/15/2021	9/15/2021	9/16/2021	Task Completed				100%		
04SC009 - Design, Supply and Installation of HVSB	Submission of subletting package for acceptance	4/21/2020		5/1/2020		-						
	Acceptance of subletting package	5/21/2020		5/30/2020		-						
	Tender invitation	6/1/2020		6/14/2020		-						
	Tender award	7/1/2020		7/14/2020		-						
04SC010 - Design, Supply and Installation of LVSB	Submission of subletting package for acceptance	5/1/2020		5/14/2020		-						

	Acceptance of subletting package	6/1/2020		6/14/2020		-						
	Tender invitation	6/14/2020		6/30/2020		-						
	Tender award	7/1/2020		7/14/2020		-						
04SC011 - Design and Installation of Building	Submission of subletting package for acceptance	4/14/2020		4/30/2020		-						
	Acceptance of subletting package	5/14/2020		5/30/2020		-						
	Tender invitation	5/30/2020		6/14/2020		-						
	Tender award	6/21/2020		6/30/2020		-						
04SC012 - Facility Computerized Systems	Submission of subletting package for acceptance	5/14/2020		5/30/2020		-						
	Acceptance of subletting package	6/14/2020		6/30/2020		-						
	Tender invitation	7/1/2020		7/14/2020		-						
	Tender award	7/21/2020		8/14/2020		-						
Plant and Materials (Marking Scheme)												
PS Clause no. 6B.2.1 Inlet Pump	Submission of marking scheme for PM's acceptance (fourth draft)	5/1/2020	5/1/2020	9/1/2020	8/19/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020.
	Submission of marking scheme for PM's acceptance	5/1/2020	5/1/2020	9/1/2020	8/19/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020.
	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020
	Tender invitation	5/29/2020	9/9/2020	9/29/2020	9/18/2020	Task Completed				100%		Tender invitation was conducted on 9 Sept 2020 and returned on 18 Sept 2020.
PS Clause no. 6B.2.1 Inlet Pump	Tender award	6/5/2020	9/19/2020	10/5/2020	10/7/2020	Task Completed				100%		Technical Submission Evaluation Report was submitted on 5 Oct 2020, Tender report was submitted on 7 Oct 2020. AECOM noted on 8 Oct 2020.
	Acceptance of tender award	6/19/2020	10/17/2020	10/19/2020	11/15/2020	Task Completed				-		
	Submission of marking scheme for PM's acceptance (third draft)	5/1/2020	5/14/2020	9/1/2020	8/19/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	5/1/2020	5/14/2020	9/1/2020	8/19/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020
PS Clause no. 6B.2.4 MBR Pre-treatment Screen	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020
	Tender invitation	5/29/2020	11/20/2020	9/29/2020	12/11/2020	Task Completed				100%		Tender invitation was conducted on 20 Nov 2020 and returned on 11 Dec 2020. Tender
	Tender award	6/5/2020	12/13/2020	10/5/2020	3/3/2021	Task Completed				100%		Technical Submission Evaluation Report was submitted on 12 Jan 2021. AECOM noted on 22 Jan 2021. Tender Report was submitted on 4 Feb 2021, AECOM commented on 19 Feb 2021, Bestwise submitted supplementary information on 26 Feb 2021. AECOM noted on 3 Mar
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/1/2020	5/14/2020	9/1/2020	9/2/2020	Task Completed				100%		AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020
	Submission of marking scheme for PM's acceptance	5/1/2020	9/3/2020	9/1/2020	9/2/2020	Task Completed				100%		Bestwise resubmitted on 2 Sep 2020
PS Clause no. 6B.2.4 Air Diffusion System	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020, subject to conditions.
	Tender invitation	5/29/2020	2/17/2021	9/29/2020	3/12/2021	Task Completed				100%		Procurement package would follow the approved format (i.e. aeration blower) Tender invitation was conducted on 17 Feb 2021. Addendum No. 1 was issued on 18 Feb 2021. Tender return date was extended from 26 Feb 2021 to 12 Mar 2021. Tender returned on 12 Mar 2021
	Tender award	6/5/2020	3/18/2021	10/5/2020	4/20/2021	Task Completed				-		Technical Submission Evaluation Report was submitted on 18 Mar 2021. AECOM noted on 30 Mar 2021. Tender Report was submitted on 8 Apr 2021. LOI was issued to supplier.
	Acceptance of tender award	6/19/2020	2/20/2021	10/19/2020	3/12/2021	Task Completed				-		
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020
PS Clause no. 6B.2.4 BR Aeration Blower	Acceptance of marking scheme by the PM	5/28/2020	8/20/2020	9/28/2020	9/1/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020
	Tender invitation	6/11/2020	2/3/2021	10/12/2020	3/3/2021	Task Completed				100%		Procurement package was submitted to AECOM under CGS-066. AECOM replied on 29 Jan 2021. Tender invitation was conducted on 3 Feb 2021. Tender returned on 3 Mar 2021
	Tender award	6/18/2020	3/4/2021	10/19/2020	4/12/2021	Task Completed				-		Technical Submission Evaluation Report was submitted on 10 Mar 2021. AECOM noted on 19 Mar 2021. Tender Report was submitted on 24 Mar 2021. LOI was issued to supplier.
	Acceptance of tender award	7/2/2020	3/4/2021	11/2/2020	3/25/2021	Task Completed				-		AECOM accepted on 1 Sep 2020, subject to conditions.
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/14/2020	5/1/2020	9/14/2020	9/2/2020	Task Completed				100%		AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020
	Submission of marking scheme for PM's acceptance	5/14/2020	9/3/2020	9/14/2020	9/2/2020	Task Completed				100%		Bestwise resubmitted on 2 Sep 2020
	Acceptance of marking scheme by the PM	5/28/2020	9/3/2020	9/28/2020	9/5/2020	Task Completed				100%		AECOM accepted on 5 Sep 2020 subject to conditions.
	Tender invitation	6/11/2020	9/14/2020	10/12/2020	10/5/2020	Task Completed				100%		Tender invitation was conducted on 14 Sept 2020 and returned on 5 Oct 2020.
PS Clause no. 6B.2.4 Membrane Modules, Cassettes / Racks	Tender award	6/18/2020	10/6/2020	10/19/2020	11/2/2020	Task Completed				100%		Technical Submission Evaluation Report was submitted on 14 Oct 2020, Tender report was submitted on 2 Nov 2020. AECOM noted on 4 Nov 2020.
	Acceptance of tender award	7/2/2020	11/3/2020	11/2/2020	11/24/2020	Task Completed				-		
	Submission of marking scheme for PM's acceptance (second draft)	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020
	Acceptance of marking scheme by the PM	5/28/2020	8/20/2020	9/28/2020	9/1/2020	Task Completed				100%		AECOM accepeted on 1 Sep 2020
	Tender invitation	6/11/2020	9/25/2020	10/12/2020	10/29/2020	Task Completed				100%		Tender invitation was conducted on 25 Sept 2020 and returned on 29 Oct 2020.
PS Clause no. 6B.2.4 RAS Pump	Tender award	6/18/2020	10/30/2020	10/19/2020	12/2/2020	Task Completed				100%		Technical Submission Evaluation Report was submitted on 6 Nov 2020. Tender report was submitted on 24 Nov 2020, AECOM noted on 2 Dec 2020.
	Acceptance of tender award	7/2/2020	11/21/2020	11/2/2020	12/12/2020	Task Completed				-		

Usage of WA2-A		-		2/21/2020	2/21/2020	Task Completed				-		Site works including fencing and site clearnace works to be completed by DC/2018/06 by 30/4/2020 WA2C handovered to Bestwise on 21 February 2020

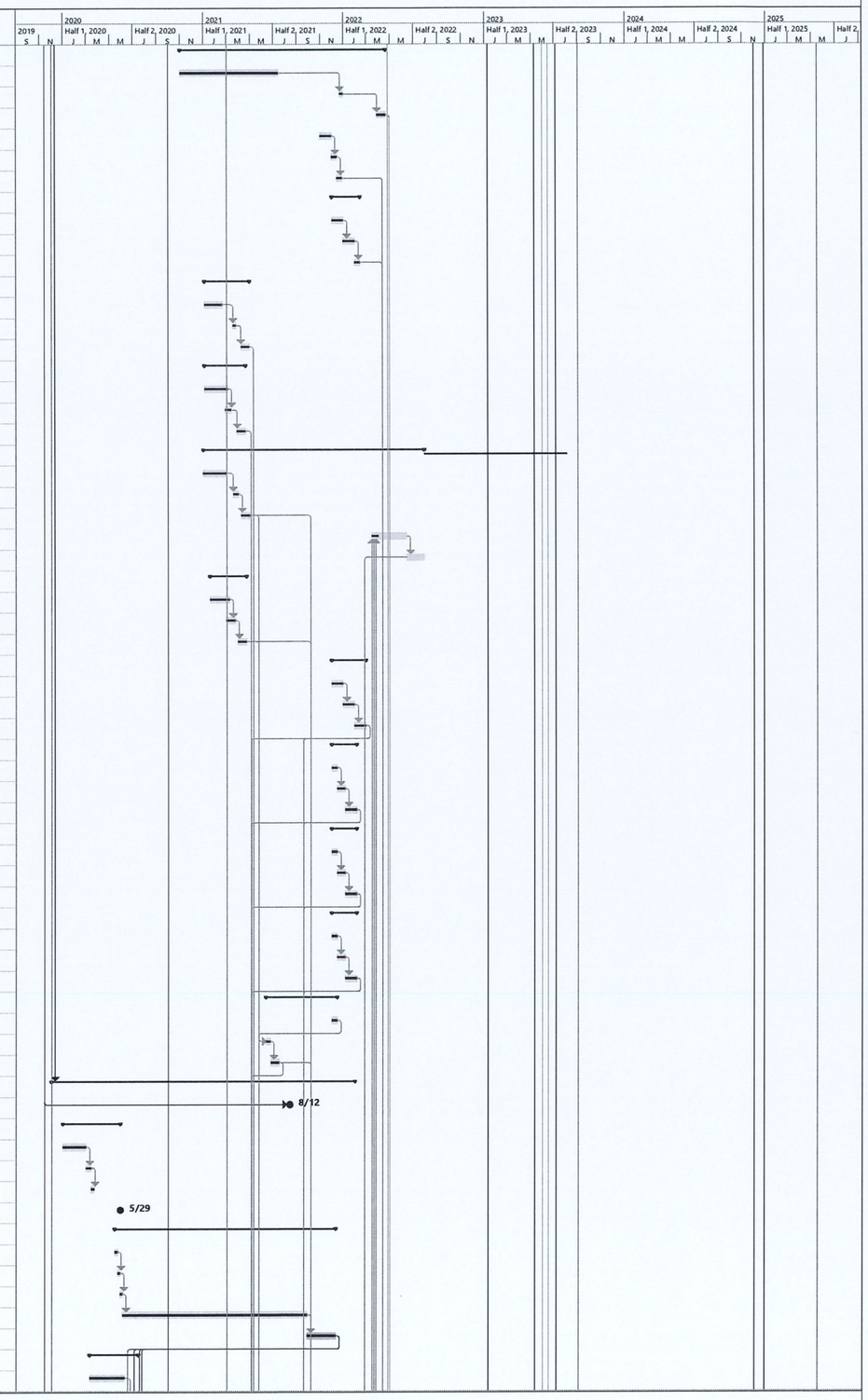
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1	1	1	**DE/2018/04 - Contract Master Programme**	**1991 days**	**Dec 2 '19**	**May 14 '25**	**Dec 2 '19**	**May 14 '25**	**0 days**			
2	2	1.1	Starting Date	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days		3SS+1625 eday	
3	3	1.2	Completion Date	0 days	May 14 '24	May 14 '24	May 14 '24	May 14 '24	0 days	2SS+1625 edays,39	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		645	
13	13	2.8	Access Date for Portion B-5A, MFB No. 2 below 1st floor level	0 edays	Dec 31 '22	Dec 31 '22	Dec 31 '22	Dec 31 '22	0 edays		847	
14	14	2.9	Access Date for Portion B-5B, MFB No. 2 remaining portion	0 edays	Apr 30 '23	Apr 30 '23	Apr 30 '23	Apr 30 '23	0 edays		882	
15	15	2.10	Access Date for Portion B-7 & 7B, Chemical Dosing, Concrete Plinth for DOs, Chemical Sys 1 & 2, FS & sprinkler pump room, Genset, FS hydrant and booster pump room, flowmeter chambers	150 edays	Dec 20 '21	May 19 '22	Dec 20 '21	May 19 '22	0 edays			
16	16	2.11	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			
17	17	2.12	Access Date for Portion B-9B, underground pipework	60 edays	Feb 18 '24	Apr 18 '24	Feb 18 '24	Apr 18 '24	0 edays			
18	18	2.13	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			
19	19	3	**Key Dates**	**555 days**	**Dec 2 '19**	**Jun 9 '21**	**Dec 2 '19**	**Jun 9 '21**	**0 days**			
20	20	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	31FF		
21	21	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	32FF		
22	22	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 therein.	240 edays	Dec 2 '19	Jul 29 '20	Dec 2 '19	Jul 29 '20	0 edays	33FF		
23	23	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	34FF		
24	24	4	**Sectional Completion Dates**	**1625 days**	**Dec 2 '19**	**May 14 '24**	**Dec 2 '19**	**May 14 '24**	**0 days**			
25	25	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	35FF		
26	26	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 starting date)	1600 edays	Dec 2 '19	Apr 19 '24	Dec 2 '19	Apr 19 '24	0 edays	36FF		
27	27	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	37FF		
28	28	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	38FF		
29	29	5	**DE/2018/04 - the Contractor's Programme (w/ Defects Date of Planned Completion Date)**	**1977 days?**	**Dec 2 '19**	**Apr 30 '25**	**Dec 2 '19**	**Apr 30 '25**	**0 days?**			
30	30	5.1	Starting Date	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days		715,225SS+30 e	
31	31	5.2	Planned Key Date Completion Date - KD1A	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days		20FF	
32	32	5.3	Planned Key Date Completion Date - KD1B	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days		21FF	
33	33	5.4	Planned Key Date Completion Date - KD3A	0 days	Jul 22 '20	Jul 22 '20	Jul 22 '20	Jul 22 '20	0 days		22FF	
34	34	5.5	Planned Key Date Completion Date - KD3B	0 days	Jun 7 '21	Jun 7 '21	Jun 7 '21	Jun 7 '21	0 days		23FF	
35	35	5.6	Planned Sectional Completion Date - Section 1	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days		25FF	
36	36	5.7	Planned Sectional Completion Date - Section 2	0 days	Apr 1 '24	Apr 1 '24	Apr 19 '24	Apr 19 '24	18 days		26FF	
37	37	5.8	Planned Sectional Completion Date - Section 3	0 days	Sep 1 '21	Sep 1 '21	Sep 1 '21	Sep 1 '21	0 days		27FF	
38	38	5.9	Planned Sectional Completion Date - Section 4	0 days	May 1 '24	May 1 '24	May 14 '24	May 14 '24	13 days		28FF	
39	39	5.10	Planned Completion Date	0 days	Dec 8 '24	Dec 8 '24	May 14 '24	May 14 '24	0 days	1398,1399,1400,1401,1402,3		
40	40	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			
41	41	5.12	**Part A: Procurement and Delivery of Major Plant and Materials (for multi buildings)**	**758 days**	**Jul 1 '20**	**Jul 28 '22**	**Jul 1 '20**	**Aug 3 '23**	**371 days**			
42	42	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	30SS+550 days		
43	43	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**			
44	44	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		45	
45	45	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	44	46	
46	46	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	45	276	
47	47	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**			
48	48	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		49	
49	49	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	48	50	
50	50	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	49	51	
51	51	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	50	52	
52	52	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	51	364,512,909	



Bestwise
Project: DE/2018/04

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
53	53	5.12.4	**General - Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve**	**535 days**	**Nov 2 '20**	**Apr 20 '22**	**Nov 2 '20**	**Apr 20 '22**	**0 days**			
54	54	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		55	
55	55	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	54	56	
56	56	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	55	298,304,466,61	
57	57	5.12.4.4	Submission for acceptance of purchasing package for remaining pipework and valves (Rev. :	30 days	Nov 1 '21	Nov 30 '21	Nov 1 '21	Nov 30 '21	0 days		58	
58	58	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	57	59	
59	59	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	58	298,304,466,61	
60	60	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**			
61	61	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		62	
62	62	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	61	63	
63	63	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	62	304,466,610,75	
64	64	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**			
65	65	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		66	
66	66	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	65	67	
67	67	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	66	752	
68	68	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**			
69	69	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		70	
70	70	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	69	71	
71	71	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	70	279,584,439,75	
72	72	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**	**Aug 3 '23**	**371 days**			
73	73	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		74	
74	74	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	73	75	
75	75	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	74	277,437,582,74	
76	76	5.12.8.4	Manufacturing and Factory Acceptance Test of Plant	90 days	Mar 16 '22	Jun 13 '22	Mar 16 '22	Jun 19 '23	0 days	277,437,582,747	77	
77	77	5.12.8.5	Shipping and Delivery of Plant to LVSB Sub-Contractor	45 days	Jun 14 '22	Jul 28 '22	Jun 20 '23	Aug 3 '23	0 days	76	311SS-90 edays	
78	78	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**			
79	79	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		80	
80	80	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	79	81	
81	81	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	80	277,747	
82	82	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**			
83	83	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		84	
84	84	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	83	85	
85	85	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	84	277,437,582,74	
86	86	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**			
87	87	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		88	
88	88	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	87	89	
89	89	5.12.11.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	88	277,747	
90	90	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**			
91	91	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		92	
92	92	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	91	93	
93	93	5.12.12.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	92	277,437,582,74	
94	94	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**			
95	95	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		96	
96	96	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	95	97	
97	97	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	96	277,437,582,74	
98	98	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**			
99	99	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		100	
100	100	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	99	101	
101	101	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	100	277,437,582,74	
102	102	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**	2,30		
103	103	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,30SS+620 days		
104	104	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**			
105	105	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		106	
106	106	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	105	107	
107	107	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	106		
108	108	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			
109	109	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**			
110	110	5.13.3.1	Submission for acceptance of proposed hydraulic laboratory to conduct the test	7 edays	May 15 '20	May 22 '20	May 15 '20	May 22 '20	0 edays		111	
111	111	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	110	112	
112	112	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	111	113	
113	113	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	112	114	
114	114	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	113	272,432,577,74	
115	115	5.13.4	**General - Independent Checking Engineer (04SC004)**	**127 days**	**Mar 11 '20**	**Jul 15 '20**	**Mar 11 '20**	**Jul 15 '20**	**0 days**			
116	116	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		117	



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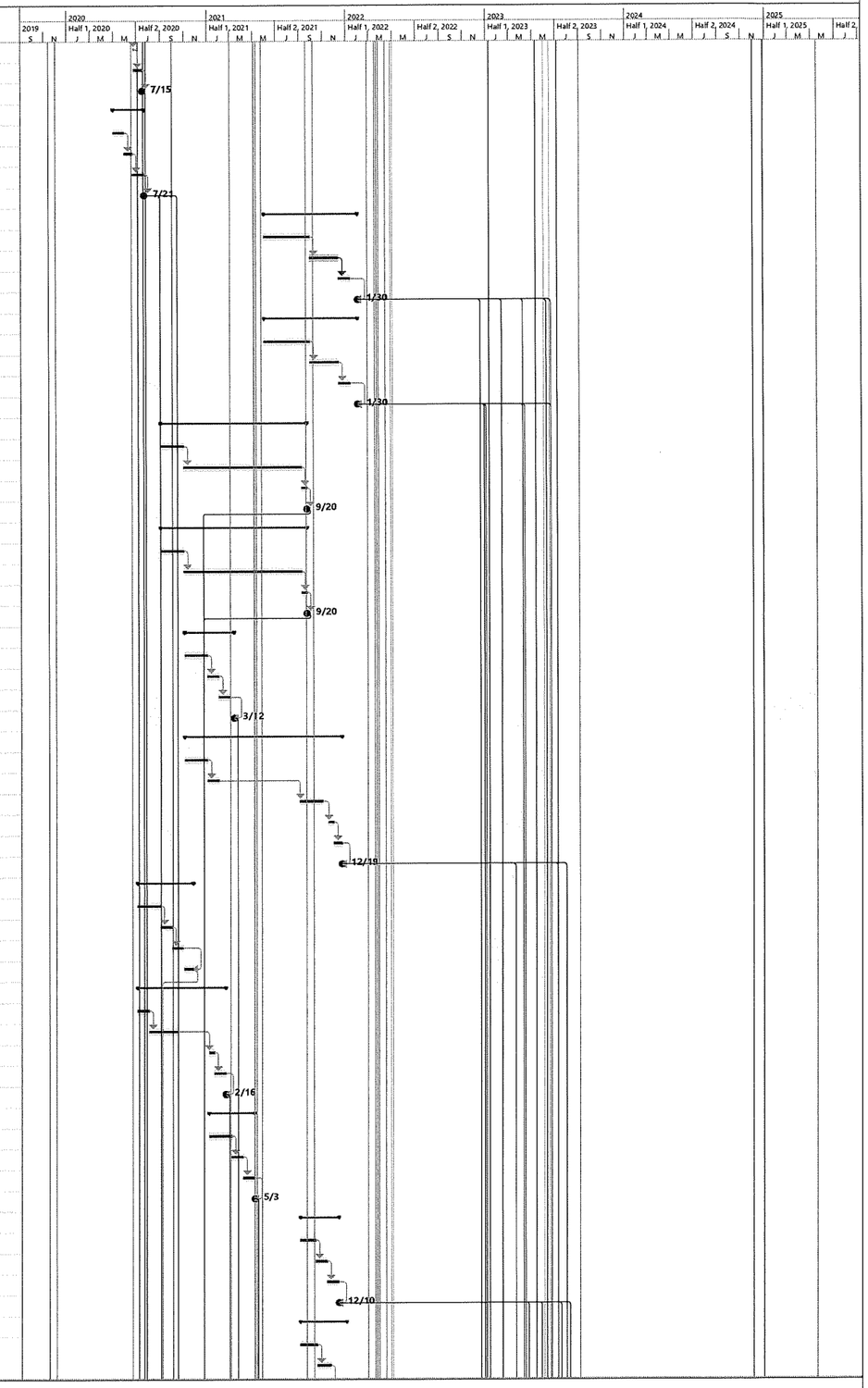
Project: DE/2018/04

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
117	117	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	116	118	
118	118	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	117	119	
119	119	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	118		
120	**120**	**5.13.5**	**General - Lifting Appliances (04SC008)**	**81 days**	**May 1 '20**	**Jul 21 '20**	**May 1 '20**	**Jul 21 '20**	**0 days**			
121	121	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		122	
122	122	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	121	123	
123	123	5.13.5.3	Acceptance of conforming tender	30 edays	Jun 21 '20	Jul 21 '20	Jun 21 '20	Jul 21 '20	0 edays	122	124	
124	124	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	123	280,440,587,75	
125	**125**	**5.13.6**	**General - Mechanical Installations**	**244 days**	**Jun 1 '21**	**Jan 30 '22**	**Jun 1 '21**	**Jan 30 '22**	**0 days**			
126	126	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		127	
127	127	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	126	128	
128	128	5.13.6.3	Acceptance of conforming tender	30 days	Dec 13 '21	Jan 11 '22	Dec 13 '21	Jan 11 '22	0 days	127	129FF	
129	129	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	128FF	352,502,655,85	
130	**130**	**5.13.7**	**General - Electrical Installations**	**244 days**	**Jun 1 '21**	**Jan 30 '22**	**Jun 1 '21**	**Jan 30 '22**	**0 days**			
131	131	5.13.7.1	Submission for acceptance of subcontract works package	120 edays	Jun 1 '21	Sep 29 '21	Jun 1 '21	Dec 13 '21	0 edays		132	
132	132	5.13.7.2	Invitation of tender for subcontract works	75 edays	Sep 29 '21	Dec 13 '21	Sep 29 '21	Jan 12 '22	0 edays	131	133	
133	133	5.13.7.3	Acceptance of conforming tender	30 edays	Dec 13 '21	Jan 12 '22	Dec 13 '21	Jan 30 '22	0 edays	132	134FF	
134	134	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	133FF	367,515,678,88	
135	**135**	**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**			
136	136	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		137	
137	137	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	136	138	
138	138	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	137	139	
139	139	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	138	213	
140	**140**	**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**			
141	141	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		142	
142	142	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	141	143	
143	143	5.13.9.3	Acceptance of conforming tender	14 edays	Sep 6 '21	Sep 20 '21	Sep 6 '21	Sep 20 '21	0 edays	142	144	
144	144	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	143	213	
145	**145**	**5.13.10**	**General - Building Services Installations**	**130 days**	**Nov 2 '20**	**Mar 12 '21**	**Nov 2 '20**	**Mar 12 '21**	**0 days**			
146	146	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 31 '21	0 edays		147	
147	147	5.13.10.2	Invitation of tender for subcontract works	30 edays	Jan 1 '21	Jan 31 '21	Jan 1 '21	Mar 2 '21	0 edays	146	148	
148	148	5.13.10.3	Acceptance of conforming tender	30 edays	Jan 31 '21	Mar 2 '21	Jan 31 '21	Mar 2 '21	0 edays	147	149FF	
149	149	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	148FF	278,438,583,75	
150	**150**	**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**			
151	151	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		152	
152	152	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	151	153	
153	153	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	152	154	
154	154	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	153	155	
155	155	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	154	156FF	
156	156	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	155FF	667,375,524	
157	**157**	**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**			
158	158	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		159	
159	159	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	158	160	
160	160	5.13.12.3	Acceptance of conforming tender	30 edays	Sep 29 '20	Oct 29 '20	Sep 29 '20	Oct 29 '20	0 edays	159	161FF	
161	161	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	160FF	1048	
162	**162**	**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**			
163	163	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		164	
164	164	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	163	165	
165	165	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	164	166	
166	166	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	165	167FF	
167	167	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	166FF	1371	
168	**168**	**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**			
169	169	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		170	
170	170	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	169	171	
171	171	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	170	172FF	
172	172	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	171FF	1322	
173	**173**	**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**			
174	174	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		175	
175	175	5.13.15.2	Invitation of tender for subcontract works (Rev. 15)	30 edays	Oct 11 '21	Nov 10 '21	Oct 11 '21	Dec 10 '21	0 edays	174	176	
176	176	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	175	177FF	
177	177	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	176FF	947,672,381,53	
178	**178**	**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**			
179	179	5.13.16.1	Submission for acceptance of subcontract works package	45 edays	Sep 1 '21	Oct 16 '21	Sep 1 '21	Nov 20 '21	0 edays		180	
180	180	5.13.16.2	Invitation of tender for subcontract works	35 edays	Oct 16 '21	Nov 20 '21	Oct 16 '21	Dec 20 '21	0 edays	179	181	



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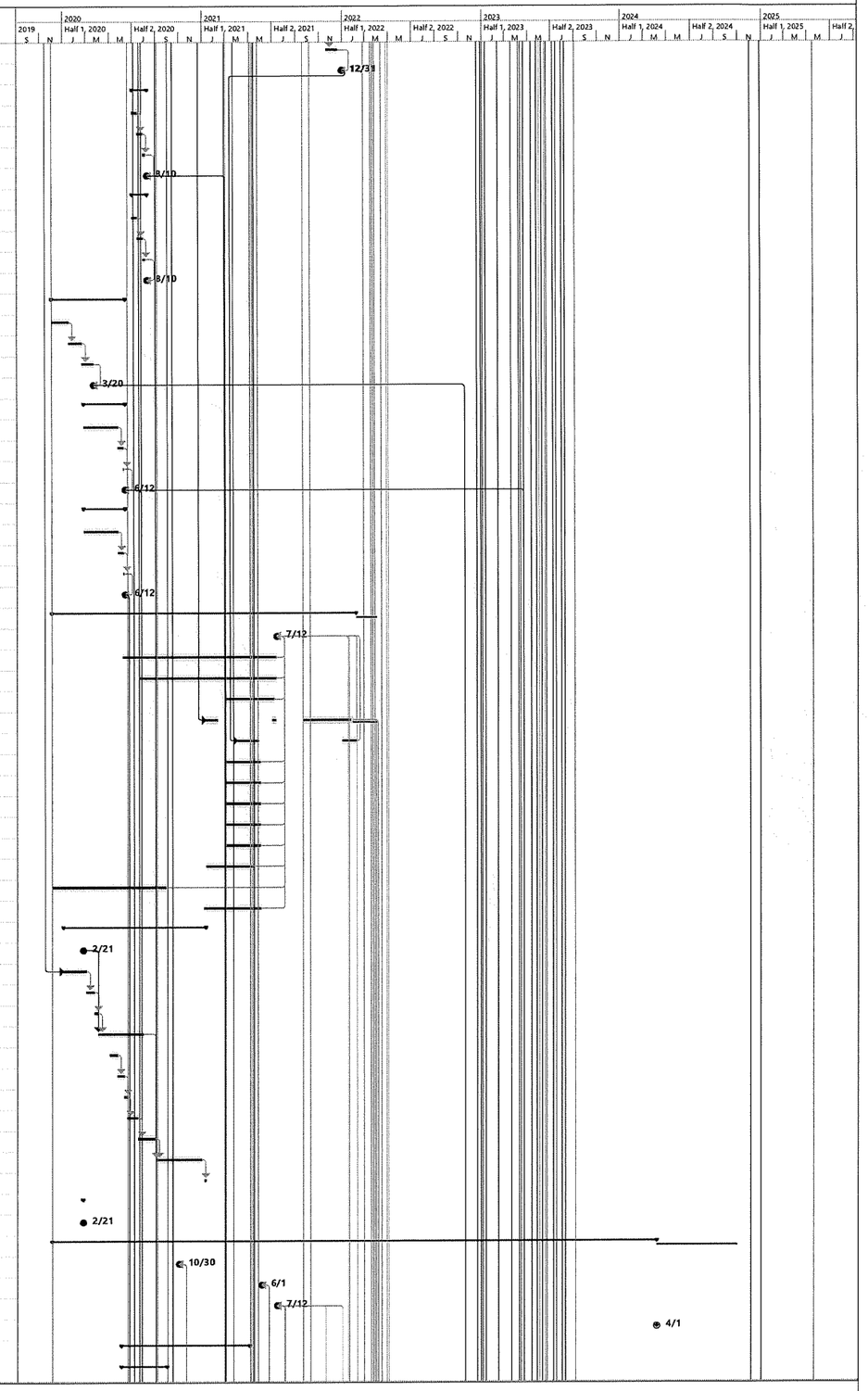
Project: DE/2018/04

