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

AUGUST 2022

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Contract No. SPW 12/2021

Shek Wu Hui Effluent Polishing Plant – Main Work

Monthly Environmental Monitoring & Audit Report

August 2022

(September 2022)

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TABLE OF CONTENTS

1 INTRODUCTION 7
1.1 Scope of the Report 7
1.2 Structure of the Report 7
2 PROJECT BACKGROUND 9
2.1 Background 9
2.2 Project Organization and Contact Personnel 9
2.3 Construction Activities 10
3 STATUS OF REGULATORY COMPLIANCE 14
3.1 Status of Environmental Licensing and Permitting under the Project 14
4 MONITORING REQUIREMENTS 17
4.1 Noise Monitoring 17
4.2 Air Monitoring 20
4.3. Ecological Monitoring 25
5 MONITORING RESULTS 28
5.1 Noise Monitoring Results 28
5.2 Air Monitoring Results 28
5.3 Ecology Monitoring Results 28
5.4 Waste Management 29
6 COMPLIANCE AUDIT 32
6.2 Noise Monitoring 32
6.3 Air Quality Monitoring 32
6.4 Ecological Monitoring 32
6.5 Review of the Reasons for and the Implications of Non-compliance 32
6.6 Summary of action taken in the event of and follow-up on non-compliance 32
7 ENVIRONMENTAL SITE AUDIT 33
8. COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION 35
9. CONCLUSION 36

LIST OF TABLES

Table 2.1 Contact Details of Key Personnel
Table 2.2 Summary of key PME and working locations of works contracts
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
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
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
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
Table 3.5 Summary of submission status under FEP-02/474/2013
Table 4.1 Noise Monitoring Station Monitoring Station ID
Table 4.3 Noise Monitoring Equipment
Table 4.4 Action and Limit Level for Noise Monitoring
Table 4.5 Air Monitoring Station
Table 4.6 Air Quality Monitoring Equipment
Table 4.7 Action and Limit Level for Air Quality Monitoring
Table 5.1 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/06
Table 5.2 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/07
Table 5.3 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/03
Table 5.4 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/04
Table 7.1 Summary of Environmental Inspections of Contract No. DC/2018/06
Table 7.2 Summary of Environmental Inspections of Contract No. DC/2018/07
Table 7.3 Summary of Environmental Inspections of Contract No. DE/2018/03
Table 7.4 Summary of Environmental Inspections of Contract No. DE/2018/04
Table 8.1 Cumulative Statistics on Complaints in the Reporting Month
Table 8.2 Cumulative Statistics on Successful Prosecutions
Table 9.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting 3 Months

LIST OF FIGURES

Figure 2.1 Project Layout
Figure 2.2 Project Organization Chart
Figure 4.1 Locations of Noise Monitoring Station
Figure 4.2 Locations of Air Quality Monitoring Stations
Figure 4.3 Locations of Ecological Monitoring Stations

LIST OF APPENDICES

Appendix 2.1 Layout Plans of Construction Activities and Site Record Photos
Appendix 3.1 Environmental Mitigation Implementation Schedule
Appendix 4.1 Action and Limit Level
Appendix 4.2 Copies of Calibration Certificates
Appendix 4.3 Wind data
Appendix 5.1 Monitoring Schedule for Reporting Month and Next Reporting Month
Appendix 5.2 Noise Monitoring Results and Graphical Presentations
Appendix 5.3 Air Quality Monitoring Results and Graphical Presentations
Appendix 5.4 Details of Ecological Monitoring Results in the Reporting Month
Appendix 5.5 Ecological Monitoring Results and Analysis
Appendix 5.6 Photo Record of Ecological Monitoring
Appendix 5.7 Monthly Summary Waste Flow Table
Appendix 6.1 Event and Action Plans

Appendix 6.2 Summary for Notification of Exceedance
Appendix 8.1 Complaint Log
Appendix 9.1 Construction Programme of Individual Contracts

EXECUTIVE SUMMARY

i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – August 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 12th 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 August 2022 to 31 August 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
- Sewage, utility and pipe works
- Backfilling
- ABWF works
- Excavation

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 works (Sidestream Treatment Facilities)
- MVAC System Installation at Workshop No.2
- Penstock and Stoplog Installation at SAS 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

Air Quality Monitoring

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

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

v. Power failure was encountered at AM1a* during the period of 16 Aug 2022 to 20 Aug 2022, and 27 Aug 2022 to 31 Aug 2022, so the 24hr air quality monitoring for AM1a* was temporarily suspended.

Noise Monitoring

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

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

viii. Noise monitoring scheduled on 5 Aug 2022 and 11 Aug 2022 were rescheduled to 6 Aug 2022 and 12 Aug 2022 respectively due to heavy rain.

Ecological Monitoring

ix. 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.

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

Site Inspections and Audit

xi. The Environmental Team (ET) conducted weekly site inspections on 11, 16, 23 and 30 August 2022 and biweekly landscape inspection on 16 and 30 August 2022. IEC attended the joint site inspection on 23 August 2022. No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

xii. Due to adverse weather condition on 4 Aug 2022, the weekly site inspection and biweekly landscape inspection were cancelled.

Complaints, Notifications of Summons and Successful Prosecutions

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

Reporting Changes

xiv. There are no particular reporting changes.

Future Key Issues

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

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

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

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

- ELS works
- 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 works (Sidestream Treatment Facilities)
- MVAC System Installation at Workshop No.2
- Penstock and Stoplog Installation at SAS 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 and FS & Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant & Booster Pump Room and Temporary Chemical System

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)	Ms. Claudine Lee	9612 9229
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939

2.3 Construction Activities

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

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

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

- Excavation

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 works (Sidestream Treatment Facilities)
- MVAC System Installation at Workshop No.2
- Penstock and Stoplog Installation at SAS 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

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	4	Section 4, Area next to SDB, Biogas Holding Tank
	Mobile crane	1	SDB
	Tower Crane	2	Near Workshop No.2 & Gate 2
	Mobile generator	1	Near Workshop No.2
	Scissor lift platform	2	SDB
DC/2018/07	Drilling rig	2	PST and Inlet
	Excavator	11	BR2, Inlet, PST and SAS
	Generator	4	BR2, MFB, PST and Inlet
	Air compressor	4	BR2 & Inlet
	Mobile Crane	2	PST & BR2
	Drilling machine	1	MFB
DE/2018/03	Generator	4	UV No.1, Sidestream and Workshop No.2
	Excavator	1	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

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

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

- ELS works
- 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 works (Sidestream Treatment Facilities)
- MVAC System Installation at Workshop No.2
- Penstock and Stoplog Installation at SAS 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 and FS & Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant & Booster Pump Room and Temporary Chemical System

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
	GW-RN0791-22	29 Aug 2022	28 Nov 2022	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
	GW-RN0791-22	29 Aug 2022	28 Nov 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-RN0435-22	25 May 2022	24 Aug 2022	Valid
	GW-RN0794-22	31 Aug 2022	30 Nov 2022	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
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	NTi XL2	A2A-15269-EO
Acoustic Calibrator	LD CAL200	13098

4.1.4. The calibration certificates of the noise monitoring equipment are attached in ***Appendix 4.2***.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

4.1.5. Monitoring Procedure

(a) Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s

(b) The monitoring station shall normally be at a point 1 m from the exterior of the sensitive receiver building facade and be at a position 1.2 m above the ground. If there is problem with access to the normal monitoring position, an alternative position may be chosen, and a correction to the measurements shall be made. For reference, a correction of +3 dB(A) shall be made to the free field measurements.

(c) The battery condition was checked to ensure the correct functioning of the meter.

(d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

- Frequency weighting: A
- Time weighting: Fast
- Time measurement: Leq (30min) for noise monitoring

(e) Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.

(f) The wind speed was checked with the portable wind meter before noise monitoring.

(g) At the end of the monitoring period, the Leq, L90 and L10 were recorded. In addition, site conditions and noise sources were recorded on a record sheet.

4.1.6. Maintenance and Calibration

(a) The microphone head of the sound level and calibrator would be cleaned with soft cloth regularly.

(B) The noise monitoring equipment shall be calibrated annually.

CONSTRUCTION NOISE LEVEL

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

EVENT AND ACTION PLAN

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

Table 4.4 Action and Limit Level for Noise Monitoring

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

4.2 Air Monitoring

AIR QUALITY MONITORING STATIONS

4.2.1. The air monitoring stations for the Project are listed and shown in ***Table 4.5*** and ***Figure 4.2***.

Table 4.5 Air Monitoring Station

Monitoring Station ID	Location	Measurement
AM1	House No. 15, Wai Loi Tsuen	1-hour TSP
AM2	Fu Tei Au	1-hour TSP
AM1a	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

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

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

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

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

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

4.2.4. 24-hour TSP Measuring Installation (HVS)

(a) 0.6 – 1.7 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 AEROCET831	R14332 W15448
High Volume Sampler	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model no. G3101)	HVS001 (Serial number: 0401-1105) HVS003 (Serial number: 1096-2305)
Wind Anemometer	YGY-FSXY1	YG 21071630T0924

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

WIND DATA

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

EVENT AND ACTION PLAN

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

Table 4.7 Action and Limit Level for Air Quality Monitoring

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

4.3. Ecological Monitoring

4.3.8. 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 environmental monitoring schedules for reporting month and coming month are presented in ***Appendix 5.1*****.**

5.1 Noise Monitoring Results

5.1.1 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation are shown in ***Appendix 5.2***.

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

5.1.3 Noise monitoring scheduled on 5 Aug 2022 and 11 Aug 2022 were rescheduled to 6 Aug 2022 and 12 Aug 2022 respectively due to heavy rain.

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.

5.2.3 Power failure was encountered at AM1a* during the period of 16 Aug 2022 to 20 Aug 2022, and 27 Aug 2022 to 31 Aug 2022, so the 24hr air quality monitoring for AM1a* was temporarily suspended.

5.3 Ecology Monitoring Results

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

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

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

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

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

5.4 Waste Management

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

Table 5.1 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/06

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000m^3)	0	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)	1.635	1.409	7.477
Metals (in '000kg)	0.003	0	2.373
Paper / Cardboard Packing (in '000kg)	0	0	0.01
Plastics (in '000kg)	0.001	0.005	0.006
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m^3)	0.122	0.160	0.902

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)

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	1.671
Disposal as Public Fill (Inert) (in '000m^3)	3.222	4.151	22.759
Metals (in '000kg)	0	0	23.3
Paper / Cardboard Packing (in '000kg)	0	0	0.01
Plastics (in '000kg)	0.005	0.003	0.012
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m^3)	0.031	0.026	0.15

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)	5374.59	149.1	15378.67

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
(in '000kg)			
Metals (in '000kg)	0	0	0
Paper / Cardboard Packing (in '000kg)	0	0	0.439
Plastics (in '000kg)	0	0	0.023
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	1.71	0	10.3

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 11, 16, 23 and 30 August 2022 and biweekly landscape inspection on 16 and 30 August 2022. IEC attended the joint site inspection on 23 August 2022.

7.0.2. Due to adverse weather condition on 4 Aug 2022, the weekly site inspection and biweekly landscape inspection were 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
-	-	-	-	-

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20220726_2	26 Jul 2022	The Contractor was requested to enhance the dust suppression measure at PST.	Tarpaulin and water spraying measure were provided.	Rectified on 11 Aug 2022
20220726_3	26 Jul 2022	The Contractor was requested to provide and display valid NRMM label for the generator near MFB.	Valid NRMM label was provided.	Rectified on 11 Aug 2022
20220816_2	16 Aug 2022	The Contractor was requested to provide mitigation measure for the overflowing sedimentation tank at PST.	The overflowing tank was fixed and the function of the tank was maintained.	Rectified on 23 Aug 2022
20220823_2	23 Aug 2022	The Contractor was reminded to properly cover the exposed stockpile with tarpaulin near Sidestream.	The stockpile was properly covered.	Rectified on 24 Aug 2022

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

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

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

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

8. Complaints, Notification of Summons and Prosecution

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

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

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

Table 8.1 Cumulative Statistics on Complaints in the Reporting Month

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

Table 8.2 Cumulative Statistics on Successful Prosecutions

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

9. Conclusion

9.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.

9.0.2. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.

9.0.3. The scheduled construction activities and the recommended mitigation measures for the coming 3 months are listed in ***Table 9.1***. The construction programmes of individual activities are provided in ***Appendix 9.1.***

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

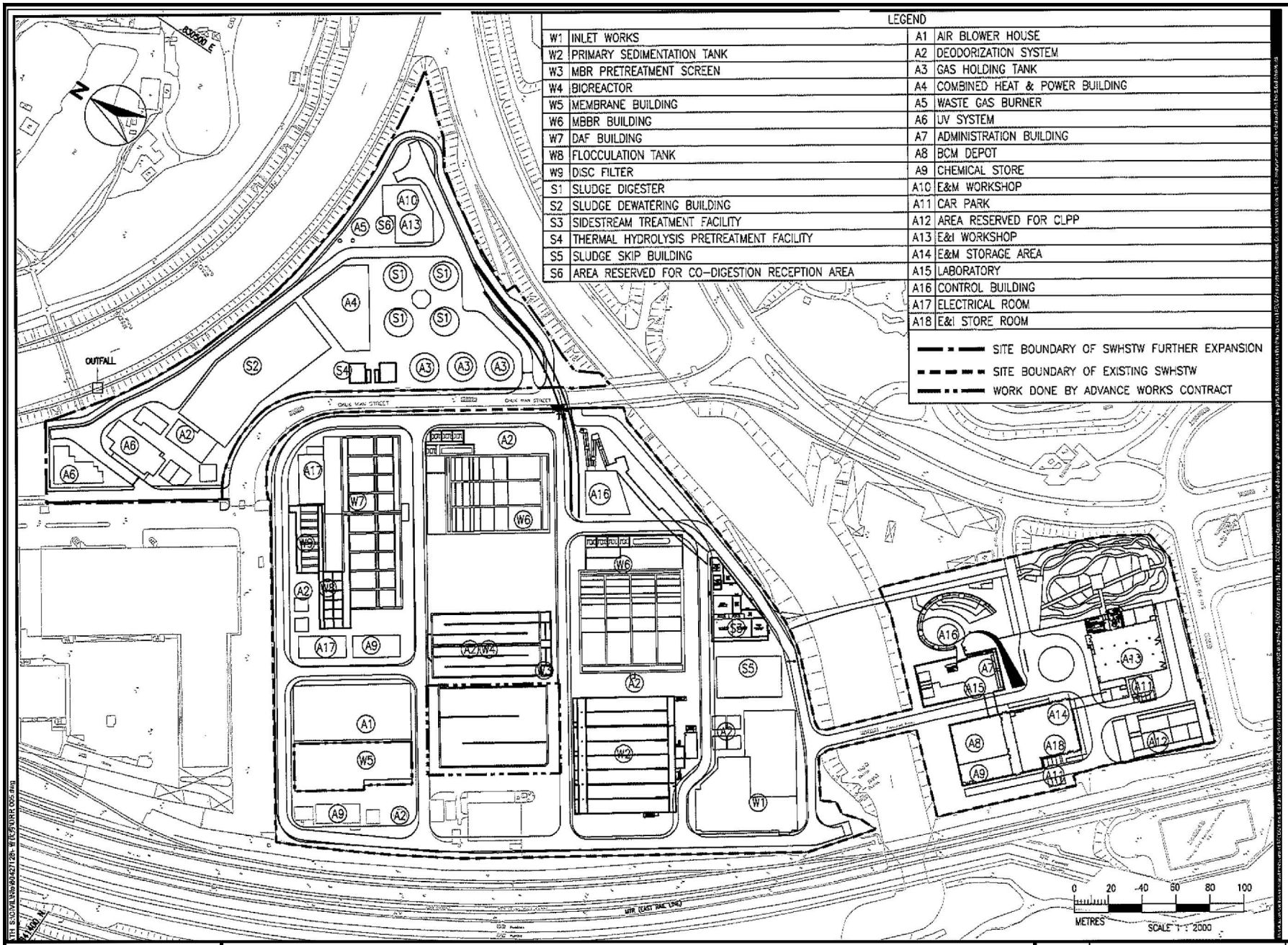
Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	• RC works • Road works • Sewage, utility and pipe works • Backfilling • ABWF works	• Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Proper maintenance of the on-site drainage system • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal

Contract No.	Key Construction Works	Recommended Mitigation Measures
		• Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.
DC/2018/07	• ELS works • 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 • Proper maintenance of the on-site drainage system • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal. • Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.
DE/2018/03	• ELS works (Sidestream Treatment Facilities) • MVAC System Installation at Workshop No.2	• Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper noise mitigation measures to prevent potential noise

Contract No.	Key Construction Works	Recommended Mitigation Measures
	• Penstock and Stoplog Installation at SAS PS	nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Proper maintenance of the on-site drainage system • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal • Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.
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 and FS & Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant & Booster Pump Room and Temporary Chemical 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.

Figure 2.1

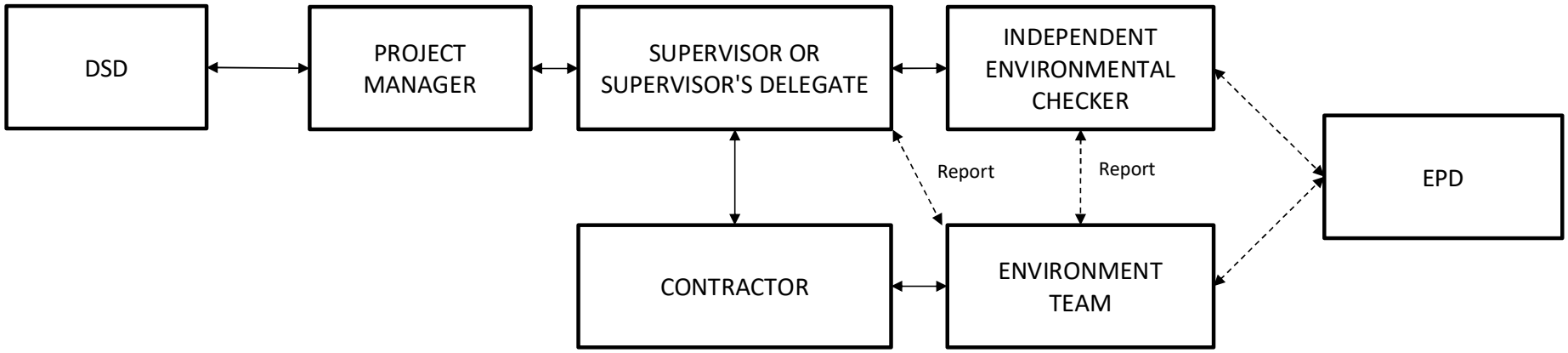
Project Layout



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

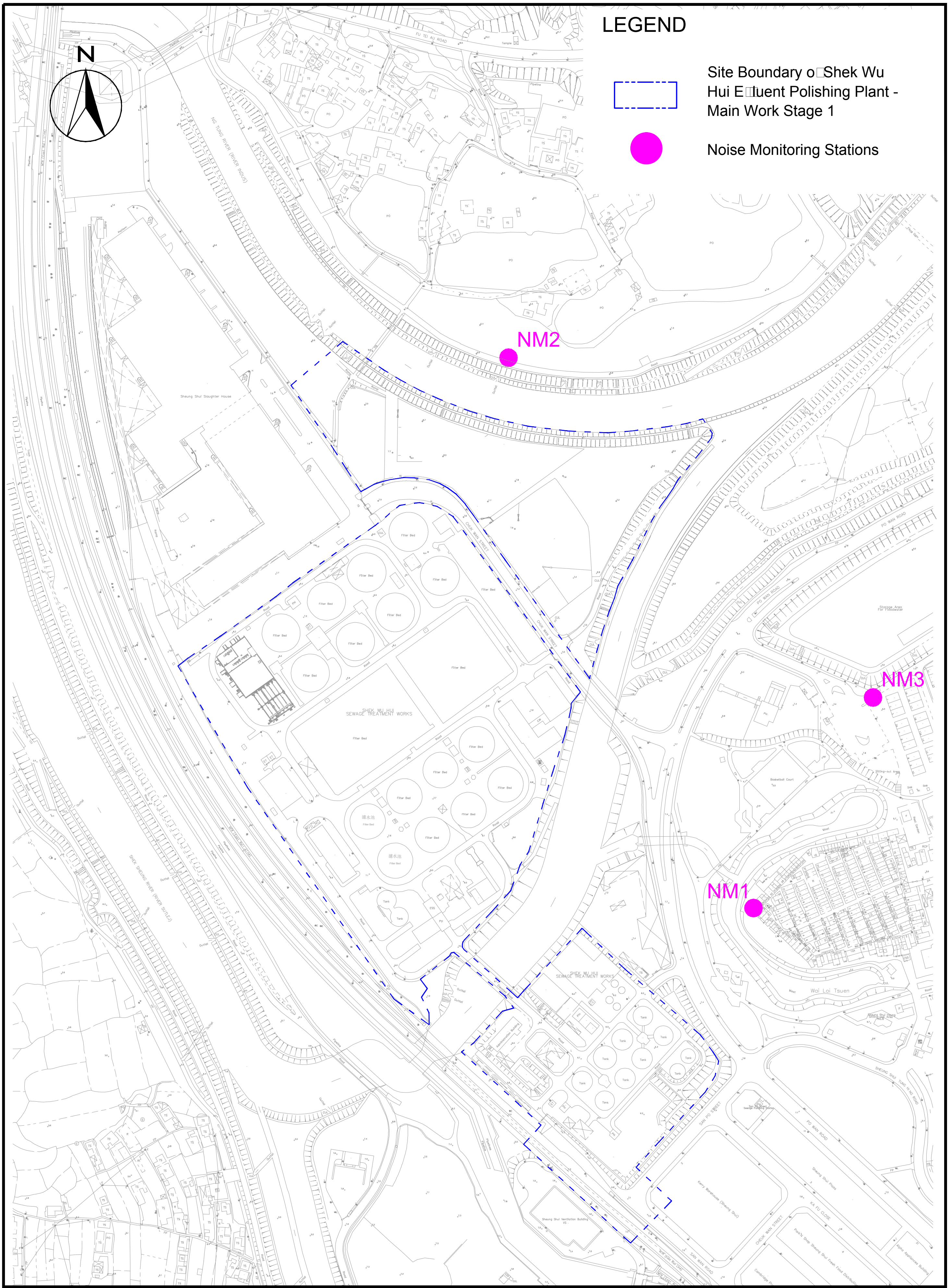
Project Organization Chart



	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

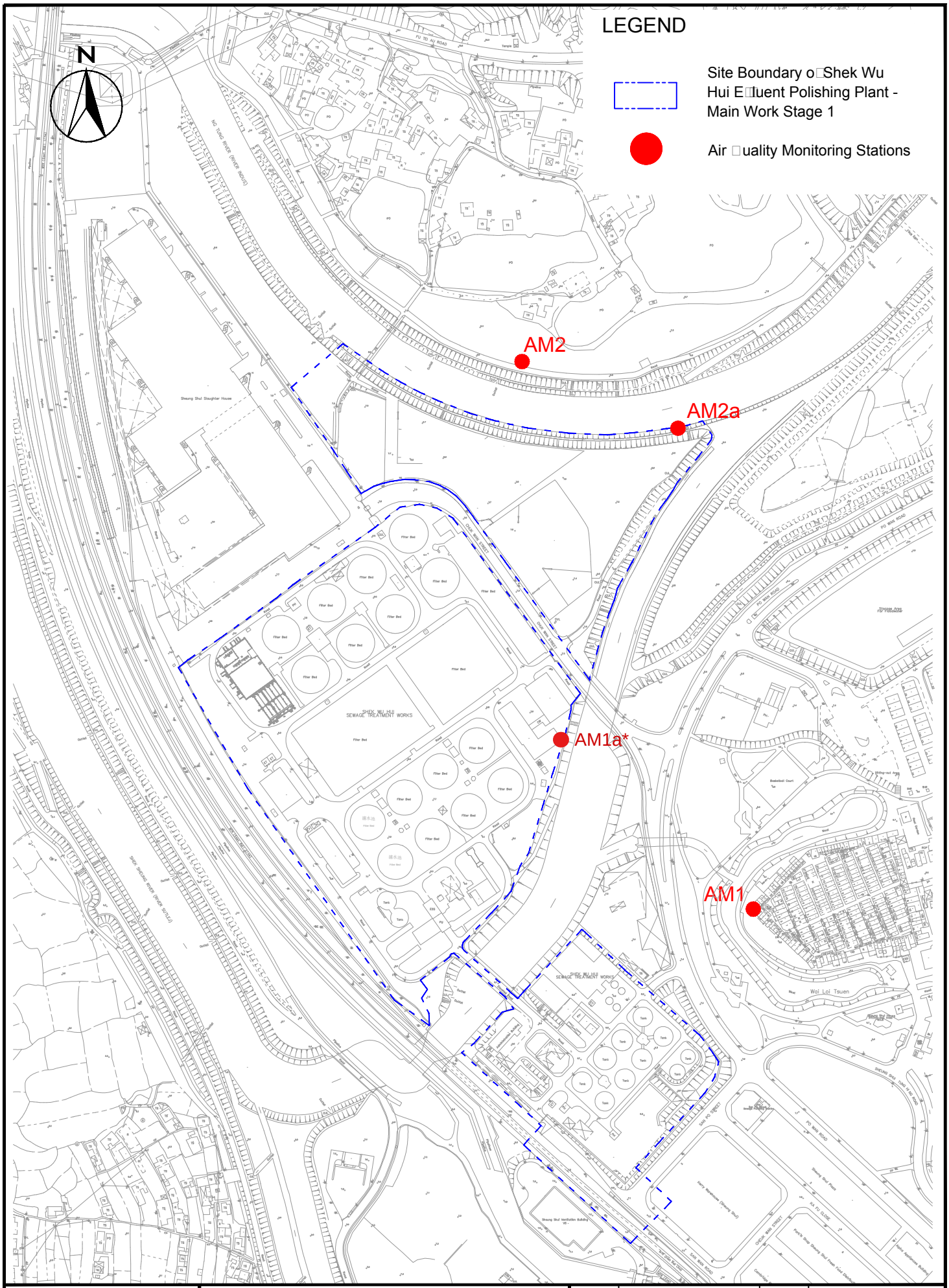
Locations of Noise Monitoring Stations



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

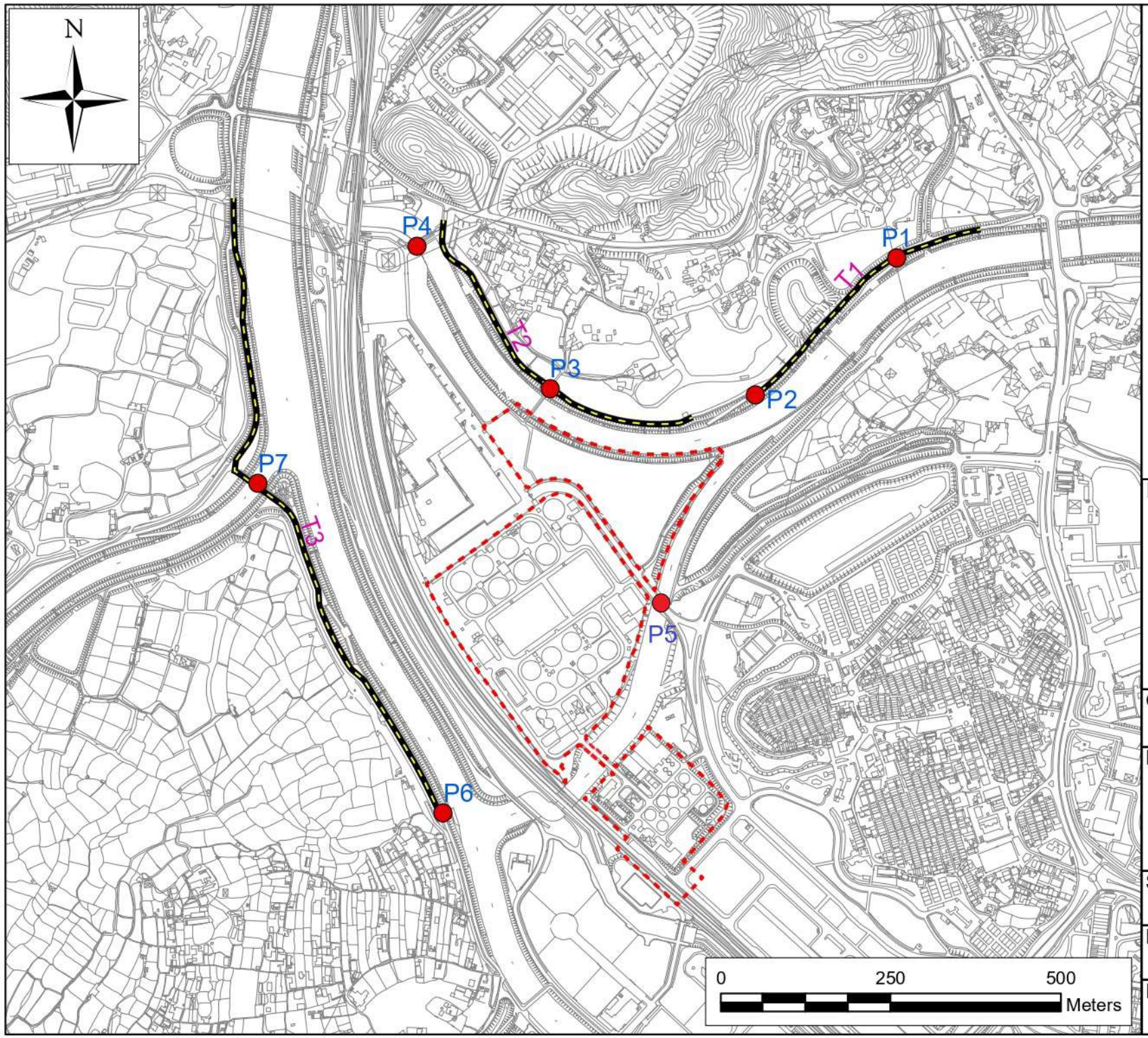


Shek Wu Hui E□luent Polishing Plant - Location o□Air □uality Monitoring Stations	SCALE	1:400□ A4	DATE	SEP 2019
	CHECK	JM	DRAWN	SY
	JOB No.		FIGURE NO. 2	RE□ -

F:/Project_drawings

Figure 4.3

Locations of Ecological Monitoring Stations



Legend

- Project Site Boundary
- Walk Transects
- Point Count Locations

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CONTRACT NO.

SPW 12/2021

PROJECT TITLE

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

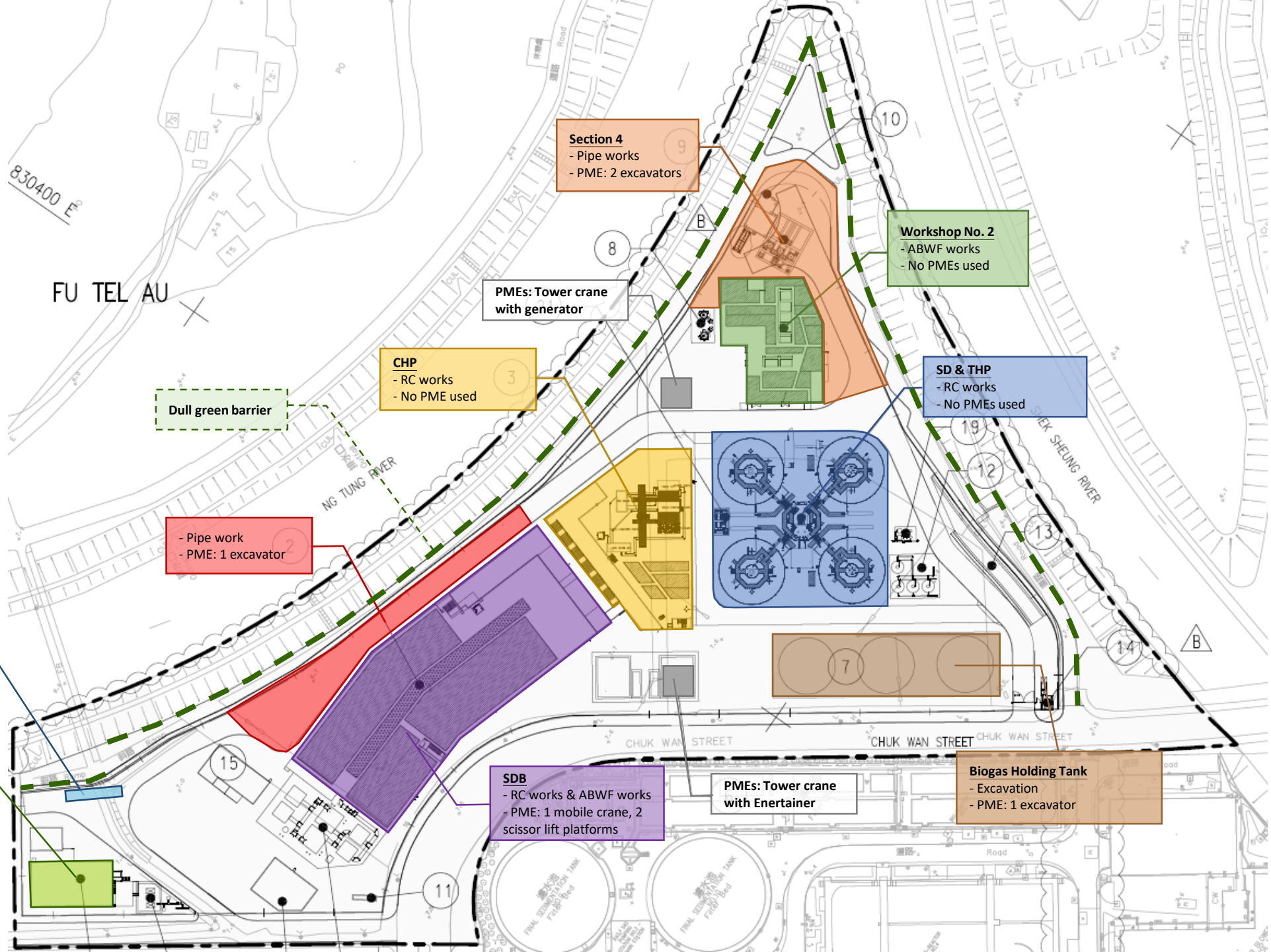
SCALE	DATE
1:7500@A4	***Sept 2021***
DRAWN BY	CHECK BY
AL	***MC***
FIGURE NO.	REVISION NO.
1	*-*

Appendix 2.1

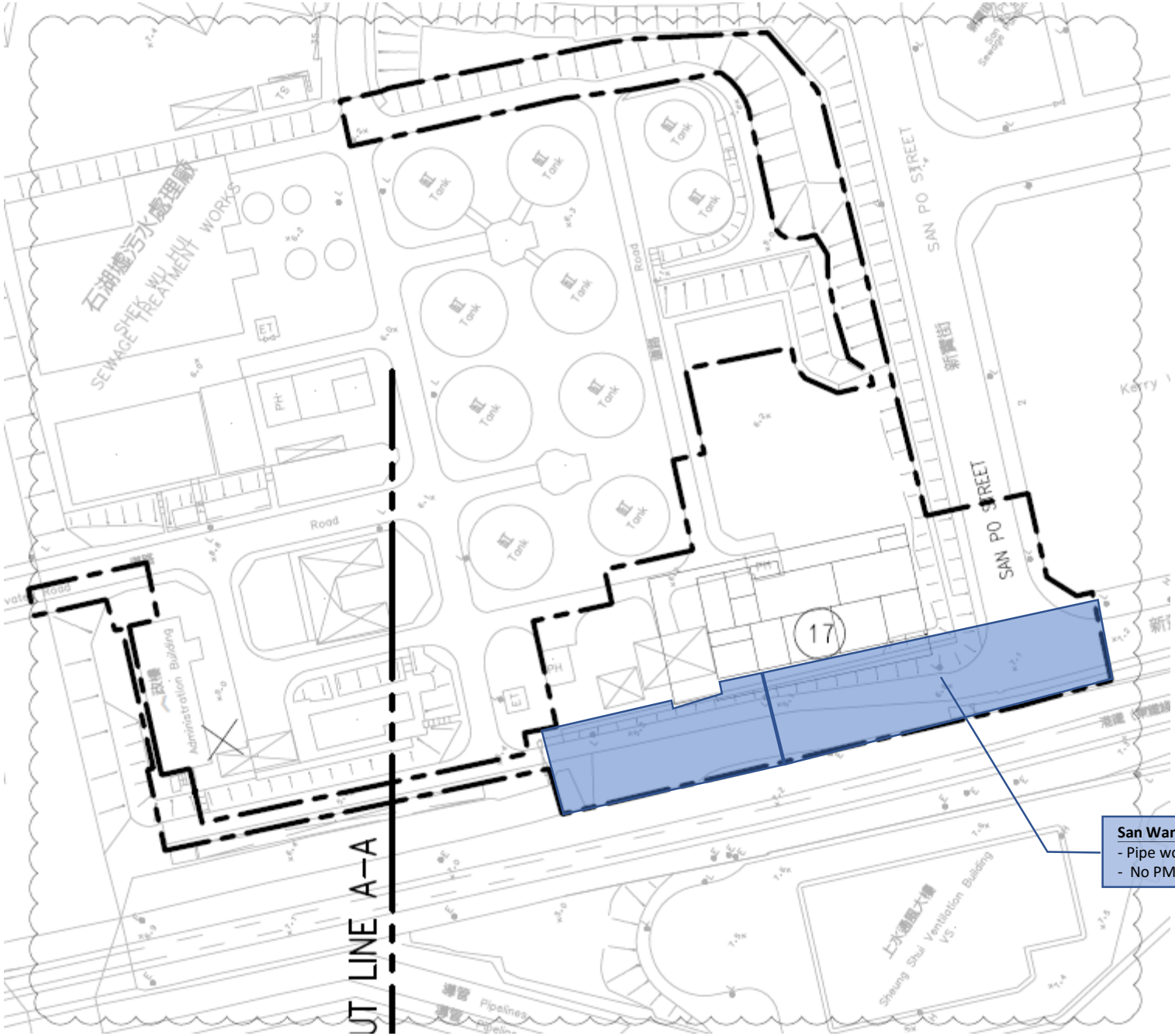
Layout Plan of Construction Activities and Site Record Photos

Portion C

DC/2018/06

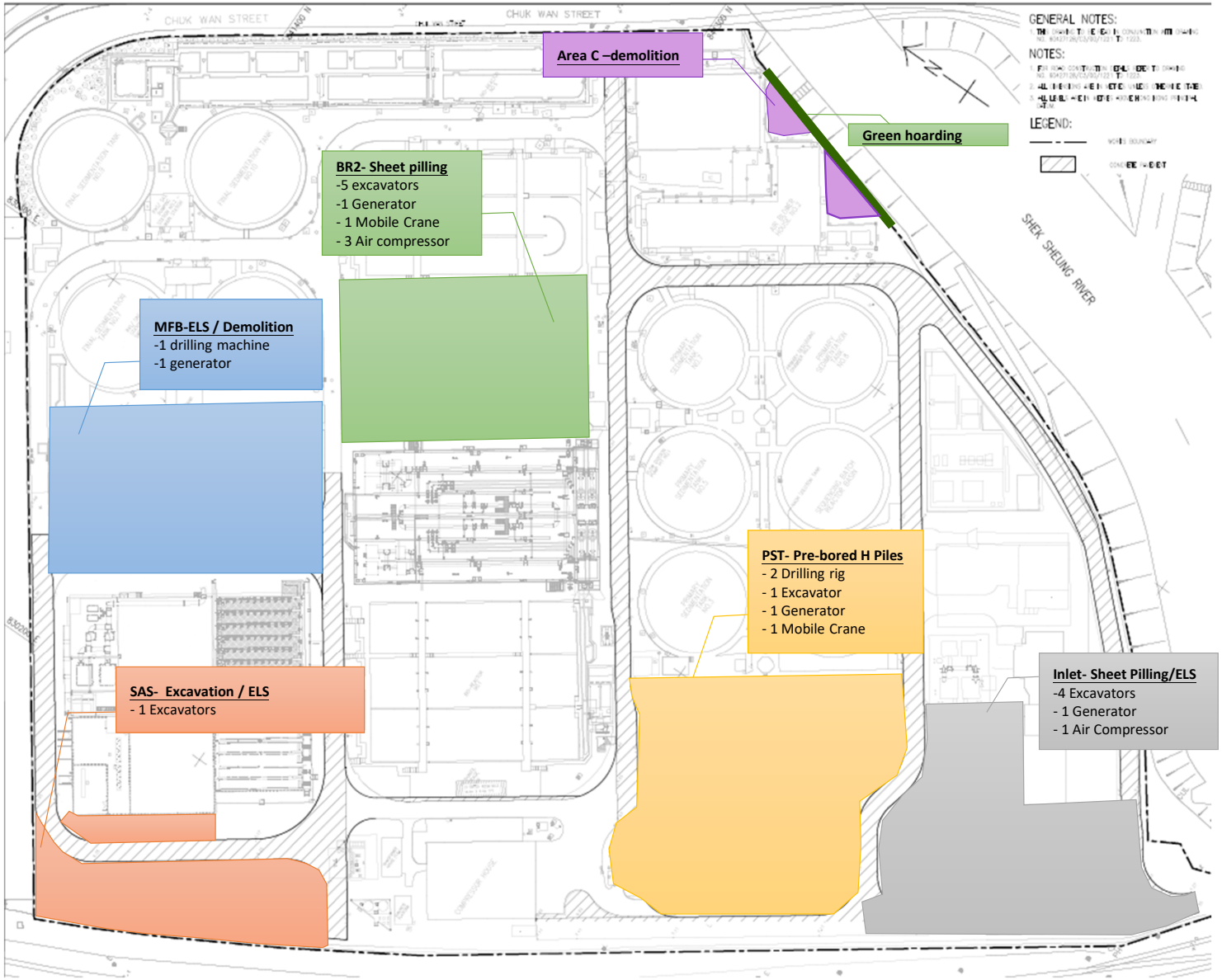


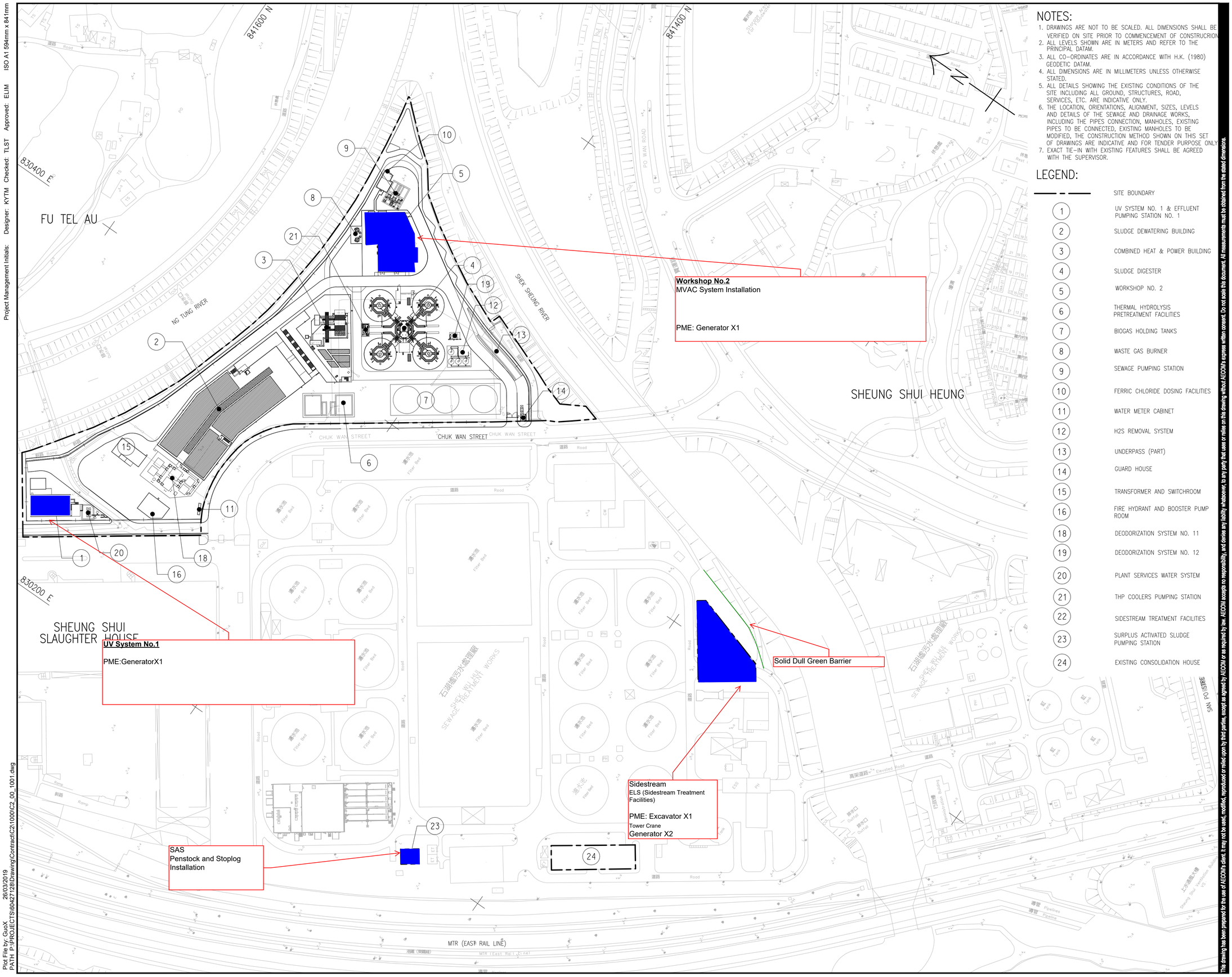
Portion A


SHEK WU HUI SEWAGE TREATMENT WORKS
石湖墟污水處理廠
Tank
Road
Administration Building
行政樓
Pipelines
管道
CUT LINE A–A
SAN PO STREET
新圍街
17
Sheung Shui Ventilation Building
上水通風大樓
San Wan Road
- Pipe works
- No PMEs used

Portion B

DC/2018/07





NOTES:

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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

AECOM

PROJECT 項目

SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT 業主

渠務署 Drainage Services Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
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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

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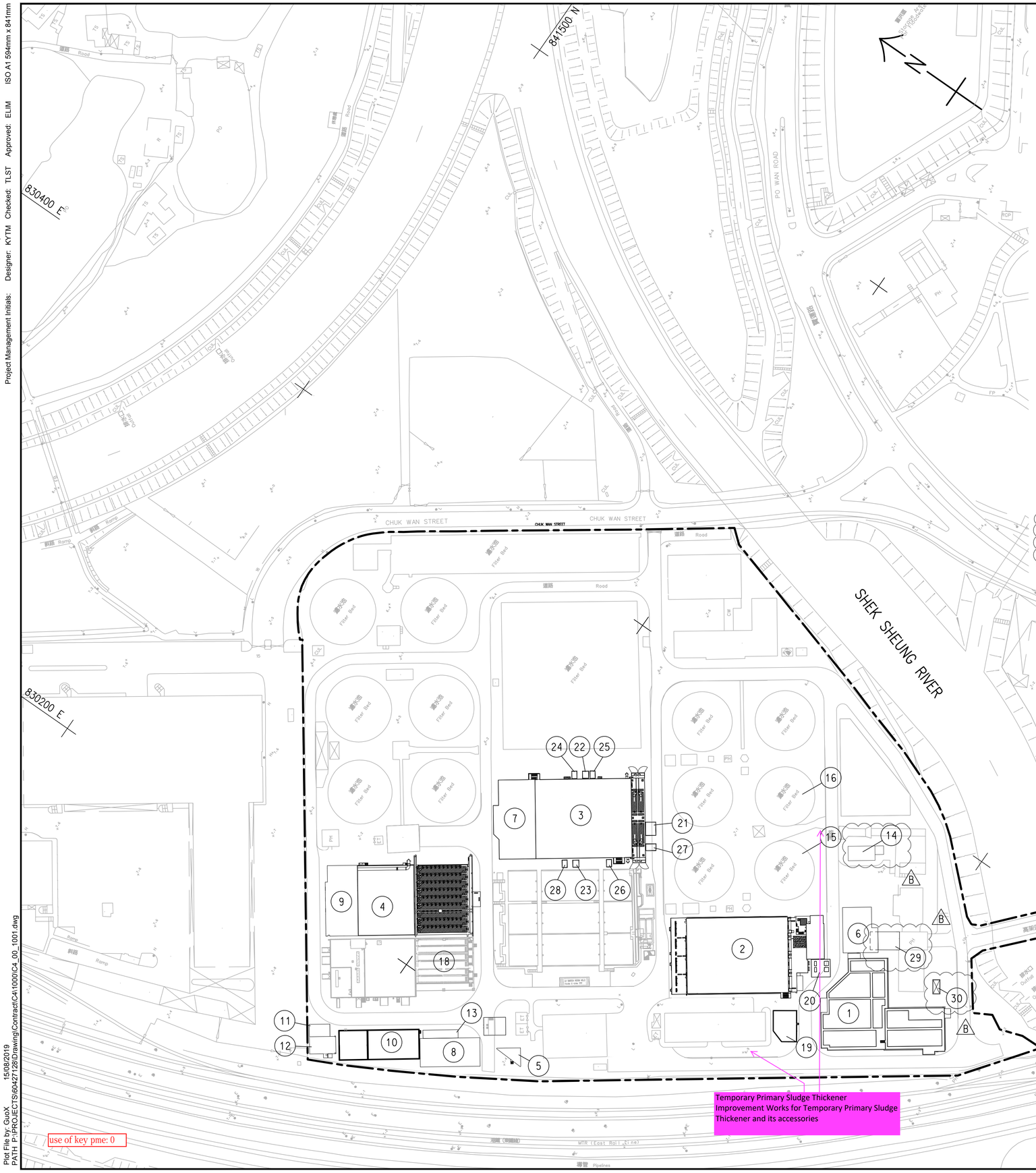
ISO A1 594mm x 841mm

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

Plot File by: GuoX 26/03/2019
PATH P:\PROJECTS\60427128\Drawing\Contract\C2\1000\C2_00_1001.dwg



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

AECOM

PROJECT 項目

SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT 業主

渠務署 Drainage Services Department

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 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

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ISO A1 594mm x 841mm

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

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

use of key pme: 0

Site Record Photos

DC/2018/06

SD&THP	CHP	SDB	Biogas Holding Tank

DC/2018/07

BR2	MFB	PST	Inlet

DE/2018/03

Sidestream

Site drainage system

DC/2018/06

The site surface runoff was collected and directed to the sedimentation tank by the pump and properly treated in the treatment tank

DC/2018/07

The site surface runoff was collected and directed to the sedimentation tank by the pump and properly treated in the treatment tank

DE/2018/03

The site surface runoff was collected and directed to the sedimentation tank by the pump and properly treated in the treatment tank

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**	:	2-Jul-22
Equipment no.	:	HVS001 (0401-1105)	**Calbration Due Date**	:	1-Sep-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	300	Kelvin	**Pressure, P_a**	999	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	1.5	1.5	3.0	0.8888	22	21.7713
2	2.3	2.3	4.6	1.1056	33	32.6569
3	3.4	3.4	6.8	1.3488	44	43.5426
4	4.3	4.3	8.6	1.5195	51	50.4698
5	5.5	5.5	11.0	1.7213	59	58.3866

By Linear Regression of Y on X

Slope, m	=	48.9134	Intercept, b	=	-17.5531
Correlation Coefficient*	=	0.9987			
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	:	2-Jul-22	**Date**	:	2-Jul-22

Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	AM2a	**Calbration Date**	:	2-Jul-22
Equipment no.	:	HVS003 (1096-2305)	**Calbration Due Date**	:	1-Sep-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	300	Kelvin	**Pressure, P_a**	999	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	2.4	2.4	4.8	1.1299	22	21.7713
2	3.5	3.5	7.0	1.3688	32	31.6673
3	4.7	4.7	9.4	1.5896	43	42.5530
4	5.3	5.3	10.6	1.6893	48	47.5010
5	6.1	6.1	12.2	1.8138	54	53.4386

By Linear Regression of Y on X

Slope, m	=	47.3405	Intercept, b	=	-26.2467
Correlation Coefficient*	=	0.9993			
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	:	2-Jul-22	**Date**	:	2-Jul-22

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

Calibration Certificate

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

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

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

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

JGoddard AT8 — AT5

Calibration Technician **Quality Check**

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

Test Procedure: *Aerocet 831-6100*

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

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

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

Lam Environmental Services Limited

Portable Dust Meter Performance Check Record

Portable Dust Meter

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

Standard Equipment

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

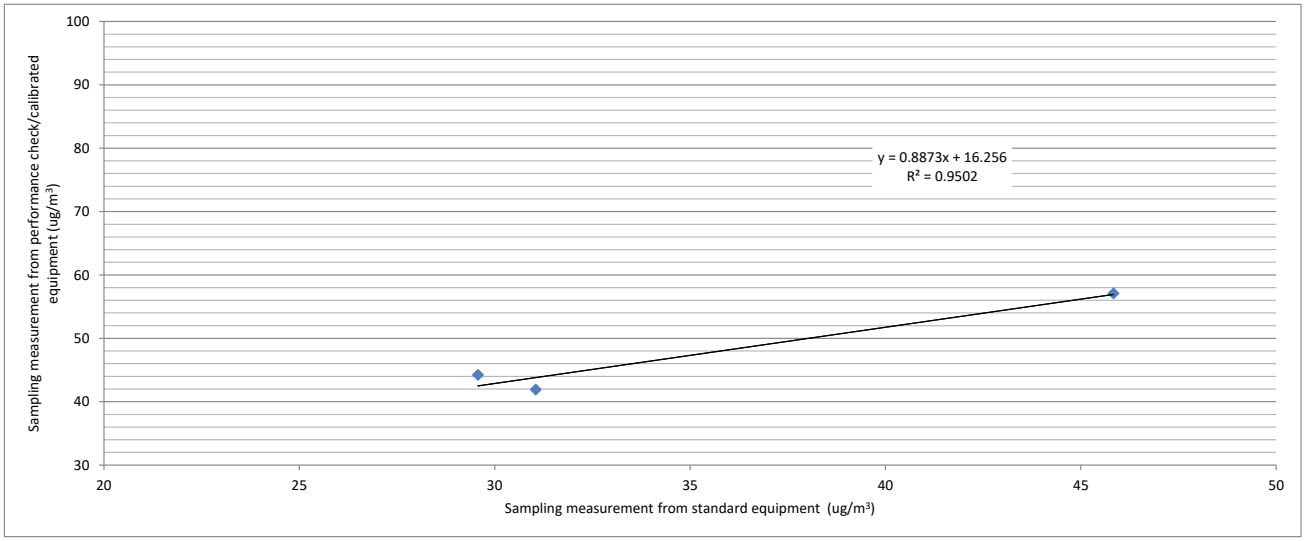
Portable Dust Meter Performance Check Results

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

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

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



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

Met One Instruments
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(541) 471-7111
(541) 471-7116 (Fax)
Service@metone.com

Calibration Certificate

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

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

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

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

JGoddard AT8 — AT5

Calibration Technician **Quality Check**

Temperature *22* ^{o}C **Relative Humidity** *32* %

Test Procedure: *Aerocet 831-6100*

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

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

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

Lam Environmental Services Limited

Portable Dust Meter Performance Check Record

Portable Dust Meter

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

Standard Equipment

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

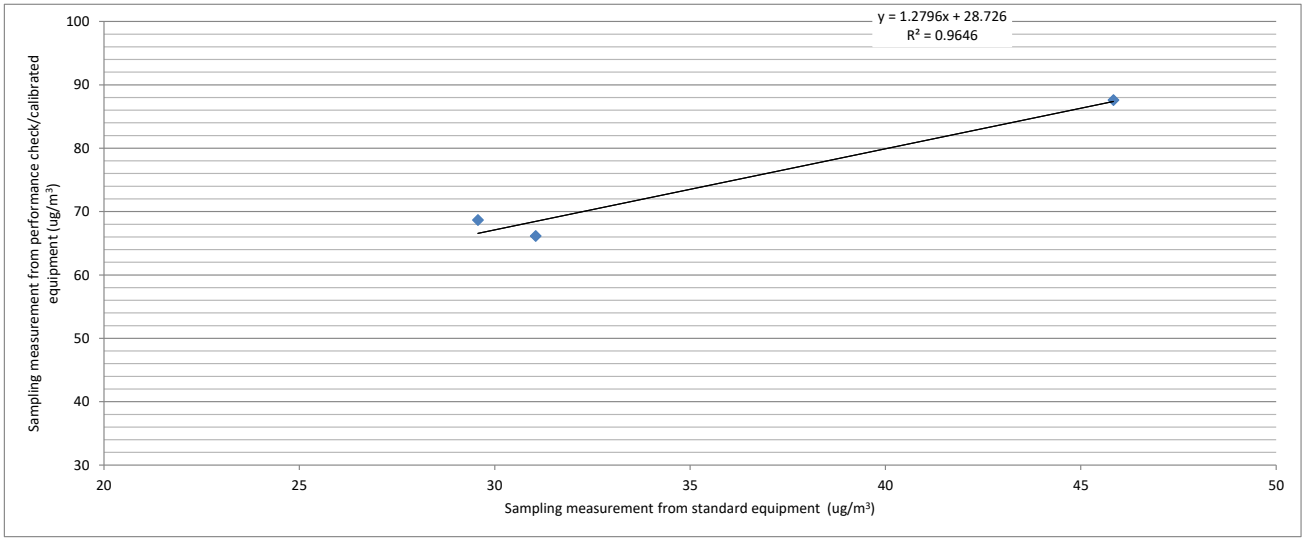
Portable Dust Meter Performance Check Results

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

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

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



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

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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HOKLAS 028
CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 22CA0224 04-02 **Page** 1 **of** 2

Item tested

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

Item submitted by

Customer Name: Lam Environmental Services Limited.
Address of Customer: -
Request No.: -
Date of receipt: 24-Feb-2022

Date of test: 01-Mar-2022

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

Test results

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

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

Actual Measurement data are documented on worksheets.

Approved Signatory: Feng Junqi **Date:** 02-Mar-2022 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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

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

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

(Continuation Page)

Certificate No.: 22CA0224 04-02 **Page** 2 **of** 2

1, Electrical Tests

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

Test:	Subtest:	Status:	Expanded 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: Fung Chi Yip **Date:** 01-Mar-2022

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

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

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

SMECLab

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

SELF GENERATED NOISE TEST

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

Noise level in A weighting	11.0	dB
Noise level in C weighting	14.5	dB
Noise level in Lin	20.9	dB

LINEARITY TEST

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

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.1	49.1	0.7	0.1	0.1
44.0	44.0	44.0	0.7	0.0	0.0
39.0	39.0	39.0	0.7	0.0	0.0
34.0	34.1	34.1	0.7	0.1	0.1
33.0	33.1	33.1	0.7	0.1	0.1

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

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

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

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

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

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

FREQUENCY WEIGHTING TEST

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

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.4	1.5	1.5	-0.2
63.1	94.0	67.8	67.7	1.5	1.5	-0.1
125.9	94.0	77.9	77.8	1.0	1.0	-0.1
251.2	94.0	85.4	85.3	1.0	1.0	-0.1
501.2	94.0	90.8	90.7	1.0	1.0	-0.1
1995.0	94.0	95.2	95.1	1.0	1.0	-0.1
3981.0	94.0	95.0	94.9	1.0	1.0	-0.1
7943.0	94.0	92.9	92.9	1.5	3.0	0.0
12590.0	94.0	89.7	89.5	3.0	6.0	-0.2

Frequency weighting C:

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

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SMECLab

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

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

Frequency weighting Lin:

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

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

TIME WEIGHTING FAST TEST

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

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

TIME WEIGHTING SLOW TEST

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

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

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SMECLab

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

PEAK RESPONSE TEST

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

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

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

Negative polarities:

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

RMS ACCURACY TEST

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

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

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

TIME WEIGHTING IMPULSE TEST

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

Single sinusoidal burst of duration 5 ms:

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

Repeated at 100 Hz

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

TIME AVERAGING TEST

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

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

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

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SMECLab

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

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

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

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

Test frequency: 4000 Hz

Integration time: 10 sec

The integrating sound level meter set to Leq:

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

The integrating sound level meter set to SEL:

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

OVERLOAD INDICATION TEST

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

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

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
121.6	120.6	117.6	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

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

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

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
127.7	126.7	86.7	86.7	2.2	0.0

ACOUSTIC TEST

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

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

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SMECLab

Test Data for Sound Level Meter

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

1000	94.0	94.0	0.0	0.0	0.0
125	77.9	77.9	1.0	1.0	0.0
8000	92.9	93.3	1.5	3.0	0.4

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

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CERTIFICATE OF CALIBRATION

Certificate No.: 21CA1222 02-01 **Page:** 1 **of** 2

Item tested

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

Item submitted by

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 Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
1-Aug-22	00:00	0.9	327(NNW)
	01:00	1.5	112(ESE)
	02:00	1.9	63(ENE)
	03:00	0.7	128(SE)
	04:00	1.5	72(ENE)
	05:00	2.7	118(ESE)
	06:00	1.5	41(NE)
	07:00	1.2	130(SE)
	08:00	2.9	101(E)
	09:00	2.3	86(E)
	10:00	2.5	113(ESE)
	11:00	3.7	81(E)
	12:00	1.7	103(ESE)
	13:00	3.6	141(SE)
	14:00	3.3	72(ENE)
	15:00	2.7	112(ESE)
	16:00	2.6	102(ESE)
	17:00	2.5	130(SE)
	18:00	1.7	83(E)
	19:00	1.1	240(WSW)
	20:00	2.3	326(NW)
	21:00	1.3	250(WSW)
	22:00	1.9	107(ESE)
	23:00	2.4	97(E)
2-Aug-22	00:00	0.9	104(ESE)
	01:00	1.3	65(ENE)
	02:00	1.5	215(SW)
	03:00	1.3	154(SSE)
	04:00	2.5	196(SSW)
	05:00	0.5	186(S)
	06:00	1.3	324(NW)
	07:00	1.3	147(SSE)
	08:00	1.1	237(WSW)
	09:00	0.0	92(E)
	10:00	1.1	304(NW)
	11:00	0.7	85(E)
	12:00	0.7	264(W)
	13:00	0.7	130(SE)
	14:00	2.3	283(WNW)
	15:00	3.7	267(W)
	16:00	1.3	321(NW)
	17:00	1.9	267(W)
	18:00	1.7	217(SW)
	19:00	3.3	57(ENE)
	20:00	3.7	49(NE)
	21:00	1.9	124(SE)
	22:00	0.9	255(WSW)
	23:00	1.7	67(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
3-Aug-22	00:00	0.0	61(ENE)
	01:00	0.0	54(NE)
	02:00	0.0	136(SE)
	03:00	0.0	319(NW)
	04:00	0.0	120(ESE)
	05:00	0.0	111(ESE)
	06:00	0.0	82(E)
	07:00	0.0	82(E)
	08:00	0.0	106(ESE)
	09:00	1.5	270(W)
	10:00	0.0	69(ENE)
	11:00	0.0	103(ESE)
	12:00	1.5	250(WSW)
	13:00	1.5	268(W)
	14:00	2.7	273(W)
	15:00	5.5	260(W)
	16:00	3.7	300(WNW)
	17:00	3.1	148(SSE)
	18:00	0.9	129(SE)
	19:00	1.7	71(ENE)
	20:00	0.7	243(WSW)
	21:00	0.9	213(SSW)
	22:00	1.1	75(ENE)
	23:00	1.5	54(NE)
4-Aug-22	00:00	0.9	211(SSW)
	01:00	0.9	55(NE)
	02:00	0.0	259(W)
	03:00	0.5	266(W)
	04:00	1.3	282(WNW)
	05:00	0.0	236(SW)
	06:00	0.9	242(WSW)
	07:00	1.1	266(W)
	08:00	1.3	279(W)
	09:00	0.9	263(W)
	10:00	1.3	278(W)
	11:00	1.9	269(W)
	12:00	1.7	233(SW)
	13:00	2.1	247(WSW)
	14:00	2.1	223(SW)
	15:00	0.7	71(ENE)
	16:00	1.3	272(W)
	17:00	1.3	275(W)
	18:00	1.1	118(ESE)
	19:00	0.7	239(WSW)
	20:00	1.5	58(ENE)
	21:00	1.9	73(ENE)
	22:00	1.5	109(ESE)
	23:00	1.1	80(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
5-Aug-22	00:00	1.7	61(ENE)
	01:00	1.3	117(ESE)
	02:00	0.7	162(SSE)
	03:00	1.1	48(NE)
	04:00	1.1	193(SSW)
	05:00	2.7	271(W)
	06:00	2.3	98(E)
	07:00	1.5	102(ESE)
	08:00	0.5	119(ESE)
	09:00	1.5	64(ENE)
	10:00	1.1	95(E)
	11:00	1.3	51(NE)
	12:00	1.3	38(NE)
	13:00	1.1	117(ESE)
	14:00	1.3	103(ESE)
	15:00	2.3	58(ENE)
	16:00	0.7	31(NNE)
	17:00	1.1	96(E)
	18:00	0.0	178(S)
	19:00	0.7	42(NE)
	20:00	1.3	109(ESE)
	21:00	0.7	56(NE)
	22:00	1.5	184(S)
	23:00	0.9	218(SW)
6-Aug-22	00:00	0.9	177(S)
	01:00	1.3	80(E)
	02:00	0.0	134(SE)
	03:00	0.7	82(E)
	04:00	0.0	33(NNE)
	05:00	1.3	104(ESE)
	06:00	0.0	42(NE)
	07:00	1.1	104(ESE)
	08:00	1.1	68(ENE)
	09:00	1.5	92(E)
	10:00	1.3	117(ESE)
	11:00	2.3	92(E)
	12:00	2.1	146(SE)
	13:00	3.1	92(E)
	14:00	1.5	105(ESE)
	15:00	1.1	189(S)
	16:00	0.7	144(SE)
	17:00	1.1	307(NW)
	18:00	1.5	263(W)
	19:00	1.3	94(E)
	20:00	1.3	101(E)
	21:00	1.1	62(ENE)
	22:00	0.9	83(E)
	23:00	1.5	80(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
7-Aug-22	00:00	0.9	83(E)
	01:00	1.1	75(ENE)
	02:00	0.5	63(ENE)
	03:00	0.7	246(WSW)
	04:00	1.7	82(E)
	05:00	0.5	127(SE)
	06:00	0.0	348(NNW)
	07:00	0.9	55(NE)
	08:00	2.1	74(ENE)
	09:00	2.7	70(ENE)
	10:00	2.9	74(ENE)
	11:00	1.7	100(E)
	12:00	3.9	74(ENE)
	13:00	1.9	121(ESE)
	14:00	1.9	117(ESE)
	15:00	2.9	112(ESE)
	16:00	2.9	164(SSE)
	17:00	3.5	91(E)
	18:00	2.3	120(ESE)
	19:00	1.3	70(ENE)
	20:00	2.5	74(ENE)
	21:00	1.7	69(ENE)
	22:00	1.3	90(E)
	23:00	2.5	110(ESE)
8-Aug-22	00:00	1.3	206(SSW)
	01:00	1.9	23(NNE)
	02:00	1.1	129(SE)
	03:00	0.7	128(SE)
	04:00	1.5	72(ENE)
	05:00	2.7	118(ESE)
	06:00	1.5	41(NE)
	07:00	1.9	131(SE)
	08:00	2.9	101(E)
	09:00	2.3	86(E)
	10:00	2.5	113(ESE)
	11:00	3.7	81(E)
	12:00	1.7	103(ESE)
	13:00	3.7	141(SE)
	14:00	3.3	72(ENE)
	15:00	2.7	112(ESE)
	16:00	2.1	103(ESE)
	17:00	2.5	130(SE)
	18:00	1.7	83(E)
	19:00	1.3	76(ENE)
	20:00	0.5	25(NNE)
	21:00	1.7	76(ENE)
	22:00	1.3	79(E)
	23:00	0.0	242(WSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
9-Aug-22	00:00	2.3	58(ENE)
	01:00	1.3	146(SE)
	02:00	2.7	84(E)
	03:00	4.7	110(ESE)
	04:00	3.5	93(E)
	05:00	1.7	55(NE)
	06:00	2.3	83(E)
	07:00	1.1	124(SE)
	08:00	1.3	105(ESE)
	09:00	3.1	120(ESE)
	10:00	3.9	114(ESE)
	11:00	2.3	136(SE)
	12:00	1.5	110(ESE)
	13:00	1.5	186(S)
	14:00	3.5	70(ENE)
	15:00	3.5	92(E)
	16:00	3.1	124(SE)
	17:00	0.7	62(ENE)
	18:00	1.5	115(ESE)
	19:00	3.5	94(E)
	20:00	1.3	104(ESE)
	21:00	3.7	123(ESE)
	22:00	3.9	86(E)
	23:00	1.9	131(SE)
10-Aug-22	00:00	2.9	125(SE)
	01:00	1.1	142(SE)
	02:00	5.9	86(E)
	03:00	4.9	86(E)
	04:00	2.5	138(SE)
	05:00	4.1	129(SE)
	06:00	3.7	110(ESE)
	07:00	2.1	30(NNE)
	08:00	1.7	107(ESE)
	09:00	1.1	72(ENE)
	10:00	3.7	163(SSE)
	11:00	3.1	93(E)
	12:00	6.5	155(SSE)
	13:00	2.1	153(SSE)
	14:00	8.3	139(SE)
	15:00	1.5	288(WNW)
	16:00	3.9	145(SE)
	17:00	3.1	187(S)
	18:00	1.1	82(E)
	19:00	1.7	47(NE)
	20:00	1.9	151(SSE)
	21:00	1.9	81(E)
	22:00	3.7	109(ESE)
	23:00	2.3	80(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
11-Aug-22	00:00	1.1	75(ENE)
	01:00	0.9	125(SE)
	02:00	1.1	219(SW)
	03:00	1.3	164(SSE)
	04:00	1.3	257(WSW)
	05:00	2.7	142(SE)
	06:00	1.7	150(SSE)
	07:00	1.5	129(SE)
	08:00	0.9	71(ENE)
	09:00	0.7	103(ESE)
	10:00	1.3	99(E)
	11:00	0.7	111(ESE)
	12:00	1.5	147(SSE)
	13:00	1.1	130(SE)
	14:00	0.9	238(WSW)
	15:00	0.7	331(NNW)
	16:00	1.1	92(E)
	17:00	1.5	67(ENE)
	18:00	2.1	181(S)
	19:00	1.3	86(E)
	20:00	1.1	233(SW)
	21:00	2.1	81(E)
	22:00	1.1	118(ESE)
	23:00	1.5	122(ESE)
12-Aug-22	00:00	0.9	88(E)
	01:00	0.9	133(SE)
	02:00	0.7	47(NE)
	03:00	1.1	94(E)
	04:00	0.9	31(NNE)
	05:00	1.3	52(NE)
	06:00	0.0	135(SE)
	07:00	0.9	46(NE)
	08:00	0.0	174(S)
	09:00	0.7	96(E)
	10:00	0.9	65(ENE)
	11:00	1.1	98(E)
	12:00	1.9	16(NNE)
	13:00	2.1	243(WSW)
	14:00	0.9	112(ESE)
	15:00	0.0	82(E)
	16:00	1.1	84(E)
	17:00	1.5	97(E)
	18:00	1.1	134(SE)
	19:00	1.3	91(E)
	20:00	1.3	109(ESE)
	21:00	1.1	91(E)
	22:00	1.1	94(E)
	23:00	1.1	104(ESE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
13-Aug-22	00:00	0.0	84(E)
	01:00	0.9	141(SE)
	02:00	1.3	112(ESE)
	03:00	1.1	79(E)
	04:00	1.1	91(E)
	05:00	0.7	52(NE)
	06:00	1.1	68(ENE)
	07:00	1.3	229(SW)
	08:00	1.1	129(SE)
	09:00	0.7	127(SE)
	10:00	0.9	291(WNW)
	11:00	1.1	197(SSW)
	12:00	0.7	96(E)
	13:00	1.1	95(E)
	14:00	1.1	62(ENE)
	15:00	7.5	49(NE)
	16:00	2.3	91(E)
	17:00	1.1	81(E)
	18:00	0.7	125(SE)
	19:00	0.0	40(NE)
	20:00	0.0	39(NE)
	21:00	0.0	109(ESE)
	22:00	1.5	331(NNW)
	23:00	0.0	223(SW)
14-Aug-22	00:00	0.0	349(N)
	01:00	0.0	84(E)
	02:00	0.0	47(NE)
	03:00	0.0	74(ENE)
	04:00	0.0	97(E)
	05:00	0.0	99(E)
	06:00	0.0	40(NE)
	07:00	0.0	90(E)
	08:00	0.0	281(W)
	09:00	1.1	102(ESE)
	10:00	1.7	304(NW)
	11:00	0.9	51(NE)
	12:00	1.5	126(SE)
	13:00	1.9	316(NW)
	14:00	0.5	271(W)
	15:00	3.7	151(SSE)
	16:00	1.7	193(SSW)
	17:00	2.3	171(S)
	18:00	2.3	80(E)
	19:00	1.9	184(S)
	20:00	1.9	319(NW)
	21:00	0.0	355(N)
	22:00	0.5	56(NE)
	23:00	0.7	88(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
15-Aug-22	00:00	1.5	330(NNW)
	01:00	0.9	177(S)
	02:00	1.1	262(W)
	03:00	0.0	23(NNE)
	04:00	0.9	276(W)
	05:00	0.9	84(E)
	06:00	0.0	268(W)
	07:00	0.0	139(SE)
	08:00	0.0	245(WSW)
	09:00	0.7	58(ENE)
	10:00	1.1	154(SSE)
	11:00	1.5	63(ENE)
	12:00	1.7	223(SW)
	13:00	3.5	234(SW)
	14:00	0.0	82(E)
	15:00	1.5	274(W)
	16:00	2.5	247(WSW)
	17:00	1.9	178(S)
	18:00	1.5	200(SSW)
	19:00	1.1	110(ESE)
	20:00	1.1	105(ESE)
	21:00	1.7	180(S)
	22:00	0.9	128(SE)
	23:00	0.9	64(ENE)
16-Aug-22	00:00	0.0	39(NE)
	01:00	1.3	248(WSW)
	02:00	0.9	265(W)
	03:00	1.5	262(W)
	04:00	0.7	42(NE)
	05:00	0.9	303(WNW)
	06:00	0.5	12(NNE)
	07:00	0.5	60(ENE)
	08:00	0.7	84(E)
	09:00	1.9	64(ENE)
	10:00	1.3	291(WNW)
	11:00	2.5	76(ENE)
	12:00	1.9	50(NE)
	13:00	0.9	204(SSW)
	14:00	1.7	92(E)
	15:00	3.7	123(ESE)
	16:00	1.9	91(E)
	17:00	3.3	194(SSW)
	18:00	2.9	132(SE)
	19:00	1.5	91(E)
	20:00	2.5	166(SSE)
	21:00	1.5	140(SE)
	22:00	0.0	65(ENE)
	23:00	2.1	66(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
17-Aug-22	00:00	1.3	92(E)
	01:00	0.5	115(ESE)
	02:00	1.9	102(ESE)
	03:00	0.7	140(SE)
	04:00	3.9	54(NE)
	05:00	0.9	89(E)
	06:00	0.7	194(SSW)
	07:00	1.1	62(ENE)
	08:00	0.9	29(NNE)
	09:00	0.9	53(NE)
	10:00	1.5	222(SW)
	11:00	1.7	66(ENE)
	12:00	1.3	224(SW)
	13:00	1.7	205(SSW)
	14:00	6.5	216(SW)
	15:00	3.9	198(SSW)
	16:00	1.7	189(S)
	17:00	3.3	229(SW)
	18:00	1.1	251(WSW)
	19:00	0.9	88(E)
	20:00	1.3	102(ESE)
	21:00	1.3	77(ENE)
	22:00	1.5	113(ESE)
	23:00	1.9	93(E)
18-Aug-22	00:00	0.9	89(E)
	01:00	0.9	75(ENE)
	02:00	0.7	262(W)
	03:00	0.9	81(E)
	04:00	0.5	312(NW)
	05:00	1.7	110(ESE)
	06:00	0.5	156(SSE)
	07:00	0.0	283(WNW)
	08:00	1.3	248(WSW)
	09:00	1.1	96(E)
	10:00	2.3	314(NW)
	11:00	1.9	60(ENE)
	12:00	1.7	105(ESE)
	13:00	0.9	62(ENE)
	14:00	2.1	62(ENE)
	15:00	2.1	119(ESE)
	16:00	0.7	239(WSW)
	17:00	3.5	101(E)
	18:00	1.9	164(SSE)
	19:00	1.9	126(SE)
	20:00	0.9	116(ESE)
	21:00	0.7	114(ESE)
	22:00	1.3	75(ENE)
	23:00	0.9	67(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
19-Aug-22	00:00	1.1	73(ENE)
	01:00	0.7	18(NNE)
	02:00	0.7	19(NNE)
	03:00	0.7	63(ENE)
	04:00	0.9	82(E)
	05:00	0.7	35(NE)
	06:00	0.7	222(SW)
	07:00	0.7	94(E)
	08:00	0.9	52(NE)
	09:00	0.7	137(SE)
	10:00	1.7	111(ESE)
	11:00	1.1	96(E)
	12:00	0.7	332(NNW)
	13:00	2.9	118(ESE)
	14:00	1.7	61(ENE)
	15:00	2.1	109(ESE)
	16:00	1.3	95(E)
	17:00	0.7	140(SE)
	18:00	2.3	96(E)
	19:00	0.9	54(NE)
	20:00	1.5	157(SSE)
	21:00	1.7	106(ESE)
	22:00	1.3	77(ENE)
	23:00	0.7	148(SSE)
20-Aug-22	00:00	1.5	131(SE)
	01:00	1.1	118(ESE)
	02:00	1.1	321(NW)
	03:00	1.7	81(E)
	04:00	0.9	117(ESE)
	05:00	0.7	67(ENE)
	06:00	0.9	63(ENE)
	07:00	0.5	257(WSW)
	08:00	1.1	88(E)
	09:00	0.9	253(WSW)
	10:00	1.7	194(SSW)
	11:00	3.3	173(S)
	12:00	1.3	231(SW)
	13:00	3.5	153(SSE)
	14:00	2.7	137(SE)
	15:00	3.1	102(ESE)
	16:00	5.9	242(WSW)
	17:00	1.5	115(ESE)
	18:00	1.7	123(ESE)
	19:00	0.7	73(ENE)
	20:00	0.9	327(NNW)
	21:00	1.5	111(ESE)
	22:00	0.9	63(ENE)
	23:00	0.5	128(SE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
21-Aug-22	00:00	1.1	162(SSE)
	01:00	0.9	135(SE)
	02:00	0.9	46(NE)
	03:00	0.7	97(E)
	04:00	0.7	84(E)
	05:00	1.1	123(ESE)
	06:00	1.1	60(ENE)
	07:00	1.1	88(E)
	08:00	0.5	54(NE)
	09:00	1.5	84(E)
	10:00	2.5	89(E)
	11:00	1.5	150(SSE)
	12:00	1.7	160(SSE)
	13:00	3.7	163(SSE)
	14:00	3.5	131(SE)
	15:00	5.9	217(SW)
	16:00	1.1	184(S)
	17:00	1.9	143(SE)
	18:00	2.9	191(S)
	19:00	1.9	165(SSE)
	20:00	1.1	110(ESE)
	21:00	0.9	336(NNW)
	22:00	1.3	104(ESE)
	23:00	0.7	66(ENE)
22-Aug-22	00:00	1.1	78(ENE)
	01:00	1.3	80(E)
	02:00	1.1	288(WNW)
	03:00	1.5	286(WNW)
	04:00	0.7	91(E)
	05:00	0.9	109(ESE)
	06:00	0.5	300(WNW)
	07:00	0.5	228(SW)
	08:00	0.5	299(WNW)
	09:00	0.9	121(ESE)
	10:00	1.1	157(SSE)
	11:00	2.1	277(W)
	12:00	6.3	244(WSW)
	13:00	6.1	321(NW)
	14:00	5.1	270(W)
	15:00	1.9	303(WNW)
	16:00	3.9	240(WSW)
	17:00	3.3	286(WNW)
	18:00	3.7	285(WNW)
	19:00	4.7	299(WNW)
	20:00	1.9	278(W)
	21:00	1.5	240(WSW)
	22:00	1.1	299(WNW)
	23:00	1.7	291(WNW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
23-Aug-22	00:00	1.3	264(W)
	01:00	0.9	213(SSW)
	02:00	0.9	259(W)
	03:00	1.7	263(W)
	04:00	0.9	216(SW)
	05:00	1.7	296(WNW)
	06:00	0.7	228(SW)
	07:00	1.1	276(W)
	08:00	0.5	276(W)
	09:00	1.9	278(W)
	10:00	1.5	288(WNW)
	11:00	2.5	317(NW)
	12:00	1.5	329(NNW)
	13:00	0.7	163(SSE)
	14:00	1.9	241(WSW)
	15:00	2.3	326(NW)
	16:00	1.3	250(WSW)
	17:00	1.5	106(ESE)
	18:00	1.7	85(E)
	19:00	1.3	216(SW)
	20:00	0.7	78(ENE)
	21:00	0.7	103(ESE)
	22:00	1.1	84(E)
	23:00	0.9	298(WNW)
24-Aug-22	00:00	2.3	103(ESE)
	01:00	1.1	94(E)
	02:00	1.5	93(E)
	03:00	0.9	39(NE)
	04:00	1.1	162(SSE)
	05:00	0.9	75(ENE)
	06:00	1.1	80(E)
	07:00	1.1	265(W)
	08:00	0.9	68(ENE)
	09:00	0.7	133(SE)
	10:00	2.9	101(E)
	11:00	2.9	108(ESE)
	12:00	1.1	85(E)
	13:00	0.7	255(WSW)
	14:00	2.5	106(ESE)
	15:00	2.7	106(ESE)
	16:00	2.9	103(ESE)
	17:00	4.3	110(ESE)
	18:00	4.1	122(ESE)
	19:00	2.9	126(SE)
	20:00	2.7	139(SE)
	21:00	2.3	74(ENE)
	22:00	4.1	75(ENE)
	23:00	4.9	173(S)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
25-Aug-22	00:00	4.7	107(ESE)
	01:00	5.1	103(ESE)
	02:00	5.3	156(SSE)
	03:00	4.5	114(ESE)
	04:00	7.3	136(SE)
	05:00	2.9	103(ESE)
	06:00	1.1	195(SSW)
	07:00	2.1	100(E)
	08:00	2.9	136(SE)
	09:00	1.1	224(SW)
	10:00	1.5	242(WSW)
	11:00	1.3	89(E)
	12:00	4.1	132(SE)
	13:00	1.7	161(SSE)
	14:00	2.5	295(WNW)
	15:00	0.7	194(SSW)
	16:00	1.9	270(W)
	17:00	2.9	109(ESE)
	18:00	1.7	99(E)
	19:00	0.7	132(SE)
	20:00	0.0	184(S)
	21:00	0.0	276(W)
	22:00	1.3	104(ESE)
	23:00	0.7	322(NW)
26-Aug-22	00:00	0.0	301(WNW)
	01:00	1.3	150(SSE)
	02:00	1.5	80(E)
	03:00	1.7	38(NE)
	04:00	1.3	139(SE)
	05:00	1.1	56(NE)
	06:00	1.3	95(E)
	07:00	1.5	97(E)
	08:00	1.1	66(ENE)
	09:00	0.9	209(SSW)
	10:00	0.7	308(NW)
	11:00	1.9	214(SW)
	12:00	2.7	181(S)
	13:00	2.7	168(SSE)
	14:00	1.3	190(S)
	15:00	1.9	188(S)
	16:00	1.3	189(S)
	17:00	3.1	250(WSW)
	18:00	3.9	244(WSW)
	19:00	3.9	222(SW)
	20:00	2.1	264(W)
	21:00	0.5	230(SW)
	22:00	1.7	211(SSW)
	23:00	1.1	66(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
27-Aug-22	00:00	0.7	157(SSE)
	01:00	1.1	243(WSW)
	02:00	0.7	272(W)
	03:00	0.7	327(NNW)
	04:00	1.1	89(E)
	05:00	0.0	242(WSW)
	06:00	0.7	286(WNW)
	07:00	0.0	326(NW)
	08:00	1.1	112(ESE)
	09:00	1.7	263(W)
	10:00	2.7	318(NW)
	11:00	1.9	293(WNW)
	12:00	0.9	310(NW)
	13:00	2.5	307(NW)
	14:00	4.3	258(WSW)
	15:00	2.9	289(WNW)
	16:00	2.9	250(WSW)
	17:00	3.5	269(W)
	18:00	2.1	254(WSW)
	19:00	3.7	278(W)
	20:00	4.1	284(WNW)
	21:00	1.5	269(W)
	22:00	1.7	283(WNW)
	23:00	1.1	232(SW)
28-Aug-22	00:00	0.9	29(NNE)
	01:00	1.3	304(NW)
	02:00	1.1	239(WSW)
	03:00	1.1	255(WSW)
	04:00	1.3	259(W)
	05:00	0.7	279(W)
	06:00	0.9	265(W)
	07:00	1.1	300(WNW)
	08:00	0.9	294(WNW)
	09:00	1.1	277(W)
	10:00	3.9	288(WNW)
	11:00	2.7	269(W)
	12:00	0.9	205(SSW)
	13:00	1.3	88(E)
	14:00	1.9	102(ESE)
	15:00	4.7	128(SE)
	16:00	2.3	337(NNW)
	17:00	0.7	225(SW)
	18:00	3.1	126(SE)
	19:00	2.5	181(S)
	20:00	1.5	86(E)
	21:00	0.9	114(ESE)
	22:00	2.7	98(E)
	23:00	1.3	101(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
29-Aug-22	00:00	0.9	223(SW)
	01:00	1.1	92(E)
	02:00	1.1	85(E)
	03:00	1.3	86(E)
	04:00	0.9	5(N)
	05:00	1.3	88(E)
	06:00	0.7	93(E)
	07:00	1.1	113(ESE)
	08:00	1.3	84(E)
	09:00	0.9	100(E)
	10:00	0.9	101(E)
	11:00	1.3	96(E)
	12:00	1.9	229(SW)
	13:00	1.1	298(WNW)
	14:00	2.5	210(SSW)
	15:00	3.9	264(W)
	16:00	4.1	316(NW)
	17:00	2.3	290(WNW)
	18:00	0.9	268(W)
	19:00	1.1	224(SW)
	20:00	1.3	68(ENE)
	21:00	0.9	70(ENE)
	22:00	1.1	104(ESE)
	23:00	1.1	98(E)
30-Aug-22	00:00	1.9	51(NE)
	01:00	0.5	77(ENE)
	02:00	1.1	256(WSW)
	03:00	0.9	93(E)
	04:00	0.7	70(ENE)
	05:00	0.7	51(NE)
	06:00	0.9	26(NNE)
	07:00	0.0	261(W)
	08:00	1.1	60(ENE)
	09:00	1.1	69(ENE)
	10:00	1.9	254(WSW)
	11:00	2.1	304(NW)
	12:00	3.9	309(NW)
	13:00	2.5	283(WNW)
	14:00	3.7	236(SW)
	15:00	3.3	270(W)
	16:00	1.7	149(SSE)
	17:00	4.1	121(ESE)
	18:00	1.3	256(WSW)
	19:00	4.7	100(E)
	20:00	1.5	193(SSW)
	21:00	0.9	32(NNE)
	22:00	3.9	161(SSE)
	23:00	1.3	125(SE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
31-Aug-22	00:00	2.3	271(W)
	01:00	1.3	56(NE)
	02:00	3.5	301(WNW)
	03:00	1.7	163(SSE)
	04:00	3.7	243(WSW)
	05:00	1.8	213(SSW)
	06:00	1.7	231(SW)
	07:00	3.9	311(NW)
	08:00	3.3	46(NE)
	09:00	0.9	115(ESE)
	10:00	0.1	255(WSW)
	11:00	3.3	285(WNW)
	12:00	1.1	309(NW)
	13:00	2.9	168(S)
	14:00	1.9	40(NE)
	15:00	2.6	295(WNW)
	16:00	1.5	151(SSE)
	17:00	0.7	220(SW)
	18:00	1.3	118(ESE)
	19:00	1.2	116(ESE)
	20:00	0.7	74(ENE)
	21:00	1.9	265(W)
	22:00	2.1	307(NW)
	23:00	0.8	161(SSE)

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
Aug 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	01 Aug	02 Aug	03 Aug	04 Aug AQM - 24hr TSP	05 Aug AQM - 1hr TSP Ecological Monitoring	06 Aug NM [1]
07 Aug	08 Aug	09 Aug Ecological Monitoring	10 Aug AQM - 24hr TSP	11 Aug AQM - 1hr TSP	12 Aug NM [2]	13 Aug
14 Aug	15 Aug	16 Aug AQM - 24hr TSP (AM2a) [3]	17 Aug AQM - 1hr TSP NM (NM2)	18 Aug NM (NM1 & NM3)	19 Aug Ecological Monitoring	20 Aug
21 Aug	22 Aug AQM - 24hr TSP	23 Aug AQM - 1hr TSP NM	24 Aug	25 Aug	26 Aug Ecological Monitoring	27 Aug AQM - 24hr TSP (AM2a) [4]
28 Aug	29 Aug AQM - 1hr TSP NM	30 Aug	31 Aug			

Remarks

1. The noise monitoring scheduled on 5 Aug 2022 was rescheduled to 6 Aug 2022 due to adverse weather condition.
2. The noise monitoring scheduled on 11 Aug 2022 was rescheduled to 12 Aug 2022 due to adverse weather condition.
3. Power failure was encountered at AM1a* from 16 Aug 2022 to 20 Aug 2022, so the 24hr AQM for AM1a* was temporarily suspended.
4. Power failure was encountered at AM1a* from 27 Aug 2022 to 31 Aug 2022, so the 24hr AQM for AM1a* was temporarily suspended.