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

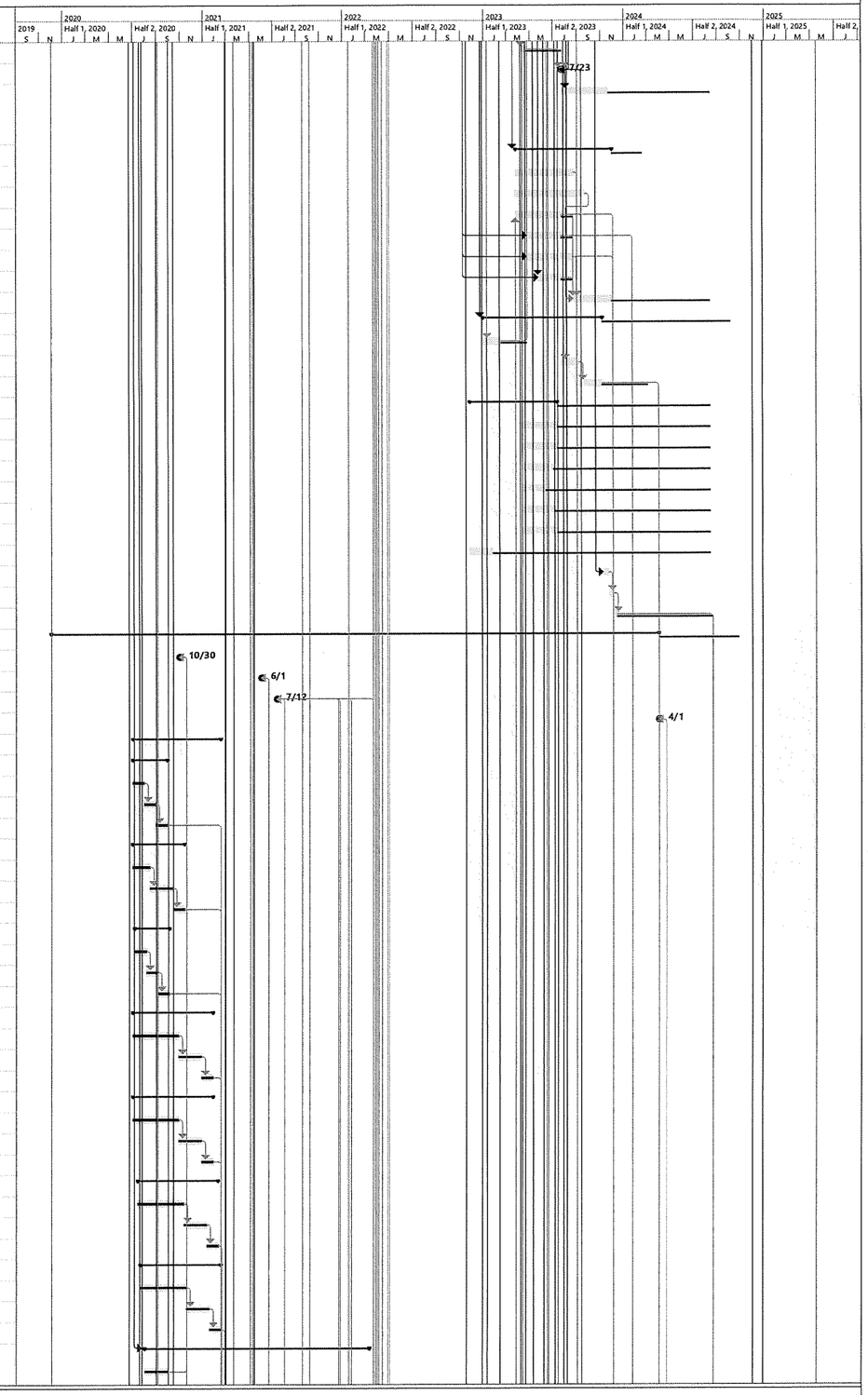
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
181	181	5.13.16.3	Acceptance of conforming tender	30 edays	Nov 20 '21	Dec 20 '21	Nov 20 '21	Dec 20 '21	0 edays	180	182FF	
182	182	5.13.16.4	Sub-contract work commencement date	0 days	Dec 31 '21	Dec 31 '21	Dec 31 '21	Dec 31 '21	0 days	181FF	214	
183	183	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**			
184	184	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		185	
185	185	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	184	186	
186	186	5.13.17.3	Acceptance of conforming tender	7 days	Jul 29 '20	Aug 4 '20	Jul 29 '20	Aug 4 '20	0 days	185	187FF	
187	187	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	186FF	1145	
188	188	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**			
189	189	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		190	
190	190	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	189	191	
191	191	5.13.18.3	Acceptance of conforming tender	7 days	Jul 29 '20	Aug 4 '20	Jul 29 '20	Aug 4 '20	0 days	190	192FF	
192	192	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	191FF		
193	193	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**			
194	194	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		195	
195	195	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	194	196	
196	196	5.13.19.3	Acceptance of conforming tender	30 days	Feb 20 '20	Mar 20 '20	Feb 20 '20	Mar 20 '20	0 days	195	197FF	
197	197	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	196FF	1351,1364	
198	198	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**			
199	199	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		200	
200	200	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	199	201	
201	201	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	200	202FF	
202	202	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	201FF	924	
203	203	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**			
204	204	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		205	
205	205	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	204	206	
206	206	5.13.20.3	Acceptance of conforming tender	1 day	Jun 7 '20	Jun 7 '20	Jun 7 '20	Jun 7 '20	0 days	205	207FF	
207	207	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	206FF	1293	
208	208	5.14	**Part C: General Design Submissions**	**796 days**	**Dec 2 '19**	**Feb 5 '22**	**Dec 2 '19**	**Apr 1 '22**	**55 days**			
209	209	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	210FF,211FF,212FF,213FF,21		
210	210	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		209FF	
211	211	5.14.3	CDS020 - Electrical Installation Typical Details	355 edays	Jul 20 '20	Jul 10 '21	Jul 20 '20	Jul 10 '21	0 edays		209FF	
212	212	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		209FF	
213	213	5.14.5	CDS012 - Detailed Design for SCADA System	383.4 edays	Jan 9 '21	Jan 27 '22	Jan 9 '21	Apr 1 '22	63.6 edays	139,144	209FF,277FF,4	
214	214	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	182	209FF	
215	215	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		209FF	
216	216	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		209FF	
217	217	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		209FF	
218	218	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		209FF	
219	219	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		209FF	
220	220	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		209FF	
221	221	5.14.13	Design submissions for E&M installation works of existing sludge thickening building	300 edays	Dec 2 '19	Sep 27 '20	Dec 2 '19	Sep 27 '20	0 edays		209FF	
222	222	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		209FF	
223	223	5.15	**Works Area WA1-C**	**374 days**	**Jan 1 '20**	**Jan 8 '21**	**Jan 1 '20**	**Jan 8 '21**	**0 days**			
224	224	5.15.1	Actual Access / Handover Date	1 day	Feb 21 '20	Feb 21 '20	Feb 21 '20	Feb 21 '20	0 days		228	
225	225	5.15.2	Submission for acceptance of subcontract works package (Site Office) (04SC003)	60 days	Jan 1 '20	Feb 29 '20	Jan 1 '20	Feb 29 '20	0 days	2SS+30 edays,30SS+30 eday	226	
226	226	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	225	227	
227	227	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	226	228	
228	228	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	224,227	234	
229	229	5.15.6	Submission for acceptance of subcontract works package (Site Office Foundation)	20 days	May 1 '20	May 20 '20	May 1 '20	May 20 '20	0 days		230	
230	230	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	229	231	
231	231	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	230	232	
232	232	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	231	233	
233	233	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	232	234	
234	234	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	228,233	235	
235	235	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	234		
236	236	5.16	**Works Area WA2-C**	**1 day**	**Feb 21 '20**	**Feb 21 '20**	**Feb 21 '20**	**Feb 21 '20**	**0 days**			
237	237	5.16.1	Actual Access / Handover Date	1 day	Feb 21 '20	Feb 21 '20	Feb 21 '20	Feb 21 '20	0 days			
238	238	5.17	Inlet Works No. 1, Portion B-2 (PS 6B.2.1)	**1582 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Oct 27 '24**	**210 days**			
239	239	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	273FF,274FF		
240	240	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	275FF		
241	241	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	276FF,277FF,278FF,280FF,27		
242	242	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			
243	243	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**			
244	244	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**			



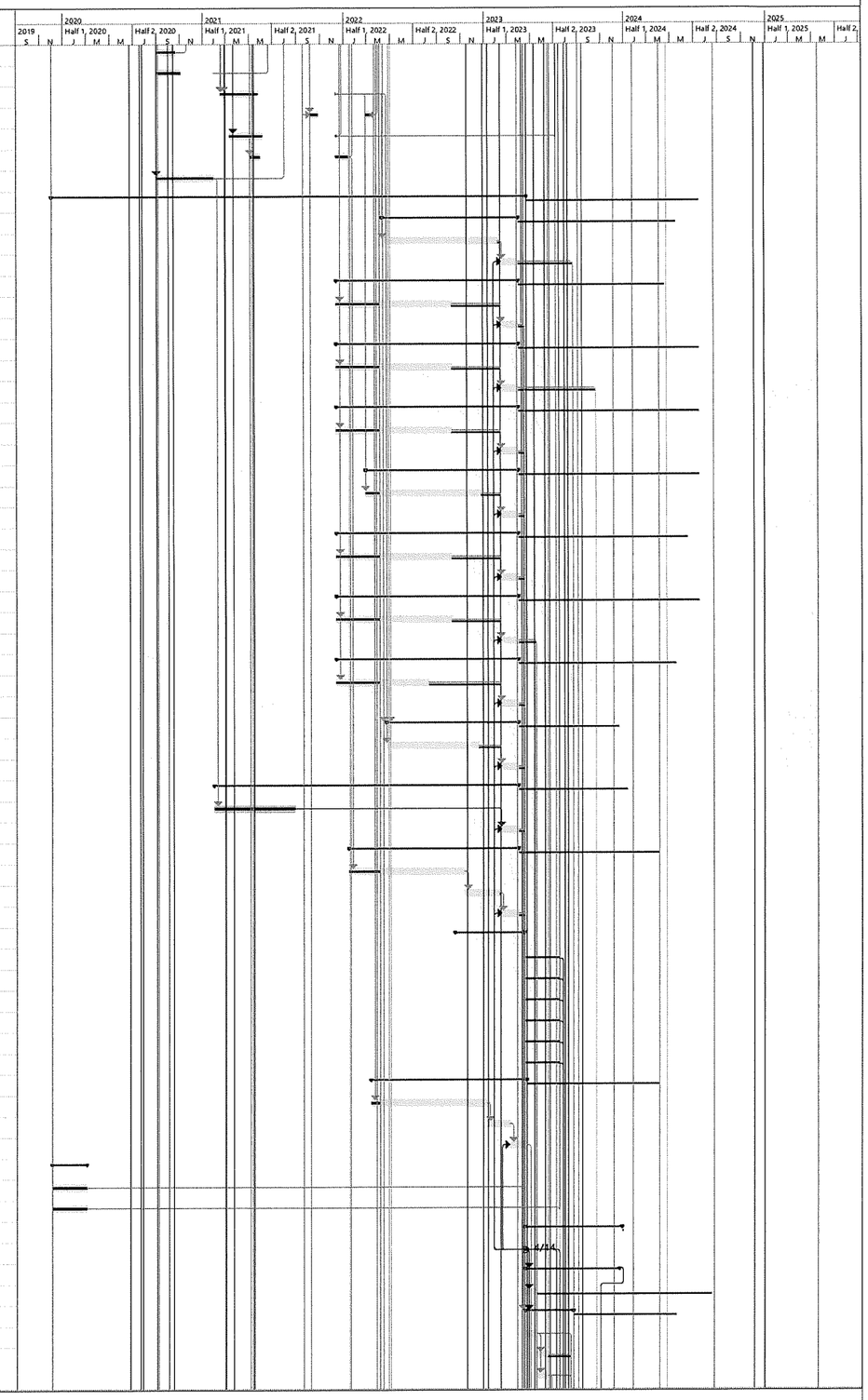
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
245	245	5.17.5.1.1	Submission for acceptance of purchasing package including proposed marking scheme	60 days	Jun 1 '20	Jul 30 '20	Jun 1 '20	Jul 30 '20	0 days		246	
246	246	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	245	247	
247	247	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	246	276	
248	248	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			
249	249	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		250	
250	250	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	249	251	
251	251	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	250	276	
252	252	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			
253	253	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		254	
254	254	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	253	255	
255	255	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	254	276	
256	256	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			
257	257	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		258	
258	258	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	257	259	
259	259	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	258	276	
260	260	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			
261	261	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		262	
262	262	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	261	263	
263	263	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	262	276	
264	264	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			
265	265	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		266	
266	266	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	265	267	
267	267	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	266	276	
268	268	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			
269	269	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		270	
270	270	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	269	271	
271	271	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	270	276	
272	272	5.17.6	Design Submissions for IW	523 days	Jul 15 '20	Dec 19 '21	Jul 15 '20	Apr 1 '22	0 days	114		
273	273	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		239FF	
274	274	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		239FF	
275	275	5.17.6.3	CDS081-1 - Civil and dimensional requirements drawings for Inlet Works No. 1	210 days	Aug 28 '20	Mar 25 '21	Aug 28 '20	Mar 25 '21	0 days		240FF	
276	276	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	251,255,247,263,267,259,27	283,302,290,29	
277	277	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	75,81,85,89,93,213FF,101,97	76,319,311,329	
278	278	5.17.6.6	CDS034-1 - Detailed Design for Electrical Installations BS at Inlet Works No. 1	120 edays	Mar 12 '21	Jul 10 '21	Mar 12 '21	Jul 10 '21	0 edays	149	241FF,375	
279	279	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	Apr 1 '22	0 edays	71	311,241FF	
280	280	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	124	308,241FF	
281	281	5.17.7	Manufacturing and Delivery of Plant & Materials	1228 days	Dec 2 '19	Apr 12 '23	Dec 2 '19	Dec 1 '23	233 days			
282	282	5.17.7.1	Inlet Pumps, EQT006	360 days	Feb 21 '22	Feb 15 '23	Feb 21 '22	Oct 11 '23	238 days			
283	283	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	276	284	
284	284	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	283	285	
285	285	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	284,339SS-60 edays	357	
286	286	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		353	
287	287	5.17.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 10 '21	Aug 6 '22	Dec 10 '21	Feb 8 '23	50 days	276	288	
288	288	5.17.7.2.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Feb 9 '23	Apr 9 '23	31 days	287,339SS-60 edays	355,358	
289	289	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			
290	290	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	276	291	
291	291	5.17.7.3.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	May 10 '23	Jul 8 '23	143 days	290,339SS-60 edays	356	
292	292	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		353	
293	293	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	276	294	
294	294	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	293,339SS-60 edays	361	
295	295	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			
296	296	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	276	297	
297	297	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	296,339SS-60 edays	359,360	
298	298	5.17.7.6	Pipework, EQT036 (Rev. 11)	300 days	Apr 21 '22	Feb 14 '23	Jul 5 '22	Apr 30 '23	75 days	56,59		
299	299	5.17.7.6.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Jul 5 '22	Mar 1 '23	0 days	276	300	
300	300	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	299,339SS-60 edays	362	
301	301	5.17.7.7	Stoplogs and Penstocks, EQT013	489 days	Jul 24 '21	Nov 24 '22	Jul 24 '21	Dec 31 '22	37 days			
302	302	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	276	303	
303	303	5.17.7.7.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Nov 2 '22	Dec 31 '22	37 days	302,339SS-60 edays	353	
304	304	5.17.7.8	Valves and Actuators, EQT036 (Rev. 11)	300 days	Apr 21 '22	Feb 14 '23	Jul 5 '22	Apr 30 '23	75 days	56,63,59		
305	305	5.17.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Jul 5 '22	Mar 1 '23	0 days	276	306	
306	306	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	305,339SS-60 edays	362	
307	307	5.17.7.9	Lifting Appliances	590 days	Mar 30 '21	Nov 9 '22	Mar 30 '21	Mar 1 '23	112 days			
308	308	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	280	309	

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
309	309	5.17.7.9.2	Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Jan 16 '23	Mar 1 '23	16 days	308,339SS-60 edays	343	
310	**310**	**5.17.7.10**	**LV Switchboards**	**345 days**	**Mar 16 '22**	**Feb 23 '23**	**Mar 16 '22**	**Nov 16 '23**	**266 days**			
311	311	5.17.7.10.1	IW - Manufacturing of Plant	240 days	Mar 16 '22	Nov 10 '22	Mar 16 '22	Aug 3 '23	0 days	277,279,77SS-90 edays	312	
312	312	5.17.7.10.2	IW - Factory Acceptance Test of Plant (to be witnessed by PM)	60 days	Nov 11 '22	Jan 9 '23	Aug 4 '23	Oct 2 '23	0 days	311	313	
313	313	5.17.7.10.3	IW - Shipping and Delivery of Plant to site	45 days	Jan 10 '23	Feb 23 '23	Oct 3 '23	Nov 16 '23	0 days	339SS-60 edays,312	368	
314	**314**	**5.17.7.11**	**HV Switchboards, 04SC012**	**1074 days**	**Dec 2 '19**	**Nov 9 '22**	**Dec 2 '19**	**Nov 9 '22**	**0 days**			
315	315	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		316	
316	316	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	315	317	
317	317	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	316,339SS-60 edays		
318	**318**	**5.17.7.12**	**11kV/380V Stepdown Power Transformers, EQT032**	**369 days**	**Nov 6 '21**	**Nov 9 '22**	**Nov 6 '21**	**Nov 16 '23**	**372 days**			
319	319	5.17.7.12.1	IW - Manufacturing and Factory Acceptance Test of Plant	240 days	Nov 6 '21	Jul 3 '22	Nov 6 '21	Oct 2 '23	84 days	277	320	
320	320	5.17.7.12.2	IW - Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Oct 3 '23	Nov 16 '23	60 days	319,339SS-60 edays	369	
321	**321**	**5.17.7.13**	**Building Services**	**180 days**	**Oct 15 '22**	**Apr 12 '23**	**Oct 15 '22**	**Apr 12 '23**	**0 days**			
322	322	5.17.7.13.1	Equipment Delivery for Mechanical Ventilation and Air Conditioning System	180 days	Oct 15 '22	Apr 12 '23	Nov 17 '23	May 15 '24	0 days		388	
323	323	5.17.7.13.2	Equipment Delivery for Lighting and Power Distribution System	180 days	Oct 15 '22	Apr 12 '23	Nov 17 '23	May 15 '24	0 days		389	
324	324	5.17.7.13.3	Equipment Delivery for Plumbing Installation	180 days	Oct 15 '22	Apr 12 '23	Nov 27 '23	May 25 '24	0 days		390	
325	325	5.17.7.13.4	Equipment Delivery for CCTV Installation	180 days	Oct 15 '22	Apr 12 '23	Dec 17 '23	Jun 14 '24	0 days		391	
326	326	5.17.7.13.5	Equipment Delivery for Fire Services Installation	180 days	Oct 15 '22	Apr 12 '23	Nov 22 '23	May 20 '24	0 days		392	
327	327	5.17.7.13.6	Equipment Delivery for Earthing and Lightning Protection System	180 days	Oct 15 '22	Apr 12 '23	Nov 17 '23	May 15 '24	0 days		393	
328	**328**	**5.17.7.14**	**PLC System**	**420 days**	**Nov 6 '21**	**Dec 30 '22**	**Nov 6 '21**	**Dec 1 '23**	**336 days**			
329	329	5.17.7.14.1	Manufacturing of Plant, PLC for IW	300 days	Nov 6 '21	Sep 1 '22	Nov 6 '21	Aug 3 '23	0 days	277	330	
330	330	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	Aug 4 '23	Oct 2 '23	0 days	329	331	
331	331	5.17.7.14.3	Shipping and Delivery of Plant to site	60 days	Nov 1 '22	Dec 30 '22	Oct 3 '23	Dec 1 '23	0 days	339SS-60 edays,330	384	
332	**332**	**5.17.7.15**	**Fixed Bar Screen, EQT046**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Jul 21 '23**	**239 days**			
333	333	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	276	334	
334	334	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	333,339SS-45 edays	354	
335	**335**	**5.17.7.16**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
336	336	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		370	
337	337	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		371	
338	**338**	**5.17.8**	**Site Installation Work**	**384 days**	**Nov 25 '22**	**Dec 13 '23**	**Nov 25 '22**	**Oct 27 '24**	**319 days**			
339	339	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	Nov 25 '22	Nov 25 '22	0 days		343,341,342,28	
340	340	5.17.8.2	Tentative Civil Handover Date, HV cables draw pits from MFB2 to IW	1 day	Feb 14 '23	Feb 14 '23	Mar 15 '24	Mar 15 '24	129 days		373FF+30 days	
341	**341**	**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**	**Oct 27 '24**	**0 days**	**339**	**395FS-30 days**	
342	342	5.17.8.3.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., I	30 days	Nov 26 '22	Dec 25 '22	Nov 26 '22	Aug 12 '24	596 days	339		
343	**343**	**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**	**339,309**	**352SS+30 days**	
344	344	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	347,348	351	LA - A x 4~6 men
345	345	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	347,348	351	LA - B x 4~6 men
346	346	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	347,348	349,351	LA - C x 4~6 men
347	347	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		344,345,346,35	LA - A x 4~6 men
348	348	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		344,345,346,35	LA - B x 4~6 men
349	349	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	346	351	LA - C x 4~6 men
350	350	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		351	
351	351	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	344,345,346,347,348,349,35	354	LA - B x 4~6 men
352	**352**	**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**	**343SS+30 days,129**	**367SS+14 days**	
353	353	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	292,286,303	362,363,366	ME - E x 4~6 men
354	354	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	351,334	358	ME - D x 2~4 men
355	355	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	288	356	ME - A x 4~6 men
356	356	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	343,355,291	361	ME - A x 4~6 men
357	357	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	343,362SS+14 days,358,363	359	ME - B x 4~6 men
358	358	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	354,288	357	ME - B x 4~6 men
359	359	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	357,297	360	ME - B x 4~6 men
360	360	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	359,297		ME - B x 4~6 men
361	361	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	356,294	366	ME - A x 4~6 men
362	362	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	353,300,306	357SS+14 days,	ME - D x 2~4 men
363	363	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	353	357SS+14 days,	ME - D x 2~4 men
364	364	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	362,363,52	366	ME - A x 4~6 men
365	365	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		366	ME - D x 2~4 men
366	366	5.17.8.3.3.1	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks, pressure tests etc.	100 days	Aug 29 '23	Dec 6 '23	Aug 29 '23	Dec 6 '23	0 days	353,361,364,365		ME - D x 2~4 men
367	**367**	**5.17.8.3.4**	**Electrical Installations for Inlet Works No. 1**	**326 days**	**Jan 9 '23**	**Nov 30 '23**	**Jun 13 '23**	**Aug 12 '24**	**155 days**	**352SS+14 days,134**		
368	368	5.17.8.3.4.1	Installation of LV Switchboards, IW	60 days	Feb 24 '23	Apr 24 '23	Nov 17 '23	Jan 15 '24	0 days	313	371	LV - A x 4~6 men
369	369	5.17.8.3.4.2	Installation of Transformer, IW, EQT032	60 days	Jan 9 '23	Mar 9 '23	Nov 17 '23	Jan 15 '24	0 days	320	371,372FS+30	EE - A x 4~6 men
370	370	5.17.8.3.4.3	Installation of cable trays and cable containments	90 days	Jan 9 '23	Apr 8 '23	Oct 18 '23	Jan 15 '24	16 days	336	371	EE - C x 4~6 men
371	371	5.17.8.3.4.4	Cables laying and terminations	90 days	Apr 25 '23	Jul 23 '23	Jan 16 '24	Apr 14 '24	0 days	368,369,370,384,337	373,385,374	EE - C x 4~6 men