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

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

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

Remarks

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

Appendix 5.2

Noise Monitoring Results and Graphical Presentations

Noise Monitoring Result

Location: NM1 - G/F, Wai Loi Tsuen

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
				Unit: dB(A), (30min)					
06/08/2022	9:58	Drizzle	0.0	55.5	54.7	49.3	63.4	56	75
12/08/2022	9:15	Drizzle	0.0	58.0	56.2	50.4	63.4	58	75
18/08/2022	15:25	Drizzle	0.0	57.6	56.7	50.9	63.4	58	75
23/08/2022	11:10	Sunny	0.0	56.2	55.9	49.3	63.4	56	75
29/08/2022	10:00	Fine	0.0	61.1	59.8	55.8	63.4	61	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)					
06/08/2022	10:40	Drizzle	0.0	62.3	61.4	55.8	58.0	60	75
12/08/2022	8:30	Drizzle	0.0	62.8	60.9	58.1	58.0	61	75
17/08/2022	14:03	Fine	0.0	64.6	64.2	57.0	58.0	64	75
23/08/2022	8:55	Sunny	0.0	64	63.5	55.1	58.0	63	75
29/08/2022	9:04	Fine	0.0	66.5	65.1	61.0	58.0	66	75

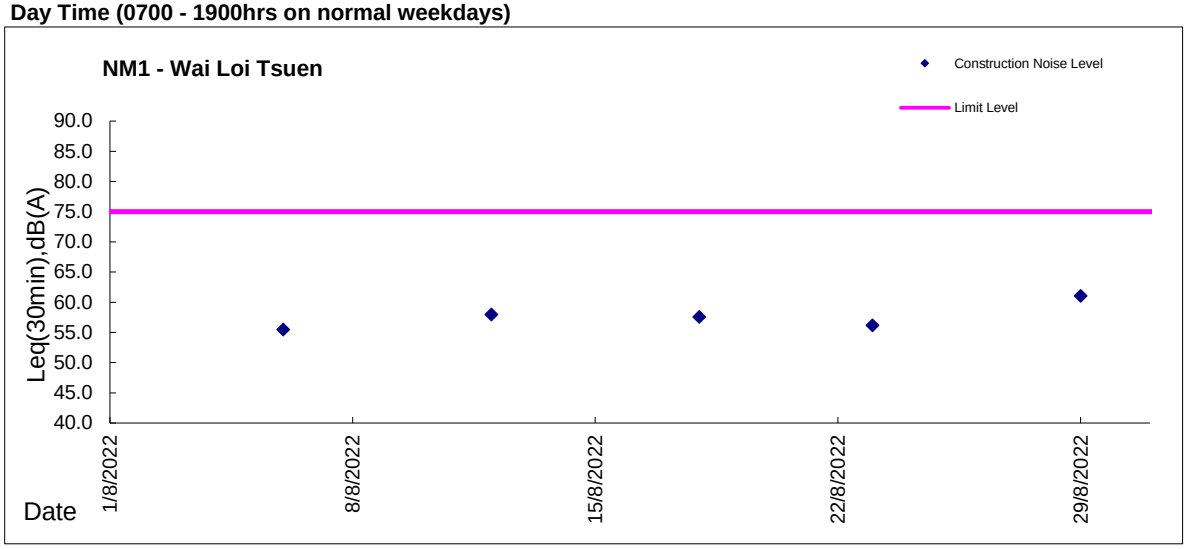
Location: NM3 - G/F, Man kok Village

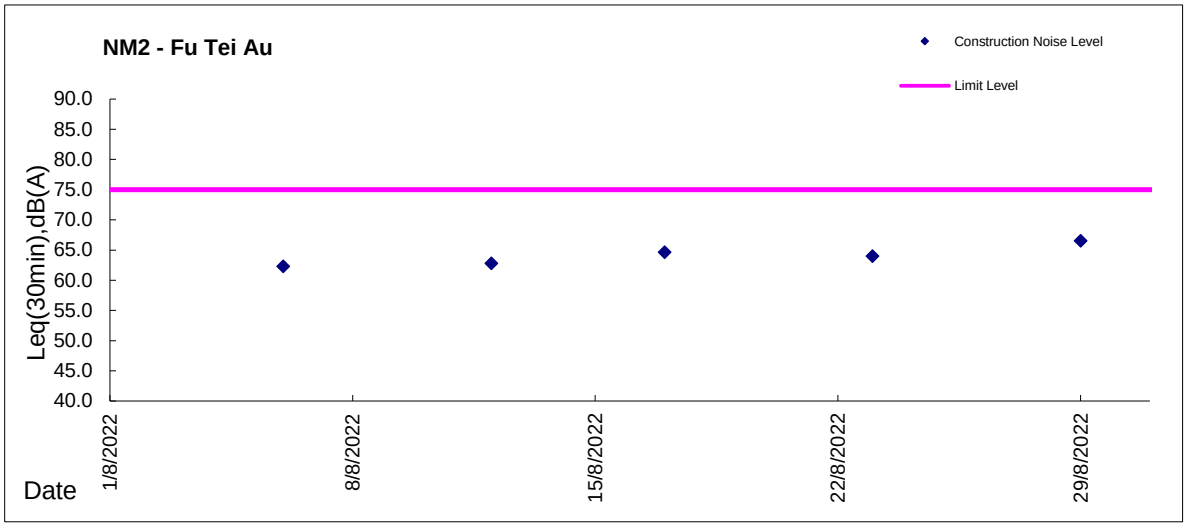
Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
06/08/2022	11:21	Drizzle	0.0	58.8	58.5	50.0	63.4	59	75
12/08/2022	10:00	Drizzle	0.0	65.4	66.1	45.0	63.4	61	75
18/08/2022	15:33	Drizzle	0.0	61.9	59.7	51.4	63.4	62	75
23/08/2022	10:05	Sunny	0.0	60.7	59.2	51.8	63.4	61	75
29/08/2022	14:35	Fine	1.3	63.1	61.0	57.4	63.4	63	75

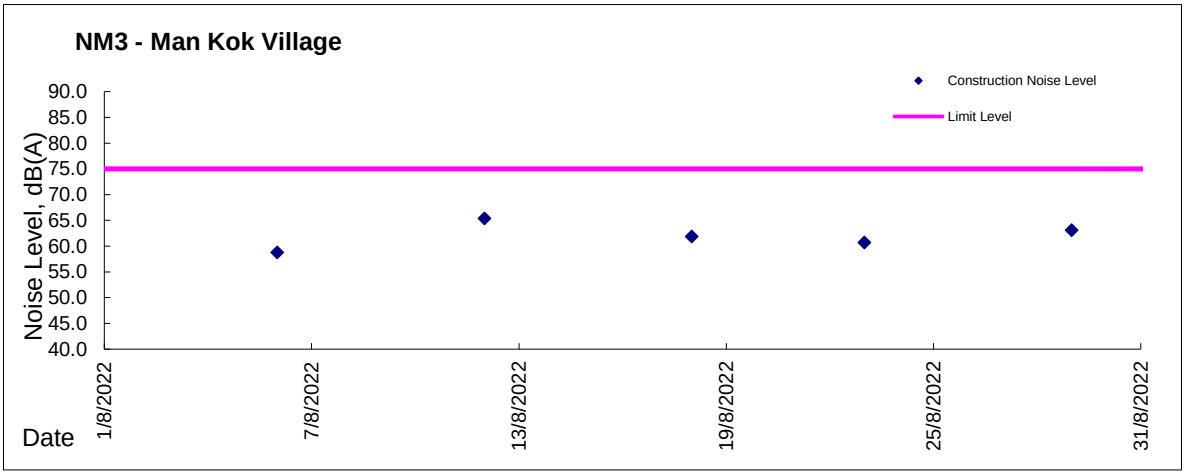
* Free field correction (Additional 3dB(A)) was made on NM1, NM2, and NM3 measurement result

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.
5-Aug-22	Drizzle	8:35	10	AEROCET 831	R14332
5-Aug-22	Drizzle	9:35	21		
5-Aug-22	Drizzle	10:35	15		
11-Aug-22	Drizzle	8:35	33		
11-Aug-22	Drizzle	9:35	17		
11-Aug-22	Drizzle	10:35	12		
17-Aug-22	Cloudy	13:36	9		
17-Aug-22	Rain	14:36	12		
17-Aug-22	Rain	15:36	34		
23-Aug-22	Sunny	8:29	21		
23-Aug-22	Sunny	9:29	23		
23-Aug-22	Sunny	10:29	26		
29-Aug-22	Fine	8:41	28		
29-Aug-22	Fine	9:41	22		
29-Aug-22	Fine	10:41	16		

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.
5-Aug-22	Drizzle	8:46	16	AEROCET 831	W15448
5-Aug-22	Drizzle	9:46	65		
5-Aug-22	Drizzle	10:46	42		
11-Aug-22	Drizzle	8:47	57		
11-Aug-22	Drizzle	9:47	37		
11-Aug-22	Drizzle	10:47	21		
17-Aug-22	Cloudy	13:50	16		
17-Aug-22	Rain	14:51	25		
17-Aug-22	Rain	15:52	40		
23-Aug-22	Sunny	8:42	39		
23-Aug-22	Sunny	9:42	42		
23-Aug-22	Sunny	10:42	49		
29-Aug-22	Fine	8:48	23		
29-Aug-22	Fine	9:48	16		
29-Aug-22	Fine	10:58	13		

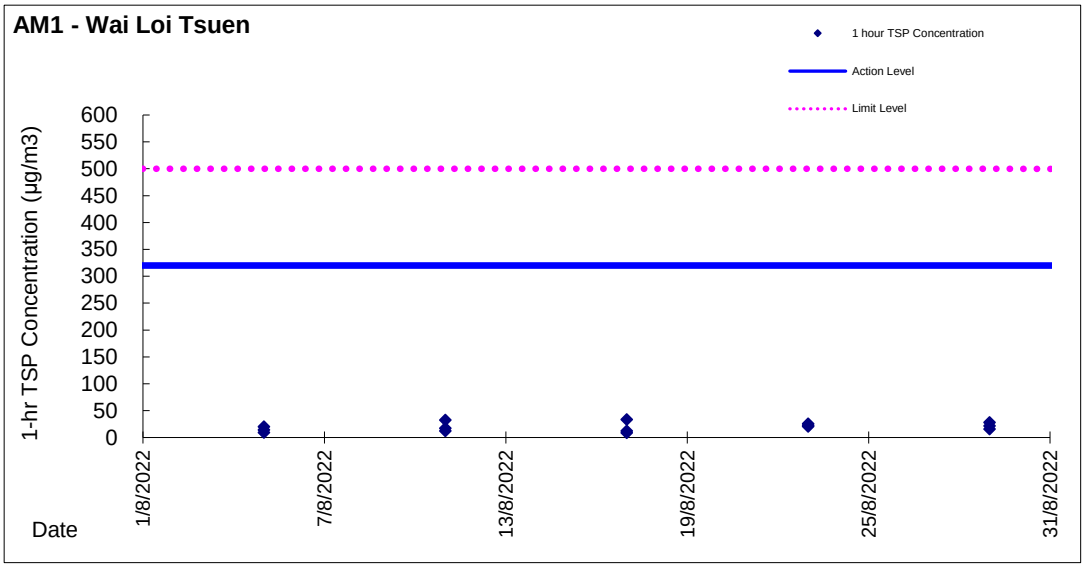
Location: AM1a* - Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW
Impact Monitoring Result on 24-hour TSP monitoring

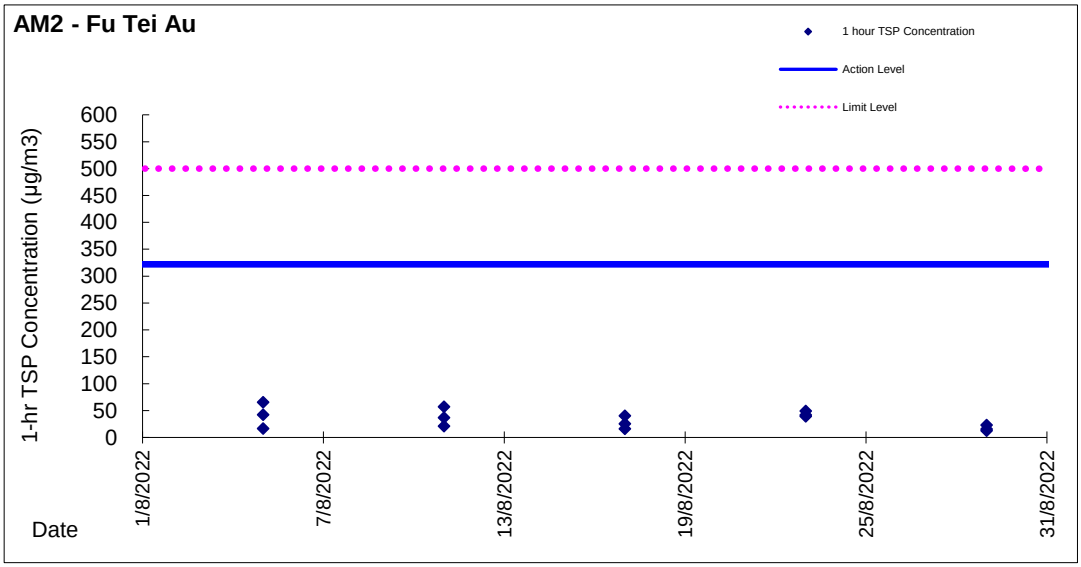
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
04-Aug-22	8:00	Drizzle	1004.5	1007.6	27.1	26.1	AM1a_24hr_010560	2.8015	2.8460	27488.35	27512.35	24.00	1.19	1.19	1.19	1709	26	G3101	0401-1105
10-Aug-22	8:00	Rain	1004.1	1007.8	27.4	26.7	AM1a_24hr_010557	2.7955	2.8415	27536.35	27560.35	24.00	1.23	1.25	1.24	1787	26		
22-Aug-22	8:00	Sunny	1006.9	1005	30.1	31.1	AM1a_24hr_010548	2.796	3.0951	27560.35	27584.35	24.00	1.18	1.20	1.19	1717	174		

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

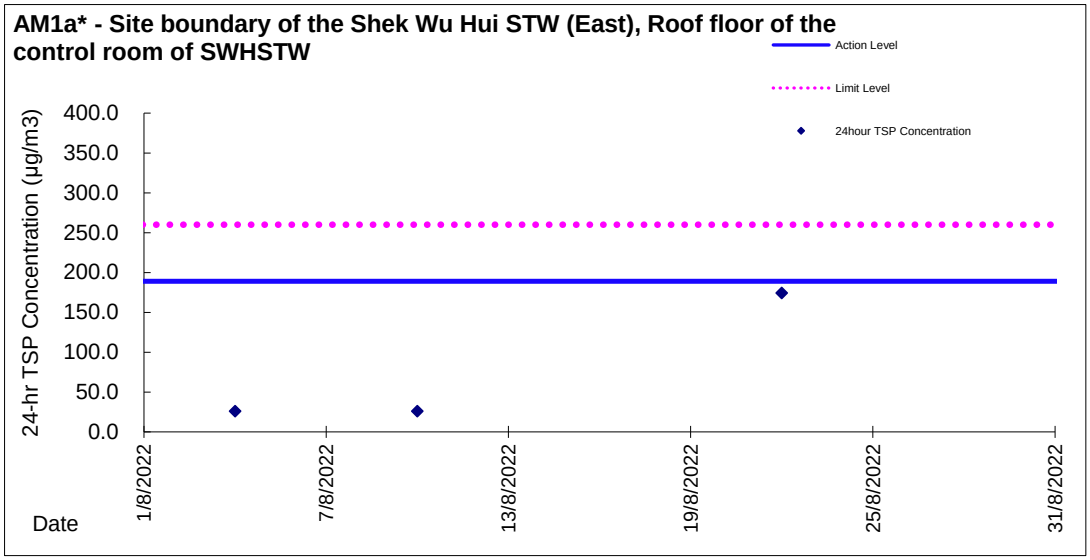
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
04-Aug-22	8:00	Drizzle	1004.5	1007.6	27.1	26.1	AM2a_24hr_010561	2.8029	2.8873	18493.93	18517.93	24.00	1.25	1.23	1.24	1788	47	G3101	1096-2305
10-Aug-22	8:00	Rain	1004.1	1007.8	27.4	26.7	AM2a_24hr_010554	2.7835	2.8642	18517.93	18541.93	24.00	1.52	1.53	1.53	2196	37		
16-Aug-22	8:00	Drizzle	1005.6	1005.8	29.4	28.2	AM2a_24hr_010558	2.7976	2.8983	18541.93	18565.93	24.00	1.48	1.48	1.48	2127	47		
22-Aug-22	8:00	Sunny	1006.9	1005	30.1	31.1	AM2a_24hr_010549	2.8116	2.9522	18565.93	18589.93	24.00	1.48	1.47	1.47	2124	66		
27-Aug-22	8:00	Sunny	1009.2	1008.4	29.7	30.5	AM2a_24hr_010546	2.8077	2.9621	18589.93	18613.93	24.00	1.43	1.43	1.43	2061	75		

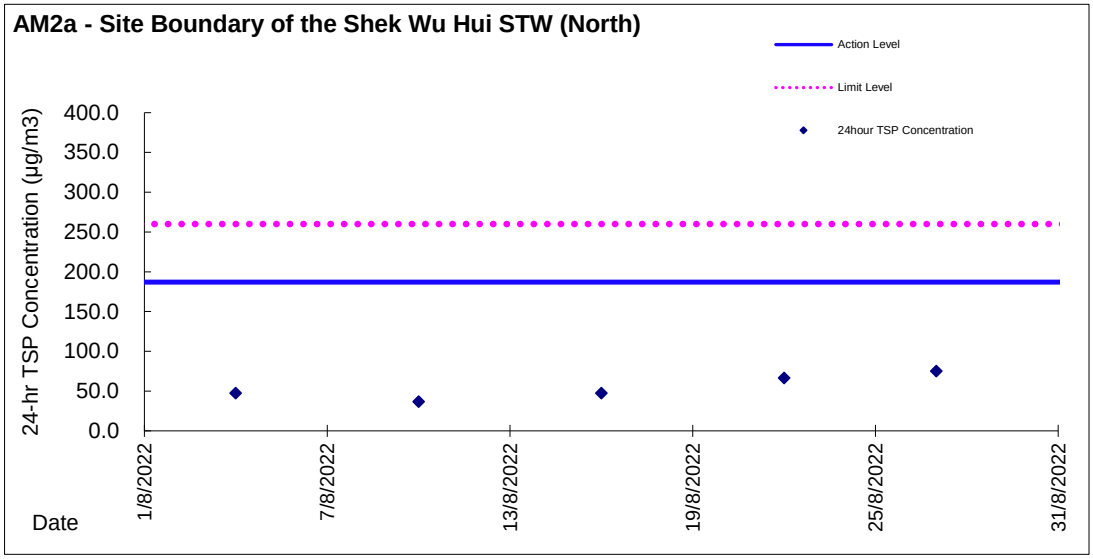
Graphic Presentation of TSP Result





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	34	1003
Waterbirds	10	265

Table 2 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	149
Ardea cinerea	Grey Heron	蒼鷺	12
Ardeola bacchus	Chinese Pond Heron	池鷺	61
Phalacrocorax carbo	Great Cormorant	普通鸬鹚	0
Ardea alba	Great Egret	大白鷺	13
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	13
		Total	**248**

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	0.650	✓	✓
	Seasonal	0.359	✓	✓

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	0.837	✓	✓	0.695	✓	✓	✓
Grey Heron	NA*						
Chinese Pond Heron	-0.279	✓	✓	-0.590	✓	✓	✓
Great Cormorant	NA*						
Great Egret	0.349	✓	✓	-0.233	✓	✓	✓
Eastern Cattle Egret	0.670	✓	✓	-0.168	✓	✓	✓

Remarks:

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

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

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

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

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

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

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

Observations

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

- Flying
- Foraging
- Soaring
- Resting

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

5.4.9.

Table 5 Observations during Ecological Monitoring in the Reporting Month

Location(s)	Observations	
	Project Related	**Non-project Related**
T1 (PC1, PC2)	N/A	Human Activities such as Fishing
T2 (PC3, PC4)	Construction activities such as 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 such as Excavation and crane	N/A
T3 (PC6, PC7)	Construction activities such as Sheet-piling	Human Activities such as Fishing Construction activities such as Excavation Sheet-piling, generator & wielding works, Scaffolding

Appendix 5.5

Ecological Monitoring Results and Analysis

Summary data of the Ecological Monitoring

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Ardeola bacchus	Chinese Pond Heron	池鷺	X	61	+++++
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	X	13	+
Ardea cinerea	Grey Heron	蒼鷺	X	12	+
Ardea alba	Great Egret	大白鷺	X	13	++
Egretta garzetta	Little Egret	小白鷺	X	149	+++++
Milvus migrans	Black Kite	黑鳶	X	1	+
Amaurornis phoenicurus	White-breasted Waterhen	白胸苦惡鳥	X	3	+
Actitis hypoleucos	Common Sandpiper	磯鷸	X	10	+
Spilopelia chinensis	Spotted Dove	珠頸斑鳩		59	+++++
Centropus sinensis	Greater Coucal	褐翅鴉鵑		1	+
Eudynamys scolopaceus	Asian Koel	噪鵑		4	+
Apus nipalensis	House Swift	小白腰雨燕		2	+
Halcyon smyrnensis	White-throated Kingfisher	白胸翡翠	X	2	+
Alcedo atthis	Common Kingfisher	普通翠鳥	X	1	+
Dicrurus macrocercus	Black Drongo	黑卷尾		1	+
Urocissa erythroryncha	Red-billed Blue Magpie	紅嘴藍鵲		0	+
Pica pica	Eurasian Magpie	喜鵲		0	+
Corvus macrorhynchos	Large-billed Crow	大嘴烏鴉		1	N/A
Parus cinereus	Cinereous Tit	蒼背山雀		2	+
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯		117	+++++

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		15	++
Hirundo rustica	Barn Swallow	家燕		42	++++
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯		9	++
Prinia inornata	Plain Prinia	純色鷦鶯		2	+
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		8	++
Garrulax perspicillatus	Masked Laughingthrush	黑臉噪鶥		59	+++++
Zosterops japonicus	Japanese White-eye	暗綠繡眼鳥		2	+
Acridotheres cristatellus	Crested Myna	八哥		279	+++++
Gracupica nigricollis	Black-collared Starling	黑領椋鳥		48	+++++
Copsychus saularis	Oriental Magpie Robin	鵲鴝		10	++
Myophonus caeruleus	Blue Whistling Thrush	紫嘯鶇		0	+
Passer montanus	Eurasian Tree Sparrow	樹麻雀		68	+++++
Lonchura punctulata	Scaly-breasted Munia	斑文鳥		0	++
Motacilla alba	White Wagtail	白鶺鴒		9	++

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	5/8/2022	13:00	H	169	328	20
		11:00	L	159		19
2	9/8/2022	9:30	H	101	274	14
		11:30	L	173		21
3	19/8/2022	14:00	H	110	207	15
		12:00	L	97		21
4	26/8/2022	12:00	H	87	194	17
		14:00	L	107		22

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	5/8/2022	13:00	H	67	114
		11:00	L	47	
2	9/8/2022	9:30	H	20	96
		11:30	L	76	
3	19/8/2022	14:00	H	11	26
		12:00	L	15	
4	26/8/2022	12:00	H	12	29
		14:00	L	17	

Remarks: H: High Tide; L: Low Tide

T-Test Analysis for All Waterbirds

Baseline Data

Monthly Average Abundance (August)	37.00
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 = -2.353 (95% Confidence Level)

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

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.132)	99% (-3.747)
Abundance	Monthly	0.650	✓	✓
	Seasonal	0.359	✓	✓

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**		**Avg (Aug)**	**Avg (Summer)**
Egretta garzetta	Little Egret	小白鷺	47	70	17	15	149	37	18	20
Ardea cinerea	Grey Heron	蒼鷺	10	0	1	1	12	3	0	1
Ardeola bacchus	Chinese Pond Heron	池鷺	32	18	5	6	61	15	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	8	4	1	0	13	3	2	3
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	11	0	0	2	13	3	1	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 = -2.353 (95% Confidence Level)

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

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value	Confidence Level (Critical Value)		Overall
	Monthly	95%	99%	Seasonal	95%	99%	
Little Egret	0.837	✓	✓	0.695	✓	✓	✓
Grey Heron	NA*						
Chinese Pond Heron	-0.279	✓	✓	-0.590	✓	✓	✓
Great Cormorant	NA*						
Great Egret	0.349	✓	✓	-0.233	✓	✓	✓
Eastern Cattle Egret	0.670	✓	✓	-0.168	✓	✓	✓

Remarks:

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

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

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

Appendix 5.6

Photo Record of Ecological Monitoring

Conditions of Rivers

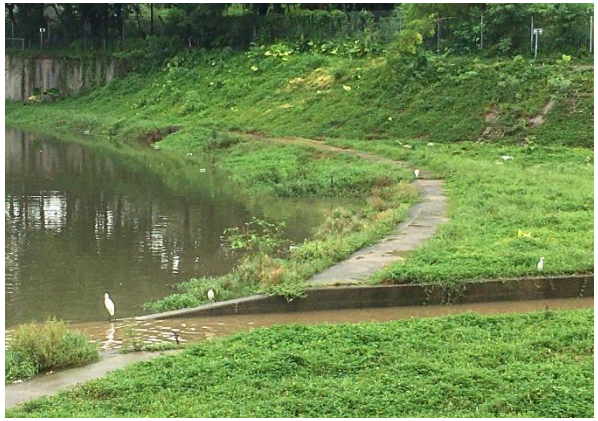
Sheung Yue River – Survey Point 7 (Taken on 9 Aug 2022)	**Shek Sheung River – Survey Point 6 (Taken on 5 Aug 2022)**
Shek Sheung River - Survey Point 5 (Taken on 5 Aug 2022)	**Ng Tung River - Survey Point 4 (Taken on 19 Aug 2022)**

Human Activities & Site Conditions

Construction Activities (Ng Tung River) **(Project-related, taken on 9 Aug 2022)**	**Construction Activities (Shek Sheung River)** **(Project-related, taken on 19 Aug 2022)**
Construction Activities (Sheung Yue River) **(Non-project-related, taken on 5 Aug 2022)**	**Construction Activities (Ng Tung River)** **(Non-Project-related, taken on 5 Aug 2022)**

Human Activities (Ng Tung River) **(Non-project-related, taken on 9 Aug 2022)**	**Human Activities (Shek Sheung River)** **(Non- project-related, taken on 19 Aug 2022)**	**Human Activities (Ng Tung River)** **(Non-project-related, taken on 19 Aug 2022)**
Construction Activities (Ng Tung River) **(Non-Project-related, taken on 19 Aug 2022)**	**Construction Activities (Sheung Yue River)** **(Non-project-related, taken on 9 Aug 2022)**	**Construction Activities (Ng Tung River)** **(Non-Project-related, taken on 19 Aug 2022)**

Waterbird Species

Great Egret	**Little Egret**	**Grey Heron**
		
Waterbird in Shek Sheung 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	0.362	0.000	0.000	0.000	0.362	0.046	0.000	0.000	0.000	0.000	0.090
Jun	0.397	0.000	0.000	0.000	0.397	0.069	0.000	0.010	0.000	0.000	0.077
Sub-total	4.433	0.000	0.000	0.000	4.433	1.233	2.370	0.010	0.000	0.000	0.620
Jul	1.635	0.000	0.000	0.000	1.635	0.104	0.003	0.000	0.001	0.000	0.122
Aug	1.409	0.000	0.000	0.000	1.409	0.487	0.000	0.000	0.005	0.000	0.160
Sep											
Oct											
Nov											
Dec											
Total	7.477	0.000	0.000	0.000	7.477	1.825	2.373	0.010	0.006	0.000	0.902

Notes:

1. Assume the density of soil fill is 2 ton/m3.
2. Assume the density of rock and broken concrete is 2.5 ton/m3.
3. Assume the density of general refuse is 0.9 ton/m3.
4. Assume density of waste oil is assued to be 0.8 kg/L.
5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
6. The slurry and bentonite are disposed at Tseung Kwun O 137.
7. The non-inert C&D wastes are disposed at NENT.

Name of Department: DSD

Contract No. DC/2018/07

Monthly Summary Waste Flow Table for 2022

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	4.980	0.000	0.000	0.813	4.167	0.000	15.45	0.000	0.004	0.000	0.012
Feb	3.400	0.000	0.000	0.639	2.761	0.038	5.71	0.000	0.000	0.000	0.010
Mar	3.050	0.000	0.000	0.073	2.977	0.000	0.00	0.000	0.000	0.000	0.019
Apr	2.037	0.000	0.000	0.112	1.925	0.108	0.00	0.000	0.000	0.000	0.016
May	1.076	0.000	0.000	0.000	1.076	0.062	2.14	0.000	0.000	0.000	0.016
Jun	2.515	0.000	0.000	0.034	2.481	0.036	0.00	0.010	0.001	0.000	0.020
Sub-total	17.057	0.000	0.000	1.671	15.386	0.244	23.30	0.010	0.005	0.000	0.093
Jul	3.222	0.000	0.000	0.000	3.222	0.000	0.00	0.000	0.005	0.000	0.031
Aug	4.151	0.000	0.000	0.000	4.151	0.115	0.00	0.000	0.003	0.000	0.026
Sep											
Oct											
Nov											
Dec											
Total	24.430	0.000	0.000	1.671	22.759	0.359	23.30	0.010	0.012	0.000	0.150

Notes:

1. Assume the density of soil fill and special waste (i.e. sediment from DSD sedimentation tank) is 2 ton/m3.
2. Assume the density of rock and broken concrete is 2.5 ton/m3
3. Assume the density of general refuse is 0.9 ton/m3
4. Density of waste oil is assued to be 0.8 kg/L. Chemical waste includes waste oil.
5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38
6. The slurry and bentonite are disposed at Tseung Kwun O 137
7. The non-inert C&D wastes, including general refuse & special waste (i.e. sediment from DSD sedimentation tank) are disposed at NENT

EM&A Monthly Reporting Template (cut-off at the end of each month)

Name of Department: ~~ArchSD/CEDD~~/DSD/~~EMSD/HyD/WSD~~ Contract No.: DE/2018/03

Monthly Summary Waste Flow Table for 2022 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	176.71 T	0	0	0	176.71 T	0	0	0.177	0.008	0	2.7T
Feb	83.58T	0	0	0	83.58T	0	0	0.132	0.003	0	0
Mar	0	0	0	0	0	0	0	0	0	0	3.06T
Apr	0	0	0	0	0	0	0	0.13	0.012	0	0
May	4029.56T	0	0	0	4029.56T	0	0	0	0	0	1.64T
June	5565.13T	0	0	0	5565.13T	0	0	0	0	0	1.19T
Sub-total	9854.98 T	0	0	0	9854.98 T	0	0	0.439	0.023	0	8.59
July	5374.59T	0	0	0	5374.59T	0	0	0	0	0	1.71T
Aug	149.1T	0	0	0	149.1T	0	0	0	0	0	0
Sept											
Oct											
Nov											
Dec											
Total	15378.67 T	0	0	0	15378.67 T	0	0	0.439	0.023	0	10.3T

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

Monthly Summary Waste Flow Table for 2022 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept											
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: August 2022

Ref No.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up Action
-	-	-	-	-	-	-	-

Ref. No.	Date	Time	Location	Construction Noise Level	Parameter	Action Level	Limit Level	Follow-up action
-	-	-	-	-	-	-	-	-

Appendix 8.1

Complaint Log

Summary of Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
1	18 March 2020	EPD	Expansion Site of SWHSTP (Portion C)	Water contamination	Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby The investigation and mitigation measures included - Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River - Arranged to repair the wastewater treatment system - Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity - Clean the slurry sediment released from the outlet regularly by suction trucks - Avoid damage of underground drains and pipes caused by existing construction works - Avoid illegal discharge from the Site into foul drains and manholes	Closed
2	19 February 2021	EPD	SWHEPP	Odour nuisance	Significant odour nuisance was suspected to be emitted from the construction activities of SWHEPP The investigation and mitigation measures included - Ensured only PMEs with valid NRMM label were used on-site - Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart - Used ULSD for diesel-powered equipment - Provided water spraying and water sprinklers system for haul road access and demolition works - Used battery powered solution to provide power to the tower crane - Provided cover for all rubbish bins on-site - Separated general refuse from construction waste	Closed

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
3	9 August 2021	EPD	SWHEPP	Air Quality	Air nuisance was suspected to be originated from the construction activities of SWHEPP The investigation and mitigation measures included - Ensured only PMEs with valid NRMM label were used on-site - Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart - Used ULSD for diesel-powered equipment - Used battery powered solution to provide power to the tower crane - Carried out plant maintenance in a timely manner	Closed
20220304	4 March 2022	EPD	SWHEPP	Odour nuisance	The complainant alleged the odour nuisance was sourced from the construction site of Shek Wu Hui Effluent Polishing Plant on 4 March 2022. Thus, all four contracts (Contract Nos. DC/2018/06, DC/2018/07, DE/2018/03 and DE/2018/04) were involved in the complaint investigation. After investigation, no construction activities undertaken by all four contracts was associated with the odour nuisance received on 4 March 2022. Nevertheless, the contractors were reminded and recommended to: • Ensure only equipment with valid NRMM label is allowed to be used at site and regular maintenance of equipment • Provide regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart • Use ULSD as fuel for diesel-powered equipment • Maintain proper segregation and storage of general refuse	Closed on 22 April 2022 as confirmed with EPD.

Appendix 9.1

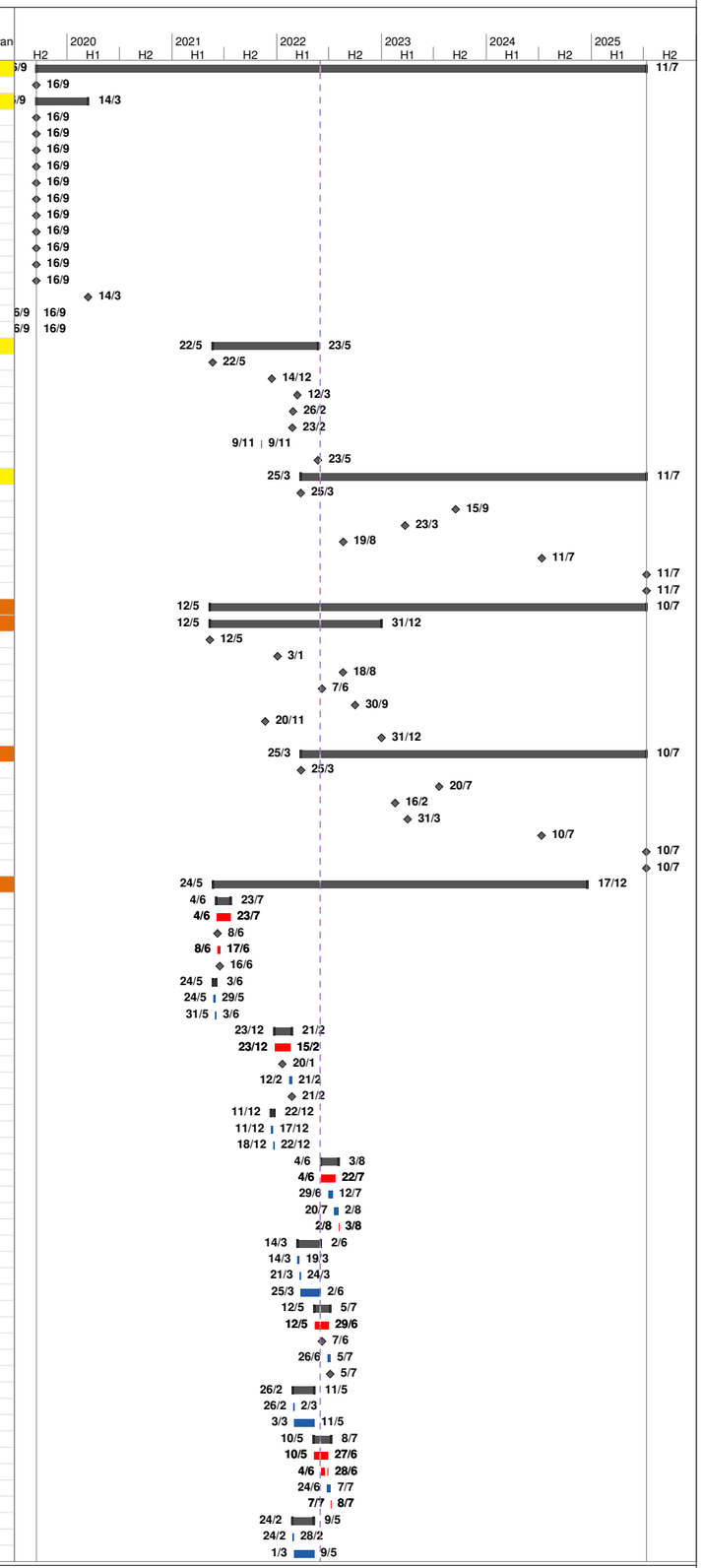
Construction Programme of Individual Contracts

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

Updated Programme (Status Date: 31/07/2022)

群利－俊和聯營體
KL－CW JV

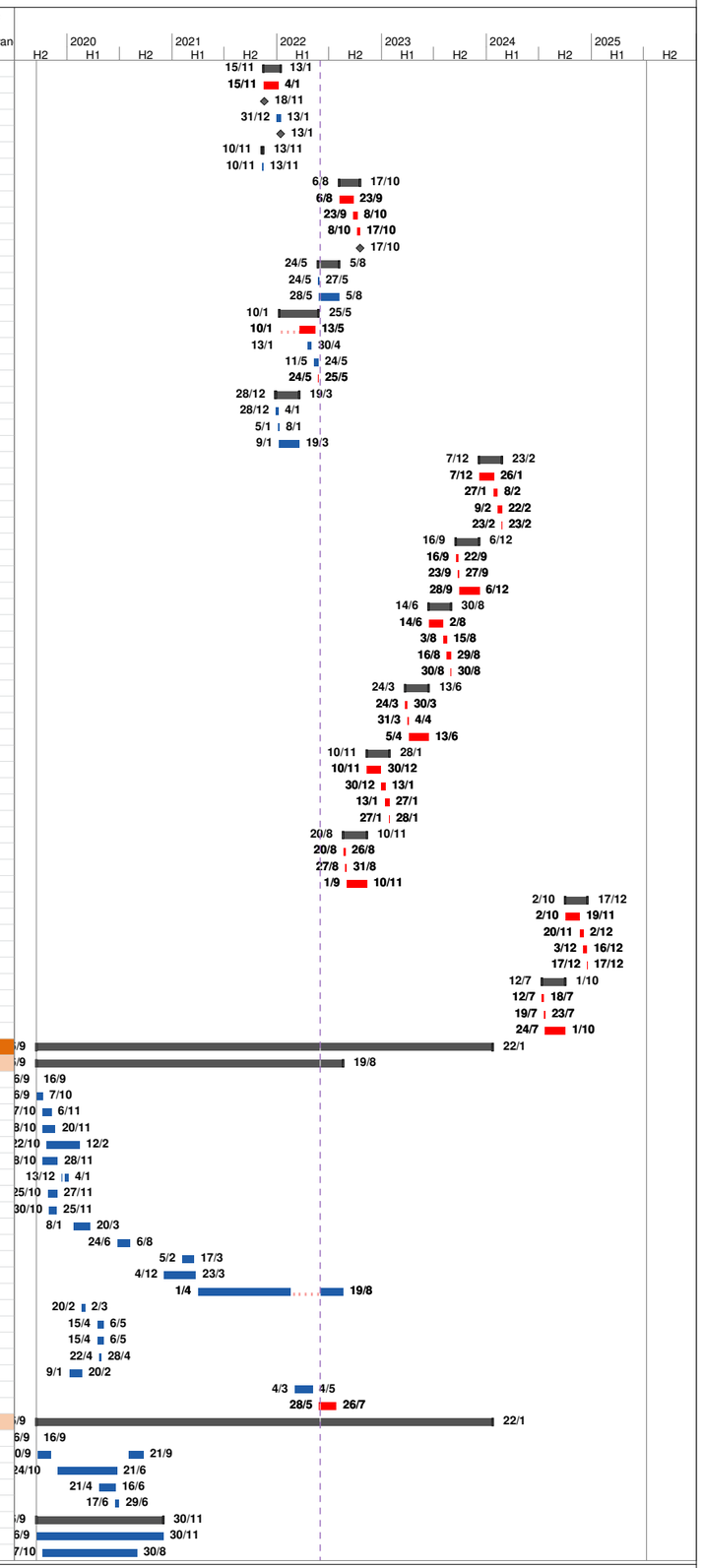
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
1	**CD-00000**		**Contract Dates**			**2126 days**	**Mon 16/9/19**	**Fri 11/7/25**	**Mon 16/9/19**	**NA**			**0%**	
2	CD-01000		Starting Date			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19		4,5FS+181 days,6,7,8,9,11,12,1	100%	
3	**CAD-00000**		**Access Date (cal. day)**			**180 days**	**Mon 16/9/19**	**Sat 14/3/20**	**Mon 16/9/19**	**Sat 14/3/20**			**100%**	
4	CAD-01000		Portion A-1			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
5	CAD-02000		Portion A-2			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2FS+181 days		100%	
6	CAD-03000		Portion C-1A			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
7	CAD-04000		Portion C-1B			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
8	CAD-05000		Portion C-2A			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
9	CAD-06000		Portion C-2B			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
10	CAD-07000		Portion C-2C			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
11	CAD-08000		Portion C-2D			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
12	CAD-09000		Portion C-3			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
13	CAD-10000		Portion C-4			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
14	CAD-11000		Portion C-5			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
15	CAD-12000		Portion C-6			0 days	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	2FS+181 days	519	100%	
16	CAD-13000		Works Area WA1			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
17	CAD-14000		Works Area WA2-A			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
18	**CKD-00000**		**Key Date (cal. day)**			**367 days**	**Sat 22/5/21**	**Mon 23/5/22**	**Sat 22/5/21**	**NA**			**99%**	
19	CKD-01000		KD1A (613.5days after starting date)			0 days	Sat 22/5/21	Sat 22/5/21	Sat 22/5/21	Sat 22/5/21	2FS+614.5 days,36FF	58	100%	
20	CKD-02000		KD2A (820 days after starting date)			0 days	Tue 14/12/21	Tue 14/12/21	Tue 14/12/21	Tue 14/12/21	2FS+821 days,37FF	66	100%	
21	CKD-03000		KD3A (908 days after starting date)			0 days	Sat 12/3/22	Sat 12/3/22	NA	NA	2FS+909 days,38FF	74	0%	
22	CKD-04000		KD3B (894 days after starting date)			0 days	Sat 26/2/22	Sat 26/2/22	Sat 26/2/22	Sat 26/2/22	2FS+895 days,39FF	83	100%	
23	CKD-05000		KD3C (891 days after starting date)			0 days	Wed 23/2/22	Wed 23/2/22	NA	NA	2FS+892 days,40FF	91	0%	
24	CKD-06000		KD3D (785 days after starting date)			1 day	Tue 9/11/21	Tue 9/11/21	Tue 9/11/21	Tue 9/11/21	2FS+786 days,41FF	99	100%	
25	CKD-07000		KD3E (980 days after starting date)			0 days	Mon 23/5/22	Mon 23/5/22	NA	NA	2FS+981 days,42FF	106	0%	
26	**CCD-00000**		**Completion Date (cal. day)**			**1205 days**	**Fri 25/3/22**	**Fri 11/7/25**	**Fri 25/3/22**	**NA**			**0%**	
27	CCD-01000		Section 1 of Works (836 days after starting date)			0 days	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22	2FS+837 days,44FF	114	100%	
28	CCD-02000		Section 2 of Works (1,460 days after starting date)			0 days	Fri 15/9/23	Fri 15/9/23	NA	NA	2FS+1461 days,45FF	123	0%	
29	CCD-03000		Section 3 of Works (1,284 days after starting date)			0 days	Thu 23/3/23	Thu 23/3/23	NA	NA	2FS+1285 days,46FF	132	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	2FS+1069 days,47FF	141	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	2FS+1761 days,48FF	32,33,150	0%	
32	CCD-06000		Defect Liability Period			365 days	Fri 12/7/24	Fri 11/7/25	NA	NA	31		0%	
33	CCD-07000		Soft Landscape Establishment Works			365 days	Fri 12/7/24	Fri 11/7/25	NA	NA	31		0%	
34	**PD-00000**	*	**Planned Completion - Key Date (cal. day)**			**1521 days**	**Wed 12/5/21**	**Thu 10/7/25**	**Wed 12/5/21**	**NA**			**31%**	
35	**PKD-00000**	*	**Planned Completion - Key Dates**			**598 days**	**Wed 12/5/21**	**Sat 31/12/22**	**Wed 12/5/21**	**NA**			**0%**	
36	PKD-01000	KD1A	KD1A			0 days	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	284FF	19FF	100%	
37	PKD-02000	KD2A	KD2A			0 days	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22	623FF	20FF	100%	
38	PKD-03000	KD3A	KD3A			0 days	Thu 18/8/22	Thu 18/8/22	NA	NA	312FF	21FF	0%	
39	PKD-04000	KD3B	KD3B			0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	339FF	22FF	100%	
40	PKD-05000	KD3C	KD3C			0 days	Fri 30/9/22	Fri 30/9/22	NA	NA	362FF	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	394FF	24FF	100%	
42	PKD-07000	KD3E	KD3E			0 days	Sat 31/12/22	Sat 31/12/22	NA	NA	410FF,418FF,426FF,434FF,469FF,4	25FF	0%	
43	**PCD-00000**	*	**Planned Completion - Section of the Works (cal. day)**			**1203 days**	**Fri 25/3/22**	**Thu 10/7/25**	**NA**	**NA**			**0%**	
44	PCD-01000	SW1	Section 1 of Works			0 days	Fri 25/3/22	Fri 25/3/22	NA	NA	516FF,553FF,554FF,555FF,556FF,5	27FF	0%	
45	PCD-02000	SW2	Section 2 of Works			0 days	Thu 20/7/23	Thu 20/7/23	NA	NA	644FF	28FF	0%	
46	PCD-03000	SW3	Section 3 of Works			0 days	Thu 16/2/23	Thu 16/2/23	NA	NA	205FF,364FF,378FF,397FF,419FF,4	589,29FF	0%	
47	PCD-04000	SW4	Section 4 of Works			0 days	Fri 31/3/23	Fri 31/3/23	NA	NA	517FF,546FF,318FF,345FF,365FF,3	30FF	0%	
48	PCD-05000	SW5	Section 5 of Works			0 days	Wed 10/7/24	Wed 10/7/24	NA	NA	290FF,319FF,346FF,366FF,380FF,3	49,50,31FF	0%	
49	PCD-06000	DLP	Defect Liability Period			365 days	Thu 11/7/24	Thu 10/7/25	NA	NA	48		0%	
50	PCD-07000		Soft Landscape Establishment Works			365 days	Thu 11/7/24	Thu 10/7/25	NA	NA	48		0%	
51	**DE-00000**		**Delaying Events Other than Change of Works Information to be considered**			**1055.8 days**	**Mon 24/5/21**	**Tue 17/12/24**	**Mon 24/5/21**	**NA**			**46%**	
52	**IWKD1A-01000**		**Inclement Weather to KD1A**			**41 days**	**Fri 4/6/21**	**Fri 23/7/21**	**Fri 4/6/21**	**NA**			**59%**	
53	IWKD1A-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Fri 4/6/21	Fri 23/7/21	Fri 4/6/21	NA	59	54	51%	
54	IWKD1A-01020		Delay and Disruption of Works for the month of July 2022	(464)		0 days	Tue 8/6/21	Tue 8/6/21	Tue 8/6/21	Tue 8/6/21	53	55	100%	
55	IWKD1A-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			10 days	Tue 8/6/21	Thu 17/6/21	Tue 8/6/21	NA	54	56	90%	
56	IWKD1A-01040	KD1A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			0 days	Wed 16/6/21	Wed 16/6/21	Wed 16/6/21	Wed 16/6/21	55		100%	
57	**OEKD1A-01000**		**Other Events affected to KD1A**			**10 days**	**Mon 24/5/21**	**Thu 3/6/21**	**Mon 24/5/21**	**Thu 3/6/21**			**100%**	
58	OEKD1A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Mon 24/5/21	Sat 29/5/21	Mon 24/5/21	Sat 29/5/21	19	59	100%	
59	OEKD1A-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Mon 31/5/21	Thu 3/6/21	Mon 31/5/21	Thu 3/6/21	58	53	100%	
60	**IWKD2A-01000**		**Inclement Weather to KD2A**			**46 days**	**Thu 23/12/21**	**Mon 21/2/22**	**Thu 23/12/21**	**NA**			**61%**	
61	IWKD2A-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Thu 23/12/21	Tue 15/2/22	Thu 23/12/21	NA	67	62	51%	
62	IWKD2A-01020		Delay and Disruption of Works for the month of July 2022	(464)		0 days	Thu 20/1/22	Thu 20/1/22	Thu 20/1/22	Thu 20/1/22	61	63	100%	
63	IWKD2A-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			10 days	Sat 12/2/22	Mon 21/2/22	Sat 12/2/22	Mon 21/2/22	62	64	100%	
64	IWKD2A-01040	KD2A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			0 days	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22	63		100%	
65	**OEKD2A-01000**		**Other Events affected to KD2A**			**10 days**	**Sat 11/12/21**	**Wed 22/12/21**	**Sat 11/12/21**	**Wed 22/12/21**			**100%**	
66	OEKD2A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 11/12/21	Fri 17/12/21	Sat 11/12/21	Fri 17/12/21	20	67	100%	
67	OEKD2A-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 18/12/21	Wed 22/12/21	Sat 18/12/21	Wed 22/12/21	66	61	100%	
68	**IWKD3A-01000**		**Inclement Weather to KD3A**			**51 days**	**Sat 4/6/22**	**Wed 3/8/22**	**Sat 4/6/22**	**NA**			**69%**	
69	IWKD3A-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Sat 4/6/22	Fri 22/7/22	Sat 4/6/22	NA	76	70	51%	
70	IWKD3A-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Wed 29/6/22	Tue 12/7/22	Wed 29/6/22	Tue 12/7/22	69	71	100%	
71	IWKD3A-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Wed 20/7/22	Tue 2/8/22	Wed 20/7/22	Tue 2/8/22	70	72	100%	
72	IWKD3A-01040	KD3A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Tue 2/8/22	Wed 3/8/22	Tue 2/8/22	NA	71		0%	
73	**OEKD3A-01000**		**Other Events affected to KD3A**			**64 days**	**Mon 14/3/22**	**Thu 2/6/22**	**Mon 14/3/22**	**Thu 2/6/22**			**100%**	
74	OEKD3A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Mon 14/3/22	Sat 19/3/22	Mon 14/3/22	Sat 19/3/22	21	75	100%	
75	OEKD3A-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Mon 21/3/22	Thu 24/3/22	Mon 21/3/22	Thu 24/3/22	74	76	100%	
76	OEKD3A-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Fri 25/3/22	Thu 2/6/22	Fri 25/3/22	Thu 2/6/22	75	69	100%	
77	**IWKD3B-01000**		**Inclement Weather to KD3B**			**45 days**	**Thu 12/5/22**	**Tue 5/7/22**	**Thu 12/5/22**	**NA**			**61%**	
78	IWKD3B-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Thu 12/5/22	Wed 29/6/22	Thu 12/5/22	NA	84	79	51%	
79	IWKD3B-01020		Delay and Disruption of Works for the month of July 2022	(464)		0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	78	80	100%	
80	IWKD3B-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			10 days	Sun 26/6/22	Tue 5/7/22	Sun 26/6/22	Tue 5/7/22	79	81	100%	
81	IWKD3B-01040	KD3B	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			0 days	Tue 5/7/22	Tue 5/7/22	Tue 5/7/22	Tue 5/7/22	80		100%	
82	**OEKD3B-01000**		**Other Events affected to KD3B**			**58 days**	**Sat 26/2/22**	**Wed 11/5/22**	**Sat 26/2/22**	**Wed 11/5/22**			**100%**	
83	OEKD3B-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 26/2/22	Wed 2/3/22	Sat 26/2/22	Wed 2/3/22	22	84	100%	
84	OEKD3B-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Thu 3/3/22	Wed 11/5/22	Thu 3/3/22	Wed 11/5/22	83	78	100%	
85	**IWKD3C-01000**		**Inclement Weather to KD3C**			**50 days**	**Tue 10/5/22**	**Fri 8/7/22**	**Tue 10/5/22**	**NA**			**67%**	
86	IWKD3C-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Tue 10/5/22	Mon 27/6/22	Tue 10/5/22	NA	92	87	51%	
87	IWKD3C-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Sat 4/6/22	Tue 28/6/22	Sat 4/6/22	NA	86	88	91%	
88	IWKD3C-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Fri 24/6/22	Thu 7/7/22	Fri 24/6/22	Thu 7/7/22	87	89	100%	
89	IWKD3C-01040	KD3C	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Thu 7/7/22	Fri 8/7/22	Thu 7/7/22	NA	88		0%	
90	**OEKD3C-01000**		**Other Events affected to KD3C**			**58 days**	**Thu 24/2/22**	**Mon 9/5/22**	**Thu 24/2/22**	**Mon 9/5/22**			**100%**	
91	OEKD3C-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Thu 24/2/22	Mon 28/2/22	Thu 24/2/22	Mon 28/2/22	23	92	100%	
92	OEKD3C-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Tue 1/3/22	Mon 9/5/22	Tue 1/3/22	Mon 9/5/22	91	86	100%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/07/2022)

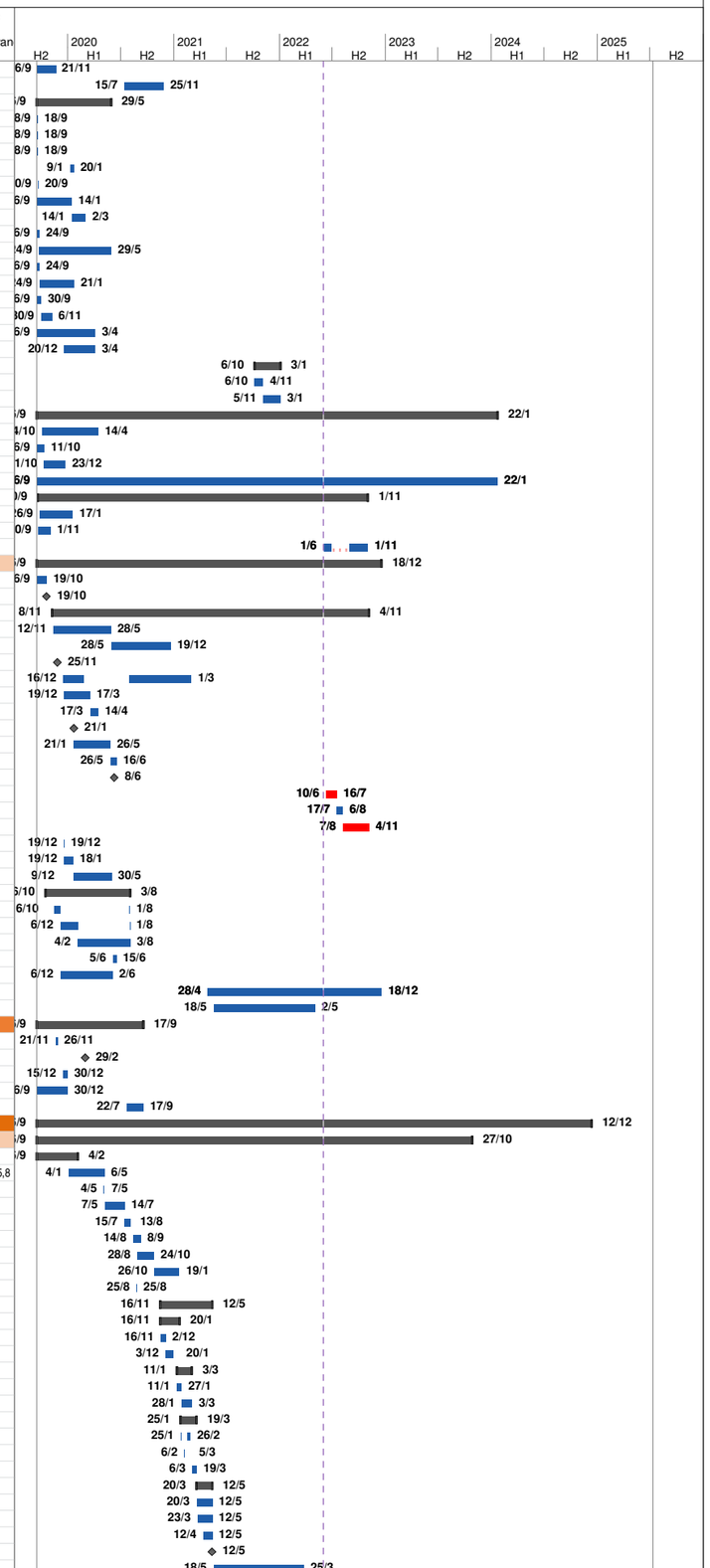
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
93	**IWKD3D-01000**		**Inclement Weather to KD3D**			**49 days**	**Mon 15/11/21**	**Thu 13/1/22**	**Mon 15/11/21**	**NA**			**64%**	
94	IWKD3D-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Mon 15/11/21	Tue 4/1/22	Mon 15/11/21	NA		95	51%	
95	IWKD3D-01020		Delay and Disruption of Works for the month of July 2022	(464)		0 days	Thu 18/11/21	Thu 18/11/21	Thu 18/11/21	Thu 18/11/21	94	96	100%	
96	IWKD3D-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Fri 31/12/21	Thu 13/1/22	Fri 31/12/21	Thu 13/1/22	95	97	100%	
97	IWKD3D-01040	KD3D	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			0 days	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	96		100%	
98	**OEKD3D-01000**		**Other Events affected to KD3D**			**4 days**	**Wed 10/11/21**	**Sat 13/11/21**	**Wed 10/11/21**	**Sat 13/11/21**			**100%**	
99	OEKD3D-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Wed 10/11/21	Sat 13/11/21	Wed 10/11/21	Sat 13/11/21	24		100%	
100	**IWKD3E-01000**		**Inclement Weather to KD3E**			**59 days**	**Sat 6/8/22**	**Mon 17/10/22**	**NA**	**NA**			**0%**	
101	IWKD3E-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Sat 6/8/22	Fri 23/9/22	NA	NA	107	102	0%	
102	IWKD3E-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Fri 23/9/22	Sat 8/10/22	NA	NA	101	103	0%	
103	IWKD3E-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			9 days	Sat 8/10/22	Mon 17/10/22	NA	NA	102	104	0%	
104	IWKD3E-01040	KD3E	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			0 days	Mon 17/10/22	Mon 17/10/22	NA	NA	103		0%	
105	**OEKD3E-01000**		**Other Events affected to KD3E**			**62 days**	**Tue 24/5/22**	**Fri 5/8/22**	**Tue 24/5/22**	**Fri 5/8/22**			**100%**	
106	OEKD3E-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Tue 24/5/22	Fri 27/5/22	Tue 24/5/22	Fri 27/5/22	25	107	100%	
107	OEKD3E-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Sat 28/5/22	Fri 5/8/22	Sat 28/5/22	Fri 5/8/22	106	101	100%	
108	**IWSW1-01000**		**Inclement Weather to Section 1 of the Works**			**108 days**	**Mon 10/1/22**	**Wed 25/5/22**	**Mon 10/1/22**	**NA**			**69%**	
109	IWSW1-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Mon 10/1/22	Fri 13/5/22	Mon 10/1/22	NA	116	110	51%	
110	IWSW1-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Thu 13/1/22	Sat 30/4/22	Thu 13/1/22	Sat 30/4/22	109	111	100%	
111	IWSW1-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Wed 11/5/22	Tue 24/5/22	Wed 11/5/22	Tue 24/5/22	110	112	100%	
112	IWSW1-01040	SW1	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Tue 24/5/22	Wed 25/5/22	Tue 24/5/22	NA	111		0%	
113	**OESW1-01000**		**Other Events affected to Section 1 of the Works**			**67 days**	**Tue 28/12/21**	**Sat 19/3/22**	**Tue 28/12/21**	**Sat 19/3/22**			**100%**	
114	OESW1-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Tue 28/12/21	Tue 4/1/22	Tue 28/12/21	Tue 4/1/22	27	115	100%	
115	OESW1-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Wed 5/1/22	Sat 8/1/22	Wed 5/1/22	Sat 8/1/22	114	116	100%	
116	OESW1-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Sun 9/1/22	Sat 19/3/22	Sun 9/1/22	Sat 19/3/22	115	109	100%	
117	**IWSW2-01000**		**Inclement Weather to Section 2 of the Works**			**62 days**	**Thu 7/12/23**	**Fri 23/2/24**	**NA**	**NA**			**0%**	
118	IWSW2-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Thu 7/12/23	Fri 26/1/24	NA	NA	125	119	0%	
119	IWSW2-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Sat 27/1/24	Thu 8/2/24	NA	NA	118	120	0%	
120	IWSW1-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Fri 9/2/24	Thu 22/2/24	NA	NA	119	121	0%	
121	IWSW1-01040	SW2	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Fri 23/2/24	Fri 23/2/24	NA	NA	120		0%	
122	**OESW2-01000**		**Other Events affected to Section 2 of the Works**			**67 days**	**Sat 16/9/23**	**Wed 6/12/23**	**NA**	**NA**			**0%**	
123	OESW2-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 16/9/23	Fri 22/9/23	NA	NA	28	124	0%	
124	OESW2-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 23/9/23	Wed 27/9/23	NA	NA	123	125	0%	
125	OESW2-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Thu 28/9/23	Wed 6/12/23	NA	NA	124	118	0%	
126	**IWSW3-01000**		**Inclement Weather to Section 3 of the Works**			**65 days**	**Wed 14/6/23**	**Wed 30/8/23**	**NA**	**NA**			**0%**	
127	IWSW3-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Wed 14/6/23	Wed 2/8/23	NA	NA	134	128	0%	
128	IWSW3-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Thu 3/8/23	Tue 15/8/23	NA	NA	127	129	0%	
129	IWSW3-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Wed 16/8/23	Tue 29/8/23	NA	NA	128	130	0%	
130	IWSW3-01040	SW3	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Wed 30/8/23	Wed 30/8/23	NA	NA	129		0%	
131	**OESW3-01000**		**Other Events affected to Section 3 of the Works**			**64 days**	**Fri 24/3/23**	**Tue 13/6/23**	**NA**	**NA**			**0%**	
132	OESW3-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Fri 24/3/23	Thu 30/3/23	NA	NA	29	133	0%	
133	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	132	134	0%	
134	OESW3-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Wed 5/4/23	Tue 13/6/23	NA	NA	133	127	0%	
135	**IWSW4-01000**		**Inclement Weather to Section 4 of the Works**			**62 days**	**Thu 10/11/22**	**Sat 28/1/23**	**NA**	**NA**			**0%**	
136	IWSW4-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Thu 10/11/22	Fri 30/12/22	NA	NA	143	137	0%	
137	IWSW4-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Fri 30/12/22	Fri 13/1/23	NA	NA	136	138	0%	
138	IWSW4-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Fri 13/1/23	Fri 27/1/23	NA	NA	137	139	0%	
139	IWSW4-01040	SW4	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Fri 27/1/23	Sat 28/1/23	NA	NA	138		0%	
140	**OESW4-01000**		**Other Events affected to Section 4 of the Works**			**68 days**	**Sat 20/8/22**	**Thu 10/11/22**	**NA**	**NA**			**0%**	
141	OESW4-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 20/8/22	Fri 26/8/22	NA	NA	30	142	0%	
142	OESW4-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 27/8/22	Wed 31/8/22	NA	NA	141	143	0%	
143	OESW4-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Thu 1/9/22	Thu 10/11/22	NA	NA	142	136	0%	
144	**IWSW5-01000**		**Inclement Weather to Section 5 of the Works**			**65 days**	**Wed 2/10/24**	**Tue 17/12/24**	**NA**	**NA**			**0%**	
145	IWSW5-01010		Delay and Disruption of Works before July 2022	(437),		41 days	Wed 2/10/24	Tue 19/11/24	NA	NA	152	146	0%	
146	IWSW5-01020		Delay and Disruption of Works for the month of July 2022	(477)		11 days	Wed 20/11/24	Mon 2/12/24	NA	NA	145	147	0%	
147	IWSW5-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before July 2022			14 days	Tue 3/12/24	Mon 16/12/24	NA	NA	146	148	0%	
148	IWSW5-01040	SW5	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for July 2022			1 day	Tue 17/12/24	Tue 17/12/24	NA	NA	147		0%	
149	**OESW5-01000**		**Other Events affected to Section 5 of the Works**			**68 days**	**Fri 12/7/24**	**Tue 1/10/24**	**NA**	**NA**			**0%**	
150	OESW5-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Fri 12/7/24	Thu 18/7/24	NA	NA	31	151	0%	
151	OESW5-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Fri 19/7/24	Tue 23/7/24	NA	NA	150	152	0%	
152	OESW5-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Wed 24/7/24	Tue 1/10/24	NA	NA	151	145	0%	
153	**SUB-00000**		**Submissions (cal. day)**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**			**90%**	
154	**SUBS-00000**		**Subletting Package**			**1069 days**	**Mon 16/9/19**	**Fri 19/8/22**	**Mon 16/9/19**	**NA**			**88%**	
155	SUBS-01000		Prepare & Submit Subletting Procedures			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2	156	100%	
156	SUBS-02000		PM Review & Accept Subletting Procedures			21 days	Mon 16/9/19	Mon 7/10/19	Mon 16/9/19	Mon 7/10/19	155	158,160,157,159,168,174,169,1	100%	
157	SUBS-03000		Subletting for Preliminary Works (Instrumentation Monitoring etc.)			30 days	Mon 7/10/19	Wed 6/11/19	Mon 7/10/19	Wed 6/11/19	156		100%	
158	SUBS-04000		Subletting for Drainage Diversion Works for UV System no.1& Effluent Pumping Station No.1 (NCE no. 3)			44 days	Tue 8/10/19	Wed 20/11/19	Tue 8/10/19	Wed 20/11/19	156	512	100%	
159	SUBS-05000		Subletting for the Temporary Site accommodation			114 days	Tue 22/10/19	Wed 12/2/20	Tue 22/10/19	Wed 12/2/20	156	248	100%	
160	SUBS-06000		Subletting for Pre-drilling Works (NCE no.3)			52 days	Tue 8/10/19	Thu 28/11/19	Tue 8/10/19	Thu 28/11/19	156	161SS+15 days,162SS+15 days	100%	
161	SUBS-07000		Subletting for Pre-bored Socketed Steel H-Pile			14 days	Fri 13/12/19	Sat 4/1/20	Fri 13/12/19	Sat 4/1/20	160SS+15 days	601,299,327,352,372,386,406,2	100%	
162	SUBS-08000		Subletting for Contractor's Designer for Temporary Works (NCE no.3)			32 days	Fri 25/10/19	Wed 27/11/19	Fri 25/10/19	Wed 27/11/19	160SS+15 days	166,164,179,171,165	100%	
163	SUBS-09000		Subletting for Independent Checking Engineer (NCE no.3)			27 days	Wed 30/10/19	Mon 25/11/19	Wed 30/10/19	Mon 25/11/19	156	266,304,330SS,354,375,388,60	100%	
164	SUBS-10000		Subletting for Sheetpile and ELS Works	17		58 days	Wed 8/1/20	Fri 20/3/20	Wed 8/1/20	Fri 20/3/20	162	266,304,330SS,354,375,388,40	100%	
165	SUBS-11000		Subletting for R.C Works (Portion A and UV no.1 building only)	33, 45, 46		44 days	Wed 24/6/20	Thu 6/8/20	Wed 24/6/20	Thu 6/8/20	162	269	100%	
166	SUBS-12000		Subletting for R.C Works (remaining buildings)	268, 338		41 days	Fri 5/2/21	Wed 17/3/21	Fri 5/2/21	Wed 17/3/21	162	356,607,417,434,447,462,476,4	100%	
167	SUBS-13000		Subletting for Waterproofing for Structures	(112), 268,338		110 days	Fri 4/12/20	Tue 23/3/21	Fri 4/12/20	Tue 23/3/21	2	272,275,278,378,306	100%	
168	SUBS-14000		Subletting for ABWF & BS Works	268 , 338,		400 days	Thu 1/4/21	Fri 19/8/22	Thu 1/4/21	NA	156	285SS,317SS,344SS,364SS,37	80%	
169	SUBS-15000		Subletting for External Works including pipeworks and road works for UV System no.1 (Diversion)			12 days	Thu 20/2/20	Mon 2/3/20	Thu 20/2/20	Mon 2/3/20	156	512,170	100%	
170	SUBS-16000		Subletting for Drainage and Pipe works at UV System no.1	21		22 days	Wed 15/4/20	Wed 6/5/20	Wed 15/4/20	Wed 6/5/20	169		100%	
171	SUBS-17000		Subletting for Pipeworks, Utilities, and Roadworks	21		22 days	Wed 15/4/20	Wed 6/5/20	Wed 15/4/20	Wed 6/5/20	162	547	100%	
172	SUBS-18000		Subletting for trenchless construction	21		7 days	Wed 22/4/20	Tue 28/4/20	Wed 22/4/20	Tue 28/4/20	156	519	100%	
173	SUBS-19000		Subletting for Traffic Management Consultant			43 days	Thu 9/1/20	Thu 20/2/20	Thu 9/1/20	Thu 20/2/20	156	186	100%	
174	SUBS-20000		Subletting for Hard Landscape and Soft Landscape			60 days	Fri 4/3/22	Wed 4/5/22	Fri 4/3/22	Wed 4/5/22	156	590,582,583,584	100%	
175	SUBS-21000		Subletting for Pai Lau Detail Design			60 days	Sat 28/5/22	Tue 26/7/22	Sat 28/5/22	NA			0%	
176	**SUBA-00000**		**Statutory Submission, Submission & Approval**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**			**90%**	
177	SUBA-01000		Prepare and Submit Subcontractor Management Plan (SMP)			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2	295	100%	
178	SUBA-02000		Prepare, submit & approve the layout plan of the Temporary Site accommodation			97.9 days	Fri 20/9/19	Mon 21/9/20	Fri 20/9/19	Mon 21/9/20	2	248	100%	
179	SUBA-03000		Prepare, submit & accept the ELS design for deep excavation	17, 25, 27, 32		207 days	Thu 24/10/19	Sun 21/6/20	Thu 24/10/19	Sun 21/6/20	162	266,304,330SS,354,375,388,40	100%	
180	SUBA-04000		Prepare, submit & accept the Method Statement for Drainage Diversion Works	21, 22, 33		57 days	Tue 21/4/20	Tue 16/6/20	Tue 21/4/20	Tue 16/6/20	2	181,512	100%	
181	SUBA-05000		PM approve the Method Statement for Drainage Diversion Works			13 days	Wed 17/6/20	Mon 29/6/20	Wed 17/6/20	Mon 29/6/20	180	512	100%	
182	SUBA-06000		TTA Management			442 days	Mon 16/9/19	Mon 30/11/20	Mon 16/9/19	Mon 30/11/20			100%	
183	SUBA-06010		Excavation Permit Application for San Wan Road (Portion A)			442 days	Mon 16/9/19	Mon 30/11/20	Mon 16/9/19	Mon 30/11/20		625	100%	
184	SUBA-06020		Excavation Permit Application for Chuk Wan Street (Portion C)			329 days	Mon 7/10/19	Sun 30/8/20	Mon 7/10/19	Sun 30/8/20	2FS+21 days		100%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/07/2022)

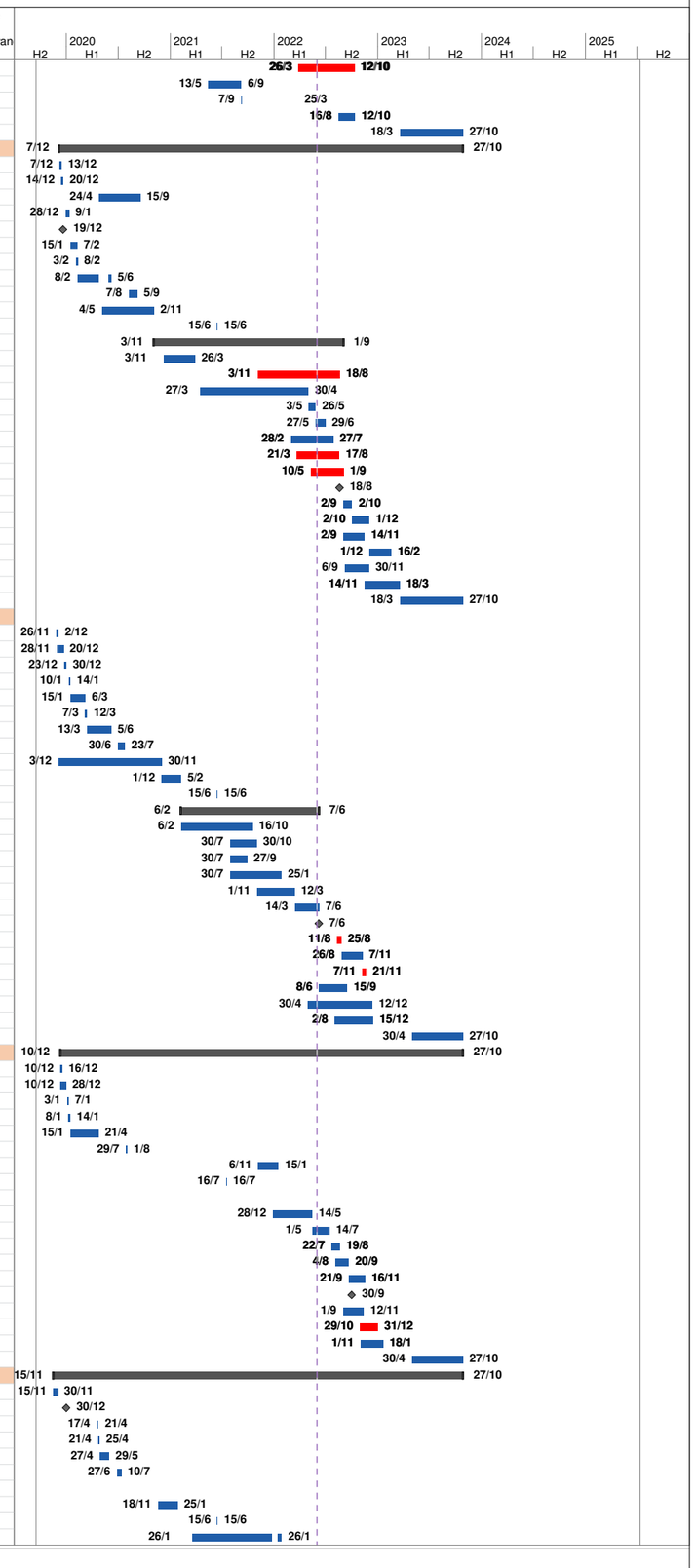
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
185	SUBA-06030		Prepare TTA Plan, submit & approve for footpath for Stage 1 - Drainage Diversion			67 days	Mon 16/9/19	Thu 21/11/19	Mon 16/9/19	Thu 21/11/19	2	512	100%	
186	SUBA-06040		Prepare TTA Plan, submit & approve for carriageway at San Wan Road for CLP 13kV substation			134 days	Wed 15/7/20	Wed 25/11/20	Wed 15/7/20	Wed 25/11/20	173	627	100%	
187	**SUBA-07000**		**Environmental Aspect Submissions**			**257 days**	**Mon 16/9/19**	**Fri 29/5/20**	**Mon 16/9/19**	**Fri 29/5/20**	**2**		**100%**	
188	SUBA-07010		Notification to EPD for Works Commencement			1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	2	295	100%	
189	SUBA-07020		Apply & approve for Registration as a Chemical Waste Producer			1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	2	295	100%	
190	SUBA-07030		Apply & approve for a Billing Account for Disposal of Construction Waste			1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	2	295	100%	
191	SUBA-07040		Apply & approve for Effluent Discharge Licence			12 days	Thu 9/1/20	Mon 20/1/20	Thu 9/1/20	Mon 20/1/20	2	295	100%	
192	SUBA-07050		Prepare & submit of Project Layout Plan & O-Chart for EP			1 day	Fri 20/9/19	Fri 20/9/19	Fri 20/9/19	Fri 20/9/19	2	295	100%	
193	SUBA-07060		Prepare & submit Construction Noise Permits			121 days	Mon 16/9/19	Tue 14/1/20	Mon 16/9/19	Tue 14/1/20	2	194	100%	
194	SUBA-07070		Approval of Construction Noise Permits			48 days	Tue 14/1/20	Mon 2/3/20	Tue 14/1/20	Mon 2/3/20	193	295	100%	
195	SUBA-07080		Prepare, submit Site Management Plan for Trip Ticket System			9 days	Mon 16/9/19	Tue 24/9/19	Mon 16/9/19	Tue 24/9/19	2		100%	
196	SUBA-07090		Approval of Site Management Plan for Trip Ticket System			249 days	Tue 24/9/19	Fri 29/5/20	Tue 24/9/19	Fri 29/5/20		295	100%	
197	SUBA-07100		Prepare & submit approve Waste Management Plan			9 days	Mon 16/9/19	Tue 24/9/19	Mon 16/9/19	Tue 24/9/19	2	198	100%	
198	SUBA-07110		Approval of Waste Management Plan			119 days	Tue 24/9/19	Tue 21/1/20	Tue 24/9/19	Tue 21/1/20	197	295	100%	
199	SUBA-07120		Prepare & submit Environmental Management Plan			15 days	Mon 16/9/19	Mon 30/9/19	Mon 16/9/19	Mon 30/9/19	2	200	100%	
200	SUBA-07130		Approval of Environmental Management Plan			37 days	Mon 30/9/19	Wed 6/11/19	Mon 30/9/19	Wed 6/11/19	199	295	100%	
201	SUBA-07140		Prepare& submit for Temporary Drainage and Management Plan			201 days	Mon 16/9/19	Fri 3/4/20	Mon 16/9/19	Fri 3/4/20	2	202	100%	
202	SUBA-07150		Approval of Temporary Drainage and Management Plan			106 days	Fri 20/12/19	Fri 3/4/20	Fri 20/12/19	Fri 3/4/20	201	512	100%	
203	SUBA-08000		Prepare, submit & approve for the FSD submissions for CLP 132kV Substation			90 days	Wed 6/10/21	Mon 3/1/22	Wed 6/10/21	Mon 3/1/22			100%	
204	SUBA-08010		Prepare and submit arrangement and schedule to FSD			30 days	Wed 6/10/21	Thu 4/11/21	Wed 6/10/21	Thu 4/11/21	205SS-1 emon		100%	
205	SUBA-08020		FSD approve the arrangement and schedule			60 days	Fri 5/11/21	Mon 3/1/22	Fri 5/11/21	Mon 3/1/22	622SS-2 emons	46FF,204SS-1 emon	100%	
206	**SUBA-09000**		**Trees Related Submissions**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**			**78%**	
207	SUBA-09010		Initial Tree survey and report submission			194 days	Fri 4/10/19	Tue 14/4/20	Fri 4/10/19	Tue 14/4/20	2	245	100%	
208	SUBA-09020		Prepare and submit and approve the Method Statement of Erection of the protective fencing			26 days	Mon 16/9/19	Fri 11/10/19	Mon 16/9/19	Fri 11/10/19	2	245	100%	
209	SUBA-09030		Prepare and submit and approve the Method Statement of Tree felling, Preservation, Prunning works &			74 days	Fri 11/10/19	Mon 23/12/19	Fri 11/10/19	Mon 23/12/19	2	245,294	100%	
210	SUBA-09040		Submit Yearly Tree Risk Assessment and Inspection Report			1590 days	Mon 16/9/19	Mon 22/1/24	Mon 16/9/19	NA	2		75%	
211	**SUBA-10000**		**Others**			**1138.2 days**	**Fri 20/9/19**	**Tue 1/11/22**	**Fri 20/9/19**	**NA**			**74%**	
212	SUBA-10010		Approval for Lighting Removal at Portion C-1A of the Site from Hyd			114 days	Thu 26/9/19	Fri 17/1/20	Thu 26/9/19	Fri 17/1/20	2	258	100%	
213	SUBA-10020		Prepare, submit & approve for commencement of Works near MTRCL protection zone at Sun Wan Road from			43 days	Fri 20/9/19	Fri 1/11/19	Fri 20/9/19	Fri 1/11/19	2	598	100%	
214	SUBA-10030		Prepare, submit & approve for commencement Works along the riverbank by DSD			90 days	Wed 1/6/22	Tue 1/11/22	Wed 1/6/22	NA		585,586,588,587	30%	
215	**SUBP-00000**		**Procurement**			**1190 days**	**Mon 16/9/19**	**Sun 18/12/22**	**Mon 16/9/19**	**NA**			**90%**	
216	SUBP-01000		Prepare and submit the Procurement Procedure			34 days	Mon 16/9/19	Sat 19/10/19	Mon 16/9/19	Sat 19/10/19	2	217	100%	
217	SUBP-02000		PM Review & Accept Procurement Procedure			0 days	Sat 19/10/19	Sat 19/10/19	Sat 19/10/19	Sat 19/10/19	216	218,235,239,240,241,242,246	100%	
218	SUBP-03000		Pipe works material			1093 days	Fri 8/11/19	Fri 4/11/22	Fri 8/11/19	NA	217		89%	
219	SUBP-03010		Prepare & submit concrete pipe material particular			199 days	Tue 12/11/19	Thu 28/5/20	Tue 12/11/19	Thu 28/5/20	2	220	100%	
220	SUBP-03020		Approval of concrete pipe material			205 days	Thu 28/5/20	Sat 19/12/20	Thu 28/5/20	Sat 19/12/20	219	221	100%	
221	SUBP-03030		Procurement, deliver & testing of concrete pipe material (1st batch)			0 days	Fri 8/11/19	Mon 25/11/19	Fri 8/11/19	Mon 25/11/19	220	511,512	100%	
222	SUBP-03040		Procurement, deliver & testing of concrete pipe material (remaining)			285 days	Mon 16/12/19	Mon 1/3/21	Mon 16/12/19	Mon 1/3/21			100%	
223	SUBP-03050		Prepare & submit ductile iron pipe material particular			90 days	Thu 19/12/19	Tue 17/3/20	Thu 19/12/19	Tue 17/3/20	2	224	100%	
224	SUBP-03060		Approval of ductile iron pipe material			28 days	Tue 17/3/20	Tue 14/4/20	Tue 17/3/20	Tue 14/4/20	223	225	100%	
225	SUBP-03070		Procurement, deliver & testing of ductile iorn pipe material			0 days	Wed 18/12/19	Tue 21/1/20	Wed 18/12/19	Tue 21/1/20	224		100%	
226	SUBP-03080		Prepare & submit HDPE pipe material particular			127 days	Tue 21/1/20	Tue 26/5/20	Tue 21/1/20	Tue 26/5/20	2FS+120 days	227	100%	
227	SUBP-03090		Approval of HDPE pipe material			21 days	Tue 26/5/20	Tue 16/6/20	Tue 26/5/20	Tue 16/6/20	226	228	100%	
228	SUBP-03100		Procurement, deliver & testing of HDPE pipe material			0 days	Fri 8/5/20	Mon 8/6/20	Fri 8/5/20	Mon 8/6/20	227		100%	
229	SUBP-03110		Prepare & submit stainless steel pipe material particular			37 days	Fri 10/6/22	Sat 16/7/22	Fri 10/6/22	NA	2	230	19%	
230	SUBP-03120		Approval of stainless steel pipe material			21 days	Sun 17/7/22	Sat 6/8/22	NA	NA	229	231	0%	
231	SUBP-03130		Procurement, deliver & testing of stainless steel pipe material			90 days	Sun 7/8/22	Fri 4/11/22	NA	NA	230		0%	
232	SUBP-03140		Prepare & submit mild steel steel pipe material particular			1 day	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	2	233	100%	
233	SUBP-03150		Approval of mild steel pipe material			30 days	Thu 19/12/19	Sat 18/1/20	Thu 19/12/19	Sat 18/1/20	232	234	100%	
234	SUBP-03160		Procurement, deliver & testing of mild steel pipe material			133 days	Mon 9/12/19	Sat 30/5/20	Mon 9/12/19	Sat 30/5/20	233		100%	
235	**SUBP-04000**		**Prefabricated steel reinforcement**			**292.61 days**	**Wed 16/10/19**	**Mon 3/8/20**	**Wed 16/10/19**	**Mon 3/8/20**	**217**		**100%**	
236	SUBP-04010		Prepare & submit steel reinforcement material particular			21 days	Wed 16/10/19	Sat 1/8/20	Wed 16/10/19	Sat 1/8/20	2FS+60 days	237	100%	
237	SUBP-04020		Approval of prefabricated steel reinforcement material supplier			60 days	Fri 6/12/19	Sat 1/8/20	Fri 6/12/19	Sat 1/8/20	236	238	100%	
238	SUBP-04030		Procurement, deliver & testing of prefabricated steel reinforcement material			180 days	Tue 4/2/20	Mon 3/8/20	Tue 4/2/20	Mon 3/8/20	237	607,462,447,434,417,391,356,3	100%	
239	SUBP-05000		Prepare, submit and approve the water proofing material			11 days	Fri 5/6/20	Mon 15/6/20	Fri 5/6/20	Mon 15/6/20	217	332,356,607,377	100%	
240	SUBP-06000		Prepare, submit and approve the concrete mix			180 days	Fri 6/12/19	Tue 2/6/20	Fri 6/12/19	Tue 2/6/20	217	332,356,607,377	100%	
241	SUBP-07000		Prepare, submit and approve the metal works material			600 days	Wed 28/4/21	Sun 18/12/22	Wed 28/4/21	NA	217		80%	
242	SUBP-08000		Prepare, submit and approve the ABWF works material			350 days	Tue 18/5/21	Mon 2/5/22	Tue 18/5/21	Mon 2/5/22	217	285SS,317SS,344SS,364SS,37	100%	
243	**CPW-00000**		**Site Preliminary Works**			**300 days**	**Mon 16/9/19**	**Thu 17/9/20**	**Mon 16/9/19**	**Thu 17/9/20**			**100%**	
244	CPW-01000		Mobilization for Hoarding			5 days	Thu 21/11/19	Tue 26/11/19	Thu 21/11/19	Tue 26/11/19	2	245	100%	
245	CPW-02000		Hoarding Erection at Portion C			0 days	Wed 27/11/19	Sat 29/2/20	Wed 27/11/19	Sat 29/2/20	244,207,208,209,246,163		100%	
246	CPW-03000		Project Signboard Erection			11 days	Sun 15/12/19	Mon 30/12/19	Sun 15/12/19	Mon 30/12/19	217	245	100%	
247	CPW-04000		Utility applications and Connection			87 days	Mon 16/9/19	Mon 30/12/19	Mon 16/9/19	Mon 30/12/19	2	248FF	100%	
248	CPW-05000		Construction of Site Accommodation in Works Area (MIC)			50 days	Wed 22/7/20	Thu 17/9/20	Wed 22/7/20	Thu 17/9/20	178,247FF,159		100%	
249	**CWPC-00000**	*	**Construction Works of Portion C of the Site**			**1548 days?**	**Mon 16/9/19**	**Thu 12/12/24**	**Mon 16/9/19**	**NA**			**41%**	
250	**CUV1-00000**	*	**UV System No. 1 & Effluent Pumping Station No. 1 (1)**			**1219 days**	**Mon 16/9/19**	**Fri 27/10/23**	**Mon 16/9/19**	**NA**			**74%**	
251	**CUV1-01000**		**Preliminary Works**			**114 days**	**Mon 16/9/19**	**Tue 4/2/20**	**Mon 16/9/19**	**Tue 4/2/20**			**100%**	
261	CUV1-02000		Sheetpile Installation (FSP IV, 2200sq.m, 1 Rig)- stage 1	17, 21	23	97 days	Sat 4/1/20	Wed 6/5/20	Sat 4/1/20	Wed 6/5/20	260	263,265	100%	6.5,2.5,8
262	CUV1-03000		Setting up plant for pre-bored socked H-pile Installation			0 days	Mon 4/5/20	Thu 7/5/20	Mon 4/5/20	Thu 7/5/20	260,263SS-5 days		100%	
263	CUV1-04000		Pre-bored Socketed H-Pile Installation (34 Nos, 1 Rig, 3days/rig/pile)	22, 33, 45	23, 24/27, 26, (10)	57 days	Thu 7/5/20	Tue 14/7/20	Thu 7/5/20	Tue 14/7/20	161,514,261	264,385,262SS-5 days,545	100%	40
264	CUV1-05000		Pile Loading Test	45, 46		26 days	Wed 15/7/20	Thu 13/8/20	Wed 15/7/20	Thu 13/8/20	263,373FS+5 days	407FS+5 days,265	100%	
265	CUV1-06000		Sheetpile Installation (FSP IV, 2200sq.m, 1 Rig)- stage 2	46, 257	26	22 days	Fri 14/8/20	Tue 8/9/20	Fri 14/8/20	Tue 8/9/20	264,261	266FS-10 days	100%	17
266	CUV1-07000		ELS Works (incl. Strut (4-layers) Installation & Excavation (3,700 cu.m)	46, 257, 258,	26, (34)	48 days	Fri 28/8/20	Sat 24/10/20	Fri 28/8/20	Sat 24/10/20	179,164,163,265FS-10 days	267,268FF-2 emons	100%	8
267	*CUV1-08000*		*Additional Sump Pits*	*258, (92), (112)*	*(77)*	*70 days*	*Mon 26/10/20*	*Tue 19/1/21*	*Mon 26/10/20*	*Tue 19/1/21*	*266*	*271*	*100%*	*15,2*
268	CUV1-08900		Receiving of Civil Requirements from PM		(275), (366)	1 day	Tue 25/8/20	Tue 25/8/20	Tue 25/8/20	Tue 25/8/20	266FF-2 emons	269SS-2 emons	100%	
269	**CUV1-09000**		**R.C. Structure (370sq.m) - Revised Structural Layout**		**288**	**142 days**	**Mon 16/11/20**	**Wed 12/5/21**	**Mon 16/11/20**	**Wed 12/5/21**	**165,268SS-2 emons**		**100%**	
270	**CUV1-09010**		**Below Ground Level Stage no.1 @ -1.10mPD**			**54 days**	**Mon 16/11/20**	**Wed 20/1/21**	**Mon 16/11/20**	**Wed 20/1/21**			**100%**	**5**
271	CUV1-09011		Base slab Construction (162 sq.m)	(92)	24/27, 224, (38), (46), (48), (64), (72	15 days	Mon 16/11/20	Wed 2/12/20	Mon 16/11/20	Wed 2/12/20	267	272	100%	
272	CUV1-09012		Walls and Slabs Construction @-1.10mPD to +2.50mPD [CHAX puddle (DN 1200 -> DN1600)	(112)	(38), (46), (48), (100)	39 days	Thu 3/12/20	Wed 20/1/21	Thu 3/12/20	Wed 20/1/21	271,167	274SS+30 days	100%	
273	**CUV1-09020**		**Below Ground Level Stage no.2 @ +1.50mPD**			**42 days**	**Mon 11/1/21**	**Wed 3/3/21**	**Mon 11/1/21**	**Wed 3/3/21**			**100%**	**5**
274	CUV1-09021		Base slab Construction (170sq.m)		(114), (115)	15 days	Mon 11/1/21	Wed 27/1/21	Mon 11/1/21	Wed 27/1/21	272SS+30 days	275	100%	
275	CUV1-09022		Walls and Slabs Construction @+1.5mPD to +4.9mPD [Additional CHA & CHL puddle (DN350), Additional CHLA	268	(38), (46), (100), (108), (114), (115),	27 days	Thu 28/1/21	Wed 3/3/21	Thu 28/1/21	Wed 3/3/21	274,167	277SS+14 days,515	100%	33
276	**CUV1-09030**		**Below Ground Level Stage no.3 @ +3.80mPD**			**44 days**	**Mon 25/1/21**	**Fri 19/3/21**	**Mon 25/1/21**	**Fri 19/3/21**			**100%**	**5**
277	CUV1-09031		Base slab Construction (15 sq.m + 40 sq.m) (NCE no. 0083,114)		(115)	25.25 days	Mon 25/1/21	Fri 26/2/21	Mon 25/1/21	Fri 26/2/21	275SS+14 days	278	100%	14
278	CUV1-09032		Walls and Slabs Construction @+3.80mPD to +7.4mPD [CHAW puddle (DN1200-> DN1400), CHBA puddle (DN	268, 338	(38), (46), (100), (108), (115), (120),	21 days	Sat 6/2/21	Fri 5/3/21	Sat 6/2/21	Fri 5/3/21	167,277	279,281	100%	21
279	CUV1-09033		Extraction of Sheetpiles	338		12 days	Sat 6/3/21	Fri 19/3/21	Sat 6/3/21	Fri 19/3/21	278		100%	
280	**CUV1-09040**		**Above Ground Level @ +7.4mPD**			**41 days**	**Sat 20/3/21**	**Wed 12/5/21**	**Sat 20/3/21**	**Wed 12/5/21**			**100%**	**4**
281	CUV1-09041	KD1A	Walls, Slabs and staircase Construction @+7.4mPD to 16.4mPD [Additional SP1-3 puddle (DN100 x 2 & DN80)	(204),(228)	(108), (146), (148), (179), (182)	41 days	Sat 20/3/21	Wed 12/5/21	Sat 20/3/21	Wed 12/5/21	278	284,285,283,287	100%	
282	CUV1-10000	KD1A	Construction of Switch room	(204),(228)		51 days	Tue 23/3/21	Wed 12/5/21	Tue 23/3/21	Wed 12/5/21			100%	
283	CUV1-10900		Additional slab and beam for external staircase		288, (197)	26 days	Mon 12/4/21	Wed 12/5/21	Mon 12/4/21	Wed 12/5/21	281	552	100%	
284	**CUV1-11000**	**KD1A**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Wed 12/5/21**	**Wed 12/5/21**	**Wed 12/5/21**	**Wed 12/5/21**	**281**	**36FF**	**100%**	
285	CUV1-12000	SW1	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining		(95), (296), (367), 359	256 days	Tue 18/5/21	Fri 25/3/22	Tue 18/5/21	Fri 25/3/22	242SS,168SS,281	582,583,584,286	100%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/07/2022)