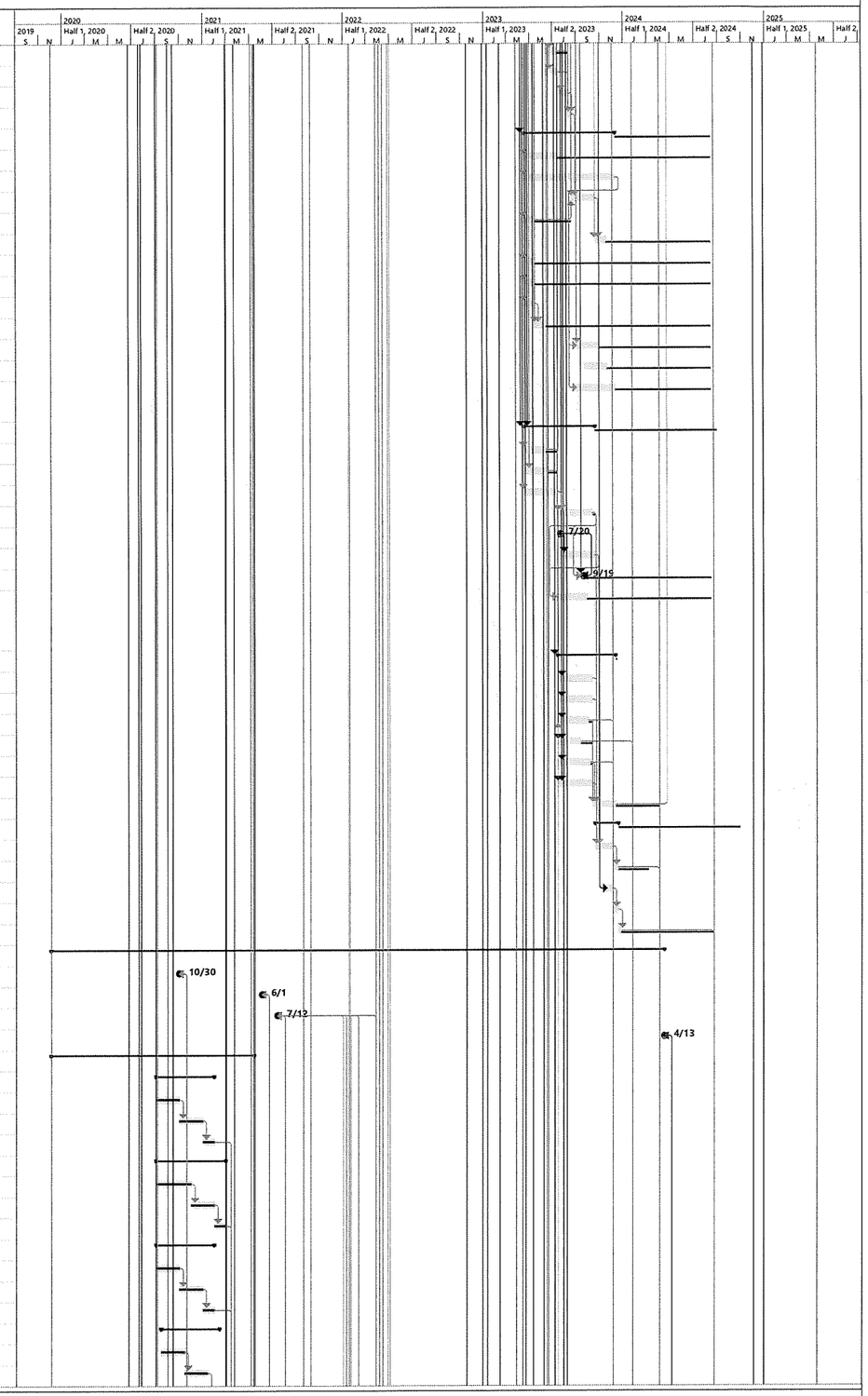
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
372	372	5.17.8.3.4.5	Energisation of Transformer, IW	14 days	Apr 9 '23	Apr 22 '23	Apr 1 '24	Apr 14 '24	92 days	369FS+30 days	373	
373	373	5.17.8.3.4.6	Energisation of LV Switchboards, IW	0 days	Jul 23 '23	Jul 23 '23	Apr 15 '24	Apr 15 '24	0 days	371,340FF+30 days,372	374,522	LV - A x 4~6 men
374	374	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	Apr 15 '24	Aug 12 '24	266 days	371,373		LV - A x 4~6 men
375	375	5.17.8.3.4.8	**Building Services Installations for Inlet Works No. 1**	**250 days**	**Mar 26 '23**	**Nov 30 '23**	**Jun 13 '23**	**Aug 12 '24**	**79 days**	**339FS+120 days,278,156**		
376	376	5.17.8.3.4.9	Mechanical Ventilation and Air Conditioning System, IW	150 days	Mar 26 '23	Aug 22 '23	Dec 7 '23	May 4 '24	0 days		382	MVAC - B x 4~6 men
377	377	5.17.8.3.4.10	Lighting and Power Distribution System, IW	180 days	Mar 26 '23	Sep 21 '23	Dec 7 '23	Jun 3 '24	0 days		382FS-30 days	BS - A x 4~6 men
378	378	5.17.8.3.4.11	Plumbing Installation, IW	120 days	Mar 26 '23	Jul 23 '23	Aug 6 '23	Dec 3 '23	30 days	1375	1377,382	Pb - A x 4~6 men
379	379	5.17.8.3.4.12	CCTV Installation (5 indoor +5 outdoor Cameras), IW	90 days	Apr 24 '23	Jul 22 '23	Feb 5 '24	May 4 '24	31 days	339SS+150 days	382,1387	BS - B x 4~6 men
380	380	5.17.8.3.4.13	Fire Services Installation, IW	120 days	Apr 24 '23	Aug 21 '23	Jun 13 '23	Oct 10 '23	1 day	339SS+150 days	1328,1340,134	FS - A x 4~6 men
381	381	5.17.8.3.4.14	Earthing and Lightning Protection System, IW	60 days	May 24 '23	Jul 22 '23	Mar 6 '24	May 4 '24	31 days	339SS+180 days,177	382	BS - C x 2~4 men
382	382	5.17.8.3.4.15	Testing and Commissioning of Building Services Installations, IW	100 days	Aug 23 '23	Nov 30 '23	May 5 '24	Aug 12 '24	256 days	376,377FS-30 days,378,379,		BS - C x 2~4 men
383	383	5.17.8.3.5	**SCADA Systems, Inlet Works**	**310 days**	**Dec 31 '22**	**Nov 5 '23**	**Dec 2 '23**	**Oct 27 '24**	**336 days**	**339**		
384	384	5.17.8.3.5.1	Installation of PLC Panels, IW	45 days	Dec 31 '22	Feb 13 '23	Dec 2 '23	Jan 15 '24	70 days	331	371	EE - B x 4~6 men
385	385	5.17.8.3.5.2	Configuration of PLC System, IW	45 days	Jul 24 '23	Sep 6 '23	Jul 15 '24	Aug 28 '24	0 days	371	386	PLC - A x 1 man
386	386	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	Aug 29 '24	Oct 27 '24	119 days	385	1388	
387	387	5.17.8.3.6	**Building Services Installations, Inlet Works No.1**	**228 days**	**Nov 26 '22**	**Jul 11 '23**	**May 15 '24**	**Aug 12 '24**	**398 days**			
388	388	5.17.8.3.6.1	Mechanical Ventilation and Air Conditioning System	90 days	Apr 13 '23	Jul 11 '23	May 15 '24	Aug 12 '24	398 days	322		MVAC - B x 4~6 men
389	389	5.17.8.3.6.2	Lighting and Power Distribution System	90 days	Apr 13 '23	Jul 11 '23	May 15 '24	Aug 12 '24	398 days	323		BS - A x 4~6 men
390	390	5.17.8.3.6.3	Plumbing Installation	80 days	Apr 13 '23	Jul 1 '23	May 25 '24	Aug 12 '24	408 days	324		Pb - B x 4~6 men
391	391	5.17.8.3.6.4	CCTV Installation	60 days	Apr 13 '23	Jun 11 '23	Jun 14 '24	Aug 12 '24	428 days	325		BS - B x 4~6 men
392	392	5.17.8.3.6.5	Fire Services Installation	85 days	Apr 13 '23	Jul 6 '23	May 20 '24	Aug 12 '24	403 days	326		FS - A x 4~6 men
393	393	5.17.8.3.6.6	Earthing and Lightning Protection System	90 days	Apr 13 '23	Jul 11 '23	May 15 '24	Aug 12 '24	398 days	327		BS - C x 2~4 men
394	394	5.17.8.3.6.7	Testing and Commissioning of Building Services Installations	60 days	Nov 26 '22	Jan 24 '23	Jun 14 '24	Aug 12 '24	566 days			BS - C x 2~4 men
395	395	5.17.8.4	Site Acceptance Test for E&M Equip & Instrumentations calibration, IW	15 days	Nov 7 '23	Nov 21 '23	Jul 14 '24	Jul 28 '24	0 days	341FS-30 days	396	
396	396	5.17.8.5	System Commissioning for E&M Equip at Inlet Works No. 1	15 edays	Nov 21 '23	Dec 6 '23	Jul 29 '24	Aug 13 '24	0 edays	395	397	
397	397	5.17.8.6	Risk Allowances for completion of Processing Plant at Inlet Works No. 1	7 edays	Dec 6 '23	Dec 13 '23	Aug 13 '24	Aug 20 '24	250.63 ed...	396	1384	
398	398	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	Oct 27 '24	209 days			
399	399	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	433FF,434FF		
400	400	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	435FF		
401	401	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	438FF,437FF,436FF,439FF,44		
402	402	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	531FF		
403	403	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**			
404	404	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**			
405	405	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		406	
406	406	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	405	407	
407	407	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	406	436	
408	408	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**			
409	409	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		410	
410	410	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	409	411	
411	411	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	410	436	
412	412	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**			
413	413	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		414	
414	414	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	413	415	
415	415	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	414	436	
416	416	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**			
417	417	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		418	
418	418	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	417	419	
419	419	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	418	436	
420	420	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**			
421	421	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		422	
422	422	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	421	423	
423	423	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	422	436	
424	424	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**			
425	425	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		426	
426	426	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	425	427	
427	427	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	426	436	
428	428	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**			
429	429	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		430	
430	430	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	429	431	
431	431	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	430	436	
432	432	5.18.6	**Design Submissions for PST No. 1~ 4**	**587 days**	**Aug 1 '20**	**Mar 11 '22**	**Aug 1 '20**	**Jul 18 '23**	**0 days**	**114**		
433	433	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		399FF	



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
434	434	5.18.6.2	CDS080-2 - Civil and dimensional requirements drawings for PST No. 1~4 up to +8.0 mPD	50 days	Sep 1 '20	Oct 20 '20	Sep 1 '20	Oct 20 '20	0 days		399FF	
435	435	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		400FF	
436	436	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	Apr 1 '22	0 edays	407,411,415,419,423,427,43	443,446,449,45	
437	437	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	Apr 1 '22	0 edays	75,85,93,213FF,101,97	76,484,401FF	
438	438	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	Jul 18 '23	0 edays	149	401FF,524	
439	439	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	Apr 1 '22	0 edays	71	473,401FF	
440	440	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	124	470,401FF	
441	441	5.18.7	**Manufacturing and Delivery of Plant & Materials**	**1235 days**	**Dec 2 '19**	**Apr 19 '23**	**Dec 2 '19**	**Jul 13 '24**	**451 days**			
442	442	5.18.7.1	**Lamella Plate Settlers, EQT014**	**353 days**	**Apr 11 '22**	**Mar 29 '23**	**Apr 11 '22**	**May 14 '24**	**412 days**			
443	443	5.18.7.1.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Apr 11 '22	Feb 4 '23	Apr 11 '22	Mar 30 '24	8 days	436	444	
444	444	5.18.7.1.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Mar 31 '24	May 14 '24	143 days	443,491SS-60 edays	505	
445	445	5.18.7.2	**Reciprocating Type Bottom Scrappers, EQT014**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Apr 14 '24**	**382 days**			
446	446	5.18.7.2.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Feb 29 '24	128 days	436	447	
447	447	5.18.7.2.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Mar 1 '24	Apr 14 '24	16 days	446,491SS-60 edays	506	
448	448	5.18.7.3	**Surface Scum Skimmers, EQT015**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Jul 13 '24**	**472 days**			
449	449	5.18.7.3.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	May 29 '24	128 days	436	450	
450	450	5.18.7.3.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	May 30 '24	Jul 13 '24	203 days	449,491SS-60 edays	507	
451	451	5.18.7.4	**Surface Scum Collection Pipes, EQT015**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Jul 13 '24**	**472 days**			
452	452	5.18.7.4.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	May 29 '24	128 days	436	453	
453	453	5.18.7.4.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	May 30 '24	Jul 13 '24	16 days	452,491SS-60 edays	508	
454	454	5.18.7.5	**Piston Type Primary Sludge Pumps, EQT016**	**397 days**	**Feb 26 '22**	**Mar 29 '23**	**Feb 26 '22**	**Jul 13 '24**	**472 days**			
455	455	5.18.7.5.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Feb 26 '22	Dec 22 '22	Feb 26 '22	May 29 '24	52 days	436	456	
456	456	5.18.7.5.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	May 30 '24	Jul 13 '24	16 days	455,491SS-60 edays	509	
457	457	5.18.7.6	**Drain Pumps, EQT007**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Jun 13 '24**	**442 days**			
458	458	5.18.7.6.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Apr 29 '24	128 days	436	459	
459	459	5.18.7.6.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Apr 30 '24	Jun 13 '24	16 days	458,491SS-60 edays	510	
460	460	5.18.7.7	**Air Blower, EQT018**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Jul 13 '24**	**472 days**			
461	461	5.18.7.7.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	May 29 '24	128 days	436	462	
462	462	5.18.7.7.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	May 30 '24	Jul 13 '24	46 days	461,491SS-60 edays	511	
463	463	5.18.7.8	**Stoplogs and Penstocks, EQT013**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**May 14 '24**	**412 days**			
464	464	5.18.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 12 '21	Aug 8 '22	Dec 12 '21	Mar 30 '24	188 days	436	465	
465	465	5.18.7.8.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Mar 31 '24	May 14 '24	16 days	491SS-60 edays,464	503	
466	466	5.18.7.9	**Pipework, Valves and Electric Actuators, EQT036, EQT042 (Rev. 11)**	**343 days**	**Apr 21 '22**	**Mar 29 '23**	**Mar 7 '23**	**Dec 16 '23**	**262 days**	56,63,59		
467	467	5.18.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Mar 7 '23	Nov 1 '23	58 days	436	468	
468	468	5.18.7.9.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Nov 2 '23	Dec 16 '23	16 days	467,491SS-60 edays	504	
469	469	5.18.7.10	**Lifting Appliances**	**790 days**	**Jan 29 '21**	**Mar 29 '23**	**Jan 29 '21**	**Jan 8 '24**	**285 days**			
470	470	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	440	471	
471	471	5.18.7.10.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Nov 25 '23	Jan 8 '24	16 days	470,491SS-60 edays	494	
472	472	5.18.7.11	**LV Switchboards**	**441 days**	**Jan 13 '22**	**Mar 29 '23**	**Jan 13 '22**	**Mar 31 '24**	**368 days**			
473	473	5.18.7.11.1	PST - Manufacturing of Plant	300 days	Jan 13 '22	Nov 8 '22	Jan 13 '22	Nov 17 '23	0 days	439	474	
474	474	5.18.7.11.2	PST - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Nov 9 '22	Feb 6 '23	Nov 18 '23	Feb 15 '24	6 days	473	475	
475	475	5.18.7.11.3	PST - Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Feb 16 '24	Mar 31 '24	16 days	474,491SS-60 edays	516	
476	476	5.18.7.12	**Building Services**	**180 days**	**Oct 15 '22**	**Apr 12 '23**	**Oct 15 '22**	**Apr 12 '23**	**0 days**			
477	477	5.18.7.12.1	Equipment Delivery for Mechanical Ventilation and Air Conditioning System	180 days	Oct 15 '22	Apr 12 '23	May 8 '23	Nov 4 '23	92 days		525	
478	478	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		526	
479	479	5.18.7.12.3	Equipment Delivery for Plumbing Installation	180 days	Oct 15 '22	Apr 12 '23	Mar 19 '23	Sep 15 '23	92 days		527	
480	480	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		528	
481	481	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		529	
482	482	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		530	
483	483	5.18.7.13	**PLC System**	**405 days**	**Mar 11 '22**	**Apr 19 '23**	**Mar 11 '22**	**Mar 31 '24**	**347 days**			
484	484	5.18.7.13.1	Manufacturing of Plant, PLC for PST	300 days	Mar 11 '22	Jan 4 '23	Mar 11 '22	Dec 17 '23	0 days	437	485	
485	485	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	Dec 18 '23	Feb 15 '24	0 days	484	486	
486	486	5.18.7.13.3	Shipping and Delivery of Plant to site	45 days	Mar 6 '23	Apr 19 '23	Feb 16 '24	Mar 31 '24	0 days	485,491SS-60 edays	517	
487	487	5.18.7.14	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
488	488	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		518	
489	489	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		519	
490	490	5.18.8	**Site Installation Work**	**255 days**	**Apr 14 '23**	**Dec 24 '23**	**Apr 18 '23**	**Oct 27 '24**	**4 days**			
491	491	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	Apr 18 '23	Apr 18 '23	0 days		494,492,515,45	
492	492	5.18.8.2	**Commencement of E&M Installation at PST No. 1~4**	**247 days**	**Apr 15 '23**	**Dec 17 '23**	**Jul 18 '23**	**Oct 27 '24**	**0 days**	491	535FS-30 days	403
493	493	5.18.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting Welfare facilities etc., P	30 days	Apr 15 '23	May 14 '23	Jul 14 '24	Aug 12 '24	456 days	491		
494	494	5.18.8.2.2	**Installation of Lifting Appliances at PST No. 1~4**	**127 days**	**Apr 15 '23**	**Aug 19 '23**	**Jan 9 '24**	**May 14 '24**	**269 days**	491,471		
495	495	5.18.8.2.2.:	Basement EOT Crane LA-02-01 SWL 10t	30 days	Apr 15 '23	May 14 '23	Jan 9 '24	Feb 7 '24	0 days		496,497,501	LA - A x 4~6 men
496	496	5.18.8.2.2.:	Coping Level EOT Crane LA-02-02 SWL 5t	30 days	May 15 '23	Jun 13 '23	Apr 8 '24	May 7 '24	60 days	495	501	LA - A x 4~6 men
497	497	5.18.8.2.2.:	Coping Level EOT Crane LA-02-03 SWL 5t	30 days	May 15 '23	Jun 13 '23	Feb 8 '24	Mar 8 '24	0 days	495	498,499,501	LA - B x 4~6 men

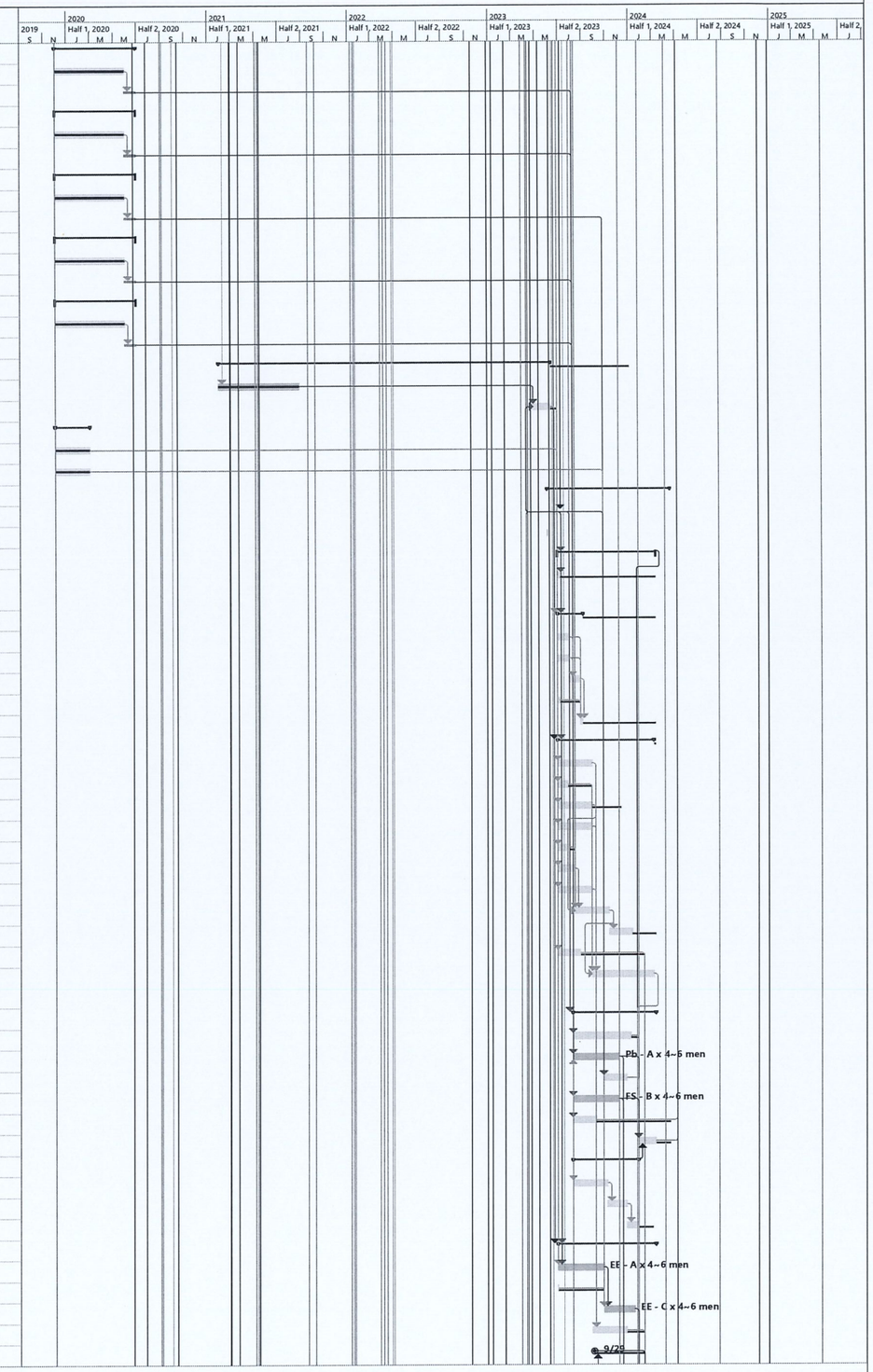


ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
498	498	5.18.8.2.2.4	Coping Level EOT Crane LA-02-04 SWL 5t	30 days	Jun 14 '23	Jul 13 '23	Apr 8 '24	May 7 '24	30 days	497	501	LA - A x 4~6 men
499	499	5.18.8.2.2.5	Coping Level EOT Crane LA-02-05 SWL 5t	30 days	Jun 14 '23	Jul 13 '23	Mar 9 '24	Apr 7 '24	0 days	497	500,501	LA - B x 4~6 men
500	500	5.18.8.2.2.6	Coping Level EOT Crane LA-02-06 SWL 2t	30 days	Jul 14 '23	Aug 12 '23	Apr 8 '24	May 7 '24	0 days	499	501	LA - A x 4~6 men
501	501	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	May 8 '24	May 14 '24	0 days	495,496,497,498,499,500	505	LA - A x 4~6 men
502	502	5.18.8.2.3	**Mechanical Installations at PST No. 1~4**	**240 days**	**Apr 15 '23**	**Dec 10 '23**	**Dec 17 '23**	**Aug 12 '24**	**246 days**	**129**		
503	503	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	May 15 '24	Aug 12 '24	396 days	465		ME - E x 4~6 men
504	504	5.18.8.2.3.2	Installation of pipework and valves, EQT036	240 days	Apr 15 '23	Dec 10 '23	Dec 17 '23	Aug 12 '24	0 days	468	514FS-100 days	ME - B x 4~6 men
505	505	5.18.8.2.3.3	Installation of lamella plate settlers (x4), EQT014	60 days	Aug 20 '23	Oct 18 '23	May 15 '24	Jul 13 '24	0 days	506,501,444	507	ME - A x 4~6 men
506	506	5.18.8.2.3.4	Installation of reciprocating type bottom scrapers (x4), EQT014	30 days	Apr 15 '23	May 14 '23	Apr 15 '24	May 14 '24	97 days	447	505	ME - A x 4~6 men
507	507	5.18.8.2.3.5	Installation of surface scum skimmers (x1), EQT015	30 days	Oct 19 '23	Nov 17 '23	Jul 14 '24	Aug 12 '24	269 days	505,450		ME - A x 4~6 men
508	508	5.18.8.2.3.6	Installation of scum collector pipes (x1), EQT015	30 days	Apr 15 '23	May 14 '23	Jul 14 '24	Aug 12 '24	456 days	453		ME - B x 4~6 men
509	509	5.18.8.2.3.7	Installation of piston type primary sludge pumps (x3), EQT016	30 days	Apr 15 '23	May 14 '23	Jul 14 '24	Aug 12 '24	456 days	456		ME - C x 4~6 men
510	510	5.18.8.2.3.8	Installation of drain pumps (x1), EQT007	30 days	Apr 15 '23	May 14 '23	Jun 14 '24	Jul 13 '24	0 days	459	511	ME - C x 4~6 men
511	511	5.18.8.2.3.9	Installation of air blowers (x2), EQT018	30 days	May 15 '23	Jun 13 '23	Jul 14 '24	Aug 12 '24	426 days	510,462		ME - C x 4~6 men
512	512	5.18.8.2.3.10	Installation of instrumentations, EQT035-1	60 days	Sep 2 '23	Oct 31 '23	Jun 14 '24	Aug 12 '24	286 days	52,504FS-100 days		ME - C x 4~6 men
513	513	5.18.8.2.3.11	Installation of Platforms, Covers etc., PST, EQT050	60 days	Sep 21 '23	Nov 19 '23	Jun 14 '24	Aug 12 '24	267 days			ME - F x 4~6 men
514	514	5.18.8.2.3.12	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks, pressure tests etc.	100 days	Sep 2 '23	Dec 10 '23	May 5 '24	Aug 12 '24	246 days	504FS-100 days		ME - D x 2~4 men
515	515	5.18.8.2.4	**Electrical Installations for PST No. 1~4**	**187 days**	**Apr 15 '23**	**Oct 18 '23**	**Mar 2 '24**	**Aug 28 '24**	**315 days**	**491,134**		
516	516	5.18.8.2.4.1	Installation of LV Switchboards, PST	60 days	Apr 15 '23	Jun 13 '23	Apr 1 '24	May 30 '24	30 days	475	519	LV - A x 4~6 men
517	517	5.18.8.2.4.2	Installation of PLC Panel, PST	60 days	Apr 20 '23	Jun 18 '23	Apr 1 '24	May 30 '24	25 days	486	519	EE - A x 4~6 men
518	518	5.18.8.2.4.3	Installation of cable trays and cable containments, PST	90 days	Apr 15 '23	Jul 13 '23	Mar 2 '24	May 30 '24	0 days	488	519	EE - A x 4~6 men
519	519	5.18.8.2.4.4	Cables laying and terminations, PST	90 days	Jul 14 '23	Oct 11 '23	May 31 '24	Aug 28 '24	7 days	516,517,518,489	522FS-30 days,	EE - B x 4~6 men
520	520	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	May 30 '24	May 30 '24	0 days		522FF+30 days,	
521	521	5.18.8.2.4.6	Cables laying and terminations between buildings	90 days	Jul 21 '23	Oct 18 '23	May 31 '24	Aug 28 '24	0 days	520	522FS-30 days,	EE - B x 4~6 men
522	522	5.18.8.2.4.7	Energisation of LV Switchboards, PST	1 day	Sep 19 '23	Sep 19 '23	Aug 12 '24	Aug 12 '24	328 days	519FS-30 days,520FF+30 day		LV - A x 4~6 men
523	523	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	May 25 '24	Aug 12 '24	319 days	519FS-100 days,521FS-100 days		LV - A x 4~6 men
524	524	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**	**491FS+90 days,438,156**		
525	525	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	477	531	MVAC - B x 4~6 men
526	526	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	478	531	BS - A x 4~6 men
527	527	5.18.8.2.5.3	Plumbing Installation, PST	80 days	Jul 14 '23	Oct 1 '23	Sep 15 '23	Dec 3 '23	10 days	1375,479	1377,531	Pb - B x 4~6 men
528	528	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	491FS+60 days,480	531,1387	BS - B x 4~6 men
529	529	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	481	1328,1340,134	FS - A x 4~6 men
530	530	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	177,482	531	BS - C x 2~4 men
531	531	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	525,526,527,528,529,530	402FF	BS - C x 2~4 men
532	532	5.18.8.2.6	**SCADA Systems, PST No. 1~4**	**60 days**	**Oct 19 '23**	**Dec 17 '23**	**Aug 29 '24**	**Oct 27 '24**	**315 days**			
533	533	5.18.8.2.6.1	Configuration of PLC System	45 days	Oct 19 '23	Dec 2 '23	Aug 29 '24	Oct 12 '24	0 days	519,521	534	PLC - B x 1 man
534	534	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	Oct 13 '24	Oct 27 '24	77 days	533	1388	PLC - A x 1 man
535	535	5.18.8.3	Site Acceptance Test for E&M Equip and Instrumentations calibrations at PST No. 1~4	15 edays	Nov 18 '23	Dec 3 '23	Jul 14 '24	Jul 29 '24	0 edays	492FS-30 days	536	
536	536	5.18.8.4	System Commissioning for E&M Equip at PST No, 1~4	15 days	Dec 3 '23	Dec 17 '23	Jul 29 '24	Aug 12 '24	0 days	535	537	
537	537	5.18.8.5	Risk Allowances for Completion of Processing Plant at PST No. 1~4	7 edays	Dec 17 '23	Dec 24 '23	Aug 13 '24	Aug 20 '24	239.63 ed...	536	1384	
538	538	5.19	Bioreactors No. 2A & 2B & DOU2A, Portion B-4 (PS 6B2.4)	**1595 days?**	**Dec 2 '19**	**Apr 13 '24**	**Dec 2 '19**	**Apr 13 '24**	**0 days?**			
539	539	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	578FF,579FF		
540	540	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	580FF		
541	541	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	581FF,582FF,583FF,584FF,58		
542	542	5.19.4	Planned Sectional Completion Date - Section 2, BR 2A & 2B & DOU2A	0 days	Apr 13 '24	Apr 13 '24	Apr 13 '24	Apr 13 '24	0 days	672FF,673FF,687FF		
543	543	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**			
544	544	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**			
545	545	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		546	
546	546	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	545	547	
547	547	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	546	581	
548	548	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**			
549	549	5.19.5.2.1	Submission for acceptance of purchasing package including proposed marking scheme	90 days	Sep 1 '20	Nov 29 '20	Sep 1 '20	Nov 29 '20	0 days		550	
550	550	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	549	551	
551	551	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	550	581	
552	552	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**			
553	553	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		554	
554	554	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	553	555	
555	555	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	554	581	
556	556	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**			
557	557	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		558	
558	558	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	557	559	

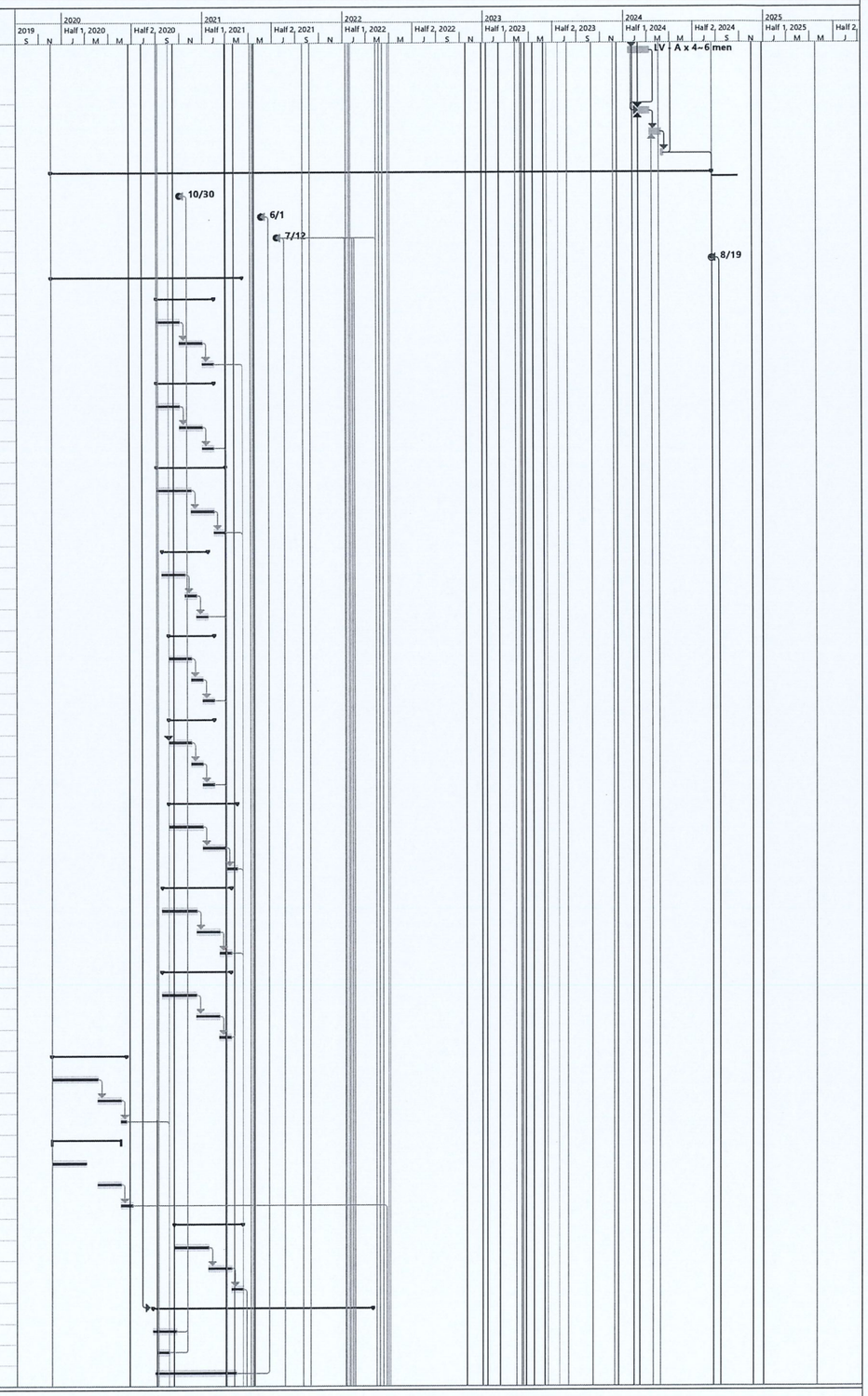


ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
559	559	5.19.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Jan 12 '21	Feb 10 '21	Jan 12 '21	Feb 10 '21	0 days	558	581	
560	**560**	**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**			
561	561	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		562	
562	562	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	561	563	
563	563	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	562	581	
564	**564**	**5.19.5.6**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B), C11, ref. EQT028**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
565	565	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		566	
566	566	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	565	567	
567	567	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	566	585,749	
568	**568**	**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**			
569	569	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		570	
570	570	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	569	576	
571	**571**	**5.19.5.8**	**PV System (EQT041)**	**104 days**	**Jan 29 '21**	**May 12 '21**	**Jan 29 '21**	**May 12 '21**	**0 days**			
572	572	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		573	
573	573	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	572	574	
574	574	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	573	575	
575	575	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	574		
576	576	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	570	581	
577	**577**	**5.19.6**	**Design Submissions for BR 2A & 2B**	**578 days**	**Aug 15 '20**	**Mar 15 '22**	**Aug 15 '20**	**Jun 13 '23**	**0 days**	**114**		
578	578	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		539FF	
579	579	5.19.6.2	CDS080-3 - Civil and dimensional requirements drawings for BR 2A&2B up to +8.0 mPD	55 days	Sep 1 '20	Oct 25 '20	Sep 1 '20	Oct 25 '20	0 days		539FF	
580	580	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		540FF	
581	581	5.19.6.4	CDS004 - Detailed Design for Bioreactor 2A and 2B	291 edays	Mar 12 '21	Dec 28 '21	Mar 12 '21	Apr 1 '22	0 edays	547,551,555,559,563,576,72	590,593,596,59	
582	582	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	Apr 1 '22	0 edays	75,85,93,213FF,101,97	76,541FF,837	
583	583	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	Jun 13 '23	0 edays	149	541FF,667,668	
584	584	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	Apr 1 '22	0 edays	71	823,541FF	
585	585	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	Apr 1 '22	0 edays	567,733	541FF,617,620	
586	586	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		209FF	
587	587	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	124	639,541FF	
588	**588**	**5.19.7**	**Manufacturing and Delivery of Plant & Materials**	**1287 days**	**Dec 2 '19**	**Jun 10 '23**	**Dec 2 '19**	**Dec 31 '23**	**204 days**			
589	**589**	**5.19.7.1**	**Pre-treatment Fine Screens, EQT019**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Sep 1 '23**	**83 days**			
590	590	5.19.7.1.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Jul 18 '23	244 days	581	591	
591	591	5.19.7.1.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Jul 19 '23	Sep 1 '23	16 days	590,645SS-60 edays	657	
592	**592**	**5.19.7.2**	**Air Diffusion System, EQT017**	**451 days**	**Mar 17 '22**	**Jun 10 '23**	**Mar 17 '22**	**Sep 14 '23**	**96 days**			
593	593	5.19.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 17 '22	Nov 11 '22	Mar 17 '22	Jul 31 '23	166 days	581	594	
594	594	5.19.7.2.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Aug 1 '23	Sep 14 '23	16 days	593,645SS-60 edays	658	
595	**595**	**5.19.7.3**	**Submersible Mixer, EQT020**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Jul 1 '23**	**21 days**			
596	596	5.19.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	May 17 '23	244 days	581	597	
597	597	5.19.7.3.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	May 18 '23	Jul 1 '23	16 days	596,645SS-60 edays	659	
598	**598**	**5.19.7.4**	**Mixed Liquor Return Pumps, EQT008**	**451 days**	**Mar 17 '22**	**Jun 10 '23**	**Mar 17 '22**	**Jul 16 '23**	**36 days**			
599	599	5.19.7.4.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 17 '22	Nov 11 '22	Mar 17 '22	Jun 1 '23	166 days	581	600	
600	600	5.19.7.4.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Jun 2 '23	Jul 16 '23	16 days	599,645SS-60 edays	660	
601	**601**	**5.19.7.5**	**Sum Removal System, EQT021, EQT022**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Jul 1 '23**	**21 days**			
602	602	5.19.7.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	May 17 '23	244 days	581	603	
603	603	5.19.7.5.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	May 18 '23	Jul 1 '23	16 days	602,645SS-60 edays	661	
604	**604**	**5.19.7.6**	**Instrumentations, EQT035-2**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Dec 8 '23**	**181 days**			
605	605	5.19.7.6.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Oct 24 '23	244 days	581	606	
606	606	5.19.7.6.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Oct 25 '23	Dec 8 '23	16 days	605,645SS-60 edays	665	
607	**607**	**5.19.7.7**	**Stoplogs and Penstocks, EQT013**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Jul 1 '23**	**21 days**			
608	608	5.19.7.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	May 17 '23	244 days	581	609	
609	609	5.19.7.7.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	May 18 '23	Jul 1 '23	16 days	608,645SS-60 edays	656	
610	**610**	**5.19.7.8**	**Pipework, Valves and Electric Actuators, EQT036, EQT042 (Rev. 11)**	**416 days**	**Apr 21 '22**	**Jun 10 '23**	**Nov 4 '22**	**Aug 15 '23**	**66 days**	**56,63,59**		
611	611	5.19.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Nov 4 '22	Jul 1 '23	131 days	581	612	
612	612	5.19.7.8.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Jul 2 '23	Aug 15 '23	61 days	611,645SS-60 edays	663	
613	**613**	**5.19.7.9**	**Photovoltaic Power System**	**195 days**	**Dec 2 '19**	**Jun 13 '20**	**Dec 2 '19**	**Jun 13 '20**	**0 days**			
614	614	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		615	
615	615	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	614	675	
616	**616**	**5.19.7.10**	**DOU 2A**	**345 days**	**Dec 21 '21**	**Nov 30 '22**	**Dec 21 '21**	**Aug 10 '23**	**253 days**			
617	617	5.19.7.10.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 21 '21	Oct 16 '22	Dec 21 '21	Jun 26 '23	0 days	585	618	
618	618	5.19.7.10.2	Shipping and Delivery of Plant to site	45 days	Oct 17 '22	Nov 30 '22	Jun 27 '23	Aug 10 '23	208 days	617	662	
619	**619**	**5.19.7.11**	**FRP Air Ductwork for DOU2A**	**345 days**	**Dec 21 '21**	**Nov 30 '22**	**Dec 21 '21**	**Aug 10 '23**	**253 days**			
620	620	5.19.7.11.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 21 '21	Oct 16 '22	Dec 21 '21	Jun 26 '23	0 days	585	621	
621	621	5.19.7.11.2	Shipping and Delivery of Plant to site	45 days	Oct 17 '22	Nov 30 '22	Jun 27 '23	Aug 10 '23	208 days	620	662	
622	**622**	**5.19.7.12**	**Building Services**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			

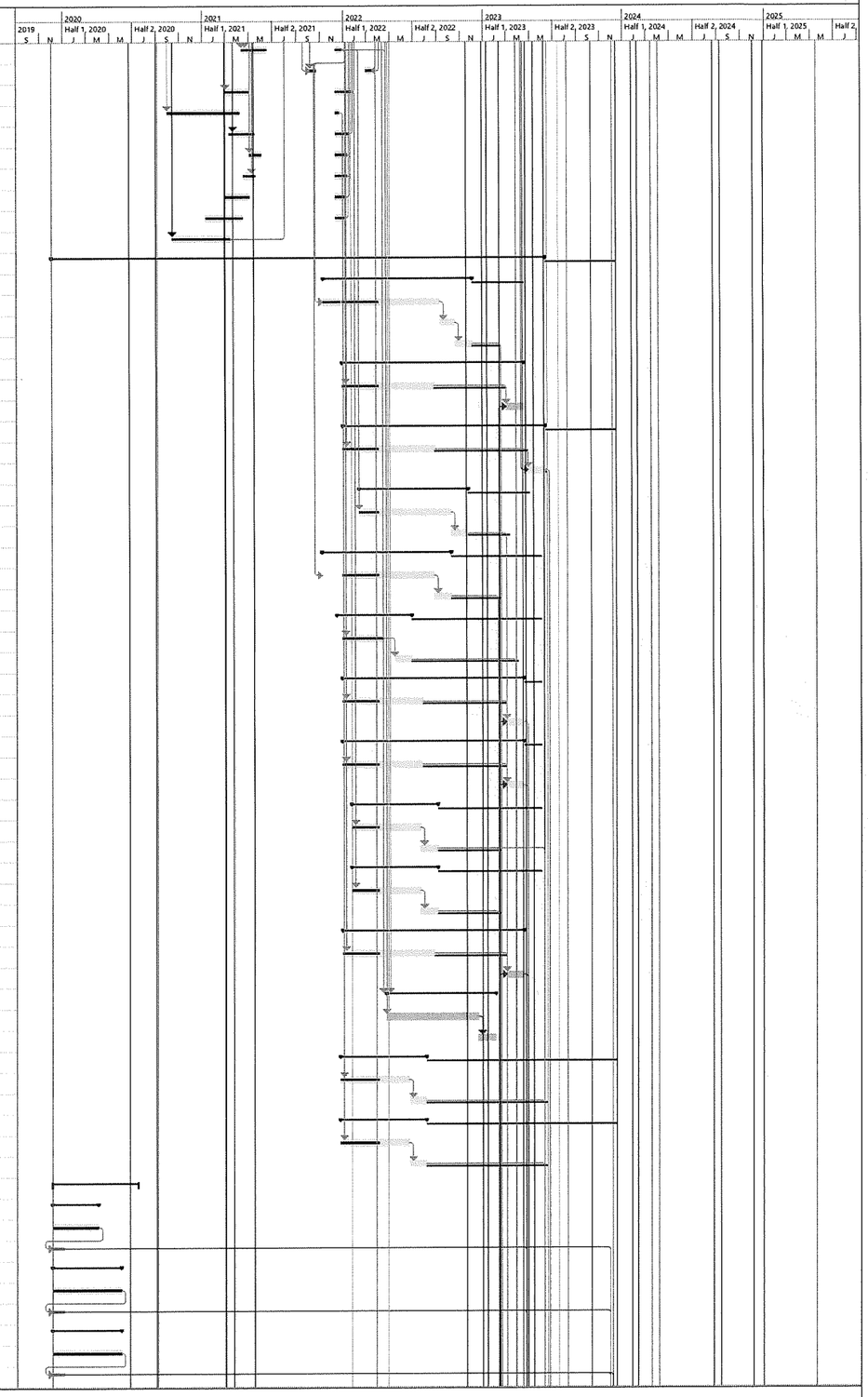
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
623	**623**	**5.19.7.12.1**	**Lighting and Power Distribution System Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
624	624	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		625	
625	625	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	624	668	
626	**626**	**5.19.7.12.2**	**Plumbing Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
627	627	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		628	
628	628	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	627	669	
629	**629**	**5.19.7.12.3**	**CCTV Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
630	630	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		631	
631	631	5.19.7.12.3	Shipping and Delivery for CCTV Equipment (7 indoor + 2 outdoor Cameras)	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	630	670	
632	**632**	**5.19.7.12.4**	**Fire Services Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
633	633	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		634	
634	634	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	633	671	
635	**635**	**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**			
636	636	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		637	
637	637	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	636	672	
638	**638**	**5.19.7.13**	**Lifting Appliances**	**863 days**	**Jan 29 '21**	**Jun 10 '23**	**Jan 29 '21**	**Dec 31 '23**	**204 days**			
639	639	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	587	640	
640	640	5.19.7.13.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Nov 17 '23	Dec 31 '23	16 days	639,645SS-60 edays	649	
641	**641**	**5.19.7.14**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
642	642	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		679	
643	643	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		681	
644	**644**	**5.19.8**	**Site Installation Work**	**318 days?**	**Jun 1 '23**	**Apr 13 '24**	**Jun 1 '23**	**Apr 13 '24**	**0 days?**			
645	645	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	649,655,678,67	
646	646	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			
647	**647**	**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**	**Apr 13 '24**	**0 days?**	**645**	**685FS-30 days**	
648	648	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	Mar 1 '24	Mar 7 '24	248 days	645		
649	**649**	**5.19.8.3.2**	**Installation of Lifting Appliances at BR 2A & 2B**	**67 days**	**Jun 27 '23**	**Sep 1 '23**	**Jan 1 '24**	**Mar 7 '24**	**188 days**	**645,640**		
650	650	5.19.8.3.2.1	Coping Level EOT Crane LA-03-01 SWL 5t	30 days	Jun 27 '23	Jul 26 '23	Jan 1 '24	Jan 30 '24	0 days		652,654	LA - A x 4~6 men
651	651	5.19.8.3.2.2	Coping Level EOT Crane LA-03-02 SWL 5t	30 days	Jun 27 '23	Jul 26 '23	Jan 1 '24	Jan 30 '24	0 days		652,654	LA - B x 4~6 men
652	652	5.19.8.3.2.3	Coping Level EOT Crane LA-03-03 SWL 5t	30 days	Jul 27 '23	Aug 25 '23	Jan 31 '24	Feb 29 '24	0 days	650,651	654	LA - A x 4~6 men
653	653	5.19.8.3.2.4	Coping Level Mobile A-frame LA-03-04 SWL 4t	7 days	Jun 27 '23	Jul 3 '23	Feb 23 '24	Feb 29 '24	53 days		654	LA - B x 4~6 men
654	654	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	Mar 1 '24	Mar 7 '24	188 days	650,651,652,653		LA - B x 4~6 men
655	**655**	**5.19.8.3.3**	**Mechanical Installations for E&M Equip at BR 2A & 2B**	**250 days**	**Jun 26 '23**	**Mar 2 '24**	**Jul 2 '23**	**Mar 7 '24**	**5 days**	**645,129**		
656	656	5.19.8.3.3.1	Installation of penstocks and stoplogs (Penstocks 8nos, Stoplogs 8nos), EQT013	90 days	Jun 27 '23	Sep 24 '23	Jul 2 '23	Sep 29 '23	0 days	609	666	ME - E x 4~6 men
657	657	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	Sep 2 '23	Sep 29 '23	62 days	591	666	ME - A x 4~6 men
658	658	5.19.8.3.3.3	Installation of air diffusion system (x2), EQT017	90 days	Jun 27 '23	Sep 24 '23	Sep 15 '23	Dec 13 '23	75 days	594	663FS-120 days	ME - D x 2~4 men
659	659	5.19.8.3.3.4	Installation of submersible mixers (x16), EQT020	90 days	Jun 27 '23	Sep 24 '23	Jul 2 '23	Sep 29 '23	0 days	597	666	ME - B x 4~6 men
660	660	5.19.8.3.3.5	Installation of mixed liquor return pumps (x6), EQT008	30 days	Jun 27 '23	Jul 26 '23	Jul 17 '23	Aug 15 '23	15 days	600	663	ME - A x 4~6 men
661	661	5.19.8.3.3.6	Installation of scum removal systems (x2), EQT022	45 days	Jun 27 '23	Aug 10 '23	Jul 2 '23	Aug 15 '23	0 days	603	663	ME - B x 4~6 men
662	662	5.19.8.3.3.7	Mechanical Installations for DOU 2A	90 edays	Jun 26 '23	Sep 24 '23	Aug 11 '23	Nov 9 '23	0 edays	618,621	682	ME - F x 4~6 men
663	663	5.19.8.3.3.8	Installation of pipework and valves, EQT036	90 days	Aug 11 '23	Nov 8 '23	Aug 16 '23	Nov 13 '23	0 days	612,658FS-120 days,660,661	666FS-45 days,I	ME - C x 4~6 men
664	664	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	Jan 8 '24	Mar 7 '24	60 days	663		
665	665	5.19.8.3.3.10	Installation of instrumentations, EQT035-2	60 days	Jun 27 '23	Aug 25 '23	Dec 9 '23	Feb 6 '24	165 days	606	685	ME - D x 2~4 men
666	666	5.19.8.3.3.11	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks, pressure tests etc.	160 days	Sep 25 '23	Mar 2 '24	Sep 30 '23	Mar 7 '24	0 days	656,657,663FS-45 days,659	685FS-30 days	ME - D x 2~4 men
667	**667**	**5.19.8.3.4**	**Building Services Installations for BR 2A & 2B**	**215 days**	**Aug 6 '23**	**Mar 7 '24**	**Jun 13 '23**	**Apr 13 '24**	**0 days**	**645FS+40 days,583,156**		
668	668	5.19.8.3.4.1	Lighting and Power Distribution System, BR2	150 days	Aug 6 '23	Jan 2 '24	Oct 2 '23	Feb 28 '24	20 days	583,625	673	BS - A x 4~6 men
669	669	5.19.8.3.4.2	Plumbing Installation, BR2	120 days	Aug 6 '23	Dec 3 '23	Aug 6 '23	Dec 3 '23	0 days	1375,628	1377,673	Pb - A x 4~6 men
670	670	5.19.8.3.4.3	CCTV Installation (7 indoor + 2 outdoor Cameras), BR2	60 days	Oct 25 '23	Dec 23 '23	Dec 31 '23	Feb 28 '24	0 days	645FS+120 days,631	673,1387	BS - B x 4~6 men
671	671	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	634	1328,1340,134	FS - B x 4~6 men
672	672	5.19.8.3.4.5	Lightning Protection System, BR2	60 days	Aug 6 '23	Oct 4 '23	Feb 14 '24	Apr 13 '24	192 days	177,637	542FF	BS - C x 2~4 men
673	673	5.19.8.3.4.6	Testing and Commissioning of Building Services Installations, BR2	45 days	Jan 23 '24	Mar 7 '24	Feb 29 '24	Apr 13 '24	37 days	668,669,670,671,674	542FF	BS - C x 2~4 men
674	**674**	**5.19.8.3.4.7**	**Photovoltaic Power System (PS 6B.6.11)**	**170 days**	**Aug 6 '23**	**Jan 22 '24**	**Sep 12 '23**	**Feb 28 '24**	**0 days**		**673**	
675	675	5.19.8.3.4.7.1	Commencement of Site Installation Work	90 days	Aug 6 '23	Nov 3 '23	Sep 12 '23	Dec 10 '23	0 days	615	676	PV - A x 4~6 men
676	676	5.19.8.3.4.7.2	Technical Assessment, System Test and Installation	50 days	Nov 4 '23	Dec 23 '23	Dec 11 '23	Jan 29 '24	0 days	675	677	PV - A x 4~6 men
677	677	5.19.8.3.4.7.3	CLP's smart meter installation and Final on-grid test with CLP	30 days	Dec 24 '23	Jan 22 '24	Jan 30 '24	Feb 28 '24	37 days	676		
678	**678**	**5.19.8.3.5**	**Electrical Installations for E&M Equip at BR 2A & 2B**	**255 days?**	**Jun 27 '23**	**Mar 7 '24**	**Jun 27 '23**	**Mar 7 '24**	**0 days?**	**645,134**		
679	679	5.19.8.3.5.1	Installation of cable trays and cable containments	120 days	Jun 27 '23	Oct 24 '23	Jun 27 '23	Oct 24 '23	0 days	645,642	681	EE - A x 4~6 men
680	680	5.19.8.3.5.2	Tentative Civil Handover Date LV cable draw pits from MFB No.2 to BR2A2B	1 day?	Jun 27 '23	Jun 27 '23	Oct 24 '23	Oct 24 '23	119 days?		681	
681	681	5.19.8.3.5.3	Cables laying and terminations between buildings	80 days	Oct 25 '23	Jan 12 '24	Oct 25 '23	Jan 12 '24	0 days	679,680,643	684,937	EE - C x 4~6 men
682	682	5.19.8.3.5.4	Electrical Installations for DOU 2A	90 edays	Sep 24 '23	Dec 23 '23	Nov 9 '23	Feb 7 '24	45.63 edays	662	685	EE - C x 4~6 men
683	683	5.19.8.3.5.5	Energisation of LV Switchboards, BR2	1 day	Sep 29 '23	Sep 29 '23	Feb 6 '24	Feb 6 '24	130 days	933	685	LV - A x 4~6 men



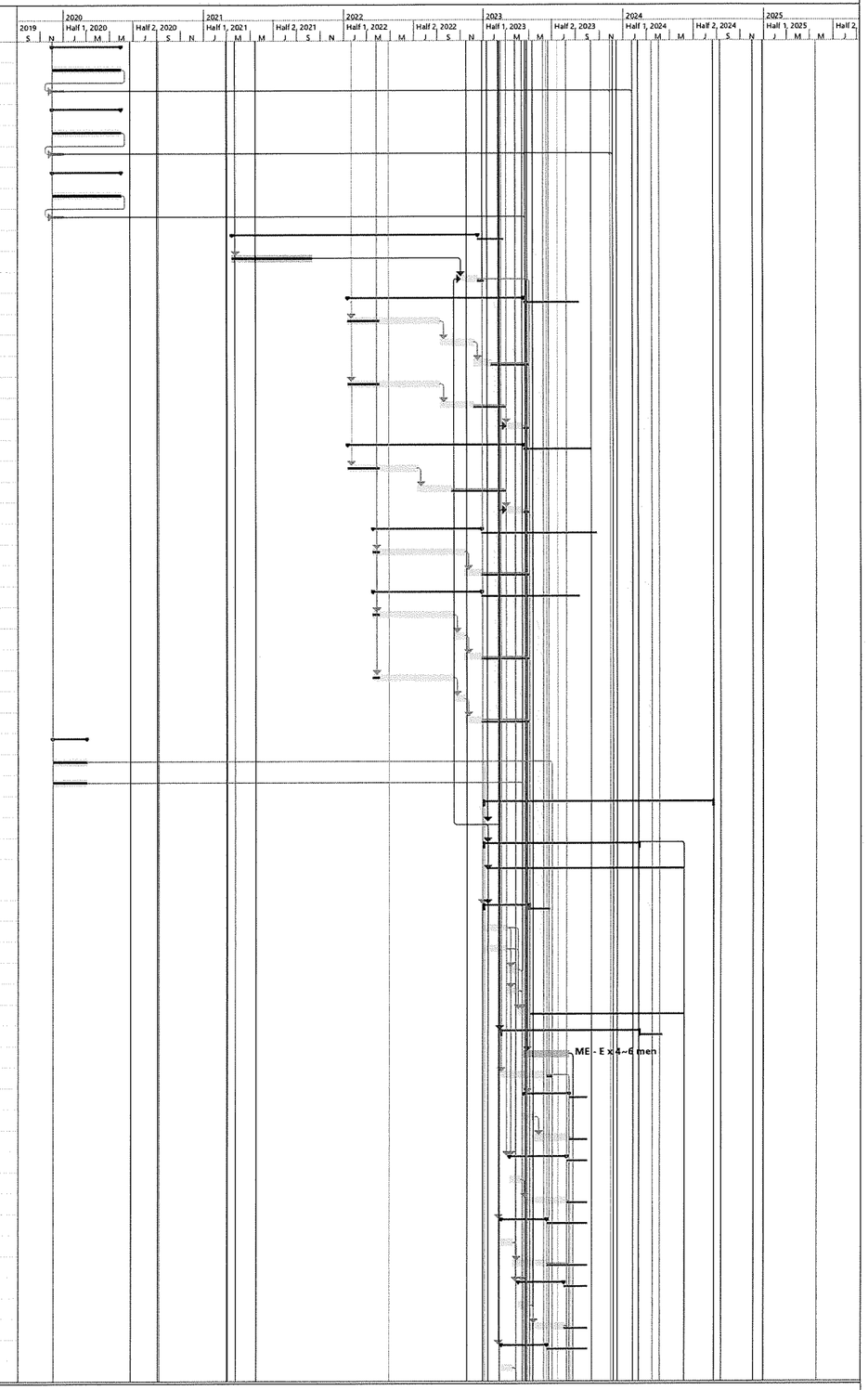
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
684	684	5.19.8.3.5.(	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipment protection interlock checks, motor rotation direction and electrical tests, control and functional checks etc.	55 days	Jan 13 '24	Mar 7 '24	Jan 13 '24	Mar 7 '24	0 days	681	685FS-30 days	LV - A x 4~6 men
685	685	5.19.8.4	Site Acceptance Test for E&M Equip at BR 2A & 2B & DOU2A	30 edays	Feb 7 '24	Mar 8 '24	Feb 7 '24	Mar 8 '24	0 edays	665,666FS-30 days,683,647F	686	
686	686	5.19.8.5	System Commissioning for E&M Equip at BR 2A & 2B & DOU2A	30 days	Mar 8 '24	Apr 6 '24	Mar 8 '24	Apr 6 '24	0 days	685,939	687	
687	687	5.19.8.6	Risk Allowances for Completion of Processing Plant at BR 2A & 2B	7 edays	Apr 6 '24	Apr 13 '24	Apr 6 '24	Apr 13 '24	0 edays	686	1384,542FF	
688	**688**	**5.20**	Membrane Facilities Building & DOU3B, Portion B-5 (PS 6B.2.4)	**1723 days?**	**Dec 2 '19**	**Aug 19 '24**	**Dec 2 '19**	**Oct 27 '24**	**69 days?**			
689	689	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	743FF,744FF		
690	690	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	745FF		
691	691	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	746FF,747FF,748FF,750FF,75		
692	692	5.20.4	Planned Sectional Completion Date - Section 2, MFB No. 2 & DOU3B	0 days	Aug 19 '24	Aug 19 '24	Aug 19 '24	Aug 19 '24	0 days	951FF		
693	**693**	**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**			
694	**694**	**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**			
695	695	5.20.5.1.1	Submission for acceptance of purchasing package including proposed marking scheme	60 days	Sep 1 '20	Oct 30 '20	Sep 1 '20	Oct 30 '20	0 days		696	
696	696	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	695	697	
697	697	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	696	746	
698	**698**	**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**			
699	699	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		700	
700	700	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	699	701	
701	701	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	700	748	
702	**702**	**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**			
703	703	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		704	
704	704	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	703	705	
705	705	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	704	746	
706	**706**	**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**			
707	707	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		708	
708	708	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	707	709	
709	709	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	708	748	
710	**710**	**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**			
711	711	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		712	
712	712	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	711	713	
713	713	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	712	748	
714	**714**	**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**			
715	715	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	2,30	716	
716	716	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	715	717	
717	717	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	716	748	
718	**718**	**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**			
719	719	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		720	
720	720	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	719	721	
721	721	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	720	746	
722	**722**	**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**			
723	723	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		724	
724	724	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	723	725	
725	725	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	724	746	
726	**726**	**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**			
727	727	5.20.5.9.1	Submission for acceptance of purchasing package including proposed marking scheme	90 days	Sep 14 '20	Dec 12 '20	Sep 14 '20	Dec 12 '20	0 days		728	
728	728	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	727	729	
729	729	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	728	581	
730	**730**	**5.20.5.10**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B), C11, ref. EQT028**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
731	731	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		732	
732	732	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	731	733	
733	733	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	732	585,749	
734	**734**	**5.20.5.11**	**Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamb**	**180 days**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
735	735	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			
736	736	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		737	
737	737	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	736	792FS-60 days	
738	**738**	**5.20.5.12**	**Plant Service Water System - booster pumps & hydro-pneumatic pressure tanks, C11, ref.**	**180 days**	**Oct 15 '20**	**Apr 12 '21**	**Oct 15 '20**	**Apr 12 '21**	**0 days**			
739	739	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		740	
740	740	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	739	741	
741	741	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	740	746	
742	**742**	**5.20.6**	**Design Submissions for MFB No. 2**	**572 days**	**Aug 21 '20**	**Mar 15 '22**	**Aug 21 '20**	**Apr 1 '22**	**0 days**	**114**		
743	743	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		689FF	
744	744	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		689FF	
745	745	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		690FF	