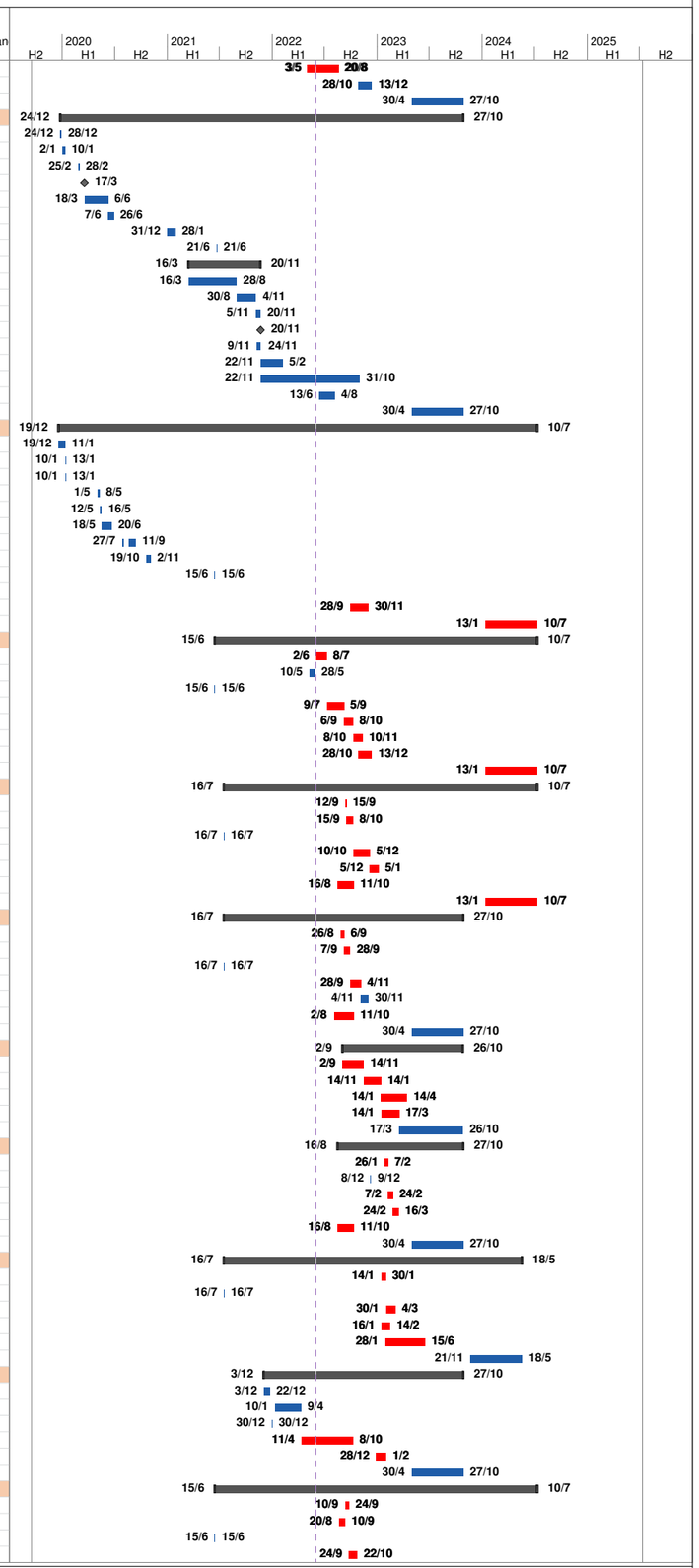
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
286	CUV1-12050		Remaining ABWF Works			200 days	Sat 26/3/22	Wed 12/10/22	Sat 26/3/22	NA	285	289FF	0%	
287	CUV1-12100		Underground Utilities Works in related to Effluent Chamber			97 days	Thu 13/5/21	Mon 6/9/21	Thu 13/5/21	Mon 6/9/21	281	288FS+1 day	100%	
288	CUV1-12200	SW1	Effluent Chamber (including Additional Works from PMI)		292	163 days	Tue 7/9/21	Fri 25/3/22	Tue 7/9/21	Fri 25/3/22	287FS+1 day	44FF	100%	
289	CUV1-12500	SW4	Underground utilities works - Revised Cable Ducts plan		318, 276,219,248,207	47 days	Tue 16/8/22	Wed 12/10/22	NA	NA	286FF	492SS,428SS	0%	
290	CUV1-13000	SW5	Surrounding Site formation works and road works			180 days	Sat 18/3/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
291	**CSDC-00000**	*	**Sludge Digesters and Distribution Chamber (4)**			**1150 days**	**Sat 7/12/19**	**Fri 27/10/23**	**Sat 7/12/19**	**NA**			**51%**	
292	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	293SF		100%	
293	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	295SF	292SF	100%	
294	CSDC-03000		Tree Transplanting Works (TC080)	21, 22, 33, 45,	(50), (51)	120 days	Fri 24/4/20	Tue 15/9/20	Fri 24/4/20	Tue 15/9/20	209	304FS-8 days	100%	
295	CSDC-04000		Predrilling Works (50no., 4rig, 3 days/drillhole/rig) - Change to Work Information		(10)	10 days	Sat 28/12/19	Thu 9/1/20	Sat 28/12/19	Thu 9/1/20	160,177,188,189,190,192,191,194,1	296,293SF,301	100%	
296	CSDC-05000		Installation of Monitoring Points			0 days	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	295	299	100%	
297	CSDC-06000		Sheetpile Installation- original		(310)	24 days	Wed 15/1/20	Fri 7/2/20	Wed 15/1/20	Fri 7/2/20			100%	
298	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		299	100%	
299	CSDC-08000		Pre-bored Sockedted H-Pile Installation (127nos, 3rig, 3days/rig/pile) (NCE no. 18A,25)	17, 21, 22, 33	(10)	69 days	Sat 8/2/20	Fri 5/6/20	Sat 8/2/20	Fri 5/6/20	161,296,301SS+20 days,298	300	100%	6
300	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	299,407SS+10 days	304	100%	
301	CSDC-10000		Sheetpile Installation -Change to Work Information (Use of Auger)	22, 33, 45, 46,	(33), (47), (236), (24),364 , (40)	152 days	Mon 4/5/20	Mon 2/11/20	Mon 4/5/20	Mon 2/11/20	295	299SS+20 days,374FS+8	100%	
302	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	304FF-2 emons	306SS-2 emons	100%	
303	CSDC-11000		Construction of Digestors		(125), (232), (233), (234), (364), (41	542 days	Tue 3/11/20	Thu 1/9/22	Tue 3/11/20	NA		410	57%	
304	CSDC-11010		ELS Works (incl. Strut (4-layers) Installation & Excavation (17,600 cu.m))	(112), 268, 338	(153), (76), (99), (94)	88 days	Tue 3/11/20	Fri 26/3/21	Tue 3/11/20	Fri 26/3/21	179,164,300,163,294FS-8 days,301	302FF-2 emons,305SS+365	100%	2,3
305	CSDC-11015		Construction of Distribution Chamber	(204), (228)	(232), (233), (234), (429), 385, 413,	289 days	Wed 3/11/21	Thu 18/8/22	Wed 3/11/21	NA	304SS+365 days	459SS+30 days,312,492,317FS	72%	
306	CSDC-11016		Construction of Digesters tank No.1,2,3,4 (Wall Portion)	(204),(228)	(76), (413), (419), (125), (306), (233)	400 days	Sat 27/3/21	Sat 30/4/22	Sat 27/3/21	Sat 30/4/22	304,238,167,302SS-2 emons	307,309FS-50 days,415FS+8 d	100%	
307	CSDC-11017		Water Test			20 days	Tue 3/5/22	Thu 26/5/22	NA	NA	306	308	0%	
308	CSDC-11018		Apply Internal Anti-corrosion Protective Lining			28 days	Fri 27/5/22	Wed 29/6/22	NA	NA	307	46FF	0%	
309	CSDC-11020a		Construction of the Roof Slab of SD No.1		(76), (413), (419), (125), (306), (233)	121 days	Mon 28/2/22	Wed 27/7/22	Mon 28/2/22	NA	306FS-50 days	316,312FS-65 days,310SS+21	0%	30
310	CSDC-11020b		Construction of the Roof Slab of SD No.3, No.4		(76), (413), (419), (125), (306), (233)	150 days	Mon 21/3/22	Wed 17/8/22	Mon 21/3/22	NA	309SS+21 days	311SS+50 days	0%	
311	CSDC-11020d		Construction of the Roof Slab of SD No.2		(76), (413), (419), (125), (306), (233)	115 days	Tue 10/5/22	Thu 1/9/22	Tue 10/5/22	NA	310SS+50 days	313,315,439	0%	
312	**CSDC-12000**	**KD3A**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Thu 18/8/22**	**Thu 18/8/22**	**NA**	**NA**	**305,309FS-65 days**	**38FF**	**0%**	
313	CSDC-11030d		Dismantle Scaffolding			30 days	Fri 2/9/22	Sun 2/10/22	NA	NA	311	314	0%	
314	CSDC-11050		Backfill and Removal of ELS			60 days	Sun 2/10/22	Thu 1/12/22	NA	NA	313	316,495,502,499FS+12 days	0%	
315	CSDC-13000		Drainage System (within Bldg/ Structure) Installation			60 days	Fri 2/9/22	Mon 14/11/22	NA	NA	311	318	0%	
316	CSDC-14000		FRP Walkway & Micellanous Installation			60 days	Thu 1/12/22	Thu 16/2/23	NA	NA	309,314	46FF	0%	
317	CSDC-15000	SW3	ABWF Works & BS Works, Change to Work Information (Apply Internal Anti-corrosion Protective Lining)		(173),594	71 days	Tue 6/9/22	Wed 30/11/22	NA	NA	242SS,168SS,305FS+15 days	46FF	0%	
318	CSDC-15500	SW4	Surrounding sewerage, utility and process pipe works		358,298,222,248,205,206	101 days	Mon 14/11/22	Sat 18/3/23	NA	NA	315	47FF,582FS-360 days,583FS-3	0%	
319	CSDC-16000	SW5	Surrounding Site formation works and road works			180 days	Sat 18/3/23	Fri 27/10/23	NA	NA	318	48FF,346FF,366FF,380FF,399f	0%	
320	**CSDB-00000**	*	**Sludge Dewatering Building (2)**			**875.8 days?**	**Tue 26/11/19**	**Wed 9/11/22**	**Tue 26/11/19**	**NA**			**66%**	
321	CSDB-01000		Site Clearance & Site Set Up			6 days	Tue 26/11/19	Mon 2/12/19	Tue 26/11/19	Mon 2/12/19	2	322	100%	
322	CSDB-02000		Predrilling Works (39no.4rig, 3days/drillhole/rig) - Change to Work Information (Additional Predrill and Steel H-Pile)		(10)	20 days	Thu 28/11/19	Fri 20/12/19	Thu 28/11/19	Fri 20/12/19	160,321	324,323	100%	
323	CSDB-03000		Additional Predrilling Works (11no.)			8 days	Mon 23/12/19	Mon 30/12/19	Mon 23/12/19	Mon 30/12/19	322	324	100%	
324	CSDB-04000		Installation of Monitoring Points			4 days	Fri 10/1/20	Tue 14/1/20	Fri 10/1/20	Tue 14/1/20	322,323	329FS-3 days,325	100%	
325	CSDB-05000		Sheet Pile Installation - Original	17		52 days	Wed 15/1/20	Fri 6/3/20	Wed 15/1/20	Fri 6/3/20	324	327,326	100%	
326	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	325	327	100%	
327	CSDB-07000		Pre-bored Socketed H-Pile Installation (202 Nos, 4 Rig, 3days/rig/pile)	17, 21, 22, 33	(10)	67 days	Fri 13/3/20	Fri 5/6/20	Fri 13/3/20	Fri 5/6/20	161,326,325	371,328	100%	24
328	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	327	330	100%	
329	CSDB-09000		Sheet Pile Installation- stage2 - Additional Works (Removal of uncharted reinforced concrete structure at SD)	17, 21, 22, 33,	(47), (40), (14), (24), (33), (113),	295 days	Tue 3/12/19	Mon 30/11/20	Tue 3/12/19	Mon 30/11/20	324FS-3 days	330	100%	56
330	CSDB-10000		ELS Works (incl. Strut (3-layers) Installation & Excavation (25,000 cu.m)) - Change to Work Information / Removal of	258, (92), (112)	239, (40), (113), (153), (183),	55 days	Tue 1/12/20	Fri 5/2/21	Tue 1/12/20	Fri 5/2/21	179SS,164SS,328,163SS,329	332,333,547,331FF-2 emons	100%	10,2
331	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	330FF-2 emons	332SS-2 emons	100%	
332	CSDB-11000		R.C. Structure		438, (123), (183), (184), (187), (53),	390 days	Sat 6/2/21	Tue 7/6/22	Sat 6/2/21	Tue 7/6/22	239,240,330,238,331SS-2 emons		100%	10
333	CSDB-11010		Basement Construction & external waterproofing works - (Additional Sump Pit, wall layout, revised GA/Framing	268, 338,	239, (53), (110), (113), (115), (123),	203 days	Sat 6/2/21	Sat 16/10/21	Sat 6/2/21	Sat 16/10/21	330	354,334FS-90 days	100%	30
334	CSDB-11020		Ground Floor Construction @ +7.55mPD - Change to Work Information (Revised Layout)		(354), (187), (465), 465, (468),468, 47	7 days	Fri 30/7/21	Sat 30/10/21	Fri 30/7/21	Sat 30/10/21	333FS-90 days	337,335SS	100%	
335	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	334SS	336SS	100%	
336	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	335SS		100%	
337	CSDB-11050		1/F Construction @ +15.3mPD - Change to Work Information (Revised Layout)		(402), (414), (428), (446), (187), (41	108 days	Mon 1/11/21	Sat 12/3/22	Mon 1/11/21	Sat 12/3/22	334	338	100%	
338	CSDB-11060		Roof Construction @ +25.65mPD		(450), 450	67 days	Mon 14/3/22	Tue 7/6/22	Mon 14/3/22	Tue 7/6/22	337	339,580FS+120 days,344SS+3	100%	
339	**CSDB-12000**	**KD3B**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Tue 7/6/22**	**Tue 7/6/22**	**Tue 7/6/22**	**Tue 7/6/22**	**338**	**39FF,340FS+65 days,343**	**100%**	
340	CSDB-12100		Dismantle of Scaffolding			15 days	Thu 11/8/22	Thu 25/8/22	NA	NA	339FS+65 days	341,345SS-8 days,411FS+28 d	0%	
341	CSDB-12200		Backfill and Removal of ELS			60 days	Fri 26/8/22	Mon 7/11/22	NA	NA	340	342,546FS-9 days	0%	
342	CSDB-12300		Sheetpile Removal			12 days	Mon 7/11/22	Mon 21/11/22	NA	NA	341		0%	
343	CSDB-13000		Drainage System (within Bldg/ structure) installation			84 days	Wed 8/6/22	Thu 15/9/22	Wed 8/6/22	NA	339		11%	
344	CSDB-14000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining		(95), (173),594	187 days	Sat 30/4/22	Mon 12/12/22	NA	NA	242SS,168SS,338SS+37 days	46FF	0%	
345	CSDB-14500	SW4	Surrounding sewerage, utility and process pipe works		(335),(53),219,248,205,206,207	114 days	Tue 2/8/22	Thu 15/12/22	NA	NA	340SS-8 days	47FF,582FS-367 days,583FS-3	0%	
346	CSDB-15000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
347	**CHPB-00000**	*	**Combined Heat Power Building (3)**			**1148 days**	**Tue 10/12/19**	**Fri 27/10/23**	**Tue 10/12/19**	**NA**			**41%**	
348	CHPB-01000		Site Clearance & Site Set Up			6 days	Tue 10/12/19	Mon 16/12/19	Tue 10/12/19	Mon 16/12/19	2,349SF		100%	
349	CHPB-02000		Predrilling Works (15no. 2rig, 3days/drillhole/rig) - Change to Work Information (Additional Predrill and Steel H-Pile)		(10)	15 days	Tue 10/12/19	Sat 28/12/19	Tue 10/12/19	Sat 28/12/19	160FS+28 days	350,348SF	100%	
350	CHPB-03000		Installation of Monitoring Points			4 days	Fri 3/1/20	Tue 7/1/20	Fri 3/1/20	Tue 7/1/20	349	352	100%	
351	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		352	100%	
352	CHPB-05000		Pre-bored Socketed H-Pile Installation (50 Nos, 2 Rig 3days/rig/pile) (PMI no.005)	17, 21	(10), (420)	77 days	Wed 15/1/20	Tue 21/4/20	Wed 15/1/20	Tue 21/4/20	161,350,351,601	353	100%	6
353	CHPB-06000		Pile Loading Test			4 days	Wed 29/7/20	Sat 1/8/20	Wed 29/7/20	Sat 1/8/20	352	354	100%	
354	CHPB-07000		Excavation for Pile Cap (2,060 cu.m)		(382), (385), (295), (420), (430), (95)	58 days	Sat 6/11/21	Sat 15/1/22	Sat 6/11/21	Sat 15/1/22	179,164,353,163,333	356,355FF-2 emons	100%	10
355	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	354FF-2 emons	356SS-2 emons	100%	
356	CHPB-08000		R.C. Structure - update on Civil Requirement & Change to the Works Information		(295), (416), (417), (418), (346), (43	200 days	Tue 28/12/21	Wed 31/8/22	Tue 28/12/21	NA	239,240,166,354,238,355SS-2 emor	363	57%	10
357	CHPB-08100		Lower Ground Floor @+7.55mPD - Change to the Works Information (Additional RC Beam and Revised Detail for		295	109 days	Tue 28/12/21	Sat 14/5/22	Tue 28/12/21	Sat 14/5/22		358	100%	
358	CHPB-08200		Upper Ground Floor @13.05mPD			60 days	Sun 1/5/22	Thu 14/7/22	Sun 1/5/22	NA	357	359FS-10 days	60%	
359	CHPB-08300		First Floor @19.60mPD			25 days	Fri 22/7/22	Fri 19/8/22	Fri 22/7/22	NA	358FS-10 days	360FS-14 days	60%	
360	CHPB-08400		Podium @24.15mPD			40 days	Thu 4/8/22	Tue 20/9/22	NA	NA	359FS-14 days	361FS+1 day	0%	
361	CHPB-08500		Roof @27.15mPD			46 days	Wed 21/9/22	Wed 16/11/22	NA	NA	360FS+1 day	362FF-38 days,364FS-15 days	0%	
362	**CHPB-09000**	**KD3C**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Fri 30/9/22**	**Fri 30/9/22**	**NA**	**NA**	**361FF-38 days**	**40FF**	**0%**	
363	CHPB-10000		Drainage System (within Bldg/ Structure) Installation			60 days	Thu 1/9/22	Sat 12/11/22	NA	NA	356	46FF	0%	
364	CHPB-11000	SW3	ABWF Works & BS Works with additional/change to works information		(173)	52 days	Sat 29/10/22	Sat 31/12/22	NA	NA	242SS,168SS,361FS-15 days	46FF,365SS+2 days	0%	
365	CHPB-11500	SW4	Surrounding sewerage, utility and process pipe works		221,219,220,248,205,206	64 days	Tue 1/11/22	Wed 18/1/23	NA	NA	364SS+2 days	47FF,582FS-428 days,583FS-4	0%	
366	CHPB-12000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
367	**CSPS-00000**	*	**Sewage Pumping Station (9)**			**1169 days**	**Fri 15/11/19**	**Fri 27/10/23**	**Fri 15/11/19**	**NA**			**60%**	
368	CSPS-01000		Site Clearance & Site Set Up			14 days	Fri 15/11/19	Sat 30/11/19	Fri 15/11/19	Sat 30/11/19	2	369	100%	
369	CSPS-02000		Predrilling Works (4no.1rig, 3days/drillhole/rig)			0 days	Mon 2/12/19	Mon 30/12/19	Mon 2/12/19	Mon 30/12/19	160FS+14 days,368	370	100%	
370	CSPS-03000		Installation of Monitoring Points			4 days	Fri 17/4/20	Tue 21/4/20	Fri 17/4/20	Tue 21/4/20	369		100%	
371	CSPS-04000		Setting up plant for pre-bored socked H-pile Installation	25		5 days	Tue 21/4/20	Sat 25/4/20	Tue 21/4/20	Sat 25/4/20	327	372	100%	
372	CSPS-05000		Pre-bored Socketed H-Pile Installation (22 Nos, 1 Rig, 3days/rig/pile)	21, 22		27 days	Mon 27/4/20	Fri 29/5/20	Mon 27/4/20	Fri 29/5/20	161,371	373	100%	6
373	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	372,387FS+5 days	375,264FS+5 days,374	100%	
374	CSPS-07000		Sheet Pile Installation	258		0 days	Sat 10/10/20	Sat 10/10/20	Sat 10/10/20	Sat 10/10/20	373,301FS+8 days	375	100%	
375	CSPS-08000		ELS Works (incl. Strut (3-layers) Installation & Excavation (1,440 cu.m))	(92)		56 days	Wed 18/11/20	Mon 25/1/21	Wed 18/11/20	Mon 25/1/21	179,164,373,163,374	376FF-2 emons,377	100%	10
376	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	375FF-2 emons	377SS-2 emons	100%	
377	CSPS-09000	KD3E	R.C. Structure & waterproofing works - Change to Work Information (Additional Puddle Flange and Civil Provision)	268, 338,	*(63) ,(303), (341)*	297 days	Tue 26/1/21	Wed 26/1/22	Tue 26/1/21	Wed 26/1/22	375,166,238,239,240,376SS-2	378,42FF	100%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/07/2022)

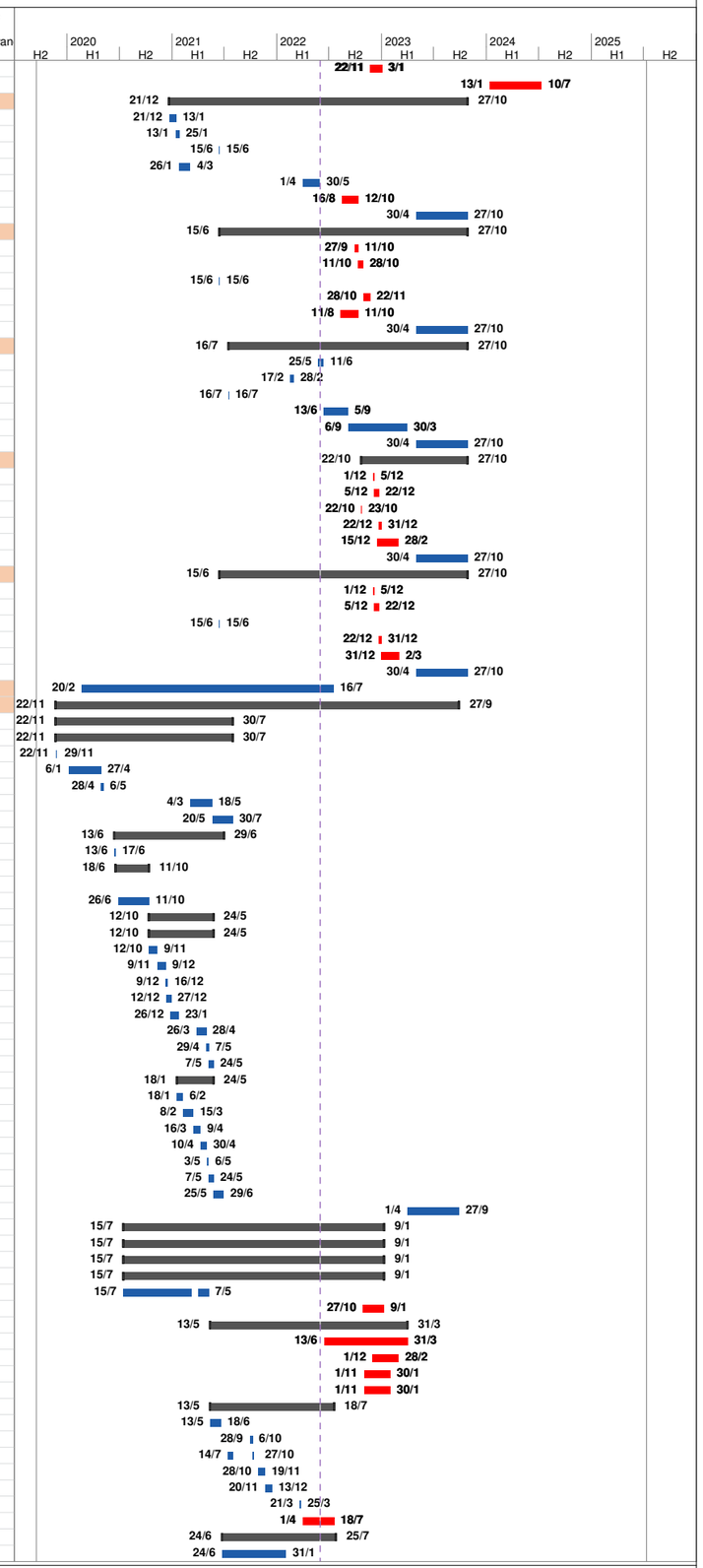
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
378	CSPS-10000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining			90 days	Tue 3/5/22	Sat 20/8/22	Tue 3/5/22	NA	242SS,168SS,167,377	46FF,467	25%	3
379	CSPS-10500	SW4	Surrounding sewerage, utility and process pipe works		386 , 299	39 days	Fri 28/10/22	Tue 13/12/22	NA	NA	420SS	47FF,582FS-148 days,583FS-1	0%	
380	CSPS-11000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
381	**CWS2-00000**	*	**Workshop No. 2 (5)**			**1136 days**	**Tue 24/12/19**	**Fri 27/10/23**	**Tue 24/12/19**	**NA**			**64%**	
382	CWS2-01000		Site Clearance & Site Set Up			3 days	Tue 24/12/19	Sat 28/12/19	Tue 24/12/19	Sat 28/12/19	2	383	100%	
383	CWS2-02000		Predrilling Works (10no.1rig, 3days/drillhole/rig)		16, (10)	8 days	Thu 2/1/20	Fri 10/1/20	Thu 2/1/20	Fri 10/1/20	160,382	384	100%	
384	CWS2-03000		Installation of Monitoring Points			4 days	Tue 25/2/20	Fri 28/2/20	Tue 25/2/20	Fri 28/2/20	383	386,385	100%	
385	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	384,263	386	100%	
386	CWS2-05000		Pre-bored Socketed H-Pile Installation (36 Nos, 2 Rig, 3days/rig/pile)	17, 21, 22, 33	(10)	64 days	Wed 18/3/20	Sat 6/6/20	Wed 18/3/20	Sat 6/6/20	161,384,385	387,406	100%	6
387	CWS2-06000		Pile Loading Test	33		16 days	Sun 7/6/20	Fri 26/6/20	Sun 7/6/20	Fri 26/6/20	386,602FS+5 days	388,373FS+5 days	100%	
388	CWS2-07000		Excavation for Pile Cap (1,800 cu.m) - Change to Work Information (Revised Layout of Foundation)	268, 338	(169), (85)	24 days	Thu 31/12/20	Thu 28/1/21	Thu 31/12/20	Thu 28/1/21	179,164,387,163	391,547,408,389FF-2 emons	100%	56
389	CWS2-07900		Receiving of Civil Requirements from PM		548, 557 , (170)	1 day	Mon 21/6/21	Mon 21/6/21	Mon 21/6/21	Mon 21/6/21	388FF-2 emons	390SS-2 emons	100%	
390	CWS2-08000		R.C. Structure		(303), 374, (85), (169), (185), (195),	204 days	Tue 16/3/21	Sat 20/11/21	Tue 16/3/21	Sat 20/11/21	389SS-2 emons		100%	10
391	CWS2-08010		Ground Floor Construction @ +6.30mpD - Revised Civil Requirements in G/F	(204), (228)	(169), (185), (195), (217), (223), (22	135 days	Tue 16/3/21	Sat 28/8/21	Tue 16/3/21	Sat 28/8/21	388,238	392	100%	
392	CWS2-08020		First Floor Construction @ +13.50mpD - Revised Civil Requirements in 1/F		(266), (299), (300)	55 days	Mon 30/8/21	Thu 4/11/21	Mon 30/8/21	Thu 4/11/21	391	393	100%	
393	CWS2-08030	KD3D	Roof Construction @+19.00mPD - Revised Civil Requirements in R/F		(302)	14 days	Fri 5/11/21	Sat 20/11/21	Fri 5/11/21	Sat 20/11/21	392	394	100%	
394	**CWS2-09000**	**KD3D**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Sat 20/11/21**	**Sat 20/11/21**	**Sat 20/11/21**	**Sat 20/11/21**	**393**	**41FF**	**100%**	
395	CWS2-NCE		Additional Works due to Change of Works Information		(85), (169), (185), (195), (235),	14 days	Tue 9/11/21	Wed 24/11/21	Tue 9/11/21	Wed 24/11/21		396,397	100%	
396	CWS2-10000		Drainage System (within Bldg/ Structure) Installation		(265), 366	60 days	Mon 22/11/21	Sat 5/2/22	Mon 22/11/21	Sat 5/2/22	395		100%	
397	CWS2-11000	SW3	ABWF Works & BS Works - Revised Architectural Layout & Schedule for Doors, Louvers and Windows		(95), (173), (406,407,408)	278 days	Mon 22/11/21	Mon 31/10/22	Mon 22/11/21	NA	242SS,168SS,395	46FF	64%	
398	CWS2-11500	SW4	Surrounding sewerage, utility and process pipe works		221,219,220,205,206,207	45 days	Mon 13/6/22	Thu 4/8/22	Mon 13/6/22	NA	309FS-38 days	47FF,582FS-200 days,583FS-2	0%	
399	CWS2-12000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
400	**CTHP-00000**	*	**Thermal Hydrolysis Pretreatment (6)**			**1339.8 days**	**Thu 19/12/19**	**Wed 10/7/24**	**Thu 19/12/19**	**NA**			**30%**	
401	CTHP-01000		Site Clearance & Site Set Up			18 days	Thu 19/12/19	Sat 11/1/20	Thu 19/12/19	Sat 11/1/20	2	402,403	100%	
402	CTHP-02000		Predrilling Works (3no.1rig, 3days/drillhole/rig)		21/24, (10)	1 day	Fri 10/1/20	Mon 13/1/20	Fri 10/1/20	Mon 13/1/20	160FS+24 days,401	404	100%	
403	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	401	404	100%	
404	CTHP-04000		Installation of Monitoring Points			6 days	Fri 1/5/20	Fri 8/5/20	Fri 1/5/20	Fri 8/5/20	402,403	406	100%	
405	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		406	100%	
406	CTHP-06000		Pre-bored Socketed H-Pile Installation (15 Nos, 1 Rig, 3days/rig/pile)	22, 33	(10)	30 days	Mon 18/5/20	Sat 20/6/20	Mon 18/5/20	Sat 20/6/20	161,404,405,386	407	100%	6
407	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	406,264FS+5 days	408,300SS+10 days	100%	
408	CTHP-08000		Excavation for Pile Cap (160 cu.m)		225, (70), (75)	12 days	Mon 19/10/20	Mon 2/11/20	Mon 19/10/20	Mon 2/11/20	179,164,407,388	410,409FF-2 emons	100%	
409	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	408FF-2 emons	410SS-2 emons	100%	
410	CTHP-09000	KD3E, S	R.C. Plinth - Change to Works Information	268, 338	225, (115),(236)	0 days	Mon 2/11/20	Mon 2/11/20	Mon 2/11/20	Mon 2/11/20	408,303,409SS-2 emons	42FF,46FF	100%	
411	CTHP-09500	SW4	Surrounding sewerage, utility and process pipe works			52 days	Wed 28/9/22	Wed 30/11/22	NA	NA	340FS+28 days	47FF,582FS-200 days,583FS-2	0%	
412	CTHP-10000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	319FF	48FF	0%	
413	**CFCD-00000**	*	**Ferric Chloride Dosing Facilities (10)**			**903.8 days**	**Tue 15/6/21**	**Wed 10/7/24**	**Tue 15/6/21**	**NA**			**5%**	
414	CFCD-01000		Excavation & ELS for Raft Footing (105 cu.m)			30 days	Thu 2/6/22	Fri 8/7/22	Thu 2/6/22	NA	415	417	0%	
415	CFCD-02000		Plate Load Test			19 days	Tue 10/5/22	Sat 28/5/22	Tue 10/5/22	Sat 28/5/22	306FS+8 days	417,416FF-2 emons,414	100%	
416	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	415FF-2 emons	417SS-2 emons	100%	
417	CFCD-03000		R.C. Structure			50 days	Sat 9/7/22	Mon 5/9/22	NA	NA	166,238,416SS-2 emons,415,414	418	0%	5
418	CFCD-04000	KD3E	Steel Roof Structure (On-site Fabrication)			26 days	Tue 6/9/22	Sat 8/10/22	NA	NA	417	419,42FF	0%	
419	CFCD-05000	SW3	ABWF Works & BS Works, Change to Work Information (Application of Protective Lining System)		*594*	28 days	Sat 8/10/22	Thu 10/11/22	NA	NA	418,242,168	46FF,582FS-185 days,583FS-1	0%	
420	CFCD-05500	SW4	Surrounding sewerage, utility and process pipe works - Updated Process Pipes Arrangement		386, 298	39 days	Fri 28/10/22	Tue 13/12/22	NA	NA	419FS-11 days	47FF,582FS-200 days,583FS-2	0%	
421	CFCD-06000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	319FF	48FF	0%	
422	**CFHB-00000**	*	**Fire Hydrant and Booster Pump Room (16)**			**877.8 days**	**Fri 16/7/21**	**Wed 10/7/24**	**Fri 16/7/21**	**NA**			**0%**	
423	CFHB-01000		Excavation for Raft Footing (160 cu.m)			3 days	Mon 12/9/22	Thu 15/9/22	NA	NA	2,340FS+14 days	424	0%	
424	CFHB-02000		Plate Load Test			18 days	Thu 15/9/22	Sat 8/10/22	NA	NA	423	426FS+1 day,425FF-2 emons	0%	
425	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	424FF-2 emons		100%	
426	CFHB-03000	KD3E	R.C. Structure & waterproofing works			48 days	Mon 10/10/22	Mon 5/12/22	NA	NA	424FS+1 day	427,42FF	0%	5
427	CFHB-04000	SW3	ABWF Works & BS Works			24 days	Mon 5/12/22	Thu 5/1/23	NA	NA	426,242SS,168SS	46FF,582FS-320 days,583FS-3	0%	
428	CFHB-04500	SW4	Surrounding sewerage, utility and process pipe works			46 days	Tue 16/8/22	Tue 11/10/22	NA	NA	289SS,340SS	47FF,582FS-200 days,583FS-2	0%	
429	CFHB-05000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	319FF	48FF	0%	
430	**CTFS-00000**	*	**Transformer and Switchroom (15)**			**678 days**	**Fri 16/7/21**	**Fri 27/10/23**	**Fri 16/7/21**	**NA**			**0%**	
431	CTFS-01000		Excavation for Raft Footing (310 cu.m)		386	10 days	Fri 26/8/22	Tue 6/9/22	NA	NA	2,340	432	0%	
432	CTFS-02000		Plate Load Test			18 days	Wed 7/9/22	Wed 28/9/22	NA	NA	431	434,433FF-2 emons	0%	
433	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	432FF-2 emons	434	100%	
434	CTFS-03000	KD3E	R.C. Structure			30 days	Wed 28/9/22	Fri 4/11/22	NA	NA	432,166,238,433	435,42FF	0%	5
435	CTFS-04000	SW3	ABWF Works & BS Works		(95)	22 days	Fri 4/11/22	Wed 30/11/22	NA	NA	434,242SS,168SS	46FF	0%	
436	CTFS-04500	SW4	Surrounding sewerage, utility and process pipe works			58 days	Tue 2/8/22	Tue 11/10/22	NA	NA	345SS	47FF,582FS-200 days,583FS-2	0%	
437	CTFS-05000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
438	**CUC-00000**	*	**Utility Corridor (13)**		**204**	**340 days**	**Fri 2/9/22**	**Thu 26/10/23**	**NA**	**NA**			**0%**	
439	CUC-01000		Excavation for Raft Footing -Additional Works (Verification of Existing Utilities)		478	60 days	Fri 2/9/22	Mon 14/11/22	NA	NA	2,311	440	0%	
440	CUC-02000		Construction of Utility Corridor			50 days	Mon 14/11/22	Sat 14/1/23	NA	NA	166,238,439	441,442,456SS+59 days,455FS	0%	3
441	CUC-03000		ABWF Works & BS Works			70 days	Sat 14/1/23	Fri 14/4/23	NA	NA	440,242SS,168SS		0%	
442	CUC-03500	SW4	Surrounding sewerage, utility and process pipe works		248,205,207	50 days	Sat 14/1/23	Fri 17/3/23	NA	NA	440	47FF,582FS-200 days,583FS-2	0%	
443	CUC-04000	SW5	Surrounding Site formation works and road works			180 days	Fri 17/3/23	Thu 26/10/23	NA	NA	442	48FF	0%	
444	**CWMC-00000**	*	**Water Meter Cabinet (11)**		**204**	**356 days**	**Tue 16/8/22**	**Fri 27/10/23**	**NA**	**NA**			**0%**	
445	CWMC-01000		Excavation for Raft Footing (6 cu.m)			10 days	Thu 26/1/23	Tue 7/2/23	NA	NA	484SS+71 days	447,446FF-2 emons	0%	
446	CWMC-01900		Receiving of Civil Requirements from PM			1 day	Thu 8/12/22	Fri 9/12/22	NA	NA	445FF-2 emons	447SS-2 emons	0%	
447	CWMC-02000		R.C. Structure			15 days	Tue 7/2/23	Fri 24/2/23	NA	NA	166,238,445,446SS-2 emons	448	0%	3
448	CWMC-03000		ABWF Works & BS Works			17 days	Fri 24/2/23	Thu 16/3/23	NA	NA	447,242SS,168SS		0%	
449	CWMC-03500	SW4	Surrounding sewerage, utility and process pipe works		220	46 days	Tue 16/8/22	Tue 11/10/22	NA	NA	428SS	47FF,582FS-200 days,583FS-2	0%	
450	CWMC-04000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
451	**CGH-00000**	*	**Guard House (14)**			**834.8 days**	**Fri 16/7/21**	**Sat 18/5/24**	**Fri 16/7/21**	**NA**			**0%**	
452	CGH-01000		Excavation to Formation			10 days	Sat 14/1/23	Mon 30/1/23	NA	NA	2,442SS	453FF-2 emons,454	0%	
453	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	452FF-2 emons	454SS-2 emons	100%	
454	CGH-02000		R.C. Structure			29 days	Mon 30/1/23	Sat 4/3/23	NA	NA	453SS-2 emons,166,452,238		0%	3
455	CGH-03000		ABWF Works & BS Works		(95)	22 days	Mon 16/1/23	Tue 14/2/23	NA	NA	242SS,168SS,440FS+1 day		0%	
456	CGH-03500	SW4	Surrounding sewerage, utility and process pipe works		205	112 days	Sat 28/1/23	Thu 15/6/23	NA	NA	440SS+59 days		0%	
457	CGH-04000	SW5	Surrounding Site formation works and road works			180 days	Tue 21/11/23	Sat 18/5/24	NA	NA	319FF	48FF	0%	
458	**CCPS-00000**	*	**THP Coolers Pumping Station (21)**			**561 days**	**Fri 3/12/21**	**Fri 27/10/23**	**Fri 3/12/21**	**NA**			**21%**	
459	CCPS-01010		Sheet Pile Installation			20 days	Fri 3/12/21	Wed 22/12/21	Fri 3/12/21	Wed 22/12/21	305SS+30 days		100%	
460	CCPS-01000		Excavation & ELS (185 cu.m)		(70)	74 days	Mon 10/1/22	Sat 9/4/22	Mon 10/1/22	Sat 9/4/22		461FF-2 emons,462	100%	
461	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	460FF-2 emons	462SS-2 emons	100%	
462	CCPS-02000	KD3E	R.C. Structure			146 days	Mon 11/4/22	Sat 8/10/22	Mon 11/4/22	NA	166,238,461SS-2 emons,460	463FS+67 days	0%	5
463	CCPS-02500	SW4	Surrounding sewerage, utility and process pipe works			26 days	Wed 28/12/22	Wed 1/2/23	NA	NA	462FS+67 days	47FF	0%	
464	CCPS-03000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF		0%	
465	**CWGB-00000**	*	**Waste Gas Burner (8)**			**903.8 days**	**Tue 15/6/21**	**Wed 10/7/24**	**Tue 15/6/21**	**NA**			**0%**	
466	CWGB-01000		Excavation for Raft Rooting (75cu.m)			12 days	Sat 10/9/22	Sat 24/9/22	NA	NA	467	469	0%	
467	CWGB-02000		Plate Load Test			18 days	Sat 20/8/22	Sat 10/9/22	NA	NA	378	468FF-2 emons,466	0%	
468	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	467FF-2 emons	469SS-2 emons	100%	
469	CWGB-03000	KD3E	R.C. Plinth			22 days	Sat 24/9/22	Sat 22/10/22	NA	NA	166,468SS-2 emons,466	505,42FF,470	0%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/07/2022)

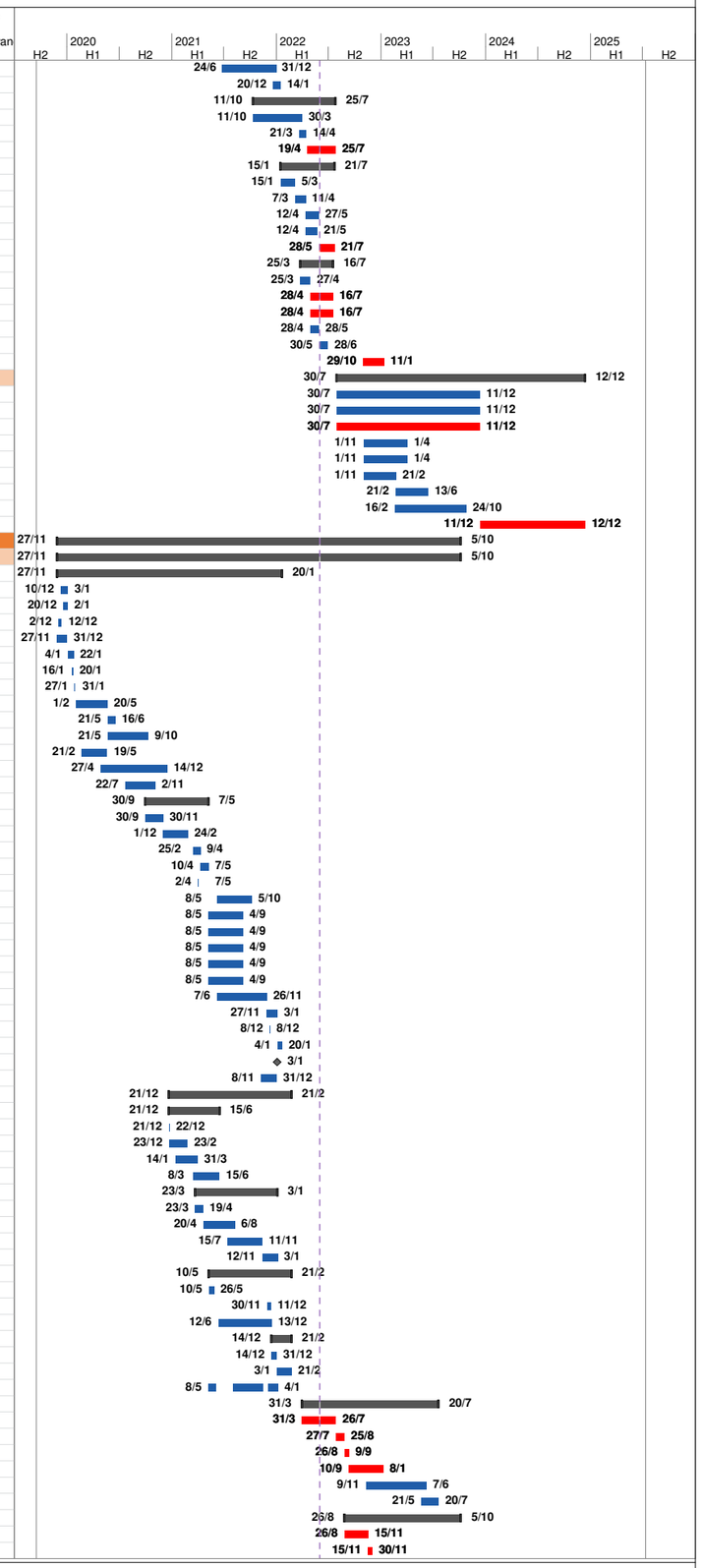
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
470	CWGB-03500	SW4	Surrounding sewerage, utility and process pipe works			34 days	Tue 22/11/22	Tue 3/1/23	NA	NA	469,379SS	47FF,582FS-200 days,583FS-2	0%	
471	CWGB-04000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	319FF	48FF	0%	
472	**CPSW-00000**	*	**Plant Services Water System (20)**			**842 days**	**Mon 21/12/20**	**Fri 27/10/23**	**Mon 21/12/20**		**NA**		**34%**	
473	CPSW-01000		Excavation for Raft Footing (800 cu.m) - Unexpected Ground Condition, leads to modification of ELS		336,(81), (34)	18 days	Mon 21/12/20	Wed 13/1/21	Mon 21/12/20	Wed 13/1/21	2	474	100%	
474	CPSW-02000		Plate Load Test			10 days	Wed 13/1/21	Mon 25/1/21	Wed 13/1/21	Mon 25/1/21	473	476,475FF-2 emons	100%	
475	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	474FF-2 emons	476SS-2 emons	100%	
476	CPSW-03000	KD3E	Basement Construction @+1.20mPD - Change to Works Information (Basement)		*(136), (117)*	30 days	Tue 26/1/21	Thu 4/3/21	Tue 26/1/21	Thu 4/3/21	474,166,475SS-2 emons	42FF,477	100%	
477	CPSW-03500	SW3	ABWF Works & BS Works			60 days	Fri 1/4/22	Mon 30/5/22	Fri 1/4/22	Mon 30/5/22	476	478,46FF	100%	
478	CPSW-03600	SW4	Surrounding sewerage, utility and process pipe works - (Updated Process Pipe Arrangement)		*439,455*	47 days	Tue 16/8/22	Wed 12/10/22	NA	NA	477,345SS,428SS	47FF,582FS-200 days,583FS-2	0%	
479	CPSW-04000	SW5	Surrounding Site formation works and road works	338,(204),		180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
480	**CDS11-00000**	*	**Deodorization System No. 11 (18)**			**704 days**	**Tue 15/6/21**	**Fri 27/10/23**	**Tue 15/6/21**		**NA**		**0%**	
481	CDS11-01000		Excavation for Raft Footing (1,280 cu.m)			10 days	Tue 27/9/22	Tue 11/10/22	NA	NA	2,485FF	482	0%	
482	CDS11-02000		Plate Load Test			15 days	Tue 11/10/22	Fri 28/10/22	NA	NA	481	484,483FF-2 emons	0%	
483	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	482FF-2 emons	484SS-2 emons	100%	
484	CDS11-03000	KD3E, S	R.C. Plinth			21 days	Fri 28/10/22	Tue 22/11/22	NA	NA	482,166,483SS-2 emons	42FF,445SS+71 days,46FF	0%	
485	CDS11-03500	SW4	Surrounding sewerage, utility and process pipe works			50 days	Thu 11/8/22	Tue 11/10/22	NA	NA	340SS	47FF,481FF	0%	
486	CDS11-04000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
487	**CBGH-00000**	*	**Biogas Holder (7)**			**678 days**	**Fri 16/7/21**	**Fri 27/10/23**	**Fri 16/7/21**		**NA**		**9%**	
488	CBGH-01000		Excavation for Raft Footing (1,120 cu.m) - Uncharted Concrete		(452), (454), (455)	15 days	Wed 25/5/22	Sat 11/6/22	Wed 25/5/22	Sat 11/6/22	2	489,491	100%	
489	CBGH-02000		Plate Load Test			10 days	Thu 17/2/22	Mon 28/2/22	Thu 17/2/22	Mon 28/2/22	488	491,490FF-2 emons	100%	
490	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	489FF-2 emons	491SS-2 emons	100%	
491	CBGH-03000	KD3E, S	R.C. Plinth - Change to Works Information (Resize of Plinth)		481	72 days	Mon 13/6/22	Mon 5/9/22	Mon 13/6/22	NA	489,166,490SS-2 emons,488	42FF,46FF,492	22%	
492	CBGH-03500	SW4	Surrounding sewerage, utility and process pipe works - update process pipe arrangement, Revised Plan for Pipe		262,297,248	168 days	Tue 6/9/22	Thu 30/3/23	NA	NA	289SS,305,491	47FF,582FS-200	0%	
493	CBGH-04000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
494	**CH2S-00000**	*	**H2S Removal System (12)**			**300.2 days**	**Sat 22/10/22**	**Fri 27/10/23**	**NA**		**NA**		**0%**	
495	CH2S-01000		Excavation for Raft Footing (396 cu.m)			3 days	Thu 1/12/22	Mon 5/12/22	NA	NA	314	496	0%	
496	CH2S-02000		Plate Load Test			15 days	Mon 5/12/22	Thu 22/12/22	NA	NA	495	498,497FF-2 emons	0%	
497	CH2S-02900		Receiving of Civil Requirements from PM			1 day	Sat 22/10/22	Sun 23/10/22	NA	NA	496FF-2 emons	498SS-2 emons	0%	
498	CH2S-03000	KD3E, S	R.C. Plinth			6 days	Thu 22/12/22	Sat 31/12/22	NA	NA	496,497SS-2 emons	42FF,46FF	0%	
499	CH2S-03500	SW4	Surrounding sewerage, utility and process pipe works	248		58 days	Thu 15/12/22	Tue 28/2/23	NA	NA	314FS+12 days	47FF,582FS-200 days,583FS-2	0%	
500	CH2S-04000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
501	**CDS12-00000**	*	**Deodorization System No. 12 (19)**			**704 days**	**Tue 15/6/21**	**Fri 27/10/23**	**Tue 15/6/21**		**NA**		**0%**	
502	CDS12-01000		Excavation to Formation			3 days	Thu 1/12/22	Mon 5/12/22	NA	NA	314	503	0%	
503	CDS12-02000		Plate Load Test			15 days	Mon 5/12/22	Thu 22/12/22	NA	NA	502	505,504FF-2 emons	0%	
504	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	503FF-2 emons	505SS-2 emons	100%	
505	CDS12-03000	KD3E, S	R.C. Plinth			6 days	Thu 22/12/22	Sat 31/12/22	NA	NA	503,166,469,504SS-2 emons	42FF,46FF,506	0%	
506	CDS12-03500	SW4	Surrounding sewerage, utility and process pipe works			48 days	Sat 31/12/22	Thu 2/3/23	NA	NA	505	47FF,582FS-200 days,583FS-2	0%	
507	CDS12-04000	SW5	Surrounding Site formation works and road works			180 days	Sun 30/4/23	Fri 27/10/23	NA	NA	319FF	48FF	0%	
508	CUPH-00000	SW5	Underpass & Pump House			711 days	Thu 20/2/20	Sat 16/7/22	Thu 20/2/20		NA	47FF	81%	
509	**CPWU-00000**	*	**Pipe Works and Utility Installation**			**1140.8 days**	**Fri 22/11/19**	**Wed 27/9/23**	**Fri 22/11/19**		**NA**		**77%**	
510	**CPWU-01000**		**Pipe Works At Chuk Wan Street**			**498 days**	**Fri 22/11/19**	**Fri 30/7/21**	**Fri 22/11/19**	**Fri 30/7/21**			**100%**	
511	**CPWU-01100**		**Drainage Diversion (Existing Drainage Culvert)**			**498 days**	**Fri 22/11/19**	**Fri 30/7/21**	**Fri 22/11/19**	**Fri 30/7/21**	**258,221**		**100%**	
512	CPWU-01110		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and			7 days	Fri 22/11/19	Fri 29/11/19	Fri 22/11/19	Fri 29/11/19	158,180,185,181,169,202,221	513	100%	
513	CPWU-01120		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and Reconstr	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	512		100%	
514	CPWU-01130	KD1A	Stage 1 - Backfilling Works for Drainage Diversion			9 days	Tue 28/4/20	Wed 6/5/20	Tue 28/4/20	Wed 6/5/20		263	100%	
515	CPWU-01140	KD1A	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage	338, (204),		60 days	Thu 4/3/21	Tue 18/5/21	Thu 4/3/21	Tue 18/5/21	275	516	100%	
516	CPWU-01150	SW1	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage			60 days	Thu 20/5/21	Fri 30/7/21	Thu 20/5/21	Fri 30/7/21	515	44FF	100%	
517	**CPWU-01200**	**SW4**	**Trenchless Work for Pipe Installation**			**309 days**	**Sat 13/6/20**	**Tue 29/6/21**	**Sat 13/6/20**	**Tue 29/6/21**		**47FF**	**100%**	
518	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		520	100%	
519	**CPWU-01220**		**Construction of Temporary Jacking Pit**			**95 days**	**Thu 18/6/20**	**Sun 11/10/20**	**Thu 18/6/20**	**Sun 11/10/20**	**15,172**		**100%**	
520	CPWU-01221		Trial Pit Excavation & UU Detection Works			0 days	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	2,518	521	100%	
521	CPWU-01222		Pit Construction (11m x 9m)	33, 45, 46, 257,		89 days	Fri 26/6/20	Sun 11/10/20	Fri 26/6/20	Sun 11/10/20	520	524	100%	
522	**CPWU-01230**		**Pipe Jacking Operation**			**180 days**	**Mon 12/10/20**	**Mon 24/5/21**	**Mon 12/10/20**	**Mon 24/5/21**			**100%**	
523	CPWU-01231		Twin DN900 DI pipe (CHAT & CHAU)		(26), (128), 230	180 days	Mon 12/10/20	Mon 24/5/21	Mon 12/10/20	Mon 24/5/21			100%	
524	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	521	525	100%	
525	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	524	528,527,526	100%	6
526	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	525	527	100%	
527	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	525,526	528	100%	
528	CPWU-01231e		Installation of grouting pipe and rail			23 days	Sat 26/12/20	Sat 23/1/21	Sat 26/12/20	Sat 23/1/21	525,527	529	100%	
529	CPWU-01231f		Pipe Laying Works			25 days	Fri 26/3/21	Wed 28/4/21	Fri 26/3/21	Wed 28/4/21	528	530	100%	
530	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	529		100%	
531	CPWU-01231h		Backfilling works			14 days	Fri 7/5/21	Mon 24/5/21	Fri 7/5/21	Mon 24/5/21	538SS		100%	
532	**CPWU-01232**		**Pipe Jacking Operation for DN2200 MS pipe (CHAV)**			**100 days**	**Mon 18/1/21**	**Mon 24/5/21**	**Mon 18/1/21**	**Mon 24/5/21**			**100%**	
533	CPWU-01232a		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment		(62)	18 days	Mon 18/1/21	Sat 6/2/21	Mon 18/1/21	Sat 6/2/21		534	100%	
534	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	533	535	100%	6
535	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	534	536	100%	
536	CPWU-01232d		Pipe Laying Works	(204)		18 days	Sat 10/4/21	Fri 30/4/21	Sat 10/4/21	Fri 30/4/21	535	537	100%	
537	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	536	539,538	100%	
538	CPWU-01232f		Backfilling works			14 days	Fri 7/5/21	Mon 24/5/21	Fri 7/5/21	Mon 24/5/21	537	539,531SS	100%	
539	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	537,538	540	100%	
540	CPWU-01020	SW5	Surrounding Site formation works and road works			180 days	Sat 1/4/23	Wed 27/9/23	NA	NA	539,547	48FF	0%	
541	**CPWU-02000**		**Process Pipeworks, All Sewerage, Utilities & Roadworks in Portion C of the Site**			**739 days**	**Wed 15/7/20**	**Mon 9/1/23**	**Wed 15/7/20**	**NA**			**79%**	
542	CPWU-02100		Process Pipeworks			739 days	Wed 15/7/20	Mon 9/1/23	Wed 15/7/20	NA			79%	
543	**CPWU-02110**		**Connection pipe at UV System no.1 & Effluent Pumping Stataion no.1**			**739 days**	**Wed 15/7/20**	**Mon 9/1/23**	**Wed 15/7/20**	**NA**			**79%**	
544	**CPWU-02111**	**SW1**	**Effluent Pipe(approx. 70m, dia 300-1600)**			**908 days**	**Wed 15/7/20**	**Mon 9/1/23**	**Wed 15/7/20**	**NA**			**79%**	
545	CPWU-02111a		Twin DN900 +DN2200 (CHAT, CHAU, CHAV) (+0.2mPD)	45, 46, 257,	(60), (62), (66),(152)	220 days	Wed 15/7/20	Fri 7/5/21	Wed 15/7/20	Fri 7/5/21	263		100%	
546	CPWU-02111c		CHAM, CHAN Pipe Laying (+2.0mPD)			60 days	Thu 27/10/22	Mon 9/1/23	NA	NA	559,341FS-9 days	47FF	0%	
547	**CPWU-02160**	**SW4**	Cable & Other Underground Utility Pipeworks	**17, 21, 22, 33,**	**(283)**	**561.8 days**	**Thu 13/5/21**	**Fri 31/3/23**	**Thu 13/5/21**	**NA**	**171,330,388**	**540,47FF**	**53%**	
548	CPWU-02160d		Cable works			291 days	Mon 13/6/22	Fri 31/3/23	NA	NA			0%	
549	CPWU-02160a		Trench No.1 and associated utilities and pipeworks		297	90 days	Thu 1/12/22	Tue 28/2/23	NA	NA			0%	
550	CPWU-02160b		Trench No.2 and associated utilities and pipeworks		298	91 days	Tue 1/11/22	Mon 30/1/23	NA	NA			0%	
551	CPWU-02160c		Trench No.3 and associated utilities and pipeworks		299	91 days	Tue 1/11/22	Mon 30/1/23	NA	NA			0%	
552	**CPWU-02161**		**Portion C1-B, UV No.1 Building**			**350 days**	**Thu 13/5/21**	**Mon 18/7/22**	**Thu 13/5/21**	**NA**	**283**		**67%**	
553	CPWU-02161a		Falsework removal of UV no.1 building		288, 248	30 days	Thu 13/5/21	Fri 18/6/21	Thu 13/5/21	Fri 18/6/21		44FF	100%	
554	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		555,44FF	100%	
555	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	554	556,44FF	100%	
556	CPWU-02161d		Process pipe DN800 (CHAY)			20 days	Thu 28/10/21	Fri 19/11/21	Thu 28/10/21	Fri 19/11/21	555	557,44FF	100%	
557	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	556	558,44FF	100%	
558	CPWU-02161f		Irrigation System		218	5 days	Mon 21/3/22	Fri 25/3/22	Mon 21/3/22	Fri 25/3/22	557	559,44FF	100%	
559	CPWU-02161g		Road works (footpath 25m)			85 days	Fri 1/4/22	Mon 18/7/22	Fri 1/4/22	NA	558	546	0%	
560	**CPWU-02162**		**Portion C1-B, EVA**			**322 days**	**Thu 24/6/21**	**Mon 25/7/22**	**Thu 24/6/21**	**NA**		**47FF**	**93%**	
561	CPWU-02162a		Watermain works DN450, 350, 300, 150 & 100 (CHL, CHA, CHC, CHLA) (60m)		216, 248, 276,318, (295), (305)	183 days	Thu 24/6/21	Mon 31/1/22	Thu 24/6/21	Mon 31/1/22		562SS	100%	



Critical Split | Task | Milestone | Summary | Critical

Updated Programme (Status Date: 31/07/2022)

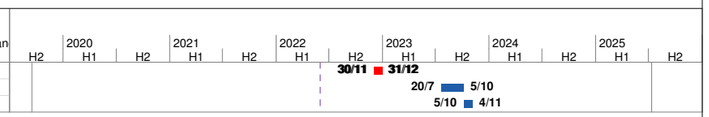
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
562	CPWU-02162b		AC DN150 pipe (CHR)		216	191 days	Thu 24/6/21	Fri 31/12/21	Thu 24/6/21	Fri 31/12/21	561SS		100%	
563	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		568	100%	
564	CPWU-02162d		Area between Fence wall and UV no.1			232 days	Mon 11/10/21	Mon 25/7/22	Mon 11/10/21	NA			93%	
565	CPWU-02162d1		Draiange system			140 days	Mon 11/10/21	Wed 30/3/22	Mon 11/10/21	Wed 30/3/22			100%	
566	CPWU-02162d2		Irrigation System		218	21 days	Mon 21/3/22	Thu 14/4/22	Mon 21/3/22	Thu 14/4/22		567	100%	
567	CPWU-02162d3		Road works (footpath 30m)			80 days	Tue 19/4/22	Mon 25/7/22	Tue 19/4/22	NA	566		80%	
568	CPWU-02162j		Area between Fence wall and SSSH			150 days	Sat 15/1/22	Thu 21/7/22	Sat 15/1/22	NA	563		75%	
569	CPWU-02162j0		300 Uchannel (50m)			40 days	Sat 15/1/22	Sat 5/3/22	Sat 15/1/22	Sat 5/3/22		570	100%	
570	CPWU-02162j1		HyD Lightng pole and drawpits			30 days	Mon 7/3/22	Mon 11/4/22	Mon 7/3/22	Mon 11/4/22	569	571,572	100%	
571	CPWU-02162j2		Road light & drawpit			35 days	Tue 12/4/22	Fri 27/5/22	Tue 12/4/22	Fri 27/5/22	570	573	100%	
572	CPWU-02162j3		Cable Drawpit & ducts			30 days	Tue 12/4/22	Sat 21/5/22	Tue 12/4/22	Sat 21/5/22	570	573	100%	
573	CPWU-02162j4		Road works (footpath & carriageway)		(343)	45 days	Sat 28/5/22	Thu 21/7/22	Sat 28/5/22	NA	572,571		0%	
574	**CPWU-02163**		**Portion C1-B (Stage 3 - External Works)**			**90 days**	**Fri 25/3/22**	**Sat 16/7/22**	**Fri 25/3/22**	**NA**			**39%**	
575	CPWU-02163b		Process Pipe DN1400 (CHAW) (35m)		273	25 days	Fri 25/3/22	Wed 27/4/22	Fri 25/3/22	Wed 27/4/22		578,577,576	100%	
576	CPWU-02163c		Process Pipe DN300 (CHBA) (35m)			80 days	Thu 28/4/22	Sat 16/7/22	Thu 28/4/22	NA	575	578	10%	
577	CPWU-02163d		Process Pipe DN300 (CHAX) (10m)			80 days	Thu 28/4/22	Sat 16/7/22	Thu 28/4/22	NA	575	578	10%	
578	CPWU-02163e		Cable drawpit and ducts			25 days	Thu 28/4/22	Sat 28/5/22	Thu 28/4/22	Sat 28/5/22	575,576,577	579	100%	
579	CPWU-02163f		Road Works (footpath & carriageway)			25 days	Mon 30/5/22	Tue 28/6/22	Mon 30/5/22	Tue 28/6/22	578		100%	
580	CPWU-02200	SW4	Pipe Bridge No.1		297	60 days	Sat 29/10/22	Wed 11/1/23	NA	NA	338FS+120 days		0%	
581	**CRWL-00000**	*	**Remaining Works & Landscape Works**			**699 days**	**Sat 30/7/22**	**Thu 12/12/24**	**NA**	**NA**			**0%**	
582	CRWL-01000	SW5	Irrigation System		218	408 days	Sat 30/7/22	Mon 11/12/23	NA	NA	174,285,318FS-360 days,345FS-36	48FF	0%	
583	CRWL-02000	SW5	Hard Landscape Works			408 days	Sat 30/7/22	Mon 11/12/23	NA	NA	174,285,318FS-360 days,345FS-36	48FF	0%	
584	CRWL-03000	SW5	Soft Landscape Works			408 days	Sat 30/7/22	Mon 11/12/23	NA	NA	174,285,318FS-360 days,345FS-36	590,48FF	0%	
585	CRWL-04000	SW5	Outfall for Effluent Pipes			124 days	Tue 1/11/22	Sat 1/4/23	NA	NA	214	48FF	0%	
586	CRWL-05000	SW5	Slope Formation Works near Outfall			124 days	Tue 1/11/22	Sat 1/4/23	NA	NA	214	48FF	0%	
587	CRWL-06000	SW5	Removal of invasive trees along River Embankment		(37)	90 days	Tue 1/11/22	Tue 21/2/23	NA	NA	214	588	0%	
588	CRWL-07000	SW5	Retaining Wall along River Embankment, street furniture & road works			90 days	Tue 21/2/23	Tue 13/6/23	NA	NA	214,587	48FF	0%	
589	CRWL-08000	SW5	Remaining Site formation works, road works and boundary fence wall		(348), 299	250 days	Thu 16/2/23	Tue 24/10/23	NA	NA	46	48FF	0%	
590	CRWL-09000		Establishment Works (365 Calendar Days)			291 days	Mon 11/12/23	Thu 12/12/24	NA	NA	584,174		0%	
591	**CWPA-00000**	*	**Construction of Portion A of the Site**			**1141 days**	**Wed 27/11/19**	**Thu 5/10/23**	**Wed 27/11/19**	**NA**			**77%**	
592	**C132S-00000**	*	**132kV Substation**			**1141 days**	**Wed 27/11/19**	**Thu 5/10/23**	**Wed 27/11/19**	**NA**			**77%**	
593	**C132SI-00000**		**Internal Works**			**637 days**	**Wed 27/11/19**	**Thu 20/1/22**	**Wed 27/11/19**	**Thu 20/1/22**			**100%**	
594	C132SI-01000		Site Clearance & Site Set Up			19 days	Tue 10/12/19	Fri 3/1/20	Tue 10/12/19	Fri 3/1/20	2	595	100%	
595	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	594	597	100%	
596	C132SI-03000		Trial Pit Excavation & UU Detection Works			0 days	Mon 2/12/19	Thu 12/12/19	Mon 2/12/19	Thu 12/12/19	2	598	100%	
597	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	595	598	100%	
598	C132SI-05000		Predrilling Works (11no., 1rig, 3days/drillhole/rig)		(10)	16 days	Sat 4/1/20	Wed 22/1/20	Sat 4/1/20	Wed 22/1/20	160,596,213,597	599	100%	
599	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	598	600	100%	
600	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	599	601	100%	
601	C132SI-08000		Pre-bored Socketed H-Pile Installation (41 Nos, 2 Rig, 3days/rig/pile)	17, 21, 22	39/43, (10), (19), (36)	88 days	Sat 1/2/20	Wed 20/5/20	Sat 1/2/20	Wed 20/5/20	161,600	602,352,604	100%	6
602	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	601	603,387FS+5 days,605	100%	
603	C132SI-10000		Sheetpile Installation Stage 1 - Obstruction of Uncharted Manhole and DI Pipe, and Fire Hydrants	45	234, (19), (24), (36), (56), (58), (59)	118 days	Thu 21/5/20	Fri 9/10/20	Thu 21/5/20	Fri 9/10/20	602,163	606	100%	6
604	C132SI-11000		CHP Cable Diversion Works	22, 33, 45, 46,	31/35, (23), (137)	70 days	Fri 21/2/20	Tue 19/5/20	Fri 21/2/20	Tue 19/5/20	601		100%	
605	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	602		100%	
606	C132SI-13000		Excavation Works Stage 1	45, 46, 257,	(16), (23), (36)	86 days	Wed 22/7/20	Mon 2/11/20	Wed 22/7/20	Mon 2/11/20	603	607	100%	8
607	C132SI-14000		R.C. Structure (880 sq.m)		(52)	175 days	Wed 30/9/20	Fri 7/5/21	Wed 30/9/20	Fri 7/5/21	239,240,166,238,606	643	100%	10
608	C132SI-14020		Basement -Revised 132kV Primary Substation Foundation Plan	(92), (112)	39/43, (56), (59), (115), (30)	50 days	Wed 30/9/20	Mon 30/11/20	Wed 30/9/20	Mon 30/11/20		609	100%	
609	C132SI-14030		Ground Floor - Change to Works Information / Revised Civil Requirement (G/F)	268	(106), (115), (143), (79),(103),(91),(8	68 days	Tue 1/12/20	Wed 24/2/21	Tue 1/12/20	Wed 24/2/21	608	610	100%	
610	C132SI-14040		First Floor - Change to Works Information / Revised Civil Requirement (1/F)	338	(143), (104)	19 days	Thu 25/2/21	Fri 9/4/21	Thu 25/2/21	Fri 9/4/21	609	611	100%	
611	C132SI-14050		Roof Floor (461sq.m) - Additional Roof Plinth	(204), (228)	(126), (143), (105)	23 days	Sat 10/4/21	Fri 7/5/21	Sat 10/4/21	Fri 7/5/21	610	612	100%	
612	C132SI-14060		Parapet			26 days	Fri 2/4/21	Fri 7/5/21	Fri 2/4/21	Fri 7/5/21	611	613,619,614,617,616,618,615	100%	
613	C132SI-22000		ABWF Works + Additional Works		(269), (271), (274), (324), (208), (29	100 days	Sat 8/5/21	Tue 5/10/21	Sat 8/5/21	Tue 5/10/21	242,168,612	619FF	100%	
614	C132SI-23000		BS Works + Additional Works		(316), (330), (362)	100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	168,612	619FF	100%	
615	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	612	619FF	100%	
616	C132SI-25000		Backfilling reinstatement & road works			100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	612	619FF	100%	
617	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	612,621		100%	
618	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	612		100%	
619	C132SI-28000		Architectual Works			144 days	Mon 7/6/21	Fri 26/11/21	Mon 7/6/21	Fri 26/11/21	613FF,614FF,615FF,616FF,612	620	100%	
620	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	619	622,621SS+5 days,623	100%	
621	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	620SS+5 days	617,623	100%	
622	C132SI-30000		FSD Inspection & FS Certificate			15 days	Tue 4/1/22	Thu 20/1/22	Tue 4/1/22	Thu 20/1/22	620	205SS-2 emons,644	100%	
623	**C132SI-31000**	**KD2A**	**Allow for CLP to carry out E&M installation works**			**0 days**	**Mon 3/1/22**	**Mon 3/1/22**	**Mon 3/1/22**	**Mon 3/1/22**	**621,620,641**	**624SS-30 days,37FF,644**	**100%**	
624	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	623SS-30 days,242,168	644	100%	
625	**C132SE-00000**		**External Works**			**344 days**	**Mon 21/12/20**	**Mon 21/2/22**	**Mon 21/12/20**	**Mon 21/2/22**	**183**		**100%**	
626	**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**		**644**	**100%**	
627	C132SE-01010		Trial Pit Excavation & UU Detection Works	(112)		2 days	Mon 21/12/20	Tue 22/12/20	Mon 21/12/20	Tue 22/12/20	186	628	100%	
628	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	627	629SS+20 days	100%	
629	C132SI-17000		Dismantle existing boundary wall	268, 338	(21), (90), 370	63 days	Thu 14/1/21	Wed 31/3/21	Thu 14/1/21	Wed 31/3/21	628SS+20 days	630SS+40 days	100%	
630	C132SI-19000		Sheetpile Installation Stage 2	338, (204),	(35), (151), (155), (166)	70 days	Mon 8/3/21	Tue 15/6/21	Mon 8/3/21	Tue 15/6/21	629SS+40 days		100%	
631	C132SE-02000		Drainage & Sewerage Works		245	232 days	Tue 23/3/21	Mon 3/1/22	Tue 23/3/21	Mon 3/1/22		644	100%	
632	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		633	100%	
633	C132SE-02010		Trench Excavation and ELS works	(204), (228)	(162), (308), (312), (332)	90 days	Tue 20/4/21	Fri 6/8/21	Tue 20/4/21	Fri 6/8/21	632	634	100%	
634	C132SE-02020		Pipe Laying Works		(312), (314), (332), (322), (364)	100 days	Thu 15/7/21	Thu 11/11/21	Thu 15/7/21	Thu 11/11/21	633	635	100%	
635	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	634		100%	
636	C132SE-02040	KD2A	CLP Cable & Other Underground Utility Pipeworks			235 days	Mon 10/5/21	Mon 21/2/22	Mon 10/5/21	Mon 21/2/22		644	100%	
637	C132SE-02042		CLP cable diversion works within SWHSTW and along San Wan Road by others		(EWN210)(148)	14 days	Mon 10/5/21	Wed 26/5/21	Mon 10/5/21	Wed 26/5/21			100%	
638	C132SE-02043		CLP cable works along & across San Wan Road		(320), (363)	11 days	Tue 30/11/21	Sat 11/12/21	Tue 30/11/21	Sat 11/12/21			100%	
639	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		640,641	100%	
640	C132SE-02050		Road Works		(307), (309), (313), (333), (344), (34	54 days	Tue 14/12/21	Mon 21/2/22	Tue 14/12/21	Mon 21/2/22	639		100%	
641	C132SE-02060		Road Carriageway Works			18 days	Tue 14/12/21	Fri 31/12/21	Tue 14/12/21	Fri 31/12/21	639	642SS+20 days,623	100%	
642	C132SE-02070		Footpath works			50 days	Mon 3/1/22	Mon 21/2/22	Mon 3/1/22	Mon 21/2/22	641SS+20 days		100%	
643	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	607		100%	
644	C132SE-04000	SW2	Remaining Works after CLP Plant and Power Cables Installation			384 days	Thu 31/3/22	Thu 20/7/23	Thu 31/3/22	NA	624,622,623,626,631,636	45FF	0%	
645	C132SE-04100		Coordination with CLP & SWHSTW to identify alignment & levels to suit site			118 days	Thu 31/3/22	Tue 26/7/22	Thu 31/3/22	NA		646	0%	
646	C132SE-04200		UU Detection/ Trial Pit Works			30 days	Wed 27/7/22	Thu 25/8/22	NA	NA	645	647,652	0%	
647	C132SE-04300		Confirmation on Extent of works			15 days	Fri 26/8/22	Fri 9/9/22	NA	NA	646	648	0%	
648	C132SE-04400		Material ordering & Delivery on Site			120 days	Sat 10/9/22	Sun 8/1/23	NA	NA	647	649SS+60 days	0%	
649	C132SE-04500		Construct Cable Ducts & Draw Pits			210 days	Wed 9/11/22	Wed 7/6/23	NA	NA	648SS+60 days	650FF+43 days	0%	
650	C132SE-04600		Reinstatement Works			60 days	Sun 21/5/23	Thu 20/7/23	NA	NA	649FF+43 days	655	0%	
651	C132SE-05000		Additional Trial Pit and Inspection Pit for Stage 2 Geotechnical Works		393	405 days	Fri 26/8/22	Thu 5/10/23	NA	NA			0%	
652	C132SE-05100		Apply XP			67 days	Fri 26/8/22	Tue 15/11/22	NA	NA	646	653	0%	
653	C132SE-05200		TTA (RMO/TD Approval)			13 days	Tue 15/11/22	Wed 30/11/22	NA	NA	652	654	0%	



Critical Split Task Milestone Summary Critical

Updated Programme (Status Date: 31/07/2022)

ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
654	C132SE-05300		Additional Trial Pit and Inspection Pit Works			25 days	Wed 30/11/22	Sat 31/12/22	NA	NA	653		0%	
655	C132SE-02080		Highway Lighting Works - Coordination with Highways Department			77 days	Thu 20/7/23	Thu 5/10/23	NA	NA	650	48FF,656	0%	1month
656	C132SE-06000		Inspection and Handover to DSD			30 days	Thu 5/10/23	Sat 4/11/23	NA	NA	655	48FF	0%	

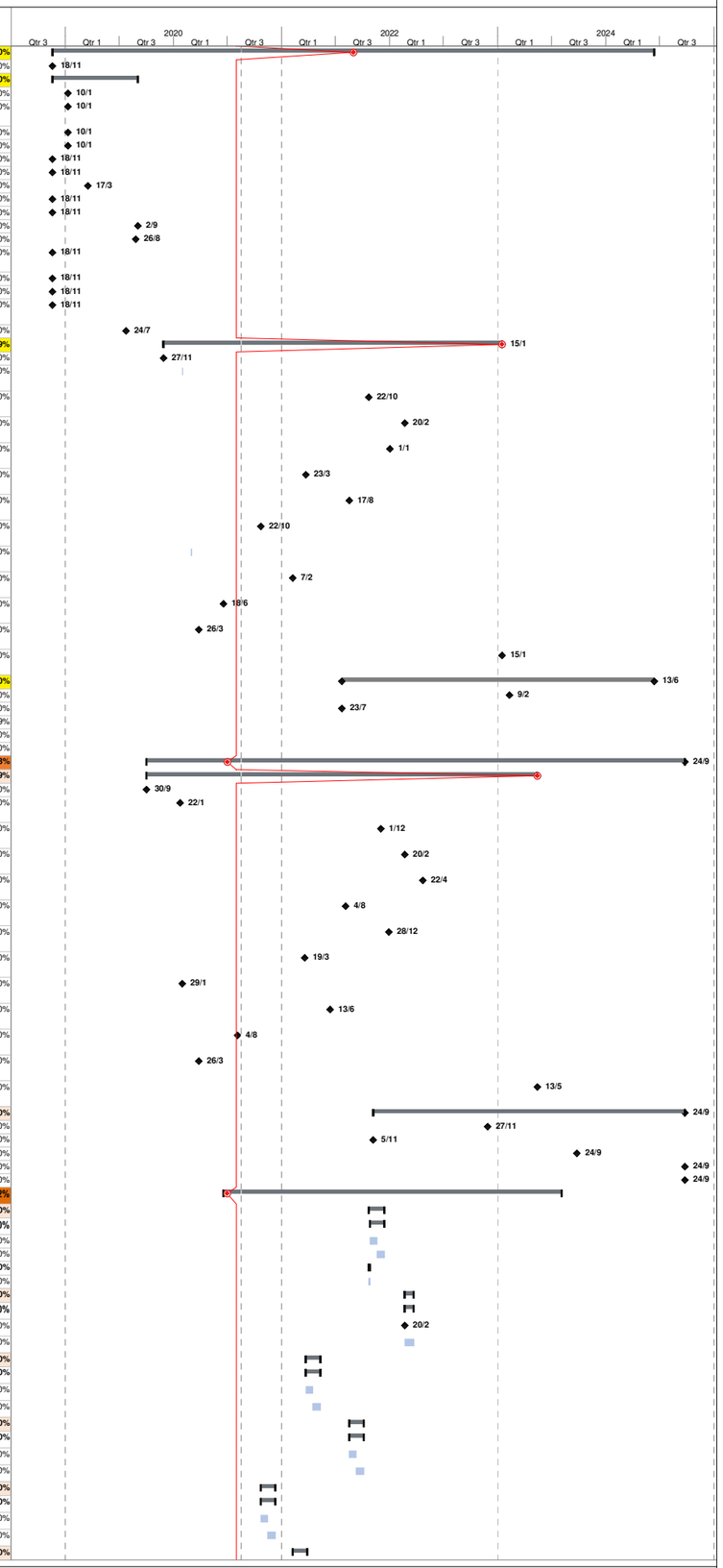


Critical Split Task Milestone Summary Critical

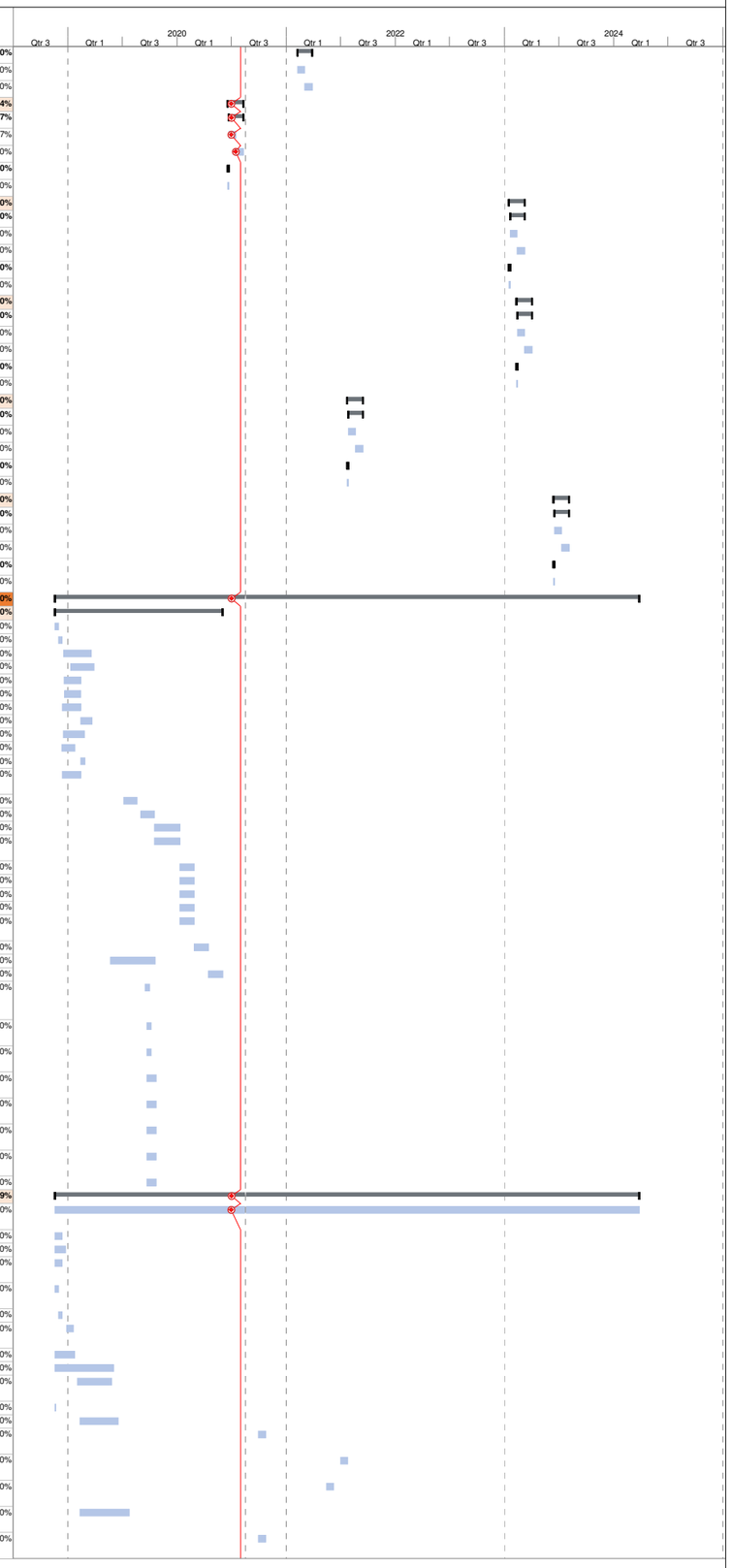
Contract No. DC/2018/07
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1

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

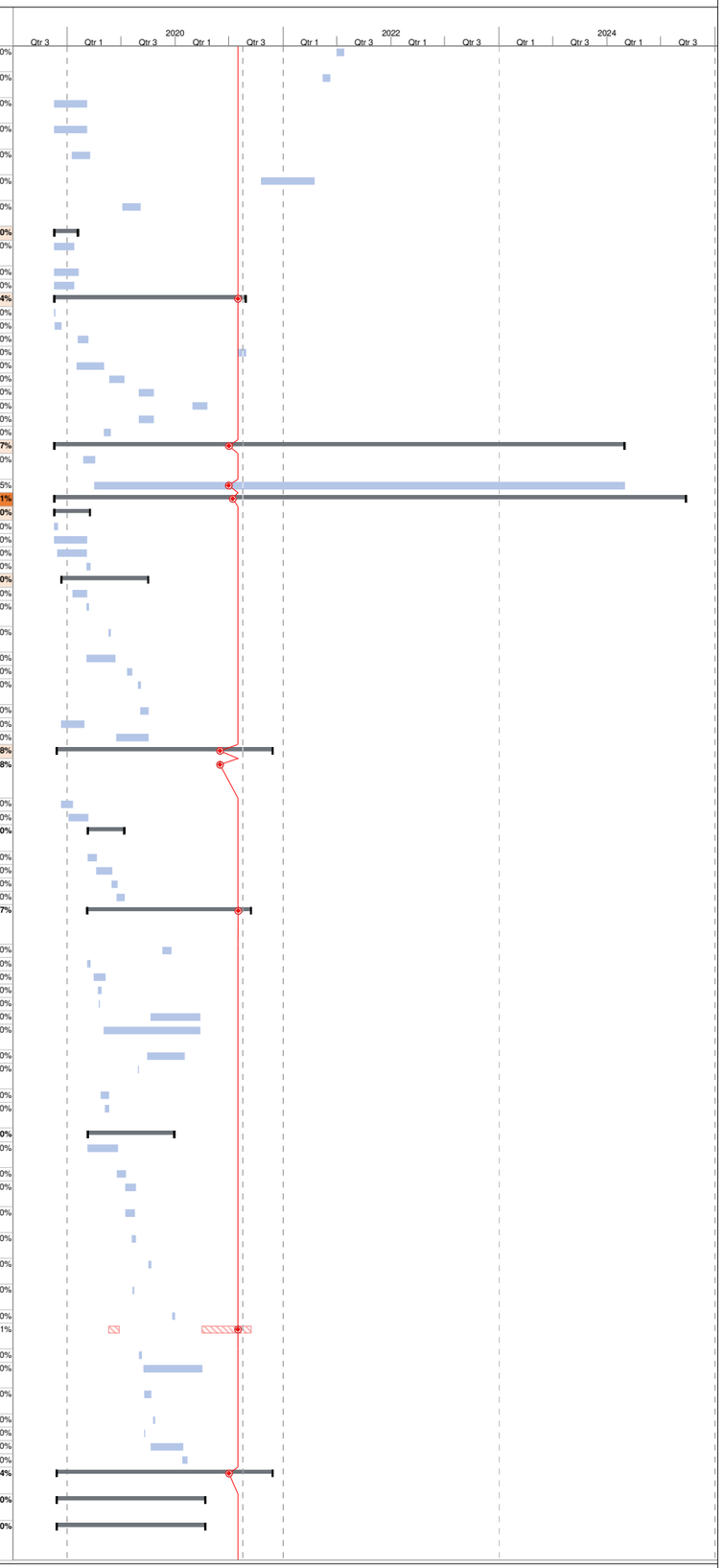
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
1	**CD-1000**		**Contract Dates**			**1585 days**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



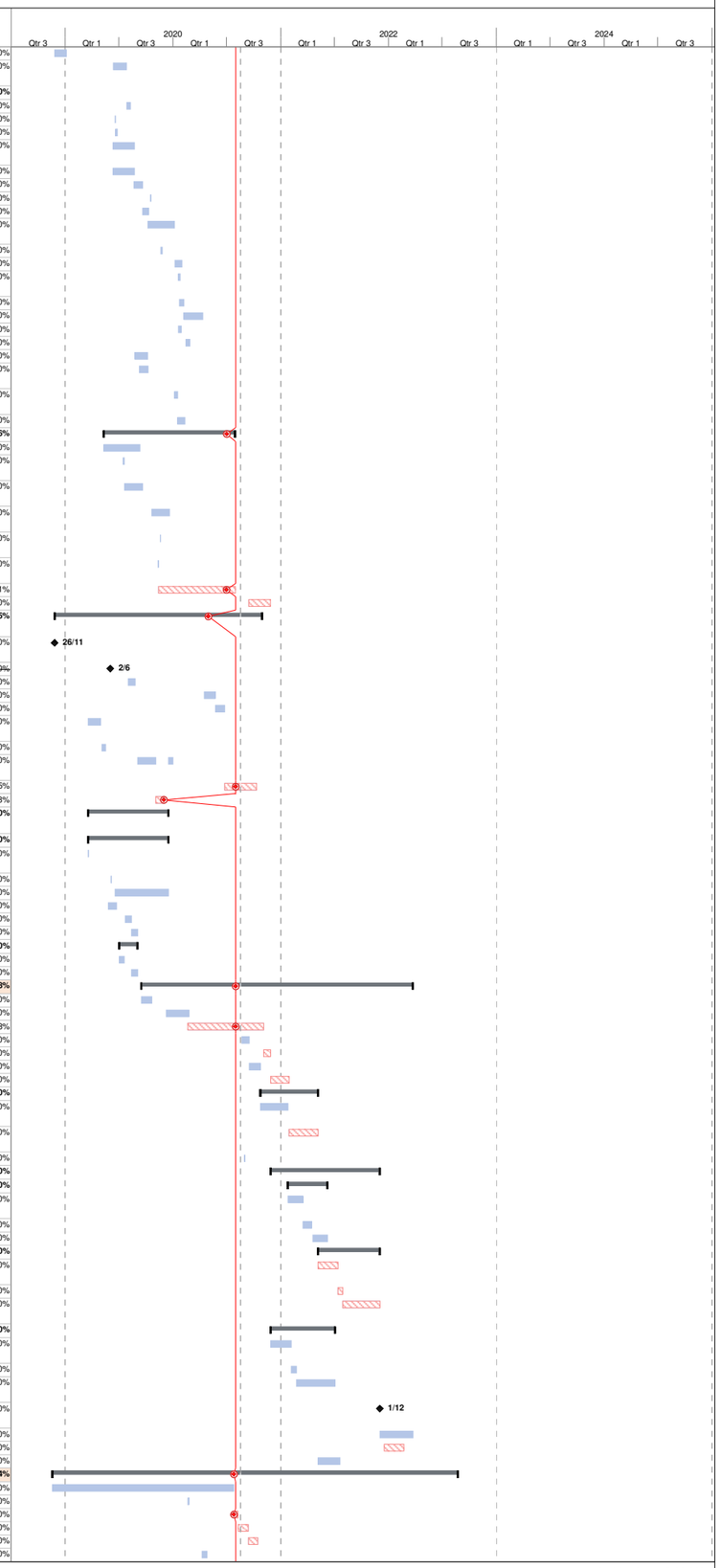
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
85	**ET1H-1100**		**Inclement Weather to KD1J (cal.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



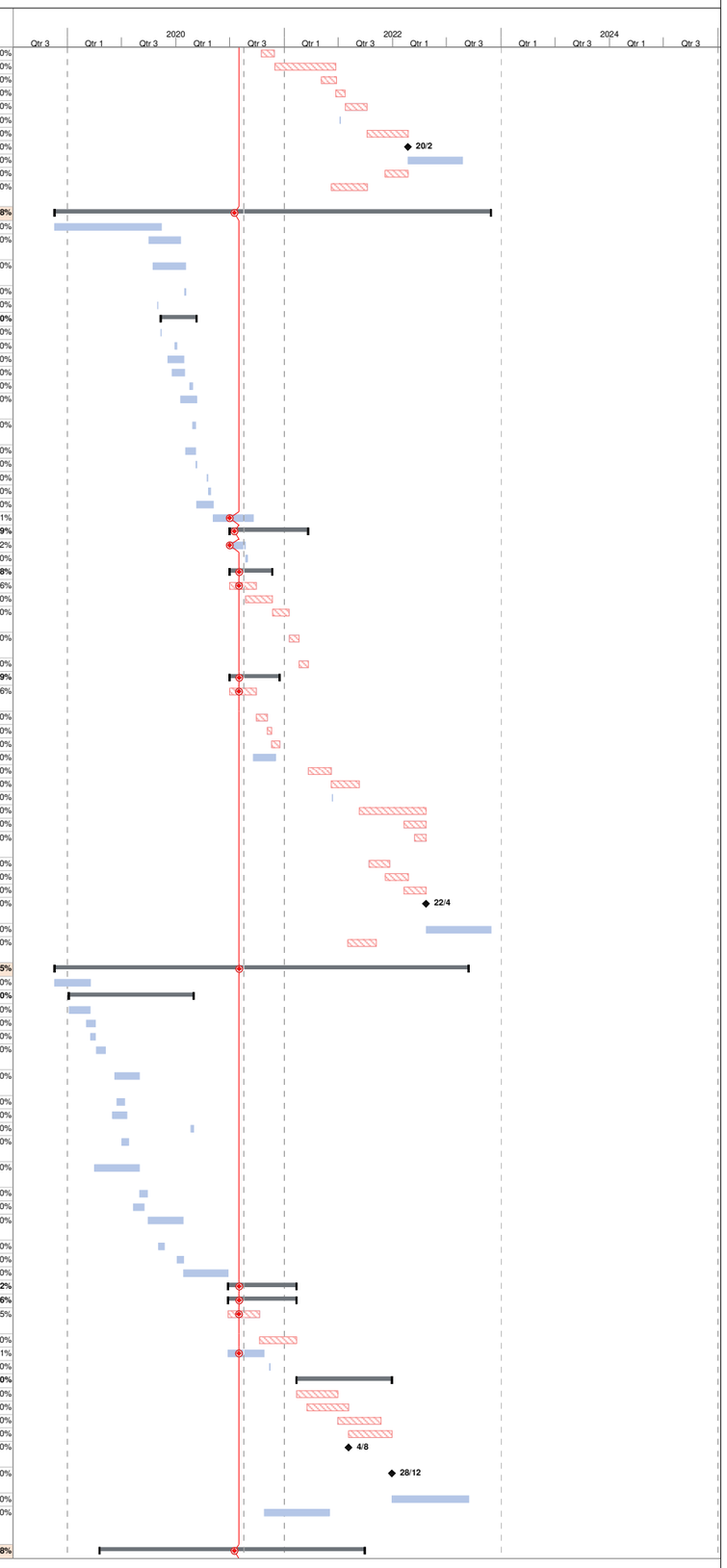
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
170	SUBA-1130b		Prepare and submit Dewatering proposal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



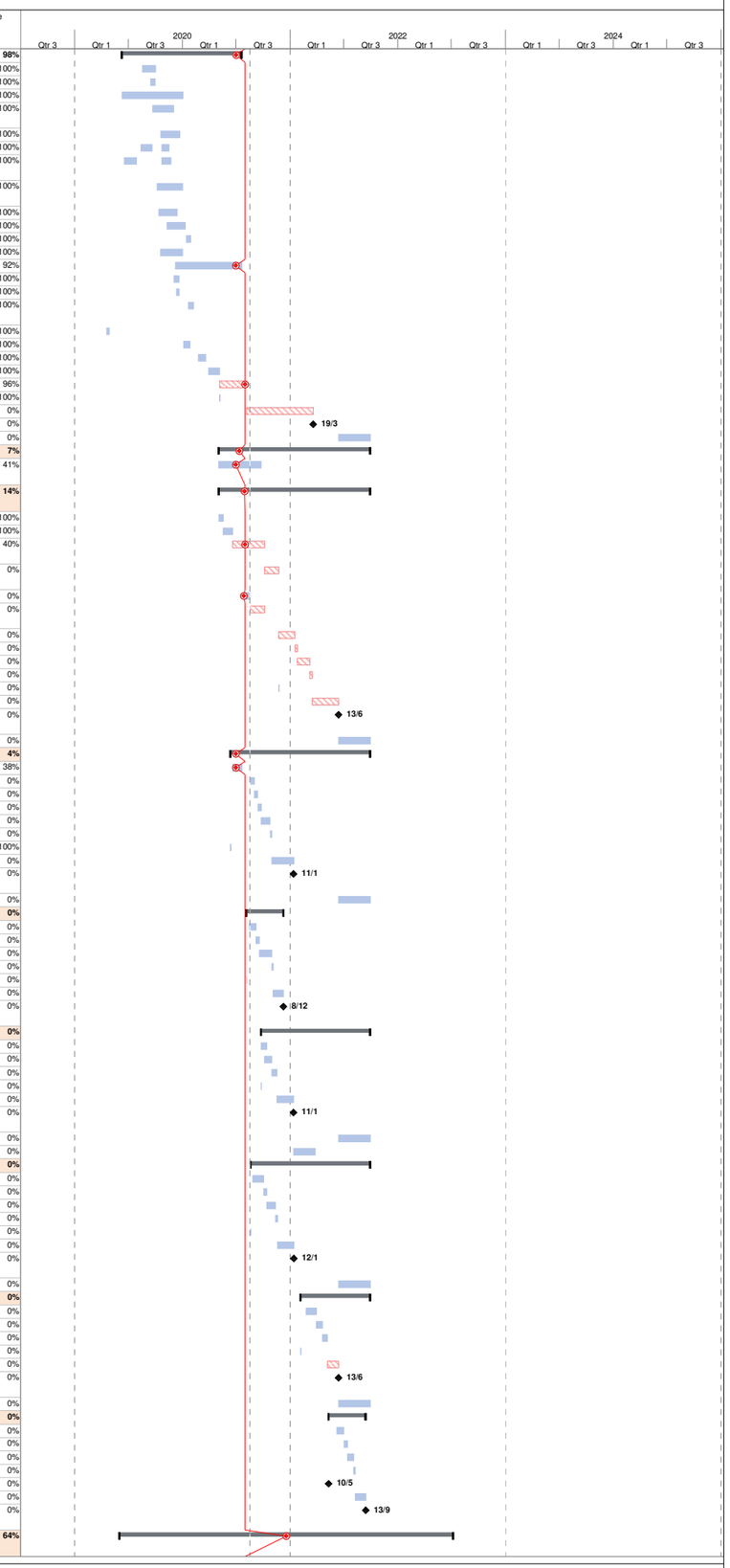
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
252	CIW-1500b		Joint Initial Survey arrangement with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

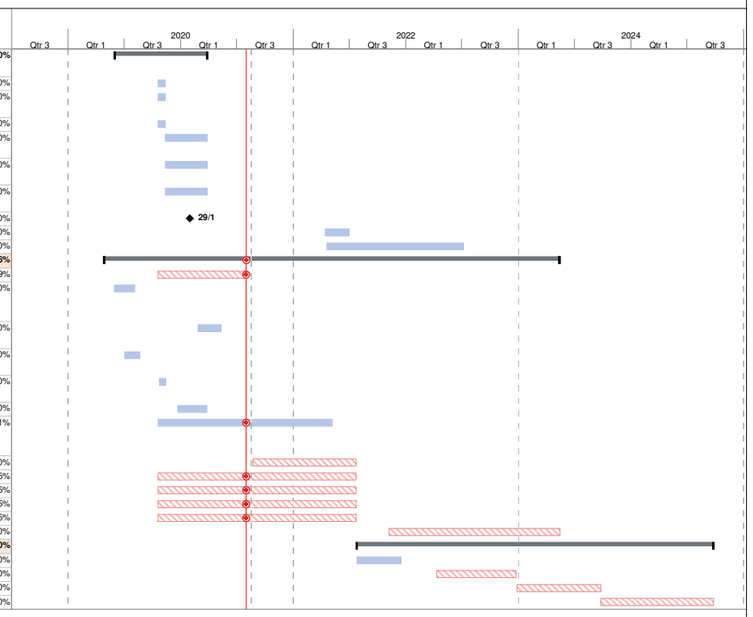


ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
435	**CSA-1000**		**Additional Preliminary Works**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

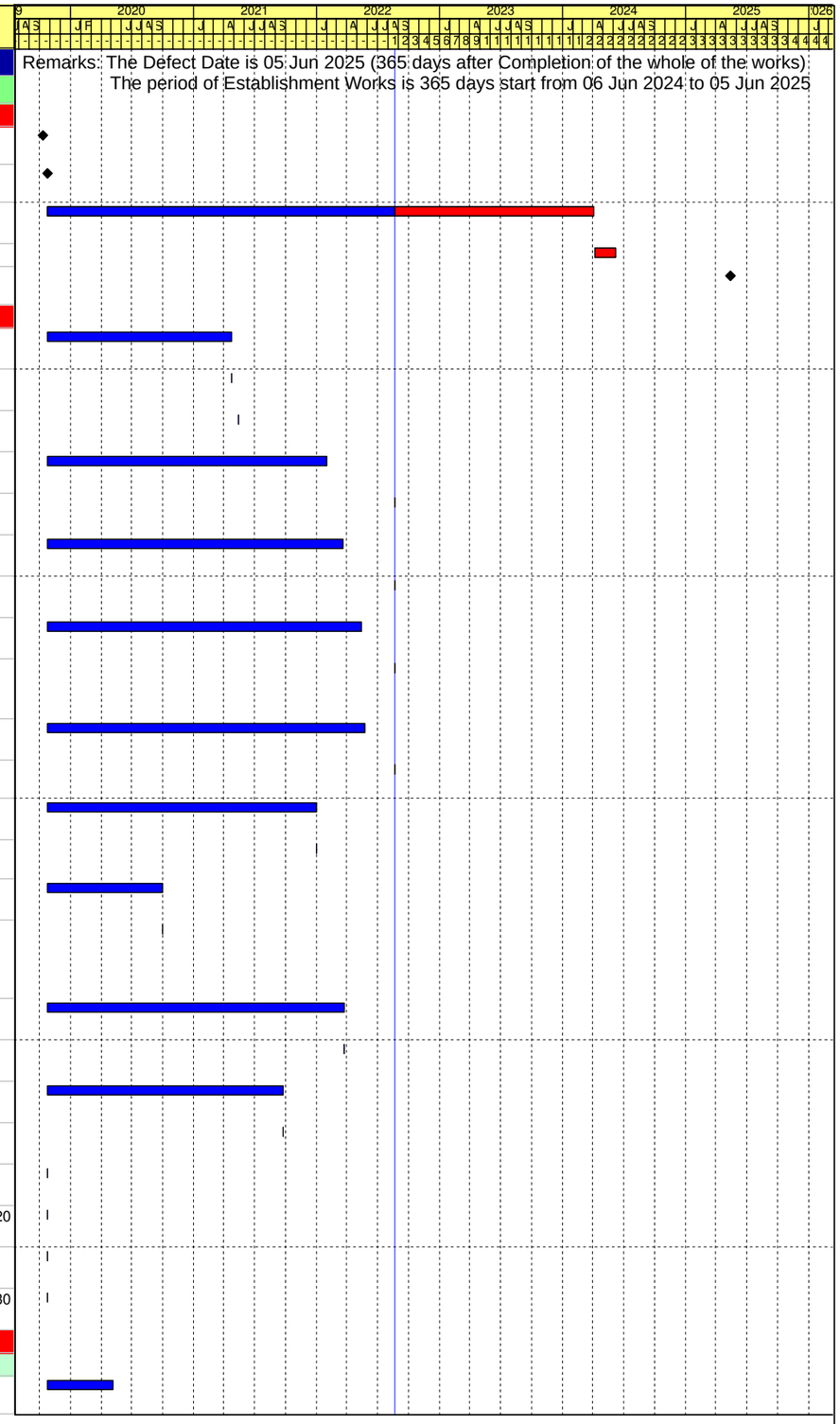


Revised Works Programme (Status Date: 31/07/2021)

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 Slu		2044	11-Oct-19 A	15-May-25	05-Sep-21	15-May-25	0		
Contract Data		2044	11-Oct-19 A	15-May-25	05-Sep-21	15-May-25	0		
Starting Date & Completion Date		2044	11-Oct-19 A	15-May-25	05-Sep-21	15-May-25	0		
CD1000	Contract Date (LOA)	0	11-Oct-19 A		05-Sep-21				CD1010, S1P1000,
CD1010	Starting Date	0	23-Oct-19 A		05-Sep-21			CD1000	S1D1040, AD1050,
CD1020	Whole Contract Period (1626 days from starting date)	1626	23-Oct-19 A	04-Apr-24	21-Aug-22	04-Apr-24	0	CD1010	CD1040, CD1030
CD1030	Extension of Time Granted (Total 61.5days)	62	05-Apr-24	05-Jun-24*	05-Apr-24	05-Jun-24	0	CD1020	CD1040
CD1040	Completion Date for the whole of the Works	0		15-May-25		15-May-25	0	CD1020, CD1010,	
Access Date		1434	23-Oct-19 A	21-Aug-22	13-Sep-21	15-May-25	998		
AD1000	Portion C-1A (within 480 to 550 days from starting date)	550	23-Oct-19 A	24-Apr-21 A	16-Apr-22	16-Apr-22		CD1010	AD1010
AD1010	Planned Access Date for Portion C-1A (Partial Access)	1	24-Apr-21 A	24-Apr-21 A	16-Apr-22	16-Apr-22		CD1010, AD1000	PL1470, S4C1010
AD1020	Planned Access Date for Portion C-1A (Access for Remaining Area)	1	12-May-21 A	12-May-21 A	16-Apr-22	16-Apr-22			S4C1010
AD1030	Portion C-2A (within 705 to 795 days from starting date) (SS by NCE-NCE-288, within 705 to 831 days from starting date)	831	23-Oct-19 A	30-Jan-22 A	30-Jan-22	30-Jan-22		CD1010	AD1040
AD1040	Planned Access Date for Portion C-2A	1	21-Aug-22	21-Aug-22*	30-Jan-22	30-Jan-22	-203	CD1010, AD1030	
AD1050	Portion C-2B (within 765 to 855 days from starting date) (SS by NCE-NCE-286, within 765 to 880 days from starting date)	880	23-Oct-19 A	20-Mar-22 A	20-Mar-22	20-Mar-22		CD1010	AD1060
AD1060	Planned Access Date for Portion C-2B	1	21-Aug-22	21-Aug-22*	20-Mar-22	20-Mar-22	-154	CD1010, AD1050	S5CHPC1020
AD1070	Portion C-2C (within 715 to 805 days from starting date) (SS by NCE-NCE-287, within 715 to 934 days from starting date)	934	23-Oct-19 A	13-May-22 A	13-May-22	13-May-22		CD1010	AD1080
AD1080	Planned Access Date for Portion C2-C	1	21-Aug-22	21-Aug-22*	13-May-22	13-May-22	-100	CD1010, AD1070	S5DIGC1040, S5DIGC1210, S5DIGC1030
AD1090	Portion C-2D (within 825 to 945 days from starting date)	945	23-Oct-19 A	24-May-22 A	16-May-22	16-May-22		CD1010	AD1100
AD1100	Planned Access Date for Portion C-2D	1	21-Aug-22	21-Aug-22*	16-May-22	16-May-22	-97	AD1090	S5BIOC1020, S5BIOC1030,
AD1110	Portion C-3 (within 615 to 705 days from starting date) (SS by NCE-NCE-273, within 615 to 815 days from starting date)	815	23-Oct-19 A	31-Dec-21 A	02-Aug-22	02-Aug-22		CD1010	AD1120
AD1120	Planned Access Date for Portion C-3 (SS by NCE-NCE-273)	1	31-Dec-21 A	31-Dec-21 A	02-Aug-22	02-Aug-22		AD1110, S2D1110	KD1060, S5WS2C1000,
AD1130	Portion B-1 (within 285 to 345 days from starting date)	345	23-Oct-19 A	30-Sep-20 A	13-Sep-21	13-Sep-21		CD1010	AD1140
AD1140	Planned Access Date for Portion B-1	1	30-Sep-20 A	30-Sep-20 A	13-Sep-21	13-Sep-21		AD1130	KD1030, S3C1020, S3C1010, KD1030-1
AD1150	Portion B-2a (within 615 to 705 days from starting date) (SS by NCE-NCE-219, within 771 to 891 days from starting date)	891	23-Oct-19 A	23-Mar-22 A	25-Aug-22	25-Aug-22		CD1010	AD1160
AD1160	Planned Access Date for Portion B-2a (SS by NCE-NCE-219)	1	23-Mar-22 A	23-Mar-22 A	25-Aug-22	25-Aug-22		AD1150	S5SASC1010, S5SASC1000
AD1170	Portion B-2b (within 615 to 705 days from starting date) (SS by NCE-NCE-219)	705	23-Oct-19 A	24-Sep-21 A	15-May-25	15-May-25			
AD1180	Planned Access Date for Portion B-2b (SS by NCE-NCE-219)	1	24-Sep-21 A	24-Sep-21 A	15-May-25	15-May-25			
AD1190	Works Area WA1-B (starting date)	1	23-Oct-19 A	23-Oct-19 A	05-Jul-22	05-Jul-22		CD1010	AD1200
AD1200	Planned Access Date for Works Area WA1-B	1	23-Oct-19 A	23-Oct-19 A	05-Jul-22	05-Jul-22		CD1010, AD1190	PL1000, PL1020
AD1210	Works Area WA3 (starting date)	1	23-Oct-19 A	23-Oct-19 A	01-Aug-23	01-Aug-23		CD1010	AD1220
AD1220	Planned Access Date for Works Area WA3	1	23-Oct-19 A	23-Oct-19 A	01-Aug-23	01-Aug-23		CD1010, AD1210	PL1000, PL1030
Key Dates		1593	23-Oct-19 A	02-Mar-24	16-Apr-22	15-May-25	439		
Contractual Completion (Include Implemented CE)		1546	23-Oct-19 A	15-Jan-24	16-Apr-22	15-May-25	487		
KD1000	KD1A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of UV System No.1 and Effluent Pumping Station No.1	196	23-Oct-19 A	05-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1040,	CD1040, S4P1040



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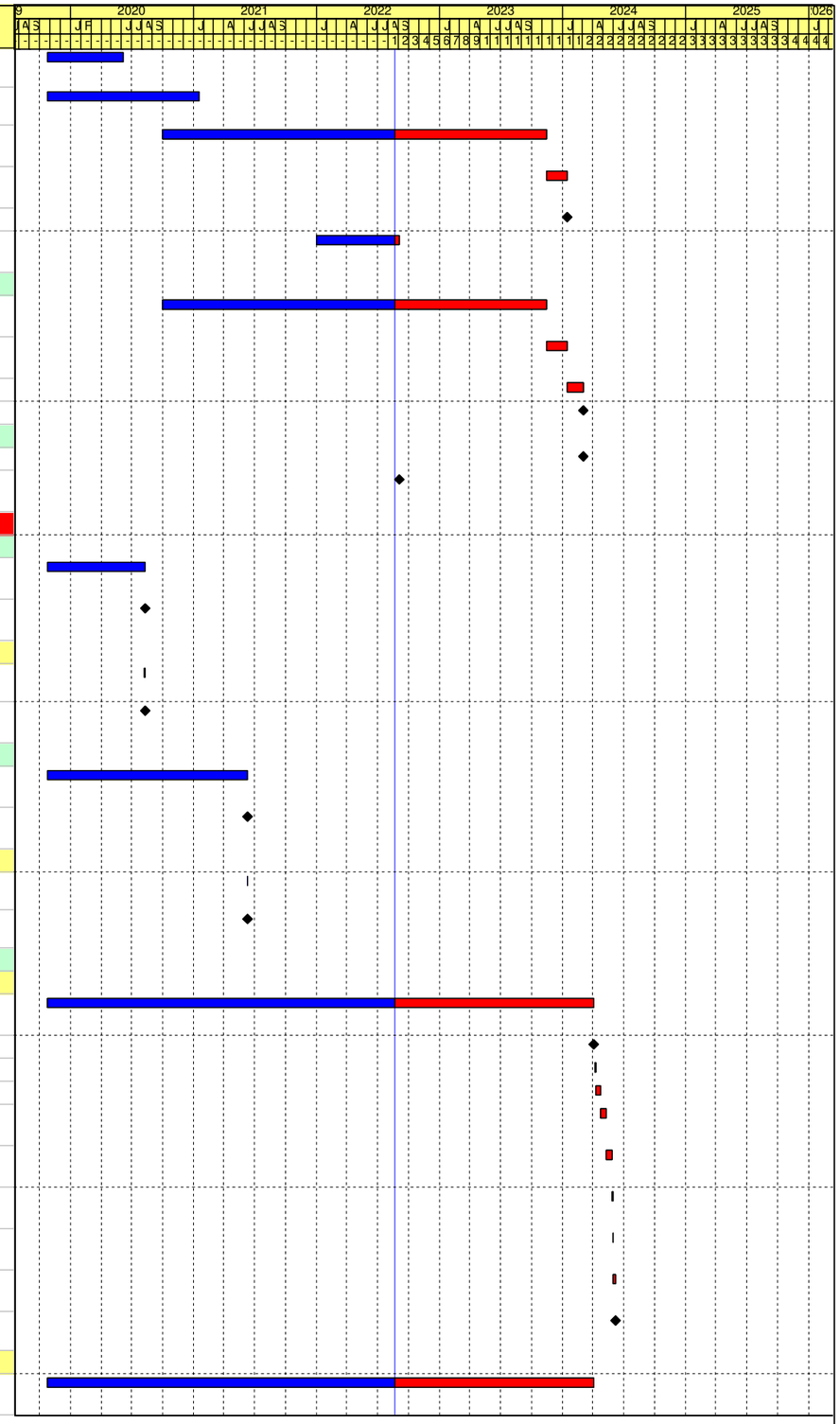
File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 1 of 46

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 Aug 2022

Date	Revision	Checked	Approved
30-Apr-22	Rev.21	LT	KM
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
KD1010	KD2A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, Workshop No.2, etc.	226	23-Oct-19 A	04-Jun-20 A	15-May-25	15-May-25		CD1010, S2D1080,	KD1020
KD1020	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	461	23-Oct-19 A	16-Jan-21 A	15-May-25	15-May-25		CD1010, S2D1120,	SC21110
KD1030	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	21-Aug-22	14-Nov-23	0	AD1140	KD1040
KD1040	Extension of Time Granted for KD3A (Total 61.5days)	62	15-Nov-23	15-Jan-24	15-Nov-23	15-Jan-24	0	KD1030	SC31110, KD1050
KD1050	Revised Completion Date for KD3A	0		15-Jan-24*		15-Jan-24	0	KD1040	
KD1060	KD5A - Completion of BS Fitting at CLP Sub-Station at Workshop No.2 (245d after Portion C-3 Access)(Impacted by NCE-273)	246	31-Dec-21 A	02-Sep-22*	21-Aug-22	02-Sep-22	0	AD1120, S5WS2C1010	
Expected Completion (Include Non-implemented CE)		1198	30-Sep-20 A	02-Mar-24	16-Aug-22	26-Feb-24	-5		
KD1030-1	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	16-Aug-22	09-Nov-23	-5	AD1140	KD1040-1
KD1040-1	Extension of Time Granted for KD3A (Total 61.5days)	62	15-Nov-23	15-Jan-24	10-Nov-23	10-Jan-24	-5	KD1030-1	SC31110, KD1045
KD1045	Extension of Time for KD3A - Non-implemented (Total 47.5days)	48	15-Jan-24	02-Mar-24	10-Jan-24	26-Feb-24	-5	KD1040-1	KD1050-1
KD1050-1	Expected Completion Date for KD3A	0		02-Mar-24*		26-Feb-24	-5	KD1045	
Planned Completion		547	02-Sep-22	02-Mar-24	02-Sep-22	15-Jan-24	-48		
KD1050-2	Planned Completion Date for KD3A	0		02-Mar-24*		15-Jan-24	-48	S3T1100	SC31110
KD1060-1	Planned Completion Date for KD5A	0		02-Sep-22*		02-Sep-22	0	AD1120, S5WS2C1010	
Completion Date		2032	23-Oct-19 A	15-May-25	09-May-22	15-May-25	0		
Section 1 - Complete All Design at UV System No.1 & EP Station No. 1		312	23-Oct-19 A	08-Aug-20 A	15-May-25	15-May-25			
SC11000	Contract Duration of Section 1	291	23-Oct-19 A	08-Aug-20 A	15-May-25	15-May-25		CD1010	SC11100
SC11100	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20 A		15-May-25		SC11000	SC11120
Time Risk Allowance and Planned Completion		1	08-Aug-20 A	08-Aug-20 A	15-May-25	15-May-25			
SC11110	Time Risk Allowance for Section 1	1	08-Aug-20 A	08-Aug-20 A	15-May-25	15-May-25		S1P1000, S1P1040,	SC11120
SC11120	Planned Completion for Section 1	0		08-Aug-20 A		15-May-25		SC11110, SC11100	CD1040
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		632	23-Oct-19 A	11-Jun-21 A	15-May-25	15-May-25			
SC21000	Contract Duration of Section 2	601	23-Oct-19 A	11-Jun-21 A	15-May-25	15-May-25		CD1010	SC21100
SC21100	Completion date - Section 2 (600 days after starting date)	0		11-Jun-21 A		15-May-25		SC21000	SC21120
Time Risk Allowance and Planned Completion		9	11-Jun-21 A	11-Jun-21 A	15-May-25	15-May-25			
SC21110	Time Risk Allowance for Section 2	6	11-Jun-21 A	11-Jun-21 A	15-May-25	15-May-25		S2P1000, S2P1010,	SC21120
SC21120	Planned Completion for Section 2	0		11-Jun-21 A		15-May-25		SC21110, SC21100,	CD1040
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		2032	23-Oct-19 A	15-May-25	21-Aug-22	15-May-25	0		
Contractual Completion (Include Implemented CE)		1688	23-Oct-19 A	05-Jun-24	21-Aug-22	05-Jun-24	0		
SC31000	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Aug-22	04-Apr-24	0		SC31001
SC31001	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC31000	SC31002
SC31002	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	SC31001	SC31003
SC31003	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	SC31002	SC31005
SC31005	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	24-Apr-24	09-May-24	24-Apr-24	09-May-24	0	SC31003	SC31100, SC31006
SC31006	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	09-May-24	28-May-24	09-May-24	28-May-24	0	SC31005	SC31100, SC31007
SC31007	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	28-May-24	31-May-24	28-May-24	31-May-24	0	SC31006	SC31010
SC31010	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	01-Jun-24	01-Jun-24	01-Jun-24	01-Jun-24	0	SC31007	SC31011
SC31011	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	01-Jun-24	05-Jun-24	01-Jun-24	05-Jun-24	0	SC31010	SC31100
SC31100	Revised Completion for Section 3	0		05-Jun-24*		05-Jun-24	0	SC31005, SC31006,	
Expected Completion (Include Non-implemented CE)		2032	23-Oct-19 A	15-May-25	21-Aug-22	15-May-25	0		
SC31000-1	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Aug-22	04-Apr-24	0	CD1010	SC31001-1



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 2 of 46

Remaining Work
Critical Activity
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Actual Progress

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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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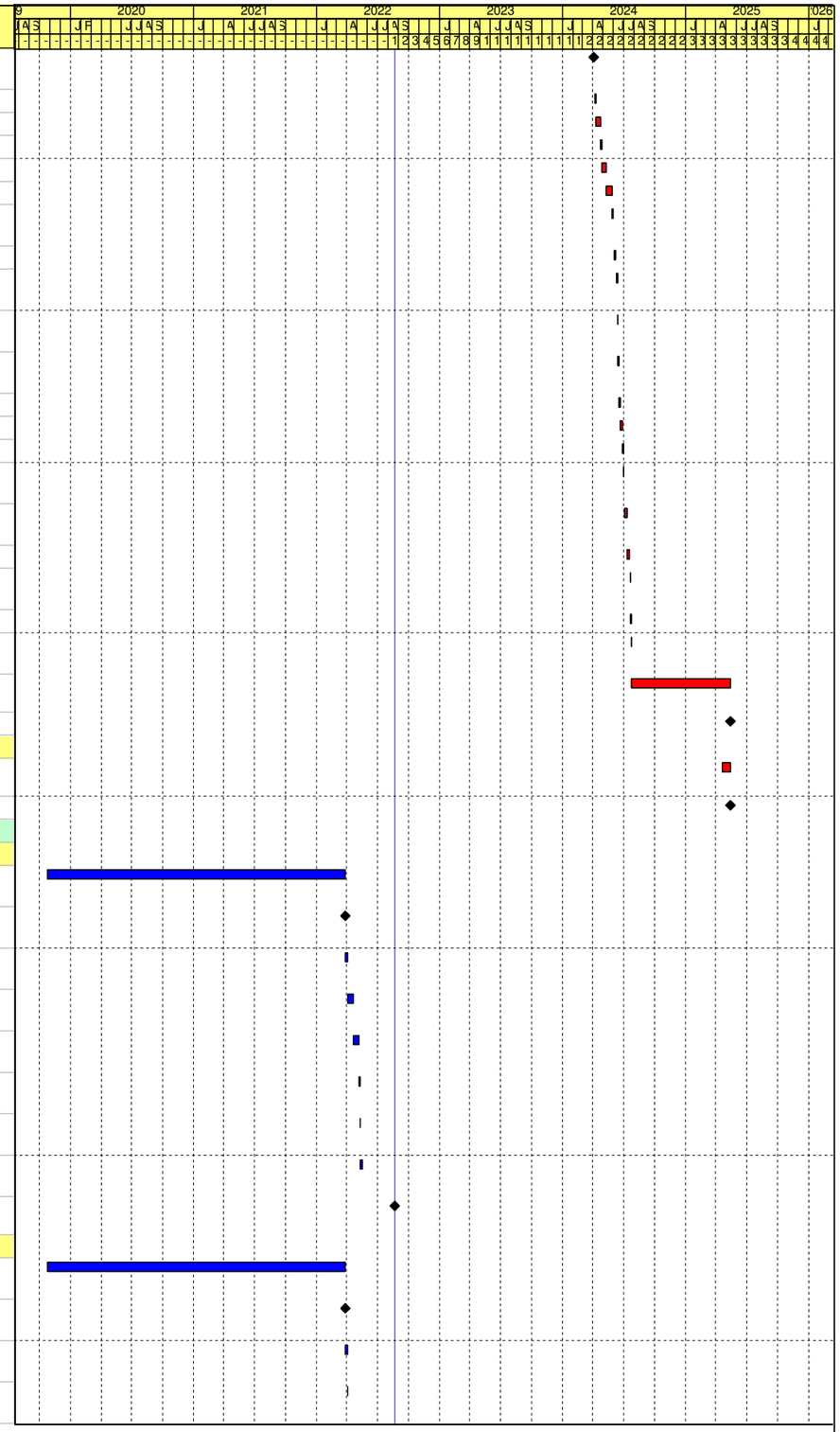
30-Apr-22	Rev.21	LT	KM
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
SC31001-1	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC31000-1	SC31110, SC31002-1
SC31002-1	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	SC31001-1	SC31003-1
SC31003-1	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	SC31002-1	SC31004-1
SC31004-1	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1	24-Apr-24	25-Apr-24	24-Apr-24	25-Apr-24	0	SC31003-1	SC31005-1
SC31005-1	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	25-Apr-24	10-May-24	25-Apr-24	10-May-24	0	SC31004-1	SC31006-1
SC31006-1	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	10-May-24	29-May-24	10-May-24	29-May-24	0	SC31005-1	SC31007-1
SC31007-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	29-May-24	01-Jun-24	29-May-24	01-Jun-24	0	SC31006-1	SC31008-1
SC31008-1	CNE-019 Inclement Weather (October 2021) - 7days	7	02-Jun-24	08-Jun-24	02-Jun-24	08-Jun-24	0	SC31007-1	SC31009-1
SC31009-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	09-Jun-24	12-Jun-24	09-Jun-24	12-Jun-24	0	SC31008-1	SC31010-1
SC31010-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	13-Jun-24	13-Jun-24	13-Jun-24	13-Jun-24	0	SC31009-1	SC31011-1
SC31011-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	13-Jun-24	17-Jun-24	13-Jun-24	17-Jun-24	0	SC31010-1	SC31012-1
SC31012-1	CNE-036 Inclement Weather (January 2022) - 4days	4	17-Jun-24	21-Jun-24	17-Jun-24	21-Jun-24	0	SC31011-1	SC31013-1
SC31013-1	CNE-040 Inclement Weather (February 2022) - 5days	5	21-Jun-24	26-Jun-24	21-Jun-24	26-Jun-24	0	SC31012-1	SC31014-1
SC31014-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	26-Jun-24	30-Jun-24	26-Jun-24	30-Jun-24	0	SC31013-1	SC31015-1
SC31015-1	CNE-048 Inclement Weather (April 2022) - 2days	2	01-Jul-24	02-Jul-24	01-Jul-24	02-Jul-24	0	SC31014-1	SC31099-1, SC31016-1
SC31016-1	CNE-050 Inclement Weather (May 2022) - 8days	8	03-Jul-24	10-Jul-24	03-Jul-24	10-Jul-24	0	SC31015-1	SC31099-1, SC31017-1
SC31017-1	CNE-052 Inclement Weather (June 2022) - 9days	9	11-Jul-24	19-Jul-24	11-Jul-24	19-Jul-24	0	SC31016-1	SC31018-1
SC31018-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1 day	1	20-Jul-24	20-Jul-24	20-Jul-24	20-Jul-24	0	SC31017-1	SC31099-1, SC31019-1
SC31019-1	CNE-054 Inclement Weather (July 2022) - 4days	4	21-Jul-24	24-Jul-24	21-Jul-24	24-Jul-24	0	SC31018-1	SC31020-1
SC31020-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1 day	1	25-Jul-24	25-Jul-24	25-Jul-24	25-Jul-24	0	SC31019-1	SC31099-1
SC31099-1	EWN-0314 Extention of Time for change of access date	294	26-Jul-24	15-May-25	26-Jul-24	15-May-25	0	SC31015-1, SC31016-1,	SC31100-1
SC31100-1	Expected Completion for Section 3	0		15-May-25*		15-May-25	0	SC31099-1	
Time Risk Allowance and Planned Completion		26	20-Apr-25	15-May-25	10-May-24	05-Jun-24	-345		
SC31110	Time Risk Allowance for Section 3	26	20-Apr-25	15-May-25	10-May-24	05-Jun-24	-345	SC31001-1, S3C1160,	SC31120
SC31120	Planned Completion for Section 3	0		15-May-25*		05-Jun-24	-345	SC31110	CD1040
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		1072	23-Oct-19 A	28-Sep-22	09-May-22	28-Jun-22	-92		
Contractual Completion (Include Implemented CE)		1033	23-Oct-19 A	20-Aug-22	16-May-22	16-May-22	-97		
SC41000	Contract Duration of Section 4	886	23-Oct-19 A	26-Mar-22 A	16-May-22	16-May-22			SC41001
SC41001	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22 A		16-May-22		SC41000	SC41002
SC41002	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	7	27-Mar-22 A	02-Apr-22 A	16-May-22	16-May-22		SC41001	SC41004
SC41004	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19	02-Apr-22 A	21-Apr-22 A	16-May-22	16-May-22		SC41002	SC41100, SC41005
SC41005	NICE-CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	16	21-Apr-22 A	07-May-22 A	16-May-22	16-May-22		SC41004	SC41100, SC41006
SC41006	NICE-CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	5	07-May-22 A	11-May-22 A	16-May-22	16-May-22		SC41005	SC41009
SC41009	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	12-May-22 A	12-May-22 A	16-May-22	16-May-22		SC41006	SC41010
SC41010	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	12-May-22 A	16-May-22 A	16-May-22	16-May-22		SC41009	SC41100
SC41100	Revised Completion for Section 4	0		20-Aug-22*		16-May-22	-97	SC41004, SC41005,	
Expected Completion (Include Non-implemented CE)		1037	23-Oct-19 A	20-Aug-22	16-May-22	28-Jun-22	-53		
SC41000-1	Contract Duration of Section 4	886	23-Oct-19 A	26-Mar-22 A	16-May-22	16-May-22		CD1010	SC41001-1
SC41001-1	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22 A		16-May-22		SC41000-1	SC41110, SC41002-1
SC41002-1	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	7	27-Mar-22 A	02-Apr-22 A	28-Jun-22	28-Jun-22		SC41001-1	SC41004-1, SC41003-1
SC41003-1	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1	02-Apr-22 A	03-Apr-22 A	28-Jun-22	28-Jun-22		SC41002-1	SC41004-1



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 3 of 46

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Actual Progress

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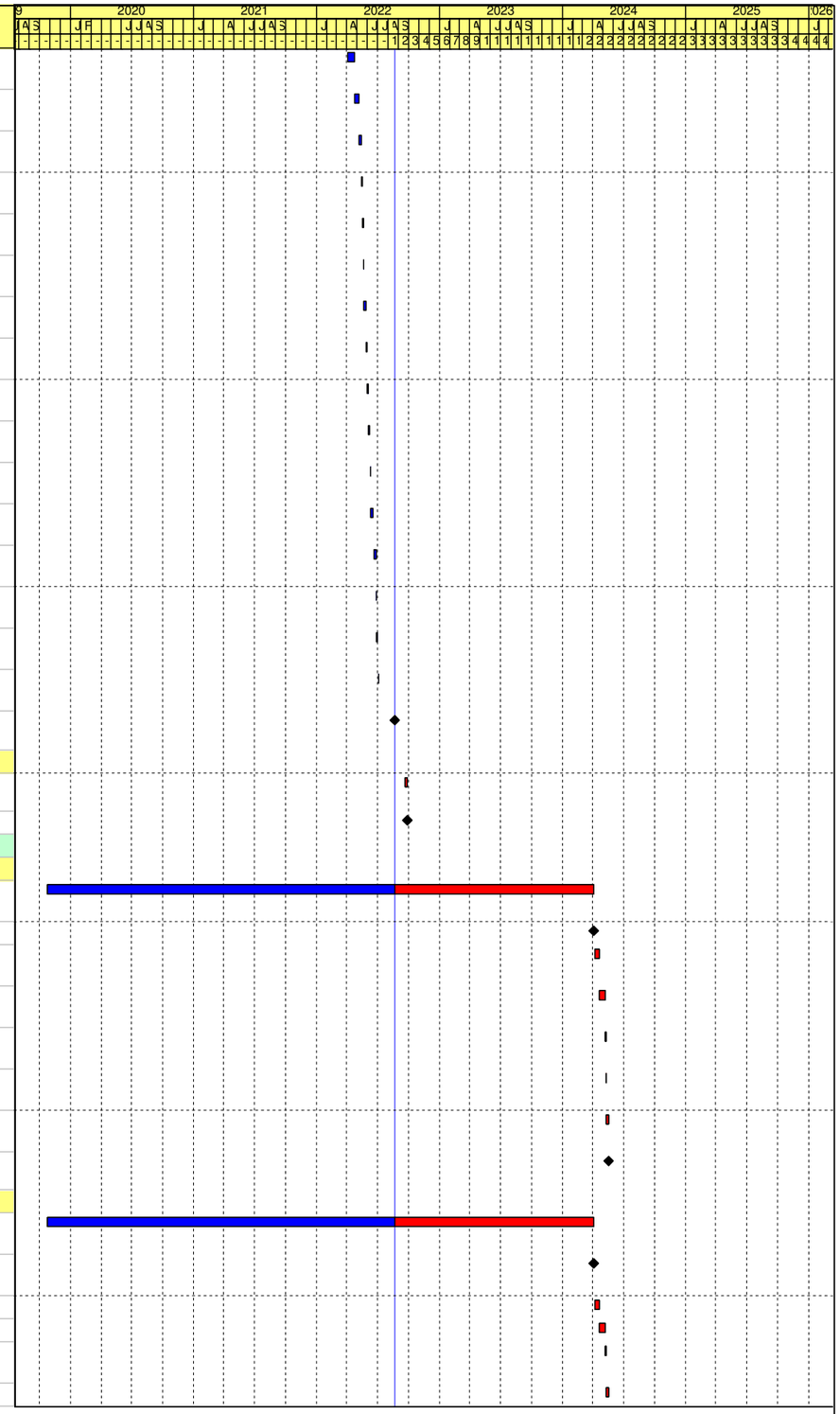
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
SC41004-1	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19	03-Apr-22 A	22-Apr-22 A	28-Jun-22	28-Jun-22		SC41002-1, SC41003-1	SC41005-1
SC41005-1	NICE-CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	16	22-Apr-22 A	08-May-22 A	28-Jun-22	28-Jun-22		SC41004-1	SC41006-1
SC41006-1	NICE-CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	5	08-May-22 A	12-May-22 A	28-Jun-22	28-Jun-22		SC41005-1	SC41007-1
SC41007-1	CNE-019 Inclement Weather (October 2021) - 5days	5	13-May-22 A	17-May-22 A	28-Jun-22	28-Jun-22		SC41006-1	SC41008-1
SC41008-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	18-May-22 A	21-May-22 A	28-Jun-22	28-Jun-22		SC41007-1	SC41009-1
SC41009-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	22-May-22 A	22-May-22 A	28-Jun-22	28-Jun-22		SC41008-1	SC41010-1
SC41010-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	22-May-22 A	26-May-22 A	28-Jun-22	28-Jun-22		SC41009-1	SC41011-1
SC41011-1	CNE-036 Inclement Weather (January 2022) - 4days	4	26-May-22 A	30-May-22 A	28-Jun-22	28-Jun-22		SC41010-1	SC41012-1
SC41012-1	CNE-040 Inclement Weather (February 2022) - 5days	5	30-May-22 A	04-Jun-22 A	28-Jun-22	28-Jun-22		SC41011-1	SC41013-1
SC41013-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	04-Jun-22 A	08-Jun-22 A	28-Jun-22	28-Jun-22		SC41012-1	SC41014-1
SC41014-1	CNE-048 Inclement Weather (April 2022) - 2days	2	09-Jun-22 A	10-Jun-22 A	28-Jun-22	28-Jun-22		SC41013-1	SC41015-1
SC41015-1	CNE-050 Inclement Weather (May 2022) - 8days	8	11-Jun-22 A	18-Jun-22 A	28-Jun-22	28-Jun-22		SC41014-1	SC41100-1, SC41016-1
SC41016-1	CNE-052 Inclement Weather (June 2022) - 9days	9	19-Jun-22 A	27-Jun-22 A	28-Jun-22	28-Jun-22		SC41015-1	SC41017-1
SC41017-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1 day	1	28-Jun-22 A	28-Jun-22 A	28-Jun-22	28-Jun-22		SC41016-1	SC41100-1, SC41018-1
SC41018-1	CNE-054 Inclement Weather (July 2022) - 4days	4	29-Jun-22 A	02-Jul-22 A	28-Jun-22	28-Jun-22		SC41017-1	SC41019-1
SC41019-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1 day	1	03-Jul-22 A	03-Jul-22 A	28-Jun-22	28-Jun-22		SC41018-1	SC41100-1
SC41100-1	Expected Completion for Section 4	0		20-Aug-22*		28-Jun-22	-53	SC41015-1, SC41017-1,	
Time Risk Allowance and Planned Completion		7	22-Sep-22	28-Sep-22	09-May-22	16-May-22	-136		
SC41110	Time Risk Allowance for Section 4	7	22-Sep-22	28-Sep-22	09-May-22	16-May-22	-136	SC41001-1, S4C1100,	SC41120
SC41120	Planned Completion for Section 4	0		28-Sep-22*		16-May-22	-136	SC41110	CD1040
Section 5 - Complete all remaining Works (incl. T&C)		2018	23-Oct-19 A	01-May-25	21-Aug-22	01-May-25	0		
Contractual Completion (Include Implemented CE)		1668	23-Oct-19 A	16-May-24	21-Aug-22	16-May-24	0		
SC51000	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Aug-22	04-Apr-24	0		SC51001
SC51001	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC51000	SC51002
SC51002	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	SC51001	SC51100, SC51003
SC51003	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	19-Apr-24	07-May-24	19-Apr-24	07-May-24	0	SC51002	SC51100, SC51004
SC51004	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	08-May-24	11-May-24	08-May-24	11-May-24	0	SC51003	SC51007
SC51007	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	11-May-24	11-May-24	11-May-24	11-May-24	0	SC51004	SC51008
SC51008	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	12-May-24	16-May-24	12-May-24	16-May-24	0	SC51007	SC51100
SC51100	Revised Completion for Section 5	0		16-May-24*		16-May-24	0	SC51002, SC51003,	
Expected Completion (Include Non-implemented CE)		2018	23-Oct-19 A	01-May-25	21-Aug-22	01-May-25	0		
SC51000-1	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Aug-22	04-Apr-24	0	CD1010	SC51001-1
SC51001-1	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC51000-1	SC51110, SC51002-1
SC51002-1	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	SC51001-1	SC51003-1
SC51003-1	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	19-Apr-24	07-May-24	19-Apr-24	07-May-24	0	SC51002-1	SC51004-1
SC51004-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	08-May-24	11-May-24	08-May-24	11-May-24	0	SC51003-1	SC51005-1
SC51005-1	CNE-019 Inclement Weather (October 2021) - 6days	6	11-May-24	17-May-24	11-May-24	17-May-24	0	SC51004-1	SC51006-1



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 4 of 46

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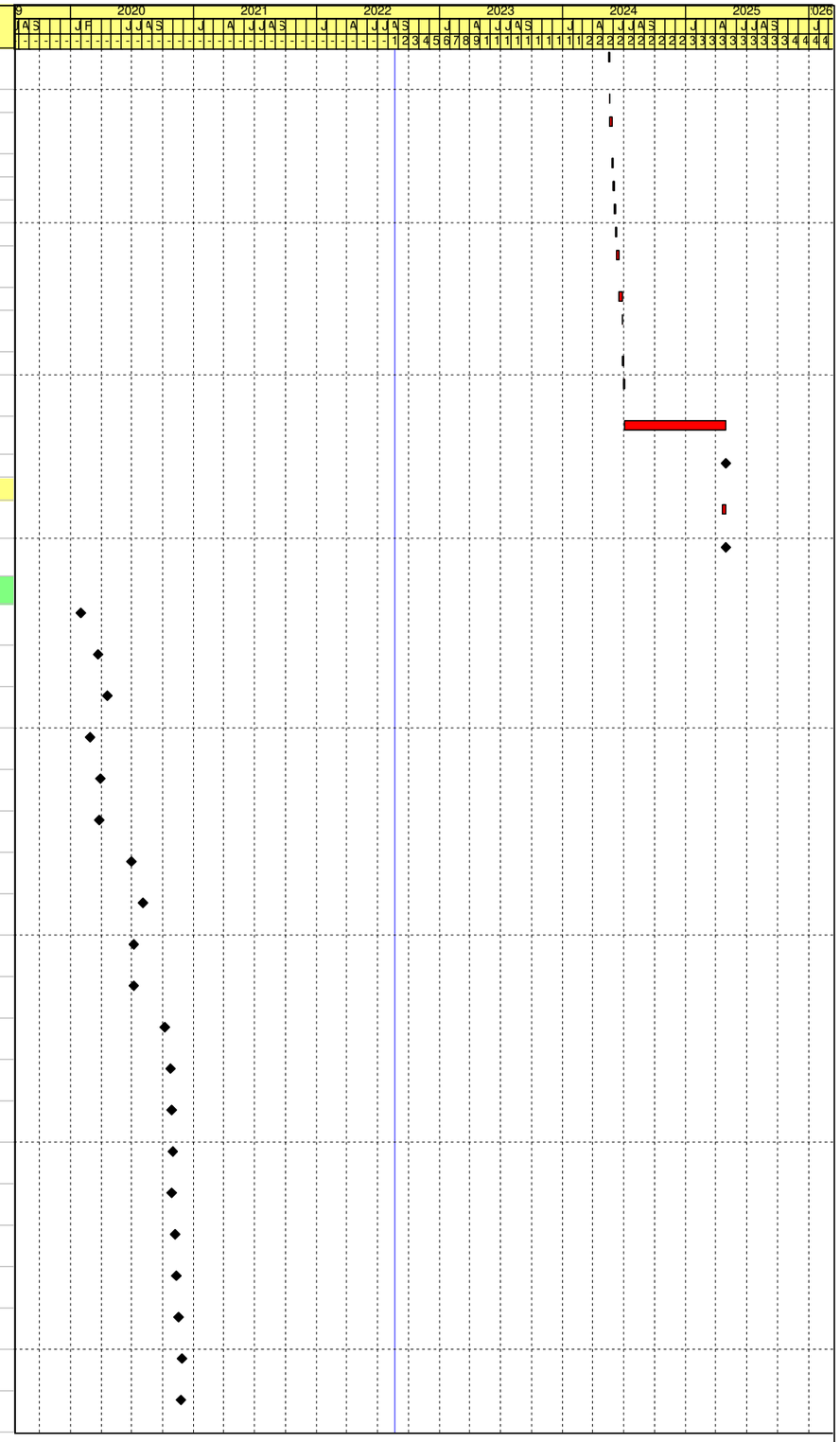
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
SC51006-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4 days	4	17-May-24	21-May-24	17-May-24	21-May-24	0	SC51005-1	SC51007-1
SC51007-1	ICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemen	1	21-May-24	21-May-24	21-May-24	21-May-24	0	SC51006-1	SC51008-1
SC51008-1	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	22-May-24	26-May-24	22-May-24	26-May-24	0	SC51007-1	SC51009-1
SC51009-1	CNE-036 Inclement Weather (January 2022) - 3days	3	27-May-24	29-May-24	27-May-24	29-May-24	0	SC51008-1	SC51010-1
SC51010-1	CNE-040 Inclement Weather (February 2022) - 5days	5	30-May-24	03-Jun-24	30-May-24	03-Jun-24	0	SC51009-1	SC51011-1
SC51011-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	04-Jun-24	08-Jun-24	04-Jun-24	08-Jun-24	0	SC51010-1	SC51012-1
SC51012-1	CNE-048 Inclement Weather (April 2022) - 2days	2	08-Jun-24	10-Jun-24	08-Jun-24	10-Jun-24	0	SC51011-1	SC51013-1
SC51013-1	CNE-050 Inclement Weather (May 2022) - 8days	8	10-Jun-24	18-Jun-24	10-Jun-24	18-Jun-24	0	SC51012-1	SC51099-1, SC51014-1
SC51014-1	CNE-052 Inclement Weather (June 2022) - 9days	9	18-Jun-24	27-Jun-24	18-Jun-24	27-Jun-24	0	SC51013-1	SC51015-1
SC51015-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1 day	1	27-Jun-24	28-Jun-24	27-Jun-24	28-Jun-24	0	SC51014-1	SC51099-1, SC51016-1
SC51016-1	CNE-054 Inclement Weather (July 2022) - 4days	4	28-Jun-24	02-Jul-24	28-Jun-24	02-Jul-24	0	SC51015-1	SC51017-1
SC51017-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1 day	1	02-Jul-24	03-Jul-24	02-Jul-24	03-Jul-24	0	SC51016-1	SC51099-1
SC51099-1	EWN-0314 Extention of Time for change of access date	303	03-Jul-24	01-May-25	03-Jul-24	01-May-25	0	SC51013-1, SC51015-1,	SC51100-1
SC51100-1	Expected Completion for Section 5	0		01-May-25*		01-May-25	0	SC51099-1	
Time Risk Allowance and Planned Completion		12	20-Apr-25	01-May-25	05-May-24	16-May-24	-350		
SC51110	Time Risk Allowance for Section 5	12	20-Apr-25	01-May-25	05-May-24	16-May-24	-350	SC51001-1, S5S1250,	SC51120
SC51120	Planned Completion for Section 5	0		01-May-25*		16-May-24	-350	SC51110, PL1520,	CD1040
Compensation Event		1621	23-Oct-19 A	21-Aug-22	30-Jan-22	15-May-25	998		
CE0001	CE No.001 - Special Work Arrangement in Reducing the Risk of the Spread of Novel Coronavirus	0		30-Jan-20 A		15-May-25			
CE0002	CE No.002 - The Contractor's Site Accomodation by Modular Integrated Construction (MIC) Method	0		23-Mar-20 A		15-May-25			
CE0003	CE No.003 - Flowmeter Relocation & Pipework Rearrangement at Effluent Transfer Pumping Station	0		20-Apr-20 A		15-May-25			
CE0004	CE No.004 - Designated Area for the Contractor's Site Accommodation in Works Area WA1	0		26-Feb-20 A		15-May-25			
CE0005	CE No.005 - Revised Size of Penstock at UV System No.1 & Effluent Pumping Station No.1 for Ex. Outfall	0		30-Mar-20 A		15-May-25			
CE0006	CE No.006 - Additional Duty Point for Effluent Transfer Pumps	0		27-Mar-20 A		15-May-25			
CE0007	CE No.007 - Additional Adjustable Weir at UV System No.1 & Effluent Pumping Station No.1	0		30-Jun-20 A		15-May-25			
CE0008	CE No.008 - Provision of Additional 2nd Temp. Power Supply for UV System No.1 & Effluent Pumping Station No.1	0		03-Aug-20 A		15-May-25			
CE0009	CE No.009 - Employment of Temporary Staff under Anti-Epidemic Fund	0		07-Jul-20 A		15-May-25			
CE0010	CE No.010 - Revised Setting Out Plan for Sidestream Treatment Facilities	0		07-Jul-20 A		15-May-25			
CE0012	CE No.012 - Provision of Touchscreen Display System for the Project Manager's Office	0		06-Oct-20 A		15-May-25			
CE0013	CE No.013 - Feasibility Study for Adopting emMiC & DfMA	0		22-Oct-20 A		15-May-25			
CE0014	CE No.014 - Revised FS Water Supply Arrangement for CHP, Guard House, Workshop No.2, SludgeDigester&DistributionChamber	0		28-Oct-20 A		15-May-25			
CE0015	CE No.015 - Revised Plumbing Arranagement for Workshop No.2, UV & Effluent No.1, CHP, SPS&FCDF, DOU No.11&12, H2S, SDDC	0		30-Oct-20 A		15-May-25			
CE0016	CE No.016 - Elect. Provisions for Addit. 800A ACB w/ CMPD as Standby Supply for MBBR for UV No.2 for Future Expansion	0		28-Oct-20 A		15-May-25			
CE0018	CE No.018 - MVAC Layout for Plant Service Water System	0		05-Nov-20 A		15-May-25			
CE0020	CE No.020 - Addit. set of 11kV power feeder panel at 11kV SB in CHP for future connection to Zone B in Stage 2	0		09-Nov-20 A		15-May-25			
CE0201	NCE-PMI-0201 - Provision of Access Platform for EOT cranes in UV System No.1 & Effluent Pumping Station No.1	0		16-Nov-20 A		15-May-25			
CE0202	NCE-PMI-0202 - Revised Plumbing Arrangement for Sludge Dewatering Building	0		26-Nov-20 A		15-May-25			
CE0203	NCE-PPMI-0203 - MVAC Layout for SAS Pumping Station	0		25-Nov-20 A		15-May-25			



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 5 of 46

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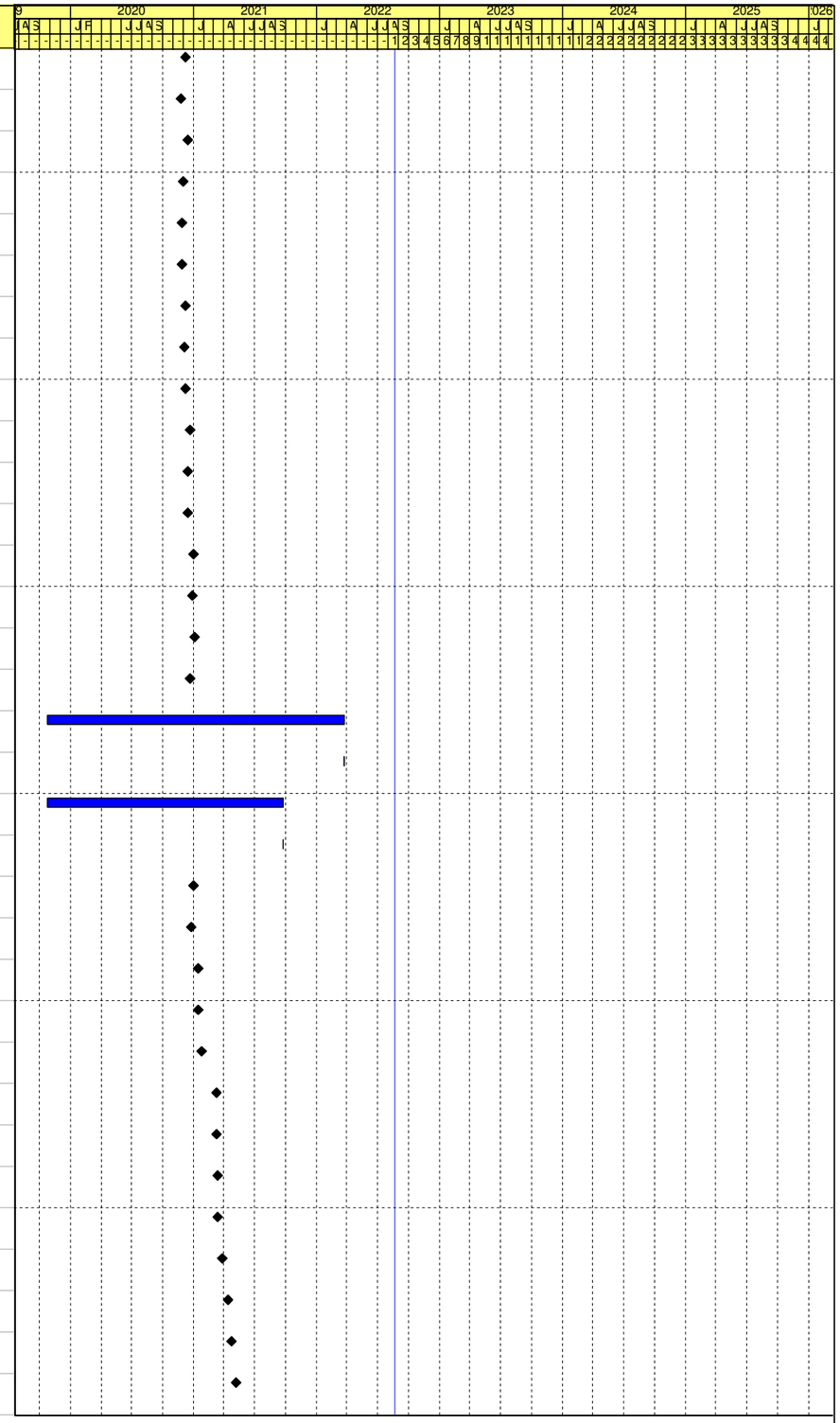
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0204	NCE-PMI-0204 - CHP - Provisional of Additional ATS for Power Supply for UPS	0		08-Dec-20 A		15-May-25			
CE0205	NCE-PPMI-0205 - Fibre Optics Network Connection for SCADA Systems between Zone B & Zone C	0		23-Nov-20 A		15-May-25			
CE0206	NCE-PMI-0206 - SDB - Provisional of Additional ATS for Power Supply for UPS	0		15-Dec-20 A		15-May-25			
CE0207	NCE-PMI-0207 - TX Rm & Switch Rm - Provision of ATS for Power Supply for UPS	0		01-Dec-20 A		15-May-25			
CE0208	NCE-PPMI-0208 - Provision of Drainage service Layout for SAS Pumping Station	0		26-Nov-20 A		15-May-25			
CE0209	NCE-PPMI-0209 - Drainage System for Plant Service Water System	0		26-Nov-20 A		15-May-25			
CE0210	NCE-PPMI-0210 - Electrical provisions for MVAC & Drainage Systems in SAS Pumping Station	0		08-Dec-20 A		15-May-25			
CE0211	NCE-PPMI-0211 - Revised MVAC Layout & Electrical Provisions for MVAC in TX and Switch Rm	0		02-Dec-20 A		15-May-25			
CE0212	NCE-PMI-0212 - Provision of Louvre Panel for Outdoor AC Units at Contractor's Site Accomodation	0		07-Dec-20 A		15-May-25			
CE0213	NCE-PPMI-0213 - Electrical provisions for MVAC & Drainage System in UV System No.1 & Effluent Pumping Station No.1	0		21-Dec-20 A		15-May-25			
CE0214	NCE-PPMI-0214 - Additional Sump Pump & Drain Pipes at UV System No.1 & Effluent Pumping Station	0		14-Dec-20 A		15-May-25			
CE0215	NCE-PPMI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-20 A		15-May-25			
CE0216	NCE-PPMI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water System	0		31-Dec-20 A		15-May-25			
CE0217	NCE-PMI-0217 - Revised Duty Points for Effluent Transfer Pumps	0		29-Dec-20 A		15-May-25			
CE0218	NCE-PMI-0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of SWHEPP	0		04-Jan-21 A		15-May-25			
CE0219	NCE-NCE-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of Portion B-2 of the Site	0		19-Dec-20 A		15-May-25			
CE0219a	NCE-NCE-0219 - Portion B-2a (within 771 to 891 days from starting date)	891	23-Oct-19 A	23-Mar-22 A	25-Aug-22	25-Aug-22		CD1010	CE0219b
CE0219b	NCE-NCE-0219 - Revised Access Date for Portion B-2a	1	23-Mar-22 A	23-Mar-22 A	25-Aug-22	25-Aug-22		CE0219a	S5SASC1010
CE0219c	NCE-NCE-0219 - Portion B-2b (within 615 to 705 days from starting date)	705	23-Oct-19 A	24-Sep-21 A	22-Nov-22	22-Nov-22			CE0219d
CE0219d	NCE-NCE-0219 - Revised Access Date for Portion B-2b	1	24-Sep-21 A	24-Sep-21 A	22-Nov-22	22-Nov-22		CE0219c	S5ECHC1000
CE0220	NCE-PMI-0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River	0		30-Dec-20 A		15-May-25			
CE0221	NCE-PPMI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room	0		24-Dec-20 A		15-May-25			
CE0222	NCE-PMI-0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering Building	0		12-Jan-21 A		15-May-25			
CE0223	NCE-PMI-0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0		15-Jan-21 A		15-May-25			
CE0224	NCE-PMI-0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for UV Disinfeciton System	0		25-Jan-21 A		15-May-25			
CE0225	NCE-PMI-0225 - Supply of Ductile Iron Puddle Pipes at the Basement of Sludge Dewatering Building	0		09-Mar-21 A		15-May-25			
CE0226	NCE-PMI-0226 - Provision of Solar Water Heating System at the Contractor's Site Accomodation	0		09-Mar-21 A		15-May-25			
CE0227	NCE-PMI-0227 - Dual Power Fedder for LV Switch Panel at Sewage Pumping Station	0		11-Mar-21 A		15-May-25			
CE0228	NCE-PMI-0228 - Provision of Effluent Pipes and Associated Valve and Supply of Supports for Effluent to Shek Sheung River	0		11-Mar-21 A		15-May-25			
CE0230	NCE-PMI-0230 - Provision of Project Jackets with Fleece Vests	0		26-Mar-21 A		15-May-25			
CE0231	NCE-PMI-0231 - Extension of Sampling Pipe From Low Level on Sludge Digesters	0		12-Apr-21 A		15-May-25			
CE0232	NCE-PMI-0232 - Dual Power Fedder for LV Switch Panel at 1/F LV Switch Room of Combined Heat and Power (CHP) Building	0		22-Apr-21 A		15-May-25			
CE0233	NCE-PMI-0233 - Sampling, Simulating and Testing of Existing Sludge for Obtaining the Viscosity of the Mixed Sludge	0		06-May-21 A		15-May-25			



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 6 of 46

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
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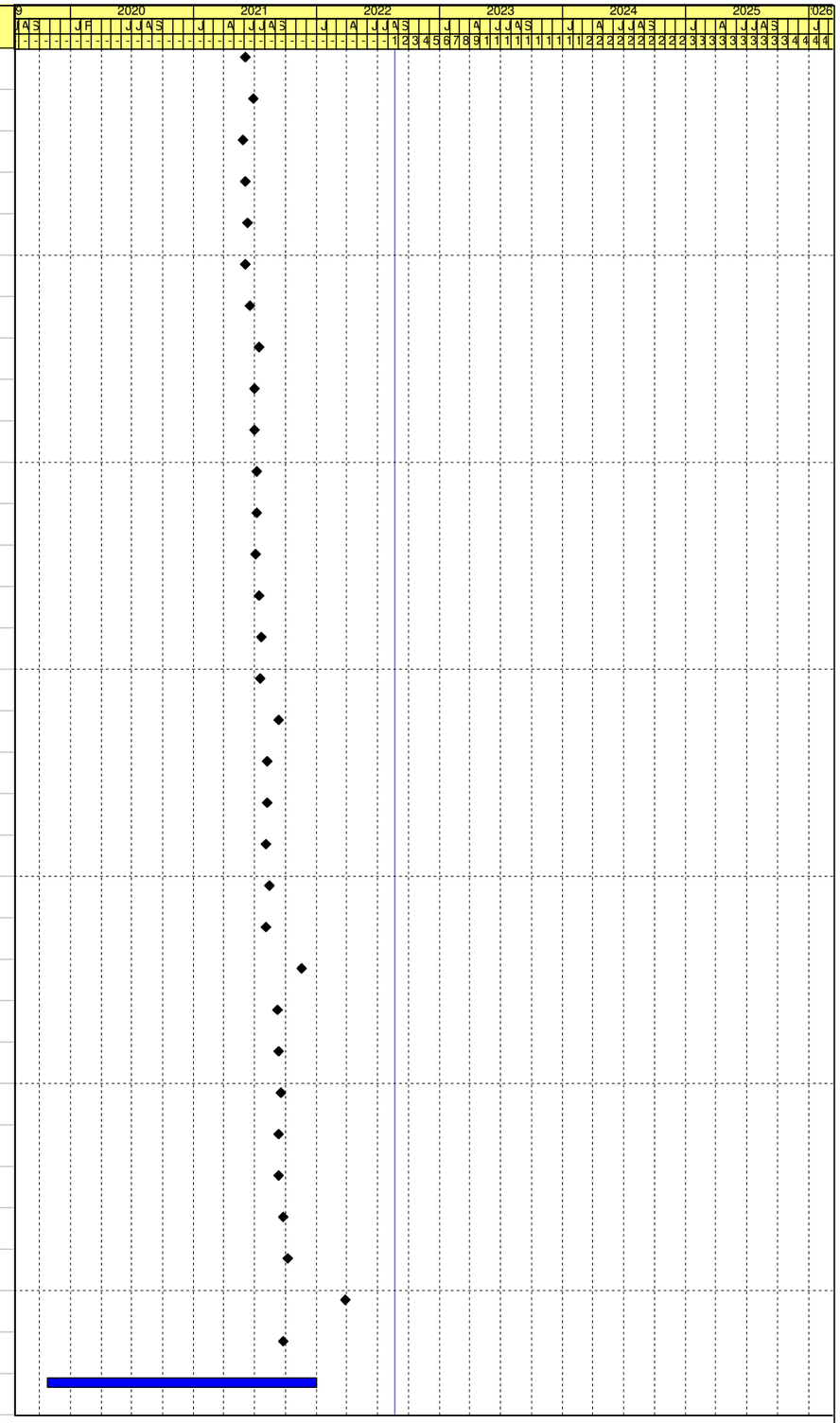
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0234	NCE-PMI-0234 - Provision of FRP Walkway, Access Platform & Handrailing for Sludge Digester No. 2	0		02-Jun-21 A		15-May-25			
CE0237	NCE-CNE-0237 - Provision of Inspectin Windows for Sludge Digester	0		25-Jun-21 A		15-May-25			
CE0238	NCE-PMI-0238 - Supply of Stainless Steel Puddle Pipes for Surplus Activated Sludge (SAS) Pumping Station	0		27-May-21 A		15-May-25			
CE0239	NCE-PMI-0239 - Revised the Arrangement for Process Water Supply and Plant Services Water System	0		01-Jun-21 A		15-May-25			
CE0240	NCE-PMI-0240 - Revised Coping and Invert Levels for Penstock and Stoplog of SAS Pumping Station	0		09-Jun-21 A		15-May-25			
CE0241	NCE-PMI-0241 - Revised Diesel Fuel Tank at Combined Heat and Power (CHP) Building	0		04-Jun-21 A		15-May-25			
CE0242	NCE-PMI-0242 - Revised Fire Services Provision of UV System No. 1 and Effluent Pumping Station No. 1	0		15-Jun-21 A		15-May-25			
CE0243	NCE-PMI-0243 - Provision of Flow Signal Inputs for UV Disinfection System	0		12-Jul-21 A		15-May-25			
CE0244	RCNE-CNE-0244 - Access to and use of portion C-1A	0		29-Jun-21 A		15-May-25			
CE0245	NCE-PMI-0245 - Provision of Augmented Reality (AR) Mobile Application	0		30-Jun-21 A		15-May-25			
CE0246	NCE-PMI-0246 - Revised HV Remote Control Panels at CHP & Workshop No. 2	0		06-Jul-21 A		15-May-25			
CE0247	NCE-PMI-0247 - Temporary 4G System for SCADA System Monitoring	0		07-Jul-21 A		15-May-25			
CE0248	NCE-PMI-0248 - Inclement Weather - May 2021 (Time Implication)	0		05-Jul-21 A		15-May-25			
CE0250	NCE-PMI-0250 - Provision of Front Access LV Switch Panel in the LV Switch Room on G/F Workshop No. 2	0		14-Jul-21 A		15-May-25			
CE0252	NCE-PMI-0252 - Provision of Neutral Earthing Resistor (NER) at Workshop No. 2	0		19-Jul-21 A		15-May-25			
CE0253	NCE-PMI-0253 - Provision of Building Services Systems in New LV Switch Room on the G/F Workshop No. 2	0		16-Jul-21 A		15-May-25			
CE0254	NCE-CNE-0254 - Removal of Obstructions at Trail Pit No. 3 at Sidestreamt Facilities	0		10-Sep-21 A		15-May-25			
CE0256	RCNE-CNE-0256 - Amber Rainstrom Warning and Inclement Weather - June 2021 (Time Implication)	0		05-Aug-21 A		15-May-25			
CE0257	RCNE-CNE-0257 - Black and Red Rainstrom Warning - June 2021 (Time & Cost Implication)	0		05-Aug-21 A		15-May-25			
CE0258	NCE-PMI-0258 - Provision of FRP Cover for Overflow Chambers of Sludge Digesters	0		04-Aug-21 A		15-May-25			
CE0259	NCE-PMI-0259 - Provision of Virtual Reality (VR) Safety Training Platform	0		13-Aug-21 A		15-May-25			
CE0260	NCE-PMI-0260 - Provision of Chequer Plates at UV System No. 1 & Effluent Pumping Station No. 1	0		04-Aug-21 A		15-May-25			
CE0262	NCE-PMI-0262 - Emergency Access Door for Lift at Sludge Dewatering Building	0		18-Nov-21 A		15-May-25			
CE0263	NCE-PMI-0263 - Upgrade of the Supporting Frame of 1st and 2nd Stage Heat Exchangers for Future Expansion of THP System	0		07-Sep-21 A		15-May-25			
CE0264	RCNE-CNE-0264 - Inclement Weather - July 2021 (Time Implication)	0		10-Sep-21 A		15-May-25			
CE0265	NCE-PMI-0265 - Water Supply to Emergency Drench Shower and Eye Fountain at Deodorization System No. 11	0		16-Sep-21 A		15-May-25			
CE0269	NCE-PMI-0269 - Additional Cleansing Points at Sludge Skip Area of Sludge Dewatering Building	0		10-Sep-21 A		15-May-25			
CE0270	NCE-CNE-0270 - Extra sampling, simulating & testing of exiting sludge for obtaining the viscosity of the existing sludge	0		10-Sep-21 A		15-May-25			
CE0271	NCE-PMI-0271 - Provision of Access Platform for the EOT Crane (LA-01-02) in Sludge Dewatering Building	0		23-Sep-21 A		15-May-25			
CE0272	NCE-PMI-0272 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		08-Oct-21 A		15-May-25			
CE0272-1	NCE-PMI-0272-1 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		28-Mar-22 A		15-May-25			
CE0273	NCE-NCE-0273 - Change of Site Access Date to Workshop No. 2 Forming Part of Portion C-3 of the Site	0		24-Sep-21 A		15-May-25			
CE0273a	NCE-NCE-0273 - Portion C-3 (within 615 to 815 days from starting date)	815	23-Oct-19 A	31-Dec-21 A	15-May-25	15-May-25			CE0273b



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 7 of 46

Remaining Work
Critical Activity
Milestone
Actual Progress

Contract No. DE/2018/03
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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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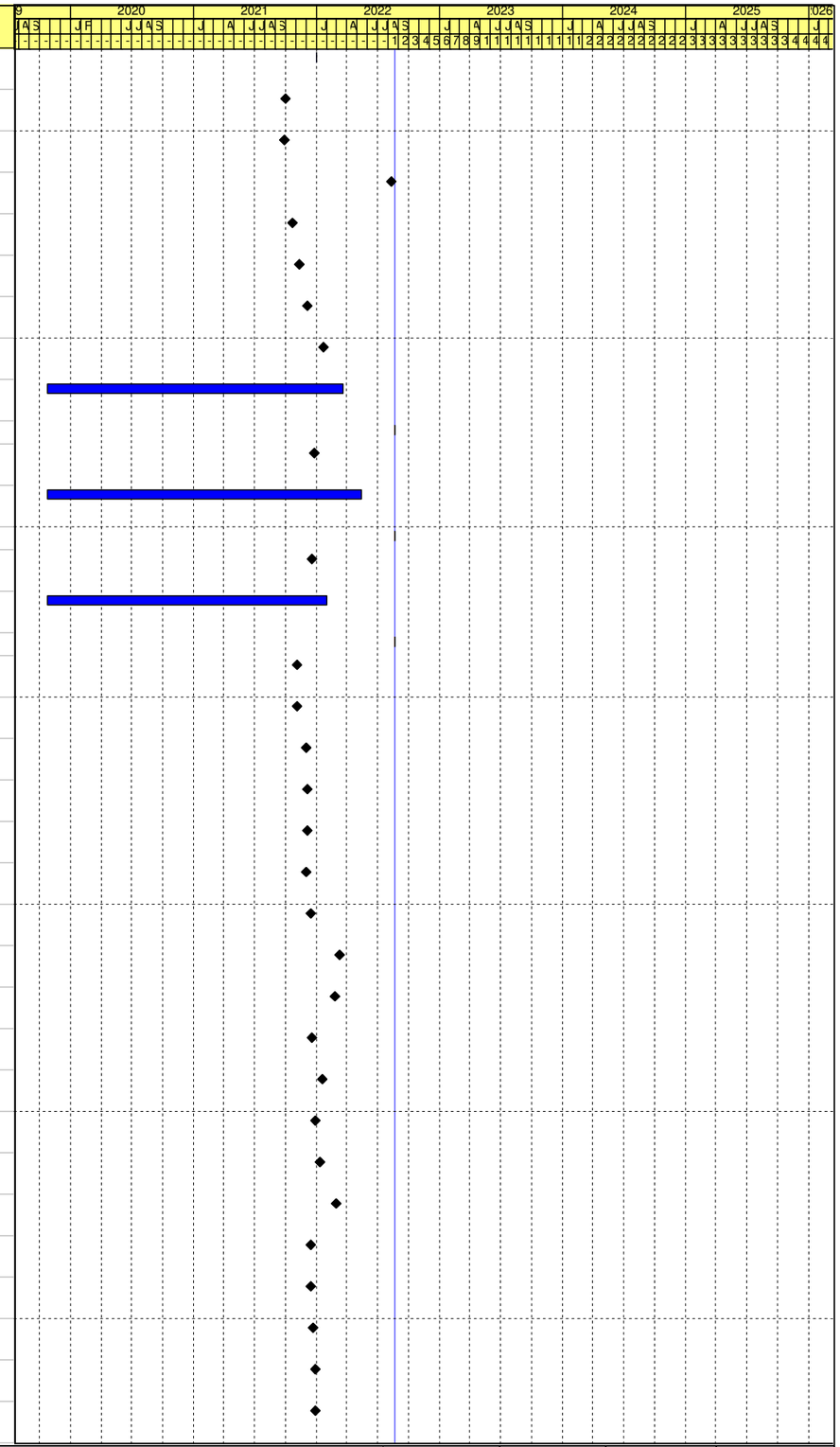
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0273b	NCE-NCE-0273 - Revised Access Date for Portion C-3	1	31-Dec-21 A	31-Dec-21 A	15-May-25	15-May-25		CE0273a	
CE0275	NCE-PMI-0275 - Additional Lighting Fittings for UV System No.1 & Effluent Pumping Station No.1	0		29-Sep-21 A		15-May-25			
CE0277	NCE-PMI-0277 - Provision of Access Platform for the EOT Crane (LA-01-03) in Sludge Dewatering Building	0		27-Sep-21 A		15-May-25			
CE0279	NCE-PPMI-0279 - Implementation of Digital Twin Pilot Project in Advance Works Area of Shek Wu Hui Sewage Treatment Works	0		11-Aug-22 A		15-May-25			
CE0280	NCE-PMI-0280 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		21-Oct-21 A		15-May-25			
CE0283	NCE-PMI-0283 - Provision of Metal Base Plate,Stopper&Guide Rail for Loading&Unloading of Sludge Skip at Skip Rm of SDB	0		11-Nov-21 A		15-May-25			
CE0284	NCE-PMI-0284 - Revised Road Lighting System for Zone C	0		03-Dec-21 A		15-May-25			
CE0286	NCE-NCE-0286 - Change of Site Access Date to Combined Heat and Power Building Forming Part of Portion C-2B of the Site	0		21-Jan-22 A		15-May-25			
CE0286a	NCE-NCE-0286 - Portion C-2B (within 765 to 880 days from starting date)	880	23-Oct-19 A	20-Mar-22 A	20-Mar-22	20-Mar-22			CE0286b
CE0286b	NCE-NCE-0286 - Revised Access Date for Portion C2-B	1	21-Aug-22	21-Aug-22*	20-Mar-22	20-Mar-22	-154	CE0286a	
CE0287	NCE-NCE-0287 - Change of Site Access Date to Sludge Digester & Distribution Chamber Forming Part of Portion C- 2C	0		24-Dec-21 A		15-May-25			
CE0287a	NCE-NCE-0287 - Portion C-2C (within 715 to 934 days from starting date)	934	23-Oct-19 A	13-May-22 A	13-May-22	13-May-22			CE0287b
CE0287b	NCE-NCE-0287 - Revised Access Date for Portion C2-C	1	21-Aug-22	21-Aug-22*	13-May-22	13-May-22	-100	CE0287a	
CE0288	NCE-NCE-0288 - Change of Site Access Date to Sludge Dewatering Building Forming Part of the Portion C- 2A of the site	0		18-Dec-21 A		15-May-25			
CE0288a	NCE-NCE-0288 - Portion C-2A (within 705 to 831 days from starting date)	831	23-Oct-19 A	30-Jan-22 A	30-Jan-22	30-Jan-22			CE0288b
CE0288b	NCE-NCE-0288 - Revised Access Date for Portion C-2A	1	21-Aug-22	21-Aug-22*	30-Jan-22	30-Jan-22	-203	CE0288a	
CE0292	RCNE-CNE-0292 - Inclement Weather - August 2021 (Time Implication)	0		02-Nov-21 A		15-May-25			
CE0293	RCNE-CNE-0293 - Inclement Weather - September 2021 (Time Implication)	0		02-Nov-21 A		15-May-25			
CE0294	NCE-PMI-0294 - IIB for FAT for THP System	0		30-Nov-21 A		15-May-25			
CE0296	NCE-PMI-0296 - Provision of emMiC Adoption of FRP Walkway and Platform for Sludge Digesters	0		03-Dec-21 A		15-May-25			
CE0297	NCE-PMI-0297-Provision of Addit. Module BIM Collaboration Pro to existing CDE&Omission of Procurement Maintenance of CDE	0		03-Dec-21 A		15-May-25			
CE0298	NCE-PMI-0298 - Additional Light Fittings at Roof Floor of UV System No.1 & Effluent Pumping Station No.1	0		30-Nov-21 A		15-May-25			
CE0299	NCE-PMI-0299 - Revised Plumbing Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-21 A		15-May-25			
CE0300	NCE-PMI-0300 - Revised Plumbing Layout for CHP, DOU 12 and SD&DC	0		10-Mar-22 A		15-May-25			
CE0301	NCE-PMI-0301 - Revised Plumbing Layout for SDB & FeCl3 Dosing System	0		24-Feb-22 A		15-May-25			
CE0302	NCE-PMI-0302 - Revised Lighting Layout Plan for Workshop No.2	0		17-Dec-21 A		15-May-25			
CE0303	NCE-CNE-0303 - Revise Fire Services Provision for Server Room of Workshop No.2	0		19-Jan-22 A		15-May-25			
CE0304	NCE-PMI-0304 - Provision of Digital Displaying Screen and Softwarewithin Portion B Area	0		29-Dec-21 A		15-May-25			
CE0305	NCE-PMI-0305 - Process Review for Advance Works	0		12-Jan-22 A		15-May-25			
CE0306	NCE-CNE-0306 - Additional Trial Pits & the Associated Modification Works for Uncharted Utilities at STF	0		01-Mar-22 A		15-May-25			
CE0307	NCE-PMI-0307 - Revised Quantity for Stoplogs of Sewage Pumping Station	0		13-Dec-21 A		15-May-25			
CE0309	RCNE-CNE-0309 - Inclement Weather - October 2021 (Time Implication)	0		16-Dec-21 A		15-May-25			
CE0310	NCE-PMI-0310 - Temp. Leased Line for UV System No.1, Effluent PS No.1 & existing Control Room at Zone B	0		20-Dec-21 A		15-May-25			
CE0311	NCE-PMI-0311 - Temp. Setup for SCADA System Monitoring & CCTV System Surveillance	0		29-Dec-21 A		15-May-25			
CE0312	CNE-0312 - Weather Condition Affecting the Site in Oct due to Typhoon Signal No.8 or above, Red/Black Rainstorm Warning	0		29-Dec-21 A		15-May-25			



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 8 of 46

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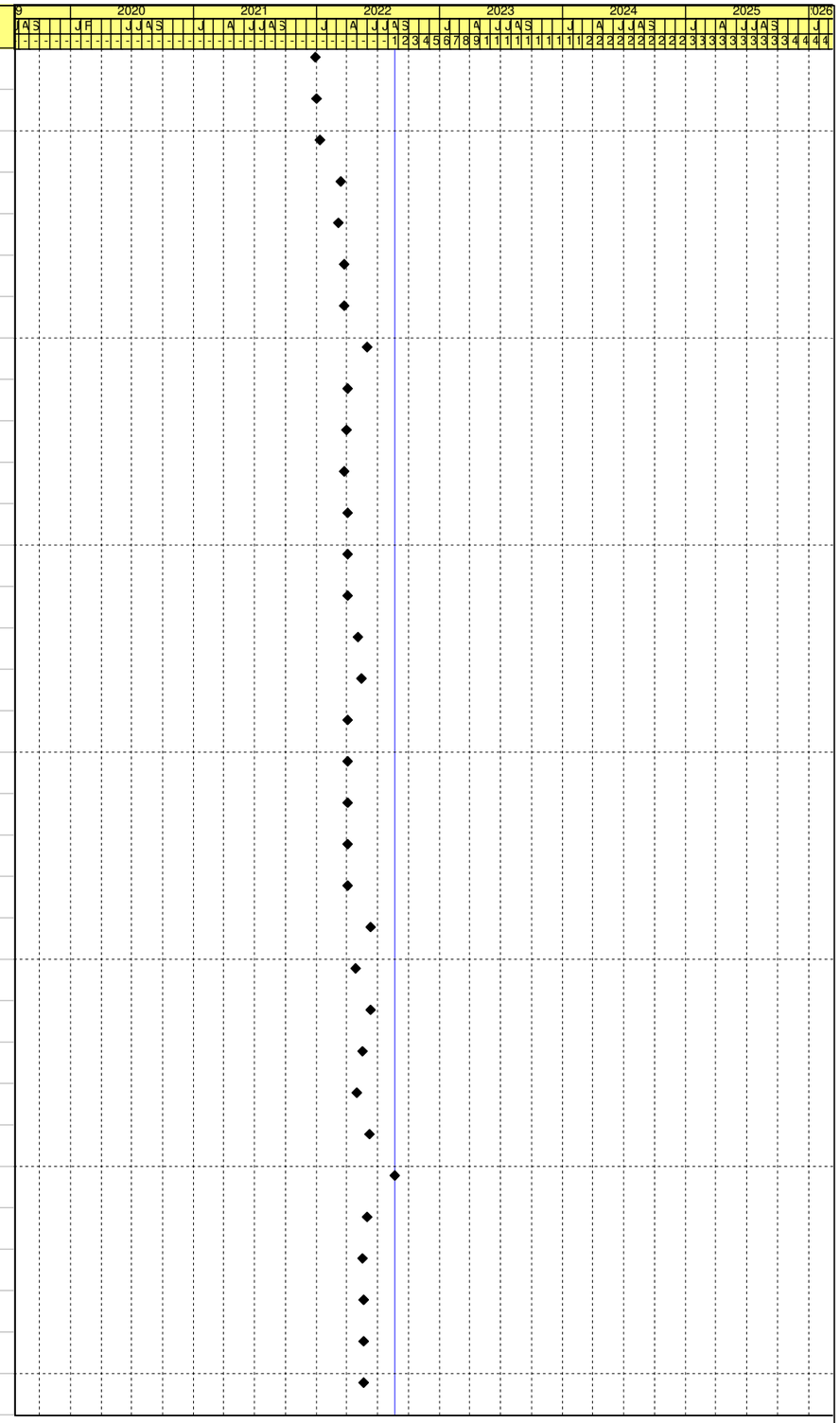
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0313	CNE-0313 - Inclement Weather - November 2021 (Time Implication)	0		29-Dec-21 A		15-May-25			
CE0315	NCE-PMI-0315 - Modification of Monorali LA-01-04 in Sludge Dewatering Building	0		30-Dec-21 A		15-May-25			
CE0317	NCE-PMI-0317 - Revised CCTV Layout Plan & Addition of CCTV Camera for UV System No.1 & Effluent Pumping Station	0		11-Jan-22 A		15-May-25			
CE0325	NCE-PMI-0325 - Provision of 2 Nos. of 3 Tons Mobile A-frame with Electrical Hoist in Sludge Dewatering Building	0		14-Mar-22 A		15-May-25			
CE0327	NCE-PMI-0327 - Change of Material for Electrical Wiring Accessories	0		08-Mar-22 A		15-May-25			
CE0328	NCE-PMI-0328 - Provision of Chequer Plates at SAS Pumping Station	0		22-Mar-22 A		15-May-25			
CE0329	NCE-PMI-0329 - Provision of IIB for FAT for Sludge Thickening and Dewatering Centrifuges	0		23-Mar-22 A		15-May-25			
CE0333	NCE-PMI-0333 - Revised MVAC Layout and Control Schematic for Workshop No.2	0		30-May-22 A		15-May-25			
CE0335	NCE-PMI-0335 - Revised Power & Control for MVAC Provision at Workshop No.2	0		01-Apr-22 A		15-May-25			
CE0336	NCE-PMI-0336 - Provision of Additional Temporary Storage Area	0		30-Mar-22 A		15-May-25			
CE0337	NCE-PMI-0337 - Revised Pipe Trenches in Zone C	0		24-Mar-22 A		15-May-25			
CE0338	NCE-PMI-0338 - Provision of Additional RFID Handheld Readers with 4G Data SIM Card Service	0		01-Apr-22 A		15-May-25			
CE0339	NCE-PMI-0339 - Revised Lighting Layout for SDB	0		01-Apr-22 A		15-May-25			
CE0340	NCE-PMI-0340 - Buillding Services & SCADA Interface Provisions for Workshop No.2	0		01-Apr-22 A		15-May-25			
CE0341	NCE-PMI-0341 - Revised MVAC Layout for Sludge Digesters and Distribution Chamber	0		05-May-22 A		15-May-25			
CE0342	NCE-PMI-0342 - Provision and Installation of Additional Pipes to Manhole MHSS1	0		12-May-22 A		15-May-25			
CE0343	CNE-0343 - Inclement Weather - December 2021 (Time Implication)	0		01-Apr-22 A		15-May-25			
CE0344	CNE-0344 - Inclement Weather - January 2022 (Time Implication)	0		01-Apr-22 A		15-May-25			
CE0345	CNE-0345 - Inclement Weather - February 2022 (Time Implication)	0		01-Apr-22 A		15-May-25			
CE0347	NCE-PMI-0347 - IIB for FAT for 11kV Switchboards	0		01-Apr-22 A		15-May-25			
CE0348	NCE-PMI-0348 - Provision of (IIB) for FAT for CHP Generating Sets	0		04-Apr-22 A		15-May-25			
CE0352	NCE-PMI-0352 - Revised MVAC Layout and for Transformer and Switch Room	0		10-Jun-22 A		15-May-25			
CE0353	NCE-PMI-0353 - Additional Auto-sampler for sampling Location at UV system No.1 and Effluent Pumping Station No.1	0		27-Apr-22 A		15-May-25			
CE0354	NCE-EWP-0354 - Early Deployment of Tower Crane to Enhance Programme affected by Uncharted U/U at STF	0		10-Jun-22 A		15-May-25			
CE0359	NCE-PMI-0359 - Revised Lighting Layout for Sludge Digesters and Districbution Chamber (Basement 1 and Basement 2)	0		16-May-22 A		15-May-25			
CE0360	NCE-PMI-0360 - Provision of Video Wall with Additional Monitors in the Control Room of Workshop No.2	0		29-Apr-22 A		15-May-25			
CE0361	NCE-PMI-0361 - Revised Power Layout for Sludge Dewatering Building	0		08-Jun-22 A		15-May-25			
CE0362	NCE-CNE-0362 - Amendment of Dangers Goods Ordinance (Cap.295)	0		19-Aug-22 A		15-May-25			
CE0363	NCE-PMI-0363 - Revised MVAC Layout and Control Schematic for CHP Building	0		30-May-22 A		15-May-25			
CE0364	NCE-PMI-0364 - Provision of Security and Utility Services for Additional Temporary Storage Area	0		16-May-22 A		15-May-25			
CE0366	CNE-0366 - No Access to and Use of Portion C-2B for Area for CHP	0		20-May-22 A		15-May-25			
CE0367	NCE-PMI-0367 - Sealing Works for UV System & Effluent Pumping Station No. 1	0		20-May-22 A		15-May-25			
CE0369	CNE-0369 - No Access to and use of Portion C-2C for Area for SD & DC	0		20-May-22 A		15-May-25			



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 9 of 46

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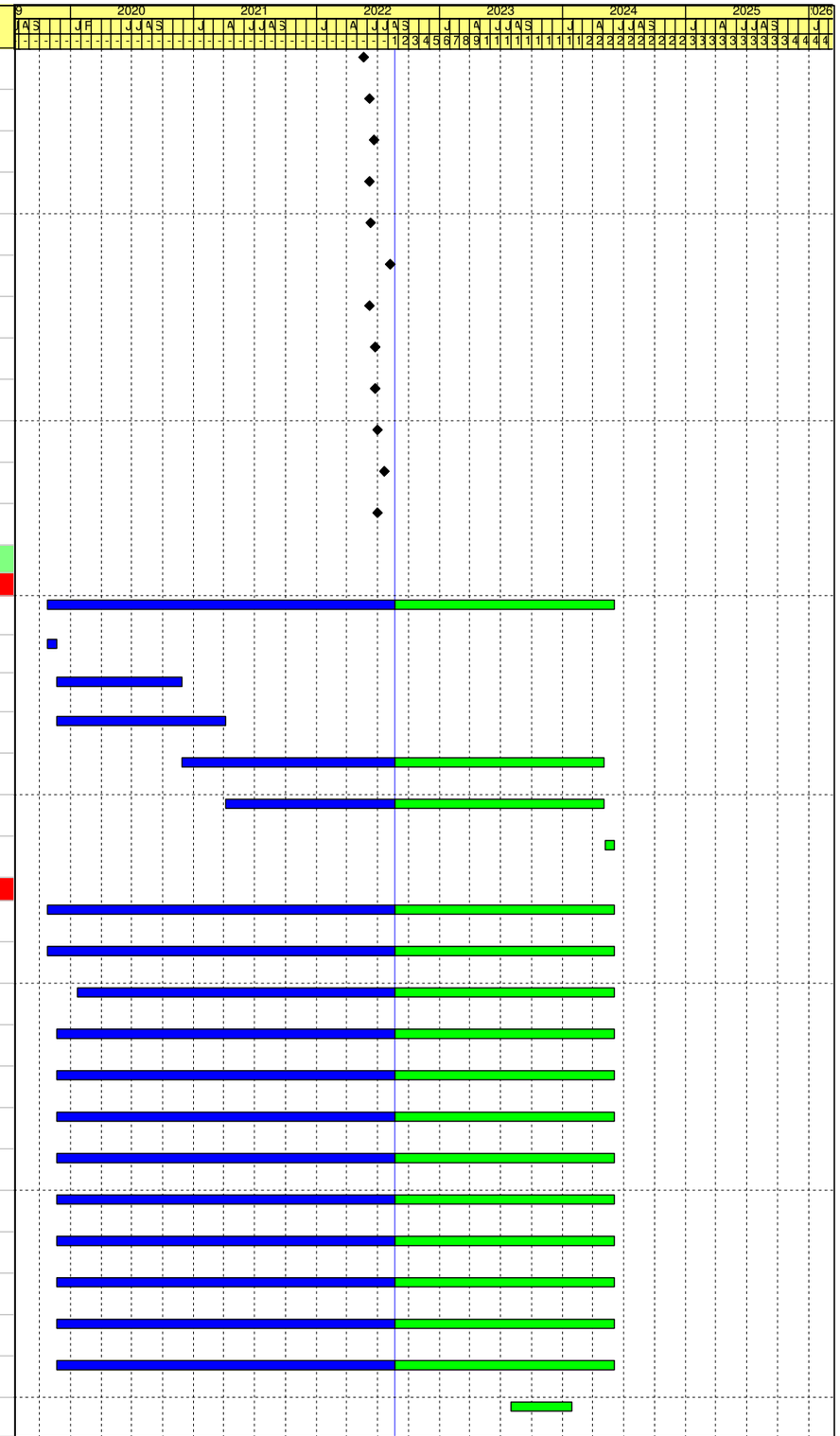
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0370	CNE-0370 - No Access to and Use of Portion C-2A for Area for SDB	0		20-May-22 A		15-May-25			
CE0372	NCE-PMI-0372 - Building Services Control & Monitoring Provisions for SDB & Gas Detection System for Pipe Tranch No.1	0		08-Jun-22 A		15-May-25			
CE0374	NCE-PMI-0374 - Revised Power Layout for SDDC & Control Provisions for Sump Pumps at Pipe Trench No.1 & No.2	0		20-Jun-22 A		15-May-25			
CE0375	NCE-PMI-0375 - Gas Detection System for Pipe Trench No.3 in Zone C	0		06-Jun-22 A		15-May-25			
CE0376	NCE-PMI-0376 - BS Provisions for SDDC (G/F & Roof) & Pipe Trench No.2	0		10-Jun-22 A		15-May-25			
CE0381	NCE-PMI-0381 - Employment of Temporary Staff under Job Creation Scheme 3.0 (JCS 3.0) under Anti-Epidemic Fund (AEF)	0		08-Aug-22 A		15-May-25			
CE0384	NCE-PMI-0384 - Enhanced Protective Measures against Spread of Omicron COVID Variant	0		08-Jun-22 A		15-May-25			
CE0386	CNE-0386 - Inclement Weather - March 2022 (Time Implication)	0		24-Jun-22 A		15-May-25			
CE0387	CNE-0387 - Inclement Weather - April 2022 (Time Implication)	0		24-Jun-22 A		15-May-25			
CE0391	CNE-0391 - Inclement Weather - May 2022 (Time Implication)	0		30-Jun-22 A		15-May-25			
CE0395	NCE-PMI-0395 - Omission of the Set-up Work for Temporary Water and Electricity Supply for Works Area WA1-B	0		20-Jul-22 A		15-May-25			
CE0397	CNE-0397 - Inclement Weather - Jun 2022 (Time Implication)	0		30-Jun-22 A		15-May-25			
Preliminaries		2032	23-Oct-19 A	15-May-25	05-Sep-21	15-May-25	0		
Mobilisation		1687	23-Oct-19 A	04-Jun-24	05-Sep-21	15-May-25	345		
PL1000	Provison of Equipment / Facilities for the PM's Office	1687	23-Oct-19 A	04-Jun-24	01-Aug-23	15-May-25	345	AD1200, AD1220,	CD1040
PL1010	Mobilisation	28	23-Oct-19 A	19-Nov-19 A	05-Sep-21	05-Sep-21		CD1010	PL1240, S2P1010,
PL1020	Design, Procurement & PO & Construction of Contractor's Site Office (Works Area WA1-B)	270	20-Nov-19 A	27-Nov-20 A	05-Jul-22	05-Jul-22		AD1200, PL1010	PL1040, S2D1930,
PL1030	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	503	20-Nov-19 A	05-Apr-21 A	01-Aug-23	01-Aug-23		AD1220, PL1010	PL1050
PL1040	Maintain Contractor's Site Office	1255	28-Nov-20 A	05-May-24	01-Aug-23	15-Apr-25	345	PL1020	PL1060
PL1050	Maintain Contractor's Storage Area	1126	06-Apr-21 A	05-May-24	01-Aug-23	15-Apr-25	345	PL1030	PL1060
PL1060	Removal of Site Office, Storage & Relevant Facilities	30	06-May-24	04-Jun-24	16-Apr-25	15-May-25	345	PL1040, PL1050	CD1040
Site Preliminaries		2032	23-Oct-19 A	15-May-25	07-Apr-22	15-May-25	0		
PL1070	Provision of Insurance, Third Party Insurances & PII	1687	23-Oct-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010	CD1040
PL1080	Provision of 2 Contract Car for the Use of the PM & Supervisor	1687	23-Oct-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010	CD1040
PL1090	Provision of 1 Electric Car for the Use of the PM & Supervisor	1596	22-Jan-20 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1100	Provision of Photographs	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1110	Provision of Environmental Mitigation Measures	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1120	Provision of Air Pollution Abatment	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1130	Provision of Noise Pollution Abatment	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1140	Provision of Wastewater Pollution Abatement	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1150	Provision of Wastement Management	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1160	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1170	Provision of Environmental Management	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1180	Provision of Site Management Plan for Trip Ticket System	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1190	Provision of As-constructed Drawings for Section 3	180	02-Aug-23	28-Jan-24	12-Nov-23	10-May-24	103	CD1010, S3C1150,	CD1040, SC31110



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 10 of 46

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Milestone
Actual Progress

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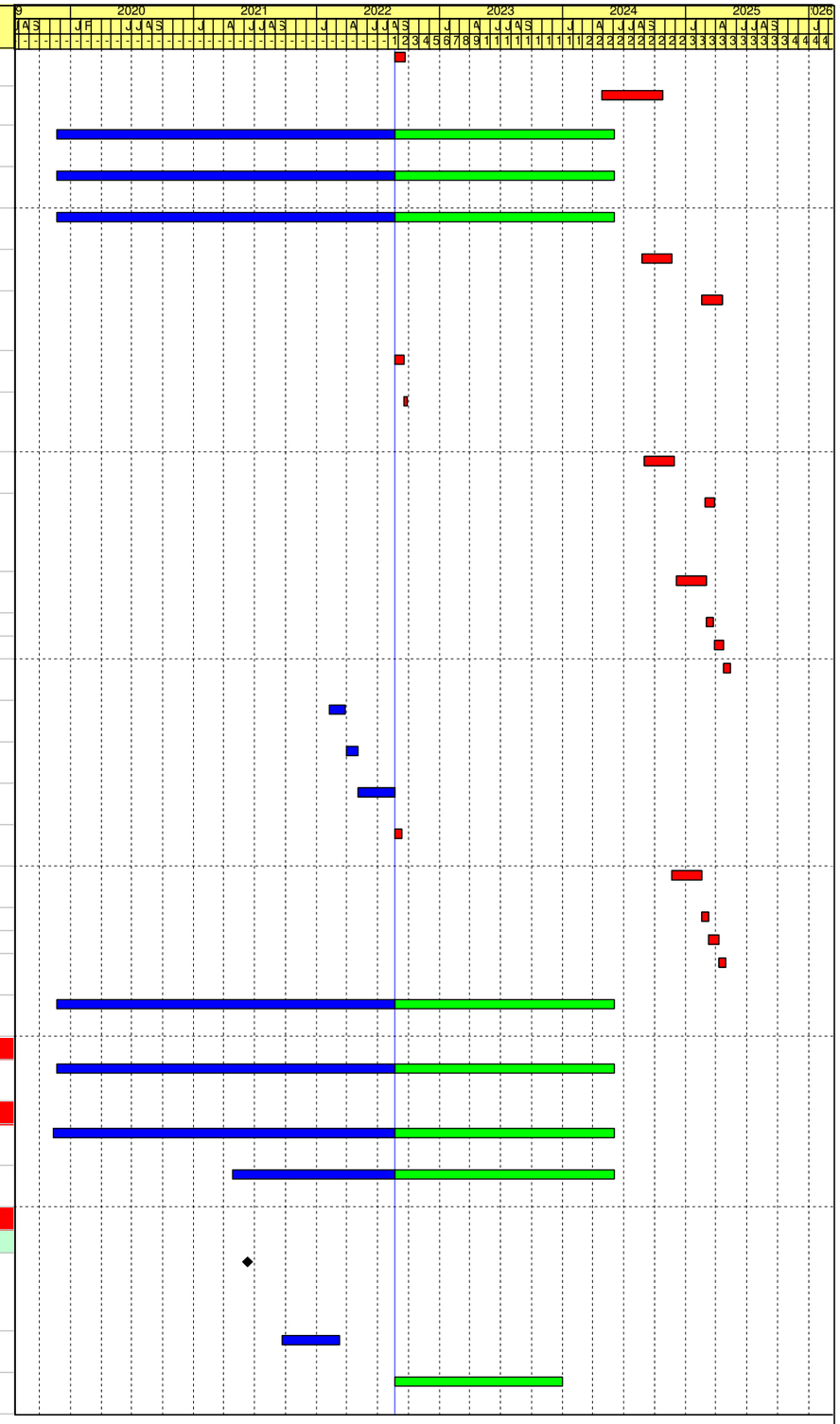
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
PL1200	Provision of As-constructed Drawings for Section 4	30	21-Aug-22	19-Sep-22	16-Apr-22	16-May-22	-127	CD1010, S4C1160,	CD1040, SC41110
PL1210	Provision of As-constructed Drawings for Section 5	180	27-Apr-24	23-Oct-24	07-Nov-23	04-May-24	-172	CD1010, S5DIGC1040,	CD1040, SC51110
PL1220	Provision of Systematic Risk Management	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1230	Provision of Site Liaison Group & Community Liaison Group	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1240	Provision of 24-Hour Telephone Line	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
PL1260	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 3	90	23-Aug-24	20-Nov-24	13-Sep-23	12-Dec-23	-345		PL1270
PL1270	Provision of Training for Employer's Staff for Section 3	60	19-Feb-25	19-Apr-25	11-Mar-24	10-May-24	-345	CD1010, PL1260, S3T1200	CD1040, SC31110
PL1280	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 4	27	21-Aug-22	16-Sep-22	07-Apr-22	04-May-22	-136		PL1290
PL1290	Provision of Training for Employer's Staff for Section 4	12	17-Sep-22	28-Sep-22	04-May-22	16-May-22	-136	CD1010, S4T1020, PL1280	CD1040, SC41110
PL1300	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 5	90	31-Aug-24	28-Nov-24	08-Oct-23	05-Jan-24	-328		PL1310
PL1310	Provision of Training for Employer's Staff for Section 5	30	27-Feb-25	28-Mar-25	05-Apr-24	04-May-24	-328	CD1010, S5T1180, S5DIGC1040, PL1300	CD1040, SC51110
PL1320	Prepare & Submit O&M Manual for Section 3	90	05-Dec-24	04-Mar-25	26-Dec-23	25-Mar-24	-345	CD1010, S3T1120	CD1040, PL1330
PL1330	PM Reivew & Comment O&M Manual for Section 3	21	05-Mar-25	25-Mar-25	25-Mar-24	15-Apr-24	-345	PL1320	PL1340
PL1340	Revise & Re-submit O&M Manual for Section 3	30	26-Mar-25	24-Apr-25	15-Apr-24	15-May-24	-345	PL1330	PL1350
PL1350	PM Reivew & Approval of O&M Manual for Section 3	21	25-Apr-25	15-May-25	15-May-24	05-Jun-24	-345	PL1340	CD1040, SC31110
PL1360	Prepare & Submit O&M Manual for Section 4	50	07-Feb-22 A	28-Mar-22 A	24-Apr-22	24-Apr-22		CD1010	CD1040, PL1370
PL1370	PM Reivew & Comment O&M Manual for Section 4	36	29-Mar-22 A	03-May-22 A	24-Apr-22	24-Apr-22		PL1360	PL1380
PL1380	Revise & Re-submit O&M Manual for Section 4	79	04-May-22 A	21-Aug-22	24-Apr-22	25-Apr-22	-119	PL1370	PL1390
PL1390	PM Reivew & Approval of O&M Manual for Section 4	21	22-Aug-22	11-Sep-22	25-Apr-22	16-May-22	-119	PL1380	CD1040, SC41110
PL1400	Prepare & Submit O&M Manual for Section 5	90	21-Nov-24	18-Feb-25	07-Dec-23	05-Mar-24	-350	CD1010	CD1040, PL1410
PL1410	PM Reivew & Comment O&M Manual for Section 5	21	19-Feb-25	11-Mar-25	06-Mar-24	26-Mar-24	-350	PL1400	PL1420
PL1420	Revise & Re-submit O&M Manual for Section 5	30	12-Mar-25	10-Apr-25	27-Mar-24	25-Apr-24	-350	PL1410	PL1430
PL1430	PM Reivew & Approval of O&M Manual for Section 5	21	11-Apr-25	01-May-25	26-Apr-24	16-May-24	-350	PL1420	CD1040, SC51110
PL1440	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
Site Upkeeping		1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345		
PL1450	General Site Upkeeping of the Site	1659	20-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1010, PL1010	CD1040
Safety and Environmental Management		1675	10-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345		
PL1460	Construction Health and Safety Plan	1669	10-Nov-19 A	04-Jun-24	01-Aug-23	15-May-25	345	CD1000	CD1040
PL1470	Site Traffic Safety Management Plan	1137	25-Apr-21 A	04-Jun-24	01-Aug-23	15-May-25	345	AD1010	CD1040
Compliance with BEAM Requirements		1158	11-Jun-21 A	11-Sep-24	04-Nov-22	16-May-24	-118		
Sludge Dewatering Building		1068	11-Jun-21 A	13-Jun-24	04-Nov-22	16-May-24	-28		
PL1490	Material Submission & Design Calculation Approved	0		11-Jun-21 A		04-Nov-22		S2D1290, S2D1330, S2D1450, S2D1490	PL1500, SC21120
PL1500	Issued approved submission & Calculation to Cinotech	161	21-Sep-21 A	11-Mar-22 A	04-Nov-22	04-Nov-22		PL1490	PL1510
PL1510	Monthly Review & Submission	500	22-Aug-22	03-Jan-24	04-Nov-22	17-Mar-24	74	PL1500, S5SDBC1020	PL1520