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
746	746	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	Apr 1 '22	0 edays	697,705,721,725,741	758,762,768,78	
747	747	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	Apr 1 '22	0 edays	75,85,81,89,93,213FF,101,97	76,834,840,691	
748	748	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	Apr 1 '22	0 edays	701,709,713,717	783,786,691FF	
749	749	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	Mar 31 '22	0 edays	567,733	795,798	
750	750	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	149	691FF	
751	751	5.20.6.9	CDS025-4 - Detailed Design for LV Switchboards for Membrane Filtration System	251 edays	May 3 '21	Jan 9 '22	May 3 '21	Apr 1 '22	0 edays	71	826,691FF	
752	752	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	Apr 1 '22	0 edays	67	691FF,830	
753	753	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		209FF	
754	754	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		209FF	
755	755	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	124	820,691FF	
756	756	5.20.7	**Manufacturing and Delivery of Plant & Materials**	**1287 days**	**Dec 2 '19**	**Jun 10 '23**	**Dec 2 '19**	**Dec 12 '23**	**184 days**			
757	757	5.20.7.1	**Hollow Fibre Membrane Modules, EQT023**	**389 days**	**Nov 8 '21**	**Dec 1 '22**	**Nov 8 '21**	**Apr 14 '23**	**134 days**			
758	758	5.20.7.1.1	MFS - Manufacturing of Plant (M.I. issued)	300 days	Nov 8 '21	Sep 7 '22	Nov 8 '21	Jan 19 '23	0 days	746	759	
759	759	5.20.7.1.2	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	40 days	Sep 8 '22	Oct 17 '22	Jan 20 '23	Feb 28 '23	0 days	758	760	
760	760	5.20.7.1.3	MFS - Shipping and Delivery of Plant to site	45 days	Oct 18 '22	Dec 1 '22	Mar 1 '23	Apr 14 '23	75 days	759	858	
761	761	5.20.7.2	**Air Scour Blowers, EQT040**	**474 days**	**Dec 27 '21**	**Apr 14 '23**	**Dec 27 '21**	**Apr 14 '23**	**0 days**			
762	762	5.20.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 27 '21	Aug 23 '22	Dec 27 '21	Feb 28 '23	189 days	746	763	
763	763	5.20.7.2.2	Shipping and Delivery of Plant to site	45 days	Mar 1 '23	Apr 14 '23	Mar 1 '23	Apr 14 '23	0 days	762,882SS-60 edays		
764	764	5.20.7.3	**Aeration Blowers, EQT039**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Dec 11 '23**	**184 days**			
765	765	5.20.7.3.1	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by PM)	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Oct 27 '23	244 days	581	766	
766	766	5.20.7.3.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Oct 28 '23	Dec 11 '23	4 days	765,645SS-60 edays	903	
767	767	5.20.7.4	**Permeate Pump, EQT024**	**285 days**	**Feb 9 '22**	**Nov 20 '22**	**Feb 9 '22**	**Apr 29 '23**	**160 days**			
768	768	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	Mar 15 '23	0 days	746	769	
769	769	5.20.7.4.2	Shipping and Delivery of Plant to site	45 days	Oct 7 '22	Nov 20 '22	Mar 16 '23	Apr 29 '23	108 days	768	862	
770	770	5.20.7.5	**Return Activated Sludge Pump, EQT010**	**337 days**	**Nov 5 '21**	**Oct 7 '22**	**Nov 5 '21**	**May 29 '23**	**234 days**			
771	771	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	Apr 14 '23	0 days	746	772	
772	772	5.20.7.5.2	Shipping and Delivery of Plant to site	45 days	Aug 24 '22	Oct 7 '22	Apr 15 '23	May 29 '23	130 days	771	865	
773	773	5.20.7.6	**Membrane Tank Drain Pump, EQT009**	**196 days**	**Dec 13 '21**	**Jun 26 '22**	**Dec 13 '21**	**May 29 '23**	**337 days**			
774	774	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	746	775FS+30 days	
775	775	5.20.7.6.2	Shipping and Delivery of Plant to site	45 days	May 13 '22	Jun 26 '22	Apr 15 '23	May 29 '23	278 days	774FS+30 days	868	
776	776	5.20.7.7	**Plant Service Water System, EQT030**	**474 days**	**Dec 27 '21**	**Apr 14 '23**	**Dec 27 '21**	**May 29 '23**	**45 days**			
777	777	5.20.7.7.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Dec 27 '21	Jul 24 '22	Dec 27 '21	Apr 14 '23	219 days	746	778	
778	778	5.20.7.7.2	Shipping and Delivery of Plant to site	45 days	Mar 1 '23	Apr 14 '23	Apr 15 '23	May 29 '23	0 days	777,882SS-60 edays	875	
779	779	5.20.7.8	**Compressed Air System, EQT029**	**474 days**	**Dec 27 '21**	**Apr 14 '23**	**Dec 27 '21**	**May 29 '23**	**45 days**			
780	780	5.20.7.8.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Dec 27 '21	Jul 24 '22	Dec 27 '21	Apr 14 '23	219 days	746	781	
781	781	5.20.7.8.2	Shipping and Delivery of Plant to site	45 days	Mar 1 '23	Apr 14 '23	Apr 15 '23	May 29 '23	0 days	780,882SS-60 edays	859	
782	782	5.20.7.9	**Chemical Storage Tanks, EQT025**	**225 days**	**Jan 20 '22**	**Sep 1 '22**	**Jan 20 '22**	**May 29 '23**	**270 days**			
783	783	5.20.7.9.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 20 '22	Jul 18 '22	Jan 20 '22	Apr 14 '23	0 days	748	784	
784	784	5.20.7.9.2	Shipping and Delivery of Plant to site	45 days	Jul 19 '22	Sep 1 '22	Apr 15 '23	May 29 '23	166 days	783	871,896	
785	785	5.20.7.10	**Chemical Dosing and Transfer Pumps, EQT026**	**225 days**	**Jan 20 '22**	**Sep 1 '22**	**Jan 20 '22**	**May 29 '23**	**270 days**			
786	786	5.20.7.10.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 20 '22	Jul 18 '22	Jan 20 '22	Apr 14 '23	0 days	748	787	
787	787	5.20.7.10.2	Shipping and Delivery of Plant to site	45 days	Jul 19 '22	Sep 1 '22	Apr 15 '23	May 29 '23	166 days	786	871	
788	788	5.20.7.11	**Stoplogs and Penstocks, EQT013**	**474 days**	**Dec 27 '21**	**Apr 14 '23**	**Dec 27 '21**	**Apr 14 '23**	**0 days**			
789	789	5.20.7.11.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 27 '21	Aug 23 '22	Dec 27 '21	Feb 28 '23	189 days	746	790	
790	790	5.20.7.11.2	Shipping and Delivery of Plant to site	45 days	Mar 1 '23	Apr 14 '23	Mar 1 '23	Apr 14 '23	0 days	789,882SS-60 edays	857	
791	791	5.20.7.12	**Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamb**	**285 days**	**Apr 21 '22**	**Jan 30 '23**	**Apr 21 '22**	**Jan 30 '23**	**0 days**	**56,63,59**		
792	792	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	746,737FS-60 days	793	
793	793	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	792		
794	794	5.20.7.13	**DOU 3B**	**225 days**	**Dec 20 '21**	**Aug 2 '22**	**Dec 20 '21**	**Dec 12 '23**	**496 days**			
795	795	5.20.7.13.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Dec 20 '21	Jun 18 '22	Dec 20 '21	Oct 28 '23	0 edays	749	796	
796	796	5.20.7.13.2	Shipping and Delivery of Plant to Site	45 edays	Jun 18 '22	Aug 2 '22	Oct 28 '23	Dec 12 '23	316.63 ed...	795	906	
797	797	5.20.7.14	**FRP Air Ductwork for DOU3B**	**225 days**	**Dec 20 '21**	**Aug 2 '22**	**Dec 20 '21**	**Dec 12 '23**	**496 days**			
798	798	5.20.7.14.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Dec 20 '21	Jun 18 '22	Dec 20 '21	Oct 28 '23	0 edays	749	799	
799	799	5.20.7.14.2	Shipping and Delivery of Plant to Site	45 edays	Jun 18 '22	Aug 2 '22	Oct 28 '23	Dec 12 '23	316.63 ed...	798	906	
800	800	5.20.7.15	**Building Services**	**225 days**	**Dec 2 '19**	**Jul 13 '20**	**Dec 2 '19**	**Jul 13 '20**	**0 days?**			
801	801	5.20.7.15.1	**MVAC Equipment**	**120 days?**	**Dec 2 '19**	**Mar 30 '20**	**Dec 2 '19**	**Mar 30 '20**	**0 days?**			
802	802	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		803	
803	803	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	802	948,942	
804	804	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?**			
805	805	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		806	
806	806	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	805	948,943	
807	807	5.20.7.15.3	**Plumbing Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
808	808	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		809	
809	809	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	808	1377,948	

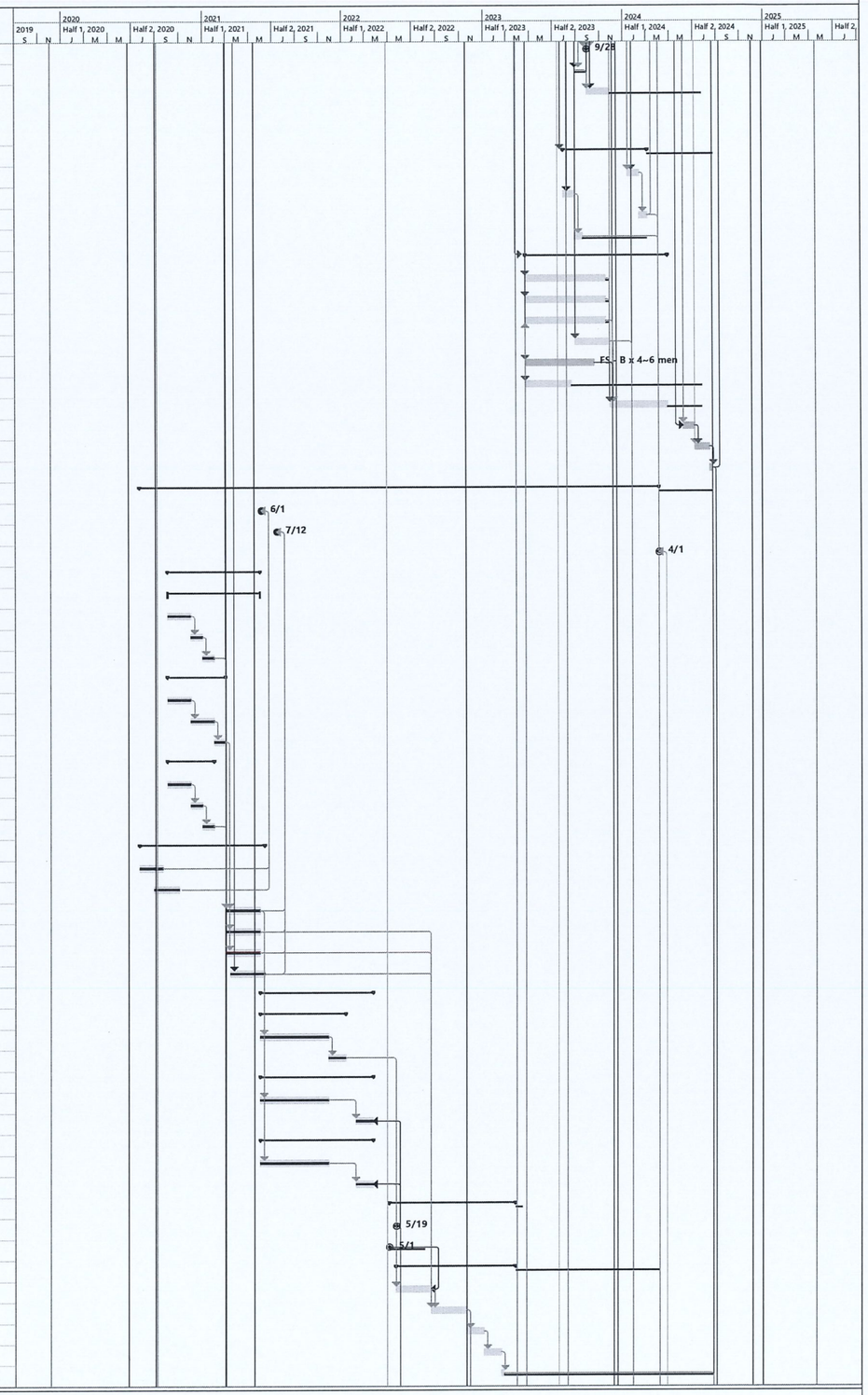


ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
810	810	5.20.7.15.4	**CCTV Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
811	811	5.20.7.15.4	Manufacturing and FAT for CCTV Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		812	
812	812	5.20.7.15.4	Shipping and Delivery for CCTV Equipment (10 indoor + 3 outdoor Cameras)	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	811	948,1387	
813	813	5.20.7.15.5	**Fire Service Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
814	814	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		815	
815	815	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	814	1328,1340,134	
816	816	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**			
817	817	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		818	
818	818	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	817	947	
819	819	5.20.7.16	**Lifting Appliances**	**642 days**	**Mar 14 '21**	**Dec 15 '22**	**Mar 14 '21**	**Feb 21 '23**	**68 days**			
820	820	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	755	821	
821	821	5.20.7.16.2	Shipping and Delivery of Plant to site	45 days	Nov 1 '22	Dec 15 '22	Jan 8 '23	Feb 21 '23	16 days	820,847SS-60 edays	850,885,892	
822	822	5.20.7.17	**LV Switchboards**	**460 days**	**Jan 10 '22**	**Apr 14 '23**	**Jan 10 '22**	**Sep 7 '23**	**146 days**			
823	823	5.20.7.17.1	BR - Manufacturing of Plant	240 days	Jan 10 '22	Sep 6 '22	Jan 10 '22	Apr 25 '23	0 days	584	824	
824	824	5.20.7.17.2	BR - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Sep 7 '22	Dec 5 '22	Apr 26 '23	Jul 24 '23	0 days	823	825	
825	825	5.20.7.17.3	BR - Shipping and Delivery of Plant to site	45 days	Dec 6 '22	Jan 19 '23	Jul 25 '23	Sep 7 '23	101 days	824	913	
826	826	5.20.7.17.4	MFS - Manufacturing of Plant	240 days	Jan 10 '22	Sep 6 '22	Jan 10 '22	Apr 25 '23	0 days	751	827	
827	827	5.20.7.17.5	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Sep 7 '22	Dec 5 '22	Apr 26 '23	Jul 24 '23	85 days	826	828	
828	828	5.20.7.17.6	MFS - Shipping and Delivery of Plant to site	45 days	Mar 1 '23	Apr 14 '23	Jul 25 '23	Sep 7 '23	16 days	827,882SS-60 edays	914	
829	829	5.20.7.18	**HV Switchboards, 04SC012**	**460 days**	**Jan 10 '22**	**Apr 14 '23**	**Jan 10 '22**	**Oct 7 '23**	**176 days**			
830	830	5.20.7.18.1	MFS - Manufacturing of Plant	180 days	Jan 10 '22	Jul 8 '22	Jan 10 '22	May 25 '23	0 days	752	831	
831	831	5.20.7.18.2	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Jul 9 '22	Oct 6 '22	May 26 '23	Aug 23 '23	145 days	830	832	
832	832	5.20.7.18.3	MFS - Shipping and Delivery of Plant to site	45 days	Mar 1 '23	Apr 14 '23	Aug 24 '23	Oct 7 '23	16 days	831,882SS-60 edays	917	
833	833	5.20.7.19	**11kV/380V Stepdown Power Transformers, EQT032**	**285 days**	**Mar 16 '22**	**Dec 25 '22**	**Mar 16 '22**	**Oct 22 '23**	**301 days**			
834	834	5.20.7.19.1	MFS - Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 16 '22	Nov 10 '22	Mar 16 '22	Sep 7 '23	0 days	747	835	
835	835	5.20.7.19.2	MFS - Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Sep 8 '23	Oct 22 '23	126 days	834	918	
836	836	5.20.7.20	**PLC System**	**285 days**	**Mar 16 '22**	**Dec 25 '22**	**Mar 16 '22**	**Sep 7 '23**	**256 days**			
837	837	5.20.7.20.1	Manufacturing of Plant, PLC for BR2A &B	210 days	Mar 16 '22	Oct 11 '22	Mar 16 '22	Jun 24 '23	0 days	582	838	
838	838	5.20.7.20.2	Factory Acceptance Test of Plant, PLC for BR2A &B (To be witnessed by PM)	30 days	Oct 12 '22	Nov 10 '22	Jun 25 '23	Jul 24 '23	0 days	837	839	
839	839	5.20.7.20.3	Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Jul 25 '23	Sep 7 '23	126 days	838	915	
840	840	5.20.7.20.4	Manufacturing of Plant, PLC for MFB2	210 days	Mar 16 '22	Oct 11 '22	Mar 16 '22	Jun 24 '23	0 days	747	841	
841	841	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	Jun 25 '23	Jul 24 '23	0 days	840	842	
842	842	5.20.7.20.6	Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Jul 25 '23	Sep 7 '23	126 days	841	916	
843	843	5.20.7.21	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
844	844	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		881,920	
845	845	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		921	
846	846	5.20.8	**Site Installation Work**	**598 days?**	**Dec 31 '22**	**Aug 19 '24**	**Dec 31 '22**	**Oct 27 '24**	**0 days**			
847	847	5.20.8.1	Tentative Civil Handover Date, Portion B-SA, MFB No. 2	1 day	Dec 31 '22	Dec 31 '22	Dec 31 '22	Jan 1 '23	0 days	13	850,856FS+45	
848	848	5.20.8.2	**Commencement of E&M Installation at MFB No. 2 Lower Part**	**404 days**	**Jan 1 '23**	**Feb 8 '24**	**Jan 1 '23**	**Jun 3 '24**	**0 days**	**847**	**949**	
849	849	5.20.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., MFB2	7 days	Jan 1 '23	Jan 7 '23	May 28 '24	Jun 4 '24	513 days	847		
850	850	5.20.8.2.2	**Installation of Lifting Appliances at MFB No. 2**	**120 days**	**Jan 1 '23**	**Apr 30 '23**	**Feb 22 '23**	**Jun 3 '24**	**52 days**	**847,821**		
851	851	5.20.8.2.2.1	B2 EOT Crane LA-04-01 SWL 5t	60 days	Jan 1 '23	Mar 1 '23	Feb 22 '23	Apr 22 '23	0 days		853,854,855,86	
852	852	5.20.8.2.2.2	B2 EOT Crane LA-04-02 SWL 5t	60 days	Jan 1 '23	Mar 1 '23	Feb 22 '23	Apr 22 '23	0 days		853,854,855,86	
853	853	5.20.8.2.2.3	B2 MR LA-04-03 SWL 5t	30 days	Mar 2 '23	Mar 31 '23	Apr 5 '24	May 4 '24	0 days	851,852	855	
854	854	5.20.8.2.2.4	B1 MR LA-04-04 SWL 3t	30 days	Mar 2 '23	Mar 31 '23	Apr 30 '23	May 29 '23	0 days	851,852	855,868	
855	855	5.20.8.2.2.5	T&C, Loading Test for Lifting Appliances	30 days	Apr 1 '23	Apr 30 '23	May 5 '24	Jun 3 '24	400 days	851,852,853,854		
856	856	5.20.8.2.3	**Mechanical Installations for E&M Equip. at MFB No. 2 Lower Part**	**359 days**	**Feb 15 '23**	**Feb 8 '24**	**Apr 15 '23**	**Jun 3 '24**	**59 days**	**847FS+45 edays,129**		
857	857	5.20.8.2.3.1	Installation of penstocks and stoplogs (Penstocks 18nos, Stoplogs 11nos), EQT013	120 days	Apr 15 '23	Aug 12 '23	Apr 15 '23	Aug 12 '23	0 days	790	879	ME - E x 4~6 men
858	858	5.20.8.2.3.2	Installation of hollow fibre membrane modules rack (x9), EQT023	120 days	Feb 15 '23	Jun 14 '23	Apr 15 '23	Aug 12 '23	15 days	760	879,895	ME - A x 4~6 men
859	859	5.20.8.2.3.3	**Installation of compressed air system**	**120 days**	**Apr 15 '23**	**Aug 12 '23**	**May 30 '23**	**Sep 26 '23**	**45 days**	**781**		**ME - B x 4~6 men**
860	860	5.20.8.2.3.3.1	Installation of compressor, air dryer & air receiver (x2)	30 days	Apr 15 '23	May 14 '23	May 30 '23	Jun 28 '23	0 days		861	
861	861	5.20.8.2.3.3.2	Installation of pipework and valves, EQT036	90 days	May 15 '23	Aug 12 '23	Jun 29 '23	Sep 26 '23	45 days	860	879FS-45 days	
862	862	5.20.8.2.3.4	**Installation of permeate pumping system**	**150 days**	**Mar 9 '23**	**Aug 5 '23**	**Apr 30 '23**	**Sep 26 '23**	**52 days**	**769,851FS+7 days,852FS+7**		**ME - A x 4~6 men**
863	863	5.20.8.2.3.4.1	Installation of permeate pumps (x10), EQT024	30 days	Mar 9 '23	Apr 7 '23	Apr 30 '23	May 29 '23	0 days		864	
864	864	5.20.8.2.3.4.2	Installation of pipework and valves, EQT036	120 days	Apr 8 '23	Aug 5 '23	May 30 '23	Sep 26 '23	52 days	863	879FS-45 days	
865	865	5.20.8.2.3.5	**Installation of return activated sludge pumping system**	**120 days**	**Feb 15 '23**	**Jun 14 '23**	**May 30 '23**	**Sep 26 '23**	**104 days**	**772**		**ME - B x 4~6 men**
866	866	5.20.8.2.3.5.1	Installation of RAS pump (x5), EQT010	30 days	Feb 15 '23	Mar 16 '23	May 30 '23	Jun 28 '23	0 days		867	
867	867	5.20.8.2.3.5.2	Installation of pipework and valves, EQT036	90 days	Mar 17 '23	Jun 14 '23	Jun 29 '23	Sep 26 '23	104 days	866	879FS-45 days	
868	868	5.20.8.2.3.6	**Installation of membrane tank drain pumping system**	**120 days**	**Apr 1 '23**	**Jul 29 '23**	**May 30 '23**	**Sep 26 '23**	**59 days**	**854,775**		**ME - C x 4~6 men**
869	869	5.20.8.2.3.6.1	Installation of drain pump (x2), EQT009	30 days	Apr 1 '23	Apr 30 '23	May 30 '23	Jun 28 '23	0 days		870	
870	870	5.20.8.2.3.6.2	Installation of pipework and valves, EQT036	90 days	May 1 '23	Jul 29 '23	Jun 29 '23	Sep 26 '23	59 days	869	879FS-45 days	
871	871	5.20.8.2.3.7	**Installation of chemical system**	**120 days**	**Feb 15 '23**	**Jun 14 '23**	**May 30 '23**	**Sep 26 '23**	**104 days**	**784,787**		**ME - D x 2~4 men**
872	872	5.20.8.2.3.7.1	Installation of storage tank (x2), EQT091	30 days	Feb 15 '23	Mar 16 '23	May 30 '23	Jun 28 '23	0 days		874	