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 11 of 46

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Actual Progress

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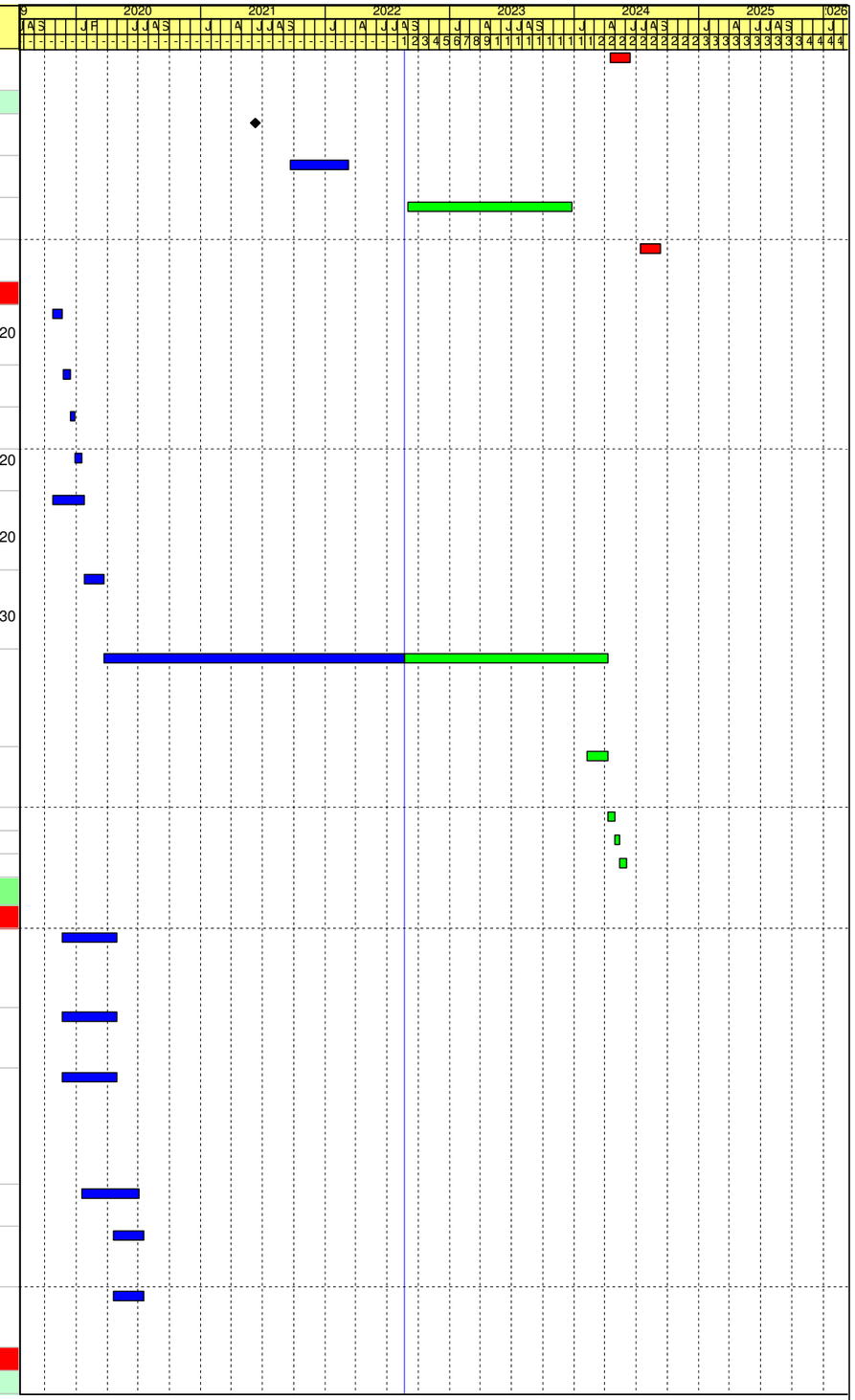
PL1520	Submission & Approval of Test Record	60	15-Apr-24	13-Jun-24	18-Mar-24	16-May-24	-28	PL1510, S5T1060	SC51120
CHP Building		1158	11-Jun-21 A	11-Sep-24	24-Nov-22	16-May-24	-118		
PL1530	Material Submission & Design Calculation Approved	0		11-Jun-21 A		24-Nov-22		S2D1610	PL1540, SC21120
PL1540	Issued approved submission & Calculation to Cinotech	168	21-Sep-21 A	11-Mar-22 A	24-Nov-22	24-Nov-22		PL1530	PL1550
PL1550	Monthly Review & Submission	480	01-Sep-22	24-Dec-23	24-Nov-22	17-Mar-24	84	S5CHPC1020, PL1540	PL1560
PL1560	Submission & Approval of Test Record	60	14-Jul-24	11-Sep-24	18-Mar-24	16-May-24	-118	PL1550, S5T1100	SC51120
BIM		1686	24-Oct-19 A	04-Jun-24	01-Aug-23	15-May-25	345		
PL1570	Prepare & Submit Construction Stage BIM Execution Plan	30	24-Oct-19 A	22-Nov-19 A	01-Aug-23	01-Aug-23		CD1010	PL1580, PL1630, PL1620
PL1580	PM Reivew & Comment Construction Stage BIM Execution Plan	21	23-Nov-19 A	13-Dec-19 A	01-Aug-23	01-Aug-23		PL1570	PL1590
PL1590	Revise & Re-submit Construction Stage BIM Execution Plan	14	14-Dec-19 A	27-Dec-19 A	01-Aug-23	01-Aug-23		PL1580	PL1600
PL1600	PM Reivew & Approval of Construction Stage BIM Execution Plan	21	28-Dec-19 A	17-Jan-20 A	01-Aug-23	01-Aug-23		PL1590	PL1630, PL1620
PL1610	Contractor Review & Study Design Stage BIM	92	24-Oct-19 A	23-Jan-20 A	01-Aug-23	01-Aug-23		CD1010	CD1040, PL1640, PL1630, PL1620
PL1620	Contractor Develop 1st Construction Stage BIM	60	24-Jan-20 A	23-Mar-20 A	01-Aug-23	01-Aug-23		PL1600, PL1570, PL1610	CD1040, PL1640, PL1630, PL1630
PL1630	Review & Update BIM Execution Plan & BIM Model	1415	24-Mar-20 A	09-Apr-24	01-Aug-23	20-Mar-25	345	PL1570, PL1620, PL1600, PL1610, PL1620	CD1040, PL1640
PL1640	Prepare & Submit the Fully Coordinated BIM	60	10-Feb-24	09-Apr-24	20-Jan-25	20-Mar-25	345	PL1620, PL1630, PL1610	PL1650
PL1650	PM Reivew & Comment Fully Coordinated BIM	21	10-Apr-24	30-Apr-24	21-Mar-25	10-Apr-25	345	PL1640	PL1660
PL1660	Revise & Re-submit Fully Coordinated BIM	14	01-May-24	14-May-24	11-Apr-25	24-Apr-25	345	PL1650	PL1670
PL1670	PM Reivew & Approval of Fully Coordinated BIM	21	15-May-24	04-Jun-24	25-Apr-25	15-May-25	345	PL1660	CD1040
Section 1 - Design for UV System No. 1 & Effluent Pumping Station No.1		284	21-Nov-19 A	08-Aug-20 A	01-Dec-21	15-May-25			
Major Plant & Materials Procurement		240	21-Nov-19 A	17-Jul-20 A	01-Dec-21	16-Apr-22			
S1P1000	Procurement & PO for UV Disinfection System (S10)	150	21-Nov-19 A	28-Apr-20 A	01-Dec-21	01-Dec-21		CD1000, CD1010, PL1010	SC11110, S4P1040, S1D1000, S1P1030
S1P1010	Procurement & PO for Lift-up Pumps (S11)	150	21-Nov-19 A	28-Apr-20 A	01-Dec-21	01-Dec-21		CD1010, PL1010	SC11110, S4P1070, S1D1000
S1P1020	Procurement & PO for Transfer Pumps (S13)	150	21-Nov-19 A	28-Apr-20 A	01-Dec-21	01-Dec-21		CD1010, PL1010	SC11110, S4P1080, S1P1040, S1P1050, S1D1000, S4P1090
S1P1030	Procurement & PO for EOT Cranes (2T & 5T) (S19)	150	19-Jan-20 A	03-Jul-20 A	16-Apr-22	16-Apr-22		S1P1000	SC11110, S4P1100
S1P1040	Procurement & PO for Stoplogs (S21)	90	18-Apr-20 A	17-Jul-20 A	16-Apr-22	16-Apr-22		S1P1020, PL1010	SC11110, S4P1110, S2P1160
S1P1050	Procurement & PO for Penstocks (S21)	90	18-Apr-20 A	17-Jul-20 A	16-Apr-22	16-Apr-22		S1P1020, PL1010	SC11110, S4P1120, S2P1170
Design & Submission		217	27-Jan-20 A	08-Aug-20 A	01-Dec-21	15-May-25			
General Arrangement Drawings		217	27-Jan-20 A	08-Aug-20 A	01-Dec-21	01-Dec-21			



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 12 of 46

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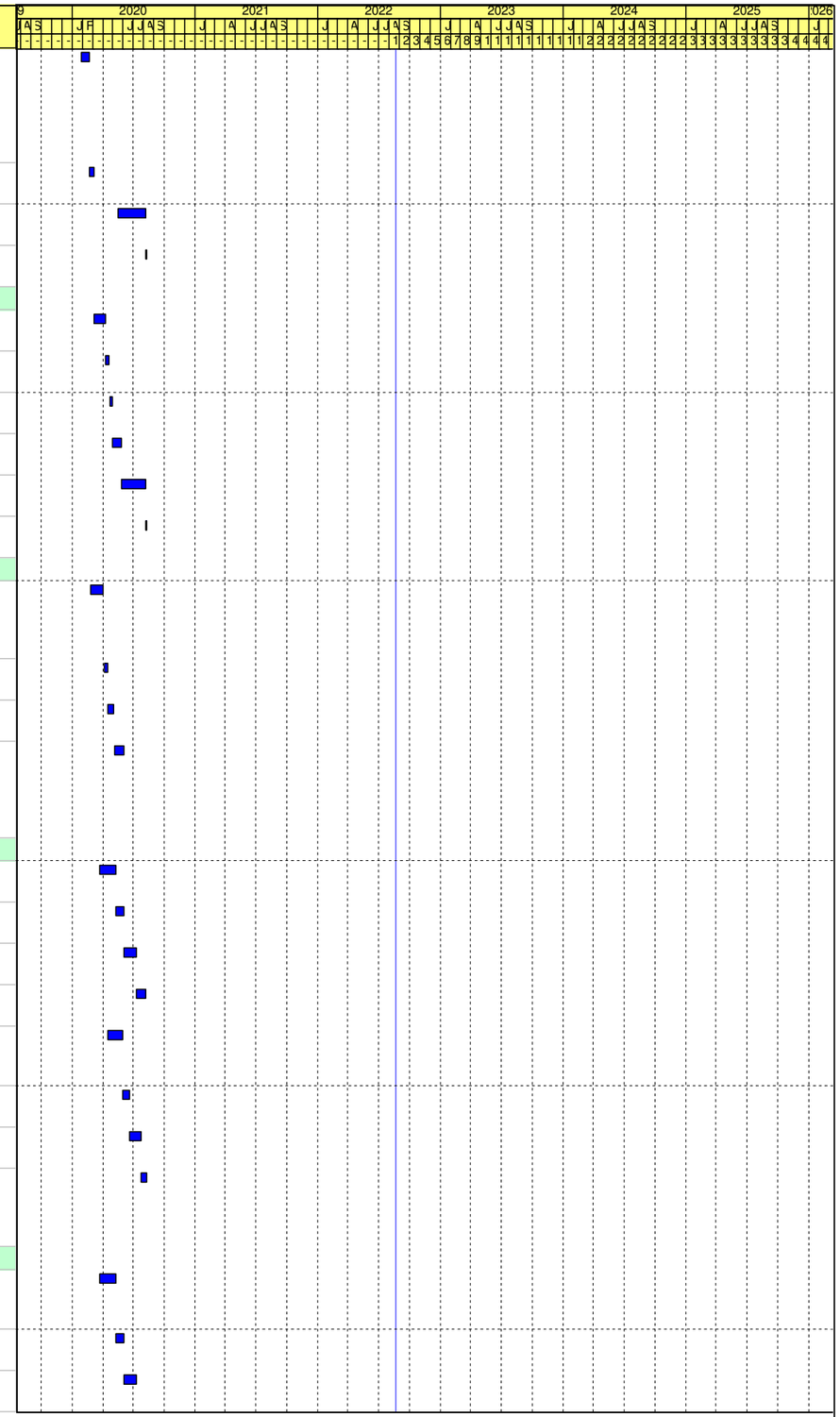
S1D1000	Prepare & Submit General Arrangement Drawings	90	27-Jan-20 A	19-Feb-20 A	01-Dec-21	01-Dec-21		S1P1000, S1P1010, S1P1020, PL1010	S1D1010, S1D1040, S1D1100, S1D1180, S1D1260, S4P1010
S1D1010	Review & Comment on General Arrangement Drawings by PM	21	20-Feb-20 A	04-Mar-20 A	01-Dec-21	01-Dec-21		S1D1000	S1D1020
S1D1020	Revise & Re-submit General Arrangement Drawings	14	16-May-20 A	05-Aug-20 A	01-Dec-21	01-Dec-21		S1D1010	S1D1030
S1D1030	Review & Accept of General Arrangement Drawings by PM	5	06-Aug-20 A	08-Aug-20 A	01-Dec-21	01-Dec-21		S1D1020	SC11110, S3C1170
Civil & Dimensional / Tolerance Requirement Drawings		176	07-Mar-20 A	08-Aug-20 A	16-Apr-22	15-May-25			
S1D1040	Prepare & Submit Civil Requirement Drawings	60	07-Mar-20 A	08-Apr-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1000	S1D1050, KD1000
S1D1050	Review & Comment on Civil Requirement Drawings by PM	21	09-Apr-20 A	20-Apr-20 A	15-May-25	15-May-25		S1D1040	S1D1060
S1D1060	Revise & Re-submit Civil Requirement Drawings	14	21-Apr-20 A	29-Apr-20 A	15-May-25	15-May-25		S1D1050	S1D1070
S1D1070	Review & Comment of Civil Requirement Drawings by PM	21	30-Apr-20 A	25-May-20 A	15-May-25	15-May-25		S1D1060	SC11110, S1D1080
S1D1080	Revise & Re-submit Civil Requirement Drawings	28	26-May-20 A	05-Aug-20 A	15-May-25	15-May-25		S1D1070	S1D1090
S1D1090	Review & Accept of Civil Requirement Drawings by PM	5	06-Aug-20 A	08-Aug-20 A	15-May-25	15-May-25		S1D1080	SC11110
Electrical Schematic Drawings		116	25-Feb-20 A	03-Jun-20 A	16-Apr-22	16-Apr-22			
S1D1100	Prepare & Submit Elec. Schematic Drawings	60	25-Feb-20 A	03-Apr-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1000	S1D1110, KD1000, S1D1140, S1D1220
S1D1110	Review & Comment on Elec. Schematic Drawings by PM	21	04-Apr-20 A	16-Apr-20 A	16-Apr-22	16-Apr-22		S1D1100	S1D1120
S1D1120	Revise & Re-submit Elec. Schematic Drawings	14	17-Apr-20 A	04-May-20 A	16-Apr-22	16-Apr-22		S1D1110	S1D1130
S1D1130	Review & Accept of Elec. Schematic Drawings by PM	21	05-May-20 A	03-Jun-20 A	16-Apr-22	16-Apr-22		S1D1120	S5TXRP1000, S4C1000, S4C1010, S4P1020, SC11110
UV System No. 1		146	24-Mar-20 A	08-Aug-20 A	16-Apr-22	15-May-25			
S1D1140	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20 A	08-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1100	S1D1150, S1D1180
S1D1150	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	09-May-20 A	01-Jun-20 A	15-May-25	15-May-25		S1D1140	S1D1160
S1D1160	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	02-Jun-20 A	10-Jul-20 A	15-May-25	15-May-25		S1D1150	S1D1170
S1D1170	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	11-Jul-20 A	06-Aug-20 A	15-May-25	15-May-25		S1D1160	SC11110
S1D1180	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20 A	29-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1140, S1D1000	S1D1190, S4C1020
S1D1190	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	30-May-20 A	19-Jun-20 A	16-Apr-22	16-Apr-22		S1D1180	S1D1200
S1D1200	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	20-Jun-20 A	23-Jul-20 A	16-Apr-22	16-Apr-22		S1D1190	S1D1210
S1D1210	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14	24-Jul-20 A	08-Aug-20 A	16-Apr-22	16-Apr-22		S1D1200	S4P1040, S5TXRP1000, S5TXRP1010, SC11110
Effluent Pumping Station No. 1		139	24-Mar-20 A	08-Aug-20 A	16-Apr-22	15-May-25			
S1D1220	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20 A	08-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1100	S1D1230, S1D1260, S1D1300
S1D1230	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	09-May-20 A	01-Jun-20 A	15-May-25	15-May-25		S1D1220	S1D1240
S1D1240	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	02-Jun-20 A	10-Jul-20 A	15-May-25	15-May-25		S1D1230	S1D1250



JEC

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Layout: DE1803 RP (Aug 2022) - WBS
Page 13 of 46

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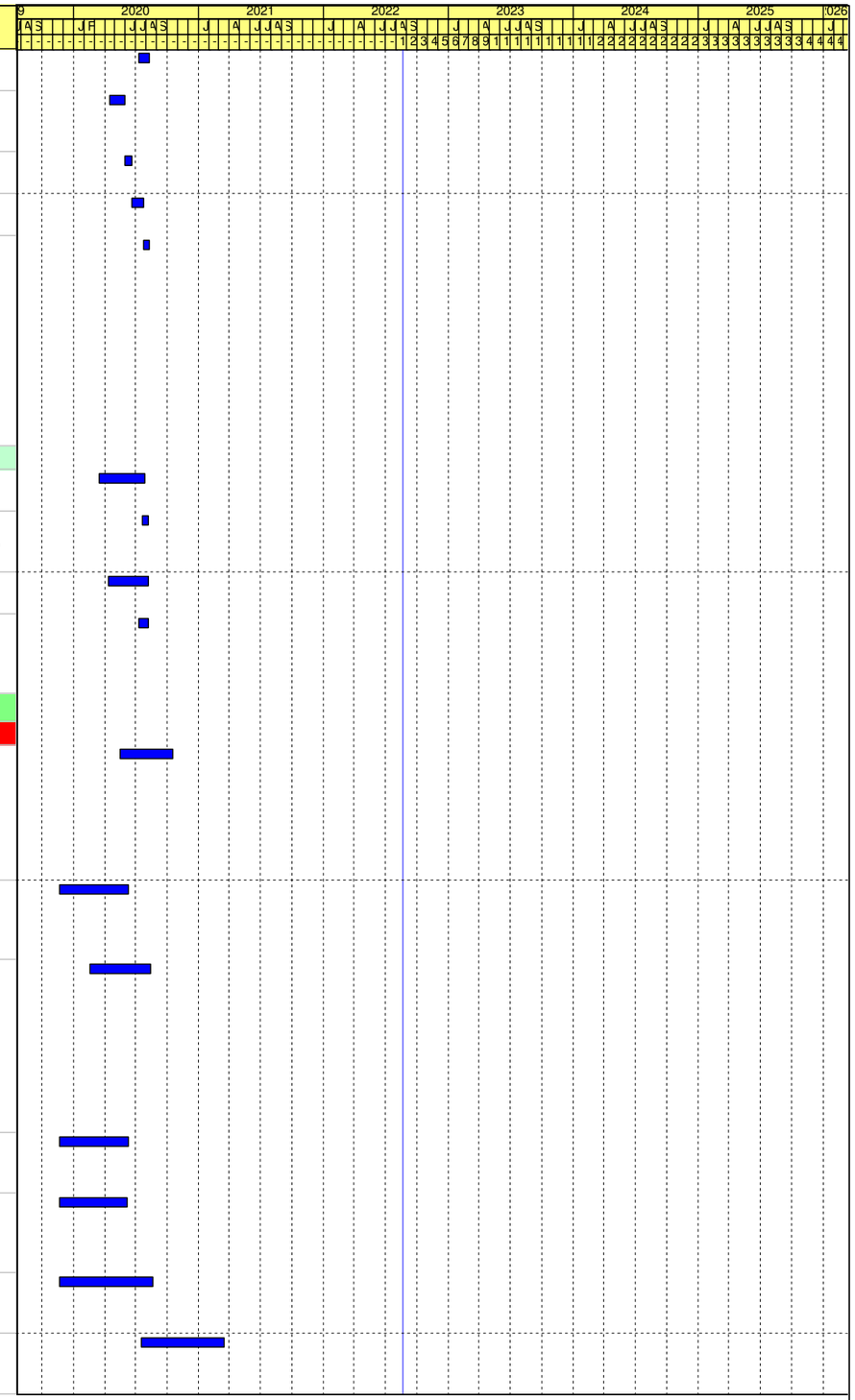
S1D1250	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	11-Jul-20 A	08-Aug-20 A	15-May-25	15-May-25		S1D1240	SC11110
S1D1260	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20 A	29-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1220, S1D1000	S1D1270, S4C1020
S1D1270	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	30-May-20 A	19-Jun-20 A	16-Apr-22	16-Apr-22		S1D1260	S1D1280
S1D1280	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	20-Jun-20 A	23-Jul-20 A	16-Apr-22	16-Apr-22		S1D1270	S1D1290
S1D1290	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14	24-Jul-20 A	08-Aug-20 A	16-Apr-22	16-Apr-22		S1D1280	S4P1110, S4P1120, S4P1070, S4P1080, S4P1090, S4P1100, S5TXRP1000, S5TXRP1010, S5TXRP1020, S4P1130, SC11110
Building Services		147	15-Mar-20 A	06-Aug-20 A	16-Apr-22	16-Apr-22			
S1D1300	Prepare & Submit BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	90	15-Mar-20 A	27-Jul-20 A	16-Apr-22	16-Apr-22		S1D1220	S1D1320, S1D1310
S1D1310	Review & Accept of BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8	21-Jul-20 A	05-Aug-20 A	16-Apr-22	16-Apr-22		S1D1300	SC11110, S5TXRC1030, S4C1110
S1D1320	Prepare & Submit FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	60	14-Apr-20 A	05-Aug-20 A	16-Apr-22	16-Apr-22		S1D1300	S1D1330
S1D1330	Review & Accept of FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8	09-Jul-20 A	06-Aug-20 A	16-Apr-22	16-Apr-22		S1D1320	SC11110, S4P1030, S4P1140, S4P1150
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		943	20-Nov-19 A	21-Aug-22	31-Oct-21	15-May-25	998		
Major Plant & Materials Procurement		571	20-Nov-19 A	23-Apr-21 A	16-Mar-22	12-Mar-23			
S2P1000	Procurement & PO for Sludge Screening System (S2)	150	18-May-20 A	16-Oct-20 A	16-Mar-22	16-Mar-22		S2P1020	SC21110, S5SDBP1000, S2D1260, S5P1000, S2P1060, S2P1150, S5P1030
S2P1010	Procurement & PO for Sludge Thickening System (S3)	180	20-Nov-19 A	08-Jun-20 A	16-Mar-22	16-Mar-22		PL1010, CD1010	SC21110, S5SDBP1010, S2D1300, S2P1030
S2P1020	Procurement & PO for Sludge Digestion System (S5)	150	18-Feb-20 A	12-Aug-20 A	16-Mar-22	16-Mar-22		CD1010, S2P1040	SC21110, S5DIGP1000, S2D1420, S5DIGP1010, S2P1180, S2P1210, S5P1040, S2P1000, S5P1020
S2P1030	Procurement & PO for Sludge Dewatering System (S6)	180	20-Nov-19 A	08-Jun-20 A	16-Mar-22	16-Mar-22		PL1010, CD1010, S2P1010	SC21110, S5SDBP1040, S2D1460
S2P1040	Procurement & PO for THP System (S4)	180	20-Nov-19 A	05-Jun-20 A	16-Mar-22	16-Mar-22		CD1010, PL1010	SC21110, S5THPP1000, S2D1340, S2P1020
S2P1050	Procurement & PO for Biogas Holding Tanks(S7)	180	20-Nov-19 A	20-Aug-20 A	16-Mar-22	16-Mar-22		PL1010	SC21110, S5BIOP1010, S2D1500
S2P1060	Procurement & PO for H2S Removal System (S7)	234	17-Jul-20 A	17-Mar-21 A	16-Mar-22	16-Mar-22		S2P1000	SC21110, S5H2SP1000, S2D1500



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS

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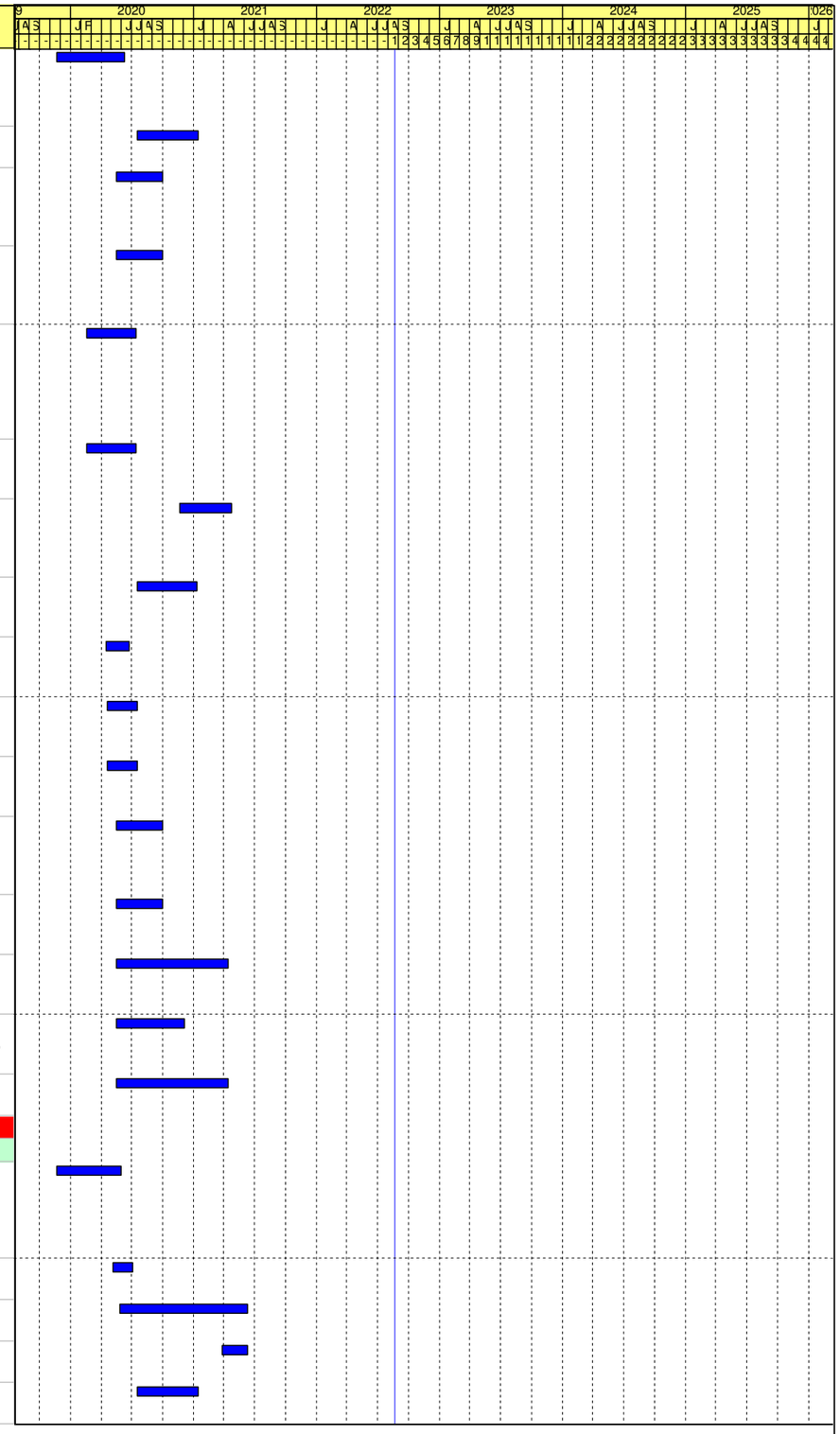
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S2P1070	Procurement & PO for CHP System (S8)	180	20-Nov-19 A	08-Jun-20 A	16-Mar-22	16-Mar-22		PL1010	SC21110, S5CHPP1010, S2D1540, S2P1110
S2P1080	Procurement & PO for Waste Gas Burning System (S9)	150	17-Jul-20 A	15-Jan-21 A	09-Sep-22	09-Sep-22			SC21110, S5WGBP1000
S2P1090	Procurement & PO for Plant Service Water System (S12)	150	18-May-20 A	30-Sep-20 A	16-Mar-22	16-Mar-22			SC21110, S5PSWP1000, S2D1660, S2P1190
S2P1100	Procurement & PO for SAS Pumping System (S14)	150	18-May-20 A	30-Sep-20 A	05-Jul-22	05-Jul-22			SC21110, S5SASP1000, S2D1700, S2P1220
S2P1110	Procurement & PO for Transfomers (S17)	150	18-Feb-20 A	13-Jul-20 A	16-Mar-22	16-Mar-22		S2P1070	SC21110, S5WS2P1000, S5WS2P1030, S2P1120, S2P1140, S5TXRP1000
S2P1120	Procurement & PO for 11 kV Switchboard (S17)	150	18-Feb-20 A	13-Jul-20 A	16-Mar-22	16-Mar-22		S2P1110	SC21110, S5WS2P1060, S2P1130
S2P1130	Procurement & PO for 380V Switchboard (S17)	174	21-Nov-20 A	23-Apr-21 A	16-Mar-22	16-Mar-22		S2P1120, S2D1220	SC21110, S5WS2P1090, S5P1050, S5TXRP1010
S2P1140	Procurement & PO for Control & Monitoring System (S18)	183	17-Jul-20 A	11-Jan-21 A	17-May-22	17-May-22		PL1010, S2P1110	SC21110, S5P1080, S5TXRP1020
S2P1150	Procurement & PO for DO System (S21)	150	15-Apr-20 A	24-Jun-20 A	07-Jan-23	07-Jan-23		S2P1000	SC21110, S5DOUP1000, S2D1930
S2P1160	Procurement & PO for Stoplog (S21)	90	18-Apr-20 A	17-Jul-20 A	12-Mar-23	12-Mar-23		PL1010, S1P1040	SC21110, S5SASP1010, S2P1170
S2P1170	Procurement & PO for Penstock (S21)	90	18-Apr-20 A	17-Jul-20 A	12-Mar-23	12-Mar-23		PL1010, S2P1160, S1P1050	SC21110, S5SASP1020
S2P1180	Procurement & PO for Sewage Pump (S21)	120	18-May-20 A	30-Sep-20 A	15-Oct-22	15-Oct-22		S2P1020	SC21110, S5SPSP1000, S2D1940, S2P1200
S2P1190	Procurement & PO for Process Water Pump (S21)	120	18-May-20 A	30-Sep-20 A	25-May-22	25-May-22		S2P1090	SC21110, S5SDBP1070, S2D1950
S2P1200	Procurement & PO for External Sludge Transfer Pump (S21)	348	18-May-20 A	14-Apr-21 A	15-Oct-22	15-Oct-22		S2P1180	SC21110, S5SDBP1080, S2D1960
S2P1210	Procurement & PO for THP Cooling Pump (S21)	150	18-May-20 A	04-Dec-20 A	29-Dec-22	29-Dec-22		S2P1020	SC21110, S5TCWP1000, S2D1970
S2P1220	Procurement & PO for Temporary Primary Sludge Pump (S21)	348	18-May-20 A	14-Apr-21 A	05-Jul-22	05-Jul-22		PL1010, S2P1100	SC21110, S5ECHP1000
Design & Submission		860	20-Nov-19 A	11-Jun-21 A	16-Mar-22	15-May-25			
General Arrangement Drawings		715	20-Nov-19 A	11-Jun-21 A	16-Mar-22	15-May-25			
S2D1000	Prepare & Submit General Arrangement Drawings (from formation level up to +8mPD)	180	20-Nov-19 A	29-May-20 A	16-Mar-22	16-Mar-22		PL1010	S2D1010, S2D1080, S2D1160, S2D1040, S2D1340
S2D1010	Review & Comment on General Arrangement Drawings by PM (from formation level up to +8mPD)	21	07-May-20 A	02-Jul-20 A	15-May-25	15-May-25		S2D1000	S2D1020
S2D1020	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	381	26-May-20 A	10-Jun-21 A	15-May-25	15-May-25		S2D1010	S2D1030
S2D1030	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	77	26-Mar-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1020	SC21110
S2D1040	Prepare & Submit General Arrangement Drawings (remaining)	177	17-Jul-20 A	15-Jan-21 A	21-May-22	21-May-22		PL1010, S2D1000	S2D1050, S2D1120



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 15 of 46

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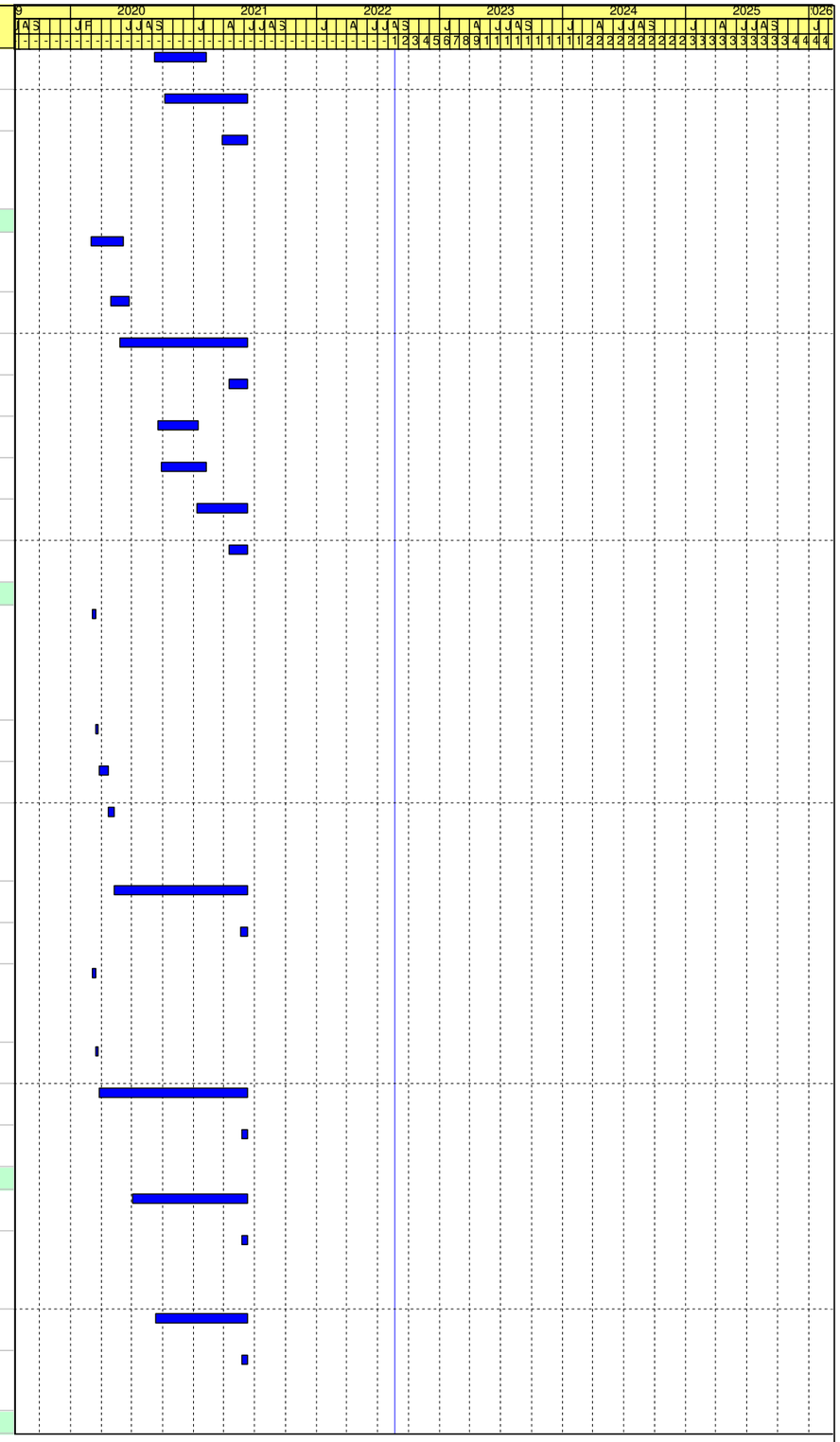
S2D1050	Review & Comment on General Arrangement Drawings by PM (remaining)	21	05-Sep-20 A	08-Feb-21 A	21-May-22	21-May-22		S2D1040	S2D1060
S2D1060	Revise & Re-submit General Arrangement Drawings (remaining)	248	06-Oct-20 A	10-Jun-21 A	21-May-22	21-May-22		S2D1050	S2D1070
S2D1070	Review & Accept of General Arrangement Drawings by PM (remaining)	77	26-Mar-21 A	11-Jun-21 A	21-May-22	21-May-22		S2D1060	SC21110, S5S1060, S5P1010, S5S1050
Civil & Dimensional / Tolerance Requirement Drawings		522	04-Mar-20 A	11-Jun-21 A	16-Mar-22	15-May-25			
S2D1080	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	90	04-Mar-20 A	04-Jun-20 A	16-Mar-22	16-Mar-22		S2D1000	S2D1090, S2D1660, KD1010
S2D1090	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	30-Apr-20 A	23-Jun-20 A	02-Aug-22	02-Aug-22		S2D1080	S2D1100
S2D1100	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	381	26-May-20 A	10-Jun-21 A	02-Aug-22	02-Aug-22		S2D1090	S2D1110
S2D1110	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	55	17-Apr-21 A	11-Jun-21 A	02-Aug-22	02-Aug-22		S2D1100	SC21110, AD1120
S2D1120	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	120	15-Sep-20 A	15-Jan-21 A	15-May-25	15-May-25		S2D1040	S2D1130, KD1020
S2D1130	Review & Comment on Civil Requirement Drawings by PM (remaining)	21	28-Sep-20 A	08-Feb-21 A	15-May-25	15-May-25		S2D1120	S2D1140
S2D1140	Revise & Re-submit Civil Requirement Drawings (remaining)	150	12-Jan-21 A	10-Jun-21 A	15-May-25	15-May-25		S2D1130	S2D1150
S2D1150	Review & Accept of Civil Requirement Drawings by PM (remaining)	55	17-Apr-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1140	SC21110
Electrical Schematic Drawings		754	05-Mar-20 A	11-Jun-21 A	16-Mar-22	15-May-25			
S2D1160	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	90	05-Mar-20 A	16-Mar-20 A	16-Mar-22	16-Mar-22		S2D1000	S2D1170, S2D1260, S2D1660, KD1010, S2D1220, S5P1060
S2D1170	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	17-Mar-20 A	24-Mar-20 A	16-Mar-22	16-Mar-22		S2D1160	S2D1180
S2D1180	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	28	25-Mar-20 A	23-Apr-20 A	16-Mar-22	16-Mar-22		S2D1170	S2D1190, S2D1220
S2D1190	Review & Comment of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	24-Apr-20 A	08-May-20 A	16-Mar-22	16-Mar-22		S2D1180	S2D1250, S5WS2P1090, S2D1220, S2D1200
S2D1200	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	398	09-May-20 A	10-Jun-21 A	15-May-25	15-May-25		S2D1190	S2D1210
S2D1210	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	21-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1200	SC21110
S2D1220	Prepare & Submit Elec. Schematic Drawings (remaining) -KD2B	120	05-Mar-20 A	16-Mar-20 A	16-Mar-22	16-Mar-22		S2D1160, S2D1180, S2D1190	S2D1230, KD1020, S2P1130, S5P1060
S2D1230	Review & Comment on Elec. Schematic Drawings by PM (remaining)	21	17-Mar-20 A	24-Mar-20 A	02-Sep-22	02-Sep-22		S2D1220	S2D1240
S2D1240	Revise & Re-submit Elec. Schematic Drawings (remaining)	443	25-Mar-20 A	10-Jun-21 A	02-Sep-22	02-Sep-22		S2D1230	S2D1250
S2D1250	Review & Accept of Elec. Schematic Drawings by PM (remaining)	21	24-May-21 A	11-Jun-21 A	02-Sep-22	02-Sep-22		S2D1240, S2D1190	SC21110, S5WS2P1090
Sludge Screening (SSc)		357	02-Jul-20 A	11-Jun-21 A	16-Mar-22	03-Nov-22			
S2D1260	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22		S2D1160, S2P1000	S2D1270
S2D1270	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1260	S5WS2P1030, S5WS2P1090, S5P1050, SC21110
S2D1280	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274	10-Sep-20 A	10-Jun-21 A	03-Nov-22	03-Nov-22			S2D1290
S2D1290	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	03-Nov-22	03-Nov-22		S2D1280	SC21110, S5SDBP1000, PL1490
Sludge Thickening (STh)		357	02-Jul-20 A	11-Jun-21 A	16-Mar-22	26-Aug-22			



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 16 of 46

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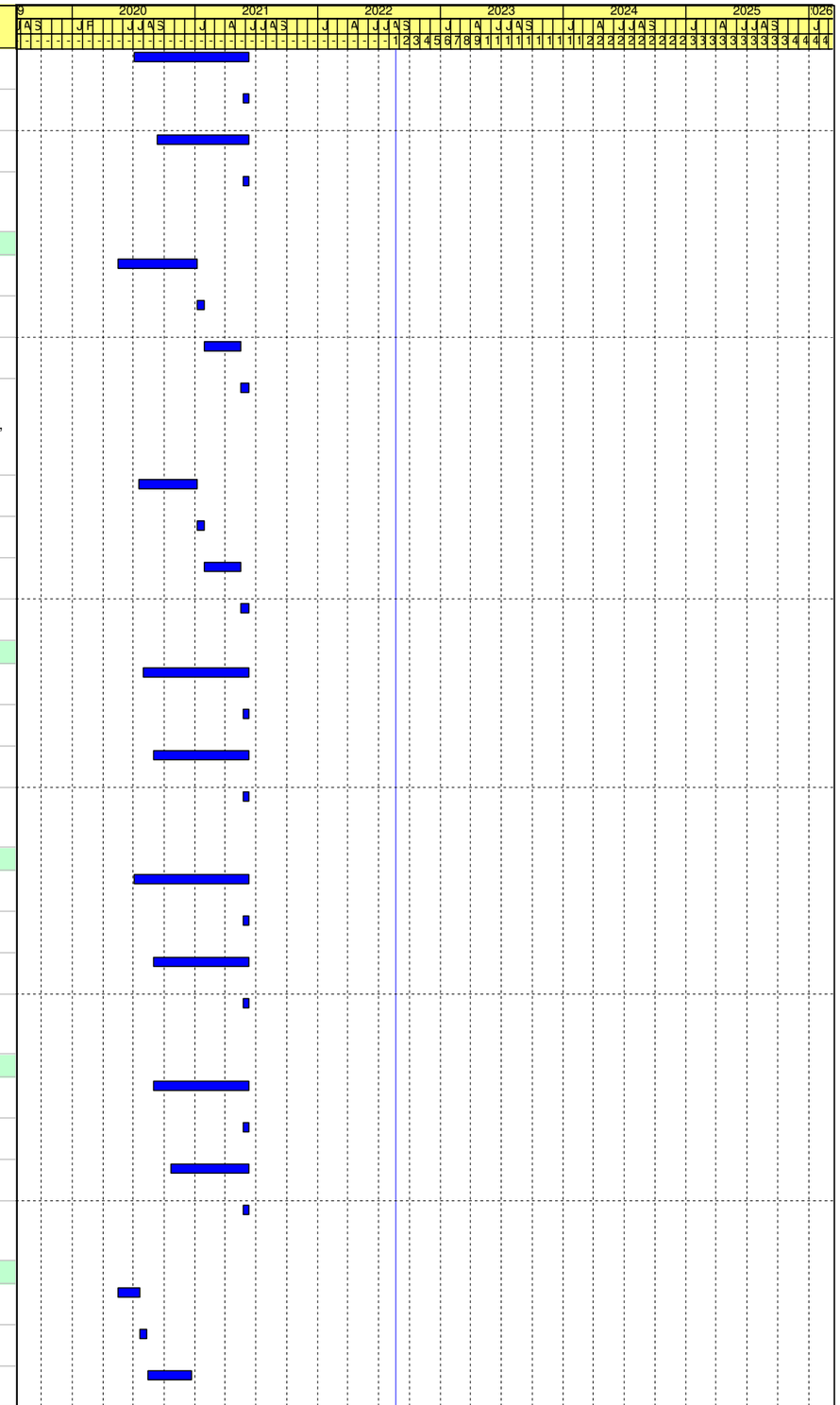
S2D1300	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22		S2P1010	S2D1310
S2D1310	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1300	SC21110, S5P1050
S2D1320	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274	10-Sep-20 A	10-Jun-21 A	26-Aug-22	26-Aug-22			S2D1330
S2D1330	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	26-Aug-22	26-Aug-22		S2D1320	S5SDBP1010, SC21110, PL1490
Thermal Hydrolysis Process (THP)		416	18-May-20 A	11-Jun-21 A	16-Mar-22	02-Nov-22			
S2D1340	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	241	18-May-20 A	07-Jan-21 A	16-Mar-22	16-Mar-22		S2P1040, S2D1000	S2D1350, S2D1970
S2D1350	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	08-Jan-21 A	27-Jan-21 A	16-Mar-22	16-Mar-22		S2D1340	S2D1360
S2D1360	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	117	28-Jan-21 A	17-May-21 A	16-Mar-22	16-Mar-22		S2D1350	S2D1370
S2D1370	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	24	18-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1360	SC21110, S5THPP1000, S5TCWP1000, S5P1130, S5P1050
S2D1380	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	17-Jul-20 A	07-Jan-21 A	02-Nov-22	02-Nov-22			S2D1390
S2D1390	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	08-Jan-21 A	27-Jan-21 A	02-Nov-22	02-Nov-22		S2D1380	S2D1400
S2D1400	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	117	28-Jan-21 A	17-May-21 A	02-Nov-22	02-Nov-22		S2D1390	S2D1410
S2D1410	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	24	18-May-21 A	11-Jun-21 A	02-Nov-22	02-Nov-22		S2D1400	S5THPP1000, SC21110
Sludge Digestion (SDi)		325	01-Aug-20 A	11-Jun-21 A	16-Mar-22	22-Jul-22			
S2D1420	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	314	01-Aug-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22		S2P1020	S2D1430
S2D1430	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1420	SC21110, S5P1050
S2D1440	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284	31-Aug-20 A	10-Jun-21 A	22-Jul-22	22-Jul-22			S2D1450
S2D1450	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	22-Jul-22	22-Jul-22		S2D1440	S5DIGP1000, SC21110, PL1490
Sludge Dewatering (SDe)		357	02-Jul-20 A	11-Jun-21 A	16-Mar-22	02-Nov-22			
S2D1460	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22		S2P1030	S2D1470
S2D1470	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1460	SC21110, S5P1050
S2D1480	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284	31-Aug-20 A	10-Jun-21 A	02-Nov-22	02-Nov-22			S2D1490
S2D1490	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	02-Nov-22	02-Nov-22		S2D1480	S5SDBP1040, SC21110, PL1490
Biogas Storage & Pre-Treatment (BSPT)		295	31-Aug-20 A	11-Jun-21 A	16-Mar-22	01-Jun-22			
S2D1500	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	284	31-Aug-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22		S2P1060, S2P1050	S2D1510
S2D1510	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1500	SC21110, S5P1050
S2D1520	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	232	22-Oct-20 A	10-Jun-21 A	01-Jun-22	01-Jun-22			S2D1530
S2D1530	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	01-Jun-22	01-Jun-22		S2D1520	S5BIOP1010, S5H2SP1000, SC21110
Combined Heat & Power Generation (CHP)		512	18-May-20 A	11-Jun-21 A	16-Mar-22	04-Jun-22			
S2D1540	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	233	18-May-20 A	21-Jul-20 A	16-Mar-22	16-Mar-22		S2P1070	S2D1550
S2D1550	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	22-Jul-20 A	11-Aug-20 A	16-Mar-22	16-Mar-22		S2D1540	S2D1560, S2D1870
S2D1560	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	12-Aug-20 A	21-Dec-20 A	16-Mar-22	16-Mar-22		S2D1550	S2D1570



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 17 of 46

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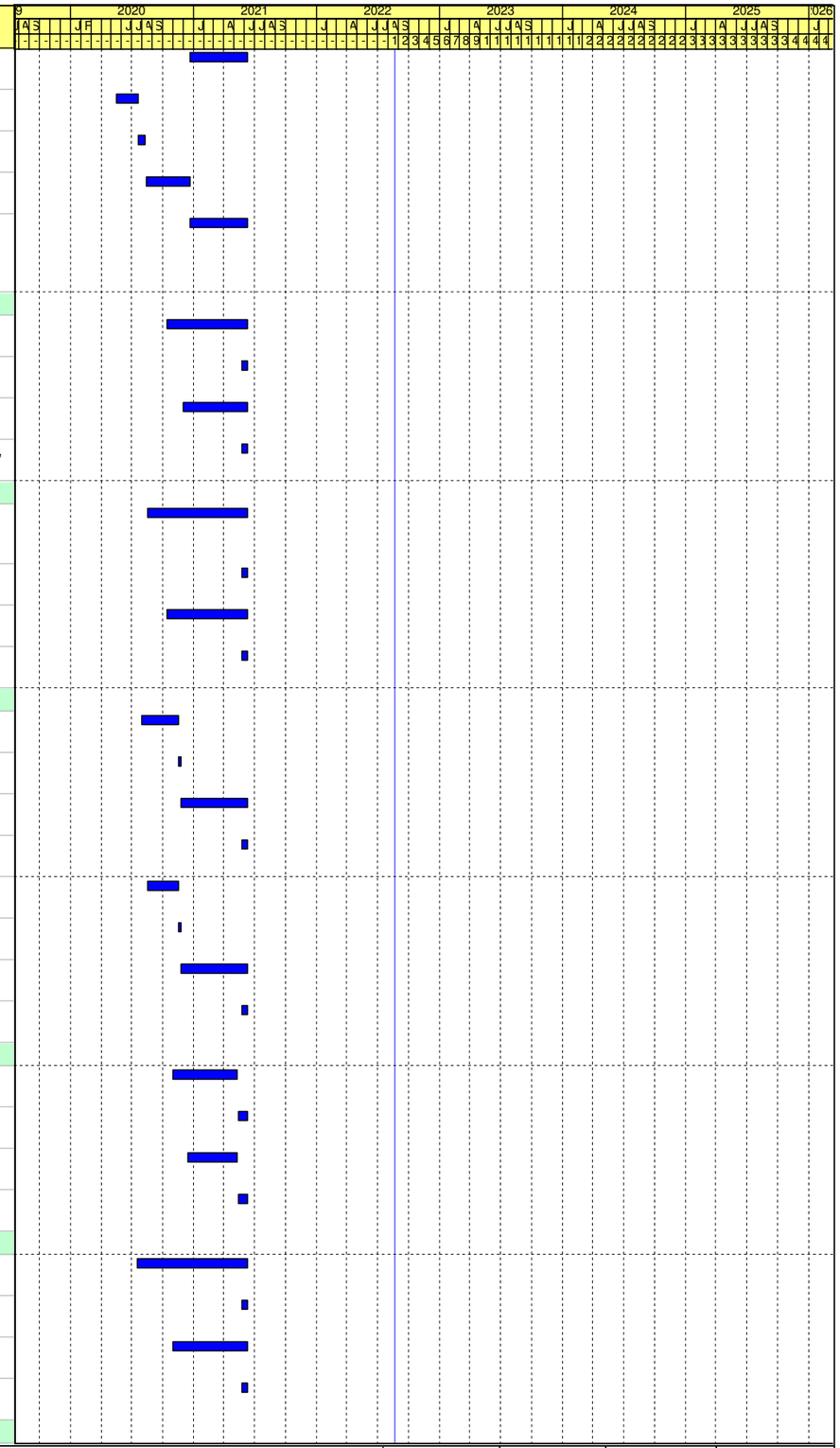
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S2D1570	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	171	22-Dec-20 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1560	SC21110, S5P1050
S2D1580	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	18-May-20 A	21-Jul-20 A	04-Jun-22	04-Jun-22			S2D1590
S2D1590	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	22-Jul-20 A	11-Aug-20 A	04-Jun-22	04-Jun-22		S2D1580	S2D1600
S2D1600	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	12-Aug-20 A	21-Dec-20 A	04-Jun-22	04-Jun-22		S2D1590	S2D1610
S2D1610	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	171	22-Dec-20 A	11-Jun-21 A	04-Jun-22	04-Jun-22		S2D1600	S5CHPP1010, SC21110, S5S1020, PL1530
Waste Gas Burning System (WGB)		264	15-Oct-20 A	11-Jun-21 A	16-Mar-22	09-Sep-22			
S2D1620	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	239	15-Oct-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22			S2D1630
S2D1630	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1620	SC21110, S5P1050
S2D1640	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	194	29-Nov-20 A	10-Jun-21 A	09-Sep-22	09-Sep-22			S2D1650
S2D1650	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	09-Sep-22	09-Sep-22		S2D1640	S5WGBP1000, SC21110
Plant Service Water System (PSW)		325	16-Aug-20 A	11-Jun-21 A	16-Mar-22	15-Sep-22			
S2D1660	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	299	16-Aug-20 A	10-Jun-21 A	16-Mar-22	16-Mar-22		S2D1080, S2D1160, S2P1090	S2D1670
S2D1670	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	16-Mar-22	16-Mar-22		S2D1660	SC21110, S5P1050
S2D1680	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	239	15-Oct-20 A	10-Jun-21 A	15-Sep-22	15-Sep-22			S2D1690
S2D1690	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	15-Sep-22	15-Sep-22		S2D1680	S5PSWP1000, SC21110
Surplus Activated Sludge Pumping Station (SAS)		440	01-Aug-20 A	11-Jun-21 A	18-Feb-23	15-May-25			
S2D1700	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	202	01-Aug-20 A	17-Nov-20 A	15-May-25	15-May-25		S2P1100	S2D1710
S2D1710	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Nov-20 A	24-Nov-20 A	15-May-25	15-May-25		S2D1700	S2D1720
S2D1720	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	198	25-Nov-20 A	10-Jun-21 A	15-May-25	15-May-25		S2D1710	S2D1730
S2D1730	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1720	SC21110
S2D1740	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	183	16-Aug-20 A	17-Nov-20 A	18-Feb-23	18-Feb-23			S2D1750
S2D1750	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	18-Nov-20 A	24-Nov-20 A	18-Feb-23	18-Feb-23		S2D1740	S2D1760
S2D1760	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	198	25-Nov-20 A	10-Jun-21 A	18-Feb-23	18-Feb-23		S2D1750	S2D1770
S2D1770	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	18-Feb-23	18-Feb-23		S2D1760	S5SASP1000, SC21110
Control and Monitoring System		211	30-Oct-20 A	11-Jun-21 A	17-May-22	15-May-25			
S2D1780	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	193	30-Oct-20 A	11-May-21 A	15-May-25	15-May-25			S2D1790
S2D1790	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	30	12-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1780	SC21110
S2D1800	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	148	14-Dec-20 A	11-May-21 A	17-May-22	17-May-22			S2D1810
S2D1810	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	30	12-May-21 A	11-Jun-21 A	17-May-22	17-May-22		S2D1800	S5P1080, SC21110
Lifting Appliances		358	17-Jul-20 A	11-Jun-21 A	07-Sep-22	07-Sep-22			
S2D1820	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	329	17-Jul-20 A	10-Jun-21 A	07-Sep-22	07-Sep-22			S2D1830
S2D1830	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	07-Sep-22	07-Sep-22		S2D1820	SC21110, S5SDBP1120
S2D1840	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	224	30-Oct-20 A	10-Jun-21 A	07-Sep-22	07-Sep-22			S2D1850
S2D1850	Review & Acceptt on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	07-Sep-22	07-Sep-22		S2D1840	S5SDBP1120, SC21110
Building Services		357	02-Jul-20 A	11-Jun-21 A	07-May-22	15-May-25			



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 18 of 46

Remaining Work
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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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30-Apr-22	Rev.21	LT	KM
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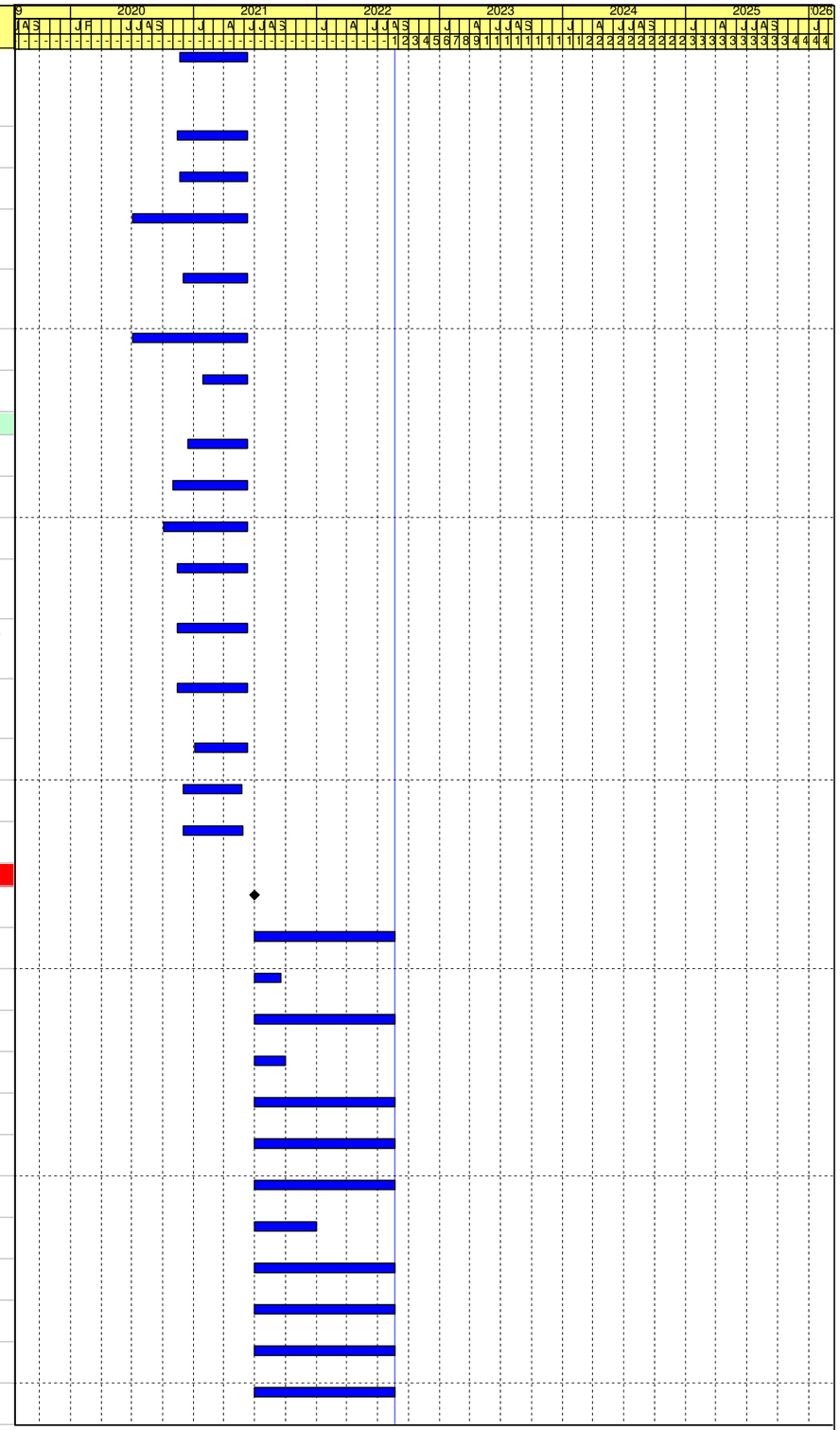
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S2D1860	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	202	21-Nov-20 A	11-Jun-21 A	07-May-22	07-May-22			SC21110, S5S1260, S5S1010, S5S1120
S2D1870	Submit & Accept BS Works Design & Dwgs for CHP Building	209	14-Nov-20 A	11-Jun-21 A	14-Sep-22	14-Sep-22		S2D1550	SC21110, S5S1120
S2D1880	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	202	21-Nov-20 A	11-Jun-21 A	14-Sep-22	14-Sep-22			SC21110, S5S1120
S2D1890	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	344	02-Jul-20 A	11-Jun-21 A	02-Aug-22	02-Aug-22			SC21110, S5S1030, S5S1120
S2D1900	Submit & Accept BS Works Design & Dwgs for Other Facilities	194	29-Nov-20 A	11-Jun-21 A	14-Sep-22	14-Sep-22			S2D1920, SC21110, S5S1120
S2D1910	Submit & Accept BS Works Design & Dwgs for FS Installation	344	02-Jul-20 A	11-Jun-21 A	14-Sep-22	14-Sep-22			SC21110, S5S1120
S2D1920	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	134	28-Jan-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1900	SC21110
Miscellaneous		264	05-Oct-20 A	11-Jun-21 A	25-May-22	15-May-25			
S2D1930	Submit & Accept Design & Dwgs for DO System	179	14-Dec-20 A	11-Jun-21 A	07-Jan-23	07-Jan-23		S2P1150, PL1020	S5DOUP1000, SC21110
S2D1940	Submit & Accept Design & Dwgs for Sewage Pumping Station	224	30-Oct-20 A	11-Jun-21 A	13-Nov-22	13-Nov-22		S2P1180	S5SPSP1000, SC21110
S2D1950	Submit & Accept Design & Dwgs for Process Water Pumping System	249	05-Oct-20 A	11-Jun-21 A	25-May-22	25-May-22		S2P1190	S5SDBP1070, SC21110
S2D1960	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	209	14-Nov-20 A	11-Jun-21 A	15-Oct-22	15-Oct-22		S2P1200	S2D1970, S5SDBP1080, SC21110
S2D1970	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	209	14-Nov-20 A	10-Jun-21 A	29-Dec-22	29-Dec-22		S2D1340, S2D1960, S2P1210	S5TCWP1000, SC21110
S2D1980	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	209	14-Nov-20 A	11-Jun-21 A	30-Sep-22	30-Sep-22			S5FCDP1000, S5FCDP1010, SC21110
S2D1990	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	158	04-Jan-21 A	11-Jun-21 A	05-Jul-22	05-Jul-22		PL1020	S5ECHP1000, SC21110
S2D2000	Submit & Accept Design & Dwgs for Gas Detection System	194	29-Nov-20 A	24-May-21 A	14-Sep-22	14-Sep-22			SC21110, S5CHPP1040
S2D2010	Submit & Accept Design & Dwgs for CCTV System	194	29-Nov-20 A	26-May-21 A	15-May-25	15-May-25			SC21110
Outstanding Works		334	02-Jul-21 A	21-Aug-22	31-Oct-21	15-May-25	998		
S2D2020	Certifiate of Completion - Section 2 of the works (Ref: RCYK:ccm:60427128/92-2021004626w)	0	02-Jul-21 A		15-May-25				
S2D2030	Provide ICE Certificate for all design, calculations, drawings, plans & relevant documents	334	02-Jul-21 A	21-Aug-22*	31-May-22	31-May-22	-82		
S2D2040	Submit finalized design calculations, drawings & material submissions for BS systems (Workshop No.2)	76	02-Jul-21 A	15-Sep-21 A	15-May-25	15-May-25			
S2D2050	Submit finalized design calculations, drawings & material submissions for BS systems (except Workshop No.2)	303	02-Jul-21 A	21-Aug-22*	30-Apr-22	30-Apr-22	-113		
S2D2060	Submit finalized sizing calculations for the actuators and stems for penstocks	91	02-Jul-21 A	30-Sep-21 A	15-May-25	15-May-25			
S2D2070	Submit finalized cable schedules & sizing calculation (LV System)	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2080	Submit finalized pumps and associated motor and VSD calculations	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2090	Submit finalized electrical loads to verify the rating of the switchgears, transformers and protective devices	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2100	Submit finalized material submissions of the cables, cable tray, ladder and accessories	294	02-Jul-21 A	31-Dec-21 A	15-May-25	15-May-25			
S2D2110	Submit finalized cable route drawings	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2120	Submit finalized layout and control wiring diagrams for switchboard, MCC, control panel, etc	294	02-Jul-21 A	21-Aug-22*	31-Jan-22	31-Jan-22	-202		
S2D2130	Submit finalized design submissions of the CHP system	294	02-Jul-21 A	21-Aug-22*	31-Jan-22	31-Jan-22	-202		
S2D2140	Submit finalized interlock devices for electrical equipment and system	303	02-Jul-21 A	21-Aug-22*	30-Apr-22	30-Apr-22	-113		



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 19 of 46

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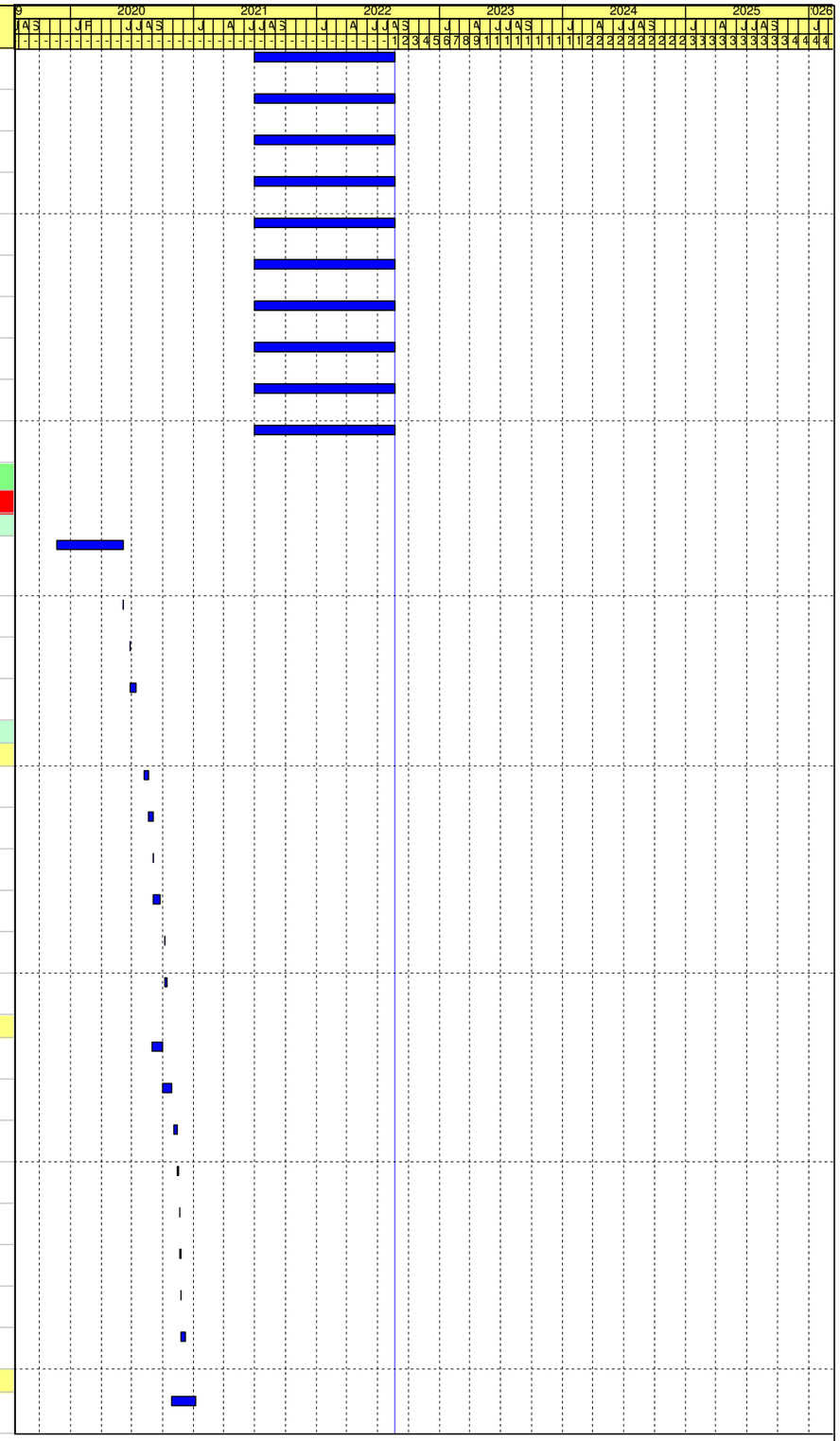
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S2D2150	Submit finalized calculations for total harmonic distortion, electrical faults and touch voltage	303	02-Jul-21 A	21-Aug-22*	30-Apr-22	30-Apr-22	-113		
S2D2160	Submit finalized design calculations, drawings & material submissions for ELV systems	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2170	Submit finalized design submissions of SCADA, PMS, CMMS, IDMS, UPS for FCS	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2180	Submit finalized configuration of SCADA / PLC system, CMMS & PMS	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2190	Submit finalized PLC and MCC panel design	294	02-Jul-21 A	21-Aug-22*	28-Feb-22	28-Feb-22	-174		
S2D2200	Submit finalized design & philosophy of the process instrument	294	02-Jul-21 A	21-Aug-22*	31-Dec-21	31-Dec-21	-233		
S2D2210	Submit finalized Process Design Submission	152	02-Jul-21 A	21-Aug-22*	30-Nov-21	30-Nov-21	-264		
S2D2220	Submit finalized acoustic and noise calculations for all equipment	303	02-Jul-21 A	21-Aug-22*	30-Apr-22	30-Apr-22	-113		
S2D2230	Submit finalized design of THP feeding system	122	02-Jul-21 A	21-Aug-22*	31-Oct-21	31-Oct-21	-294		
S2D2240	Submit finalized design of the centrifuge discharge system	152	02-Jul-21 A	21-Aug-22*	30-Nov-21	30-Nov-21	-264		
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		1978	20-Nov-19 A	19-Apr-25	05-Sep-21	15-May-25	26		
Major Subcontractor / Supplier Procurement		633	20-Nov-19 A	06-Sep-21 A	05-Sep-21	15-May-25			
Design		320	20-Nov-19 A	12-Jul-20 A	05-Sep-21	15-May-25			
S3P1000	Procurement & PO for Deammonification Sidestream Treatment Facilities	200	20-Nov-19 A	05-Jun-20 A	05-Sep-21	05-Sep-21		CD1010, PL1010	S3D1000, S3D1440, S3P1470
S3P1010	E&M (Process) Designer Award	1	05-Jun-20 A	05-Jun-20 A	15-May-25	15-May-25			
S3P1020	Civil & BS Designer Award	1	26-Jun-20 A	26-Jun-20 A	15-May-25	15-May-25			S3P1030
S3P1030	Mobilisation	14	27-Jun-20 A	12-Jul-20 A	15-May-25	15-May-25		S3P1020	
Civil & Building Contractor		327	05-Aug-20 A	06-Sep-21 A	13-Sep-21	13-Sep-21			
For Site Clearance & Survey		36	05-Aug-20 A	12-Oct-20 A	13-Sep-21	13-Sep-21			
S3P1040	Submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	05-Aug-20 A	20-Aug-20 A	13-Sep-21	13-Sep-21			S3P1050
S3P1050	Review & Comment the Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	21-Aug-20 A	01-Sep-20 A	13-Sep-21	13-Sep-21		S3P1040	S3P1060
S3P1060	Re-submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	02-Sep-20 A	02-Sep-20 A	13-Sep-21	13-Sep-21		S3P1050	S3P1070
S3P1070	Review & Accept Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	03-Sep-20 A	23-Sep-20 A	13-Sep-21	13-Sep-21		S3P1060	S3P1080
S3P1080	Civil Contractor (Site Clearance & Survey) Award	1	07-Oct-20 A	07-Oct-20 A	13-Sep-21	13-Sep-21		S3P1070	S3P1090
S3P1090	Mobilisation	5	08-Oct-20 A	12-Oct-20 A	13-Sep-21	13-Sep-21		S3P1080	S3C1010
For Ground Investigation		98	29-Aug-20 A	08-Dec-20 A	13-Sep-21	13-Sep-21			
S3P1100	Submit Tender proprosal of Civil Contractor (Ground Investigation)	14	29-Aug-20 A	29-Sep-20 A	13-Sep-21	13-Sep-21			S3P1110
S3P1110	Review & Accept the Tender proprosal of Civil Contractor (Ground Investigation)	21	30-Sep-20 A	27-Oct-20 A	13-Sep-21	13-Sep-21		S3P1100	S3P1120
S3P1120	Tender Invitation of Civil Contractor (Ground Investigation)	7	02-Nov-20 A	13-Nov-20 A	13-Sep-21	13-Sep-21		S3P1110	S3P1130
S3P1130	Submission of Tender Report	7	14-Nov-20 A	18-Nov-20 A	13-Sep-21	13-Sep-21		S3P1120	S3P1140
S3P1140	Review & Accept the Tender Report by PM	21	19-Nov-20 A	19-Nov-20 A	13-Sep-21	13-Sep-21		S3P1130	S3P1150
S3P1150	Contract Preparation	3	20-Nov-20 A	23-Nov-20 A	13-Sep-21	13-Sep-21		S3P1140	S3P1160
S3P1160	Civil Contractor (Ground Investigation) Award	1	24-Nov-20 A	24-Nov-20 A	13-Sep-21	13-Sep-21		S3P1150	S3P1170
S3P1170	Mobilisation	7	25-Nov-20 A	08-Dec-20 A	13-Sep-21	13-Sep-21		S3P1160	S3C1020
For Pre-drilling & Post-drilling		116	26-Oct-20 A	21-Feb-21 A	13-Sep-21	13-Sep-21			
S3P1180	Submit Tender proprosal of Civil Contractor (Pre-drilling & Post-drilling)	74	26-Oct-20 A	06-Jan-21 A	13-Sep-21	13-Sep-21		S3D1300, S3D1240	S3P1190



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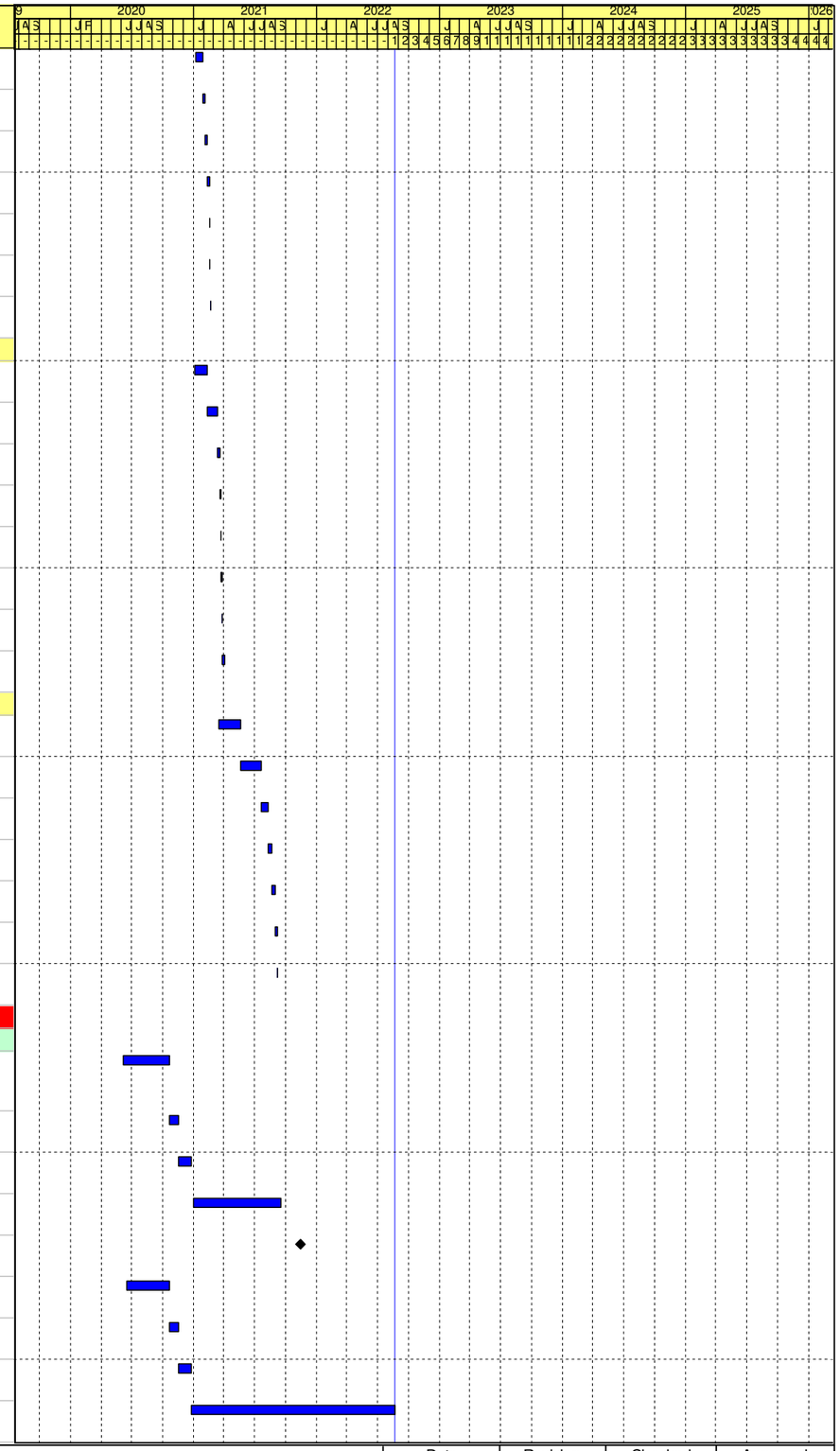
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3P1190	Review & Accept the Tender proprosal of Civil Contractor (Predrill & Proof drill)	21	07-Jan-21 A	27-Jan-21 A	13-Sep-21	13-Sep-21		S3P1180	S3P1200
S3P1200	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	14	28-Jan-21 A	04-Feb-21 A	13-Sep-21	13-Sep-21		S3P1190	S3P1210
S3P1210	Submission of Tender Report	4	05-Feb-21 A	10-Feb-21 A	13-Sep-21	13-Sep-21		S3P1200	S3P1220
S3P1220	Review & Accept the Tender Report by PM	21	11-Feb-21 A	16-Feb-21 A	13-Sep-21	13-Sep-21		S3P1210	S3P1230
S3P1230	Contract Preparation	3	17-Feb-21 A	17-Feb-21 A	13-Sep-21	13-Sep-21		S3P1220	S3P1240
S3P1240	Civil Contractor (Pre-drilling & Post-drilling) Award	1	18-Feb-21 A	18-Feb-21 A	13-Sep-21	13-Sep-21		S3P1230	S3P1250
S3P1250	Mobilisation	3	19-Feb-21 A	21-Feb-21 A	13-Sep-21	13-Sep-21		S3P1240	S3C1030
For Piling		90	04-Jan-21 A	01-Apr-21 A	13-Sep-21	13-Sep-21			
S3P1260	Submit Tender proprosal of Civil Contractor (Piling)	39	04-Jan-21 A	10-Feb-21 A	13-Sep-21	13-Sep-21			S3P1270
S3P1270	Review & Accept the Tender proprosal of Civil Contractor (Piling)	25	11-Feb-21 A	12-Mar-21 A	13-Sep-21	13-Sep-21		S3P1260	S3P1280
S3P1280	Tender Invitation of Civil Contractor (Piling)	14	12-Mar-21 A	19-Mar-21 A	13-Sep-21	13-Sep-21		S3P1270	S3P1290
S3P1290	Submission of Tender Report	7	20-Mar-21 A	22-Mar-21 A	13-Sep-21	13-Sep-21		S3P1280	S3P1300
S3P1300	Review & Accept the Tender Report by PM	21	23-Mar-21 A	23-Mar-21 A	13-Sep-21	13-Sep-21		S3P1290	S3P1310
S3P1310	Contract Preparation	3	24-Mar-21 A	25-Mar-21 A	13-Sep-21	13-Sep-21		S3P1300	S3P1320
S3P1320	Civil Contractor (Piling) Award	1	26-Mar-21 A	26-Mar-21 A	13-Sep-21	13-Sep-21		S3P1310	S3P1330
S3P1330	Mobilisation	3	26-Mar-21 A	01-Apr-21 A	13-Sep-21	13-Sep-21		S3P1320	S3C1030
For Main Civil Works		146	17-Mar-21 A	06-Sep-21 A	13-Sep-21	13-Sep-21			
S3P1340	Submit Tender proprosal of Civil Contractor (Main Civil Works)	30	17-Mar-21 A	21-May-21 A	13-Sep-21	13-Sep-21			S3P1350
S3P1350	Review & Accept the Tender proprosal of Civil Contractor (Main Civil Works)	42	22-May-21 A	19-Jul-21 A	13-Sep-21	13-Sep-21		S3P1340	S3P1360
S3P1360	Tender Invitation of Civil Contractor (Main Civil Works)	14	21-Jul-21 A	11-Aug-21 A	13-Sep-21	13-Sep-21		S3P1350	S3P1370
S3P1370	Submission of Tender Report	1	12-Aug-21 A	19-Aug-21 A	13-Sep-21	13-Sep-21		S3P1360	S3P1380
S3P1380	Review & Accept the Tender Report by PM	6	20-Aug-21 A	31-Aug-21 A	13-Sep-21	13-Sep-21		S3P1370	S3P1390
S3P1390	Contract Preparation	1	01-Sep-21 A	05-Sep-21 A	13-Sep-21	13-Sep-21		S3P1380	S3P1400
S3P1400	Civil Contractor (Main Civil Works) Award	1	06-Sep-21 A	06-Sep-21 A	13-Sep-21	13-Sep-21		S3P1390	S3D1360, S3C1070
Design & Submission		922	07-Jun-20 A	10-Sep-22	05-Sep-21	15-May-25	978		
Architectural		922	07-Jun-20 A	10-Sep-22	24-Feb-23	17-Mar-23	188		
S3D1000	Prepare & Submit Building Layout Plan	60	07-Jun-20 A	21-Oct-20 A	24-Feb-23	24-Feb-23		CD1010, S3P1000	S3D1010, S3D1050, S3D1100
S3D1010	Review & Comment on Buildingl Layout Plan by PM	67	22-Oct-20 A	17-Nov-20 A	24-Feb-23	24-Feb-23		S3D1000	S3D1020
S3D1020	Revise & Re-submit Building Layout Plan	28	18-Nov-20 A	24-Dec-20 A	24-Feb-23	24-Feb-23		S3D1010	S3D1030
S3D1030	Review & Accept of Building Layout Plan by PM	214	01-Jan-21 A	16-Sep-21 A	24-Feb-23	24-Feb-23		S3D1020	S3D1090
S3D1040	Coordination Meeting with DSD (Employer) for the Architectural Drawing	0		15-Nov-21 A		24-Feb-23			S3D1090
S3D1050	Prepare & Submit Architectural Design / Drawings	60	17-Jun-20 A	21-Oct-20 A	16-Mar-23	16-Mar-23		S3D1000	S3D1060
S3D1060	Review & Comment on Architectural Design / Drawings by PM	67	22-Oct-20 A	17-Nov-20 A	16-Mar-23	16-Mar-23		S3D1050	S3D1070
S3D1070	Revise & Re-submit Architectural Design / Drawings	28	18-Nov-20 A	24-Dec-20 A	16-Mar-23	16-Mar-23		S3D1060	S3D1080
S3D1080	Review & Accept of Architectural Design / Drawings by PM	483	25-Dec-20 A	21-Aug-22	16-Mar-23	17-Mar-23	208	S3D1070	S3D1090



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 21 of 46

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Milestone
Actual Progress

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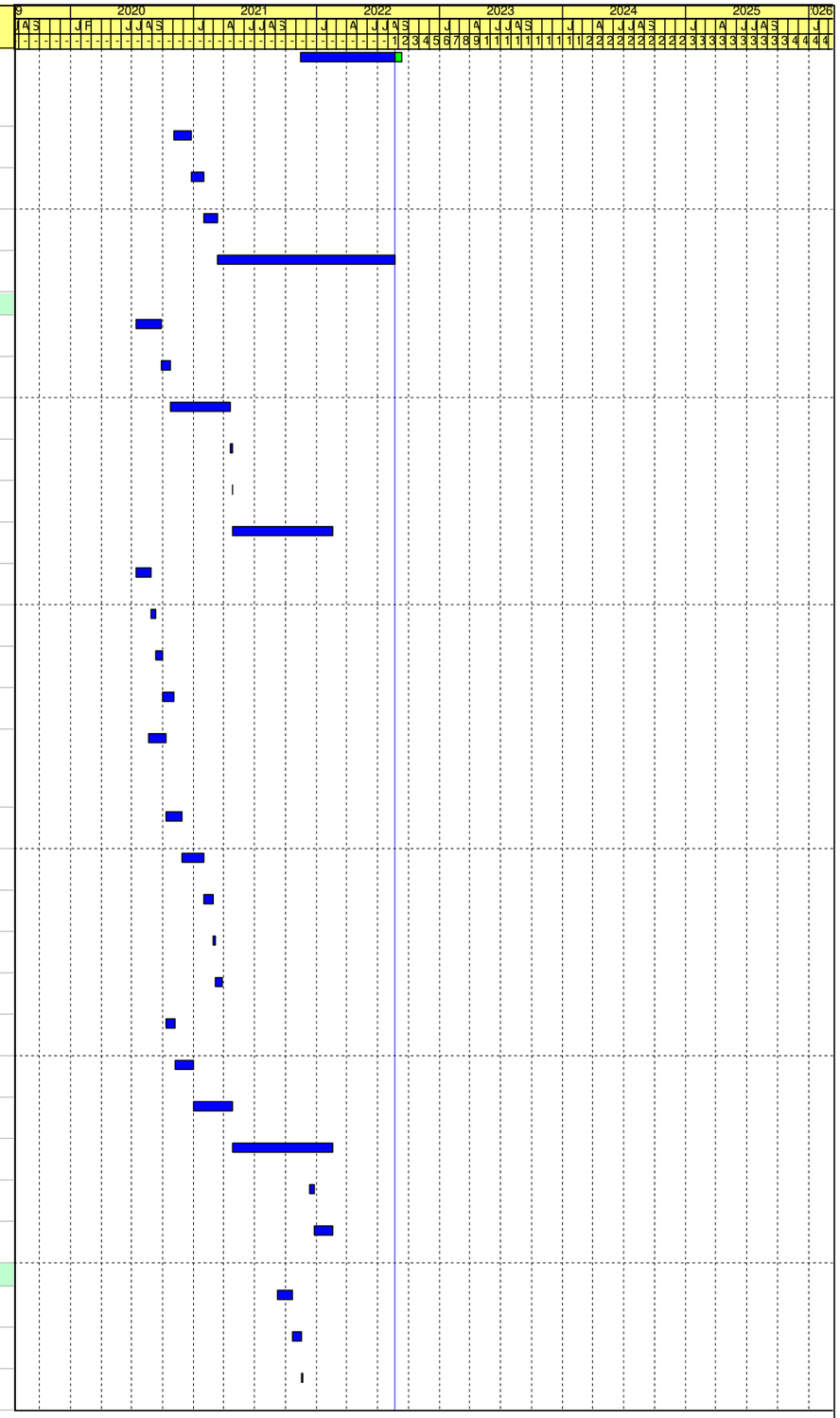
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3D1090	Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD	300	15-Nov-21 A	10-Sep-22	24-Feb-23	17-Mar-23	188	S3D1080, S3D1130, S3D1030, S3D1040	S3C1140, S3P1490
S3D1100	Prepare & Submit ABWF Works Drawings	68	03-Nov-20 A	24-Dec-20 A	16-Mar-23	16-Mar-23		S3D1000	S3D1110
S3D1110	Review & Comment on ABWF Works Drawings by PM	21	25-Dec-20 A	29-Jan-21 A	16-Mar-23	16-Mar-23		S3D1100	S3D1120
S3D1120	Revise & Re-submit ABWF Works Drawings	41	30-Jan-21 A	11-Mar-21 A	16-Mar-23	16-Mar-23		S3D1110	S3D1130
S3D1130	Review & Accept of ABWF Works Drawings by PM	406	12-Mar-21 A	21-Aug-22	16-Mar-23	17-Mar-23	208	S3D1120	S3C1140, S3D1090
Civil / Structural		639	13-Jul-20 A	18-Feb-22 A	05-Sep-21	15-May-25			
S3D1140	Prepare & Submit Loading Plan to ICE	60	13-Jul-20 A	25-Sep-20 A	05-Sep-21	05-Sep-21			S3D1150
S3D1150	Review & Comment on Loading Plan by ICE	14	26-Sep-20 A	23-Oct-20 A	05-Sep-21	05-Sep-21		S3D1140	S3D1160
S3D1160	Revise & Re-submit Loading Plan to ICE	175	24-Oct-20 A	20-Apr-21 A	05-Sep-21	05-Sep-21		S3D1150	S3D1170
S3D1170	Review & Accept of Loading Plan by ICE	7	21-Apr-21 A	26-Apr-21 A	05-Sep-21	05-Sep-21		S3D1160	S3D1180
S3D1180	Prepare & Submit Loading Plan to PM	7	27-Apr-21 A	27-Apr-21 A	05-Sep-21	05-Sep-21		S3D1170	S3D1190
S3D1190	Review & Accept of Loading Plan by PM & DSD (incl. BCM)	359	28-Apr-21 A	18-Feb-22 A	05-Sep-21	05-Sep-21		S3D1180	S3C1090
S3D1200	Prepare & Submit GI Plan	60	13-Jul-20 A	26-Aug-20 A	13-Sep-21	13-Sep-21			S3D1210
S3D1210	Review & Comment on GI Plan by PM	14	27-Aug-20 A	10-Sep-20 A	13-Sep-21	13-Sep-21		S3D1200	S3D1220
S3D1220	Revise & Re-submit GI Plan	7	11-Sep-20 A	28-Sep-20 A	13-Sep-21	13-Sep-21		S3D1210	S3D1230
S3D1230	Review & Accept of GI Plan by PM	21	29-Sep-20 A	02-Nov-20 A	13-Sep-21	13-Sep-21		S3D1220	S3C1020
S3D1240	Prepare & Submit Foundation Design / Drawings to ICE & PM	60	20-Aug-20 A	09-Oct-20 A	13-Sep-21	13-Sep-21			S3D1250, S3C1010, S3D1300, S3P1180
S3D1250	Review & Comment on Foundation Design / Drawings by ICE & PM	79	10-Oct-20 A	27-Nov-20 A	15-May-25	15-May-25		S3D1240	S3D1260
S3D1260	Revise & Re-submit Foundation Design / Drawings to ICE & PM	14	28-Nov-20 A	29-Jan-21 A	15-May-25	15-May-25		S3D1250	S3D1270
S3D1270	Review & Accept of Foundation Design / Drawings by ICE & PM	10	30-Jan-21 A	26-Feb-21 A	15-May-25	15-May-25		S3D1260	S3D1280
S3D1280	Prepare & Submit Foundation Design / Drawings to DSD (incl. BCM)	7	27-Feb-21 A	05-Mar-21 A	15-May-25	15-May-25		S3D1270	S3D1290
S3D1290	Review & Accept of Foundation Design / Drawings by DSD (incl. BCM)	45	06-Mar-21 A	26-Mar-21 A	15-May-25	15-May-25		S3D1280	
S3D1300	Prepare & Submit Substructure / Superstructure Design / Drawings to ICE & PM	25	10-Oct-20 A	05-Nov-20 A	13-Sep-21	13-Sep-21		S3D1240	S3D1310, S3P1180
S3D1310	Review & Comment on Substructure / Superstructure Design / Drawings by ICE & PM	55	06-Nov-20 A	30-Dec-20 A	19-Sep-21	19-Sep-21		S3D1300	S3D1320
S3D1320	Revise & Re-submit Substructure / Superstructure Design / Drawings to ICE & PM	72	31-Dec-20 A	26-Apr-21 A	19-Sep-21	19-Sep-21		S3D1310	S3D1330
S3D1330	Review & Accept of Substructure / Superstructure Design / Drawings by ICE & PM	271	27-Apr-21 A	18-Feb-22 A	19-Sep-21	19-Sep-21		S3D1320	S3D1340
S3D1340	Prepare & Submit Substructure / Superstructure Design / Drawings to DSD (incl. BCM)	2	13-Dec-21 A	23-Dec-21 A	19-Sep-21	19-Sep-21		S3D1330	S3D1350
S3D1350	Review & Accept of Substructure / Superstructure Design / Drawings by DSD (incl. BCM)	119	24-Dec-21 A	18-Feb-22 A	19-Sep-21	19-Sep-21		S3D1340	S3C1100
ELS		214	07-Sep-21 A	26-Apr-22 A	23-Sep-21	23-Sep-21			
S3D1360	Prepare & Submit ELS Plan to ICE	45	07-Sep-21 A	20-Oct-21 A	23-Sep-21	23-Sep-21		S3P1400	S3D1370
S3D1370	Review & Accept of ELS Plan by ICE	5	21-Oct-21 A	18-Nov-21 A	23-Sep-21	23-Sep-21		S3D1360	S3D1380
S3D1380	Prepare & Submit ELS Plan to PM	3	19-Nov-21 A	19-Nov-21 A	23-Sep-21	23-Sep-21		S3D1370	S3D1390



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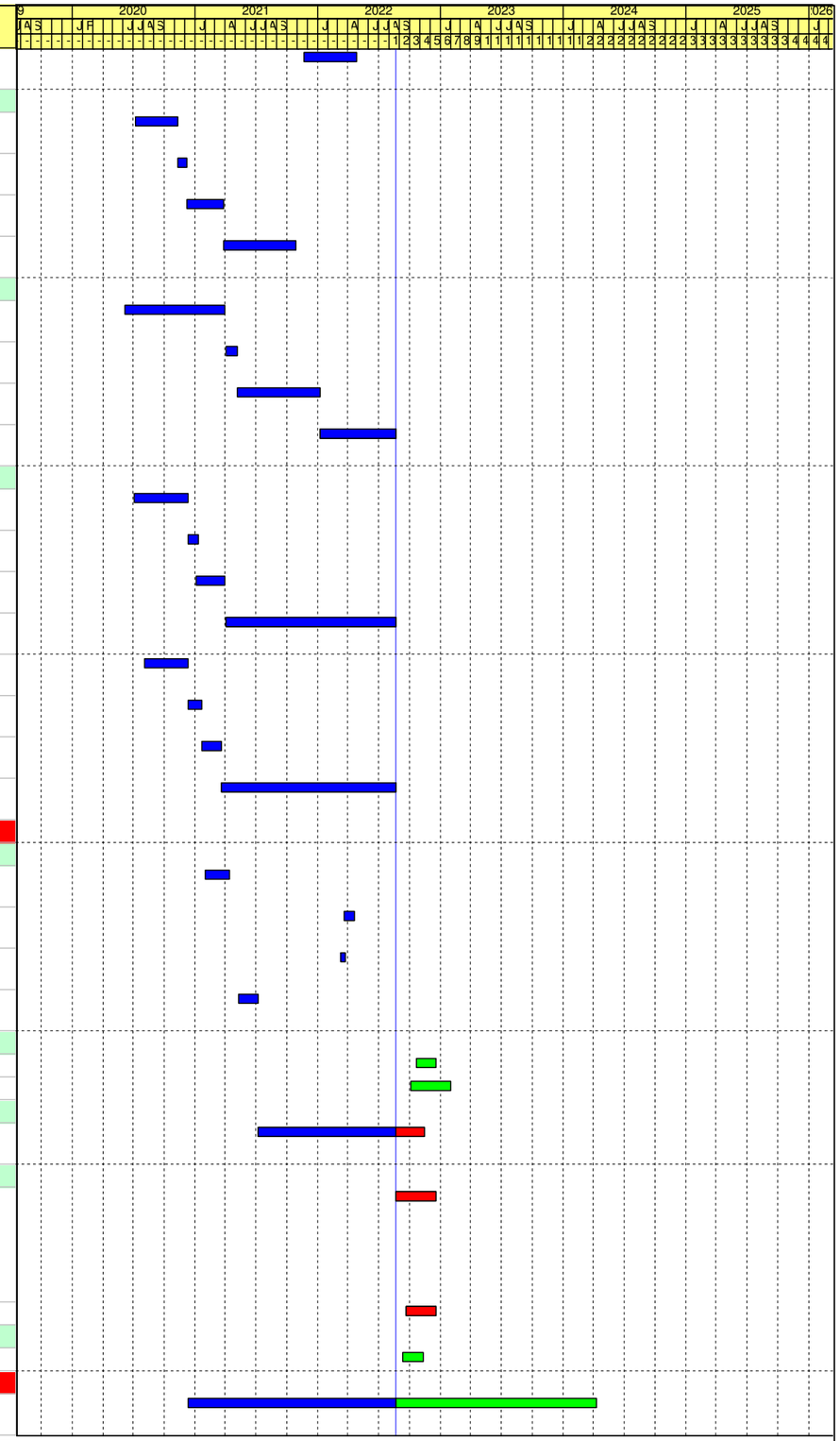
S3D1390	Review & Accept of ELS Plan by PM	153	20-Nov-21 A	26-Apr-22 A	23-Sep-21	23-Sep-21		S3D1380	S3C1080
Process Design		454	06-Jul-20 A	29-Oct-21 A	01-Dec-21	01-Dec-21			
S3D1400	Prepare & Submit E&M Works (Process) Design Drawings	198	06-Jul-20 A	10-Nov-20 A	01-Dec-21	01-Dec-21			S3D1410
S3D1410	Review & Comment on E&M Works (Process) Design Drawings by PM	21	11-Nov-20 A	08-Dec-20 A	01-Dec-21	01-Dec-21		S3D1400	S3D1420
S3D1420	Revise & Re-submit E&M Works (Process) Design Drawings	87	09-Dec-20 A	26-Mar-21 A	01-Dec-21	01-Dec-21		S3D1410	S3D1430
S3D1430	Review & Accept of E&M Works (Process) Design Drawings by PM	278	27-Mar-21 A	29-Oct-21 A	01-Dec-21	01-Dec-21		S3D1420	S3C1170
E&M Design		715	07-Jun-20 A	21-Aug-22	13-Sep-21	30-Nov-21	-264		
S3D1440	Prepare & Submit General Arrangement Drawings	298	07-Jun-20 A	31-Mar-21 A	13-Sep-21	13-Sep-21		S3P1000	S3D1450, S3C1080
S3D1450	Review & Comment on General Arrangement Drawings by PM	37	01-Apr-21 A	07-May-21 A	30-Nov-21	30-Nov-21		S3D1440	S3D1460
S3D1460	Revise & Re-submit General Arrangement Drawings	247	08-May-21 A	06-Jan-22 A	30-Nov-21	30-Nov-21		S3D1450	S3D1470
S3D1470	Review & Accept of General Arrangement Drawings by PM	105	07-Jan-22 A	21-Aug-22	30-Nov-21	30-Nov-21	-264	S3D1460	S3C1170
BS		598	03-Jul-20 A	21-Aug-22	07-Nov-21	07-Nov-21	-287		
S3D1480	Prepare & Submit BS Works Design & Dwgs for Sidestream Treatment Facilities	264	03-Jul-20 A	10-Dec-20 A	07-Nov-21	07-Nov-21			S3D1490
S3D1490	Review & Comment on BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	11-Jan-21 A	07-Nov-21	07-Nov-21		S3D1480	S3D1500
S3D1500	Revise & Re-submit BS Works Design & Dwgs for Sidestream Treatment Facilities	102	05-Jan-21 A	31-Mar-21 A	07-Nov-21	07-Nov-21		S3D1490	S3D1510
S3D1510	Review & Accept of BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	386	01-Apr-21 A	21-Aug-22	07-Nov-21	07-Nov-21	-287	S3D1500	S3C1220, S3S1020
S3D1520	Submission & Submit FS Works Design & Dwgs for Sidestream Treatment Facilities	182	03-Aug-20 A	10-Dec-20 A	07-Nov-21	07-Nov-21			S3D1530
S3D1530	Review & Comment on FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	19-Jan-21 A	07-Nov-21	07-Nov-21		S3D1520	S3D1540
S3D1540	Revise & Re-submit FS Works Design & Dwgs for Sidestream Treatment Facilities	66	20-Jan-21 A	19-Mar-21 A	07-Nov-21	07-Nov-21		S3D1530	S3D1550
S3D1550	Review & Accept of FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	398	20-Mar-21 A	21-Aug-22	07-Nov-21	07-Nov-21	-287	S3D1540	S3C1200, S3S1020
Major Plant & Materials Procurement		682	01-Feb-21 A	02-Feb-23	05-Sep-21	16-May-23	103		
Civil & Structure		378	01-Feb-21 A	19-Apr-22 A	05-Sep-21	13-Sep-21			
S3P1410	Procurement, Manufacture & Delivery of Piling	60	01-Feb-21 A	14-Apr-21 A	13-Sep-21	13-Sep-21			S3C1040
S3P1420	Procurement, Manufacture & Delivery of Concrete Mix	15	21-Mar-22 A	19-Apr-22 A	05-Sep-21	05-Sep-21			S3C1090
S3P1430	Procurement, Manufacture & Delivery of Steel Reinforcement	15	11-Mar-22 A	25-Mar-22 A	05-Sep-21	05-Sep-21			S3C1090
S3P1440	Procurement, Manufacture & Delivery of Metal Works Material	80	09-May-21 A	07-Jul-21 A	13-Sep-21	13-Sep-21			S3C1080
ABWF		120	06-Oct-22	02-Feb-23	16-Jan-23	16-May-23	103		
S3P1450	Procurement, Manufacture & Delivery of Water Proofing Material	60	21-Oct-22	19-Dec-22	31-Jan-23	01-Apr-23	103		S3C1130
S3P1460	Procurement, Manufacture & Delivery of ABWF Works Material	120	06-Oct-22	02-Feb-23	16-Jan-23	16-May-23	103		S3C1140
E&M Process		360	07-Jul-21 A	15-Nov-22	05-Sep-21	30-Nov-21	-350		
S3P1470	Procurement, Manufacture & Delivery of Deammonification Sidestream Treatment Facilities	360	07-Jul-21 A	15-Nov-22	05-Sep-21	30-Nov-21	-350	S3P1000	S3C1170
BS		120	21-Aug-22	18-Dec-22	09-Oct-21	16-Mar-22	-277		
S3P1480	Procurement, Manufacture & Delivery of BS Works Material	120	21-Aug-22	18-Dec-22	09-Oct-21	05-Feb-22	-316		S3C1190, S3C1200, S3C1220, S3C1240, S3T1060, S3C1250
S3P1485	Procurement, Manufacture & Delivery of LV Switchboard	90	20-Sep-22	18-Dec-22	17-Dec-21	16-Mar-22	-277		S3C1190
Fitting-out		60	11-Sep-22	09-Nov-22	17-Mar-23	16-May-23	188		
S3P1490	Procurement, Manufacture & Delivery of Fit-out Works Material	60	11-Sep-22	09-Nov-22	17-Mar-23	16-May-23	188	S3D1090	S3C1140
Ground Settlement, Tilting & Utility Monitoring		1184	12-Dec-20 A	08-Apr-24	21-Sep-22	10-May-24	32		
S3C1000	Ground Settlement, Tilting & Utility Monitoring	1184	12-Dec-20 A	08-Apr-24	21-Sep-22	10-May-24	32	S3C1010	S3T1200



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 23 of 46

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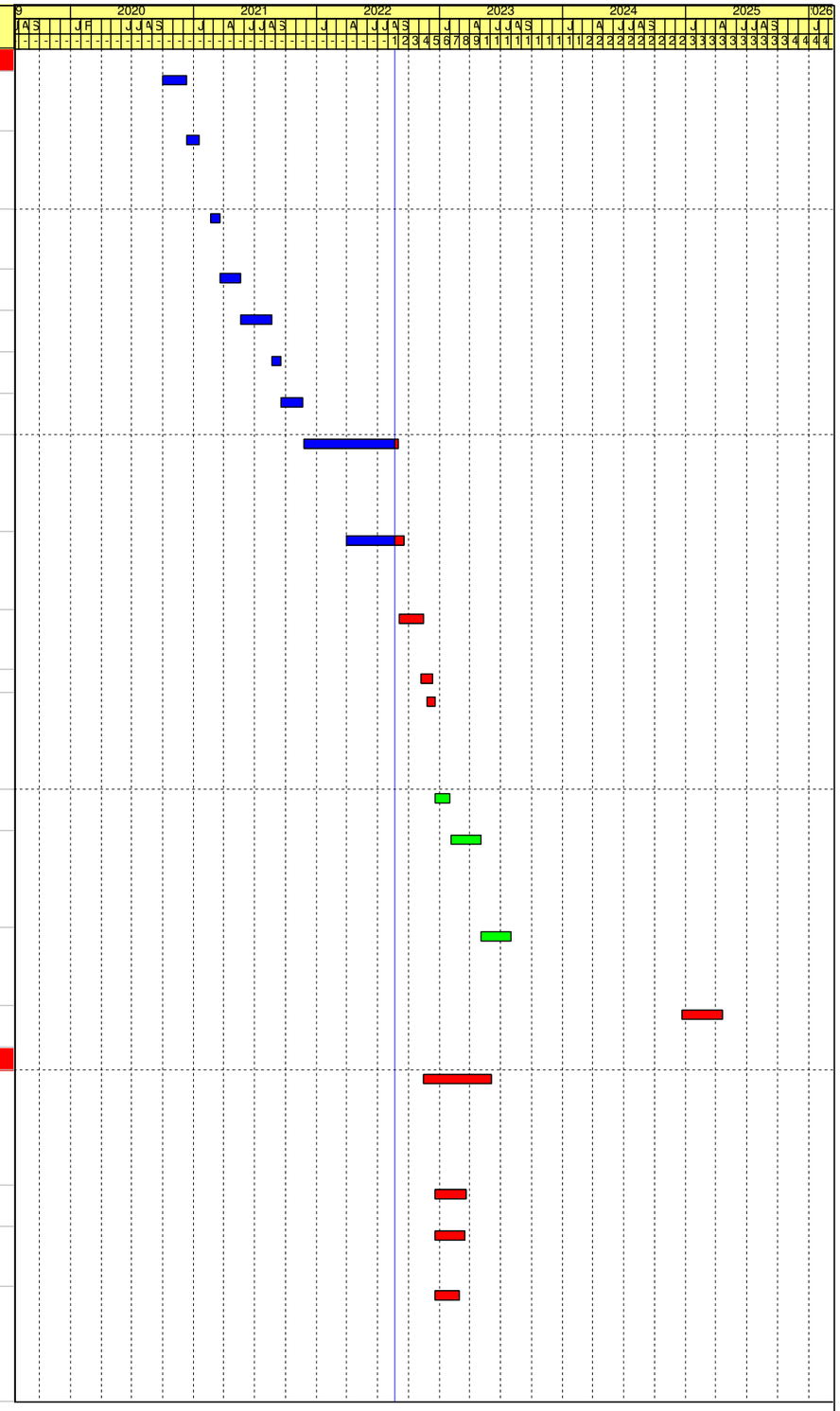
Civil Works Construction		1642	30-Sep-20 A	19-Apr-25	05-Sep-21	10-May-24	-345		
S3C1010	Site Clearance & Survey	50	30-Sep-20 A	11-Dec-20 A	13-Sep-21	13-Sep-21		S3D1240, AD1140, S3P1090	S3C1020, S3C1000
S3C1020	Ground Investigation	65	12-Dec-20 A	18-Jan-21 A	13-Sep-21	13-Sep-21		AD1140, S3C1010, S3P1170, S3D1230	S3C1030
S3C1030	Pre-drilling Works	180	22-Feb-21 A	19-Mar-21 A	13-Sep-21	13-Sep-21		S3C1020, S3P1250, S3P1330	S3C1040
S3C1040	Minor Civil Works & Preperation Works for Piling	31	20-Mar-21 A	20-May-21 A	13-Sep-21	13-Sep-21		S3C1030, S3P1410	S3C1050
S3C1050	Piling Works (Impacted by Inclement Weather)	69	21-May-21 A	21-Aug-21 A	13-Sep-21	13-Sep-21		S3C1040	S3C1060
S3C1060	Post-drilling, Proof test & remaining works (Impacted by Inclement Weather)	23	22-Aug-21 A	17-Sep-21 A	13-Sep-21	13-Sep-21		S3C1050	S3C1080, S3C1070
S3C1070	Site Set-up / Mobilisation (Impacted by Inclement Weather)	51	18-Sep-21 A	20-Nov-21 A	13-Sep-21	13-Sep-21		S3C1060, S3P1400	S3C1080
S3C1080	Excavation / ELS (Impacted by Inclement Weather)	157	24-Nov-21 A	31-Aug-22	13-Sep-21	23-Sep-21	-342	S3D1440, S3P1440, S3D1390, S3C1060, S3C1070	S3C1090
S3C1090	Pile Caps installation	89	01-Apr-22 A	17-Sep-22	05-Sep-21	02-Oct-21	-350	S3C1080, S3P1420, S3P1430, S3D1190	S3C1100
S3C1100	Construction of Basement up to G/F Slab	73	04-Sep-22	15-Nov-22	19-Sep-21	30-Nov-21	-350	S3C1090, S3D1350, S3S1010	S3C1110
S3C1110	Construction of G/F up to 1/F Slab	33	09-Nov-22	11-Dec-22	24-Nov-21	26-Dec-21	-350	S3C1100	S3C1120
S3C1120	Construction of 1/F up to Roof	25	25-Nov-22	19-Dec-22	10-Dec-21	03-Jan-22	-350	S3C1110	S3C1170, S3C1130, S3C1180, S3C1200, S3C1220
S3C1130	Waterproofing	45	20-Dec-22	02-Feb-23	01-Apr-23	16-May-23	103	S3P1450, S3C1120	S3C1140
S3C1140	External & Internal Finishes - 1st Fix (Blockwork, Plastering, Wet Trade)	90	03-Feb-23	03-May-23	16-May-23	14-Aug-23	103	S3C1130, S3P1460, S3D1090, S3D1130, S3P1490	S3C1150, S3C1160
S3C1150	External & Internal Finishes - 2nd Fix (Ceiling / Wall / Floor Finishing, Door)	90	04-May-23	01-Aug-23	14-Aug-23	12-Nov-23	103	S3C1140	SC31110, S3S1170, S3C1160, PL1190
S3C1160	Landscaping Works	120	21-Dec-24	19-Apr-25	11-Jan-24	10-May-24	-345	S3C1140, S3C1150	SC31110
E&M Installation		217	16-Nov-22	20-Jun-23	01-Dec-21	05-Jul-22	-350		
S3C1170	E&M Installation of Deammonification Sidestream Treatment Facilities	200	16-Nov-22	03-Jun-23	01-Dec-21	18-Jun-22	-350	S3P1470, S3D1430, S3C1120, S1D1030, S3D1470	S3C1190, S3T1030, S3C1240, S3T1060, S3C1250, PL1190
S3C1180	E&M installation of DG Plant Room	90	20-Dec-22	19-Mar-23	26-Jan-22	25-Apr-22	-328	S3S1100, S3C1120	S3S1110, PL1190
S3C1190	Installation of Electrical Supply Systems (TX, LV Switchboard & Temp. Power)	90	19-Dec-22	18-Mar-23	17-Mar-22	14-Jun-22	-277	S3C1170, S3P1480, S3P1485	S3T1030, S3T1000, PL1190
S3C1200	FS Installation - Conduits, Trunking, & Pipeworks	70	20-Dec-22	27-Feb-23	02-Mar-22	10-May-22	-293	S3S1000, S3S1010, S3S1020, S3P1480, S3D1550, S3C1120	S3C1210, S3S1030, PL1190



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 24 of 46

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31-Aug-22	Rev.25	LT	KM

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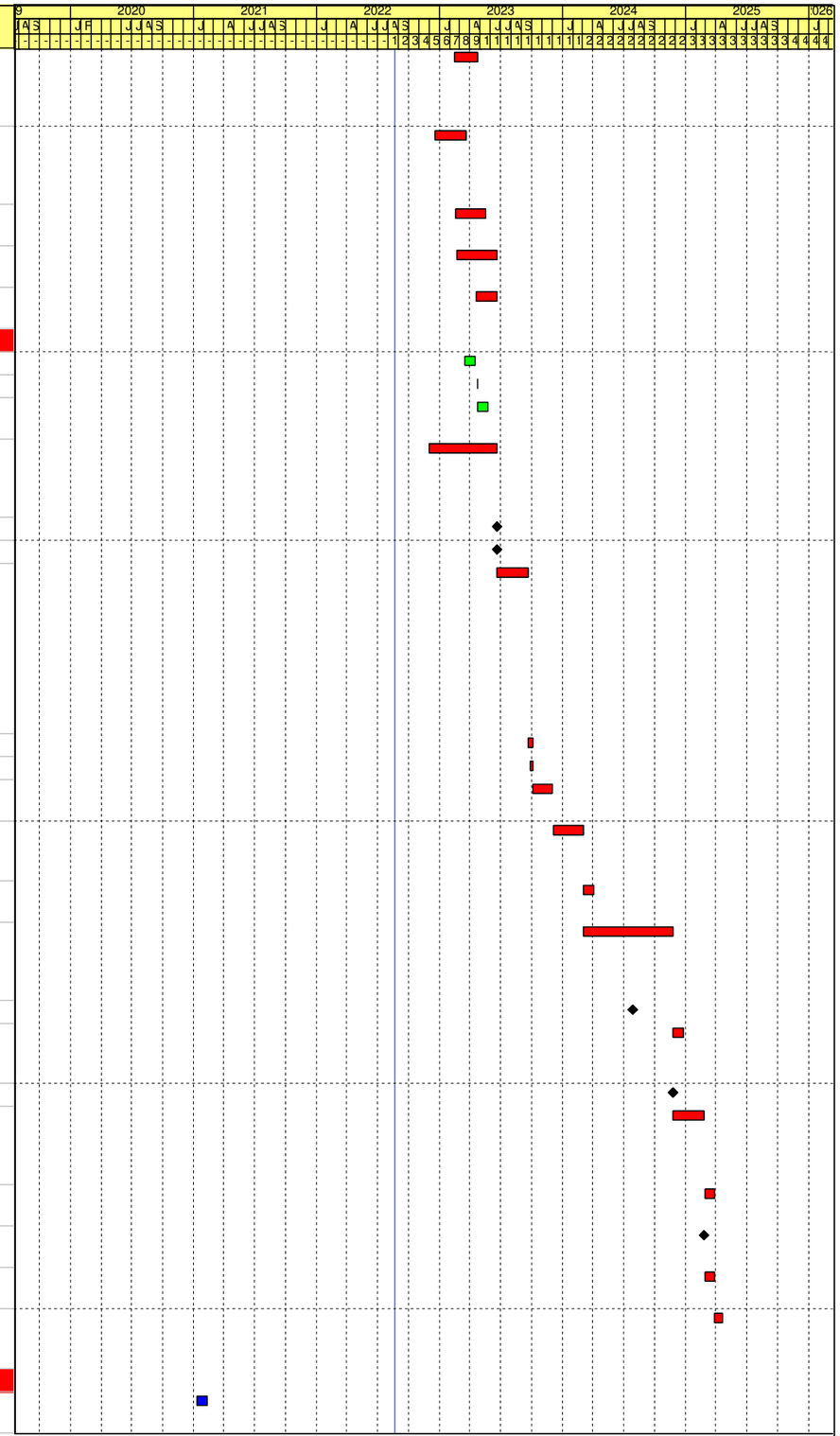
S3C1210	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	70	14-Feb-23	24-Apr-23	27-Apr-22	05-Jul-22	-293	S3C1200	S3T1060, S3S1150, S3T1020, PL1190
S3C1220	BS Fitting Installation - Conduits, Trunking, & Ductworks	90	20-Dec-22	19-Mar-23	06-Feb-22	06-May-22	-317	S3S1020, S3P1480, S3D1510, S3C1120	S3C1230, S3S1030, PL1190
S3C1230	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	18-Feb-23	18-May-23	07-Apr-22	05-Jul-22	-317	S3C1220	S3T1030, PL1190
S3C1240	Installation of Control & Monitoring System	120	21-Feb-23	20-Jun-23	08-Mar-22	05-Jul-22	-350	S3C1170, S3P1480	S3T1030, PL1190
S3C1250	Installation of Gas Detection System	60	22-Apr-23	20-Jun-23	07-May-22	05-Jul-22	-350	S3C1170, S3P1480	S3T1060, PL1190
Testing & Commissioning		869	03-Dec-22	19-Apr-25	18-Dec-21	10-May-24	-345		
S3T1000	SAT for TX & LV Switchboard	30	19-Mar-23	17-Apr-23	08-Nov-23	08-Dec-23	235	S3C1190	S3T1010
S3T1010	Power Energization (Power Provision from DE/2018/04 Contract)	1	24-Apr-23	24-Apr-23	08-Dec-23	09-Dec-23	229	S3T1000	S3T1020
S3T1020	Essential T&C for FSD Inspection	30	25-Apr-23	24-May-23	09-Dec-23	08-Jan-24	229	S3T1010, S3C1210	S3S1150
S3T1030	SAT for Deammonification Sidestream Treatment Facilities (Ref. to PS6B.1.18.3)	200	03-Dec-22	20-Jun-23	18-Dec-21	05-Jul-22	-350	S3C1170, S3C1190, S3C1240, S3C1230	S3T1060, S3T1060
S3T1040	Existing sludge dewatering facilities Ready (by DE/2018/04 Contract)	0		20-Jun-23		05-Jul-22	-350		S3T1060
S3T1050	Plant service water from zone B/C Ready (Zone B by DE/2018/04 Contract)	0		20-Jun-23		05-Jul-22	-350		S3T1060
S3T1060	Process Start Up	92	21-Jun-23	20-Sep-23	06-Jul-22	05-Oct-22	-350	S3T1030, S3C1210, S3T1050, S3T1040, S3S1140, S3C1250, S3C1170, S3P1480, S3T1030	S3T1070
S3T1070	Submission & Acceptance of Process Start Up Report	14	21-Sep-23	04-Oct-23	06-Oct-22	19-Oct-22	-350	S3T1060	S3T1080
S3T1080	Notice for Commencement of Phase 1 Commissioning Tests	7	28-Sep-23	04-Oct-23	13-Oct-22	19-Oct-22	-350	S3T1070	S3T1090
S3T1090	Phase 1 Commissioning Tests with daily result to PM	60	05-Oct-23	03-Dec-23	20-Oct-22	18-Dec-22	-350	S3T1080	S3T1110, S3T1100
S3T1100	Phase 1 Re-commissioning Tests with daily result to PM (If Failure)	90	04-Dec-23	02-Mar-24	19-Dec-22	18-Mar-23	-350	S3T1090	S3T1110, S3T1120, KD1050-2
S3T1110	Submission & Acceptance of Phase 1 Commissioning Tests Report	30	03-Mar-24	01-Apr-24	19-Jan-24	18-Feb-24	-44	S3T1090, S3T1100	S3T1140
S3T1120	Phase 1 Post Commissioning with daily result to PM	268	03-Mar-24	25-Nov-24	19-Mar-23	11-Dec-23	-350	S3T1100	S3T1140, PL1320, S3T1160, S5T1120
S3T1130	Ready to Process start up of the first Anaerobic Digester in Zone C	0	29-Jul-24		18-Feb-24		-162	S5T1120	S3T1140
S3T1140	Submission & Acceptance of Phase 1 Post Commissioning Report	30	26-Nov-24	25-Dec-24	18-Feb-24	19-Mar-24	-282	S3T1120, S3T1130, S3T1110	S3T1170
S3T1150	THP digested sludge centrate from Zone C Ready	0		25-Nov-24		17-Dec-23	-345		S3T1160
S3T1160	Phase 2 Commissioning Tests with daily result to PM	93	26-Nov-24	26-Feb-25	17-Dec-23	19-Mar-24	-345	S3T1150, S3T1120	S3T1170, S3T1180, S3T1190, S5T1200
S3T1170	Submission & Acceptance of Phase 2 Commissioning Tests Report	30	27-Feb-25	28-Mar-25	19-Mar-24	18-Apr-24	-345	S3T1160, S3T1140	S3T1200
S3T1180	Commissioning of new Anaerobic Digesters (2 nos.) in Zone C Finished	0		26-Feb-25		19-Mar-24	-345	S5T1180, S3T1160	S3T1190
S3T1190	Phase 3 Commissioning Tests with daily result to PM	30	27-Feb-25	28-Mar-25	19-Mar-24	18-Apr-24	-345	S3T1180, S3T1160	S3T1200
S3T1200	Submission & Acceptance of Phase 3 Commissioning Tests Report	22	29-Mar-25	19-Apr-25	18-Apr-24	10-May-24	-345	S3T1190, S3C1000, S3T1170	SC31110, PL1270
Statutory Submission / Inspection (FSD)		1011	12-Jan-21 A	28-Oct-23	19-Sep-21	10-May-24	195		
S3S1000	Prepare & Submit GBP for FSD approval	90	12-Jan-21 A	10-Feb-21 A	19-Sep-21	19-Sep-21			S3C1200, S3S1010



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Layout: DE1803 RP (Aug 2022) - WBS

Remaining Work
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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 Aug 2022

Date	Revision	Checked	Approved
30-Apr-22	Rev.21	LT	KM
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
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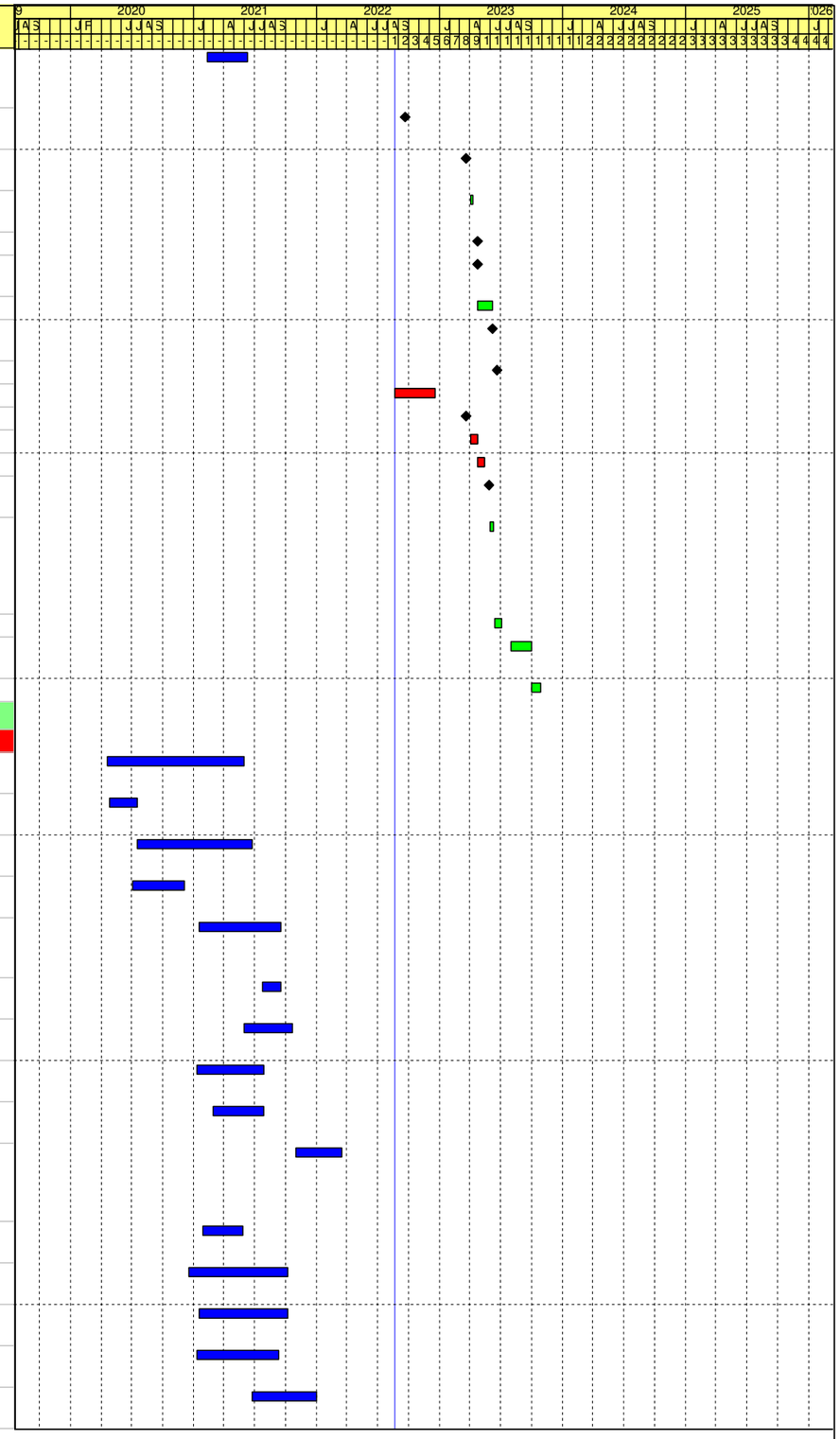
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3S1010	FSD Review & Approval of GBP	180	11-Feb-21 A	11-Jun-21 A	19-Sep-21	19-Sep-21		S3S1000	S3C1200, S3S1150, S3C1100
S3S1020	Submit WWO46 Part I/II to WSD (FS / PD)	0	21-Sep-22		08-Nov-21		-317	S3D1550, S3D1510	S3C1200, S3C1220
S3S1030	Submit WWO46 Part IV to WSD (FS / PD)	0	20-Mar-23		04-Dec-23		260	S3C1200, S3C1220	S3S1040
S3S1040	WSD Inspection	7	03-Apr-23	09-Apr-23	18-Dec-23	25-Dec-23	260	S3S1030	S3S1060, S3S1050
S3S1050	Issuance of FS Water Certificate	0		23-Apr-23		08-Jan-24	260	S3S1040	S3S1150
S3S1060	Issuance of Form WWO46 Part Va	0		23-Apr-23		12-Mar-24	324	S3S1040	S3S1080, S3S1070
S3S1070	System Flushing / Sampling	45	24-Apr-23	07-Jun-23	12-Mar-24	26-Apr-24	324	S3S1060	S3S1080
S3S1080	Issuance of Form WWO46 Part Vb	0		07-Jun-23		26-Apr-24	324	S3S1060, S3S1070	S3S1090
S3S1090	Issuance of Water Certificate	0		21-Jun-23		10-May-24	324	S3S1080	SC31110
S3S1100	Submission & Approval of DG Application to FSD	120	22-Aug-22	19-Dec-22	28-Sep-21	25-Jan-22	-328		S3C1180
S3S1110	Submit Application to FSD for DG Licence	0	20-Mar-23		26-Apr-22		-328	S3C1180	S3S1120
S3S1120	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	04-Apr-23	24-Apr-23	11-May-22	31-May-22	-328	S3S1110	S3S1130
S3S1130	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	21	25-Apr-23	15-May-23	01-Jun-22	21-Jun-22	-328	S3S1120	S3S1140
S3S1140	DG Licence issued	0		29-May-23		05-Jul-22	-328	S3S1130	S3S1150, S3T1060
S3S1150	Prepare & Submit FS/314, FS/501 & FS/501a	14	30-May-23	12-Jun-23	08-Jan-24	22-Jan-24	224	S3S1010, S3C1210, S3T1020, S3S1140, S3S1050	S3S1160
S3S1160	FSD Review & Approval of FS/314, FS/501 & FS/501a	21	13-Jun-23	03-Jul-23	22-Jan-24	12-Feb-24	224	S3S1150	S3S1170
S3S1170	F.S. Inspection, Defects Rectification & Re-inspection	60	02-Aug-23	30-Sep-23	12-Feb-24	12-Apr-24	195	S3S1160, S3C1150	S3S1180
S3S1180	Issuance of Acceptance Letter	28	01-Oct-23	28-Oct-23	12-Apr-24	10-May-24	195	S3S1170	SC31110
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		921	18-Apr-20 A	12-Sep-22	16-Apr-22	17-Mar-23	185		
Major Plant & Materials Fabrication & Delivery		725	18-Apr-20 A	16-Mar-22 A	16-Apr-22	17-Mar-23			
S4P1000	Procurement & PO for FRP Cover	409	18-Apr-20 A	31-May-21 A	27-Apr-22	27-Apr-22		PL1010	S4P1090
S4P1010	Procurement & PO for Pipeworks & Associated Valves	90	25-Apr-20 A	15-Jul-20 A	16-Apr-22	16-Apr-22		S1D1000	S4P1130
S4P1020	Procurement & PO for Elec. Materials	365	18-Jul-20 A	22-Jun-21 A	16-Apr-22	16-Apr-22		S1D1130	S4P1140
S4P1030	Procurement & PO for FS System	60	02-Jul-20 A	04-Dec-20 A	16-Apr-22	16-Apr-22		S1D1330	S4P1150
S4P1040	Fabrication of UV Disinfection System	239	18-Jan-21 A	17-Sep-21 A	16-Apr-22	16-Apr-22		S1P1000, KD1000, S1D1210	S4C1080, S4P1050
S4P1050	FAT for UV Disinfection System	71	23-Jul-21 A	17-Sep-21 A	16-Apr-22	16-Apr-22		S4P1040	S4P1060
S4P1060	Delivery of UV Disinfection System	149	01-Jun-21 A	22-Oct-21 A	16-Apr-22	16-Apr-22		S4P1050	S4C1080
S4P1070	Fabrication & Delivery of Lift-up Pumps	225	11-Jan-21 A	26-Jul-21 A	16-Apr-22	16-Apr-22		S1P1010, S1D1290	S4C1040
S4P1080	Fabrication & Delivery of Transfer Pumps	218	26-Feb-21 A	26-Jul-21 A	17-Mar-23	17-Mar-23		S1P1020, S1D1290	S5UVPC1000
S4P1090	Fabrication & Delivery of FRP Cover	89	01-Nov-21 A	16-Mar-22 A	27-Apr-22	27-Apr-22		S1D1290, S4P1000, S1P1020, PL1010	S4T1010
S4P1100	Fabrication & Delivery of EOT Cranes (2T & 5T)	170	28-Jan-21 A	27-May-21 A	16-Apr-22	16-Apr-22		S1P1030, S1D1290	S4C1020
S4P1110	Fabrication & Delivery of Stoplogs	289	16-Dec-20 A	07-Oct-21 A	16-Apr-22	16-Apr-22		S1P1040, S1D1290	S4C1070
S4P1120	Fabrication & Delivery of Penstocks	256	18-Jan-21 A	07-Oct-21 A	16-Apr-22	16-Apr-22		S1P1050, S1D1290	S4C1070
S4P1130	Fabrication & Delivery of Pipeworks & Associated Valves	200	11-Jan-21 A	08-Sep-21 A	16-Apr-22	16-Apr-22		S4P1010, S1D1290	S4C1040
S4P1140	Fabrication & Delivery of Elec. Materials	190	24-Jun-21 A	31-Dec-21 A	16-Apr-22	16-Apr-22		S4P1020, S1D1330	S4C1120



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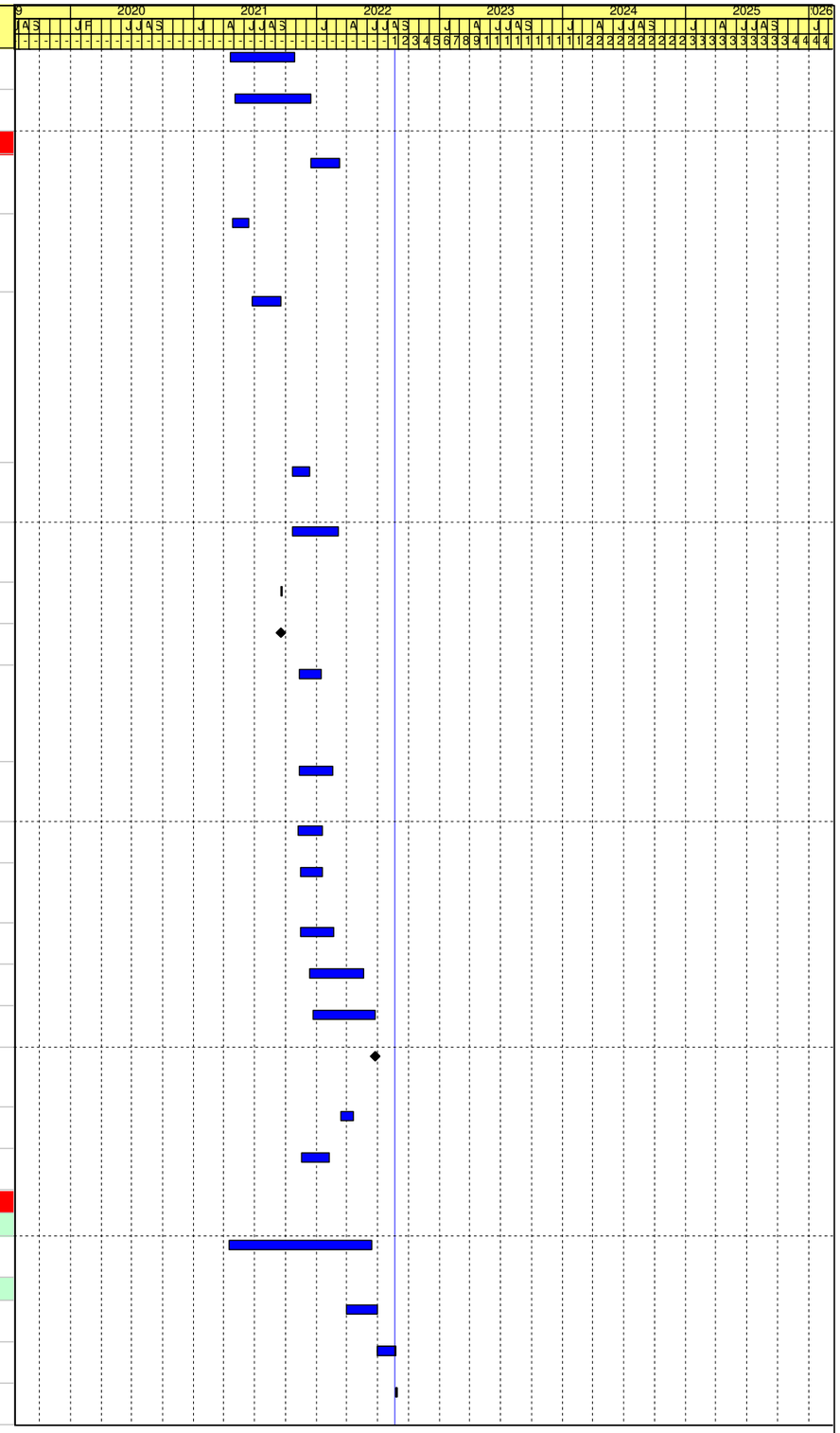
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S4P1150	Fabrication & Delivery of FS System	187	18-Apr-21 A	28-Oct-21 A	16-Apr-22	16-Apr-22		S4P1030, S1D1330	S4C1100
S4P1160	Fabrication & Delivery of Temp. Switchboard	194	05-May-21 A	15-Dec-21 A	21-Apr-22	21-Apr-22			S4C1000
E&M Installation		449	25-Apr-21 A	23-Jun-22 A	16-Apr-22	21-Apr-22			
S4C1000	Provision of Temporary Power for UV System No.1 & Effluent Transfer Pumping Station	45	15-Dec-21 A	11-Mar-22 A	21-Apr-22	21-Apr-22		S4C1010, S1D1130, S4P1160	S4T1010, S4C1140
S4C1010	Mobilisation (Partial Access on 24 Apr 2021, Remaining Access on 12 May 2021)	30	25-Apr-21 A	12-Jun-21 A	16-Apr-22	16-Apr-22		AD1010, S1D1130, AD1020	S4C1020, S5TXRC1030, S4C1090, S4C1000
S4C1020	E&M Installation of EOT Cranes (2T)	46	25-Jun-21 A	17-Sep-21 A	16-Apr-22	16-Apr-22		S1D1180, S1D1260, S4C1010, S4P1100	S4T1010, S4C1030, S4C1040, S4C1110, S4C1090, S4T1000, S4C1080, S4C1070, PL1200
S4C1030	E&M Installation of EOT Cranes (5T)	60	20-Oct-21 A	11-Dec-21 A	16-Apr-22	16-Apr-22		S4C1020	S5UVPC1000, S4T1000, PL1200
S4C1040	E&M Installation of Transfer Pumps & Associated Pipeworks / Valves	103	21-Oct-21 A	05-Mar-22 A	16-Apr-22	16-Apr-22		S4C1020, S4P1070, S4P1130	S5TXRC1050, S4T1010, PL1200
S4C1050	Preperation Works for E&M Installation of Penstocks & Stoplogs	3	17-Sep-21 A	19-Sep-21 A	16-Apr-22	16-Apr-22			S4C1070
S4C1060	CNE-014 Access to and use to Portion C-1A for Installation of EOT, UV Equipment and Effluent Transfer Pump	0	16-Sep-21 A		16-Apr-22				S4C1070
S4C1070	E&M Installation of Penstocks & Stoplogs (Impacted by CNE-014)	66	11-Nov-21 A	15-Jan-22 A	16-Apr-22	16-Apr-22		S4P1110, S4P1120, S4C1020, S4C1050, S4C1060	S4T1010, S5TXRC1050, PL1200
S4C1080	E&M Installation of UV System	44	11-Nov-21 A	19-Feb-22 A	16-Apr-22	16-Apr-22		S4P1040, S4P1060, S4C1020	S4T1010, S5TXRC1050, PL1200
S4C1090	FS Installation - Conduits, Trunking, & Pipeworks	74	08-Nov-21 A	18-Jan-22 A	16-Apr-22	16-Apr-22		S4C1010, S4C1020	S4C1100, PL1200
S4C1100	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	67	15-Nov-21 A	18-Jan-22 A	16-Apr-22	16-Apr-22		S4P1150, S4C1090	SC41110, S4S1010, PL1200
S4C1110	BS Fitting Installation - Conduits, Trunking, & Ductworks	111	15-Nov-21 A	19-Feb-22 A	16-Apr-22	16-Apr-22		S4C1020, S1D1310	S4C1120, PL1200
S4C1120	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	139	13-Dec-21 A	21-May-22 A	16-Apr-22	16-Apr-22		S4C1110, S4P1140	S4C1150, PL1200
S4C1130	Excavation Works & Cable Laying - by CLP (Impacted by CNE-035)	184	22-Dec-21 A	23-Jun-22 A	21-Apr-22	21-Apr-22			S4C1140
S4C1140	Ready for Power Energization	0		23-Jun-22 A		21-Apr-22		S4C1000, S4C1130, S4S1000	S4S1030, S4T1010
S4C1150	Installation of CCTV System	37	14-Mar-22 A	19-Apr-22 A	16-Apr-22	16-Apr-22		S4C1120	SC41110, PL1200
S4C1160	Installation of FS Link	84	17-Nov-21 A	08-Feb-22 A	16-Apr-22	16-Apr-22			S4S1010, PL1200
Statutory Submission / Inspection		480	17-Apr-21 A	12-Sep-22	16-Apr-22	09-May-22	-127		
CLP Submission		425	17-Apr-21 A	15-Jun-22 A	21-Apr-22	21-Apr-22			
S4S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP (Temp. Power)	425	17-Apr-21 A	15-Jun-22 A	21-Apr-22	21-Apr-22			S4C1140
FSD Submission & Inspection		145	01-Apr-22 A	12-Sep-22	16-Apr-22	09-May-22	-127		
S4S1010	Prepare & Submit FS/314, FS/501 & FS/501a	91	01-Apr-22 A	30-Jun-22 A	16-Apr-22	16-Apr-22		S4C1100, S4C1160	S4S1020
S4S1020	FSD Review & Approval of FS/314, FS/501 & FS/501a	25	01-Jul-22 A	25-Aug-22	16-Apr-22	21-Apr-22	-127	S4S1010	S4S1030
S4S1030	F.S. Inspection, Defects Rectification & Re-inspection	4	26-Aug-22	29-Aug-22	21-Apr-22	25-Apr-22	-127	S4S1020, S4C1140	S4S1040



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Layout: DE1803 RP (Aug 2022) - WBS
Page 27 of 46

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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S4S1040	Issuance of Acceptance Letter	14	30-Aug-22	12-Sep-22	25-Apr-22	09-May-22	-127	S4S1030	SC41110
Testing & Commissioning		318	18-Sep-21 A	08-Sep-22	27-Apr-22	16-May-22	-116		
S4T1000	T&C and R.P.E inspection for EOT Cranes	133	18-Sep-21 A	28-Jan-22 A	13-May-22	13-May-22		S4C1020, S4C1030	S4T1010
S4T1010	SAT for UV System No. 1 & Effluent Transfer Pumping Station No. 1 (Impacted by CNE-035)	217	10-Jan-22 A	05-Sep-22	27-Apr-22	13-May-22	-116	S4C1020, S4C1070, S4C1080, S4C1000, S4T1000, S4C1040, S4P1090, S4C1140	S4T1020
S4T1020	System Commissioning Tests	3	06-Sep-22	08-Sep-22	13-May-22	16-May-22	-116	S4T1010	SC41110, PL1290, S5UVPC1000
Section 5 - Complete all remaining Works (incl. T&C)		1798	18-May-20 A	19-Apr-25	16-Mar-22	15-May-25	26		
Fabrication, FAT & Delivery of Major Plant & Materials		1005	18-May-20 A	16-Feb-23	16-Mar-22	24-Nov-22	-85		
S5P1000	Procurement & PO for Biogas Booster and Transfer Pumps	735	17-Jul-20 A	21-Aug-22	30-Jul-22	30-Jul-22	-22	S2P1000	S5BIOP1000
S5P1010	Procurement & PO for Pipeworks & Associated Valves	539	29-Jan-21 A	21-Aug-22	03-Aug-22	03-Aug-22	-18	S2D1070	S5SDBP1130, S5CHPP1070, S5DIGP1020
S5P1020	Procurement & PO for Lifting Appliances	530	18-May-20 A	29-Oct-21 A	07-Sep-22	07-Sep-22		S2P1020	S5SDBP1120
S5P1030	Procurement & PO for Ferric Chloride Storage Tank	668	20-Jul-20 A	18-May-22 A	30-Sep-22	30-Sep-22		S2P1000	S5FCDP1000
S5P1040	Procurement & PO for Ferric Chloride Dosing Pump	726	18-May-20 A	13-May-22 A	24-Nov-22	24-Nov-22		S2P1020	S5FCDP1010
S5P1050	Procurement & PO for Elec. Materials	396	21-Jun-21 A	21-Aug-22	16-Mar-22	16-Mar-22	-158	PL1010, S2P1130, S2D1370, S2D1570, S2D1270, S2D1310, S2D1430, S2D1470, S2D1510, S2D1630, S2D1670	S5P1130
S5P1060	Procurement & PO for Genset	721	31-Jul-20 A	21-Aug-22	06-Apr-22	06-Apr-22	-137	S2D1160, S2D1220	S5SDBP1090
S5P1070	Procurement & PO for mechanical ventilation system	90	28-Dec-21 A	28-Mar-22 A	04-Jun-22	04-Jun-22			S5P1140
S5P1080	Fabrication of Control & Monitoring System / SCADA System	180	21-Aug-22*	16-Feb-23	17-May-22	12-Nov-22	-96	S2P1140, S2D1810	S5P1090
S5P1090	FAT for Control & Monitoring System / SCADA System	30	18-Jan-23	16-Feb-23	14-Oct-22	12-Nov-22	-96	S5P1080	S5SDBP1160, S5CHPP1080, S5TXRP1020, S5DIGP1050, S5WS2P1130, S5BIOP1020, S5THPP1030, S5H2SP1010, S5PSWP1010, S5DOUP1010, S5SPSP1020, S5TCWP1010, S5FCDP1030, S5SHPP1010, S5SASP1040

JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 28 of 46

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
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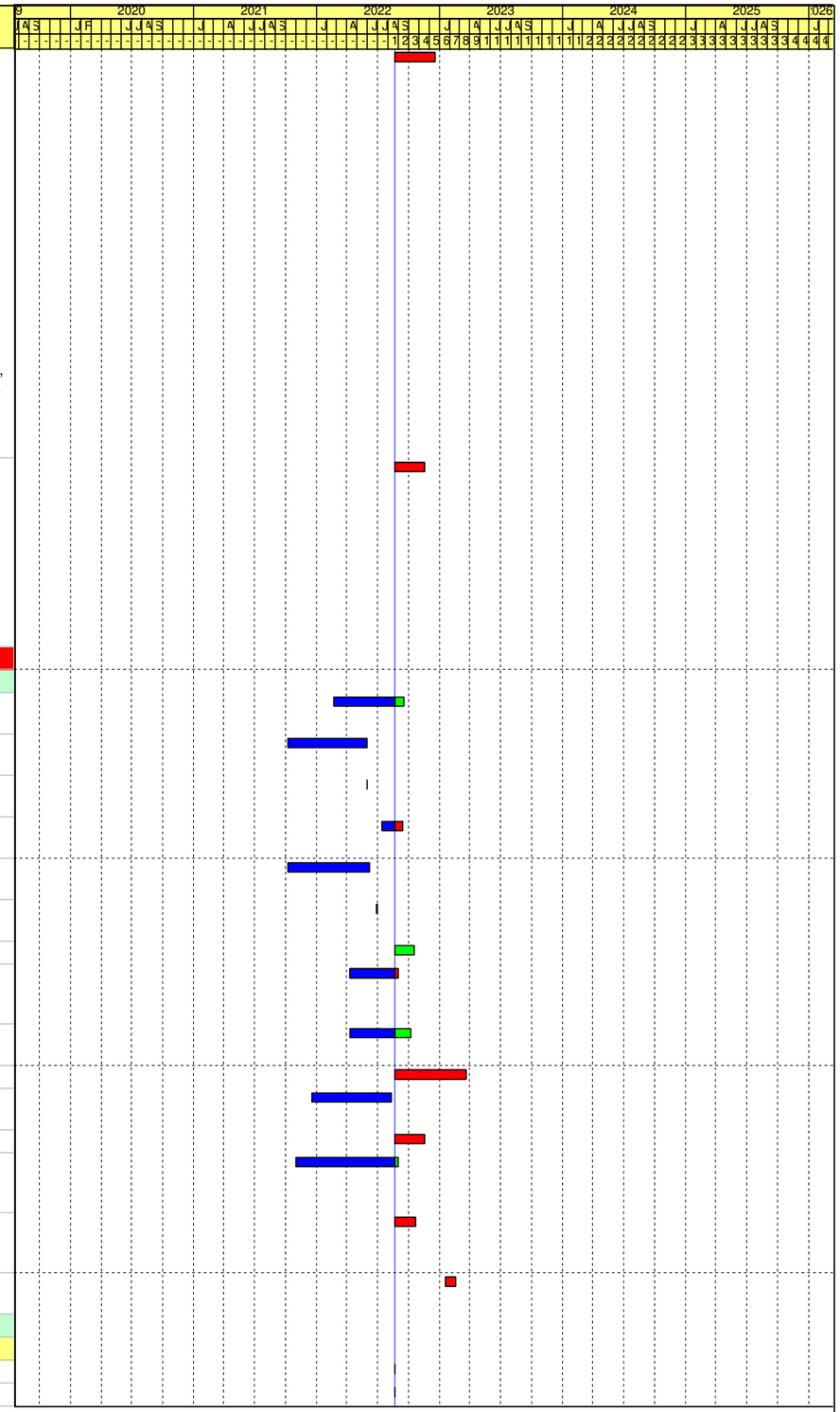
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5P1130	Fabrication & Delivery of Elec. Materials	120	22-Aug-22	19-Dec-22	17-Mar-22	14-Jul-22	-158	S5P1050, S2D1370	S5SDBC1070, S5SDBC1170, S5SDBC1370, S5CHPC1100, S5CHPC1230, S5CHPC1290, S5TXRC1030, S5TXRC1040, S5DIGC1260, S5DIGC1120, S5DIGC1160, S5DIGC1200, S5WS2C1160, S5BIOC1020, S5BIOC1030, S5BIOC1040, S5THPC1020, S5H2SC1020, S5WGBC1020, S5DOUC1040, S5EXAC1030, S5EXAC1040
S5P1140	Fabrication & Delivery of Ventilation Fans	90	21-Aug-22	18-Nov-22	04-Jun-22	01-Sep-22	-78	S5P1070	S5SPSC1020, S5SDBC1060, S5SDBC1160, S5SDBC1360, S5CHPC1090, S5CHPC1220, S5TXRC1020, S5DIGC1290, S5WS2C1050, S5WS2C1150
Sludge Dewatering Building		814	08-Oct-21 A	12-Jan-24	07-Apr-22	27-Feb-24	46		
Fabrication, FAT & Delivery of Major Plant & Materials		515	08-Oct-21 A	19-Mar-23	07-Apr-22	01-Sep-23	165		
S5SDBP1000	Fabrication & Delivery of Sludge Screening System	210	21-Feb-22 A	18-Sep-22	03-Nov-22	01-Dec-22	74	S2P1000, S2D1290	S5SDBC1120
S5SDBP1010	Fabrication of Sludge Thickening System	235	08-Oct-21 A	30-May-22 A	26-Aug-22	26-Aug-22		S2P1010, S2D1330	S5SDBP1020
S5SDBP1020	FAT for Sludge Thickening System	2	31-May-22 A	01-Jun-22 A	26-Aug-22	26-Aug-22		S5SDBP1010	S5SDBP1030
S5SDBP1030	Delivery of Sludge Thickening System	60	15-Jul-22 A	12-Sep-22	26-Aug-22	17-Sep-22	5	S5SDBP1020	S5SDBC1280
S5SDBP1040	Fabrication of Sludge Dewatering System	180	08-Oct-21 A	06-Jun-22 A	02-Nov-22	02-Nov-22		S2P1030, S2D1490	S5SDBP1050
S5SDBP1050	FAT for Sludge Dewatering System	2	29-Jun-22 A	30-Jun-22 A	02-Nov-22	02-Nov-22		S5SDBP1040	S5SDBP1060
S5SDBP1060	Delivery of Sludge Dewatering System	60	21-Aug-22	19-Oct-22	02-Nov-22	31-Dec-22	73	S5SDBP1050	S5SDBC1290
S5SDBP1070	Fabrication & Delivery of Process Water Pump	120	11-Apr-22 A	31-Aug-22	25-May-22	04-Jun-22	-88	S2P1190, S2D1950	S5SDBC1120, S5SDBC1320, S5SDBC1030
S5SDBP1080	Fabrication & Delivery of External Sludge Transfer Pump	150	11-Apr-22 A	07-Oct-22	15-Oct-22	01-Dec-22	55	S2P1200, S2D1960	S5SDBC1120
S5SDBP1090	Fabrication & Delivery of Genset	210	22-Aug-22	19-Mar-23	07-Apr-22	02-Nov-22	-137	S5P1060	S5SDBC1200
S5SDBP1100	Fabrication & Delivery of Lift	210	18-Dec-21 A	10-Aug-22 A	01-Sep-23	01-Sep-23			S5SDBC1230
S5SDBP1110	Fabrication & Delivery of LV Switchboard	90	21-Aug-22	18-Nov-22	15-Jul-22	12-Oct-22	-37		S5SDBC1220
S5SDBP1120	Fabrication & Delivery of Lifting Appliances	265	30-Oct-21 A	31-Aug-22	07-Sep-22	17-Sep-22	17	S5P1020, S2D1830, S2D1850	S5SDBC1240
S5SDBP1130	Fabrication & Delivery of Pipeworks & Associated Valves	60	22-Aug-22	20-Oct-22	05-Jun-22	03-Aug-22	-78	S5P1010	S5SDBC1040, S5SDBC1130, S5SDBC1330
S5SDBP1160	Delivery of Control & Monitoring System / SCADA System	30	18-Jan-23	16-Feb-23	02-Dec-22	31-Dec-22	-47	S5P1090	S5SDBC1090, S5SDBC1390
Installation		412	06-Jun-22 A	15-Sep-23	30-Apr-22	29-Dec-23	105		
NCE-PMI-0325 - Provision of 2 nos of 3 Tons Mobile A-frame with Electrical Hoist in SDB		412	06-Jun-22 A	15-Sep-23	30-Apr-22	29-Dec-23	105		
S5SDBC1000	Access to Sludge Dewatering Building (Impacted by EWN-0314)	1	21-Aug-22*	21-Aug-22	30-Apr-22	30-Apr-22	-113		S5SDBC1020
S5SDBC1010	Access to Sludge Dewatering Building (Impacted by EWN-0314-1)	1	21-Aug-22*	21-Aug-22	30-Apr-22	30-Apr-22	-113		S5SDBC1020



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 29 of 46

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
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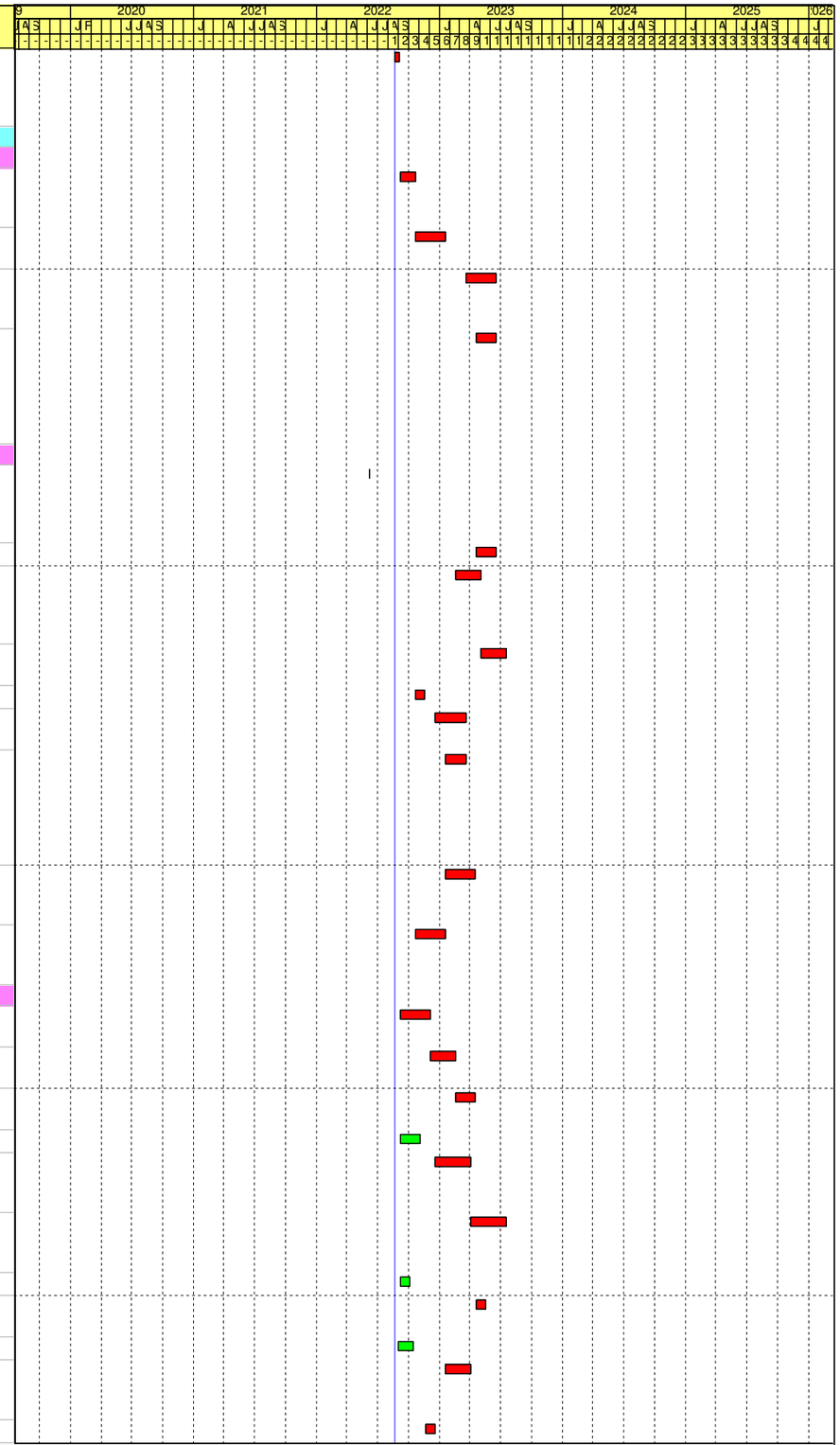
S5SDBC1020	Mobilisation	15	22-Aug-22	05-Sep-22	01-May-22	15-May-22	-113	S5SDBC1000, S5SDBC1010	S5SDBC1100, S5SDBC1150, S5SDBC1220, PL1510
E&M Installation		412	06-Jun-22 A	15-Sep-23	05-Jun-22	30-Apr-23	-138		
Basement		285	06-Sep-22	17-Jun-23	05-Jun-22	01-Mar-23	-108		
S5SDBC1030	Installation of PC Pump	45	06-Sep-22	20-Oct-22	05-Jun-22	19-Jul-22	-93	S5SDBC1100, S5SDBP1070	S5SDBC1040, S5SDBC1140, S5SDBT1040
S5SDBC1040	Installation of Process Pipe	90	21-Oct-22	18-Jan-23	04-Aug-22	01-Nov-22	-78	S5SDBC1030, S5SDBP1130	S5SDBC1330, S5SDBT1000
S5SDBC1070	Installation of Electrical System	90	20-Mar-23	17-Jun-23	13-Oct-22	10-Jan-23	-158	S5SDBC1050, S5SDBC1170, S5P1130	S5SDBC1370, S5SDBC1090
S5SDBC1090	Installation of SCADA System / Control Monitoring System	60	19-Apr-23	17-Jun-23	01-Jan-23	01-Mar-23	-108	S5SDBC1050, S5SDBC1190, S5SDBC1070, S5SDBP1160	S5SDBC1390, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
Ground Floor		352	06-Jun-22 A	17-Jul-23	05-Jun-22	30-Apr-23	-78		
S5SDBC1100	Installation of A-Frame (Effected by NCE-PMI-0325)	3	06-Jun-22 A	06-Jun-22 A	05-Jun-22	05-Jun-22		S5SDBC1020	S5SDBC1030, S5SDBC1270, S5SDBC1300, S5SDBC1240
S5SDBC1110	Installation of Monorail LA-01-01	60	19-Apr-23	17-Jun-23	15-Feb-23	15-Apr-23	-63	S5SDBC1260	S5SDBT1030
S5SDBC1120	Installation of Silo , Conveyor & PC Pump	75	18-Feb-23	03-May-23	02-Dec-22	14-Feb-23	-78	S5SDBC1330, S5SDBP1070, S5SDBP1000, S5SDBP1080	S5SDBC1130, S5SDBT1040
S5SDBC1130	Installation of Process Pipe	75	04-May-23	17-Jul-23	15-Feb-23	30-Apr-23	-78	S5SDBC1120, S5SDBP1130	S5SDBT1000
S5SDBC1140	Installation of Polymer	30	21-Oct-22	19-Nov-22	20-Jul-22	18-Aug-22	-93	S5SDBC1030	S5SDBC1340
S5SDBC1170	Installation of Electrical System	90	20-Dec-22	19-Mar-23	15-Jul-22	12-Oct-22	-158	S5SDBC1150, S5P1130	S5SDBC1070, S5SDBC1190
S5SDBC1190	Installation of SCADA System / Control Monitoring System	60	19-Jan-23	19-Mar-23	02-Nov-22	31-Dec-22	-78	S5SDBC1150, S5SDBC1170	S5SDBC1090, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
S5SDBC1210	TX Room Installation	90	18-Jan-23	17-Apr-23	12-Dec-22	11-Mar-23	-37	S5SDBC1220, S5WS2P1050	S5SDBT1030, S5SDBT1020, S5SDBT1010
S5SDBC1220	LV Switch Room Installation	90	20-Oct-22	17-Jan-23	13-Sep-22	11-Dec-22	-37	S5SDBC1020, S5SDBP1110	S5SDBC1210, S5SDBT1020, S5SDBT1010
First Floor		380	01-Sep-22	15-Sep-23	20-Jun-22	30-Apr-23	-138		
S5SDBC1240	Installation of EOT Crane LA-01-03	90	06-Sep-22	04-Dec-22	20-Jun-22	17-Sep-22	-78	S5SDBC1100, S5SDBP1120	S5SDBC1250, S5SDBC1280
S5SDBC1250	Installation of EOT Crane LA-01-02	75	05-Dec-22	17-Feb-23	03-Oct-22	16-Dec-22	-63	S5SDBC1240	S5SDBC1260, S5SDBC1290
S5SDBC1260	Installation of Monorail LA-01-04	60	18-Feb-23	18-Apr-23	17-Dec-22	14-Feb-23	-63	S5SDBC1250	S5SDBC1110, S5SDBC1310
S5SDBC1270	Installation of Polymer Tank	60	06-Sep-22	04-Nov-22	15-Feb-23	15-Apr-23	162	S5SDBC1100	S5SDBT1030
S5SDBC1280	Installation of Sludge Thickening Centrifuges	105	20-Dec-22	03-Apr-23	18-Sep-22	31-Dec-22	-93	S5SDBC1340, S5SDBC1240, S5SDBP1030	S5SDBC1290
S5SDBC1290	Installation of Sludge Dewatering Centrifuges	105	04-Apr-23	17-Jul-23	01-Jan-23	15-Apr-23	-93	S5SDBC1280, S5SDBC1250, S5SDBP1060	S5SDBT1030
S5SDBC1300	Installation of Screen Press	30	06-Sep-22	05-Oct-22	17-Mar-23	15-Apr-23	192	S5SDBC1100	S5SDBT1030
S5SDBC1310	Installation of Mixer	30	19-Apr-23	18-May-23	17-Mar-23	15-Apr-23	-33	S5SDBC1330, S5SDBC1260	S5SDBT1030
S5SDBC1320	Installation of PC Pump	45	01-Sep-22	15-Oct-22	18-Sep-22	01-Nov-22	17	S5SDBP1070	S5SDBC1330
S5SDBC1330	Installation of Process Pipe	75	19-Jan-23	03-Apr-23	02-Nov-22	15-Jan-23	-78	S5SDBC1320, S5SDBC1040, S5SDBP1130	S5SDBC1310, S5SDBC1120, S5SDBT1000
S5SDBC1340	Installation of Polymer	30	20-Nov-22	19-Dec-22	19-Aug-22	17-Sep-22	-93	S5SDBC1140	S5SDBC1280



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS

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Critical Activity
Milestone
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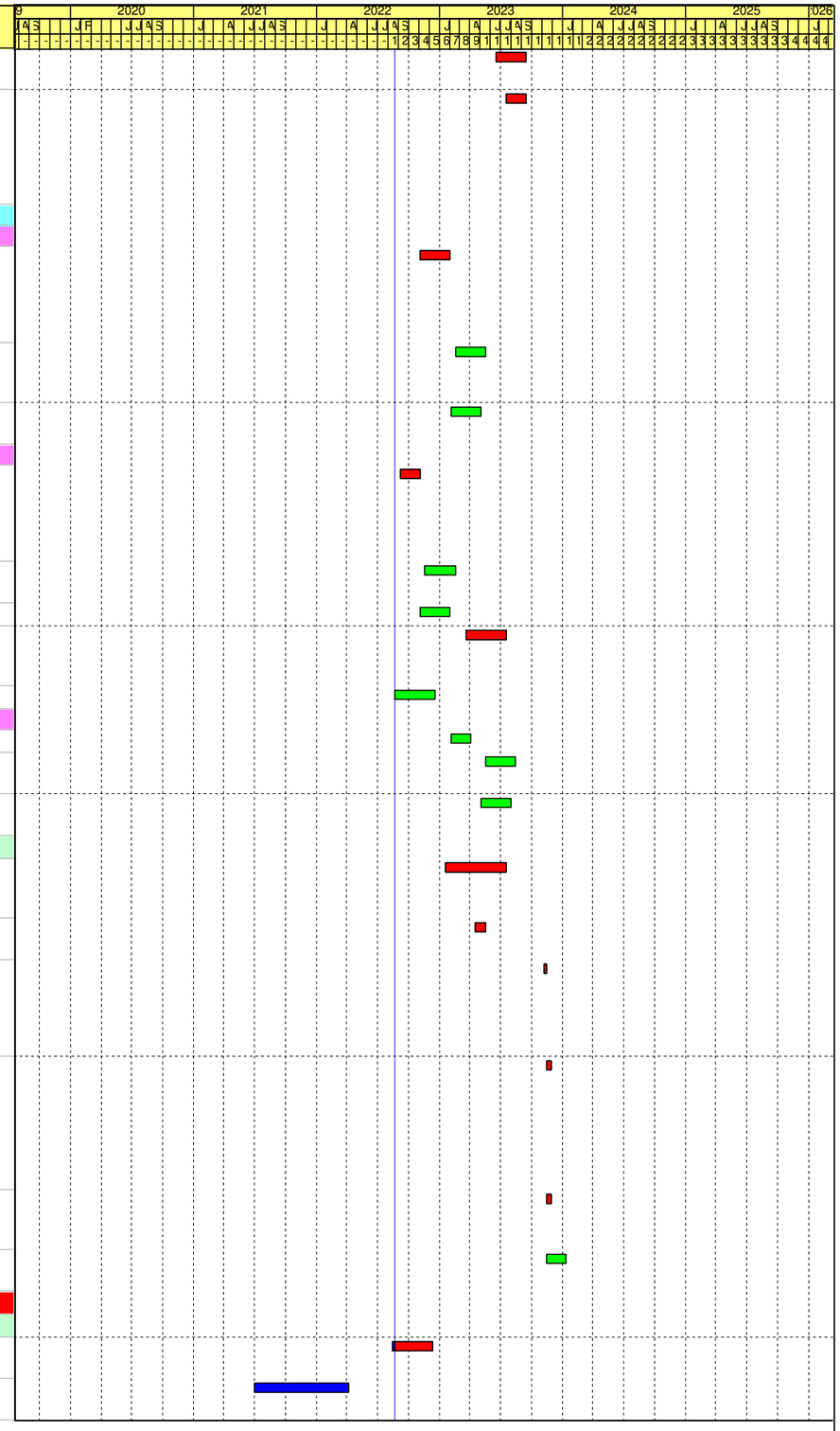
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5SDBC1370	Installation of Electrical System	90	18-Jun-23	15-Sep-23	11-Jan-23	10-Apr-23	-158	S5SDBC1070, S5P1130	S5SDBT1020, S5SDBC1390
S5SDBC1390	Installation of SCADA System / Control Monitoring System	60	18-Jul-23	15-Sep-23	02-Mar-23	30-Apr-23	-138	S5SDBC1090, S5SDBC1370, S5SDBP1160	S5T1060, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
BS Installation		360	21-Aug-22	15-Aug-23	16-May-22	29-Dec-23	136		
Basement		194	05-Nov-22	17-May-23	15-Jul-22	01-Sep-23	107		
S5SDBC1050	Installation of FS System	90	05-Nov-22	02-Feb-23	15-Jul-22	12-Oct-22	-113	S5SDBC1150	S5SDBC1060, S5SDBC1350, S5SDBC1070, S5SDBC1080, S5SDBC1090
S5SDBC1060	Installation of MVAC System	90	17-Feb-23	17-May-23	04-Jun-23	01-Sep-23	107	S5SDBC1050, S5SDBC1160, S5P1140	S5SDBC1360
S5SDBC1080	Installation of Plumbing System	90	03-Feb-23	03-May-23	11-May-23	08-Aug-23	97	S5SDBC1050, S5SDBC1180	S5SDBC1380, PL1210
Ground Floor		331	21-Aug-22	17-Jul-23	16-May-22	29-Dec-23	165		
S5SDBC1150	Installation of FS System	60	06-Sep-22	04-Nov-22	16-May-22	14-Jul-22	-113	S5SDBC1020	S5SDBC1160, S5SDBC1050, S5SDBC1170, S5SDBC1180, S5SDBC1190
S5SDBC1160	Installation of MVAC System	90	19-Nov-22	16-Feb-23	06-Mar-23	03-Jun-23	107	S5SDBC1150, S5P1140	S5SDBC1060
S5SDBC1180	Installation of Plumbing System	90	05-Nov-22	02-Feb-23	10-Feb-23	10-May-23	97	S5SDBC1150	S5SDBC1080
S5SDBC1200	Generator & Fuel Room Installation	120	20-Mar-23	17-Jul-23	03-Nov-22	02-Mar-23	-137	S5SDBP1090, S5S1270, S5S1010	S5S1280, PL1210
S5SDBC1230	Installation of Lift	120	21-Aug-22	18-Dec-22	01-Sep-23	29-Dec-23	376	S5SDBP1100	S5SDBT1050
First Floor		194	03-Feb-23	15-Aug-23	09-Aug-23	30-Nov-23	107		
S5SDBC1350	Installation of FS System	60	03-Feb-23	03-Apr-23	02-Oct-23	30-Nov-23	241	S5SDBC1050	S5S1220
S5SDBC1360	Installation of MVAC System	90	18-May-23	15-Aug-23	02-Sep-23	30-Nov-23	107	S5SDBC1060, S5P1140	S5S1220
S5SDBC1380	Installation of Plumbing System	90	04-May-23	01-Aug-23	09-Aug-23	06-Nov-23	97	S5SDBC1080	S5S1160, PL1210
Testing and Commissioning		359	19-Jan-23	12-Jan-24	02-Nov-22	27-Feb-24	46		
S5SDBT1000	Pipe Pressure Test	180	19-Jan-23	17-Jul-23	02-Nov-22	30-Apr-23	-78	S5SDBC1330, S5SDBC1130, S5SDBC1040	S5T1060
S5SDBT1010	SAT for Transformer & Switchboard	30	18-Apr-23	17-May-23	12-Mar-23	10-Apr-23	-37	S5SDBC1210, S5SDBC1220	S5SDBT1020
S5SDBT1020	Ready for Power Energisation	5	09-Nov-23	13-Nov-23	11-Apr-23	15-Apr-23	-212	S5SDBC1220, S5SDBC1210, S5WS2C1120, S5SDBC1370, S5SDBT1010	S5SDBT1030, S5SDBT1040, S5SDBT1050
S5SDBT1030	SAT for Sludge Dewatering / Thickening Centrifuges	15	14-Nov-23	28-Nov-23	16-Apr-23	30-Apr-23	-212	S5SDBT1020, S5SDBC1110, S5SDBC1210, S5SDBC1270, S5SDBC1290, S5SDBC1300, S5SDBC1310	S5T1060
S5SDBT1040	SAT for Pumps	15	14-Nov-23	28-Nov-23	16-Apr-23	30-Apr-23	-212	S5SDBT1020, S5SDBC1120, S5SDBC1030	S5T1060
S5SDBT1050	SAT for Lift	60	14-Nov-23	12-Jan-24	30-Dec-23	27-Feb-24	46	S5SDBC1230, S5SDBT1020	S5S1090
Combined Heat & Power Building		864	29-Jun-21 A	01-Dec-23	26-May-22	31-Jan-24	61		
Fabrication, FAT & Delivery of Major Plant & Materials		630	29-Jun-21 A	11-Apr-23	26-May-22	10-Feb-23	-60		
S5CHPP1000	Fabrication & Delivery of Pre-Treatment	120	15-Aug-22 A	12-Dec-22	27-May-22	17-Sep-22	-86		S5CHPC1170
S5CHPP1010	Fabrication of CHP System	270	29-Jun-21 A	06-Apr-22 A	15-Sep-22	15-Sep-22		S2P1070, S2D1610	S5CHPP1020



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 31 of 46

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Milestone
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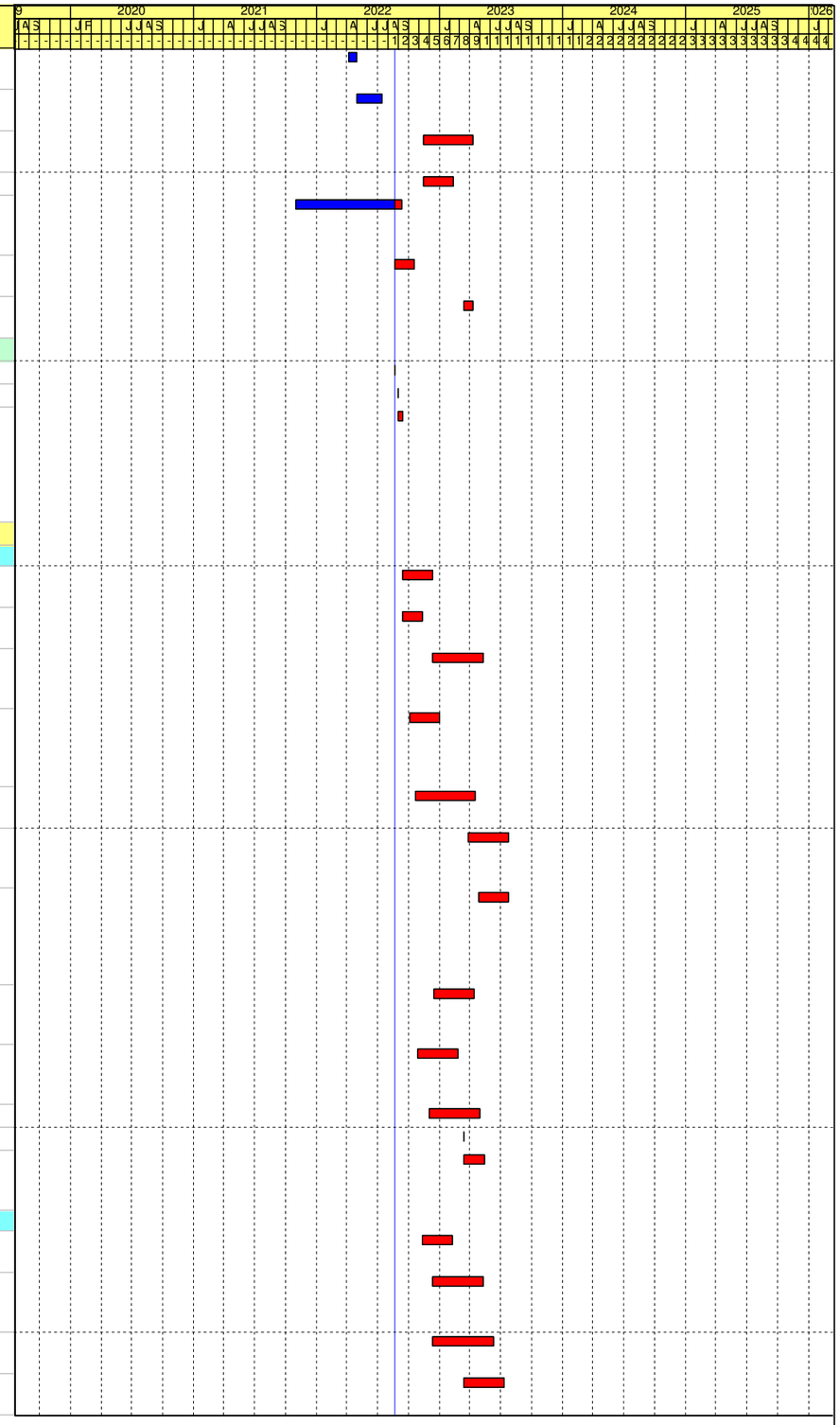
S5CHPP1020	FAT for CHP Generators	14	07-Apr-22 A	30-Apr-22 A	15-Sep-22	15-Sep-22		S5CHPP1010	S5CHPP1030
S5CHPP1030	Delivery of CHP Generators	60	02-May-22 A	14-Jul-22 A	15-Sep-22	15-Sep-22		S5CHPP1020	S5CHPC1050
S5CHPP1040	Fabrication & Delivery of Gas Detection System	150	13-Nov-22	11-Apr-23	14-Sep-22	10-Feb-23	-60	S2D2000, PL1020	S5CHPC1120, S5CHPC1250
S5CHPP1050	Fabrication & Delivery of LV Switchboard	90	15-Nov-22*	12-Feb-23	15-Sep-22	13-Dec-22	-61		S5CHPC1260
S5CHPP1060	Fabrication & Delivery of Lifting Appliances	309	30-Oct-21 A	11-Sep-22	26-May-22	16-Jun-22	-87		S5CHPC1030, S5CHPC1160, S5CHPC1040
S5CHPP1070	Fabrication & Delivery of Pipeworks & Associated Valves	60	21-Aug-22	19-Oct-22	20-Jul-22	17-Sep-22	-32	S5P1010	S5CHPC1070, S5CHPC1200
S5CHPP1080	Delivery of Control & Monitoring System / SCADA System	30	13-Mar-23	11-Apr-23	12-Jan-23	10-Feb-23	-60	S5P1090	S5CHPC1120, S5CHPC1250
Installation		353	21-Aug-22	08-Aug-23	04-Jun-22	31-Jan-24	176		
S5CHPC1000	Access to CHP Building (Impacted by EWN-0314)	1	21-Aug-22*	21-Aug-22	04-Jun-22	04-Jun-22	-78		S5CHPC1020
S5CHPC1010	Access to CHP Building (Impacted by EWN-0314-1)	1	31-Aug-22*	31-Aug-22	04-Jun-22	04-Jun-22	-88		S5CHPC1020
S5CHPC1020	Mobilisation	12	01-Sep-22	12-Sep-22	05-Jun-22	16-Jun-22	-88	AD1060, S5S1020, S5CHPC1000, S5CHPC1010	PL1550, S5CHPC1030, S5CHPC1040, S5CHPC1080, S5CHPC1130, S5CHPC1140
E&M Installation		315	13-Sep-22	24-Jul-23	17-Jun-22	11-May-23	-74		
Ground Floor		315	13-Sep-22	24-Jul-23	17-Jun-22	11-May-23	-74		
S5CHPC1030	Installation of EOT Crane LA-04-01	90	13-Sep-22	11-Dec-22	17-Jun-22	14-Sep-22	-88	S5CHPC1020, S5CHPP1060	S5CHPC1050
S5CHPC1040	Installation of Monorail LA-04-02 (total 3nos.)	60	13-Sep-22	11-Nov-22	15-Jul-22	12-Sep-22	-60	S5CHPC1020, S5CHPP1060	S5CHPC1160, S5CHPC1060
S5CHPC1050	Installation of CHP System - Mechanical Work	150	12-Dec-22	10-May-23	15-Sep-22	11-Feb-23	-88	S5CHPC1030, S5CHPP1030	S5CHPC1100, S5CHPT1030, S5CHPC1270
S5CHPC1060	Installation of Steam Boiler System - Mechanical Work	90	04-Oct-22	01-Jan-23	05-Aug-22	02-Nov-22	-60	S5CHPC1040	S5CHPC1070, S5CHPC1150, S5CHPC1170, S5CHPT1050
S5CHPC1070	Installation of pipework	180	20-Oct-22	17-Apr-23	18-Sep-22	16-Mar-23	-32	S5CHPC1060, S5CHPP1070	S5CHPT1000
S5CHPC1100	Installation of Electrical System	120	27-Mar-23	24-Jul-23	01-Jan-23	30-Apr-23	-85	S5CHPC1090, S5CHPC1050, S5P1130	S5CHPC1120, S5CHPT1050, S5CHPT1030
S5CHPC1120	Installation of SCADA System / Control Monitoring System / Gas Detection System / CCTV	90	26-Apr-23	24-Jul-23	11-Feb-23	11-May-23	-74	S5CHPC1100, S5CHPP1040, S5CHPP1080	S5T1100, S5T1000, S5T1010, S5T1020, S5T1030
S5CHPC1130	Transfomers Room Installation	120	15-Dec-22	13-Apr-23	15-Oct-22	11-Feb-23	-61	S5WS2P1020, S5CHPC1020	S5CHPT1020, S5CHPC1260, S5CHPT1010
S5CHPC1140	HV Switchroom Installation	120	29-Oct-22	25-Feb-23	20-Aug-22	17-Dec-22	-70	S5CHPC1020, S5WS2P1080	S5CHPC1190, S5CHPT1020, S5CHPT1010
S5CHPC1150	Diesel Storage & Pump Room Installation	150	03-Dec-22	01-May-23	04-Oct-22	02-Mar-23	-60	S5CHPC1060	S5S1280
S5CHPC1180	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	15-Nov-22	15-Nov-22	-119		S5CHPC1190
S5CHPC1190	Main Cables Laying between 11kV SwitchRoom of CHP Bldg to T x Rm of Workshop No.2	60	15-Mar-23	13-May-23	16-Nov-22	14-Jan-23	-119	S5CHPC1180, S5CHPC1140	S5WS2C1110, S5WS2T1010, PL1210
First Floor		241	12-Nov-22	10-Jul-23	18-Sep-22	11-May-23	-60		
S5CHPC1160	Installation of Monorail / Davit LA-04-03 to LA-04-10 (total 8nos.)	90	12-Nov-22	09-Feb-23	17-Nov-22	14-Feb-23	5	S5CHPC1040, S5CHPP1060	S5CHPC1170
S5CHPC1170	Installation of Biogas Pre-treatment System - Mechanical Work	150	13-Dec-22	11-May-23	18-Sep-22	14-Feb-23	-86	S5CHPC1060, S5CHPC1160, S5CHPP1000	S5CHPC1200, S5CHPC1230, S5CHPT1040
S5CHPC1200	Installation of pipework	180	13-Dec-22	10-Jun-23	18-Sep-22	16-Mar-23	-86	S5CHPC1170, S5CHPP1070	S5CHPT1000
S5CHPC1230	Installation of Electrical System	120	13-Mar-23	10-Jul-23	12-Jan-23	11-May-23	-60	S5CHPC1170, S5P1130	S5CHPC1250, S5CHPT1040



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS

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Milestone
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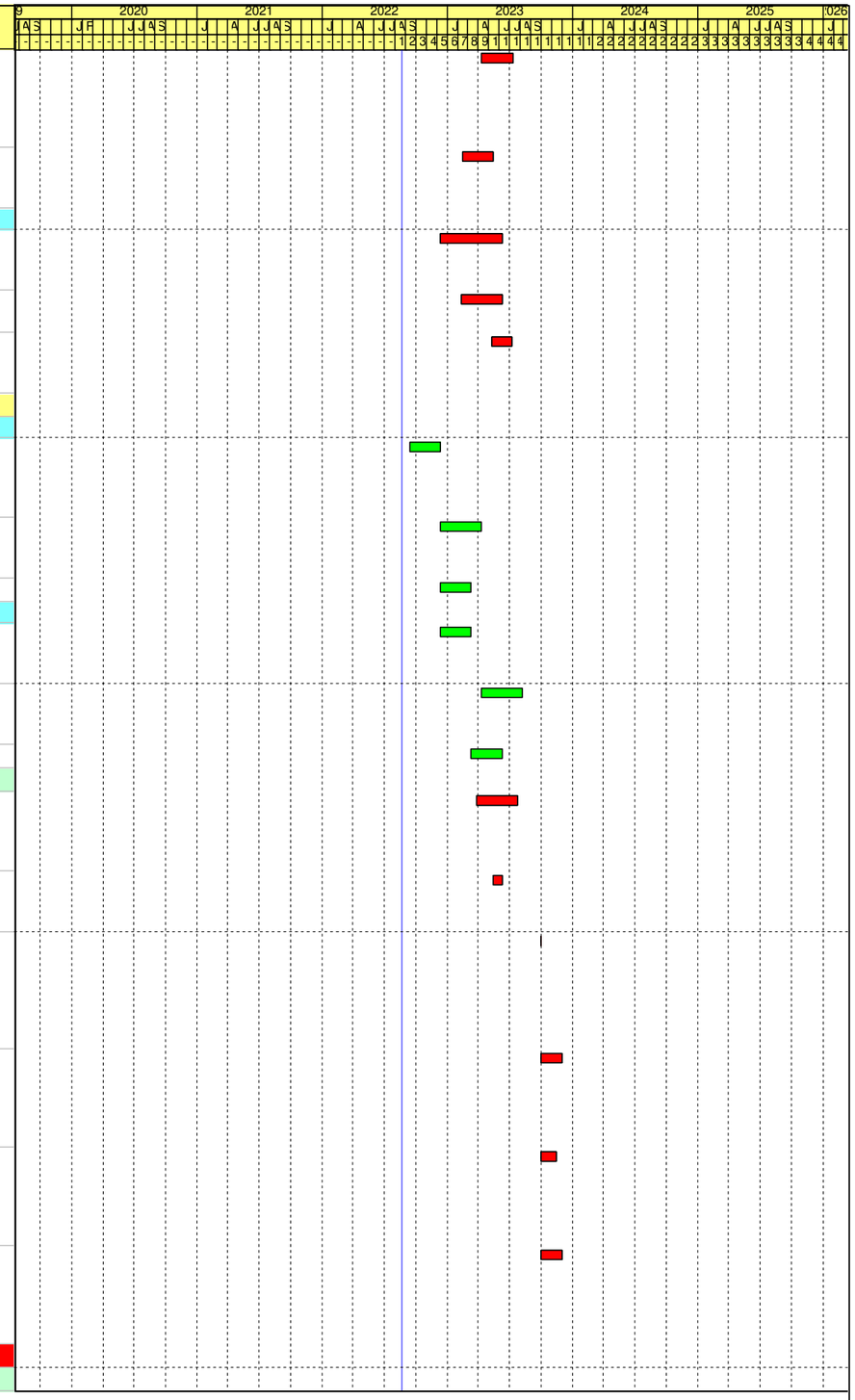
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5CHPC1250	Installation of SCADA System / Control Monitoring System / Gas Detection System / CCTV	90	12-Apr-23	10-Jul-23	11-Feb-23	11-May-23	-60	S5CHPC1230, S5CHPP1040, S5CHPP1080	S5T1100, S5T1000, S5T1010, S5T1020, S5T1030
S5CHPC1260	LV Switchroom Installation	90	13-Feb-23	13-May-23	14-Dec-22	13-Mar-23	-61	S5WS2P1110, S5CHPC1130, S5CHPP1050	S5CHPT1020, S5CHPT1010
Roof		210	12-Dec-22	09-Jul-23	15-Sep-22	12-Apr-23	-88		
S5CHPC1270	Installation of CHP System - Mechanical Work	180	12-Dec-22	09-Jun-23	15-Sep-22	13-Mar-23	-88	S5CHPC1050	S5CHPT1030, S5CHPC1280, S5CHPC1290
S5CHPC1280	Installation of Steam Boiler System - Mechanical Work	120	10-Feb-23	09-Jun-23	14-Nov-22	13-Mar-23	-88	S5CHPC1270	S5CHPT1050, S5CHPC1290
S5CHPC1290	Installation of Electrical System	60	11-May-23	09-Jul-23	12-Feb-23	12-Apr-23	-88	S5CHPC1270, S5CHPC1280, S5P1130	S5CHPT1040, S5CHPT1020
BS Installation		330	13-Sep-22	08-Aug-23	03-Oct-22	31-Jan-24	176		
Ground Floor		210	13-Sep-22	10-Apr-23	03-Oct-22	31-Jan-24	296		
S5CHPC1080	Installation of FS System	90	13-Sep-22	11-Dec-22	03-Oct-22	31-Dec-22	20	S5CHPC1020	S5CHPC1090, S5CHPC1110, S5CHPC1210, S5S1220
S5CHPC1090	Installation of MVAC System	120	12-Dec-22	10-Apr-23	01-Jan-23	30-Apr-23	20	S5CHPC1080, S5P1140	S5CHPC1100, S5S1220, S5CHPC1220
S5CHPC1110	Installation of Plumbing System	90	12-Dec-22	11-Mar-23	03-Nov-23	31-Jan-24	326	S5CHPC1080	S5S1160
First Floor		240	12-Dec-22	08-Aug-23	05-May-23	31-Jan-24	176		
S5CHPC1210	Installation of FS System	90	12-Dec-22	11-Mar-23	05-May-23	02-Aug-23	144	S5CHPC1080	S5CHPC1220, S5CHPC1240, S5S1220
S5CHPC1220	Installation of MVAC System	120	11-Apr-23	08-Aug-23	03-Aug-23	30-Nov-23	114	S5CHPC1210, S5CHPC1090, S5P1140	S5S1220
S5CHPC1240	Installation of Plumbing System	90	12-Mar-23	09-Jun-23	03-Nov-23	31-Jan-24	236	S5CHPC1210	S5S1160
Testing and Commissioning		249	28-Mar-23	01-Dec-23	01-Jan-23	29-Jun-23	-155		
S5CHPT1000	Pipe Pressure Test	120	28-Mar-23	25-Jul-23	01-Jan-23	30-Apr-23	-86	S5CHPC1200, S5CHPC1070	S5T1100, S5CHPT1030, S5CHPT1040, S5CHPT1050
S5CHPT1010	SAT for Transformer & Switchboard	30	14-May-23	12-Jun-23	14-Mar-23	12-Apr-23	-61	S5CHPC1260, S5CHPC1140, S5CHPC1130	S5CHPT1020
S5CHPT1020	Ready for Power Energisation	3	30-Sep-23	02-Oct-23	13-Apr-23	15-Apr-23	-170	S5CHPC1260, S5WS2C1110, S5CHPC1130, S5CHPC1140, S5CHPT1010, S5CHPC1290	S5CHPT1030, S5BIOT1010, S5THPT1010, S5CHPT1040, S5CHPT1050
S5CHPT1030	SAT for CHP System	60	03-Oct-23	01-Dec-23	01-May-23	29-Jun-23	-155	S5CHPT1020, S5CHPC1050, S5CHPC1100, S5CHPC1270, S5CHPT1000	S5T1100
S5CHPT1040	SAT for Pre-treatment System	45	03-Oct-23	16-Nov-23	16-May-23	29-Jun-23	-140	S5CHPC1170, S5CHPT1020, S5CHPC1230, S5CHPC1290, S5CHPT1000	S5T1100
S5CHPT1050	SAT for Steam Boiler System	60	03-Oct-23	01-Dec-23	01-May-23	29-Jun-23	-155	S5CHPC1060, S5CHPC1100, S5CHPT1020, S5CHPC1280, S5CHPT1000	S5T1100
Tx Rm & LV Switchroom (for UV)		483	31-Aug-22	26-Dec-23	30-Jun-22	11-May-23	-229		
Fabrication, FAT & Delivery of Major Plant & Materials		180	06-Sep-22	04-Mar-23	30-Jun-22	25-Feb-23	-7		