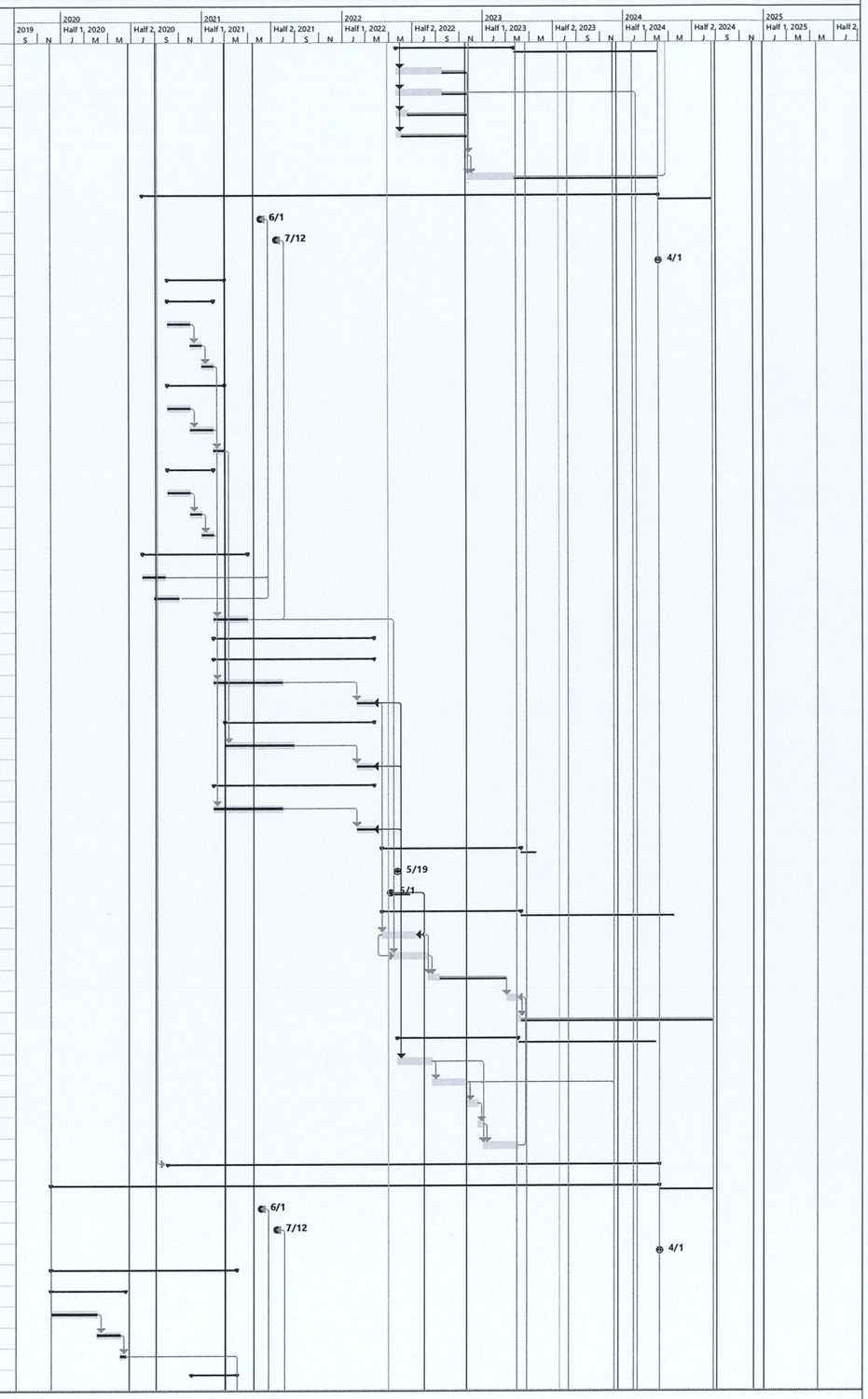


ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
873	873	5.20.8.2.3.1	Installation of dosing pump (x2), EQT090	30 days	Feb 15 '23	Mar 16 '23	May 30 '23	Jun 28 '23	0 days		874	
874	874	5.20.8.2.3.1	Installation of pipework and valves, EQT036	90 days	Mar 17 '23	Jun 14 '23	Jun 29 '23	Sep 26 '23	104 days	872,873	879FS-45 days	
875	875	5.20.8.2.3.2	**Installation of plant service water system**	**120 days**	**Apr 15 '23**	**Aug 12 '23**	**May 30 '23**	**Sep 26 '23**	**45 days**	**778**		**ME - C x 4~6 men**
876	876	5.20.8.2.3.1	Installation of pump (x4), pressure tank (x2), EQT030	30 days	Apr 15 '23	May 14 '23	May 30 '23	Jun 28 '23	0 days		877	
877	877	5.20.8.2.3.1	Installation of pipework and valves, EQT036	90 days	May 15 '23	Aug 12 '23	Jun 29 '23	Sep 26 '23	45 days	876	879FS-45 days	
878	878	5.20.8.2.3.5	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.18)	90 days	Feb 15 '23	May 15 '23	Mar 6 '24	Jun 3 '24	385 days			ME - C x 4~6 men
879	879	5.20.8.2.3.6	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks, pressure tests etc.	180 days	Aug 13 '23	Feb 8 '24	Aug 13 '23	Feb 8 '24	0 days	857,858,861FS-45 days,864FS-45 days,867FS-45		ME - D x 2~4 men
880	880	5.20.8.2.4	**Electrical Installations for E&M Equip. at MFB No. 2 Lower Part**	**180 days**	**Jan 1 '23**	**Jun 29 '23**	**Jul 30 '23**	**Jan 25 '24**	**210 days**	**134,847**		
881	881	5.20.8.2.4.1	Installation of cable trays and cable containments	180 days	Jan 1 '23	Jun 29 '23	Jul 30 '23	Jan 25 '24	0 days	844	920	
882	882	5.20.8.3	Tentative Civil Handover Date, Portion B-5B, MFB No. 2 remaining portion (Rev. 5)	1 day	Apr 30 '23	Apr 30 '23	Apr 30 '23	Apr 30 '23	0 days	14	885,894FS+45 e	
883	883	5.20.8.4	**Commencement of E&M Installation at MFB No. 2 Upper Part**	**461 days?**	**Apr 20 '23**	**Jul 23 '24**	**Apr 20 '23**	**Oct 27 '24**	**0 days?**	**882**	**949FS-50 days**	
884	884	5.20.8.4.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., MFB2	7 days	May 1 '23	May 7 '23	Jul 17 '24	Jul 23 '24	443 days	882		
885	885	5.20.8.4.2	**Installation of Lifting Appliances at MFB No. 2**	**225 days**	**May 1 '23**	**Dec 11 '23**	**May 1 '23**	**Dec 11 '23**	**0 days**	**882,821**		
886	886	5.20.8.4.2.1	GF EOT Crane LA-04-05 SWL 5t	60 days	May 1 '23	Jun 29 '23	May 1 '23	Jun 29 '23	0 days		888,889,893	LA - A x 4~6 men
887	887	5.20.8.4.2.2	GF Gantry Crane LA-04-06 SWL 6t	60 days	May 1 '23	Jun 29 '23	May 1 '23	Jun 29 '23	0 days		888,889,893,85	LA - B x 4~6 men
888	888	5.20.8.4.2.3	1F EOT Crane LA-04-07 SWL 15t	60 days	Jun 30 '23	Aug 28 '23	Jun 30 '23	Aug 28 '23	0 days	886,887	890,891,893	LA - A x 4~6 men
889	889	5.20.8.4.2.4	1F EOT Crane LA-04-08 SWL 15t	60 days	Jun 30 '23	Aug 28 '23	Jun 30 '23	Aug 28 '23	0 days	886,887	890,891,893	LA - B x 4~6 men
890	890	5.20.8.4.2.5	RF EOT Crane LA-04-09 SWL 2t	60 days	Aug 29 '23	Oct 27 '23	Aug 29 '23	Oct 27 '23	0 days	888,889	893	LA - A x 4~6 men
891	891	5.20.8.4.2.6	RF Retractable MR LA-04-10 SWL 2t	60 days	Aug 29 '23	Oct 27 '23	Aug 29 '23	Oct 27 '23	0 days	888,889	893	LA - B x 4~6 men
892	892	5.20.8.4.2.7	Mobile A-frame LA-04-11 SWL 2t	15 days	May 1 '23	May 15 '23	Oct 13 '23	Oct 27 '23	165 days	821	893	LA - C x 4~6 men
893	893	5.20.8.4.2.8	T&C, Loading Test for Lifting Appliances	45 days	Oct 28 '23	Dec 11 '23	Oct 28 '23	Dec 11 '23	0 days	886,887,888,889,890,891,89	900	LA - A x 4~6 men
894	894	5.20.8.4.3	**Mechanical Installations for E&M Equip. at MFB No. 2 Upper Part**	**405 days**	**Jun 15 '23**	**Jul 23 '24**	**Dec 12 '23**	**Aug 2 '24**	**10 days**	**882FS+45 edays,129**		
895	895	5.20.8.4.3.1	Installation of hollow fibre membrane modules (x9), EQT023	90 days	Jun 30 '23	Sep 27 '23	May 5 '24	Aug 2 '24	310 days	858,887	950FS-30 days	ME - A x 4~6 men
896	896	5.20.8.4.3.2	**Installation of chemical system**	**120 days**	**Jun 15 '23**	**Oct 12 '23**	**Dec 12 '23**	**Apr 9 '24**	**180 days**	**784**		**ME - D x 2~4 men**
897	897	5.20.8.4.3.2.1	Installation of storage tank, EQT091	30 days	Jun 15 '23	Jul 14 '23	Dec 12 '23	Jan 10 '24	0 days		899	
898	898	5.20.8.4.3.2.2	Installation of dosing pump (x4) and transfer pump (x4), EQT090	30 days	Jun 15 '23	Jul 14 '23	Dec 12 '23	Jan 10 '24	0 days		899	
899	899	5.20.8.4.3.2.3	Installation of pipework and valves, EQT036	90 days	Jul 15 '23	Oct 12 '23	Jan 11 '24	Apr 9 '24	180 days	897,898	911FS-45 days	
900	900	5.20.8.4.3.3	**Installation of air scour blower system**	**120 days**	**Dec 12 '23**	**Apr 9 '24**	**Dec 12 '23**	**Apr 9 '24**	**0 days**	**893**		**ME - A x 4~6 men**
901	901	5.20.8.4.3.3.1	Installation of blowers (x3), EQT040	30 days	Dec 12 '23	Jan 10 '24	Dec 12 '23	Jan 10 '24	0 days		902	
902	902	5.20.8.4.3.3.2	Installation of pipework and valves, EQT036	90 days	Jan 11 '24	Apr 9 '24	Jan 11 '24	Apr 9 '24	0 days	901	911FS-45 days	
903	903	5.20.8.4.3.4	**Installation of aeration blower system**	**120 days**	**Jun 15 '23**	**Oct 12 '23**	**Dec 12 '23**	**Apr 9 '24**	**117 days**	**766**	**685**	**ME - D x 2~4 men**
904	904	5.20.8.4.3.4.1	Installation of blowers (x4), EQT039	30 days	Jun 15 '23	Jul 14 '23	Dec 12 '23	Jan 10 '24	0 days		905	
905	905	5.20.8.4.3.4.2	Installation of pipework and valves, EQT036	90 days	Jul 15 '23	Oct 12 '23	Jan 11 '24	Apr 9 '24	180 days	904	911FS-45 days	
906	906	5.20.8.4.3.5	**Mechanical Installations for DOU 3B**	**120 days**	**Jun 15 '23**	**Oct 12 '23**	**Dec 12 '23**	**Apr 9 '24**	**0 days**	**796,799**	**919SS+30 eday**	**ME - F x 4~6 men**
907	907	5.20.8.4.3.5.1	Installation of extraction fan, filter, dehumidifier	30 days	Jun 15 '23	Jul 14 '23	Dec 12 '23	Jan 10 '24	0 days		908	
908	908	5.20.8.4.3.5.2	Installation of FRP ductwork	90 days	Jul 15 '23	Oct 12 '23	Jan 11 '24	Apr 9 '24	180 days	907	911FS-45 days	
909	909	5.20.8.4.3.6	Installation of instrumentations, EQT035-1	60 days	Jun 15 '23	Aug 13 '23	Jun 4 '24	Aug 2 '24	355 days	52	949FS-60 days	ME - D x 2~4 men
910	910	5.20.8.4.3.7	Installation of FRP covers, walkways, platforms and ladders , EQT050	60 days	Jun 15 '23	Aug 13 '23	May 25 '24	Jul 23 '24	345 days			ME - D x 2~4 men
911	911	5.20.8.4.3.8	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks, pressure tests etc.	150 days	Feb 25 '24	Jul 23 '24	Feb 25 '24	Jul 23 '24	0 days	899FS-45 days,902FS-45 days,905FS-45 days,908FS-45 days		ME - D x 2~4 men
912	912	5.20.8.4.4	**Electrical Installations for E&M Equip. at MFB No. 2 Upper Part**	**251 days?**	**Apr 20 '23**	**Dec 26 '23**	**Apr 20 '23**	**Jul 23 '24**	**0 days?**	**134,882**		
913	913	5.20.8.4.4.1	Installation of LV Switchboards, BR2	90 days	May 1 '23	Jul 29 '23	Sep 8 '23	Dec 6 '23	0 days	825	930FS+30 days,	LV - B x 4~6 men
914	914	5.20.8.4.4.2	Installation of LV Switchboards, MFB No. 2	90 days	May 1 '23	Jul 29 '23	Sep 8 '23	Dec 6 '23	0 days	828	929FS+30 days,	LV - A x 4~6 men
915	915	5.20.8.4.4.3	Installation of PLC Panels, BR2	90 days	May 1 '23	Jul 29 '23	Sep 8 '23	Dec 6 '23	0 days	839	937,921	
916	916	5.20.8.4.4.4	Installation of PLC Panels, MFB No. 2	90 days	May 1 '23	Jul 29 '23	Sep 8 '23	Dec 6 '23	0 days	842	937,921	PLC - B x 1 man
917	917	5.20.8.4.4.5	Installation of HV Switchboards, MFB No. 2	60 days	May 1 '23	Jun 29 '23	Oct 8 '23	Dec 6 '23	0 days	832	931FS+30 days,	HV - A x 4~6 men
918	918	5.20.8.4.4.6	Installation of transformer, MFB No. 2, EQT032	45 days	May 1 '23	Jun 14 '23	Oct 23 '23	Dec 6 '23	0 days	835	932FS+30 days	
919	919	5.20.8.4.4.7	Electrical Installations for DOU 3B	90 edays	Jul 15 '23	Oct 13 '23	Apr 24 '24	Jul 23 '24	284.38 ed...	906SS+30 edays		EE - D x 4~6 men
920	920	5.20.8.4.4.8	Installation of cable trays and cable containments	180 days	Jun 30 '23	Dec 26 '23	Jan 26 '24	Jul 23 '24	210 days	881,844		
921	921	5.20.8.4.4.9	**Cables laying and terminations**	**100 days**	**Apr 20 '23**	**Jul 28 '23**	**Dec 7 '23**	**Feb 4 '24**	**0 days**	**913,914,915,917,916,845**	**938,935,933,93**	
922	922	5.20.8.4.4.9.1	LV and control cables in MFB no.2	60 days	Apr 20 '23	Jun 18 '23	Dec 7 '23	Feb 4 '24	231 days			
923	923	5.20.8.4.4.9.2	HV and control cables in MFB no.2	60 days	Apr 20 '23	Jun 18 '23	Dec 7 '23	Feb 4 '24	231 days			
924	924	5.20.8.4.4.9.3	HV cables between MFB no.1 and MFB no.2	60 days	Apr 20 '23	Jun 18 '23	Dec 7 '23	Feb 4 '24	231 days	202		
925	925	5.20.8.4.4.9.4	LV and control cables between MFB no.2 and BR2	60 days	Apr 20 '23	Jun 18 '23	Dec 7 '23	Feb 4 '24	231 days			
926	926	5.20.8.4.4.9.5	LV and control cables between MFB no.2 and Emeregency Genset House	60 days	Apr 20 '23	Jun 18 '23	Dec 7 '23	Feb 4 '24	231 days			
927	927	5.20.8.4.4.10	Tentative Civil Handover Date HV cable draw pits from MFB No.2 to DE/2018/03 (Rev.	1 day?	May 1 '23	May 1 '23	Feb 24 '24	Feb 24 '24	0 days?		928	
928	928	5.20.8.4.4.11	Cable provision and laying between buildings for DE/2018/03 Sidestream Building Facility (Rev. 17)	150 days	May 2 '23	Sep 28 '23	Feb 25 '24	Jul 23 '24	299 days	927		
929	929	5.20.8.4.4.12	Testing of LV Switchboards, MFB No. 2	30 days	Aug 29 '23	Sep 27 '23	Jan 6 '24	Feb 4 '24	0 days	914FS+30 days	933	HV - A x 4~6 men
930	930	5.20.8.4.4.13	Testing of LV Switchboards, BR2	30 days	Aug 29 '23	Sep 27 '23	Jan 6 '24	Feb 4 '24	0 days	913FS+30 days	933	HV - A x 4~6 men
931	931	5.20.8.4.4.14	Testing of HV Switchboards, MFB No. 2	30 days	Jul 30 '23	Aug 28 '23	Apr 24 '24	May 23 '24	0 days	917FS+30 days	934	HV - A x 4~6 men
932	932	5.20.8.4.4.15	Testing of Transformers, MFB No. 2	30 days	Jul 15 '23	Aug 13 '23	Jan 6 '24	Feb 4 '24	45 days	918FS+30 days	933	HV - A x 4~6 men

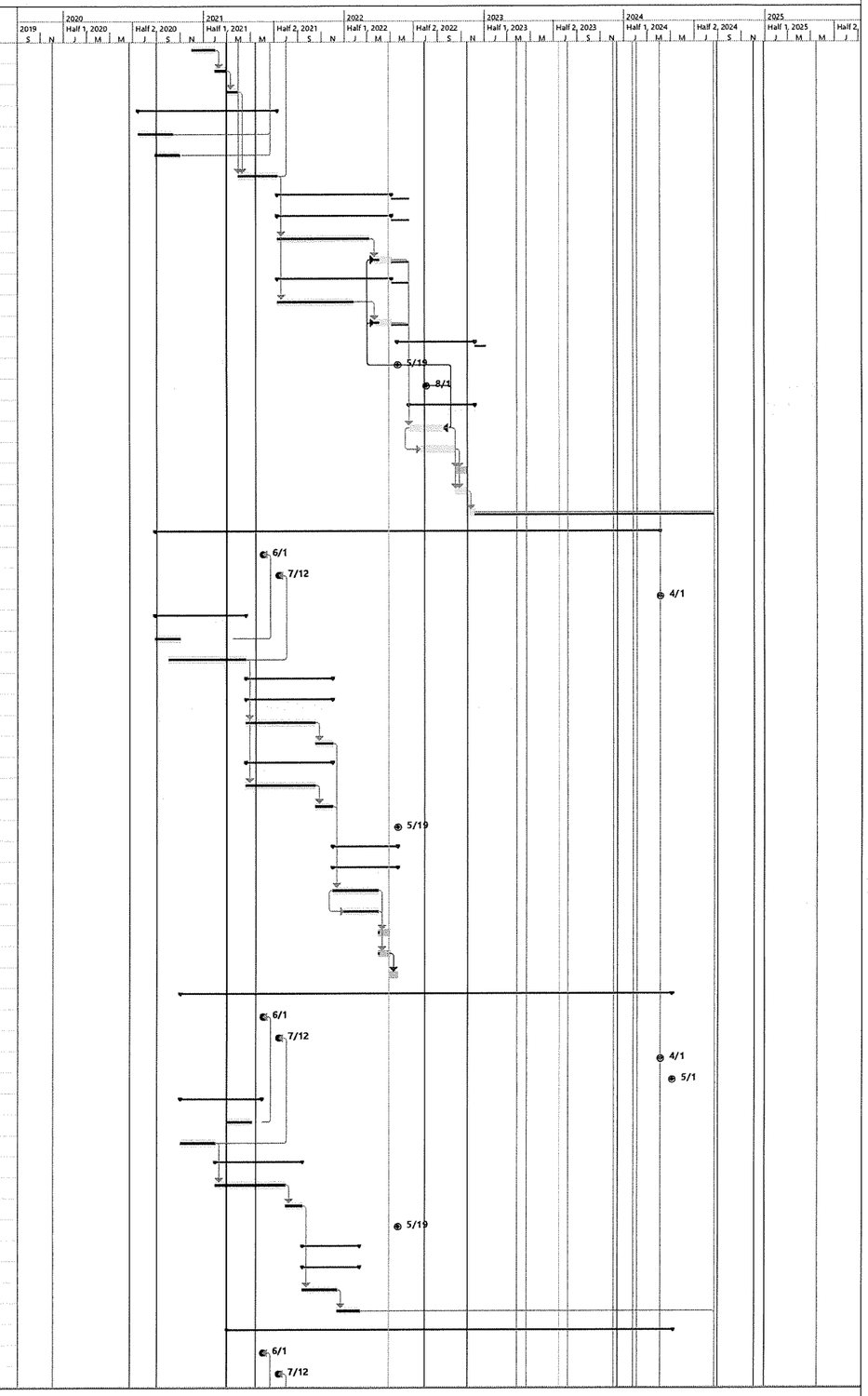
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
933	933	5.20.8.4.4.2	Energisation of LV Switchboards, MFB No. 2 (Rev. 17)	1 day	Sep 28 '23	Sep 28 '23	Feb 5 '24	Feb 5 '24	0 days	929,930,932,921	935,683	LA - A x 4~6 men
934	934	5.20.8.4.4.3	Energisation of HV Switchboards, MFB No.2 (Rev. 17)	1 day	Aug 29 '23	Aug 29 '23	May 24 '24	May 24 '24	30 days	931,921	935	
935	935	5.20.8.4.4.4	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	Sep 29 '23	Nov 27 '23	May 25 '24	Jul 23 '24	239 days	921,933,934		LV - A x 4~6 men
936	**936**	**5.20.8.4.5**	**SCADA Systems, BR No. 1 & No 2, MFB No. 2**	**219 days**	**Jul 29 '23**	**Mar 3 '24**	**Jan 17 '24**	**Oct 27 '24**	**172 days**	**882**		
937	937	5.20.8.4.5.1	Configuration of PLC System for BR No. 2A&B	30 days	Jan 13 '24	Feb 11 '24	Jan 17 '24	Feb 15 '24	0 days	915,681,916	939	PLC - A x 1 man
938	938	5.20.8.4.5.2	Configuration of PLC System for MFB No. 2	30 days	Jul 29 '23	Aug 27 '23	Sep 7 '24	Oct 6 '24	0 days	921	940	
939	939	5.20.8.4.5.3	Site Acceptance Test for PLC System at BR 2A&B	21 days	Feb 12 '24	Mar 3 '24	Feb 16 '24	Mar 7 '24	0 days	937	686,1388	
940	940	5.20.8.4.5.4	Site Acceptance Test for PLC System at MFB No. 2	21 days	Aug 28 '23	Sep 17 '23	Oct 7 '24	Oct 27 '24	168 days	938	1388	
941	**941**	**5.20.8.4.6**	**Building Services Installations for MFB No. 2**	**371 days**	**Apr 20 '23**	**Apr 24 '24**	**Apr 14 '23**	**Jul 23 '24**	**0 days**	**882FS-30 days**		
942	942	5.20.8.4.6.1	Mechanical Ventilation and Air Conditioning System, MFB No. 2	210 days	Apr 20 '23	Nov 15 '23	Jul 30 '23	Feb 24 '24	11 days	803	948	MVAC - A x 4~6 men
943	943	5.20.8.4.6.2	Lighting and Power Distribution System, MFB No. 2	210 days	Apr 20 '23	Nov 15 '23	Jul 30 '23	Feb 24 '24	11 days	806	948	BS - A x 4~6 men
944	944	5.20.8.4.6.3	Plumbing Installation, MFB No. 2	210 days	Apr 20 '23	Nov 15 '23	May 8 '23	Dec 3 '23	11 days	1375	1377,948	Pb - B x 4~6 men
945	945	5.20.8.4.6.4	CCTV Installation (10 indoor + 3 outdoor Cameras), MFB No. 2	90 days	Aug 29 '23	Nov 26 '23	Nov 27 '23	Feb 24 '24	0 days	882FS+120 days	948,1387	BS - B x 4~6 men
946	946	5.20.8.4.6.5	Fire Services Installation, MFB No. 2	180 days	Apr 20 '23	Oct 16 '23	Apr 14 '23	Oct 10 '23	0 days	815	1328,1340,134	FS - B x 4~6 men
947	947	5.20.8.4.6.6	Earthing and Lightning Protection System, MFB No. 2	120 days	Apr 20 '23	Aug 17 '23	Mar 26 '24	Jul 23 '24	341 days	177,818		BS - C x 2~4 men
948	948	5.20.8.4.6.7	Testing and Commissioning of Building Services Installations, MFB No. 2	150 days	Nov 27 '23	Apr 24 '24	Feb 25 '24	Jul 23 '24	90 days	942,943,944,945,946,803,80		BS - C x 2~4 men
949	949	5.20.8.5	Site Acceptance Test for E&M Equip at MFB No. 2	30 days	Jun 4 '24	Jul 3 '24	Jun 4 '24	Jul 4 '24	0 days	848,883FS-50 days,909FS-60	950	
950	950	5.20.8.6	System Commissioning for E&M Equip at MFB No. 2	40 days	Jul 4 '24	Aug 12 '24	Jul 4 '24	Aug 12 '24	0 days	949,895FS-30 days	951	
951	951	5.20.8.7	Risk Allowances for Completion of Processing Plant at MFB No. 2	7 edays	Aug 12 '24	Aug 19 '24	Aug 12 '24	Aug 19 '24	0 edays	950	1384,692FF	
952	**952**	**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**	**Aug 20 '24**	**140 days**			
953	953	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	970FF,971FF		
954	954	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	972FF,973FF,974FF,975FF		
955	955	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	1001FF		
956	**956**	**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**			
957	**957**	**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**			
958	958	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		959	
959	959	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	958	960	
960	960	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	959	972	
961	**961**	**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**			
962	962	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		963	
963	963	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	962	964	
964	964	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	963	972,973,974	
965	**965**	**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**			
966	966	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		967	
967	967	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	966	968	
968	968	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	967	972	
969	**969**	**5.21.5**	**Design Submissions for Chemical System No. 1 and No. 2**	**324 days**	**Jul 21 '20**	**Jun 10 '21**	**Jul 21 '20**	**Aug 29 '23**	**0 days**			
970	970	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		953FF	
971	971	5.21.5.2	CDS081-5 - Civil and dimensional requirements drawings for Chemical Systems	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		953FF	
972	972	5.21.5.3	CDS006 - Detailed Design for Chemical Dosing System	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	Nov 24 '21	0 edays	960,964,968	978,981,984,95	
973	973	5.21.5.4	CDS027 - Detailed Design for Electrical Installations for Chemical System No. 1	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	Aug 29 '23	0 edays	964	991,954FF	
974	974	5.21.5.5	CDS028 - Detailed Design for Electrical Installations for Chemical System No. 2	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	Aug 29 '23	0 edays	964	991,954FF	
975	975	5.21.5.6	CDS034-5 - Detailed Design for Electrical Installations BS at Chemical Systems	90 edays	Mar 12 '21	Jun 10 '21	Mar 12 '21	Aug 29 '23	0 edays	149	991,954FF	
976	**976**	**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**			
977	**977**	**5.21.6.1**	**Chemical Storage Tanks, EQT025**	**225 days**	**May 29 '21**	**Jan 8 '22**	**May 29 '21**	**Jan 8 '22**	**0 days**			
978	978	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	972	979	
979	979	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	978	990	
980	**980**	**5.21.6.2**	**Chemical Dosing Pumps, EQT027**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
981	981	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	972	982	
982	982	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	981,987FF-60 edays	990	
983	**983**	**5.21.6.3**	**Chemical Transfer Pumps, EQT026**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
984	984	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	972	985	
985	985	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	984,987FF-60 edays	990	
986	**986**	**5.21.7**	**Site Installation Work**	**325 days**	**May 1 '22**	**Mar 21 '23**	**May 19 '22**	**Aug 20 '24**	**18 days**			
987	987	5.21.7.1	Tentative Civil Handover Date, Portion B-7 & B-7B (Rev. 5)	1 day	May 19 '22	May 19 '22	May 19 '22	May 19 '22	0 days		985FF-60 edays	
988	988	5.21.7.2	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	1 day	May 1 '22	May 1 '22	Jul 9 '23	Jul 9 '23	90.88 days		990FF+50 days	
989	**989**	**5.21.7.3**	**Commencement of E&M Installation at Chemical Dosing System 1 and System 2**	**307 days**	**May 19 '22**	**Mar 21 '23**	**May 31 '23**	**Aug 20 '24**	**377 days**			
990	990	5.21.7.3.1	Mechanical Installations for E&M Equip. for Chemical Dosing System (Rev.18)	90 edays	May 19 '22	Aug 17 '22	May 31 '23	Aug 29 '23	0 edays	988FF+50 days,985,982,979	991	ME - D x 2~4 men
991	991	5.21.7.3.2	Electrical Installations for E&M Equip. for Chemical Dosing System	90 edays	Aug 17 '22	Nov 15 '22	Aug 29 '23	Nov 27 '23	0 edays	990,973,974,975	992,1000	EE - B x 4~6 men
992	992	5.21.7.3.3	Site Acceptance Test for E&M Equip for Chemical Dosing System	45 days	Nov 15 '22	Dec 29 '22	May 15 '24	Jun 28 '24	0 days	991	993	EE - A x 4~6 men
993	993	5.21.7.3.4	System Commissioning for E&M Equip for Chemical Dosing System	45 days	Dec 30 '22	Feb 12 '23	Jun 29 '24	Aug 12 '24	0 days	992	994	
994	994	5.21.7.3.5	Risk Allowances for Completion of Processing Plant at Chemical Dosing System	7 edays	Feb 12 '23	Feb 19 '23	Aug 13 '24	Aug 20 '24	547.63 ed...	993	1384	



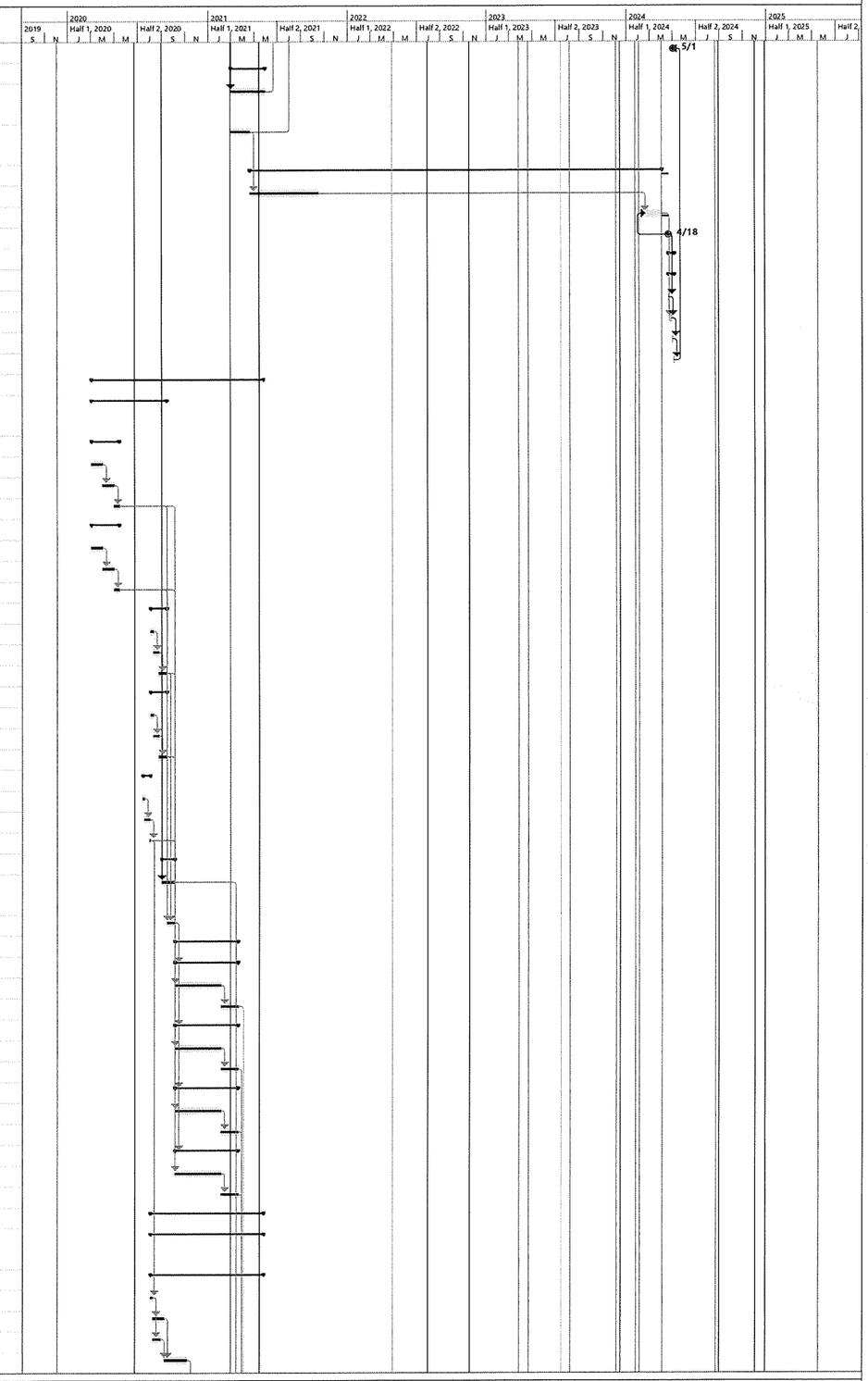
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
995	**995**	**5.21.7.3.6**	**Building Services Installations at Chemical Dosing System areas**	**306 days**	**May 20 '22**	**Mar 21 '23**	**Jul 13 '23**	**Apr 1 '24**	**377 days**			
996	996	5.21.7.3.6.2	Lighting and Power Distribution System, Chem 1&2	120 days	May 20 '22	Sep 16 '22	Aug 6 '23	Dec 3 '23	66 days	987	1001	BS - B x 4~6 men
997	997	5.21.7.3.6.3	Fire Services Installation, DG Stores	120 days	May 20 '22	Sep 16 '22	Jul 13 '23	Nov 9 '23	66 days	987	1340,1341,133	FS - A x 4~6 men
998	998	5.21.7.3.6.4	Lightning Protection System, Chem 1&2	30 days	May 20 '22	Jun 18 '22	Nov 4 '23	Dec 3 '23	156 days	987	1001	EE - D x 4~6 men
999	999	5.21.7.3.6.4	Mechanical Ventilation System, Chem 2	14 days	May 20 '22	Jun 2 '22	Nov 20 '23	Dec 3 '23	172 days	987	1001	MVAC - A x 4~6 men
1000	1000	5.21.7.3.6.5	Plumbing Installation, Chem 1	7 days	Nov 15 '22	Nov 21 '22	Nov 27 '23	Dec 3 '23	0 days	991	1001	Pb - A x 4~6 men
1001	1001	5.21.7.3.6.6	Testing and Commissioning of Building Services Installations, Chem 1&2	120 days	Nov 22 '22	Mar 21 '23	Dec 4 '23	Apr 1 '24	377 days	996,997,1000,999,998	955FF	BS - C x 2~4 men
1002	**1002**	**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**	**Aug 20 '24**	**140 days**			
1003	1003	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	1020FF,1021FF		
1004	1004	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	1022FF		
1005	1005	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			
1006	**1006**	**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**			
1007	**1007**	**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**			
1008	1008	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		1009	
1009	1009	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	1008	1010	
1010	1010	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	1009	1022,1025	
1011	**1011**	**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**			
1012	1012	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		1013	
1013	1013	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	1012	1014	
1014	1014	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	1013	1028	
1015	**1015**	**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**			
1016	1016	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		1017	
1017	1017	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	1016	1018	
1018	1018	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	1017	1031	
1019	**1019**	**5.22.5**	**Design Submissions for Temporary Chemical Dosing System**	**275 days**	**Jul 28 '20**	**Apr 28 '21**	**Jul 28 '20**	**Mar 16 '24**	**0 days**			
1020	1020	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		1003FF	
1021	1021	5.22.5.2	CDS081-6 - Civil and dimensional requirements drawings for Temporary Chemical Dosing Sy	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		1003FF	
1022	1022	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	Mar 16 '24	0 edays	1010	1038,1004FF	
1023	**1023**	**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**			
1024	**1024**	**5.22.6.1**	**Chemical Storage Tanks, EQT025**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1025	1025	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	1010	1026	
1026	1026	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	1025,1034FF-60 edays	1037	
1027	**1027**	**5.22.6.2**	**Chemical Dosing Pumps, EQT027**	**386 days**	**Feb 28 '21**	**Mar 20 '22**	**Feb 28 '21**	**Mar 20 '22**	**0 days**			
1028	1028	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	1014	1029	
1029	1029	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	1028,1034FF-60 edays	1037	
1030	**1030**	**5.22.6.3**	**Chemical Transfer Pumps, EQT026**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1031	1031	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	1018	1032	
1032	1032	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	1031,1034FF-60 edays	1037	
1033	**1033**	**5.22.7**	**Site Installation Work**	**361 days**	**Apr 9 '22**	**Apr 5 '23**	**May 19 '22**	**Aug 20 '24**	**39 days**			
1034	1034	5.22.7.1	Tentative Civil Handover Date, Temporary Chemical Dosing (Rev. 5)	1 day	May 19 '22	May 19 '22	May 19 '22	May 19 '22	0 days		1026FF-60 eday	
1035	1035	5.22.7.2	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	1 day	May 1 '22	May 1 '22	Mar 25 '24	Mar 25 '24	51 days		1037FF+50 day	
1036	**1036**	**5.22.7.3**	**Commencement of E&M Installation at Temporary Chemical Dosing System**	**361 days**	**Apr 9 '22**	**Apr 5 '23**	**May 14 '23**	**Aug 20 '24**	**399 days**			
1037	1037	5.22.7.3.1	Mechanical Installations for E&M Equip. for Chemical Dosing System	90 edays	Apr 9 '22	Jul 8 '22	Feb 15 '24	May 15 '24	0 edays	1035FF+50 days,1357FF+50	1038SS+30 eda	ME - D x 2~4 men
1038	1038	5.22.7.3.2	Electrical Installations for E&M Equip. for Chemical Dosing System	90 edays	May 9 '22	Aug 7 '22	Mar 16 '24	Jun 14 '24	0 edays	1037SS+30 edays,1022	1039	EE - A x 4~6 men
1039	1039	5.22.7.3.3	Site Acceptance Test for E&M Equip for Chemical Dosing System	30 edays	Aug 7 '22	Sep 6 '22	Jun 14 '24	Jul 14 '24	174 edays	1037,1038	1040	
1040	1040	5.22.7.3.4	System Commissioning for E&M Equip for Chemical Dosing System	30 edays	Feb 27 '23	Mar 29 '23	Jul 14 '24	Aug 13 '24	0 edays	1039,1047FF	1041	
1041	1041	5.22.7.3.5	Risk Allowances for Completion of Processing Plant at Chemical Dosing System	7 edays	Mar 29 '23	Apr 5 '23	Aug 13 '24	Aug 20 '24	502.63 ed...	1040	1384	
1042	**1042**	**5.22.7.3.6**	**Building Services Installations at Temp. Chemical Dosing System areas**	**314 days**	**May 20 '22**	**Mar 29 '23**	**May 14 '23**	**Aug 12 '24**	**359 days**			
1043	1043	5.22.7.3.6.2	Lighting and Power Distribution System, Temp. Chem	90 days	May 20 '22	Aug 17 '22	May 14 '23	Aug 11 '23	0 days	1034	1047,1044	BS - A x 4~6 men
1044	1044	5.22.7.3.6.3	Fire Services Installation, DG Stores, Temp. Chem	90 days	Aug 18 '22	Nov 15 '22	Aug 12 '23	Nov 9 '23	0 days	1043	1340,1341,104	FS - A x 4~6 men
1045	1045	5.22.7.3.6.4	Lightning Protection System, Temp. Chem	30 days	Nov 16 '22	Dec 15 '22	Apr 1 '24	Apr 30 '24	0 days	1044	1046	EE - D x 4~6 men
1046	1046	5.22.7.3.6.4	Mechanical Ventilation System, Temp. Chem	14 days	Dec 16 '22	Dec 29 '22	May 1 '24	May 14 '24	0 days	1045	1047	MVAC - A x 4~6 men
1047	1047	5.22.7.3.6.5	Testing and Commissioning of Building Services Installations, Temp. Chem	90 days	Dec 30 '22	Mar 29 '23	May 15 '24	Aug 12 '24	0 days	1043,1044,1046	1040FF	BS - C x 2~4 men
1048	**1048**	**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**	**161**		
1069	**1069**	**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**	**Aug 20 '24**	**140 days**			
1070	1070	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	1083FF,1084FF		
1071	1071	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	1085FF		
1072	1072	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			
1073	**1073**	**5.24.4**	**Selection of Plant and Materials**	**485 days**	**Dec 2 '19**	**Mar 30 '21**	**Dec 2 '19**	**Mar 30 '21**	**0 days**			
1074	**1074**	**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**			
1075	1075	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		1076	
1076	1076	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	1075	1077	
1077	1077	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	1076	1085	
1078	**1078**	**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**			