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 33 of 46

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Milestone
Actual Progress

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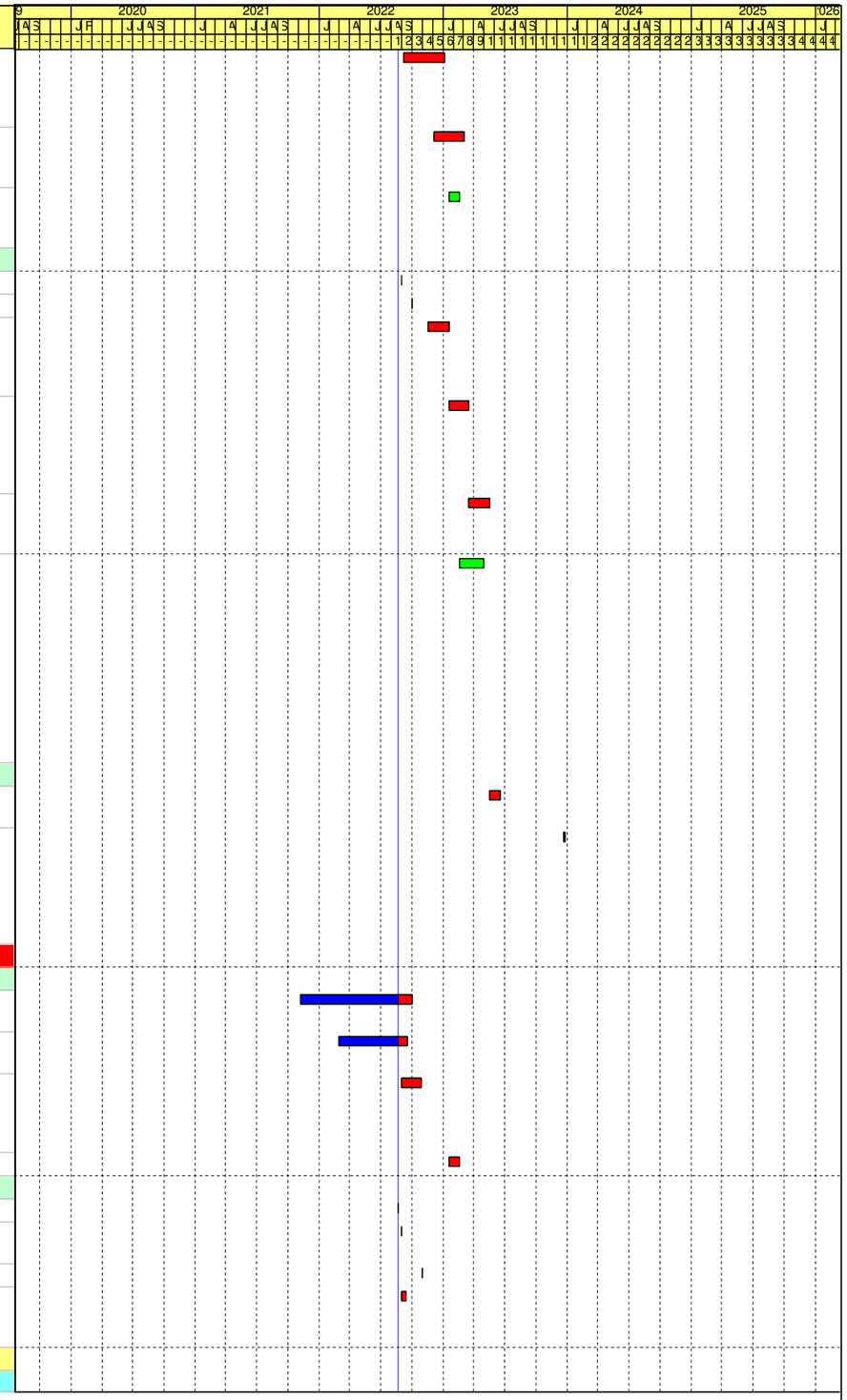
S5TXRP1000	Fabrication & Delivery of Transfomers -UV (Tx 07 & 08)	120	06-Sep-22	03-Jan-23	30-Jun-22	27-Oct-22	-68	S1D1130, S1D1290, S1D1210, S2P1110	S5TXRC1030
S5TXRP1010	Fabrication & Delivery of LVSB -UV	90	05-Dec-22	04-Mar-23	28-Sep-22	26-Dec-22	-68	S1D1210, S1D1290, S2P1130	S5TXRC1040
S5TXRP1020	Fabrication & Delivery of Control & Monitoring System -UV	30	18-Jan-23	16-Feb-23	27-Jan-23	25-Feb-23	9	S1D1290, S2P1140, S5P1090	S5TXRC1050
Installation		260	31-Aug-22	17-May-23	11-Sep-22	11-May-23	-6		
S5TXRC1000	Access to TX Rm & LV Switchroom (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	11-Sep-22	11-Sep-22	11		S5TXRC1020
S5TXRC1010	Access to TX Rm & LV Switchroom (Impacted by EWN-0314-1)	1	30-Sep-22*	30-Sep-22	11-Sep-22	11-Sep-22	-19		S5TXRC1020
S5TXRC1020	BS Fitting Intallation (at Tx Rm & LV Switchroom)	60	19-Nov-22	17-Jan-23	12-Sep-22	10-Nov-22	-68	AD1100, S5TXRC1000, S5TXRC1010, S5P1140	S5TXRT1010, S5TXRC1030
S5TXRC1030	E&M Installation of Transfomers in Tx Rm	60	18-Jan-23	18-Mar-23	11-Nov-22	09-Jan-23	-68	S5TXRC1020, S4C1010, S5TXRP1000, S1D1310, S5P1130	S5TXRC1040, S5TXRT1000
S5TXRC1040	E&M Installation of LVSB	60	19-Mar-23	17-May-23	10-Jan-23	10-Mar-23	-68	S5TXRC1030, S5TXRP1010, S5P1130	S5TXRT1010, S5TXRT1000
S5TXRC1050	Installation of Control & Monitoring System - UV	75	17-Feb-23	02-May-23	26-Feb-23	11-May-23	9	S4C1040, S5TXRP1020, S4C1070, S4C1080	S5T1200, S5T1120, S5T1000, S5T1010, S5T1020, S5T1030, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
Testing and Commissioning		223	18-May-23	26-Dec-23	11-Mar-23	12-Apr-23	-258		
S5TXRT1000	SAT for Transformer & Switchboard	30	18-May-23	16-Jun-23	11-Mar-23	09-Apr-23	-68	S5TXRC1040, S5TXRC1030	S5TXRT1010
S5TXRT1010	Ready for Power Energisation	3	24-Dec-23	26-Dec-23	10-Apr-23	12-Apr-23	-258	S5TXRC1020, S5TXRC1040, S5WS2C1060, S5WS2C1040, S5WS2C1130, S5TXRT1000	SC51110, S5SHPT1000, S5DOUT1000, S5PSWT1000
Sludge Digesters & Distribution Chamber		906	06-Nov-21 A	14-May-24	20-Jul-22	31-Jan-24	-104		
Fabrication, FAT & Delivery of Major Plant & Materials		454	06-Nov-21 A	17-Feb-23	20-Jul-22	10-Feb-23	-7		
S5DIGP1000	Fabrication & Delivery of Sludge Digestion System	180	06-Nov-21 A	29-Sep-22	22-Jul-22	30-Aug-22	-30	S2P1020, S2D1450	S5DIGC1210
S5DIGP1010	Fabrication & Delivery of FRP Walkway / Cover	90	01-Mar-22 A	17-Sep-22	20-Jul-22	16-Aug-22	-32	S2P1020	S5DIGC1040
S5DIGP1020	Fabrication & Delivery of Pipeworks & Associated Valves	60	31-Aug-22	29-Oct-22	05-Aug-22	03-Oct-22	-26	S5P1010	S5DIGC1110, S5DIGC1150, S5DIGC1190, S5DIGC1250
S5DIGP1050	Delivery of Control & Monitoring System / SCADA System	30	19-Jan-23	17-Feb-23	12-Jan-23	10-Feb-23	-7	S5P1090	S5DIGC1270
Installation		312	21-Aug-22	28-Jun-23	02-Aug-22	31-Jan-24	217		
S5DIGC1000	Access to Sludge Digesters & Distribution Chamber (Impacted by EWN-0314)	1	21-Aug-22*	21-Aug-22	02-Aug-22	02-Aug-22	-19		S5DIGC1030
S5DIGC1010	Access to Sludge Digester No.1 & Distribution Chamber (Impacted by EWN-0314-1)	1	31-Aug-22*	31-Aug-22	02-Aug-22	02-Aug-22	-29		S5DIGC1030
S5DIGC1020	Access to Sludge Digesters - Remaining (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	03-Nov-22	03-Nov-22	3		S5DIGC1050
S5DIGC1030	Mobilisation	14	01-Sep-22	14-Sep-22	03-Aug-22	16-Aug-22	-29	AD1080, S5DIGC1000, S5DIGC1010	S5DIGC1210, S5DIGC1040
E&M Installation		284	18-Sep-22	28-Jun-23	17-Aug-22	11-May-23	-48		
FRP Walkway / Cover Installation		196	18-Sep-22	01-Apr-23	17-Aug-22	15-Apr-23	14		



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 34 of 46

Remaining Work
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Milestone
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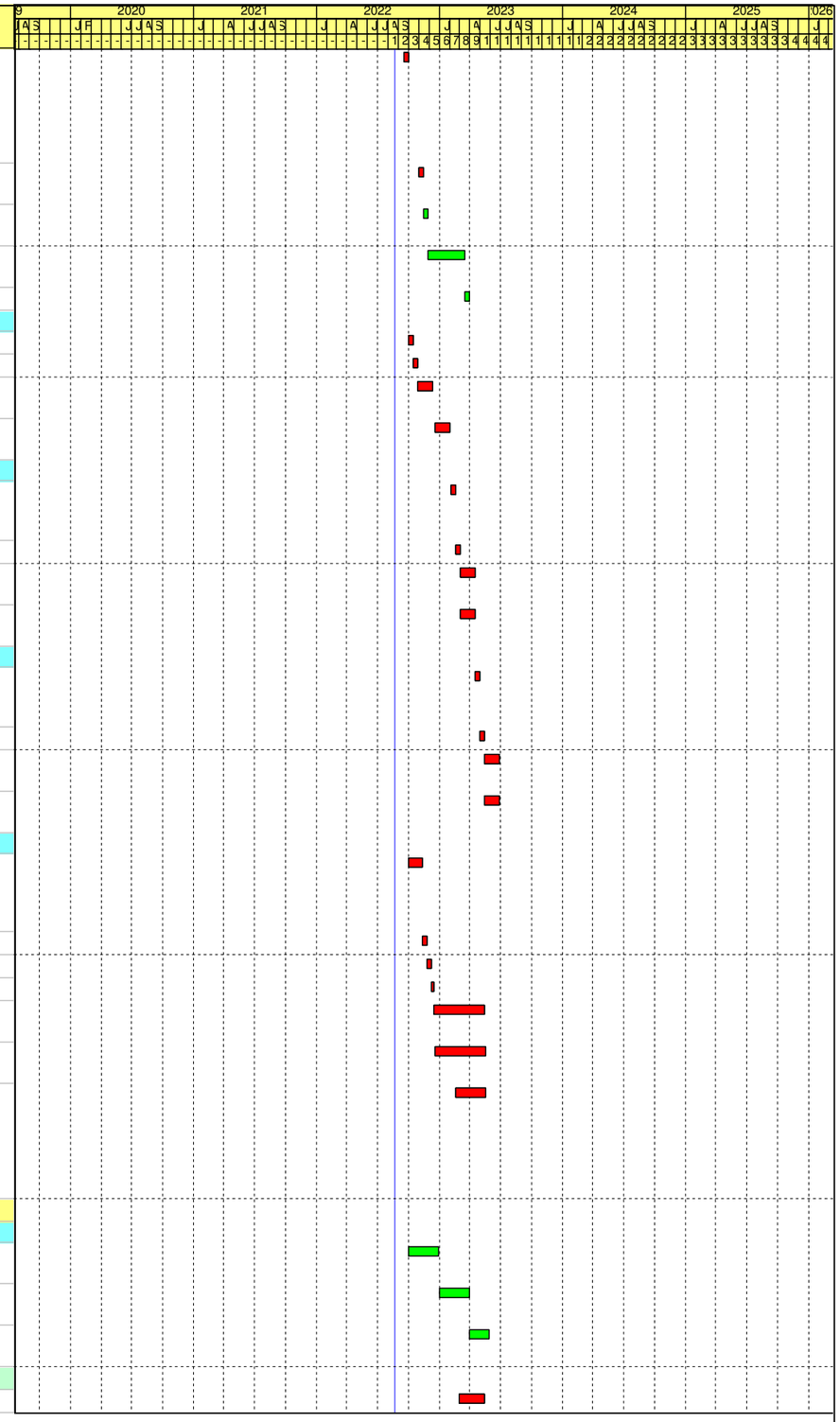
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5DIGC1040	Installation of Working Platform for Digester 1 (Roof)	14	18-Sep-22	01-Oct-22	17-Aug-22	30-Aug-22	-32	AD1080, S5DIGP1010, S5DIGC1030	SC51110, PL1210, PL1310, S5DIGC1050, S5DIGC1090, S5DIGC1210
S5DIGC1050	Installation of Working Platform for Digester 3 (Roof)	14	01-Nov-22	14-Nov-22	04-Nov-22	17-Nov-22	3	S5DIGC1040, S5DIGC1020	S5DIGC1060, S5DIGC1130
S5DIGC1060	Installation of Working Platform for Digester 4 (Roof)	14	15-Nov-22	28-Nov-22	29-Nov-22	12-Dec-22	14	S5DIGC1050	S5DIGC1070, S5DIGC1170
S5DIGC1070	Installation of Working Platform for Distribution Chamber & Overflow Chamber	110	29-Nov-22	18-Mar-23	13-Dec-22	01-Apr-23	14	S5DIGC1060	S5DIGC1080
S5DIGC1080	Installation of Working Platform for Digester 2 (Roof)	14	19-Mar-23	01-Apr-23	02-Apr-23	15-Apr-23	14	S5DIGC1070	S5DIGT1020
Sludge Digester 1		124	02-Oct-22	02-Feb-23	06-Sep-22	17-Nov-22	-77		
S5DIGC1090	Installation of Sludge Mixer (4 nos.)	14	02-Oct-22	15-Oct-22	06-Sep-22	19-Sep-22	-26	S5DIGC1040	S5DIGC1100
S5DIGC1100	Installation of Motor with Belt adjustment	14	16-Oct-22	29-Oct-22	20-Sep-22	03-Oct-22	-26	S5DIGC1090	S5DIGC1110
S5DIGC1110	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	30-Oct-22	13-Dec-22	04-Oct-22	17-Nov-22	-26	S5DIGC1100, S5DIGP1020	S5DIGC1120, S5DIGC1130
S5DIGC1120	Installation of Electrical System	45	20-Dec-22	02-Feb-23	04-Oct-22	17-Nov-22	-77	S5DIGC1110, S5P1130	S5DIGC1130, S5DIGT1010
Sludge Digester 3		73	03-Feb-23	16-Apr-23	18-Nov-22	29-Jan-23	-77		
S5DIGC1130	Installation of Sludge Mixer (4 nos.)	14	03-Feb-23	16-Feb-23	18-Nov-22	01-Dec-22	-77	S5DIGC1120, S5DIGC1110, S5DIGC1050	S5DIGC1140
S5DIGC1140	Installation of Motor with Belt adjustment	14	17-Feb-23	02-Mar-23	02-Dec-22	15-Dec-22	-77	S5DIGC1130	S5DIGC1150
S5DIGC1150	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	03-Mar-23	16-Apr-23	16-Dec-22	29-Jan-23	-77	S5DIGC1140, S5DIGP1020	S5DIGC1160, S5DIGC1170
S5DIGC1160	Installation of Electrical System	45	03-Mar-23	16-Apr-23	16-Dec-22	29-Jan-23	-77	S5DIGC1150, S5P1130	S5DIGC1170, S5DIGT1010
Sludge Digester 4		73	17-Apr-23	28-Jun-23	30-Jan-23	12-Apr-23	-77		
S5DIGC1170	Installation of Sludge Mixer (4 nos.)	14	17-Apr-23	30-Apr-23	30-Jan-23	12-Feb-23	-77	S5DIGC1150, S5DIGC1160, S5DIGC1060	S5DIGC1180
S5DIGC1180	Installation of Motor with Belt adjustment	14	01-May-23	14-May-23	13-Feb-23	26-Feb-23	-77	S5DIGC1170	S5DIGC1190
S5DIGC1190	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	15-May-23	28-Jun-23	27-Feb-23	12-Apr-23	-77	S5DIGC1180, S5DIGP1020	S5DIGC1200
S5DIGC1200	Installation of Electrical System	45	15-May-23	28-Jun-23	27-Feb-23	12-Apr-23	-77	S5DIGC1190, S5P1130	S5DIGT1010
Distribution Chamber		229	02-Oct-22	18-May-23	31-Aug-22	11-May-23	-7		
S5DIGC1210	Installation of Sludge Recirculation Pumps (5 nos.)	40	02-Oct-22	10-Nov-22	31-Aug-22	09-Oct-22	-32	AD1080, S5DIGP1000, S5DIGC1030, S5DIGC1040	S5DIGC1220, S5DIGC1280
S5DIGC1220	Installation of Heat Exchanger (3 nos.)	14	11-Nov-22	24-Nov-22	10-Oct-22	23-Oct-22	-32	S5DIGC1210	S5DIGC1230
S5DIGC1230	Installation of Sludge Transfer Pump (2 nos.)	14	25-Nov-22	08-Dec-22	24-Oct-22	06-Nov-22	-32	S5DIGC1220	S5DIGC1240
S5DIGC1240	Installation of Vertical Mixer at Sludge Buffer Tank (2 nos.)	7	09-Dec-22	15-Dec-22	07-Nov-22	13-Nov-22	-32	S5DIGC1230	S5DIGC1250
S5DIGC1250	Installation of Pipework, Valve & Instruments	150	16-Dec-22	14-May-23	14-Nov-22	12-Apr-23	-32	S5DIGC1240, S5DIGP1020	S5DIGC1260, S5DIGT1000
S5DIGC1260	Installation of Electrical System	150	20-Dec-22	18-May-23	14-Nov-22	12-Apr-23	-36	S5DIGC1250, S5P1130	S5DIGC1270, S5DIGT1010
S5DIGC1270	Installation of SCADA & PLC System	90	18-Feb-23	18-May-23	11-Feb-23	11-May-23	-7	S5DIGC1260, S5DIGP1050	S5T1080, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
BS Installation		240	02-Oct-22	29-May-23	04-Jun-23	31-Jan-24	247		
Distribution Chamber		240	02-Oct-22	29-May-23	04-Jun-23	31-Jan-24	247		
S5DIGC1280	Installation of FS System	90	02-Oct-22	30-Dec-22	04-Jun-23	01-Sep-23	245	S5DIGC1210	S5DIGC1290, S5S1220
S5DIGC1290	Installation of MVAC System	90	31-Dec-22	30-Mar-23	02-Sep-23	30-Nov-23	245	S5DIGC1280, S5P1140	S5DIGC1300, S5S1220
S5DIGC1300	Installation of Plumbing System	60	31-Mar-23	29-May-23	03-Dec-23	31-Jan-24	247	S5S1120, S5DIGC1290	S5S1160
Testing and Commissioning		441	01-Mar-23	14-May-24	31-Jan-23	30-May-23	-350		
S5DIGT1000	Pipe Pressure Test	75	01-Mar-23	14-May-23	31-Jan-23	15-Apr-23	-29	S5DIGC1250	S5DIGT1020



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 35 of 46

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31-Aug-22	Rev.25	LT	KM

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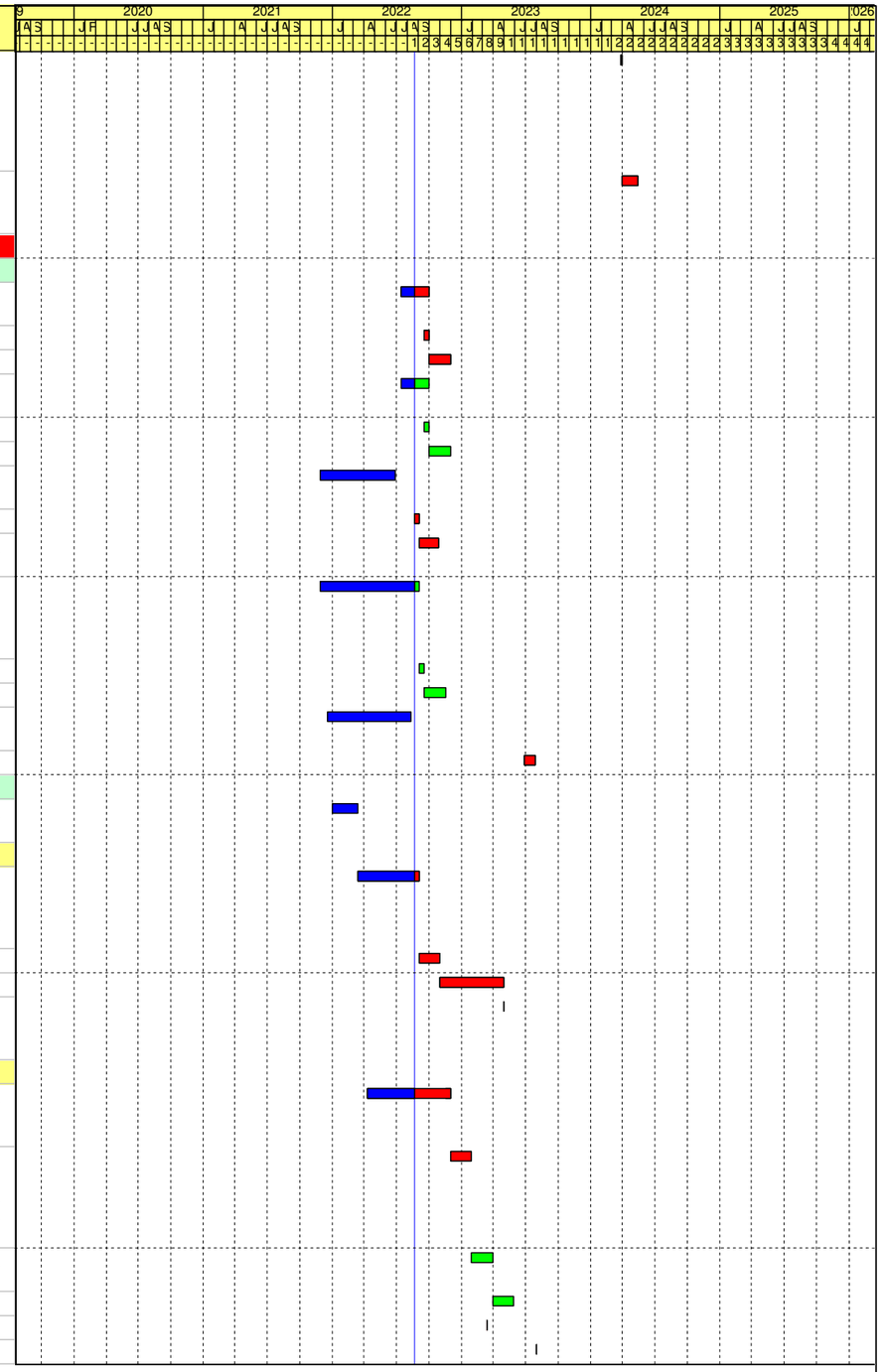
S5DIGT1010	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-Apr-23	15-Apr-23	-350	S5DIGC1260, S5DIGC1200, S5DIGC1160, S5DIGC1120, S5WS2C1110, S5EXAC1030	S5DIGT1020
S5DIGT1020	SAT for Sludge Digestion System	45	31-Mar-24	14-May-24	16-Apr-23	30-May-23	-350	S5DIGC1080, S5DIGT1010, S5DIGT1000	S5T1080
Workshop No. 2		860	29-Nov-21 A	29-May-24	12-Jun-22	27-Feb-24	-92		
Fabrication, FAT & Delivery of Major Plant & Materials		554	29-Nov-21 A	28-Jul-23	12-Jun-22	01-Sep-23	34		
S5WS2P1000	Fabrication of 11kV Transfomers	80	14-Jul-22 A	01-Oct-22	21-Jun-22	01-Aug-22	-61	S2P1110	S5WS2P1010
S5WS2P1010	FAT for 11kV Transfomers	14	18-Sep-22	01-Oct-22	19-Jul-22	01-Aug-22	-61	S5WS2P1000	S5WS2P1020
S5WS2P1020	Delivery of 11kV Transfomers	60	02-Oct-22	30-Nov-22	02-Aug-22	30-Sep-22	-61	S5WS2P1010	S5CHPC1130
S5WS2P1030	Fabrication of 380V Transfomers	80	14-Jul-22 A	01-Oct-22	01-Sep-22	12-Oct-22	11	S2P1110, S2D1270	S5WS2P1040
S5WS2P1040	FAT for 380V Transfomers	14	18-Sep-22	01-Oct-22	29-Sep-22	12-Oct-22	11	S5WS2P1030	S5WS2P1050
S5WS2P1050	Delivery of 380V Transfomers	60	02-Oct-22	30-Nov-22	13-Oct-22	11-Dec-22	11	S5WS2P1040	S5SDBC1210
S5WS2P1060	Fabrication of 11 kV Switchboard	120	29-Nov-21 A	26-Jun-22 A	12-Jun-22	12-Jun-22		S2P1120	S5WS2P1070
S5WS2P1070	FAT for 11 kV Switchboard	14	21-Aug-22	03-Sep-22	12-Jun-22	25-Jun-22	-70	S5WS2P1060	S5WS2P1080
S5WS2P1080	Delivery of 11 kV Switchboard	55	04-Sep-22	28-Oct-22	26-Jun-22	19-Aug-22	-70	S5WS2P1070	S5WS2C1060, S5CHPC1140
S5WS2P1090	Fabrication of 380V Switchboard	120	29-Nov-21 A	04-Sep-22	02-Sep-22	16-Sep-22	12	S2P1130, S2D1250, S2D1190, S2D1270	S5WS2P1100
S5WS2P1100	FAT for 380V Switchboard	14	05-Sep-22	18-Sep-22	17-Sep-22	30-Sep-22	12	S5WS2P1090	S5WS2P1110
S5WS2P1110	Delivery of 380V Switchboard	60	19-Sep-22	17-Nov-22	01-Oct-22	29-Nov-22	12	S5WS2P1100	S5CHPC1260
S5WS2P1120	Fabrication & Delivery of Lift	210	18-Dec-21 A	10-Aug-22 A	01-Sep-23	01-Sep-23			S5WS2C1190
S5WS2P1130	Delivery of Control & Monitoring System / SCADA System	30	29-Jun-23	28-Jul-23	12-Apr-23	11-May-23	-78	S5P1090	S5WS2C1180
Installation		704	31-Dec-21 A	25-Dec-23	02-Aug-22	31-Jan-24	37		
S5WS2C1000	Mobilisation	14	31-Dec-21 A	12-Mar-22 A	02-Aug-22	02-Aug-22		AD1120, S5S1030	S5WS2C1010, S5WS2C1050
CLP Substation		407	14-Mar-22 A	01-May-23	02-Aug-22	12-Apr-23	-19		
S5WS2C1010	BS Fitting Installation (at CLP Sub-station in Workshop No.2)	60	14-Mar-22 A	02-Sep-22	02-Aug-22	14-Aug-22	-19	S5WS2C1000, AD1120	KD1060, S5WS2C1020, S5WS2C1050, KD1060-1
S5WS2C1020	Inspections, Rectification & H/O to CLP	60	03-Sep-22	01-Nov-22	15-Aug-22	13-Oct-22	-19	S5WS2C1010	S5WS2C1030
S5WS2C1030	E&M Installation of HV Transformer (By CLP)	180	02-Nov-22	30-Apr-23	14-Oct-22	11-Apr-23	-19	S5WS2C1020	S5WS2C1040
S5WS2C1040	Energisation (By CLP)	1	01-May-23	01-May-23	12-Apr-23	12-Apr-23	-19	S5WS2C1030, S5WS2C1060, S5S1000	S5TXRT1010
HV Switchroom / Transformer Room / LV Switchroom		610	11-Apr-22 A	23-Dec-23	02-Sep-22	26-Nov-23	-27		
S5WS2C1050	BS Fitting Intallation	60	11-Apr-22 A	30-Nov-22	02-Sep-22	13-Sep-22	-78	S5WS2C1000, S5WS2C1010, S5P1140	S5WS2C1060, S5WS2C1140
S5WS2C1060	HV Switchroom Installation	60	01-Dec-22	29-Jan-23	26-Nov-22	24-Jan-23	-5	S5WS2C1050, S5WS2P1080	S5WS2C1130, S5TXRT1010, S5WS2C1040, S5WS2C1070, S5WS2T1000
S5WS2C1070	TX Room Installation	60	30-Jan-23	30-Mar-23	30-Jul-23	27-Sep-23	181	S5WS2C1060	S5WS2C1080, S5WS2T1000
S5WS2C1080	LV Switchroom Installation	60	31-Mar-23	29-May-23	28-Sep-23	26-Nov-23	181	S5WS2C1070	S5WS2T1000
S5WS2C1090	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	15-Nov-22	15-Nov-22	-119		S5WS2C1110
S5WS2C1100	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	31-Jul-23*	31-Jul-23	15-Nov-22	15-Nov-22	-258		S5WS2C1110



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 36 of 46

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 Aug 2022

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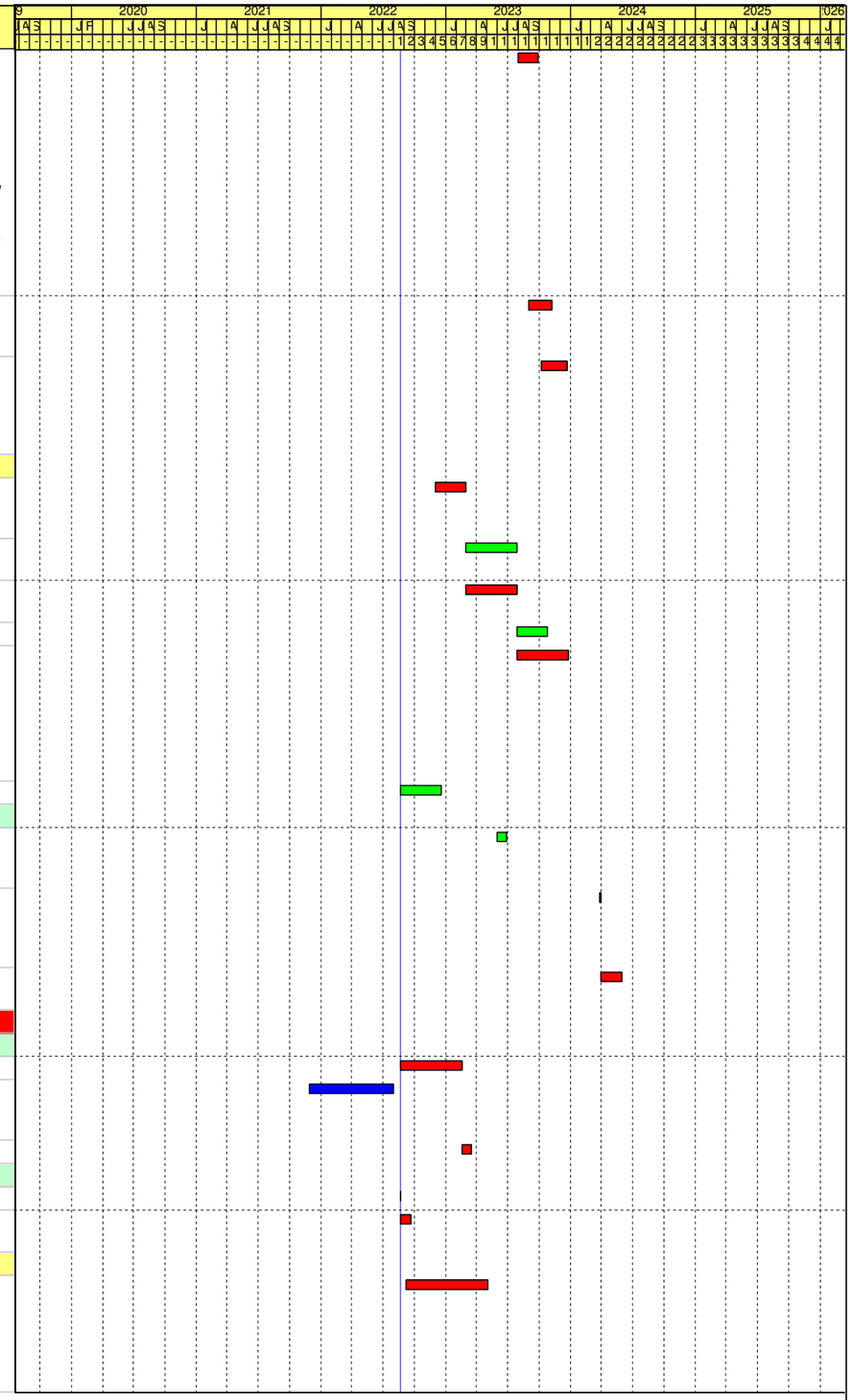
30-Apr-22	Rev.21	LT	KM
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5WS2C1110	Main Cables Laying between Workshop No.2 & Tx Rm for CHP Bldg	60	01-Aug-23	29-Sep-23	16-Nov-22	14-Jan-23	-258	S5CHPC1190, S5WS2C1090, S5WS2C1100	S5CHPT1020, S5DIGT1010, S5WS2C1120, S5WS2T1010, S5BIOT1000, S5THPT1000, S5H2ST1000, S5WGBT1000, S5DOUT1010, S5SPST1000, S5TCWT1000, S5FCDT1000, PL1210
S5WS2C1120	Main Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg	70	31-Aug-23	08-Nov-23	16-Dec-22	23-Feb-23	-258	S5WS2C1110	S5SDBT1020, S5WS2C1130, PL1210
S5WS2C1130	Main Cables Laying between Workshop No.2 & Tx Rm for UV System No.1	75	10-Oct-23	23-Dec-23	25-Jan-23	09-Apr-23	-258	S5WS2C1060, S5WS2C1120	S5TXRT1010, S5PSWT1000, S5DOUT1000, S5SHPT1000, PL1210
Building Services		492	21-Aug-22	25-Dec-23	14-Sep-22	31-Jan-24	37		
S5WS2C1140	Installation of FS System	90	01-Dec-22	28-Feb-23	14-Sep-22	12-Dec-22	-78	S5WS2C1050, S5S1120	S5WS2C1150, S5S1130, S5WS2C1160
S5WS2C1150	Installation of MVAC System	150	01-Mar-23	28-Jul-23	04-Jul-23	30-Nov-23	125	S5WS2C1140, S5P1140	S5S1220
S5WS2C1160	Installation of Electrical System	150	01-Mar-23	28-Jul-23	13-Dec-22	11-May-23	-78	S5WS2C1140, S5P1130	S5WS2C1170, S5WS2C1180
S5WS2C1170	Installation of Plumbing System	90	29-Jul-23	26-Oct-23	03-Nov-23	31-Jan-24	97	S5WS2C1160	S5S1160
S5WS2C1180	Installation of SCADA Sys. / Control Monitoring Sys. / Gas Detection Sys. / CCTV Sys. / IT&PABX Sys. / ACS Sys.	150	29-Jul-23	25-Dec-23	12-May-23	08-Oct-23	-78	S5WS2C1160, S5WS2P1130	S5T1200, S5T1000, S5T1010, S5T1020, S5T1030, S5S0990, PL1210
S5WS2C1190	Installation of Lift	120	21-Aug-22	18-Dec-22	01-Sep-23	29-Dec-23	376	S5WS2P1120	S5WS2T1020
Testing and Commissioning		366	30-May-23	29-May-24	27-Nov-23	27-Feb-24	-92		
S5WS2T1000	SAT for Transformer & Switchboard	30	30-May-23	28-Jun-23	27-Nov-23	26-Dec-23	181	S5WS2C1080, S5WS2C1070, S5WS2C1060	S5WS2T1010
S5WS2T1010	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	27-Dec-23	29-Dec-23	-92	S5WS2T1000, S5WS2C1110, S5CHPC1190, S5EXAC1030	S5WS2T1020
S5WS2T1020	SAT for Lift	60	31-Mar-24	29-May-24	30-Dec-23	27-Feb-24	-92	S5WS2C1190, S5WS2T1010	S5S1090
Biogas Storage		861	29-Nov-21 A	29-Apr-24	16-May-22	29-Jun-23	-305		
Fabrication, FAT & Delivery of Major Plant & Materials		453	29-Nov-21 A	18-Mar-23	01-Jun-22	26-Jan-23	-51		
S5BIOP1000	Fabrication & Delivery of Biogas Booster and Transfer Pumps	180	22-Aug-22	17-Feb-23	31-Jul-22	26-Jan-23	-22	S5P1000	S5BIOC1020
S5BIOP1010	Fabrication & Delivery of Biogas Storage	180	29-Nov-21 A	30-Jul-22 A	01-Jun-22	01-Jun-22		S2P1050, S2D1530	S5BIOC1020, S5BIOC1030, S5BIOC1040
S5BIOP1020	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	13-Nov-22	12-Dec-22	-96	S5P1090	S5BIOC1050
Installation		361	21-Aug-22	16-Aug-23	16-May-22	11-May-23	-97		
S5BIOC1000	Access to Biogas Holding Tanks (Impacted by EWN-0314-1)	1	21-Aug-22*	21-Aug-22	16-May-22	16-May-22	-97		S5BIOC1010
S5BIOC1010	Mobilisation	30	22-Aug-22	20-Sep-22	17-May-22	15-Jun-22	-97	AD1100, S5BIOC1000	S5BIOC1020
E&M Installation		344	06-Sep-22	15-Aug-23	01-Jun-22	11-May-23	-96		
S5BIOC1020	E&M Installation of Biogas Storage Tank 1	240	06-Sep-22	03-May-23	01-Jun-22	26-Jan-23	-97	AD1100, S5BIOP1010, S5S1060, S5BIOP1000, S5BIOC1010, S5P1130	S5BIOC1030, S5BIOT1000



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 37 of 46

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Milestone
Actual Progress

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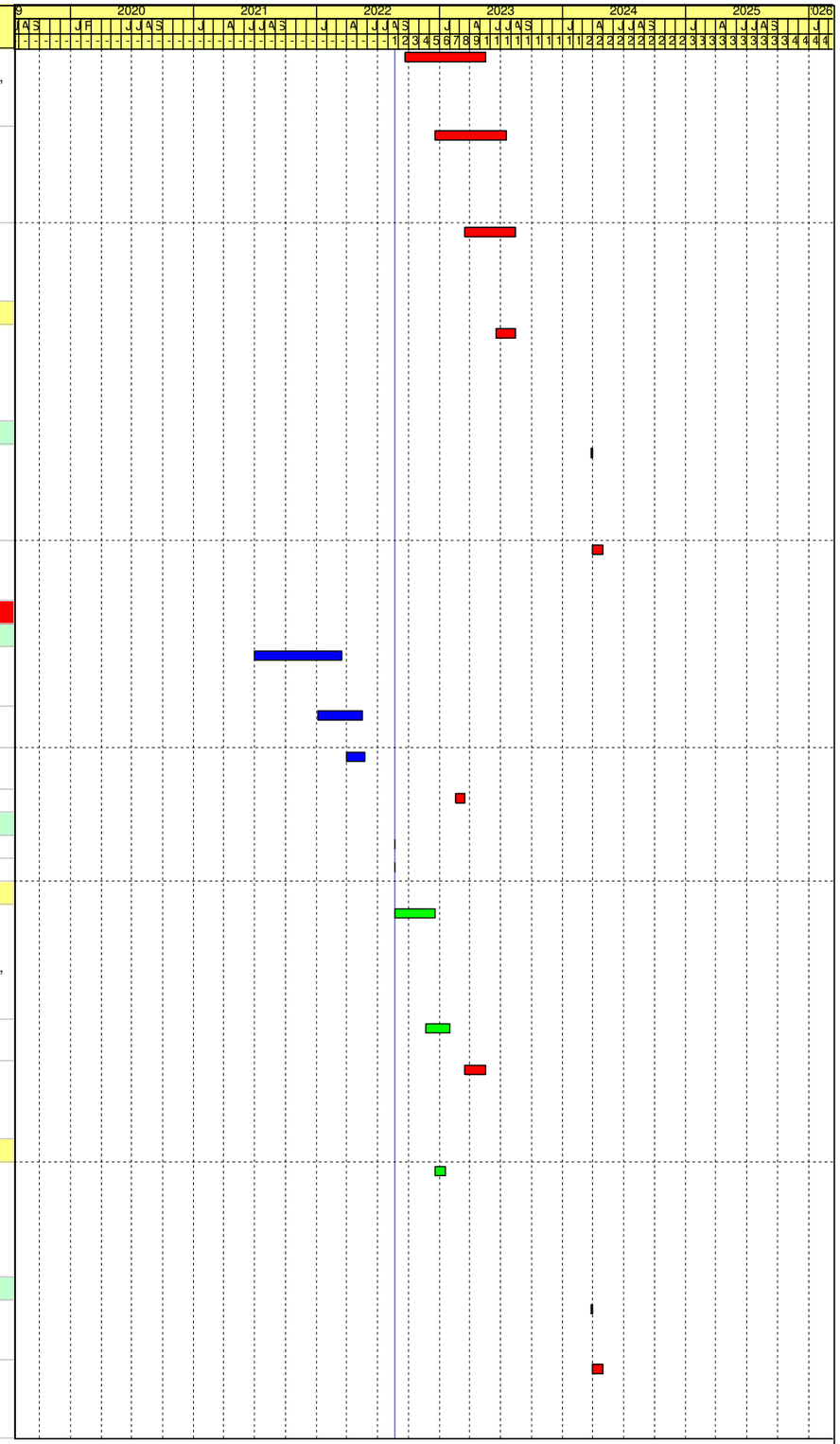
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5BIOC1030	E&M Installation of Biogas Storage Tank 2	240	21-Sep-22	18-May-23	16-Jun-22	10-Feb-23	-97	AD1100, S5BIOC1020, S5BIOP1010, S5P1130	S5BIOC1040, S5WGBC1020, S5BIOT1000
S5BIOC1040	E&M Installation of Biogas Storage Tank 3	210	20-Dec-22	17-Jul-23	14-Sep-22	11-Apr-23	-97	AD1100, S5BIOC1030, S5BIOP1010, S5P1130	S5BIOT1010, S5BIOC1060, S5BIOT1000, PL1210, S5BIOC1050
S5BIOC1050	Installation of SCADA System / Control Monitoring System	150	19-Mar-23	15-Aug-23	13-Dec-22	11-May-23	-96	S5BIOC1040, S5BIOP1020	S5T1000, S5T1010, S5T1020, S5T1030
BS Installation		60	18-Jun-23	16-Aug-23	13-Mar-23	11-May-23	-97		
S5BIOC1060	BS Installation for Biogas Holding Tanks	60	18-Jun-23	16-Aug-23	13-Mar-23	11-May-23	-97	S5THPC1050, S5BIOC1040	S5S1160, S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	28-Mar-24	29-Apr-24	28-May-23	29-Jun-23	-305		
S5BIOT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	28-May-23	30-May-23	-305	S5BIOC1040, S5BIOC1030, S5BIOC1020, S5WS2C1110, S5EXAC1030	S5BIOT1010
S5BIOT1010	SAT for Biogas Storage System	30	31-Mar-24	29-Apr-24	31-May-23	29-Jun-23	-305	S5BIOC1040, S5CHPT1020, S5BIOT1000	S5T1070
THP Area		994	29-Jun-21 A	29-Apr-24	01-Nov-22	15-May-23	-350		
Fabrication, FAT & Delivery of Major Plant & Materials		586	29-Jun-21 A	18-Mar-23	02-Nov-22	12-Mar-23	-6		
S5THPP1000	Fabrication of THP System	300	29-Jun-21 A	18-Mar-22 A	02-Nov-22	02-Nov-22		S2P1040, S2D1410, S2D1370	S5THPP1010
S5THPP1010	FAT for THP System	14	03-Jan-22 A	17-May-22 A	02-Nov-22	02-Nov-22		S5THPP1000	S5THPP1020
S5THPP1020	Delivery of THP System	60	29-Mar-22 A	23-May-22 A	02-Nov-22	02-Nov-22		S5THPP1010	S5THPC1020
S5THPP1030	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	11-Feb-23	12-Mar-23	-6	S5P1090	S5THPC1040
Installation		270	21-Aug-22	17-May-23	01-Nov-22	11-May-23	-6		
S5THPC1000	Access to THP Area (Impacted by EWN-0314)	1	21-Aug-22*	21-Aug-22	01-Nov-22	01-Nov-22	72		S5THPC1020
S5THPC1010	Access to THP Area (Impacted by EWN-0314-1)	1	21-Aug-22*	21-Aug-22	01-Nov-22	01-Nov-22	72		S5THPC1020
E&M Installation		269	22-Aug-22	17-May-23	02-Nov-22	11-May-23	-6		
S5THPC1020	E&M Installation of THP System	120	22-Aug-22	19-Dec-22	02-Nov-22	01-Mar-23	72	AD1100, S5THPP1020, S5S1020, S5THPC1000, S5THPC1010, S5P1130	S5THPC1030, S5THPT1010, S5THPC1050, S5WGBC1020, S5THPT1000, S5THPC1040
S5THPC1030	E&M Installation of Thickened Sludge Feed Pipe to THP System	75	20-Nov-22	02-Feb-23	31-Jan-23	15-Apr-23	72	S5THPC1020	S5THPT1010, PL1210
S5THPC1040	Installation of SCADA System / Control Monitoring System	60	19-Mar-23	17-May-23	13-Mar-23	11-May-23	-6	S5THPC1020, S5THPP1030	S5T1000, S5T1010, S5T1020, S5T1030
BS Installation		30	20-Dec-22	18-Jan-23	12-Apr-23	11-May-23	113		
S5THPC1050	BS Installation for THP Facilities	30	20-Dec-22	18-Jan-23	12-Apr-23	11-May-23	113	S5THPC1020	S5BIOC1060, S5S1160, S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	28-Mar-24	29-Apr-24	13-Apr-23	15-May-23	-350		
S5THPT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-Apr-23	15-Apr-23	-350	S5THPC1020, S5WS2C1110, S5EXAC1030	S5THPT1010
S5THPT1010	SAT of THP System	30	31-Mar-24	29-Apr-24	16-Apr-23	15-May-23	-350	S5THPC1020, S5THPC1030, S5CHPT1020, S5THPT1000	S5T1050



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 38 of 46

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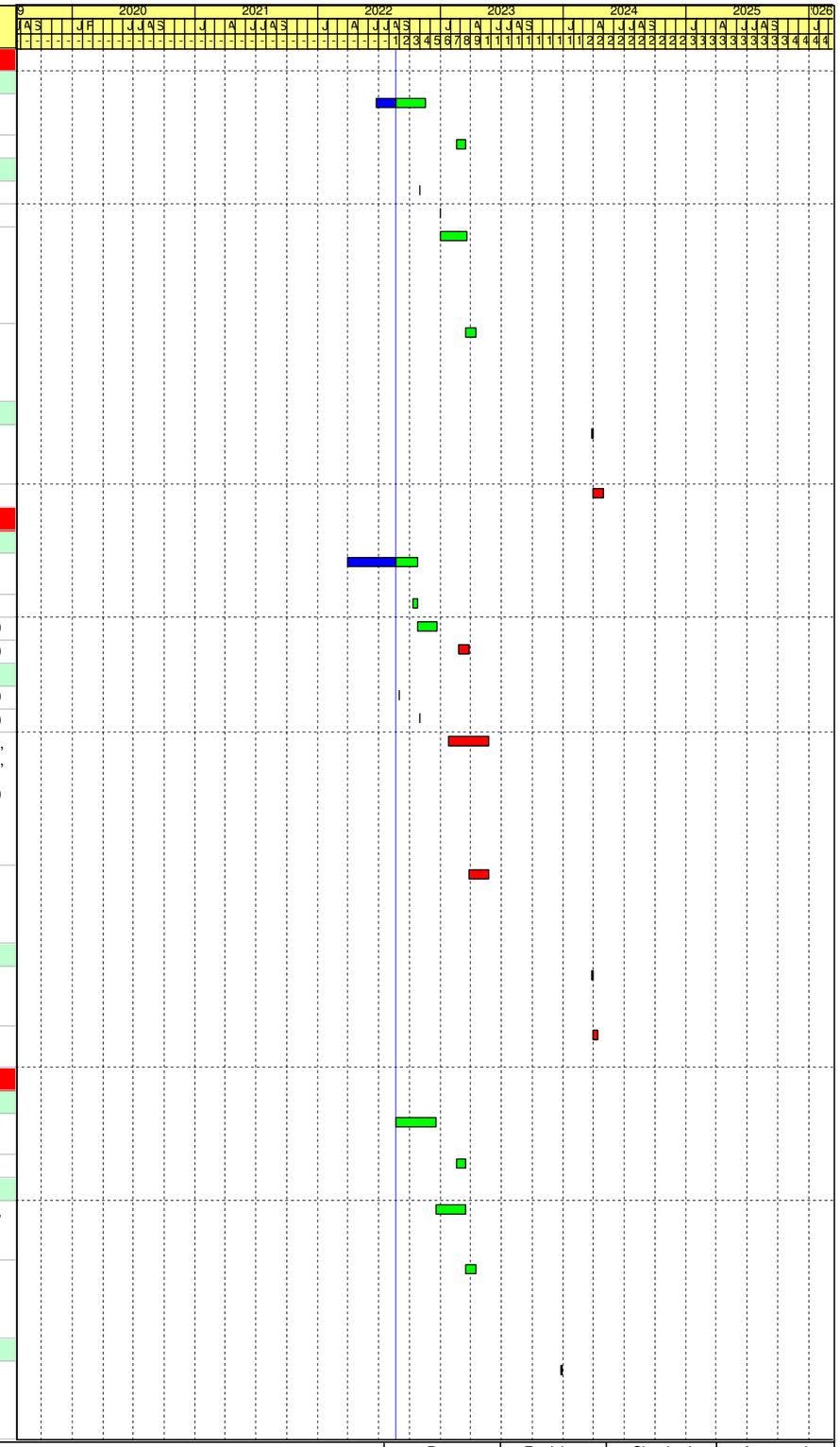
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
H2S Removal Area		618	23-Jun-22 A	29-Apr-24	25-Oct-22	30-May-23	-335		
Fabrication, FAT & Delivery of Major Plant & Materials		210	23-Jun-22 A	18-Mar-23	25-Oct-22	11-Apr-23	24		
S5H2SP1000	Fabrication & Delivery of H2S Removal System	150	23-Jun-22 A	19-Nov-22	25-Oct-22	23-Jan-23	65	S2P1060, S2D1530	S5H2SC1020
S5H2SP1010	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	13-Mar-23	11-Apr-23	24	S5P1090	S5H2SC1030
Installation		169	31-Oct-22	17-Apr-23	06-Feb-23	11-May-23	24		
S5H2SC1000	Access to H2S Removal Area (Impacted by EWN-0314)	1	31-Oct-22*	31-Oct-22	06-Feb-23	06-Feb-23	98		S5H2SC1020
S5H2SC1010	Access to H2S Removal Area (Impacted by EWN-0314-1)	1	31-Dec-22*	31-Dec-22	06-Feb-23	06-Feb-23	37		S5H2SC1020
S5H2SC1020	E&M Installation of H2S Removal System	80	01-Jan-23	21-Mar-23	07-Feb-23	27-Apr-23	37	AD1100, S5H2SP1000, S5H2SC1000, S5H2SC1010, S5P1130	S5H2ST1000, PL1210, S5H2SC1030
S5H2SC1030	Installation of SCADA System / Control Monitoring System	30	19-Mar-23	17-Apr-23	12-Apr-23	11-May-23	24	S5H2SC1020, S5H2SP1010	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	28-Mar-24	29-Apr-24	28-Apr-23	30-May-23	-335		
S5H2ST1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	28-Apr-23	30-Apr-23	-335	S5H2SC1020, S5WS2C1110, S5EXAC1030	S5H2ST1010
S5H2ST1010	SAT of H2S Removal System	30	31-Mar-24	29-Apr-24	01-May-23	30-May-23	-335	S5H2ST1000	S5T1080
Waste Gas Burning Area		664	29-Mar-22 A	14-Apr-24	09-Sep-22	14-Jul-23	-275		
Fabrication, FAT & Delivery of Major Plant & Materials		279	29-Mar-22 A	26-Mar-23	09-Sep-22	12-Mar-23	-14		
S5WGBP1000	Fabrication of Waste Gas Burning System	210	29-Mar-22 A	24-Oct-22	09-Sep-22	12-Nov-22	19	S2P1080, S2D1650	S5WGBP1010
S5WGBP1010	FAT for Waste Gas Burning System	14	11-Oct-22	24-Oct-22	30-Oct-22	12-Nov-22	19	S5WGBP1000	S5WGBP1020
S5WGBP1020	Delivery of Waste Gas Burning System	60	25-Oct-22	23-Dec-22	13-Nov-22	11-Jan-23	19	S5WGBP1010	S5WGBC1020
S5WGBP1030	Delivery of Control & Monitoring System / SCADA System	30	25-Feb-23	26-Mar-23	11-Feb-23	12-Mar-23	-14		S5WGBC1030
Installation		268	31-Aug-22	25-May-23	11-Jan-23	11-May-23	-14		
S5WGBC1000	Access to Waste Gas Burning Area (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	11-Jan-23	11-Jan-23	133		S5WGBC1020
S5WGBC1010	Access to Waste Gas Burning Area (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	11-Jan-23	11-Jan-23	72		S5WGBC1020
S5WGBC1020	E&M Installation of Waste Gas Burning System	120	26-Jan-23	25-May-23	12-Jan-23	11-May-23	-14	AD1100, S5WGBP1020, S5BIOC1030, S5THPC1020, S5WGBC1000, S5WGBC1010, S5P1130	S5WGBT1010, S5WGBT1000, PL1210, S5WGBC1030
S5WGBC1030	Installation of SCADA System / Control Monitoring System	60	27-Mar-23	25-May-23	13-Mar-23	11-May-23	-14	S5WGBP1030, S5WGBC1020	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		18	28-Mar-24	14-Apr-24	27-Jun-23	14-Jul-23	-275		
S5WGBT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	27-Jun-23	29-Jun-23	-275	S5WGBC1020, S5WS2C1110, S5EXAC1030	S5WGBT1010
S5WGBT1010	SAT for Gas Burning System	15	31-Mar-24	14-Apr-24	30-Jun-23	14-Jul-23	-275	S5WGBC1020, S5WGBT1000	S5T1090
Plant Service Water Area		541	21-Aug-22	12-Feb-24	15-Sep-22	30-May-23	-258		
Fabrication, FAT & Delivery of Major Plant & Materials		210	21-Aug-22	18-Mar-23	15-Sep-22	11-Apr-23	24		
S5PSWP1000	Fabrication & Delivery of Plant Service Water System	120	21-Aug-22	18-Dec-22	15-Sep-22	12-Jan-23	25	S2P1090, S2D1690	S5PSWC1000
S5PSWP1010	Delivery of SCADA System	30	17-Feb-23	18-Mar-23	13-Mar-23	11-Apr-23	24	S5P1090	S5PSWC1010
Installation		120	19-Dec-22	17-Apr-23	13-Jan-23	11-May-23	24		
S5PSWC1000	E&M Installation of Plant Service Water System	90	19-Dec-22	18-Mar-23	13-Jan-23	12-Apr-23	25	AD1100, S5PSWP1000	S5PSWT1000, PL1210, S5PSWC1010
S5PSWC1010	Installation of SCADA System / Control Monitoring System	30	19-Mar-23	17-Apr-23	12-Apr-23	11-May-23	24	S5PSWP1010, S5PSWC1000	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		48	27-Dec-23	12-Feb-24	13-Apr-23	30-May-23	-258		
S5PSWT1000	Ready for Power Energisation	3	27-Dec-23	29-Dec-23	13-Apr-23	15-Apr-23	-258	S5PSWC1000, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5PSWT1010



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 39 of 46

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Milestone
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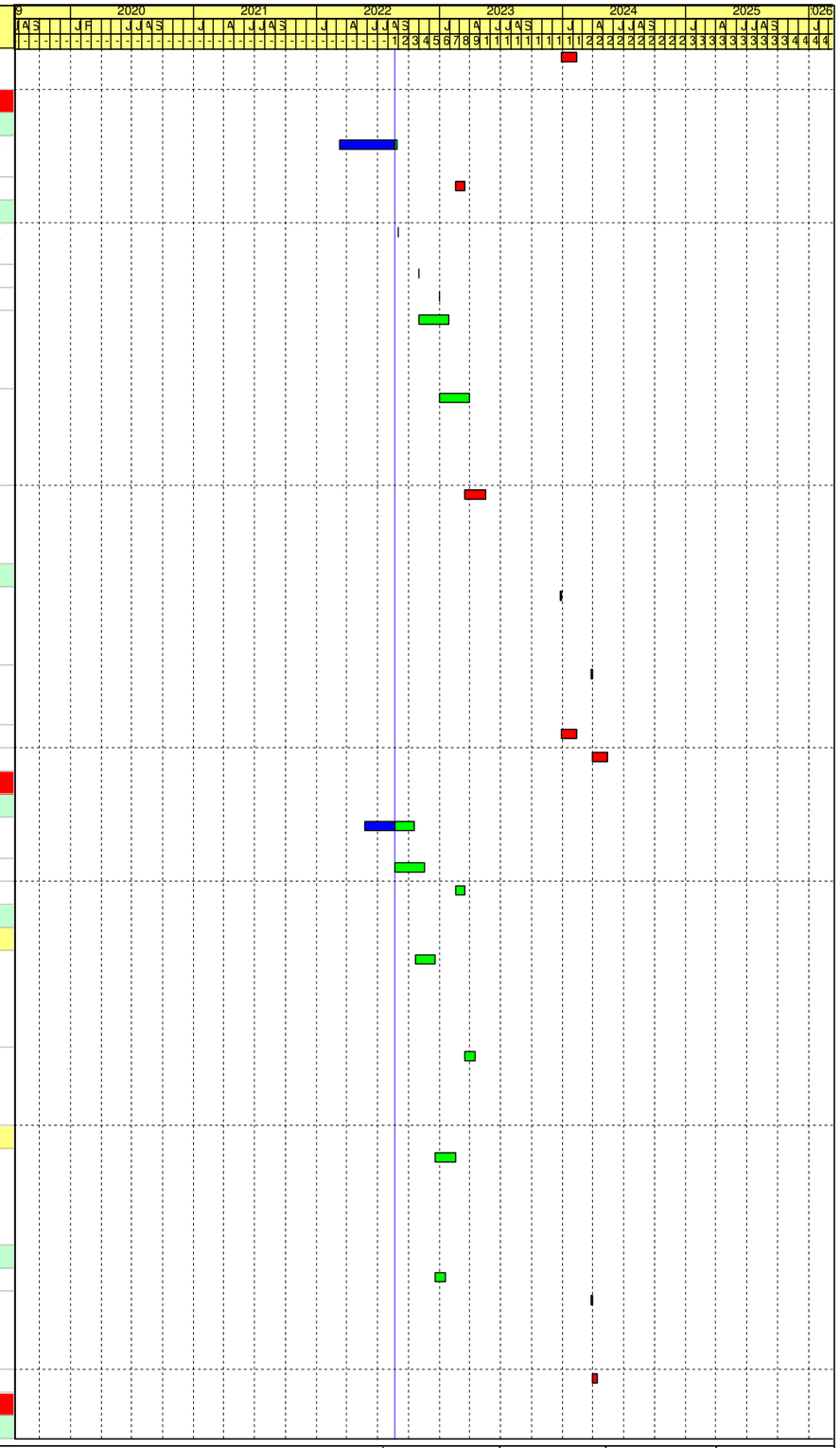
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5PSWT1010	SAT & System Commissioning Tests for Plant Services Water System	45	30-Dec-23	12-Feb-24	16-Apr-23	30-May-23	-258	S5PSWT1000, S5UVPC1000	S5T1060
DO Area		725	10-Mar-22 A	14-May-24	07-Jan-23	29-Jun-23	-320		
Fabrication, FAT & Delivery of Major Plant & Materials		302	10-Mar-22 A	18-Mar-23	07-Jan-23	12-Mar-23	-6		
S5DOUP1000	Fabrication & Delivery of DO System	150	10-Mar-22 A	26-Aug-22	07-Jan-23	12-Jan-23	139	S2P1150, S2D1930	S5DOUC1030, S5DOUC1040
S5DOUP1010	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	11-Feb-23	12-Mar-23	-6	S5P1090	S5DOUC1050
Installation		260	31-Aug-22	17-May-23	12-Jan-23	11-May-23	-6		
S5DOUC1000	Access to DO Area (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	12-Jan-23	12-Jan-23	134		S5DOUC1030, S5DOUC1040
S5DOUC1010	Access to DO Area No.11 (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	12-Jan-23	12-Jan-23	73		S5DOUC1030
S5DOUC1020	Access to DO Area No.12 (Impacted by EWN-0314-1)	1	31-Dec-22*	31-Dec-22	10-Feb-23	10-Feb-23	41		S5DOUC1040
S5DOUC1030	E&M Installation of DO System No.11	90	01-Nov-22	29-Jan-23	13-Jan-23	12-Apr-23	73	AD1100, S5DOUP1000, S5DOUC1000, S5DOUC1010	S5DOUT1000
S5DOUC1040	E&M Installation of DO System No.12	90	01-Jan-23	31-Mar-23	11-Feb-23	11-May-23	41	AD1100, S5DOUP1000, S5DOUC1000, S5DOUC1020, S5P1130	S5DOUT1010, PL1210, S5DOUC1050
S5DOUC1050	Installation of SCADA System / Control Monitoring System	60	19-Mar-23	17-May-23	13-Mar-23	11-May-23	-6	S5DOUP1010, S5DOUC1040	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		140	27-Dec-23	14-May-24	13-Apr-23	29-Jun-23	-320		
S5DOUT1000	Ready for Power Energisation of DO No.11	3	27-Dec-23	29-Dec-23	13-Apr-23	15-Apr-23	-258	S5DOUC1030, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5DOUT1020
S5DOUT1010	Ready for Power Energisation of DO No.12	3	28-Mar-24	30-Mar-24	13-May-23	15-May-23	-320	S5DOUC1040, S5WS2C1110, S5EXAC1030	S5DOUT1030
S5DOUT1020	SAT & System Commissioning Tests for DO System No.11	45	30-Dec-23	12-Feb-24	16-Apr-23	30-May-23	-258	S5DOUT1000	S5T1060
S5DOUT1030	SAT & System Commissioning Tests for DO System No.12	45	31-Mar-24	14-May-24	16-May-23	29-Jun-23	-320	S5DOUT1010	S5T1080
Sewage Pump Station		664	23-May-22 A	14-Apr-24	13-Nov-22	30-May-23	-320		
Fabrication, FAT & Delivery of Major Plant & Materials		271	23-May-22 A	18-Mar-23	13-Nov-22	11-Apr-23	24		
S5SPSP1000	Fabrication & Delivery of Sewage Pump	150	23-May-22 A	19-Oct-22	13-Nov-22	11-Jan-23	84	S2P1180, S2D1940	S5SPSC1000
S5SPSP1010	Fabrication & Delivery of LV Switchboard	90	21-Aug-22	18-Nov-22	13-Nov-22	10-Feb-23	84		S5SPSC1000
S5SPSP1020	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	13-Mar-23	11-Apr-23	24	S5P1090	S5SPSC1010
Installation		180	20-Oct-22	17-Apr-23	12-Jan-23	11-May-23	24		
E&M Installation		180	20-Oct-22	17-Apr-23	12-Jan-23	11-May-23	24		
S5SPSC1000	E&M Installation of Sewage Pump	60	20-Oct-22	18-Dec-22	12-Jan-23	12-Mar-23	84	AD1100, S5SPSP1000, S5SPSP1010	S5SPSC1020, S5SPST1000, S5SPST0990, PL1210, S5SPSC1010
S5SPSC1010	Installation of SCADA System / Control Monitoring System	30	19-Mar-23	17-Apr-23	12-Apr-23	11-May-23	24	S5SPSP1020, S5SPSC1000	S5T1000, S5T1010, S5T1020, S5T1030
BS Installation		60	19-Dec-22	16-Feb-23	13-Mar-23	11-May-23	84		
S5SPSC1020	BS Installation for Sewage Pumping Station	60	19-Dec-22	16-Feb-23	13-Mar-23	11-May-23	84	S5SPSC1000, S5P1140	S5S1160, S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		483	19-Dec-22	14-Apr-24	13-Apr-23	30-May-23	-320		
S5SPST0990	SAT of Switchboard	30	19-Dec-22	17-Jan-23	13-Apr-23	12-May-23	115	S5SPSC1000	S5SPST1000
S5SPST1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-May-23	15-May-23	-320	S5SPSC1000, S5WS2C1110, S5EXAC1030, S5SPST0990	S5SPST1010
S5SPST1010	SAT & System Commissioning Tests for Sewage Pumping Station	15	31-Mar-24	14-Apr-24	16-May-23	30-May-23	-320	S5SPST1000	S5T1060
THP Cooling Water Transfer Pumping Station		664	23-May-22 A	14-Apr-24	29-Dec-22	15-May-23	-335		
Fabrication, FAT & Delivery of Major Plant & Materials		271	23-May-22 A	18-Mar-23	29-Dec-22	11-Apr-23	24		



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 40 of 46

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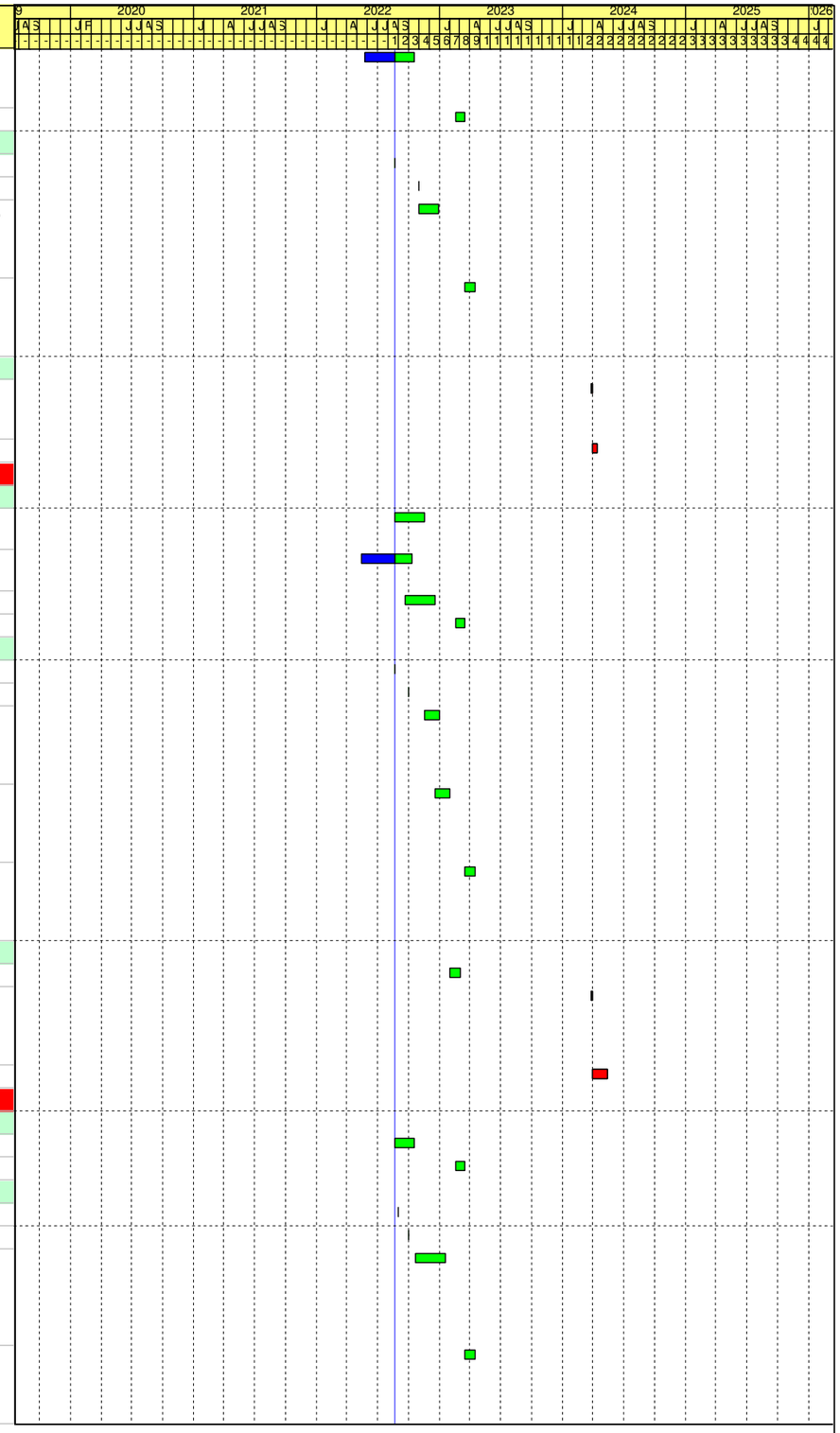
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5TCWP1000	Fabrication & Delivery of THP Cooling Pump	150	23-May-22 A	19-Oct-22	29-Dec-22	26-Feb-23	130	S2P1210, S2D1970, S2D1370	S5TCWC1020
S5TCWP1010	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	13-Mar-23	11-Apr-23	24	S5P1090	S5TCWC1030
Installation		240	21-Aug-22	17-Apr-23	26-Feb-23	11-May-23	24		
S5TCWC1000	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314)	1	21-Aug-22*	21-Aug-22	26-Feb-23	26-Feb-23	189		S5TCWC1020
S5TCWC1010	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	26-Feb-23	26-Feb-23	118		S5TCWC1020
S5TCWC1020	E&M Installation of THP Cooling Pump	60	01-Nov-22	30-Dec-22	27-Feb-23	27-Apr-23	118	AD1100, S5TCWP1000, S5TCWC1000, S5TCWC1010	S5TCWT1000, PL1210, S5TCWC1030
S5TCWC1030	Installation of SCADA System / Control Monitoring System	30	19-Mar-23	17-Apr-23	12-Apr-23	11-May-23	24	S5TCWP1010, S5TCWC1020	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		18	28-Mar-24	14-Apr-24	28-Apr-23	15-May-23	-335		
S5TCWT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	28-Apr-23	30-Apr-23	-335	S5TCWC1020, S5WS2C1110, S5EXAC1030	S5TCWT1010
S5TCWT1010	SAT & System Commissioning Tests for THP Cooling Water Pumping System	15	31-Mar-24	14-Apr-24	01-May-23	15-May-23	-335	S5TCWT1000	S5T1050
Ferric Chloride Dosing Facility		635	14-May-22 A	14-May-24	30-Sep-22	30-May-23	-350		
Fabrication, FAT & Delivery of Major Plant & Materials		212	14-May-22 A	18-Mar-23	30-Sep-22	11-Apr-23	24		
S5FCDP1000	Fabrication & Delivery of Ferric Chloride Storage Tank	90	21-Aug-22	18-Nov-22	30-Sep-22	28-Dec-22	40	S5P1030, S2D1980	S5FCDC1020
S5FCDP1010	Fabrication & Delivery of Ferric Chloride Dosing Pump	150	14-May-22 A	10-Oct-22	24-Nov-22	13-Jan-23	95	S5P1040, S2D1980	S5FCDC1030
S5FCDP1020	Fabrication & Delivery of LV Switchboard	90	20-Sep-22	18-Dec-22	30-Oct-22	27-Jan-23	40		S5FCDC1030
S5FCDP1030	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	13-Mar-23	11-Apr-23	24	S5P1090	S5FCDP1040
Installation		240	21-Aug-22	17-Apr-23	28-Dec-22	11-May-23	24		
S5FCDC1000	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314)	1	21-Aug-22*	21-Aug-22	28-Dec-22	28-Dec-22	129		S5FCDC1020
S5FCDC1010	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314-1)	1	30-Sep-22*	30-Sep-22	28-Dec-22	28-Dec-22	89		S5FCDC1020
S5FCDC1020	E&M Installation of Ferric Chloride Storage Tank	45	19-Nov-22	02-Jan-23	29-Dec-22	11-Feb-23	40	AD1100, S5FCDP1000, S5FCDC1000, S5FCDC1010	S5FCDC1030, S5S1280
S5FCDC1030	E&M Installation of Ferric Chloride Dosing Pump	45	19-Dec-22	01-Feb-23	28-Jan-23	13-Mar-23	40	AD1100, S5FCDC1020, S5FCDP1010, S5FCDP1020	S5FCDT1000, S5FCDT0990, PL1210, S5FCDP1040
S5FCDP1040	Installation of SCADA System / Control Monitoring System	30	19-Mar-23	17-Apr-23	12-Apr-23	11-May-23	24	S5FCDP1030, S5FCDC1030	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		468	02-Feb-23	14-May-24	14-Mar-23	30-May-23	-350		
S5FCDT0990	SAT of Switchboard	30	02-Feb-23	03-Mar-23	14-Mar-23	12-Apr-23	40	S5FCDC1030	S5FCDT1000
S5FCDT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-Apr-23	15-Apr-23	-350	S5FCDC1030, S5WS2C1110, S5EXAC1030, S5FCDT0990	S5FCDT1010
S5FCDT1010	SAT & System Commissioning Tests for FeCl3 Dosing Facility	45	31-Mar-24	14-May-24	16-Apr-23	30-May-23	-350	S5FCDT1000	S5T1080
Fire Hydrant and Booster Pump Room		526	21-Aug-22	28-Jan-24	13-Dec-22	30-Nov-23	-59		
Fabrication, FAT & Delivery of Major Plant & Materials		210	21-Aug-22	18-Mar-23	13-Dec-22	11-Apr-23	24		
S5SHPP1000	Fabrication & Delivery of Fire Hydrant and Booster Pump	60	21-Aug-22	19-Oct-22	13-Dec-22	10-Feb-23	114		S5SHPC1020
S5SHPP1010	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	13-Mar-23	11-Apr-23	24	S5P1090	S5SHPC1030
Installation		230	31-Aug-22	17-Apr-23	10-Feb-23	11-May-23	24		
S5SHPC1000	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314)	1	31-Aug-22*	31-Aug-22	10-Feb-23	10-Feb-23	163		S5SHPC1020
S5SHPC1010	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314-1)	1	30-Sep-22*	30-Sep-22	10-Feb-23	10-Feb-23	133		S5SHPC1020
S5SHPC1020	Fire Hydrant and Booster Pump Room Installation	90	20-Oct-22	17-Jan-23	11-Feb-23	11-May-23	114	S5S1120, AD1100, S5SHPC1000, S5SHPC1010, S5SHPP1000	S5S1130, S5SHPT1000, PL1210, S5SHPC1030
S5SHPC1030	Installation of SCADA System / Control Monitoring System	30	19-Mar-23	17-Apr-23	12-Apr-23	11-May-23	24	S5SHPP1010, S5SHPC1020	S5T1000, S5T1010, S5T1020, S5T1030



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 41 of 46

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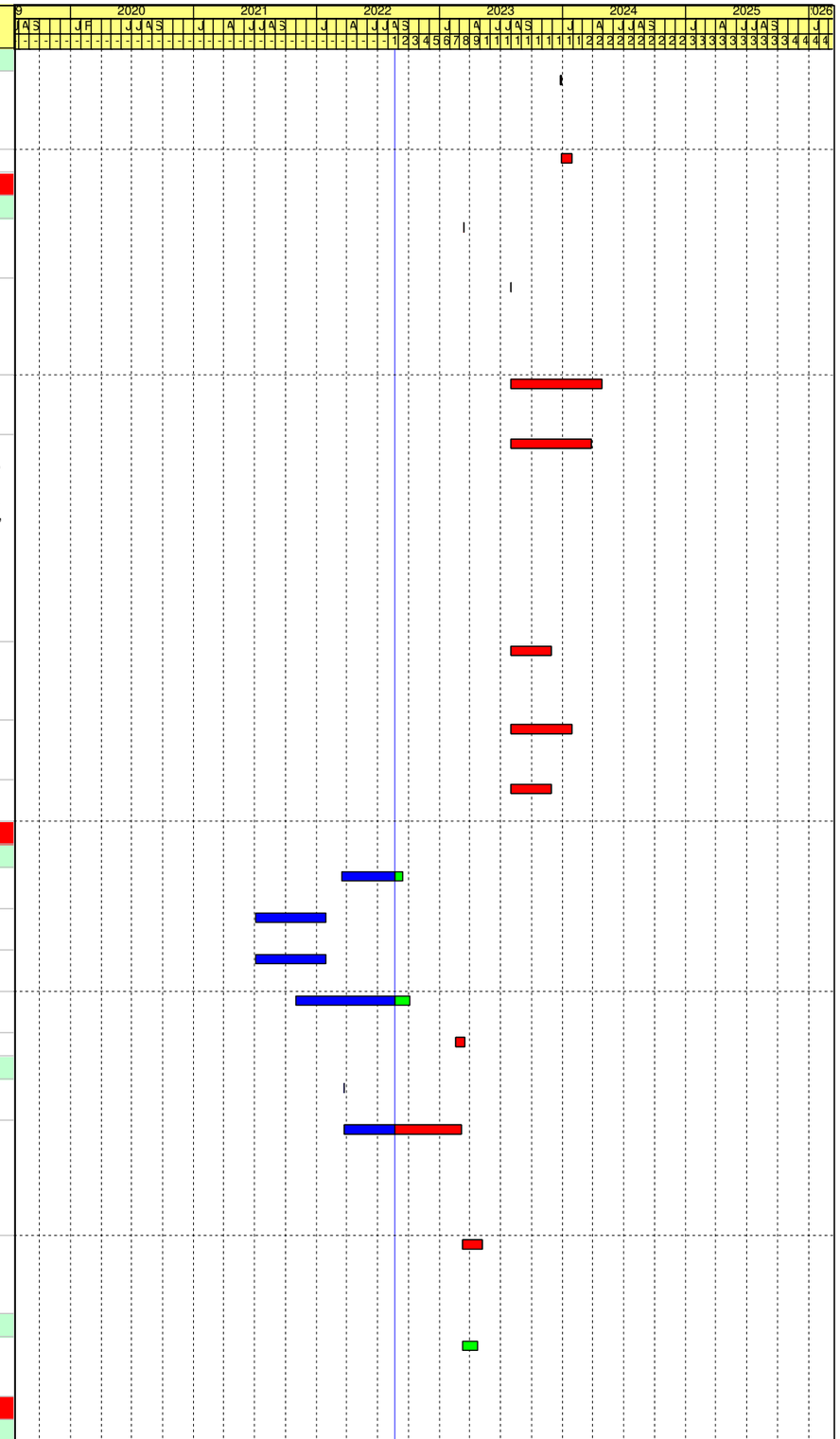
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
Testing and Commissioning		33	27-Dec-23	28-Jan-24	29-Oct-23	30-Nov-23	-59		
S5SHPT1000	Ready for Power Energisation	3	27-Dec-23	29-Dec-23	29-Oct-23	31-Oct-23	-59	S5SHPC1020, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5SHPT1010
S5SHPT1010	SAT for Fire Hydrant and Booster Pump	30	30-Dec-23	28-Jan-24	01-Nov-23	30-Nov-23	-59	S5SHPT1000	S5S1220
External Area		410	14-Mar-23	26-Apr-24	15-Aug-22	06-Nov-23	-172		
Installation		410	14-Mar-23	26-Apr-24	15-Aug-22	06-Nov-23	-172		
S5EXAC1000	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	18-Aug-22	18-Aug-22	-208		S5EXAC1020, S5EXAC1050, S5EXAC1060
S5EXAC1010	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	31-Jul-23*	31-Jul-23	15-Aug-22	15-Aug-22	-350		S5EXAC1020, S5EXAC1050, S5EXAC1060, S5EXAC1030, S5EXAC1040
S5EXAC1020	E&M Installation of Pipe Trench No.1, No.2 & No.3	270	01-Aug-23	26-Apr-24	19-Aug-22	15-May-23	-347	AD1100, S5EXAC1000, S5EXAC1010	S5T1050, PL1210
S5EXAC1030	Cable Laying from CHP to related Building / Area	240	01-Aug-23	27-Mar-24	16-Aug-22	12-Apr-23	-350	S5EXAC1010, S5P1130	S5FCDT1000, S5TCWT1000, S5SPST1000, S5DOUT1010, S5WGBT1000, S5H2ST1000, S5THPT1000, S5BIOT1000, S5WS2T1010, S5DIGT1010, PL1210
S5EXAC1040	Cable Laying from TX & SW Room to related Building / Area	120	01-Aug-23	28-Nov-23	14-Dec-22	12-Apr-23	-230	S5EXAC1010, S5P1130	S5SHPT1000, S5DOUT1000, S5PSWT1000, PL1210
S5EXAC1050	Road Lighting Installation	180	01-Aug-23	27-Jan-24	11-May-23	06-Nov-23	-82	AD1100, S5EXAC1000, S5EXAC1010	S5S1220, PL1210
S5EXAC1060	Landscape Lighting Installation	120	01-Aug-23*	28-Nov-23	10-Jul-23	06-Nov-23	-22	S5EXAC1000, S5EXAC1010	S5S1220, PL1210
SAS Pumping Station		594	04-Jul-21 A	07-May-23	25-Aug-22	15-May-25	739		
Fabrication, FAT & Delivery of Major Plant & Materials		544	04-Jul-21 A	18-Mar-23	18-Feb-23	15-May-25	789		
S5SASP1000	Fabrication & Delivery of SAS Pumping System	120	16-Mar-22 A	12-Sep-22	18-Feb-23	12-Mar-23	181	S2P1100, S2D1770	S5SASC1010
S5SASP1010	Fabrication & Delivery of Stoplog	270	04-Jul-21 A	27-Jan-22 A	12-Mar-23	12-Mar-23		S2P1160	S5SASC1010
S5SASP1020	Fabrication & Delivery of Penstock	270	04-Jul-21 A	27-Jan-22 A	12-Mar-23	12-Mar-23		S2P1170	S5SASC1010
S5SASP1030	Fabrication & Delivery of Lifting Appliances	309	30-Oct-21 A	04-Oct-22	01-Apr-25	15-May-25	954		
S5SASP1040	Delivery of Control & Monitoring System / SCADA System	30	17-Feb-23	18-Mar-23	21-Feb-23	22-Mar-23	4	S5P1090	S5SASC1020
Installation		321	23-Mar-22 A	07-May-23	25-Aug-22	11-May-23	4		
S5SASC1000	Access to SAS Pumping Station (Impacted by NCE-NCE-219)	1	23-Mar-22 A	23-Mar-22 A	25-Aug-22	25-Aug-22		AD1160	S5SASC1010
S5SASC1010	E&M Installation of SAS Pumping System	210	23-Mar-22 A	08-Mar-23	25-Aug-22	12-Mar-23	4	AD1160, S5SASP1000, CE0219b, S5SASP1010, S5SASP1020, S5SASC1000	S5SAST1000, PL1210, S5SASC1020
S5SASC1020	Installation of SCADA System / Control Monitoring System	60	09-Mar-23	07-May-23	13-Mar-23	11-May-23	4	S5SASP1040, S5SASC1010	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		45	09-Mar-23	22-Apr-23	16-Apr-23	30-May-23	38		
S5SAST1000	SAT & System Commissioning Tests for SAS Pumping Station	45	09-Mar-23	22-Apr-23	16-Apr-23	30-May-23	38	S5SASC1010	S5T1110, S5T1120, S5T1060
Existing Consolidation House		300	21-Aug-22	16-Jun-23	05-Jul-22	30-Apr-23	-47		
Fabrication, FAT & Delivery of Major Plant & Materials		150	21-Aug-22	17-Jan-23	05-Jul-22	01-Dec-22	-47		



JEC

File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 42 of 46

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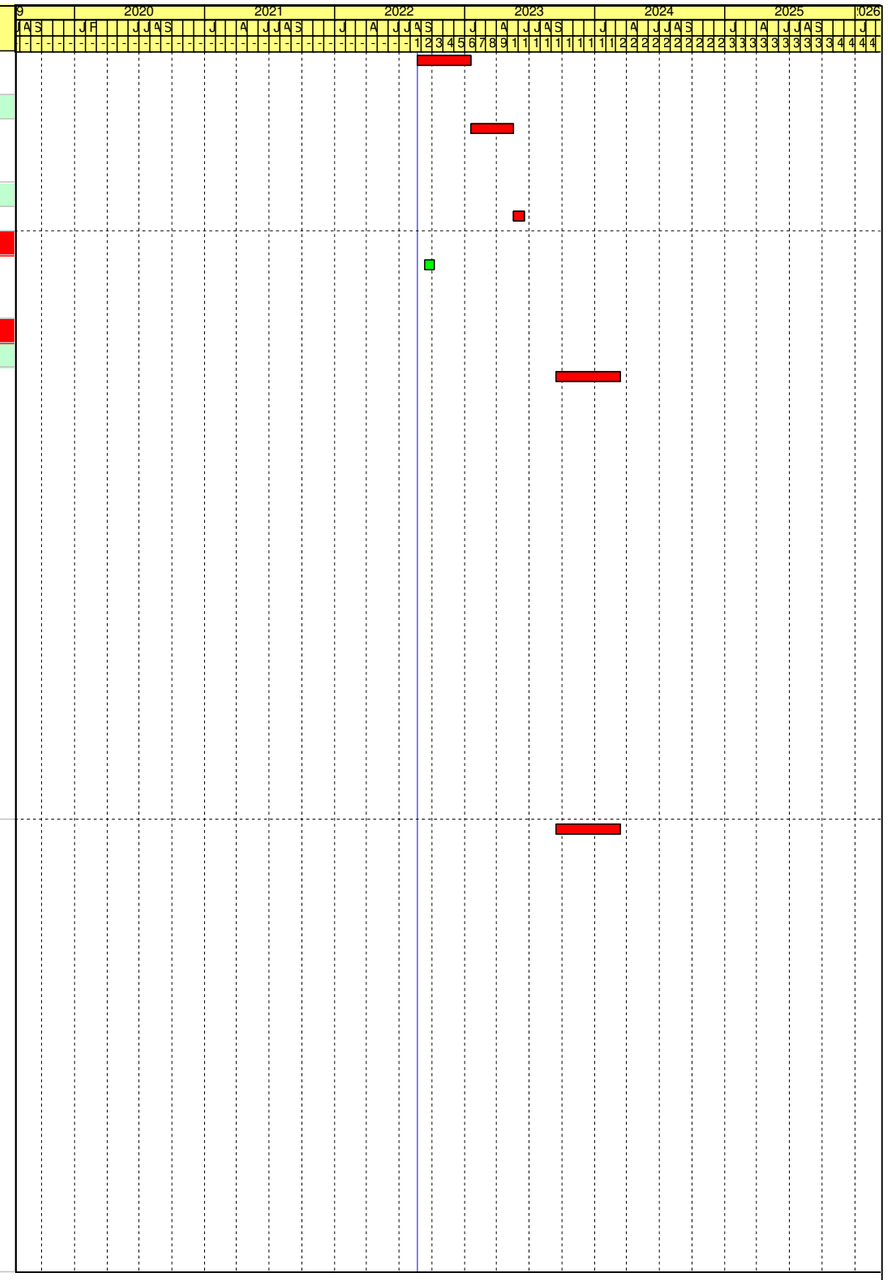
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5ECHP1000	Fabrication & Delivery of Temporary Primary Sludge Pump	150	21-Aug-22	17-Jan-23	05-Jul-22	01-Dec-22	-47	S2P1220, S2D1990	S5ECHC1000
Installation		120	18-Jan-23	17-May-23	02-Dec-22	31-Mar-23	-47		
S5ECHC1000	E&M Installation of Existing Consolidation House	120	18-Jan-23	17-May-23	02-Dec-22	31-Mar-23	-47	CE0219d, S5ECHP1000	S5T1060, S5ECHT1000, PL1210
Testing and Commissioning		30	18-May-23	16-Jun-23	01-Apr-23	30-Apr-23	-47		
S5ECHT1000	SAT for Temporary Primary Sludge Pump	30	18-May-23	16-Jun-23	01-Apr-23	30-Apr-23	-47	S5ECHC1000	S5T1060
Miscellaneous		30	09-Sep-22	08-Oct-22	17-Mar-23	15-Apr-23	189		
S5UVPC1000	E&M Installation of Lift-up Pumps & Associated Pipeworks / Valves	30	09-Sep-22	08-Oct-22	17-Mar-23	15-Apr-23	189	S4C1030, S4P1080, S4T1020	S5PSWT1010, PL1210
Testing & Commissioning		582	16-Sep-23	19-Apr-25	01-May-23	04-May-24	-350		
T&C of Control Monitoring System		270	16-Sep-23	11-Jun-24	12-May-23	05-Feb-24	-127		
S5T1000	SAT of SCADA System	180	16-Sep-23	13-Mar-24	12-May-23	07-Nov-23	-127	S5TXRC1050, S5WS2C1180, S5SDBC1090, S5SDBC1190, S5SDBC1390, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040
S5T1010	SAT of PMS	180	16-Sep-23	13-Mar-24	12-May-23	07-Nov-23	-127	S5TXRC1050, S5WS2C1180, S5SDBC1090, S5SDBC1190, S5SDBC1390, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040



Remaining Work
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Milestone
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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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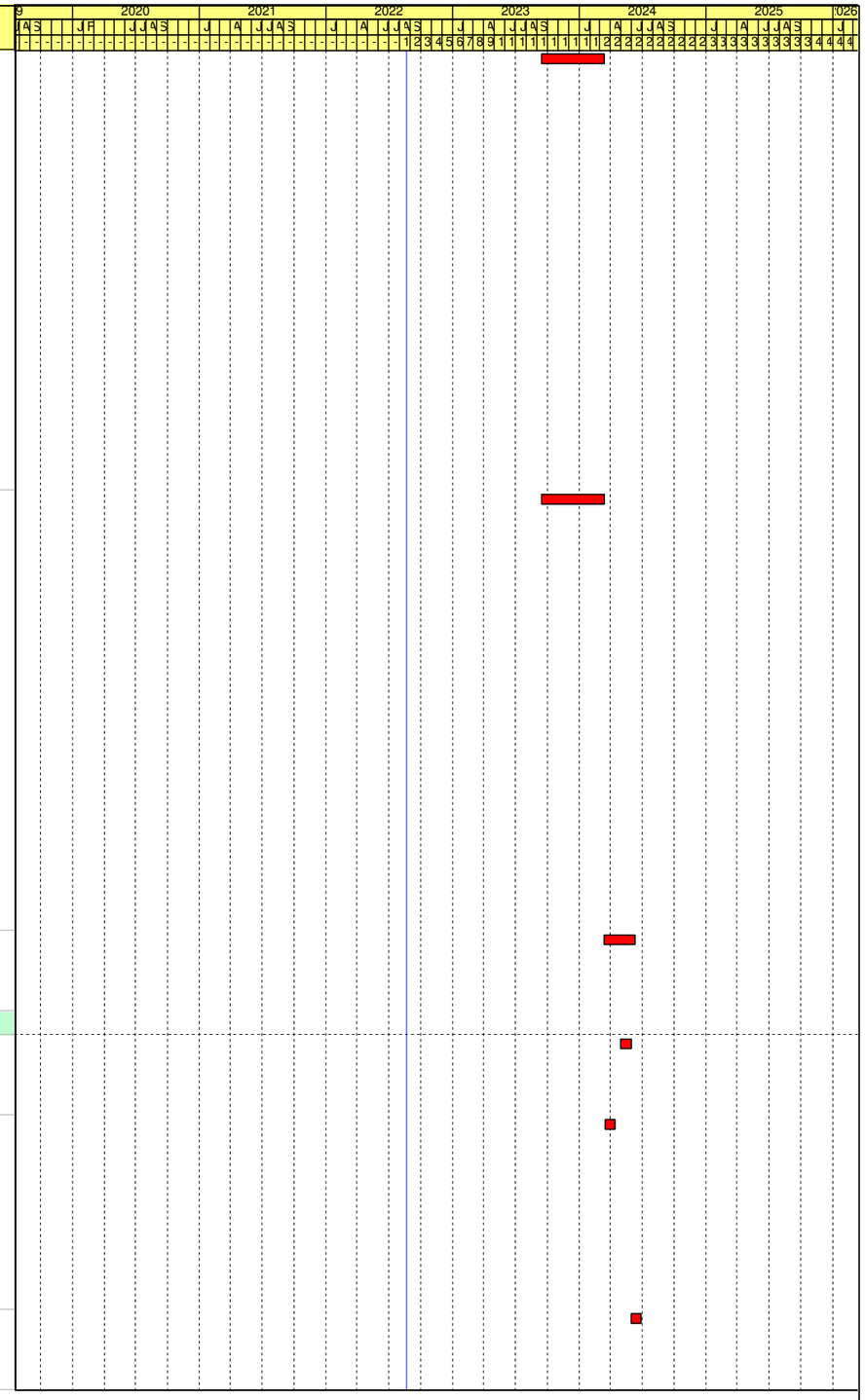
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5T1020	SAT of CMMS	180	16-Sep-23	13-Mar-24	12-May-23	07-Nov-23	-127	S5TXRC1050, S5WS2C1180, S5SDBC1090, S5SDBC1190, S5SDBC1390, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040
S5T1030	SAT of IDMS	180	16-Sep-23	13-Mar-24	12-May-23	07-Nov-23	-127	S5TXRC1050, S5WS2C1180, S5SDBC1090, S5SDBC1190, S5SDBC1390, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040
S5T1040	Overall Testing for Whole System	90	14-Mar-24	11-Jun-24	08-Nov-23	05-Feb-24	-127	S5T1000, S5T1010, S5T1020, S5T1030	SC51110, S5T1140
T&C of E&M Process		400	16-Mar-24	19-Apr-25	01-May-23	04-May-24	-350		
S5T1050	System Commissioning Tests for THP System	30	30-Apr-24	29-May-24	16-May-23	14-Jun-23	-350	S5THPT1010, S5EXAC1020, S5T1060, S5TCWT1010	S5T1120, S5T1080, S5T1110
S5T1060	System Commissioning Tests for Sludge Dewatering System	30	16-Mar-24	14-Apr-24	01-May-23	30-May-23	-320	S5SDBT1030, S5ECHC1000, S5SDBT1040, S5SDBC1390, S5SDBT1000, S5DOUT1020, S5SPST1010, S5PSWT1010, S5SAST1000, S5ECHT1000	S5T1120, S5T1110, PL1520, S5T1050
S5T1070	System Commissioning Tests for Biogas Storage System	30	30-May-24	28-Jun-24	15-Jun-23	14-Jul-23	-350	S5BIOT1010, S5T1080	S5T1120, S5T1110, S5S1070, S5T1100



File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 44 of 46

Remaining Work
Critical Activity
Milestone
Actual Progress

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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
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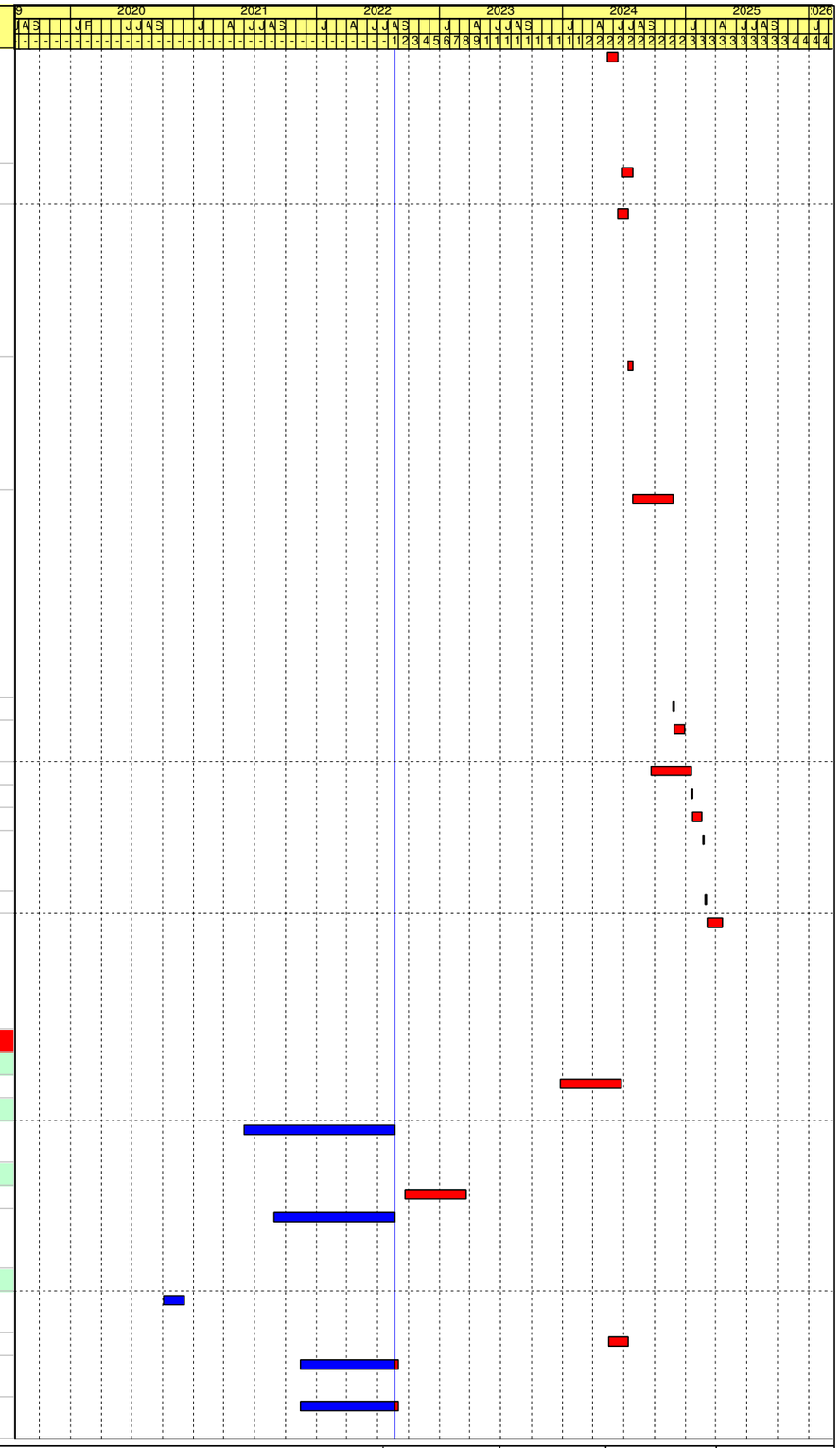
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5T1080	System Commissioning Tests for Sludge Digestion System	30	15-May-24	13-Jun-24	31-May-23	29-Jun-23	-350	S5DIGT1020, S5T1050, S5DIGC1270, S5H2ST1010, S5DOUT1030, S5FCDT1010	S5T1120, S5T1110, S5T1070
S5T1090	System Commissioning Tests for Gas Burning System	30	29-Jun-24	28-Jul-24	15-Jul-23	13-Aug-23	-350	S5WGBT1010, S5T1100	S5T1120, S5T1110
S5T1100	System Commissioning Tests for CHP System	30	14-Jun-24	13-Jul-24	30-Jun-23	29-Jul-23	-350	S5CHPT1030, S5S1310, S5CHPC1120, S5CHPT1000, S5CHPC1250, S5CHPT1040, S5CHPT1050, S5T1070	S5T1120, S5T1110, PL1560, S5T1090
S5T1110	Seeding	14	15-Jul-24	28-Jul-24	31-Jul-23	13-Aug-23	-350	S5T1090, S5T1070, S5T1080, S5T1100, S5T1060, S5T1050, S5SAST1000	S5T1120
S5T1120	Process Start Up - Digester 1	120	29-Jul-24	25-Nov-24	14-Aug-23	11-Dec-23	-350	S5T1090, S5T1070, S5T1080, S5T1100, S5T1060, S5T1050, S5T1110, S5S1080, S5TXRC1050, S5SAST1000, S3T1120	S5T1150, S5T1130, S3T1130
S5T1130	Notice to Commence Phase 1 System Commissioning - Digester 1	3	26-Nov-24	28-Nov-24	03-Feb-24	05-Feb-24	-297	S5T1120	S5T1140
S5T1140	Phase 1 System Commissioning - Digester 1	30	29-Nov-24	28-Dec-24	06-Feb-24	06-Mar-24	-297	S5T1130, S5T1040	S5T1180
S5T1150	Process Start Up - Digester 2	120	20-Sep-24	17-Jan-25	06-Oct-23	02-Feb-24	-350	S5T1120	S5T1160
S5T1160	Notice to Commence Phase 1 System Commissioning - Digester 2	3	18-Jan-25	20-Jan-25	03-Feb-24	05-Feb-24	-350	S5T1150	S5T1170
S5T1170	Phase 1 System Commissioning - Digester 2	30	21-Jan-25	19-Feb-25	06-Feb-24	06-Mar-24	-350	S5T1160	S5T1180
S5T1180	Phase 2 System Commissioning - Digester 1 & 2	7	20-Feb-25	26-Feb-25	07-Mar-24	13-Mar-24	-350	S5T1170, S5T1140	S5T1190, PL1310, S3T1180
S5T1190	Notice to Commence Plant Commissioning	7	27-Feb-25	05-Mar-25	14-Mar-24	20-Mar-24	-350	S5T1180	S5T1200
S5T1200	Plant Commissioning Tests	45	06-Mar-25	19-Apr-25	21-Mar-24	04-May-24	-350	S5T1190, S5S1020, S5TXRC1050, S5WS2C1180, S5S1150, S3T1160	SC51110
Statutory Submission / Inspection		1185	03-Oct-20 A	04-Aug-24	07-May-22	16-May-24	-80		
HKT Submission		180	26-Dec-23	22-Jun-24	07-Nov-23	04-May-24	-49		
S5S0990	Application of Telemetry Lines for Workshop No. 2.	180	26-Dec-23	22-Jun-24	07-Nov-23	04-May-24	-49	S5WS2C1180	SC51110
CLP Submission		275	30-May-21 A	21-Aug-22	11-Jan-23	11-Jan-23	143		
S5S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP	275	30-May-21 A	21-Aug-22	11-Jan-23	11-Jan-23	143		S5WS2C1040
EPD Submission / Inspection		569	28-Aug-21 A	19-Mar-23	07-May-22	02-Nov-22	-137		
S5S1010	EPD Submission & Approval for Air Pollution Control - Genset	180	21-Sep-22	19-Mar-23	07-May-22	02-Nov-22	-137	S2D1860	S5SDBC1200
S5S1020	EPD Submission & Approval for Air Pollution Control - CHP & Burner	180	28-Aug-21 A	21-Aug-22	04-Jun-22	04-Jun-22	-78	S2D1610	S5T1200, S5THPC1020, S5CHPC1020
EMSD Submission / Inspection		1185	03-Oct-20 A	04-Aug-24	21-May-22	16-May-24	-80		
S5S1030	BEEO Stage one: Submit EE1 & EE-SU to EMSD	60	03-Oct-20 A	02-Dec-20 A	02-Aug-22	02-Aug-22		S2D1890	S5WS2C1000
S5S1040	BEEO Stage two: Submit EE2 & EE-SU to EMSD	60	16-May-24	14-Jul-24	18-Mar-24	16-May-24	-59	S5S1250	SC51120
S5S1050	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	180	15-Nov-21 A	31-Aug-22	21-May-22	31-May-22	-92	S2D1070	S5S1070, S5S1060
S5S1060	Application for Construction Approval of Notifiable Gas Installation (Form 104)	180	15-Nov-21 A	31-Aug-22	21-May-22	31-May-22	-92	S2D1070, S5S1050	S5S1070, S5BIOC1020



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 45 of 46

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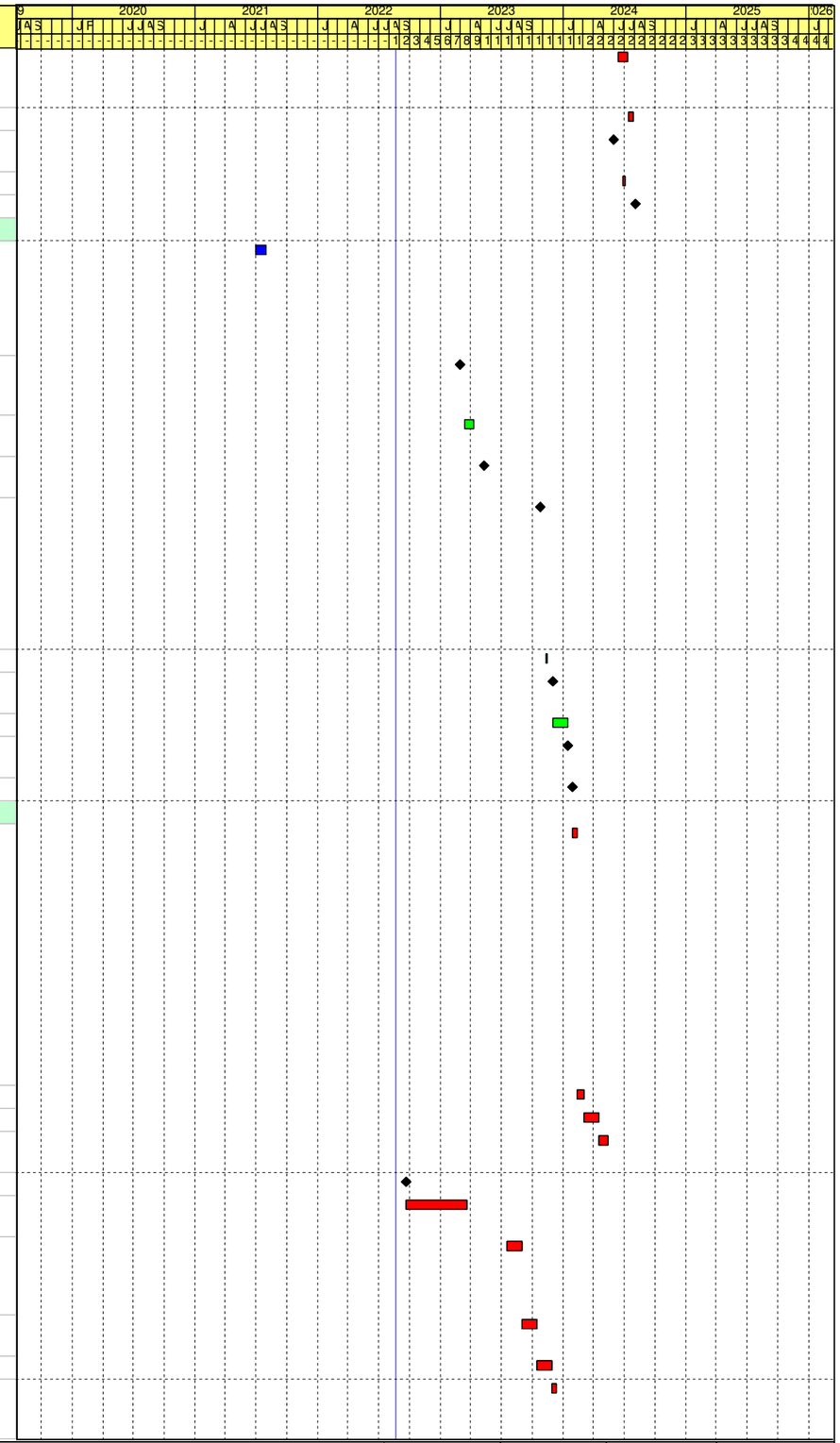
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5S1070	Application for Approval of Use of Notifiable Gas Installation (Form 105)	28	15-Jun-24	12-Jul-24	03-Jul-23	30-Jul-23	-348	S5S1060, S5T1070, S5S1050	S5S1080
S5S1080	EMSD Inspection - Gas Holding Tanks	14	13-Jul-24	26-Jul-24	31-Jul-23	13-Aug-23	-348	S5S1070	S5T1120
S5S1090	Form 5 Submission to EMSD - Lift Installation	0	30-May-24		28-Feb-24		-92	S5SDBT1050, S5WS2T1020	S5S1100
S5S1100	EMSD Inspection - Lift Installation	7	29-Jun-24	05-Jul-24	29-Mar-24	04-Apr-24	-92	S5S1090	S5S1110
S5S1110	Issuance of Form 6 - Lift Installation	0		04-Aug-24		04-May-24	-92	S5S1100	SC51110
WSD Submission / Inspection		942	01-Jul-21 A	28-Jan-24	14-Sep-22	04-May-24	97		
S5S1120	Submit WWO46 Part I / II to WSD (FS/PD)	30	01-Jul-21 A	30-Jul-21 A	14-Sep-22	14-Sep-22		S2D1910, S2D1860, S2D1870, S2D1880, S2D1890, S2D1900	S5S1130, S5WS2C1140, S5SHPC1020, S5DIGC1300
S5S1130	Submit WWO46 Part IV to WSD (FS)	0	01-Mar-23		22-Sep-23		205	S5S1120, S5WS2C1140, S5SHPC1020	S5S1140, S5S1150
S5S1140	WSD Inspection (FS)	28	15-Mar-23	11-Apr-23	06-Oct-23	02-Nov-23	205	S5S1130	S5S1250, S5S1150
S5S1150	Issuance of FS Water Certificate	0		09-May-23		30-Nov-23	205	S5S1130, S5S1140	S5T1200, S5S1220
S5S1160	Submit WWO46 Part IV to WSD (PD)	0	27-Oct-23		01-Feb-24		97	S5THPC1050, S5BIOC1060, S5SPSC1020, S5SDBC1380, S5CHPC1240, S5CHPC1110, S5DIGC1300, S5WS2C1170	S5S1170
S5S1170	WSD Inspection	7	10-Nov-23	16-Nov-23	15-Feb-24	21-Feb-24	97	S5S1160	S5S1180
S5S1180	Issuance of Form WWO46 Part Va	0		30-Nov-23		06-Mar-24	97	S5S1170	S5S1200, S5S1190
S5S1190	System Flushing / Sampling	45	01-Dec-23	14-Jan-24	07-Mar-24	20-Apr-24	97	S5S1180	S5S1200
S5S1200	Issuance of Form WWO46 Part Vb	0		14-Jan-24		20-Apr-24	97	S5S1180, S5S1190	S5S1210
S5S1210	Issuance of Water Certificate	0		28-Jan-24		04-May-24	97	S5S1200	SC51110
FSD Submission / Inspection		603	21-Sep-22	15-May-24	07-May-22	17-Mar-24	-59		
S5S1220	Prepare & Submit FSI/314 & FSI/501	14	29-Jan-24	11-Feb-24	01-Dec-23	14-Dec-23	-59	S5WS2C1150, S5S1310, S5S1150, S5EXAC1050, S5SDBC1350, S5EXAC1060, S5SDBC1360, S5CHPC1080, S5CHPC1090, S5CHPC1210, S5CHPC1220, S5DIGC1280, S5DIGC1290, S5SHPT1010	S5S1230
S5S1230	FSD Review & Approval of FSI/314 & FSI/501	21	12-Feb-24	03-Mar-24	15-Dec-23	04-Jan-24	-59	S5S1220	S5S1240
S5S1240	F.S. Inspection, Defects Rectification & Re-inspection	45	04-Mar-24	17-Apr-24	05-Jan-24	18-Feb-24	-59	S5S1230	S5S1250
S5S1250	Issuance of Acceptance Letter	28	18-Apr-24	15-May-24	19-Feb-24	17-Mar-24	-59	S5S1240, S5S1140	SC51110, S5S1040
S5S1260	Application of D.G. Licence	0	21-Sep-22		07-May-22		-137	S2D1860	S5S1270
S5S1270	Processing of D.G. Licence Application	180	21-Sep-22	19-Mar-23	07-May-22	02-Nov-22	-137	S5S1260	S5S1280, S5SDBC1200
S5S1280	Apply for D.G. Inspection	45	18-Jul-23	31-Aug-23	03-Mar-23	16-Apr-23	-137	S5S1270, S5SDBC1200, S5CHPC1150, S5FCDC1020	S5S1310, S5S1290
S5S1290	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	45	01-Sep-23	15-Oct-23	17-Apr-23	31-May-23	-137	S5S1280	S5S1310, S5S1300
S5S1300	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	45	16-Oct-23	29-Nov-23	01-Jun-23	15-Jul-23	-137	S5S1290	S5S1310
S5S1310	Issue D.G. Licence	14	30-Nov-23	13-Dec-23	16-Jul-23	29-Jul-23	-137	S5S1290, S5S1300, S5S1280	S5S1220, S5T1100



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File Name: DE/2018/03 RP R25
Layout: DE1803 RP (Aug 2022) - WBS
Page 46 of 46

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Milestone
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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 01/06/2022 to 01/09/2022)

Updated on: **20-Aug-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	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
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.2.16 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	8/31/2022	98%				-		Defect rectification for BCM comments was partially completed and Site Acceptance Test (72 hours) shall be commenced by End Aug 2022 subject to coordination with RSS and ST1.
6B.2.1 Inlet Works	Submission of Contractor's Design for Inlet Works No. 1	9/6/2020	11/16/2020	5/14/2021	8/30/2022	98%				-	Bestwise	All finalized design calculations for Inlet Works no.1 shall be submitted by 30 Aug 2022.
	Submission of P&M Submission	9/6/2020	9/7/2020	5/14/2021	9/30/2022	95%						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 Sep 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	8/30/2022	98%						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	8/30/2022	98%						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 Aug 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		

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	8/30/2022	98%				-	Bestwise	PFD (rev.B) under DWG0004 submitted on 22 June 2021. Finalized design calculations for PST shall be submitted by 30 Aug 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	8/30/2022	98%						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 Aug 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	8/30/2022	98%						Mechanical GA was submitted on 19 Jun 2021. Electrical GA under DWG0103 (rev.1) was submitted on 6 Jul 2021 and is accepted by AECOM. Finalized drawings for PST shall be submitted by 30 Aug 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	8/30/2022	98%						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 Aug 2022.
	Acceptance of submission	5/15/2021	4/2/2021	5/29/2021	8/30/2022	98%				-		Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".
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	8/30/2022	98%						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	8/30/2022	98%						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 Aug 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		
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	8/30/2022	98%				-	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 Aug 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	8/30/2022	98%						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 Aug 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	8/30/2022	98%						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	8/30/2022	98%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 30 Aug 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".