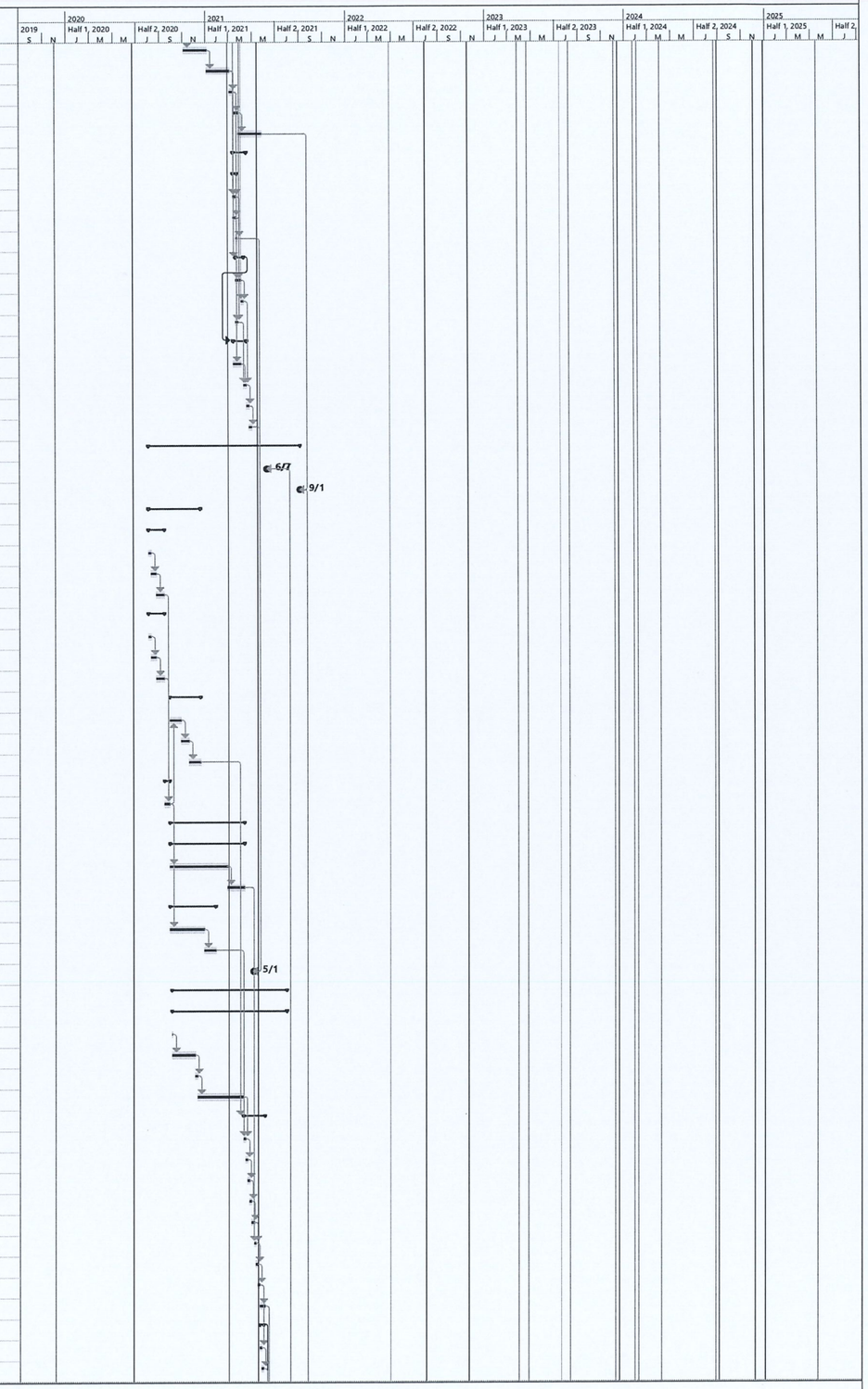
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1079	1079	5.24.4.2.1	Submission for acceptance of purchasing package	60 days	Dec 1 '20	Jan 29 '21	Dec 1 '20	Jan 29 '21	0 days		1080	
1080	1080	5.24.4.2.2	Invitation of quotations for purchasing package	30 days	Jan 30 '21	Feb 28 '21	Jan 30 '21	Feb 28 '21	0 days	1079	1081	
1081	1081	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	1080	1085	
1082	**1082**	**5.24.5**	**Design Submissions for DOU No. 1**	**359 days**	**Jul 15 '20**	**Jul 8 '21**	**Jul 15 '20**	**Jan 24 '22**	**0 days**			
1083	1083	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		1070FF	
1084	1084	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		1070FF	
1085	1085	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	Jan 24 '22	0 edays	1077,1081	1088,1091,107	
1086	**1086**	**5.24.6**	**Manufacturing and Delivery of Plant & Materials**	**299 days**	**Jul 9 '21**	**May 3 '22**	**Jul 9 '21**	**Jun 17 '22**	**45 days**			
1087	**1087**	**5.24.6.1**	**DOU 1**	**299 days**	**Jul 9 '21**	**May 3 '22**	**Jul 9 '21**	**Jun 17 '22**	**45 days**			
1088	1088	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	1085	1089	
1089	1089	5.24.6.1.2	Shipping and Delivery of Plant to site	45 days	Mar 20 '22	May 3 '22	Mar 20 '22	Jun 17 '22	45 days	1088,1094SS-60 edays	1097	
1090	**1090**	**5.24.6.2**	**FRP Air Ductwork**	**299 days**	**Jul 9 '21**	**May 3 '22**	**Jul 9 '21**	**Jun 17 '22**	**45 days**			
1091	1091	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	1085	1092	
1092	1092	5.24.6.2.2	Shipping and Delivery of Plant to Site	45 days	Mar 20 '22	May 3 '22	Mar 20 '22	Jun 17 '22	45 days	1091,1094SS-60 edays	1097	
1093	**1093**	**5.24.7**	**Site Installation Work**	**201 days**	**May 19 '22**	**Dec 5 '22**	**Jun 17 '22**	**Aug 20 '24**	**29 days**			
1094	1094	5.24.7.1	Tentative Civil Handover, DOU 1 (Rev. 5)	1 day	May 19 '22	May 19 '22	Jun 17 '22	Jun 17 '22	0 days		1097FF+45 day	
1095	1095	5.24.7.2	Tentative Civil Handover Date, underground air pipework for DOU 1 (by others)	1 day	Aug 1 '22	Aug 1 '22	Aug 1 '22	Aug 1 '22	0 days		1097FF+45 day	
1096	**1096**	**5.24.7.3**	**Commencement of E&M Installation at DOU 1**	**171 days**	**Jun 17 '22**	**Dec 5 '22**	**Jun 18 '22**	**Aug 20 '24**	**0 days**			
1097	1097	5.24.7.3.1	Mechanical Installations for DOU 1	90 edays	Jun 17 '22	Sep 15 '22	Jun 18 '22	Sep 16 '22	0 edays	1095FF+45 days,1094FF+45	1098SS+30 eda	ME - F x 4~6 men
1098	1098	5.24.7.3.2	Electrical Installations for DOU 1	90 edays	Jul 17 '22	Oct 15 '22	Jul 18 '22	Oct 16 '22	0 edays	1097SS+30 edays	1100,1099	EE - C x 4~6 men
1099	1099	5.24.7.3.3	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.19)	30 days	Oct 16 '22	Nov 14 '22	Oct 16 '22	Nov 14 '22	0 days	1097,1098		
1100	1100	5.24.7.3.4	Site Acceptance Test for DOU1	30 edays	Oct 15 '22	Nov 14 '22	Jun 30 '24	Jul 30 '24	0 edays	1097,1098	1101	
1101	1101	5.24.7.3.5	System Commissioning for DOU 1	21 edays	Nov 14 '22	Dec 5 '22	Jul 30 '24	Aug 20 '24	623.63 ed...	1100	1384	
1102	**1102**	**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**			
1103	1103	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	1107FF		
1104	1104	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	1108FF		
1105	1105	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			
1106	**1106**	**5.25.4**	**Design Submissions for DOU No. 3A**	**234 days**	**Aug 28 '20**	**Apr 19 '21**	**Aug 28 '20**	**Oct 16 '21**	**0 days**			
1107	1107	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		1103FF	
1108	1108	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	Oct 16 '21	0 edays		1104FF,1111,1	
1109	**1109**	**5.25.5**	**Manufacturing and Delivery of Plant & Materials**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Mar 30 '22**	**0 days**			
1110	**1110**	**5.25.5.1**	**DOU 3A**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Mar 30 '22**	**0 days**			
1111	1111	5.25.5.1.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Apr 19 '21	Oct 16 '21	Apr 19 '21	Nov 30 '21	0 edays	1108	1112	
1112	1112	5.25.5.1.2	Shipping and Delivery of Plant to Site	45 edays	Oct 16 '21	Nov 30 '21	Oct 16 '21	Mar 30 '22	0 edays	1111	1119	
1113	**1113**	**5.25.5.2**	**FRP Air Ductwork**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Mar 30 '22**	**0 days**			
1114	1114	5.25.5.2.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Apr 19 '21	Oct 16 '21	Apr 19 '21	Nov 30 '21	0 edays	1108	1115	
1115	1115	5.25.5.2.2	Shipping and Delivery of Plant to Site	45 edays	Oct 16 '21	Nov 30 '21	Oct 16 '21	Mar 30 '22	0 edays	1114	1119	
1116	1116	5.25.6	Tentative Civil Handover, DOU 3A (Rev. 5)	1 day	May 19 '22	May 19 '22	May 19 '22	May 19 '22	0 days			
1117	**1117**	**5.25.7**	**Site Installation Work**	**171 days**	**Nov 30 '21**	**May 20 '22**	**Nov 30 '21**	**May 20 '22**	**0 days**			
1118	**1118**	**5.25.7.1**	**Commencement of E&M Installation at DOU 3A**	**171 days**	**Nov 30 '21**	**May 20 '22**	**Nov 30 '21**	**May 20 '22**	**0 days**			
1119	1119	5.25.7.1.1	Mechanical Installations for DOU 3A	120 edays	Nov 30 '21	Mar 30 '22	Nov 30 '21	Mar 31 '22	0 edays	1112,1115	1120SS+30 eda	ME - F x 4~6 men
1120	1120	5.25.7.1.2	Electrical Installations for DOU 3A	90 edays	Dec 30 '21	Mar 30 '22	Dec 30 '21	Mar 31 '22	0 edays	1119SS+30 edays	1122,1121	EE - D x 4~6 men
1121	1121	5.25.7.1.3	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.19)	30 days	Mar 30 '22	Apr 28 '22	Mar 30 '22	Apr 28 '22	0 days	1119,1120		
1122	1122	5.25.7.1.4	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	1119,1120	1123	
1123	1123	5.25.7.1.5	System Commissioning Test for DOU 3A	21 edays	Apr 29 '22	May 20 '22	Apr 29 '22	May 20 '22	0 edays	1122		
1124	**1124**	**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**			
1125	1125	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	1130FF		
1126	1126	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	1131FF		
1127	1127	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			
1128	1128	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			
1129	**1129**	**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**			
1130	1130	5.26.5.1	CDS081-9 - Civil and dimensional requirements drawings for Valve and Flowmeter Chamber	90 days	Mar 1 '21	May 29 '21	Mar 1 '21	May 29 '21	0 days		1125FF	
1131	1131	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		1133,1126FF	
1132	**1132**	**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**			
1133	1133	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	1131	1134	
1134	1134	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	1133	1138	
1135	1135	5.26.7	Tentative Civil Handover, Chambers (Rev. 5)	1 day	May 19 '22	May 19 '22	May 19 '22	May 19 '22	0 days			
1136	**1136**	**5.26.8**	**Site Installation Work**	**150 days**	**Sep 12 '21**	**Feb 8 '22**	**Sep 12 '21**	**Feb 8 '22**	**0 days**			
1137	**1137**	**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**			
1138	1138	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	1134	1139	ME - C x 4~6 men
1139	1139	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	1138	1384	EE - A x 4~6 men
1140	**1140**	**5.27**	**Underground Pipework, Modification and Connection Works, Portion B-9B (PS 6B.2.22)**	**1161 days**	**Mar 1 '21**	**May 4 '24**	**Mar 1 '21**	**May 1 '24**	**0 days**			
1141	1141	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	1145FF		
1142	1142	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	1146FF		



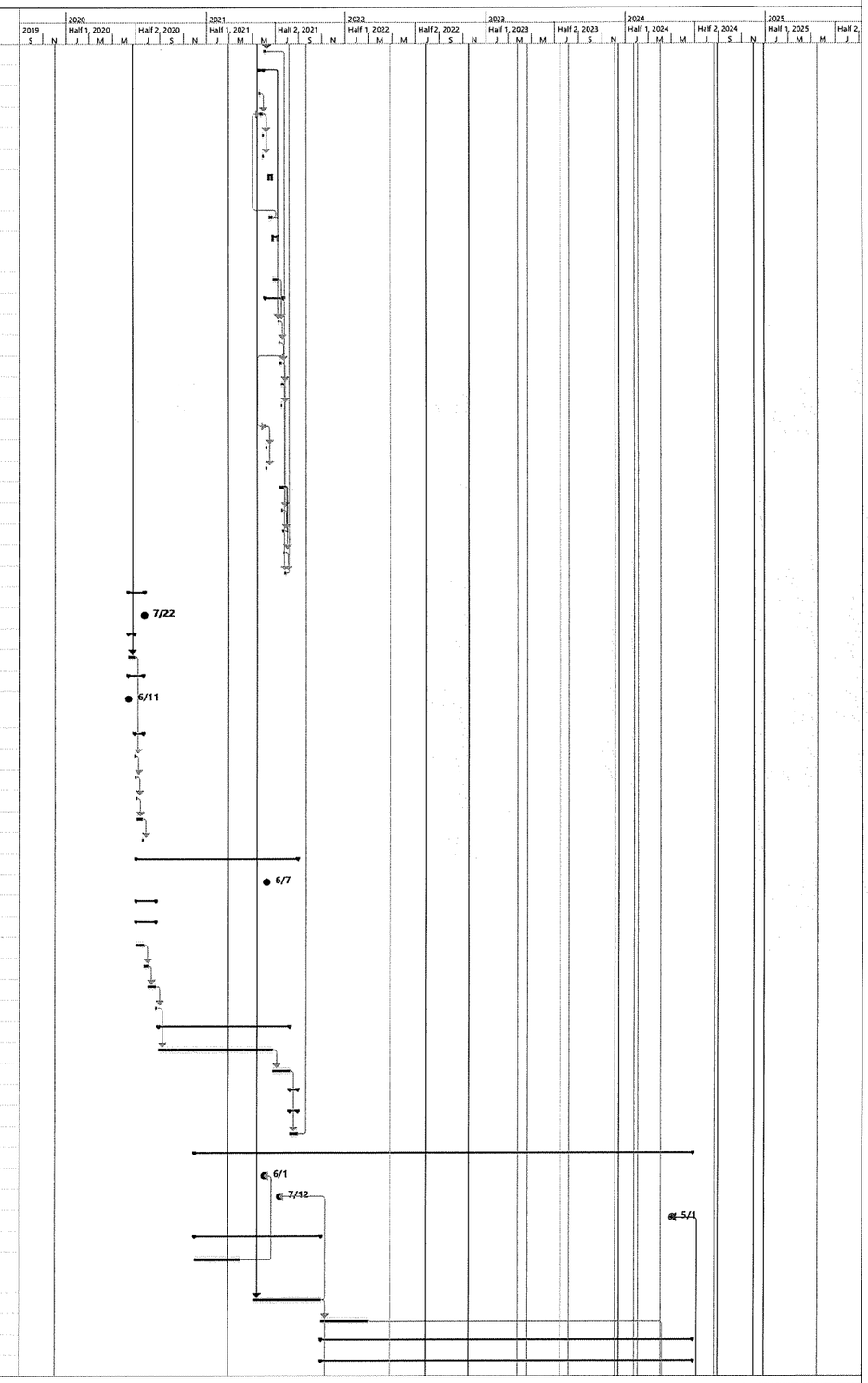
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1143	1143	5.27.3	Planned Sectional Completion Date - Section 4, Underground Pipework	0 days	May 1 '24	May 1 '24	May 1 '24	May 1 '24	0 days	1156FF		
1144	**1144**	**5.27.4**	**Design Submissions**	**90 days**	**Mar 1 '21**	**May 30 '21**	**Mar 1 '21**	**Oct 16 '21**	**0 days**			
1145	1145	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	187	1141FF	
1146	1146	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	Oct 16 '21	0 edays		1148,1142FF	
1147	**1147**	**5.27.5**	**Manufacturing and Delivery of Plant & Materials**	**1079 days**	**Apr 20 '21**	**Apr 2 '24**	**Apr 20 '21**	**Apr 18 '24**	**16 days**			
1148	1148	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	1146	1149	
1149	1149	5.27.5.2	Shipping and Delivery of Plant to Site	45 days	Feb 18 '24	Apr 2 '24	Mar 5 '24	Apr 18 '24	16 days	1148,1150SS-60 edays	1154	
1150	1150	5.27.6	Tentative Civil Handover, Road (Rev. 5)	1 day	Apr 18 '24	Apr 18 '24	Apr 15 '24	Apr 15 '24	0 days		1149SS-60 eday	
1151	**1151**	**5.27.7**	**Site Installation**	**16 days**	**Apr 19 '24**	**May 4 '24**	**Apr 16 '24**	**May 1 '24**	**0 days**			
1152	**1152**	**5.27.7.1**	**Commencement of underground pipework modification and connection works**	**16 days**	**Apr 19 '24**	**May 4 '24**	**Apr 16 '24**	**May 1 '24**	**0 days**			
1153	1153	5.27.7.1.1	Temporary Flow Diversion and Road Excavation Work	3 days	Apr 19 '24	Apr 21 '24	Apr 16 '24	Apr 18 '24	0 days	1150	1154	
1154	1154	5.27.7.1.2	Pipe Laying and connection works	7 days	Apr 22 '24	Apr 28 '24	Apr 19 '24	Apr 25 '24	0 days	1153,1149	1155	
1155	1155	5.27.7.1.3	Pressure Tests	3 days	Apr 29 '24	May 1 '24	Apr 26 '24	Apr 28 '24	0 days	1154	1156	
1156	1156	5.27.7.1.4	Make Good	3 days	May 2 '24	May 4 '24	Apr 29 '24	May 1 '24	0 days	1155	1143FF	
1157	**1157**	**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**			
1158	**1158**	**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**			
1159	**1159**	**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**			
1160	1160	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		1161	
1161	1161	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	1160	1162	
1162	1162	5.28.1.1.3	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	1161	1181,1184	
1163	**1163**	**5.28.1.2**	**Mis - Instrumentations**	**73 days**	**Mar 2 '20**	**May 13 '20**	**Mar 2 '20**	**May 13 '20**	**0 days**			
1164	1164	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		1165	
1165	1165	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	1164	1166	
1166	1166	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	1165	1181,1187	
1167	**1167**	**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**			
1168	1168	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		1169	
1169	1169	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	1168	1170	
1170	1170	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	1169	1181,1190	
1171	**1171**	**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**			
1172	1172	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		1173	
1173	1173	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	1172	1174	
1174	1174	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	1173	1181,1193	
1175	**1175**	**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**			
1176	1176	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		1177	
1177	1177	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	1176	1178	
1178	1178	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	1177	1184,1187,119	
1179	**1179**	**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**			
1180	1180	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	124	1209	
1181	1181	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	1162,1166,1170,1174	1183,1189,118	
1182	**1182**	**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**			
1183	**1183**	**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**	**1181**		
1184	1184	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	1178,1162	1185	
1185	1185	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	1184	1214	
1186	**1186**	**5.28.3.2**	**Instrumentations**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1181**		
1187	1187	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	1178,1166	1188	
1188	1188	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	1187	1215	
1189	**1189**	**5.28.3.3**	**Pipework**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1181**		
1190	1190	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	1178,1170	1191	
1191	1191	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	1190	1213	
1192	**1192**	**5.28.3.4**	**Valve**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1181**		
1193	1193	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	1178,1174	1194	
1194	1194	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	1193	1213	
1195	**1195**	**5.28.4**	**Site Installation Work**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1196	**1196**	**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**			
1197	**1197**	**5.28.4.1.1**	**Civil Construction Work**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1198	1198	5.28.4.1.1.	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	1178	1199,1200	
1199	1199	5.28.4.1.1.	Civil structural design and drawing submission for acceptance	30 days	Aug 7 '20	Sep 5 '20	Aug 7 '20	Sep 5 '20	0 days	1198	1201	
1200	1200	5.28.4.1.1.	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	1198	1201	
1201	1201	5.28.4.1.1.	ELS (Sheeting and Excavation)	60 days	Sep 6 '20	Nov 4 '20	Sep 6 '20	Nov 4 '20	0 days	1200,1199	1202	



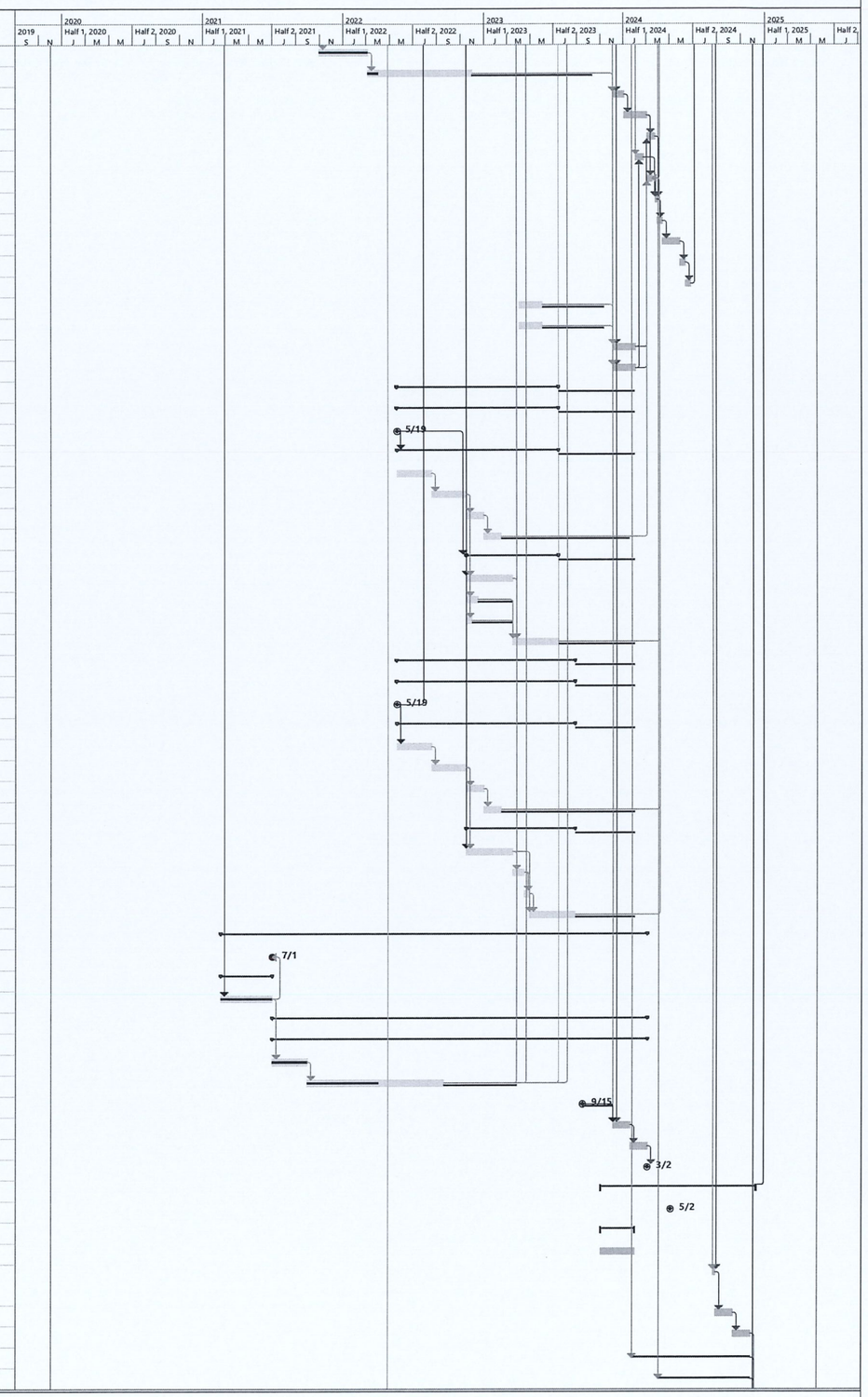
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1202	1202	5.28.4.1.1.5	Grouting Works	60 days	Nov 5 '20	Jan 3 '21	Nov 5 '20	Jan 3 '21	0 days	1201	1203	
1203	1203	5.28.4.1.1.6	RC structure works including cast-in items	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days	1202	1212,1209,120	
1204	1204	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	1203	1209,1210,121	
1205	1205	5.28.4.1.1.8	Waterproofing	14 days	Mar 13 '21	Mar 26 '21	Mar 13 '21	Mar 26 '21	0 days	1204	1206	
1206	1206	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	1205	1223FF	
1207	1207	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			
1208	1208	5.28.4.1.2.1	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			
1209	1209	5.28.4.1.2.1.1	GF MR LA-09-01 SWL 1t	7 days	Mar 13 '21	Mar 19 '21	Mar 13 '21	Mar 19 '21	0 days	1203,1180,1204	1211	LA - A x 4~6 men
1210	1210	5.28.4.1.2.1.2	GF MR LA-09-02 SWL 1t	7 days	Mar 13 '21	Mar 19 '21	Mar 13 '21	Mar 19 '21	0 days	1204	1211	LA - A x 4~6 men
1211	1211	5.28.4.1.2.1.3	Site Acceptance test and loading test of LA	3 days	Mar 20 '21	Mar 22 '21	Mar 20 '21	Mar 22 '21	0 days	1209,1210	1246FF	LA - A x 4~6 men
1212	1212	5.28.4.1.2.2	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	1203	1216FS-30 days	
1213	1213	5.28.4.1.2.2.1	Installation of pipework, chemical pipework and valves, EQT036	14 days	Mar 19 '21	Apr 1 '21	Mar 19 '21	Apr 1 '21	0 days	1204,1191,1194	1214	ME - A x 4~6 men
1214	1214	5.28.4.1.2.2.2	Installation of pumps	7 days	Apr 2 '21	Apr 8 '21	Apr 2 '21	Apr 8 '21	0 days	1213,1185	1218	ME - A x 4~6 men
1215	1215	5.28.4.1.2.2.3	Installation of instrumentations, EQT035-3	7 days	Mar 19 '21	Mar 25 '21	Mar 19 '21	Mar 25 '21	0 days	1204,1188	1218	ME - A x 4~6 men
1216	1216	5.28.4.1.2.3	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	1212FS-30 days		
1217	1217	5.28.4.1.2.3.1	Installation of cable trays and cable containments	21 days	Mar 13 '21	Apr 2 '21	Mar 13 '21	Apr 2 '21	0 days	1204	1218	EE - A x 4~6 men
1218	1218	5.28.4.1.2.3.2	Cables laying and terminations	7 days	Apr 9 '21	Apr 15 '21	Apr 9 '21	Apr 15 '21	0 days	1217,1214,1215	1219	EE - A x 4~6 men
1219	1219	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	1218	1220	
1220	1220	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	1219	1246FF	
1221	1221	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			
1222	1222	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	1289FF		
1223	1223	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	1206FF,1315FF		
1224	1224	5.29.3	Selection of Suppliers for major plant and materials and Subcontractor for PST No. 4 and No	137 days	Aug 1 '20	Dec 15 '20	Aug 1 '20	Dec 15 '20	0 days			
1225	1225	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			
1226	1226	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		1227	
1227	1227	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	1226	1228	
1228	1228	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	1227	1238	
1229	1229	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			
1230	1230	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		1231	
1231	1231	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	1230	1232	
1232	1232	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	1231	1238	
1233	1233	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			
1234	1234	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	1238	1235	
1235	1235	5.29.3.3.2	Invitation to tender	21 days	Oct 26 '20	Nov 15 '20	Oct 26 '20	Nov 15 '20	0 days	1234	1236	
1236	1236	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	1235	1253	
1237	1237	5.29.4	Design Submissions	14 days	Sep 12 '20	Sep 25 '20	Sep 12 '20	Sep 25 '20	0 days			
1238	1238	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	1228,1232	1241,1244,123	
1239	1239	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			
1240	1240	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			
1241	1241	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	1238	1242	
1242	1242	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	1241	1259	
1243	1243	5.29.5.2	Pipework	120 days	Sep 26 '20	Jan 23 '21	Sep 26 '20	Jan 23 '21	0 days			
1244	1244	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	1238	1245	
1245	1245	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	1244	1254	
1246	1246	5.29.6	Tentative Civil Handover, Filtrate Lifting Well and Eq. Tank (Completion of work)	1 day	May 1 '21	May 1 '21	May 1 '21	May 1 '21	0 days	1220FF,1211FF		
1247	1247	5.29.7	Site Installation Work	300 days	Oct 1 '20	Jul 27 '21	Oct 1 '20	Jul 27 '21	0 days			
1248	1248	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			
1249	1249	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		1250	
1250	1250	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	1249	1251	
1251	1251	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	1250	1252	
1252	1252	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	1251	1254	
1253	1253	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	1236		
1254	1254	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	1252,1245	1255	ME - A x 4~6 men
1255	1255	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	1254	1256	ME - A x 4~6 men
1256	1256	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	1255	1257	ME - A x 4~6 men
1257	1257	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	1256	1258	ME - A x 4~6 men
1258	1258	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	1257	1259	ME - A x 4~6 men
1259	1259	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	1258,1242	1260	ME - A x 4~6 men
1260	1260	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	1259	1261	ME - A x 4~6 men
1261	1261	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	1260	1262,1264	ME - A x 4~6 men
1262	1262	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	1261	1266	ME - A x 4~6 men
1263	1263	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		1266	
1264	1264	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	1261	1265	EE - A x 4~6 men
1265	1265	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	1264	1266	EE - A x 4~6 men



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
1266	1266	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	1263,1262,1265	1289	
1267	1267	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**		**1277**	
1268	1268	5.29.7.1.8.:	Filtrate divserion to Temporary Filtrate Equalisation Tank	2 days	May 19 '21	May 20 '21	May 19 '21	May 20 '21	0 days		1269	
1269	1269	5.29.7.1.8.:	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	1268,1273	1270,1271	
1270	1270	5.29.7.1.8.:	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	1269		
1271	1271	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	1269		
1272	1272	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**			
1273	1273	5.29.7.1.9.:	Provision of ICE's Certificate	8 days	Jun 14 '21	Jun 21 '21	Jun 14 '21	Jun 21 '21	0 days		1269,1277	
1274	1274	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**			
1275	1275	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		1277	
1276	1276	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**			
1277	1277	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	1267,1273,1275	1278	ME - A x 4~6 men
1278	1278	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	1277	1279,1282	ME - A x 4~6 men
1279	1279	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	1278	1286,1280,128	ME - A x 4~6 men
1280	1280	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	1279		ME - A x 4~6 men
1281	1281	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	1279		ME - A x 4~6 men
1282	1282	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	1278	1283,1284	ME - A x 4~6 men
1283	1283	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	1282		ME - A x 4~6 men
1284	1284	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	1282		ME - A x 4~6 men
1285	1285	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**		**1288**	
1286	1286	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	1279	1287	
1287	1287	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	1286	1288	
1288	1288	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	1285,1287	1289	
1289	1289	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	1266,1288	1222FF	
1290	1290	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**			
1291	1291	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			
1292	1292	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**			
1293	1293	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	207	1297	
1294	1294	5.30.3	**Site Installation Work**	**39 days**	**Jun 11 '20**	**Jul 19 '20**	**Jun 11 '20**	**Jul 19 '20**	**0 days**			
1295	1295	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			
1296	1296	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**			
1297	1297	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	1293	1298	
1298	1298	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	1297	1299	
1299	1299	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	1298	1300	
1300	1300	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	1299	1301	
1301	1301	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	1300		
1302	1302	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**			
1303	1303	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			
1304	1304	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**			
1305	1305	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**			
1306	1306	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		1307	
1307	1307	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	1306	1308	
1308	1308	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	1307	1309	
1309	1309	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	1308	1311	
1310	1310	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**			
1311	1311	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	1309	1312	
1312	1312	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	1311	1315	
1313	1313	5.31.5	**Site Installation Work**	**21 days**	**Aug 9 '21**	**Aug 29 '21**	**Aug 9 '21**	**Aug 29 '21**	**0 days**			
1314	1314	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**			
1315	1315	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	1312	1223FF	
1316	1316	5.32	Fire Services Installation (PS 6B.6.9)	**1302 days**	**Dec 1 '20**	**Jun 24 '24**	**Dec 1 '20**	**May 1 '24**	**0 days**			
1317	1317	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	1321FF		
1318	1318	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	1322FF		
1319	1319	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	1337FF		
1320	1320	5.32.4	**Design Submissions for FSI**	**334 days**	**Dec 1 '20**	**Oct 30 '21**	**Dec 1 '20**	**Feb 27 '22**	**0 days**			
1321	1321	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		1317FF	
1322	1322	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	Feb 27 '22	0 edays	172	1326,1323,131:	
1323	1323	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	1322	1332FF	
1324	1324	5.32.6	**Site Installation Work**	**968 days**	**Oct 31 '21**	**Jun 24 '24**	**Oct 31 '21**	**May 1 '24**	**0 days**			
1325	1325	5.32.6.1	**Commencement of Fire Services Installation**	**968 days**	**Oct 31 '21**	**Jun 24 '24**	**Oct 31 '21**	**May 1 '24**	**0 days**			



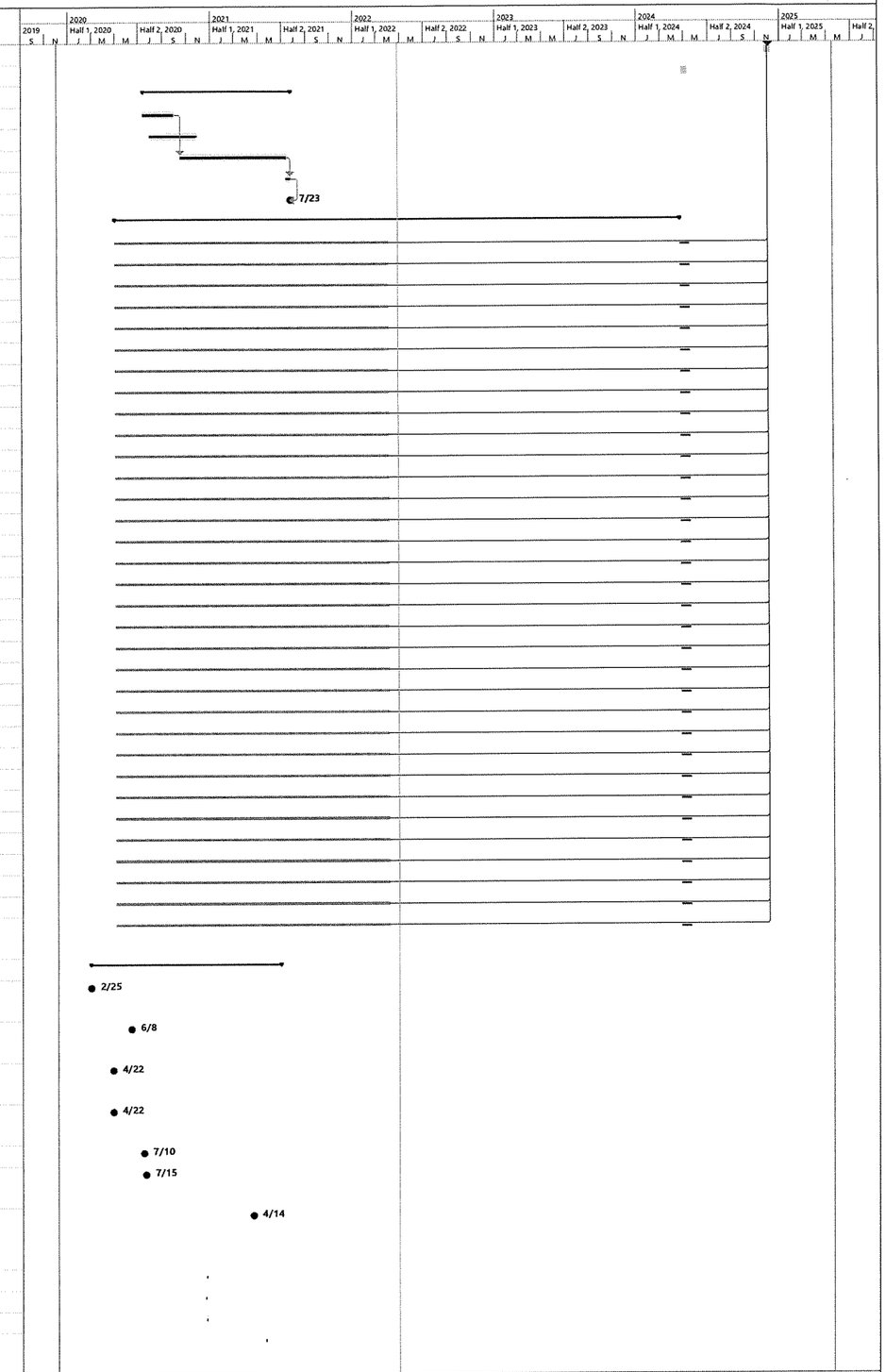
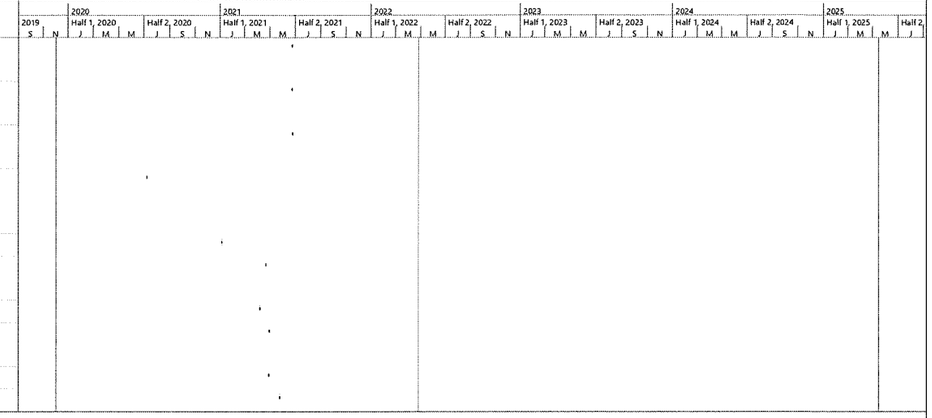
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1326	1326	5.32.6.1.1	Design Review of Approved General Building Plan	126 days	Oct 31 '21	Mar 5 '22	Oct 31 '21	Mar 5 '22	0 days	1322	1327	
1327	1327	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	1326	1328	
1328	1328	5.32.6.1.3	Submission of WWO46 for WSD's Inspection	30 days	Dec 4 '23	Jan 2 '24	Oct 11 '23	Nov 9 '23	0 days	1327,946,671,380,529,815	1329	
1329	1329	5.32.6.1.4	Obtain WWO46 Part V	60 days	Jan 3 '24	Mar 2 '24	Nov 10 '23	Jan 8 '24	0 days	1328	1332,1330	
1330	1330	5.32.6.1.5	FSD Inspection and Approval for MVAC	21 days	Mar 3 '24	Mar 23 '24	Jan 9 '24	Jan 29 '24	0 days	1340,1341,1329	1333	
1331	1331	5.32.6.1.6	FSD Inspection and Approval for DG Stores	21 days	Feb 2 '24	Feb 22 '24	Jan 9 '24	Jan 29 '24	0 days	1340,1341,997	1333	
1332	1332	5.32.6.1.7	Submission of (FSI/314 & FSI/501) to FSD	14 days	Mar 3 '24	Mar 16 '24	Jan 16 '24	Jan 29 '24	0 days	1340,1341,1329,1354FF,1349,1	1333	
1333	1333	5.32.6.1.8	Pre-inspection meeting with FSD	5 days	Mar 24 '24	Mar 28 '24	Jan 30 '24	Feb 3 '24	0 days	1332,1330,1331	1334	
1334	1334	5.32.6.1.9	Initial Inspection with FSD	15 days	Mar 29 '24	Apr 12 '24	Feb 4 '24	Feb 18 '24	0 days	1333	1335	
1335	1335	5.32.6.1.10	Document Checking	45 days	Apr 13 '24	May 27 '24	Feb 19 '24	Apr 3 '24	0 days	1334	1336	
1336	1336	5.32.6.1.11	Re-inspections with FSD	14 days	May 28 '24	Jun 10 '24	Apr 4 '24	Apr 17 '24	0 days	1335	1337	
1337	1337	5.32.6.1.12	Issue of acceptance memo by FSD	14 days	Jun 11 '24	Jun 24 '24	Apr 18 '24	May 1 '24	0 days	1336	1319FF	
1338	1338	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		1341	FS - A x 4~6 men
1339	1339	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		1341	FS - A x 4~6 men
1340	1340	5.32.6.1.15	SAT for Manual and automatic fire detection and alarm system	60 days	Dec 4 '23	Feb 1 '24	Nov 10 '23	Jan 8 '24	0 days	1044,997,946,671,380,529,815	1332,1330,1331	
1341	1341	5.32.6.1.16	SAT for Fire hydrants, hose reels and street fire hydrant system	60 days	Dec 4 '23	Feb 1 '24	Nov 10 '23	Jan 8 '24	0 days	1338,1339,1044,997,946,671,3	1332,1330,1331	
1342	**1342**	**5.33**	Fire Services Sprinkler Pumping Room, Portion B-7 & B-7B (PS 6B.6.9)	**421 days**	**May 19 '22**	**Jul 13 '23**	**Dec 5 '22**	**Jan 29 '24**	**200 days**			
1343	**1343**	**5.33.1**	**Site Installation Work**	**421 days**	**May 19 '22**	**Jul 13 '23**	**Dec 5 '22**	**Jan 29 '24**	**200 days**			
1344	1344	5.33.1.1	Tentative Civil Handover Date, FS Sprinkler Pump Room (Rev. 5)	1 day	May 19 '22	May 19 '22	Dec 5 '22	Dec 5 '22	0 days		1345,1350	
1345	**1345**	**5.33.1.2**	**Commencement of E&M Installation at FS & Sprinkler Pump Room**	**420 days**	**May 19 '22**	**Jul 13 '23**	**Dec 6 '22**	**Jan 29 '24**	**200 days**	**1344**		
1346	1346	5.33.1.2.1	Mechanical Installations for FS & Sprinkler Pumps	90 edays	May 19 '22	Aug 17 '22	Dec 6 '22	Mar 6 '23	0 edays		1347	FS - A x 4~6 men
1347	1347	5.33.1.2.2	Electrical Installations for FS & Sprinkler Pumps	90 edays	Aug 17 '22	Nov 15 '22	Mar 6 '23	Jun 4 '23	0.63 edays	1346	1348,1351,135	FS - A x 4~6 men
1348	1348	5.33.1.2.3	Site Acceptance Test for FS & Sprinkler Pumps	45 days	Nov 16 '22	Dec 30 '22	Oct 18 '23	Dec 1 '23	0 days	1347	1349	
1349	1349	5.33.1.2.4	System Commissioning for FS & Sprinkler Pumps	45 days	Dec 31 '22	Feb 13 '23	Dec 2 '23	Jan 15 '24	336 days	1348	1332	
1350	**1350**	**5.33.1.2.5**	**Building Services Installations at FS & Sprinkler Pump Room**	**240 days**	**Nov 16 '22**	**Jul 13 '23**	**Jun 4 '23**	**Jan 29 '24**	**200 days**	**1344**		
1351	1351	5.33.1.2.5.	Lighting and Power Distribution System, Chem 1&2	120 days	Nov 16 '22	Mar 15 '23	Jun 4 '23	Oct 1 '23	0 days	1347,197	1354	BS - A x 4~6 men
1352	1352	5.33.1.2.5.	Lightning Protection System, FS & Sprinkler Pump Room	30 days	Nov 16 '22	Dec 15 '22	Sep 2 '23	Oct 1 '23	90 days	1347	1354	BS - A x 4~6 men
1353	1353	5.33.1.2.5.	Mechanical Ventilation System, FS & Sprinkler PR	14 days	Nov 16 '22	Nov 29 '22	Sep 18 '23	Oct 1 '23	106 days	1347	1354	MVAC - A x 4~6 men
1354	1354	5.33.1.2.5.	Testing and Commissioning of Building Services Installations, FS & Sprinkler PR	120 days	Mar 16 '23	Jul 13 '23	Oct 2 '23	Jan 29 '24	200 days	1351,1352,1353	1332FF	
1355	**1355**	**5.34**	Fire Hydrant and Booster Pumping Room, Portion B7 & B-7B (PS 6B.6.9)	**465 days**	**May 19 '22**	**Aug 26 '23**	**Oct 22 '22**	**Jan 29 '24**	**156 days**			
1356	**1356**	**5.34.1**	**Site Installation Work**	**465 days**	**May 19 '22**	**Aug 26 '23**	**Oct 22 '22**	**Jan 29 '24**	**156 days**			
1357	1357	5.34.1.1	Tentative Civil Handover Date, Fire Hydrant and Booster Pumping Room (Rev. 5)	1 day	May 19 '22	May 19 '22	Oct 22 '22	Oct 22 '22	0 days		1037FF+50 day	
1358	**1358**	**5.34.1.2**	**Commencement of E&M Installation at Street FH Pump Room**	**464 days**	**May 19 '22**	**Aug 26 '23**	**Oct 23 '22**	**Jan 29 '24**	**156 days**			
1359	1359	5.34.1.2.1	Mechanical Installations for Street FH Pumps	90 edays	May 19 '22	Aug 17 '22	Oct 23 '22	Jan 21 '23	0 edays	1357	1360	FS - A x 4~6 men
1360	1360	5.34.1.2.2	Electrical Installations for Street FH Pump	90 edays	Aug 17 '22	Nov 15 '22	Jan 21 '23	Apr 21 '23	0.63 edays	1359	1361,1364	FS - A x 4~6 men
1361	1361	5.34.1.2.3	Site Acceptance Test for Street FH Pump	45 days	Nov 16 '22	Dec 30 '22	Nov 1 '23	Dec 15 '23	0 days	1360	1362	
1362	1362	5.34.1.2.4	System Commissioning for Street FH Pumps	45 days	Dec 31 '22	Feb 13 '23	Dec 16 '23	Jan 29 '24	350 days	1361	1332FF	
1363	**1363**	**5.34.1.2.5**	**Building Services Installations at Street FH Pump Room**	**284 days**	**Nov 16 '22**	**Aug 26 '23**	**Apr 21 '23**	**Jan 29 '24**	**156 days**			
1364	1364	5.34.1.2.5.	Lighting and Power Distribution System, Street FH PR	120 days	Nov 16 '22	Mar 15 '23	Apr 21 '23	Aug 18 '23	0 days	1360,197	1367,1365	BS - A x 4~6 men
1365	1365	5.34.1.2.5.	Lightning Protection System, Street FH PR	30 days	Mar 16 '23	Apr 14 '23	Aug 19 '23	Sep 17 '23	0 days	1364	1366,1367	BS - A x 4~6 men
1366	1366	5.34.1.2.5.	Mechanical Ventilation System, Street FH PR	14 days	Apr 15 '23	Apr 28 '23	Sep 18 '23	Oct 1 '23	0 days	1365	1367	MVAC - A x 4~6 men
1367	1367	5.34.1.2.5.	Testing and Commissioning of Building Services Installations, FH PR	120 days	Apr 29 '23	Aug 26 '23	Oct 2 '23	Jan 29 '24	156 days	1364,1365,1366	1332FF	
1368	**1368**	**5.35**	Plumbing Installation (PS 6B.6.8)	**1110 days**	**Feb 16 '21**	**Mar 2 '24**	**Feb 16 '21**	**Mar 2 '24**	**0 days**			
1369	1369	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	1371FF		
1370	**1370**	**5.35.2**	**Design Submissions for Plumbing**	**134 days**	**Feb 16 '21**	**Jun 30 '21**	**Feb 16 '21**	**Sep 28 '21**	**0 days**			
1371	1371	5.35.2.1	CDS033 - Detailed Design for Plumbing System	134 edays	Feb 16 '21	Jun 30 '21	Feb 16 '21	Sep 28 '21	0 edays	167	1374,1369FF	
1372	**1372**	**5.35.3**	**Site Installation Work**	**976 days**	**Jul 1 '21**	**Mar 2 '24**	**Jul 1 '21**	**Mar 2 '24**	**0 days**			
1373	**1373**	**5.35.3.1**	**Commencement of Plumbing Installation**	**976 days**	**Jul 1 '21**	**Mar 2 '24**	**Jul 1 '21**	**Mar 2 '24**	**0 days**			
1374	1374	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	1371	1375	Pb - A x 4~6 men
1375	1375	5.35.3.1.2	Submission of WWO542 for WSD's approval	355 days	Sep 29 '21	Sep 18 '22	Sep 29 '21	May 7 '23	188 days	1374	944,669,378,527	Pb - B x 4~6 men
1376	1376	5.35.3.1.3	Connection of External Pumping System (By others)	0 days	Sep 15 '23	Sep 15 '23	Dec 4 '23	Dec 4 '23	80 days		1377	
1377	1377	5.35.3.1.4	Submission of WWO46 for WSD's Inspection	45 days	Dec 4 '23	Jan 17 '24	Dec 4 '23	Jan 17 '24	0 days	1376,944,669,378,527,809	1378	
1378	1378	5.35.3.1.5	Obtain WWO46 Part V	45 days	Jan 18 '24	Mar 2 '24	Jan 18 '24	Mar 2 '24	0 days	1377	1379	
1379	1379	5.35.3.1.6	Tentative Date for connection of external water pipework (by others)	0 days	Mar 2 '24	Mar 2 '24	Mar 2 '24	Mar 2 '24	0 days	1378		
1380	**1380**	**5.36**	Plant Commissioning	**404 days**	**Nov 1 '23**	**Dec 8 '24**	**Nov 1 '23**	**Dec 8 '24**	**0 days**		**39FF**	
1381	1381	5.36.1	Planned Sectional Completion Date - Section 4, Plant Commissioning	0 days	May 2 '24	May 2 '24	May 2 '24	May 2 '24	0 days			
1382	**1382**	**5.36.2**	**Design Submission for Treatment Process Plant Testing & Commissioning**	**90 days**	**Nov 1 '23**	**Jan 29 '24**	**Nov 1 '23**	**Jan 29 '24**	**0 days**			
1383	1383	5.36.2.1	Document Submission and Resubmission for T&C procedures	90 days	Nov 1 '23	Jan 29 '24	Nov 1 '23	Jan 29 '24	0 days			
1384	1384	5.36.3	System Commissioning Tests of the E&M systems at IW, PST, BR 2A&2B, MFB No. 2, Chemical Dosing Systems, DOUs	7 days	Aug 20 '24	Aug 26 '24	Aug 20 '24	Aug 27 '24	0 days	1101,397,687,951,994,1041,	1385	
1385	1385	5.36.4	MBR System Process Startup	45 days	Aug 27 '24	Oct 10 '24	Aug 27 '24	Oct 11 '24	0 days	1384	1386	
1386	1386	5.36.5	Plant Commissioning	45 days	Oct 11 '24	Nov 24 '24	Oct 11 '24	Nov 25 '24	0 days	1385	1389	
1387	1387	5.36.6	Overall commissioning of CCTV system	30 days	Dec 24 '23	Jan 22 '24	Oct 26 '24	Nov 25 '24	307 days	945,670,379,528,812	1389	
1388	1388	5.36.7	Overall commissioning of Facility Computerized Systems (SCADA, CMMS, PMS, IDMS)	28 days	Mar 4 '24	Mar 31 '24	Oct 28 '24	Nov 25 '24	238 days	386,534,939,940	1389	



Bestwise
Project: DE/2018/04

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
1389	1389	5.36.8	Overall Plant Commissioning and DSD pre-handover inspections	14 days	Nov 25 '24	Dec 8 '24	Nov 25 '24	Dec 8 '24	0 days	1386,1387,1388		
1390	1390	5.36.9	O&M manual for overall system	14 days	Apr 25 '24	May 8 '24	Apr 25 '24	May 8 '24	0 days			
1391	**1391**	**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**			
1392	1392	5.37.1	Detail Design Submission and Approval	77 days	Jul 14 '20	Sep 28 '20	Jul 14 '20	Sep 28 '20	0 days		1394	
1393	1393	5.37.2	Subletting, Procurement, Manufacturing and Delivery	120 days	Jul 31 '20	Nov 27 '20	Jul 31 '20	Nov 27 '20	0 days			
1394	1394	5.37.3	Site Installation	270 days	Oct 17 '20	Jul 13 '21	Oct 17 '20	Jul 13 '21	0 days	1392	1395	
1395	1395	5.37.4	Testing and Commissioning (Rev. 15)	10 days	Jul 14 '21	Jul 23 '21	Jul 14 '21	Jul 23 '21	0 days	1394	1396FF	
1396	1396	5.37.5	Planned Completion Date	1 day	Jul 23 '21	Jul 23 '21	Jul 23 '21	Jul 23 '21	0 days	1395FF		
1397	1397	6	**Beam Plus Submissions**	1450 days	May 1 '20	Apr 19 '24	May 1 '20	Apr 19 '24	0 days			
1398	1398	6.1	SA10 - Environmental Management Plan	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1399	1399	6.2	SA11 - Air Pollution During Construction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1400	1400	6.3	SA12 - Noise During Construction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1401	1401	6.4	SA14 - Noise from Building Equipment	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1402	1402	6.5	SA15 - Light Pollution	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1403	1403	6.6	MAP1 - Timber used for Temporary Works	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1404	1404	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		39	
1405	1405	6.8	MAP3 - Waste Management Plan	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1406	1406	6.9	MA2 - Modular and Standardized Design	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1407	1407	6.10	MA8 - Ozone Depleting Substances	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1408	1408	6.11	MA11 - Construction Waste Reduction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1409	1409	6.12	EUP1 - Minimum Energy Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1410	1410	6.13	EU1 - Reduction of CO2 Emissions	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1411	1411	6.14	EU2 - Peak Electricity Demand Reduction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1412	1412	6.15	EU6 - Renewable Energy Systems	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1413	1413	6.16	EU9 - Energy Efficient Appliances	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1414	1414	6.17	EU10 - Testing and Commissioning	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1415	1415	6.18	EU11 - Operation and Maintenance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1416	1416	6.19	EU12 - Meter and Monitoring	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1417	1417	6.20	WUP1 - Water Quality Survey	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1418	1418	6.21	WUP2 - Minimum Water Saving Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1419	1419	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		39	
1420	1420	6.23	IEQP1 - Minimum Ventilation Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1421	1421	6.24	IEQ1 - Security	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1422	1422	6.25	IEQ2 - Plumbing and Drainage	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1423	1423	6.26	IEQ3 - Biological Contamination	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1424	1424	6.27	IEQ5 - Construction IAQ Management	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1425	1425	6.28	IEQ6 / IEQ7 - IAQ	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1426	1426	6.29	IEQ9 - Increased Ventilation	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1427	1427	6.30	IEQ11 - Localised Ventilation	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1428	1428	6.31	IEQ12 - Ventilation in Common Areas	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		39	
1429	1429	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		39	
1430	1430	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		39	
1431	**1431**	**7**	**Summary of compensation events notified**	**487 days**	**Feb 25 '20**	**Jun 25 '21**	**Feb 25 '20**	**Jun 25 '21**	**0 days**			
1432	1432	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			
1433	1433	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			
1434	1434	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			
1435	1435	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			
1436	1436	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			
1437	1437	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			
1438	1438	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			
1439	1439	7.8	NCE-PPMI-0202 (CE) Revised GA for F.S. & Sprinkler Pumping Room and Emergency Generator R	1 day	Dec 18 '20	Dec 18 '20	Dec 18 '20	Dec 18 '20	0 days			
1440	1440	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			
1441	1441	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			
1442	1442	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			



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
1443	1443	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			
1444	1444	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			
1445	1445	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			
1446	1446	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			
1447	1447	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			
1448	1448	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			
1449	1449	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			
1450	1450	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			
1451	1451	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			
1452	1452	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