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	8/30/2022	98%				-	Bestwise	PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 10 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Finalized design calculations shall be submitted by 30 Aug 2022.
	Submission of P&M Submission	9/6/2020	11/19/2020	5/14/2021	8/30/2022	98%						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 Aug 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	8/30/2022	98%						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	8/30/2022	98%						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 Aug 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		
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	9/30/2022	95%						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	8/30/2022	98%						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 July 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		
	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	9/30/2022	95%				-	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	8/30/2022	98%						Bestwise submitted (rev.0) on 26 Jan 2021, AECOM commented on 4 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 30 July 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		
	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	9/30/2022	95%				-	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	8/30/2022	98%						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 July 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%						

	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	9/30/2022	95%						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	8/30/2022	98%						GA submitted on 24 Jun 2021 Finalized drawing shall be submitted by 30 July 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	8/30/2022	98%				-		
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	8/30/2022	98%						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 July 2022.
	Submission of detailed design for lifting appliances for Primary Sedimentation Tanks (CDS050-2)	9/6/2020	12/5/2020	9/6/2020	8/30/2022	98%						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 July 2022.
	Submission of detailed design for lifting appliances for BR 2A and 2B (CDS050-3)	9/6/2020	12/5/2020	9/6/2020	8/30/2022	98%						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 July 2022.
	Submission of detailed design for lifting appliances for MFB (CDS050-4)	9/6/2020	12/5/2020	9/6/2020	8/30/2022	98%						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 July 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	8/30/2022	98%						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 July 2022.
	Submission for Fire Services System	N/A	3/15/2021	N/A	8/30/2022	98%						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 July 2022.
	Submission for Plumbing and Drainage System	N/A	3/15/2021	N/A	8/30/2022	98%						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 July 2022.
	Submission for Electrical Services System	N/A	12/10/2020	N/A	8/30/2022	98%						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 July 2022.
	Submission of ELV system	N/A	1/8/2021	N/A	8/30/2022	98%						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 July 2022.
	Submission for PV system	N/A	3/15/2021	N/A	8/30/2022	98%						Tender package was submitted to AECOM. Finalized design shall be submitted by 30 July 2022.
SCADA System & PMS	Submission for SCADA system	N/A	2/11/2021	N/A	8/30/2022	98%						Revised SCADA structure was provided via email on 9 Apr 2021 and tender package is under preparation. Finalized design shall be submitted by 30 July 2022.
	Submission for PMS system	N/A	3/8/2021	N/A	8/30/2022	98%						Tender package to be resubmitted on 29 June 2021. Finalized design shall be submitted by 30 July 2022.
	Submission for CMMS & IDMS system	N/A	6/1/2021	N/A	8/30/2022	98%						Finalized design shall be submitted by 30 July 2022.
Section 2 of Works												
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						

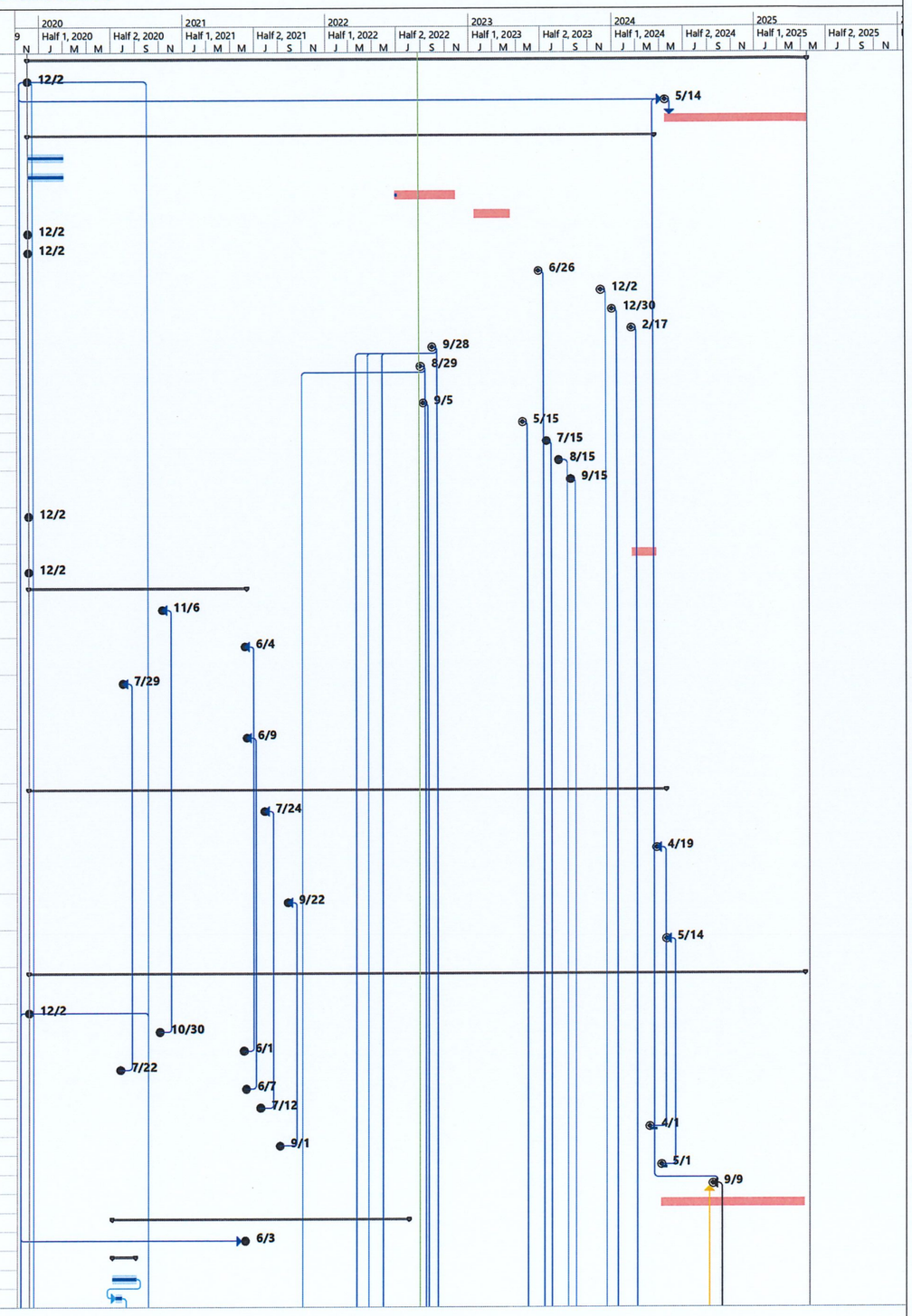
	Material Delivery	2/7/2022	2/7/2022	2/28/2022	2/28/2022	Task Completed						Material Delivery was by End Feb 2022.
	Installation Work	3/31/2022	4/26/2022	5/5/2022	5/5/2022	Task Completed						The installation work was completed on 5 May 2022.
	Testing & Commissioning	1/7/2023	1/7/2023	1/31/2023	1/31/2023							
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	10/1/2022	3/31/2022	10/31/2022							
	Installation Work	3/15/2022	11/1/2022	10/30/2022	12/14/2022							Underground works subject to site coordination with JV.
	Testing & Commissioning	11/1/2022	12/15/2022	11/15/2022	12/31/2022							
Section 3 of Works												
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												
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*	8/31/2022	98%				-		Improvement works under PMI are on-going and defect rectification for BCM comments was partially completed. - Testing and Commissioning (3 x 24hrs) to be commenced by End Aug 2022
Plant and Materials (Marking Scheme)												
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				-		
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 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 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 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				-		
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				-		

Drainage Services Department
The Government of the Hong Kong Special Administrative Region

Proposed Work Programme for DE/2018/04
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

AECOM

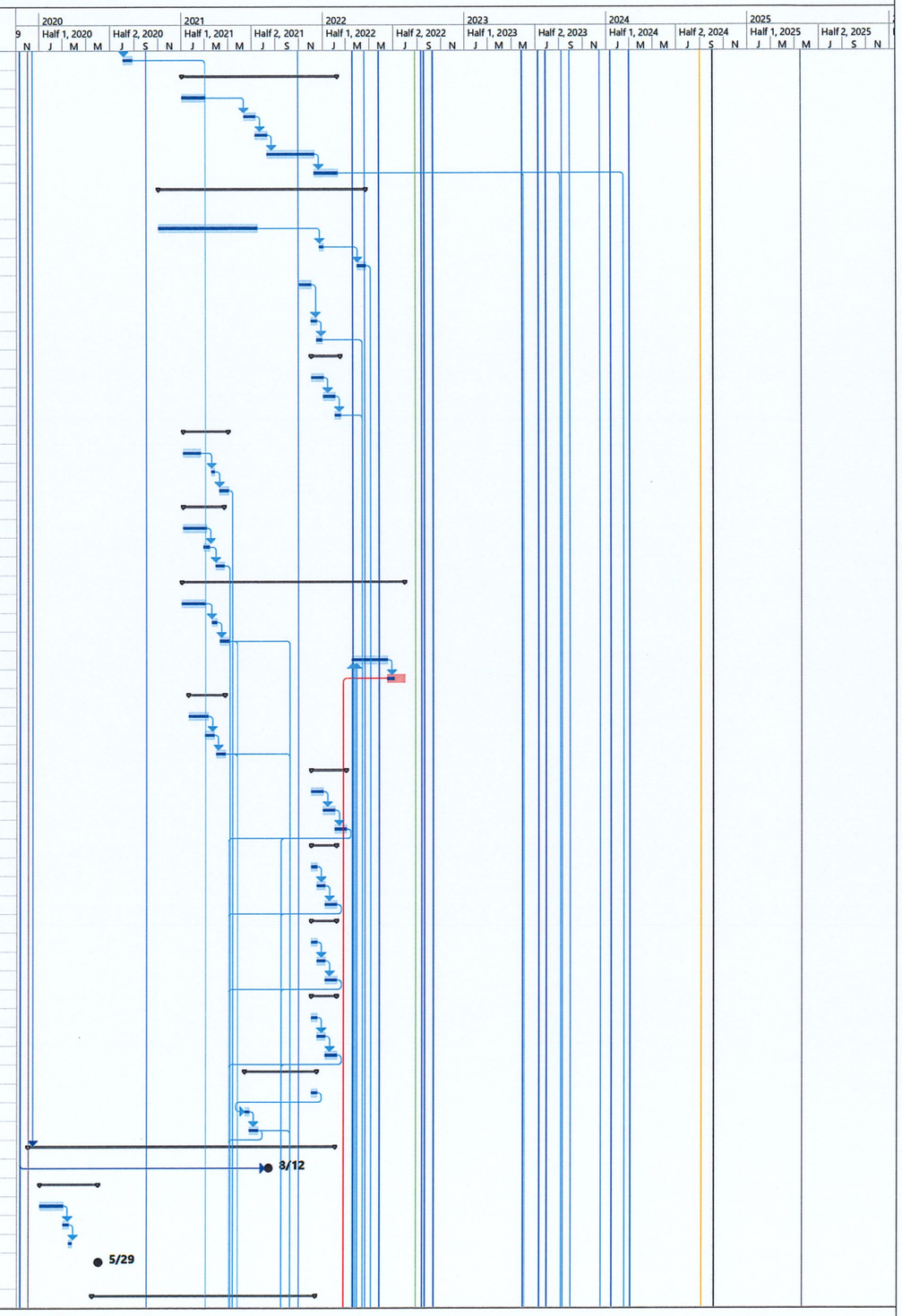
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1	1	1	**DE/2018/04 - Contract Programme**	**1991 days**	**Dec 2 '19**	**May 14 '25**	**Dec 2 '19**	**May 14 '25**	**0 days**			
2	2	1.1	Starting Date	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days		3SS+1625 ed	
3	3	1.2	Completion Date	0 days	May 14 '24	May 14 '24	May 14 '24	May 14 '24	0 days	2SS+1625 ec	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		652	
13	13	2.8	Access Date for Portion B-5A, MFB No. 2 below 1st floor level (G.L. 1-8)	0 edays	Dec 2 '23	Dec 2 '23	Dec 2 '23	Dec 2 '23	0 edays		854	
14	14	2.9	Access Date for Portion B-5B, MFB No. 2 remaining portion	0 edays	Dec 30 '23	Dec 30 '23	Dec 30 '23	Dec 30 '23	0 edays		889	
15	15	2.10	Access Date for Portion B-5B, MFB No. 2 below 1st floor level (G.L. 8-10)	0 edays	Feb 17 '24	Feb 17 '24	Feb 17 '24	Feb 17 '24	0 edays		894,865,864	
16	16	2.11	Access Date for Portion B-7 & 7B, DOU3A & Temporary Chemical System	0 edays	Sep 28 '22	Sep 28 '22	Sep 28 '22	Sep 28 '22	0 edays		1125,1043,1(	
17	17	2.12	Access Date for Portion B-7 & 7B, Emergency Generator House, FS & Sprinkler Pumping House	0 edays	Aug 29 '22	Aug 29 '22	Aug 29 '22	Aug 29 '22	0 edays		1069,1353,1(	
18	18	2.13	Access Date for Portion B-7 & 7B, Chemical System No.1	0 edays	Sep 5 '22	Sep 5 '22	Sep 28 '22	Sep 28 '22	0 edays		996,997	
19	19	2.14	Access Date for Portion B-7 & 7B, Street Fire Hydrant & Booster Pump Room	0 edays	May 15 '23	May 15 '23	May 15 '23	May 15 '23	0 edays		1366,1052,1(	
20	20	2.15	Access Date for Portion B-7 & 7B, DOU No.1	0 edays	Jul 15 '23	Jul 15 '23	Jul 15 '23	Jul 15 '23	0 edays		1103,1104	
21	21	2.16	Access Date for Portion B-7 & 7B, Flowmeter Chamber No.1	0 edays	Aug 15 '23	Aug 15 '23	Aug 15 '23	Aug 15 '23	0 edays		1144	
22	22	2.17	Access Date for Portion B-7 & 7B, Gate Valve Chamber No. 1 & 2, Flowmeter Chamber No. 2 & 3, Plug Valve Chamber	0 edays	Sep 15 '23	Sep 15 '23	Sep 15 '23	Sep 15 '23	0 edays		1144	
23	23	2.18	Access Date for Portion B-7A & 7B, area for modification of existing emergency generator electrical works	0 edays	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 edays			
24	24	2.19	Access Date for Portion B-9B, underground pipework	60 edays	Feb 18 '24	Apr 18 '24	Feb 18 '24	Apr 18 '24	0 edays			
25	25	2.20	Access Date for B-10, existing sludge thickening building	0 edays	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 edays			
26	26	3	**Key Dates**	**555 days**	**Dec 2 '19**	**Jun 9 '21**	**Dec 2 '19**	**Jun 9 '21**	**0 days**			
27	27	3.1	KD1A - Submission of civil and dimensional requirement drawings, electrical schematic drawings etc. Part 1	340 edays	Dec 2 '19	Nov 6 '20	Dec 2 '19	Nov 6 '20	0 edays	38FF		
28	28	3.2	KD1B - Submission of remaining civil and dimensional requirement drawings, electrical schematic drawings etc. Part 2	550 edays	Dec 2 '19	Jun 4 '21	Dec 2 '19	Jun 4 '21	0 edays	39FF		
29	29	3.3	KD3A - Completion of E&M Installation works of existing power house in Portions B-7A and B-7B of the Site necessary for the contractor of Contract No. DC/2018/07 to carry out civil alternation works for existing power house	240 edays	Dec 2 '19	Jul 29 '20	Dec 2 '19	Jul 29 '20	0 edays	40FF		
30	30	3.4	KD3B - Completion of all work for reprovision of the existing Primary Sedimentation Tanks No. 4 & 6 and associated systems including testing and commissioning and obtaining the relevantory statutory approval.	555 edays	Dec 2 '19	Jun 9 '21	Dec 2 '19	Jun 9 '21	0 edays	41FF		
31	31	4	**Sectional Completion Dates**	**1625 days**	**Dec 2 '19**	**May 14 '24**	**Dec 2 '19**	**May 14 '24**	**0 days**			
32	32	4.1	Section 1 - Completion of the design of E&M Works for all works as defined in WI_GP Cl. 10.1(a)of the Works (600 days after starting date)	600 edays	Dec 2 '19	Jul 24 '21	Dec 2 '19	Jul 24 '21	0 edays	42FF		
33	33	4.2	Section 2 - Completion of all works for Inlet Works, PST No. 1~4, BR No. 2A & 2B, MFB No. 2, temporary chemical dosing system, deodorisation systems, chemical system no. 1 & no. 2, FS and sprinkler pump room, ...etc as define (1600d after	1600 edays	Dec 2 '19	Apr 19 '24	Dec 2 '19	Apr 19 '24	0 edays	43FF		
34	34	4.3	Section 3 - Completion of all works for retrofitting of the existing PST...etc (660 days after starting date)	660 edays	Dec 2 '19	Sep 22 '21	Dec 2 '19	Sep 22 '21	0 edays	44FF		
35	35	4.4	Section 4 - Completion of Work for remainder of the works (1625 days after starting date)	1625 edays	Dec 2 '19	May 14 '24	Dec 2 '19	May 14 '24	0 edays	45FF		
36	36	5	**DE/2018/04 - the Contractor's Programme (w/ Defects Date of Planned Completion Date)**	**1981 days?**	**Dec 2 '19**	**May 4 '25**	**Dec 2 '19**	**May 4 '25**	**0 days?**			
37	37	5.1	Starting Date	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days		722,232SS+3(	
38	38	5.2	Planned Key Date Completion Date - KD1A	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days		27FF	
39	39	5.3	Planned Key Date Completion Date - KD1B	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days		28FF	
40	40	5.4	Planned Key Date Completion Date - KD3A	0 days	Jul 22 '20	Jul 22 '20	Jul 22 '20	Jul 22 '20	0 days		29FF	
41	41	5.5	Planned Key Date Completion Date - KD3B	0 days	Jun 7 '21	Jun 7 '21	Jun 7 '21	Jun 7 '21	0 days		30FF	
42	42	5.6	Planned Sectional Completion Date - Section 1	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days		32FF	
43	43	5.7	Planned Sectional Completion Date - Section 2	0 days	Apr 1 '24	Apr 1 '24	Apr 19 '24	Apr 19 '24	18 days		33FF	
44	44	5.8	Planned Sectional Completion Date - Section 3	0 days	Sep 1 '21	Sep 1 '21	Sep 1 '21	Sep 1 '21	0 days		34FF	
45	45	5.9	Planned Sectional Completion Date - Section 4	0 days	May 1 '24	May 1 '24	May 14 '24	May 14 '24	13 days		35FF	
46	46	5.10	Planned Completion Date	0 days	Sep 9 '24	Sep 9 '24	May 14 '24	May 14 '24	0 days	1407,1408,13		
47	47	5.11	Defect Dates with respect to planned completion date	365 days	May 1 '24	Apr 30 '25	May 1 '24	Apr 30 '25	0 days			
48	48	5.12	**Part A: Procurement and Delivery of Major Plant and Materials (for multi buildi**	**758 days**	**Jul 1 '20**	**Jul 28 '22**	**Jul 1 '20**	**Jul 28 '22**	**0 days**			
49	49	5.12.1	Planned Completion Date for Procurement of major plant and materials	0 days	Jun 3 '21	Jun 3 '21	Jun 3 '21	Jun 3 '21	0 days	37SS+550 d		
50	50	5.12.2	**General - stoplogs and penstocks, C11, EQT013**	**60 days**	**Jul 1 '20**	**Aug 29 '20**	**Jul 1 '20**	**Aug 29 '20**	**0 days**			
51	51	5.12.2.1	Submission for acceptance of purchasing package	60 days	Jul 1 '20	Aug 29 '20	Jul 1 '20	Aug 29 '20	0 days		52	
52	52	5.12.2.2	Invitation of quotations for purchasing package	14 days	Jul 10 '20	Jul 23 '20	Jul 10 '20	Jul 23 '20	0 days	51	53	



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

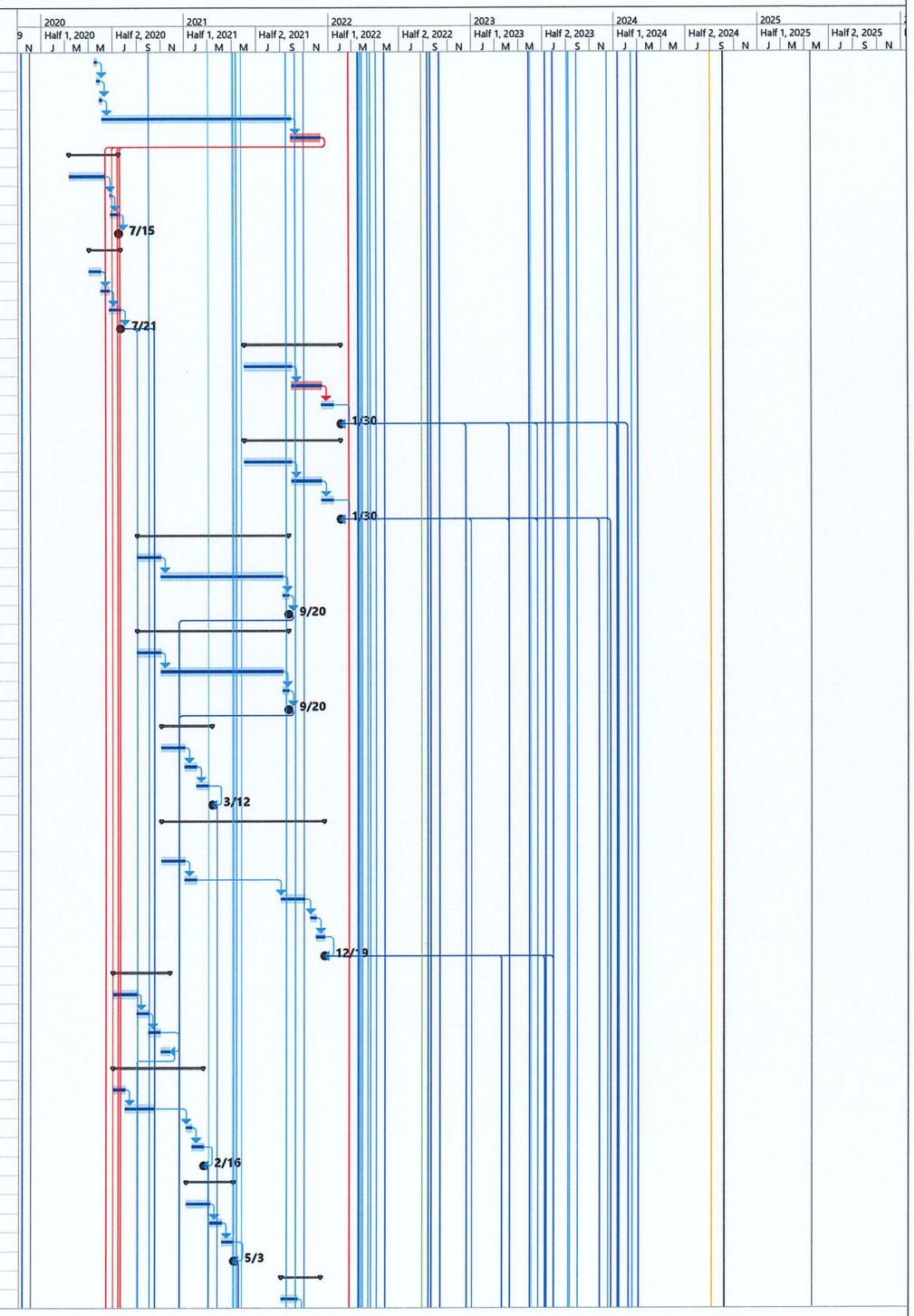
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
53	53	5.12.2.3	Acceptance of conforming quotation (Completed)	22 days	Aug 4 '20	Aug 25 '20	Aug 4 '20	Aug 25 '20	0 days	52	283	
54	**54**	**5.12.3**	**General - Instrumentations except use at BR, C11, EQT035-1**	**401 days**	**Jan 2 '21**	**Feb 6 '22**	**Jan 2 '21**	**Feb 6 '22**	**0 days**			
55	55	5.12.3.1	Submission for acceptance of purchasing package	60 days	Jan 2 '21	Mar 2 '21	Jan 2 '21	Mar 2 '21	0 days		56	
56	56	5.12.3.2	Invitation of quotations for purchasing package (Rev. 10)	30 days	Jun 11 '21	Jul 10 '21	Jun 11 '21	Jul 10 '21	0 days	55	57	
57	57	5.12.3.3	Acceptance of conforming quotation (Rev. 10)	30 days	Jul 11 '21	Aug 9 '21	Jul 11 '21	Aug 9 '21	0 days	56	58	
58	58	5.12.3.4	Manufacturing and Factory Acceptance Test of Plant (Rev. 10)	121 days	Aug 10 '21	Dec 8 '21	Aug 10 '21	Dec 8 '21	0 days	57	59	
59	59	5.12.3.5	Shipping and Delivery of Plant (Rev. 10)	60 days	Dec 9 '21	Feb 6 '22	Dec 9 '21	Feb 6 '22	0 days	58	371,519,916	
60	**60**	**5.12.4**	**General - Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamber, C11, ref. EQT036**	**535 days**	**Nov 2 '20**	**Apr 20 '22**	**Nov 2 '20**	**Apr 20 '22**	**0 days**			
61	61	5.12.4.1	Submission for acceptance of purchasing package (Rev. 11)	255 days	Nov 2 '20	Jul 14 '21	Nov 2 '20	Jul 14 '21	0 days		62	
62	62	5.12.4.2	Invitation of quotations for purchasing package (Rev. 11)	9 days	Dec 23 '21	Dec 31 '21	Dec 23 '21	Dec 31 '21	0 days	61	63	
63	63	5.12.4.3	Acceptance of conforming quotation (Rev. 11)	22 days	Mar 30 '22	Apr 20 '22	Mar 30 '22	Apr 20 '22	0 days	62	305,311,473,	
64	64	5.12.4.4	Submission for acceptance of purchasing package for remaining pipework and valves (Rev. 13)	30 days	Nov 1 '21	Nov 30 '21	Nov 1 '21	Nov 30 '21	0 days		65	
65	65	5.12.4.5	Invitation of quotations for purchasing package (Rev. 13)	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days	64	66	
66	66	5.12.4.6	Acceptance of conforming quotation (Rev. 13)	14 days	Dec 15 '21	Dec 28 '21	Dec 15 '21	Dec 28 '21	0 days	65	305,311,473,	
67	**67**	**5.12.5**	**General - Electric actuators for valves, C11, ref. EQT072 (Rev. 11)**	**74 days**	**Dec 2 '21**	**Feb 13 '22**	**Dec 2 '21**	**Feb 13 '22**	**0 days**			
68	68	5.12.5.1	Submission for acceptance of purchasing package (Rev. 11)	30 days	Dec 2 '21	Dec 31 '21	Dec 2 '21	Dec 31 '21	0 days		69	
69	69	5.12.5.2	Invitation of quotations for purchasing package (Rev. 11)	30 days	Jan 1 '22	Jan 30 '22	Jan 1 '22	Jan 30 '22	0 days	68	70	
70	70	5.12.5.3	Acceptance of conforming quotation (Rev. 11)	14 days	Jan 31 '22	Feb 13 '22	Jan 31 '22	Feb 13 '22	0 days	69	311,473,617,	
71	**71**	**5.12.6**	**General - HV Switchboards, C9, ref. 04SC012 (Rev. 14)**	**116 days**	**Jan 4 '21**	**Apr 29 '21**	**Jan 4 '21**	**Apr 29 '21**	**0 days**			
72	72	5.12.6.1	Submission for acceptance of purchasing package	45 days	Jan 4 '21	Feb 17 '21	Jan 4 '21	Feb 17 '21	0 days		73	
73	73	5.12.6.2	Invitation of quotations for purchasing package	8 days	Mar 18 '21	Mar 25 '21	Mar 18 '21	Mar 25 '21	0 days	72	74	
74	74	5.12.6.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Apr 8 '21	Apr 29 '21	Apr 8 '21	Apr 29 '21	0 days	73	759	
75	**75**	**5.12.7**	**General - LV Switchboards, C9, ref. 04SC013 (Rev. 14)**	**106 days**	**Jan 4 '21**	**Apr 19 '21**	**Jan 4 '21**	**Apr 19 '21**	**0 days**			
76	76	5.12.7.1	Submission for acceptance of purchasing package	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days		77	
77	77	5.12.7.2	Invitation of quotations for purchasing package	15 days	Feb 26 '21	Mar 12 '21	Feb 26 '21	Mar 12 '21	0 days	76	78	
78	78	5.12.7.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Mar 29 '21	Apr 19 '21	Mar 29 '21	Apr 19 '21	0 days	77	286,591,446,	
79	**79**	**5.12.8**	**General - VSDs & Passive Type Harmonic Filters, C11, ref. EQT034 (Rev. 5)**	**574 days**	**Jan 1 '21**	**Jul 28 '22**	**Jan 1 '21**	**Jul 28 '22**	**0 days**			
80	80	5.12.8.1	Submission for acceptance of purchasing package	60 days	Jan 1 '21	Mar 1 '21	Jan 1 '21	Mar 1 '21	0 days		81	
81	81	5.12.8.2	Invitation of quotations for purchasing package	13 days	Mar 19 '21	Mar 31 '21	Mar 19 '21	Mar 31 '21	0 days	80	82	
82	82	5.12.8.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Apr 9 '21	Apr 30 '21	Apr 9 '21	Apr 30 '21	0 days	81	284,444,589,	
83	83	5.12.8.4	Manufacturing and Factory Acceptance Test of Plant	90 days	Mar 16 '22	Jun 13 '22	Mar 16 '22	Jun 13 '22	0 days	284,444,585	84	
84	84	5.12.8.5	Shipping and Delivery of Plant to LVSB Sub-Contractor	45 days	Jun 14 '22	Jul 28 '22	Jun 14 '22	Jul 28 '22	0 days	83	318SS-90 eda	
85	**85**	**5.12.9**	**General - 11kV/380V Stepdown Power Transformers, C11, EQT032 (Rev. 5)**	**94 days**	**Jan 18 '21**	**Apr 21 '21**	**Jan 18 '21**	**Apr 21 '21**	**0 days**			
86	86	5.12.9.1	Submission for acceptance of purchasing package	50 days	Jan 18 '21	Mar 8 '21	Jan 18 '21	Mar 8 '21	0 days		87	
87	87	5.12.9.2	Invitation of quotations for purchasing package	23 days	Mar 1 '21	Mar 23 '21	Mar 1 '21	Mar 23 '21	0 days	86	88	
88	88	5.12.9.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Mar 31 '21	Apr 21 '21	Mar 31 '21	Apr 21 '21	0 days	87	284,754	
89	**89**	**5.12.10**	**General - UPS, C11, EQT039A (Rev. 14)**	**90 days**	**Dec 1 '21**	**Feb 28 '22**	**Dec 1 '21**	**Feb 28 '22**	**0 days**			
90	90	5.12.10.1	Submission for acceptance of purchasing package (Rev. 13)	30 days	Dec 1 '21	Dec 30 '21	Dec 1 '21	Dec 30 '21	0 days		91	
91	91	5.12.10.2	Invitation of quotations for purchasing package (Rev. 13)	30 days	Dec 31 '21	Jan 29 '22	Dec 31 '21	Jan 29 '22	0 days	90	92	
92	92	5.12.10.3	Acceptance of conforming quotation (Rev. 13)	30 days	Jan 30 '22	Feb 28 '22	Jan 30 '22	Feb 28 '22	0 days	91	284,444,589,	
93	**93**	**5.12.11**	**General - HV Cables, C11, EQT041 (Rev. 13)**	**65 days**	**Dec 1 '21**	**Feb 3 '22**	**Dec 1 '21**	**Feb 3 '22**	**0 days**			
94	94	5.12.11.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		95	
95	95	5.12.11.2	Invitation of quotations for purchasing package	21 days	Dec 15 '21	Jan 4 '22	Dec 15 '21	Jan 4 '22	0 days	94	96	
96	96	5.12.11.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	95	284,754	
97	**97**	**5.12.12**	**General - LV Cables, C11, EQT042 (Rev. 13)**	**65 days**	**Dec 1 '21**	**Feb 3 '22**	**Dec 1 '21**	**Feb 3 '22**	**0 days**			
98	98	5.12.12.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		99	
99	99	5.12.12.2	Invitation of quotations for purchasing package	21 days	Dec 15 '21	Jan 4 '22	Dec 15 '21	Jan 4 '22	0 days	98	100	
100	100	5.12.12.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	99	284,444,589,	
101	**101**	**5.12.12.4**	**General - FRP Covers & Walkways & Platform & Ladders, EQT050 (Rev.18)**	**65 days**	**Dec 1 '21**	**Feb 3 '22**	**Dec 1 '21**	**Feb 3 '22**	**0 days**			
102	102	5.12.12.4.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		103	
103	103	5.12.12.4.2	Invitation of quotations for purchasing package	21 days	Dec 15 '21	Jan 4 '22	Dec 15 '21	Jan 4 '22	0 days	102	104	
104	104	5.12.12.4.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	103	284,444,589,	
105	**105**	**5.12.13**	**General - Gas Detection System, C11, EQT051 (Rev. 16)**	**186 days**	**Jun 12 '21**	**Dec 14 '21**	**Jun 12 '21**	**Dec 14 '21**	**0 days**			
106	106	5.12.13.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		107	
107	107	5.12.13.2	Invitation of quotations for purchasing package	11 days	Jun 12 '21	Jun 22 '21	Jun 12 '21	Jun 22 '21	0 days	106	108	
108	108	5.12.13.3	Acceptance of conforming quotation (Completed)	22 days	Jun 24 '21	Jul 15 '21	Jun 24 '21	Jul 15 '21	0 days	107	284,444,589,	
109	**109**	**5.13**	**Part B: Subletting of major sub-contract works**	**791 days**	**Dec 2 '19**	**Jan 30 '22**	**Dec 2 '19**	**Jan 30 '22**	**0 days**	**2,37**		
110	110	5.13.1	Planned Completion Date for major sub-contract works	0 days	Aug 12 '21	Aug 12 '21	Aug 12 '21	Aug 12 '21	0 days	2SS+620 day		
111	**111**	**5.13.2**	**General - Independent BEAM Plus Consultant (04SC007)**	**150 days**	**Jan 1 '20**	**May 29 '20**	**Jan 1 '20**	**May 29 '20**	**0 days**			
112	112	5.13.2.1	Submission for acceptance of proposed Independent BEAM Plus Consultant	60 edays	Jan 1 '20	Mar 1 '20	Jan 1 '20	Mar 1 '20	0 edays		113	
113	113	5.13.2.2	Acceptance of proposed Independent BEAM Plus Consultant	14 edays	Mar 1 '20	Mar 15 '20	Mar 1 '20	Mar 15 '20	0 edays	112	114	
114	114	5.13.2.3	Engagement with an Independent BEAM Plus Consultant	7 days	Mar 15 '20	Mar 21 '20	Mar 15 '20	Mar 21 '20	0 days	113		
115	115	5.13.2.4	Actual Date for engagement with an independent BEAM Plus Consultant (Completed)	0 days	May 29 '20	May 29 '20	May 29 '20	May 29 '20	0 days			
116	**116**	**5.13.3**	**General - Conduction of Pump sump physical model test (04SC015)**	**575 days**	**May 15 '20**	**Dec 10 '21**	**May 15 '20**	**Dec 10 '21**	**0 days**			



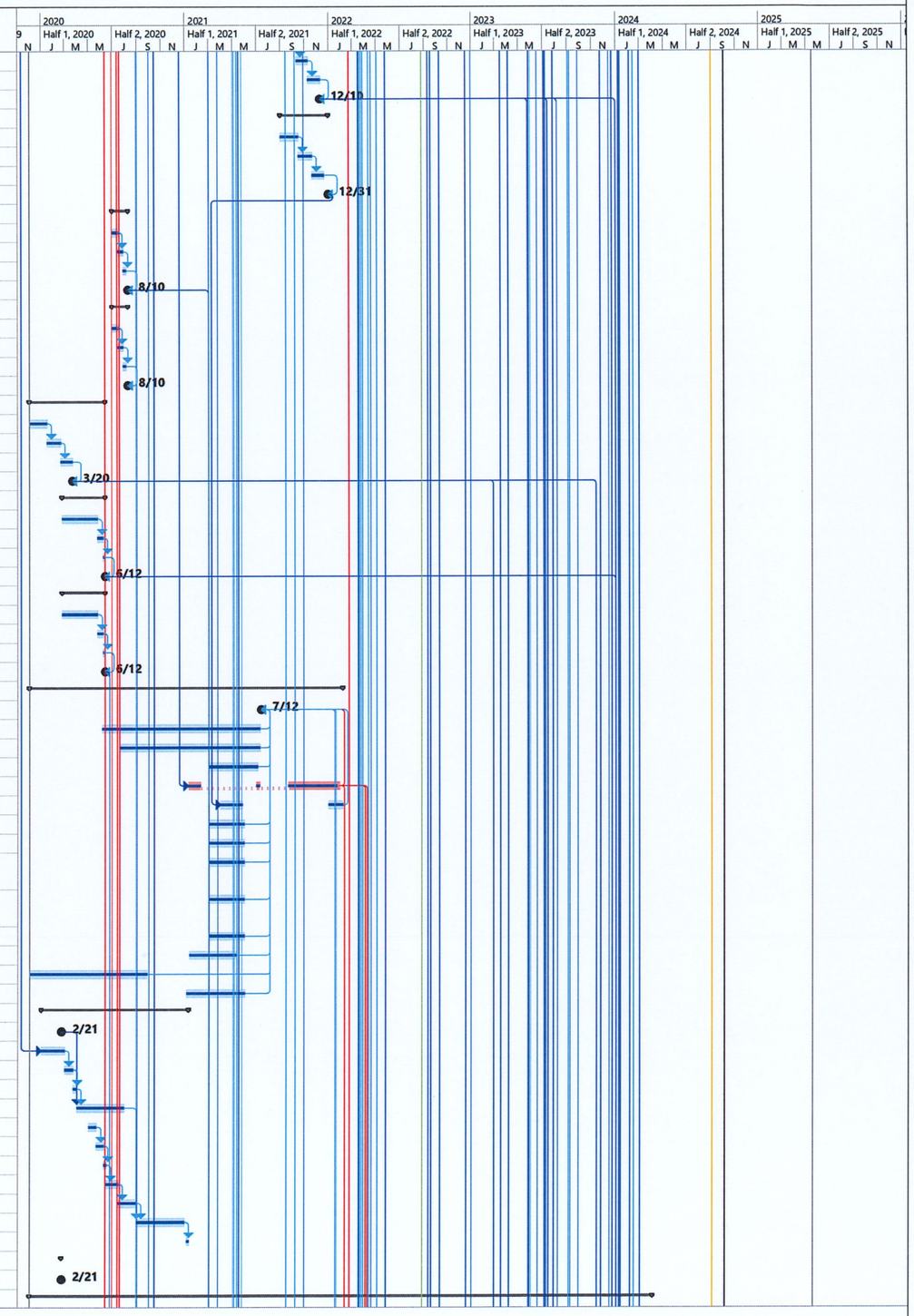
Bestwise
Project: DE/2018/04
Date: 31/07/22

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

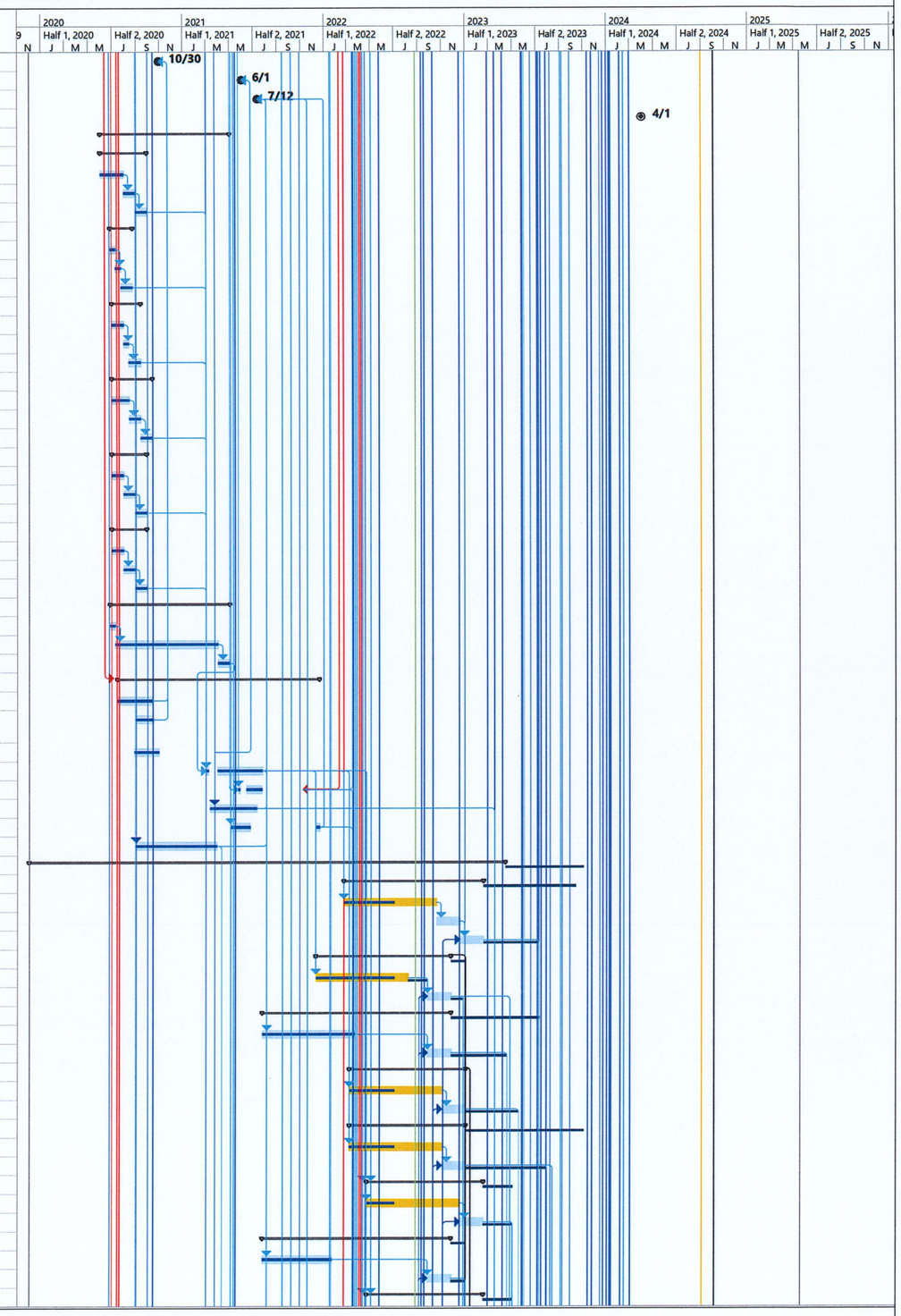
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
117	117	5.13.3.1	Submission for acceptance of proposed hydraulic laboratory to conduct the	7 edays	May 15 '20	May 22 '20	May 15 '20	May 22 '20	0 edays		118	
118	118	5.13.3.2	Invitation to quotations for provision of service	7 edays	May 22 '20	May 29 '20	May 22 '20	May 29 '20	0 edays	117	119	
119	119	5.13.3.3	Acceptance of proposed hydraulic laboratory	6 days	May 29 '20	Jun 3 '20	May 29 '20	Jun 3 '20	0 days	118	120	
120	120	5.13.3.4	Commencement of detailed proposal and conduction of test (Rev 13)	480 days	Jun 4 '20	Sep 26 '21	Jun 4 '20	Sep 26 '21	0 days	119	121	
121	121	5.13.3.5	Acceptance of hydraulic Report (Rev 16)	75 days	Sep 27 '21	Dec 10 '21	Sep 27 '21	Dec 10 '21	0 days	120	279,439,584,	
122	**122**	**5.13.4**	**General - Independent Checking Engineer (04SC004)**	**127 days**	**Mar 11 '20**	**Jul 15 '20**	**Mar 11 '20**	**Jul 15 '20**	**0 days**			
123	123	5.13.4.1	Submission for acceptance of proposed Independent Checking Engineer	90 edays	Mar 11 '20	Jun 9 '20	Mar 11 '20	Jun 9 '20	0 edays		124	
124	124	5.13.4.2	Acceptance of proposed Independent Checking Engineer	1 eday	Jun 24 '20	Jun 25 '20	Jun 24 '20	Jun 25 '20	0 edays	123	125	
125	125	5.13.4.3	Engagement with an Independent Checking Engineer	21 days	Jun 25 '20	Jul 15 '20	Jun 25 '20	Jul 15 '20	0 days	124	126	
126	126	5.13.4.4	Actual Date for engagement with an ICE (Completed)	0 days	Jul 15 '20	Jul 15 '20	Jul 15 '20	Jul 15 '20	0 days	125		
127	**127**	**5.13.5**	**General - Lifting Appliances (04SC008)**	**81 days**	**May 1 '20**	**Jul 21 '20**	**May 1 '20**	**Jul 21 '20**	**0 days**			
128	128	5.13.5.1	Submission for acceptance of subcontract works package	30 edays	May 1 '20	May 31 '20	May 1 '20	May 31 '20	0 edays		129	
129	129	5.13.5.2	Invitation of tender for subcontract works	21 edays	May 31 '20	Jun 21 '20	May 31 '20	Jun 21 '20	0 edays	128	130	
130	130	5.13.5.3	Acceptance of conforming tender	30 edays	Jun 21 '20	Jul 21 '20	Jun 21 '20	Jul 21 '20	0 edays	129	131	
131	131	5.13.5.4	Sub-contract work commencement date (Completed)	0 days	Jul 21 '20	Jul 21 '20	Jul 21 '20	Jul 21 '20	0 days	130	287,447,594,	
132	**132**	**5.13.6**	**General - Mechanical Installations**	**244 days**	**Jun 1 '21**	**Jan 30 '22**	**Jun 1 '21**	**Jan 30 '22**	**0 days**			
133	133	5.13.6.1	Submission for acceptance of subcontract works package	120 days	Jun 1 '21	Sep 28 '21	Jun 1 '21	Sep 28 '21	0 days		134	
134	134	5.13.6.2	Invitation of tender for subcontract works	75 days	Sep 29 '21	Dec 12 '21	Sep 29 '21	Dec 12 '21	0 days	133	135	
135	135	5.13.6.3	Acceptance of conforming tender	30 days	Dec 13 '21	Jan 11 '22	Dec 13 '21	Jan 11 '22	0 days	134	136FF	
136	136	5.13.6.4	Sub-contract work commencement date	1 day	Jan 30 '22	Jan 30 '22	Jan 30 '22	Jan 30 '22	0 days	135FF	359,509,662,	
137	**137**	**5.13.7**	**General - Electrical Installations**	**244 days**	**Jun 1 '21**	**Jan 30 '22**	**Jun 1 '21**	**Jan 30 '22**	**0 days**			
138	138	5.13.7.1	Submission for acceptance of subcontract works package	120 edays	Jun 1 '21	Sep 29 '21	Jun 1 '21	Sep 29 '21	0 edays		139	
139	139	5.13.7.2	Invitation of tender for subcontract works	75 edays	Sep 29 '21	Dec 13 '21	Sep 29 '21	Dec 13 '21	0 edays	138	140	
140	140	5.13.7.3	Acceptance of conforming tender	30 edays	Dec 13 '21	Jan 12 '22	Dec 13 '21	Jan 12 '22	0 edays	139	141FF	
141	141	5.13.7.4	Sub-contract work commencement date	1 day	Jan 30 '22	Jan 30 '22	Jan 30 '22	Jan 30 '22	0 days	140FF	374,522,685,	
142	**142**	**5.13.8**	**General - Facility Computerized Systems (SCADA & PMS) 04SC018**	**384 days**	**Sep 1 '20**	**Sep 20 '21**	**Sep 1 '20**	**Sep 20 '21**	**0 days**			
143	143	5.13.8.1	Submission for acceptance of subcontract works package	60 edays	Sep 1 '20	Oct 31 '20	Sep 1 '20	Oct 31 '20	0 edays		144	
144	144	5.13.8.2	Invitation of tender for subcontract works	310 edays	Oct 31 '20	Sep 6 '21	Oct 31 '20	Sep 6 '21	0 edays	143	145	
145	145	5.13.8.3	Acceptance of conforming tender (Completed)	14 edays	Sep 6 '21	Sep 20 '21	Sep 6 '21	Sep 20 '21	0 edays	144	146	
146	146	5.13.8.4	Sub-contract work commencement date	0 days	Sep 20 '21	Sep 20 '21	Sep 20 '21	Sep 20 '21	0 days	145	220	
147	**147**	**5.13.9**	**General - Facility Computerized Systems (CMMS & IDMS) 04SC057**	**384 days**	**Sep 1 '20**	**Sep 20 '21**	**Sep 1 '20**	**Sep 20 '21**	**0 days**			
148	148	5.13.9.1	Submission for acceptance of subcontract works package	60 edays	Sep 1 '20	Oct 31 '20	Sep 1 '20	Oct 31 '20	0 edays		149	
149	149	5.13.9.2	Invitation of tender for subcontract works	310 edays	Oct 31 '20	Sep 6 '21	Oct 31 '20	Sep 6 '21	0 edays	148	150	
150	150	5.13.9.3	Acceptance of conforming tender	14 edays	Sep 6 '21	Sep 20 '21	Sep 6 '21	Sep 20 '21	0 edays	149	151	
151	151	5.13.9.4	Sub-contract work commencement date	0 days	Sep 20 '21	Sep 20 '21	Sep 20 '21	Sep 20 '21	0 days	150	220	
152	**152**	**5.13.10**	**General - Building Services Installations**	**130 days**	**Nov 2 '20**	**Mar 12 '21**	**Nov 2 '20**	**Mar 12 '21**	**0 days**			
153	153	5.13.10.1	Submission for acceptance of subcontract works package (Rev. 15)	60 edays	Nov 2 '20	Jan 1 '21	Nov 2 '20	Jan 1 '21	0 edays		154	
154	154	5.13.10.2	Invitation of tender for subcontract works	30 edays	Jan 1 '21	Jan 31 '21	Jan 1 '21	Jan 31 '21	0 edays	153	155	
155	155	5.13.10.3	Acceptance of conforming tender	30 edays	Jan 31 '21	Mar 2 '21	Jan 31 '21	Mar 2 '21	0 edays	154	156FF	
156	156	5.13.10.4	Sub-contract work commencement date	0 days	Mar 12 '21	Mar 12 '21	Mar 12 '21	Mar 12 '21	0 days	155FF	285,445,590,	
157	**157**	**5.13.11**	**General - Mechanical Ventilation and Air Conditioning Installation (Rev. 13) (04SC020)**	**413 days**	**Nov 2 '20**	**Dec 19 '21**	**Nov 2 '20**	**Dec 19 '21**	**0 days**			
158	158	5.13.11.1	Submission for acceptance of subcontract works package	60 days	Nov 2 '20	Dec 31 '20	Nov 2 '20	Dec 31 '20	0 days		159	
159	159	5.13.11.2	Invitation of tender for subcontract works	30 edays	Dec 31 '20	Jan 30 '21	Dec 31 '20	Jan 30 '21	0 edays	158	160	
160	160	5.13.11.3	Submission for acceptance of revised subcontract works package (Rev. 13)	60 days	Sep 1 '21	Oct 30 '21	Sep 1 '21	Oct 30 '21	0 days	159	161	
161	161	5.13.11.4	Invitation of tender for subcontract works (Rev. 15)	14 days	Nov 15 '21	Nov 28 '21	Nov 15 '21	Nov 28 '21	0 days	160	162	
162	162	5.13.11.5	Acceptance of conforming tender (Rev. 13)	21 days	Nov 29 '21	Dec 19 '21	Nov 29 '21	Dec 19 '21	0 days	161	163FF	
163	163	5.13.11.6	Sub-contract work commencement date	0 days	Dec 19 '21	Dec 19 '21	Dec 19 '21	Dec 19 '21	0 days	162FF	674,382,531	
164	**164**	**5.13.12**	**General - Emergency Power Generator Set (04SC006)**	**146 days**	**Jul 1 '20**	**Nov 23 '20**	**Jul 1 '20**	**Nov 23 '20**	**0 days**			
165	165	5.13.12.1	Submission for acceptance of subcontract works package	60 edays	Jul 1 '20	Aug 30 '20	Jul 1 '20	Aug 30 '20	0 edays		166	
166	166	5.13.12.2	Invitation of tender for subcontract works	30 edays	Aug 30 '20	Sep 29 '20	Aug 30 '20	Sep 29 '20	0 edays	165	167	
167	167	5.13.12.3	Acceptance of conforming tender	30 edays	Sep 29 '20	Oct 29 '20	Sep 29 '20	Oct 29 '20	0 edays	166	168FF	
168	168	5.13.12.4	Sub-contract work commencement date (Completed)	24 days	Oct 31 '20	Nov 23 '20	Oct 31 '20	Nov 23 '20	0 days	167FF	1057	
169	**169**	**5.13.13**	**General - Plumbing Installation (Rev. 5) (04SC021)**	**231 days**	**Jul 1 '20**	**Feb 16 '21**	**Jul 1 '20**	**Feb 16 '21**	**0 days**			
170	170	5.13.13.1	Submission for acceptance of subcontract works package	30 edays	Jul 1 '20	Jul 31 '20	Jul 1 '20	Jul 31 '20	0 edays		171	
171	171	5.13.13.2	Invitation of tender for subcontract works	75 edays	Jul 31 '20	Oct 14 '20	Jul 31 '20	Oct 14 '20	0 edays	170	172	
172	172	5.13.13.3	Retender of subcontract works (Rev. 5)	14 days	Jan 4 '21	Jan 17 '21	Jan 4 '21	Jan 17 '21	0 days	171	173	
173	173	5.13.13.4	Acceptance of conforming tender (Completed)	30 edays	Jan 17 '21	Feb 16 '21	Jan 17 '21	Feb 16 '21	0 edays	172	174FF	
174	174	5.13.13.5	Sub-contract work commencement date (Extended)	0 days	Feb 16 '21	Feb 16 '21	Feb 16 '21	Feb 16 '21	0 days	173FF	1380	
175	**175**	**5.13.14**	**General - Fire Services Installation (Rev. 5) (04SC019)**	**120 days**	**Jan 4 '21**	**May 3 '21**	**Jan 4 '21**	**May 3 '21**	**0 days**			
176	176	5.13.14.1	Submission for acceptance of subcontract works package	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days		177	
177	177	5.13.14.2	Invitation of tender for subcontract works	30 days	Mar 5 '21	Apr 3 '21	Mar 5 '21	Apr 3 '21	0 days	176	178	
178	178	5.13.14.3	Acceptance of conforming tender (Completed)	30 days	Apr 4 '21	May 3 '21	Apr 4 '21	May 3 '21	0 days	177	179FF	
179	179	5.13.14.4	Sub-contract work commencement date	0 days	May 3 '21	May 3 '21	May 3 '21	May 3 '21	0 days	178FF	1331	
180	**180**	**5.13.15**	**General - Lightning Protection System (Rev. 15) (04SC017)**	**100 days**	**Sep 1 '21**	**Dec 10 '21**	**Sep 1 '21**	**Dec 10 '21**	**0 days**			
181	181	5.13.15.1	Submission for acceptance of subcontract works package (Rev. 13)	40 edays	Sep 1 '21	Oct 11 '21	Sep 1 '21	Oct 11 '21	0 edays		182	



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
182	182	5.13.15.2	Invitation of tender for subcontract works (Rev. 15)	30 edays	Oct 11 '21	Nov 10 '21	Oct 11 '21	Nov 10 '21	0 edays	181	183	
183	183	5.13.15.3	Acceptance of conforming tender (Rev. 15)	30 edays	Nov 10 '21	Dec 10 '21	Nov 10 '21	Dec 10 '21	0 edays	182	184FF	
184	184	5.13.15.4	Sub-contract work commencement date (Rev. 15)	0 days	Dec 10 '21	Dec 10 '21	Dec 10 '21	Dec 10 '21	0 days	183FF	956,679,388,	
185	**185**	**5.13.16**	**General - CCTV Installation (Rev. 13) (04SC016)**	**121 days**	**Sep 1 '21**	**Dec 31 '21**	**Sep 1 '21**	**Dec 31 '21**	**0 days**			
186	186	5.13.16.1	Submission for acceptance of subcontract works package	45 edays	Sep 1 '21	Oct 16 '21	Sep 1 '21	Oct 16 '21	0 edays		187	
187	187	5.13.16.2	Invitation of tender for subcontract works	35 edays	Oct 16 '21	Nov 20 '21	Oct 16 '21	Nov 20 '21	0 edays	186	188	
188	188	5.13.16.3	Acceptance of conforming tender	30 edays	Nov 20 '21	Dec 20 '21	Nov 20 '21	Dec 20 '21	0 edays	187	189FF	
189	189	5.13.16.4	Sub-contract work commencement date	0 days	Dec 31 '21	Dec 31 '21	Dec 31 '21	Dec 31 '21	0 days	188FF	221	
190	**190**	**5.13.17**	**General - Civil Construction Work for underground pipework (04SC005)**	**40 days**	**Jul 1 '20**	**Aug 10 '20**	**Jul 1 '20**	**Aug 10 '20**	**0 days**			
191	191	5.13.17.1	Submission for acceptance of subcontract works package	14 days	Jul 1 '20	Jul 14 '20	Jul 1 '20	Jul 14 '20	0 days		192	
192	192	5.13.17.2	Invitation of tender for subcontract works	14 days	Jul 15 '20	Jul 28 '20	Jul 15 '20	Jul 28 '20	0 days	191	193	
193	193	5.13.17.3	Acceptance of conforming tender	7 days	Jul 29 '20	Aug 4 '20	Jul 29 '20	Aug 4 '20	0 days	192	194FF	
194	194	5.13.17.4	Sub-contract work commencement date (Completed)	0 days	Aug 10 '20	Aug 10 '20	Aug 10 '20	Aug 10 '20	0 days	193FF	1154	
195	**195**	**5.13.18**	**General - Civil Construction Work for Temp. Filtrate Eq. System (04SC005)**	**40 days**	**Jul 1 '20**	**Aug 10 '20**	**Jul 1 '20**	**Aug 10 '20**	**0 days**			
196	196	5.13.18.1	Submission for acceptance of subcontract works package	14 days	Jul 1 '20	Jul 14 '20	Jul 1 '20	Jul 14 '20	0 days		197	
197	197	5.13.18.2	Invitation of tender for subcontract works	14 days	Jul 15 '20	Jul 28 '20	Jul 15 '20	Jul 28 '20	0 days	196	198	
198	198	5.13.18.3	Acceptance of conforming tender	7 days	Jul 29 '20	Aug 4 '20	Jul 29 '20	Aug 4 '20	0 days	197	199FF	
199	199	5.13.18.4	Sub-contract work commencement date (Completed)	0 days	Aug 10 '20	Aug 10 '20	Aug 10 '20	Aug 10 '20	0 days	198FF		
200	**200**	**5.13.19**	**General - Lighting and Small Power Distribution System (04SC011)**	**193 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
201	201	5.13.19.1	Submission for acceptance of subcontract works package	45 days	Dec 2 '19	Jan 15 '20	Dec 2 '19	Jan 15 '20	0 days		202	
202	202	5.13.19.2	Invitation of tender for subcontract works	35 days	Jan 16 '20	Feb 19 '20	Jan 16 '20	Feb 19 '20	0 days	201	203	
203	203	5.13.19.3	Acceptance of conforming tender	30 days	Feb 20 '20	Mar 20 '20	Feb 20 '20	Mar 20 '20	0 days	202	204FF	
204	204	5.13.19.4	Sub-contract work commencement date	0 days	Mar 20 '20	Mar 20 '20	Mar 20 '20	Mar 20 '20	0 days	203FF	1360,1373	
205	**205**	**5.13.19.5**	**Mis - Modification works of HV switchboard in MFB no.1 (04SC0xx)**	**109 days**	**Feb 24 '20**	**Jun 12 '20**	**Feb 24 '20**	**Jun 12 '20**	**0 days**			
206	206	5.13.19.5.1	Submission for acceptance of subcontract works package	90 days	Feb 24 '20	May 23 '20	Feb 24 '20	May 23 '20	0 days		207	
207	207	5.13.19.5.2	Invitation of tender for subcontract works	14 days	May 24 '20	Jun 6 '20	May 24 '20	Jun 6 '20	0 days	206	208	
208	208	5.13.19.5.3	Acceptance of conforming tender	1 day	Jun 7 '20	Jun 7 '20	Jun 7 '20	Jun 7 '20	0 days	207	209FF	
209	209	5.13.19.5.4	Sub-contract work commencement date	0 days	Jun 12 '20	Jun 12 '20	Jun 12 '20	Jun 12 '20	0 days	208FF	932	
210	**210**	**5.13.20**	**Mis - Modification of existing power house (04SC010)**	**109 days**	**Feb 24 '20**	**Jun 12 '20**	**Feb 24 '20**	**Jun 12 '20**	**0 days**			
211	211	5.13.20.1	Submission for acceptance of subcontract works package	90 days	Feb 24 '20	May 23 '20	Feb 24 '20	May 23 '20	0 days		212	
212	212	5.13.20.2	Invitation of tender for subcontract works	14 days	May 24 '20	Jun 6 '20	May 24 '20	Jun 6 '20	0 days	211	213	
213	213	5.13.20.3	Acceptance of conforming tender	1 day	Jun 7 '20	Jun 7 '20	Jun 7 '20	Jun 7 '20	0 days	212	214FF	
214	214	5.13.20.4	Sub-contract work commencement date (Completed)	0 days	Jun 12 '20	Jun 12 '20	Jun 12 '20	Jun 12 '20	0 days	213FF	1302	
215	**215**	**5.14**	**Part C: General Design Submissions**	**796 days**	**Dec 2 '19**	**Feb 5 '22**	**Dec 2 '19**	**Feb 5 '22**	**0 days**			
216	216	5.14.1	Planned Sectional Completion Date - Section 1	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	217FF,218FF		
217	217	5.14.2	CDS001 - General Design Parameters (Rev. 11)	400 edays	Jun 5 '20	Jul 10 '21	Jun 5 '20	Jul 10 '21	0 edays		216FF	
218	218	5.14.3	CDS020 - Electrical Installation Typical Details	355 edays	Jul 20 '20	Jul 10 '21	Jul 20 '20	Jul 10 '21	0 edays		216FF	
219	219	5.14.4	CDS009 - Detailed Design for Plant Service Water System	125 edays	Mar 1 '21	Jul 4 '21	Mar 1 '21	Jul 4 '21	0 edays		216FF	
220	220	5.14.5	CDS012 - Detailed Design for SCADA System	383.4 edays	Jan 9 '21	Jan 27 '22	Jan 9 '21	Jan 27 '22	0 edays	146,151	216FF,284FF,	
221	221	5.14.6	CDS13-1 - Detailed Design for CCTV System	310 edays	Apr 1 '21	Feb 5 '22	Apr 1 '21	Feb 5 '22	0 edays	189	216FF	
222	222	5.14.7	CDS13-2 - Detailed Design for Gas Detection and Monitoring System	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
223	223	5.14.8	CDS14-1 - Detailed Design for Power monitoring system (PMS)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
224	224	5.14.9	CDS14-2 - Detailed Design for Computerized maintenance and management (CMMS)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
225	225	5.14.10	CDS14-3 - Detailed Design for Information and documents management system (IDMS)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
226	226	5.14.11	CDS031 - Detailed Design for MVAC System	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
227	227	5.14.12	CDS042 - Detailed Design for Lightning Protection System	120 edays	Jan 11 '21	May 11 '21	Jan 11 '21	May 11 '21	0 edays		216FF	
228	228	5.14.13	Design submissions for E&M installation works of existing sludge thickening bu	300 edays	Dec 2 '19	Sep 27 '20	Dec 2 '19	Sep 27 '20	0 edays		216FF	
229	229	5.14.14	Design Submission for Earthing and Lightning (Rev. 8)	147.38 edays	Jan 4 '21	May 31 '21	Jan 4 '21	May 31 '21	0 edays		216FF	
230	**230**	**5.15**	**Works Area WA1-C**	**374 days**	**Jan 1 '20**	**Jan 8 '21**	**Jan 1 '20**	**Jan 8 '21**	**0 days**			
231	231	5.15.1	Actual Access / Handover Date	1 day	Feb 21 '20	Feb 21 '20	Feb 21 '20	Feb 21 '20	0 days		235	
232	232	5.15.2	Submission for acceptance of subcontract works package (Site Office) (04SC00	60 days	Jan 1 '20	Feb 29 '20	Jan 1 '20	Feb 29 '20	0 days	2SS+30 eday	233	
233	233	5.15.3	Invitation of quotations for subcontract works (Site Office)	21 days	Mar 1 '20	Mar 21 '20	Mar 1 '20	Mar 21 '20	0 days	232	234	
234	234	5.15.4	Acceptance of conforming quotation (Site Office)	10 days	Mar 22 '20	Mar 31 '20	Mar 22 '20	Mar 31 '20	0 days	233	235	
235	235	5.15.5	Design and Fabrication of the Contractor's Site Accommodations	120 days	Apr 1 '20	Jul 29 '20	Apr 1 '20	Jul 29 '20	0 days	231,234	241	
236	236	5.15.6	Submission for acceptance of subcontract works package (Site Office Foundati	20 days	May 1 '20	May 20 '20	May 1 '20	May 20 '20	0 days		237	
237	237	5.15.7	Invitation of quotations for subcontract works (Site Office Foundation)	18 days	May 21 '20	Jun 7 '20	May 21 '20	Jun 7 '20	0 days	236	238	
238	238	5.15.8	Acceptance of conforming quotation (Site foundation)	7 days	Jun 8 '20	Jun 14 '20	Jun 8 '20	Jun 14 '20	0 days	237	239	
239	239	5.15.9	Design and Construction of the Contractor's Site Office foundation	30 days	Jun 15 '20	Jul 14 '20	Jun 15 '20	Jul 14 '20	0 days	238	240	
240	240	5.15.10	Construction of Contractor's Site Office foundation (Completed)	47 days	Jul 15 '20	Aug 30 '20	Jul 15 '20	Aug 30 '20	0 days	239	241	
241	241	5.15.11	Site Installation of the Contractor's Site Accommodations (MiC) (Rev. 5)	120 days	Aug 31 '20	Dec 28 '20	Aug 31 '20	Dec 28 '20	0 days	235,240	242	
242	242	5.15.12	Anticipated date of working at site (Rev. 5) (Completed)	4 days	Jan 5 '21	Jan 8 '21	Jan 5 '21	Jan 8 '21	0 days	241		
243	**243**	**5.16**	**Works Area WA2-C**	**1 day**	**Feb 21 '20**	**Feb 21 '20**	**Feb 21 '20**	**Feb 21 '20**	**0 days**			
244	244	5.16.1	Actual Access / Handover Date	1 day	Feb 21 '20	Feb 21 '20	Feb 21 '20	Feb 21 '20	0 days			
245	**245**	**5.17**	**Inlet Works No. 1, Portion B-2 (PS 6B.2.1)**	**1582 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			



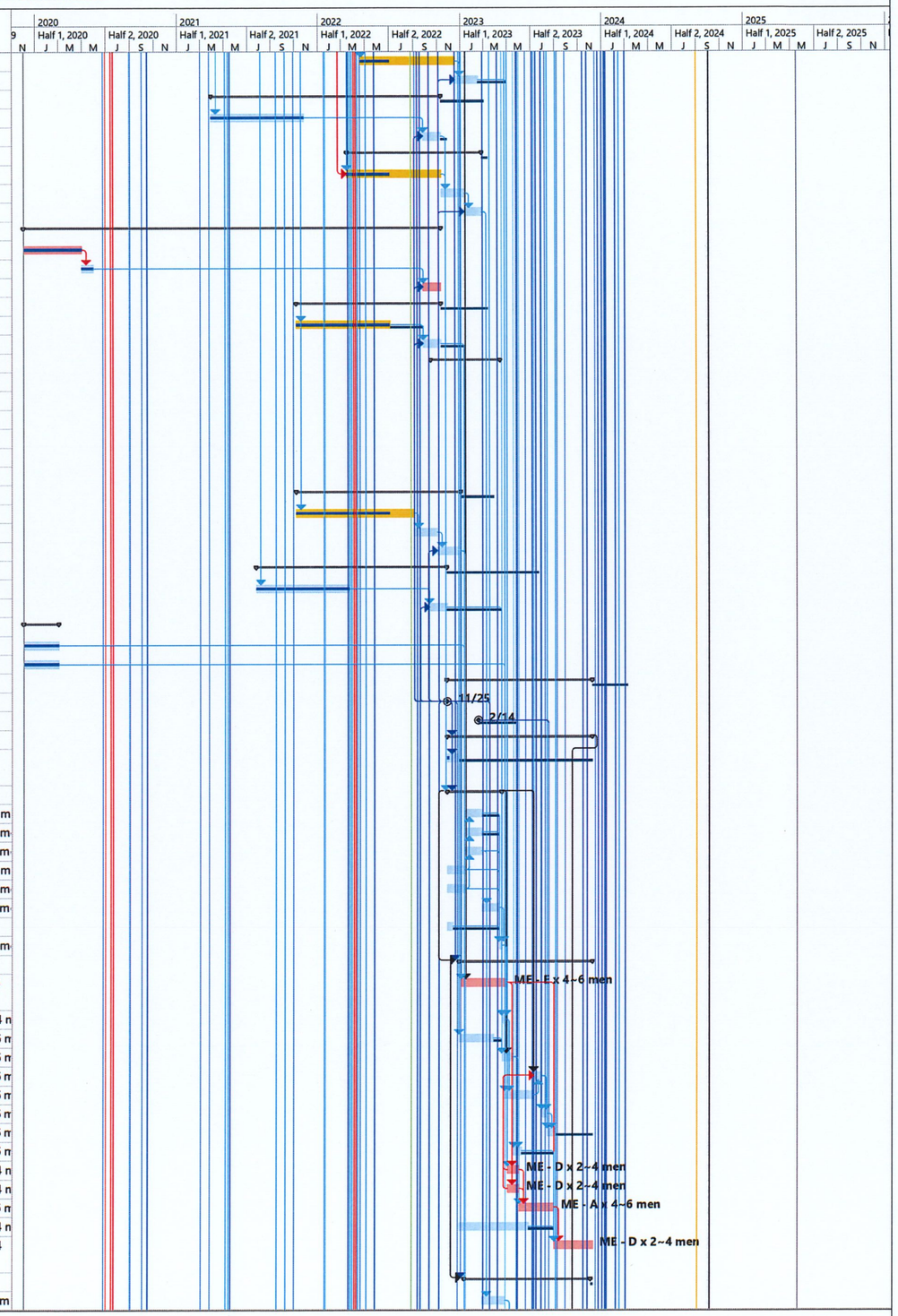
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
246	246	5.17.1	Planned Key Date Completion Date - KD1A, IW	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days	280FF,281FI		
247	247	5.17.2	Planned Key Date Completion Date - KD1B, IW	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	282FF		
248	248	5.17.3	Planned Sectional Completion Date - Section 1, IW	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	283FF,284FI		
249	249	5.17.4	Planned Sectional Completion Date - Section 2, IW	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days			
250	**250**	**5.17.5**	**Selection of Suppliers for major plant and materials for Inlet Works No. 1**	**335 days**	**Jun 1 '20**	**May 1 '21**	**Jun 1 '20**	**May 1 '21**	**0 days**			
251	**251**	**5.17.5.1**	**Inlet Works - inlet Pumps (Marking Scheme Approach), C11, ref. EQT006**	**120 days**	**Jun 1 '20**	**Sep 28 '20**	**Jun 1 '20**	**Sep 28 '20**	**0 days**			
252	252	5.17.5.1.1	Submission for acceptance of purchasing package including proposed marking sch	60 days	Jun 1 '20	Jul 30 '20	Jun 1 '20	Jul 30 '20	0 days		253	
253	253	5.17.5.1.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	252	254	
254	254	5.17.5.1.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	253	283	
255	**255**	**5.17.5.2**	**Inlet Works - mechanical raked bar screens, C11, ref. EQT052**	**58 days**	**Jun 26 '20**	**Aug 22 '20**	**Jun 26 '20**	**Aug 22 '20**	**0 days**			
256	256	5.17.5.2.1	Submission for acceptance of purchasing package	14 days	Jun 26 '20	Jul 9 '20	Jun 26 '20	Jul 9 '20	0 days		257	
257	257	5.17.5.2.2	Invitation of quotations for purchasing package	14 days	Jul 10 '20	Jul 23 '20	Jul 10 '20	Jul 23 '20	0 days	256	258	
258	258	5.17.5.2.3	Acceptance of conforming quotation (Completed)	30 days	Jul 24 '20	Aug 22 '20	Jul 24 '20	Aug 22 '20	0 days	257	283	
259	**259**	**5.17.5.3**	**Inlet Works - screening conveyors and Diverters, C11, ref. EQT053**	**74 days**	**Jul 1 '20**	**Sep 12 '20**	**Jul 1 '20**	**Sep 12 '20**	**0 days**			
260	260	5.17.5.3.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		261	
261	261	5.17.5.3.2	Invitation of quotations for purchasing package	14 days	Jul 31 '20	Aug 13 '20	Jul 31 '20	Aug 13 '20	0 days	260	262	
262	262	5.17.5.3.3	Acceptance of conforming quotation (Completed)	30 days	Aug 14 '20	Sep 12 '20	Aug 14 '20	Sep 12 '20	0 days	261	283	
263	**263**	**5.17.5.4**	**Inlet Works - screening screw type compactors, C11, ref. EQT003**	**105 days**	**Jul 1 '20**	**Oct 13 '20**	**Jul 1 '20**	**Oct 13 '20**	**0 days**			
264	264	5.17.5.4.1	Submission for acceptance of purchasing package	45 days	Jul 1 '20	Aug 14 '20	Jul 1 '20	Aug 14 '20	0 days		265	
265	265	5.17.5.4.2	Invitation of quotations for purchasing package	30 days	Aug 15 '20	Sep 13 '20	Aug 15 '20	Sep 13 '20	0 days	264	266	
266	266	5.17.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Sep 14 '20	Oct 13 '20	Sep 14 '20	Oct 13 '20	0 days	265	283	
267	**267**	**5.17.5.5**	**Inlet Works - grit removal system, C11, ref. EQT004**	**90 days**	**Jul 1 '20**	**Sep 28 '20**	**Jul 1 '20**	**Sep 28 '20**	**0 days**			
268	268	5.17.5.5.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		269	
269	269	5.17.5.5.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	268	270	
270	270	5.17.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	269	283	
271	**271**	**5.17.5.6**	**Inlet Works - grit classifiers, C11, ref. EQT004**	**90 days**	**Jul 1 '20**	**Sep 28 '20**	**Jul 1 '20**	**Sep 28 '20**	**0 days**			
272	272	5.17.5.6.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		273	
273	273	5.17.5.6.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	272	274	
274	274	5.17.5.6.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	273	283	
275	**275**	**5.17.5.7**	**Inlet Works - Fixed Bar Screen, C11, ref. EQT046 (Rev. 10)**	**310 days**	**Jun 26 '20**	**May 1 '21**	**Jun 26 '20**	**May 1 '21**	**0 days**			
276	276	5.17.5.7.1	Submission for acceptance of purchasing package	14 days	Jun 26 '20	Jul 9 '20	Jun 26 '20	Jul 9 '20	0 days		277	
277	277	5.17.5.7.2	Invitation of quotations for purchasing package	266 days	Jul 10 '20	Apr 1 '21	Jul 10 '20	Apr 1 '21	0 days	276	278	
278	278	5.17.5.7.3	Acceptance of conforming quotation (Rev. 10)	30 days	Apr 2 '21	May 1 '21	Apr 2 '21	May 1 '21	0 days	277	283	
279	**279**	**5.17.6**	**Design Submissions for IW**	**523 days**	**Jul 15 '20**	**Dec 19 '21**	**Jul 15 '20**	**Dec 19 '21**	**0 days**	**121**		
280	280	5.17.6.1	Electrical schematic drawings for Inlet Works No. 1	90 days	Jul 15 '20	Oct 12 '20	Jul 15 '20	Oct 12 '20	0 days		246FF	
281	281	5.17.6.2	CDS080-1 - Civil and dimensional requirements drawings for Inlet Works No. 1 up to +8.0 mPD	45 days	Sep 1 '20	Oct 15 '20	Sep 1 '20	Oct 15 '20	0 days		246FF	
282	282	5.17.6.3	CDS081-1 - Civil and dimensional requirements drawings for Inlet Works No.	210 days	Aug 28 '20	Mar 25 '21	Aug 28 '20	Mar 25 '21	0 days		247FF	
283	283	5.17.6.4	CDS002 - Detailed Design for Inlet Works No. 1	144 edays	Mar 1 '21	Jul 23 '21	Mar 1 '21	Jul 23 '21	0 edays	258,262,254	290,309,297,	
284	284	5.17.6.5	CDS021 - Detailed Design for Electrical Installations for Inlet Works No. 1	166.63 edays	May 23 '21	Nov 6 '21	May 23 '21	Nov 6 '21	0 edays	82,88,92,96	83,326,318,3	
285	285	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	156	248FF,382	
286	286	5.17.6.7	CDS025-1 - Detailed Design for LV Switchboards for Inlet Works No. 1	230 edays	May 3 '21	Dec 19 '21	May 3 '21	Dec 19 '21	0 edays	78	318,248FF	
287	287	5.17.6.8	CDS050-1 - Detailed Design for Lifting Appliances - Inlet Works No. 1	210 edays	Sep 1 '20	Mar 30 '21	Sep 1 '20	Mar 30 '21	0 edays	131	315,248FF	
288	**288**	**5.17.7**	**Manufacturing and Delivery of Plant & Materials**	**1228 days**	**Dec 2 '19**	**Apr 12 '23**	**Dec 2 '19**	**Nov 1 '23**	**203 days**			
289	**289**	**5.17.7.1**	**Inlet Pumps, EQT006**	**360 days**	**Feb 21 '22**	**Feb 15 '23**	**Feb 21 '22**	**Oct 11 '23**	**238 days**			
290	290	5.17.7.1.1	Manufacturing of Inlet Pumps, EQT006	240 days	Feb 21 '22	Oct 18 '22	Feb 21 '22	Jun 13 '23	0 days	283	291	
291	291	5.17.7.1.2	Factory Acceptance Test of Plant (to be witnessed by PM)	60 days	Oct 19 '22	Dec 17 '22	Jun 14 '23	Aug 12 '23	0 days	290	292	
292	292	5.17.7.1.3	Shipping and Delivery of Plant to site	60 days	Dec 18 '22	Feb 15 '23	Aug 13 '23	Oct 11 '23	142 days	291,346SS-6	364	
293	**293**	**5.17.7.2**	**Mechanical Raked Bar Screen, EQT052**	**350 days**	**Dec 10 '21**	**Nov 24 '22**	**Dec 10 '21**	**Apr 9 '23**	**37 days**		**360**	
294	294	5.17.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 10 '21	Aug 6 '22	Dec 10 '21	Feb 8 '23	50 days	283	295	
295	295	5.17.7.2.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Feb 9 '23	Apr 9 '23	31 days	294,346SS-6	362,365	
296	**296**	**5.17.7.3**	**Screening Conveyors and Diverters, EQT053**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Jul 8 '23**	**226 days**			
297	297	5.17.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Jul 24 '21	Mar 20 '22	Jul 24 '21	Mar 20 '22	0 days	283	298	
298	298	5.17.7.3.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	May 10 '23	Jul 8 '23	143 days	297,346SS-6	363	
299	**299**	**5.17.7.4**	**Screening Screw Type Compactors, EQT003**	**300 days**	**Mar 7 '22**	**Dec 31 '22**	**Mar 7 '22**	**Aug 7 '23**	**0 days**		**360**	
300	300	5.17.7.4.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 7 '22	Nov 1 '22	Mar 7 '22	Jun 8 '23	0 days	283	301	
301	301	5.17.7.4.2	Shipping and Delivery of Plant to site	60 days	Nov 2 '22	Dec 31 '22	Jun 9 '23	Aug 7 '23	136 days	300,346SS-6	368	
302	**302**	**5.17.7.5**	**Grit Removal System & Grit Classifiers, EQT004**	**300 days**	**Mar 7 '22**	**Dec 31 '22**	**Mar 7 '22**	**Nov 1 '23**	**305 days**			
303	303	5.17.7.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 7 '22	Nov 1 '22	Mar 7 '22	Sep 2 '23	0 days	283	304	
304	304	5.17.7.5.2	Shipping and Delivery of Plant to site	60 days	Nov 2 '22	Dec 31 '22	Sep 3 '23	Nov 1 '23	209 days	303,346SS-6	366,367	
305	**305**	**5.17.7.6**	**Pipework, EQT036 (Rev. 11)**	**300 days**	**Apr 21 '22**	**Feb 14 '23**	**Apr 21 '22**	**Apr 30 '23**	**75 days**	**63,66**		
306	306	5.17.7.6.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Mar 1 '23	0 days	283	307	
307	307	5.17.7.6.2	Shipping and Delivery of Plant to site	60 days	Dec 17 '22	Feb 14 '23	Mar 2 '23	Apr 30 '23	75 days	306,346SS-6	369	
308	**308**	**5.17.7.7**	**Stoplogs and Penstocks, EQT013**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Dec 31 '22**	**37 days**			
309	309	5.17.7.7.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jul 24 '21	Jan 19 '22	Jul 24 '21	Jan 19 '22	0 days	283	310	
310	310	5.17.7.7.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Nov 2 '22	Dec 31 '22	37 days	309,346SS-6	360	
311	**311**	**5.17.7.8**	**Valves and Actuators, EQT036 (Rev. 11)**	**300 days**	**Apr 21 '22**	**Feb 14 '23**	**Apr 21 '22**	**Apr 30 '23**	**75 days**	**63,70,66**		



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

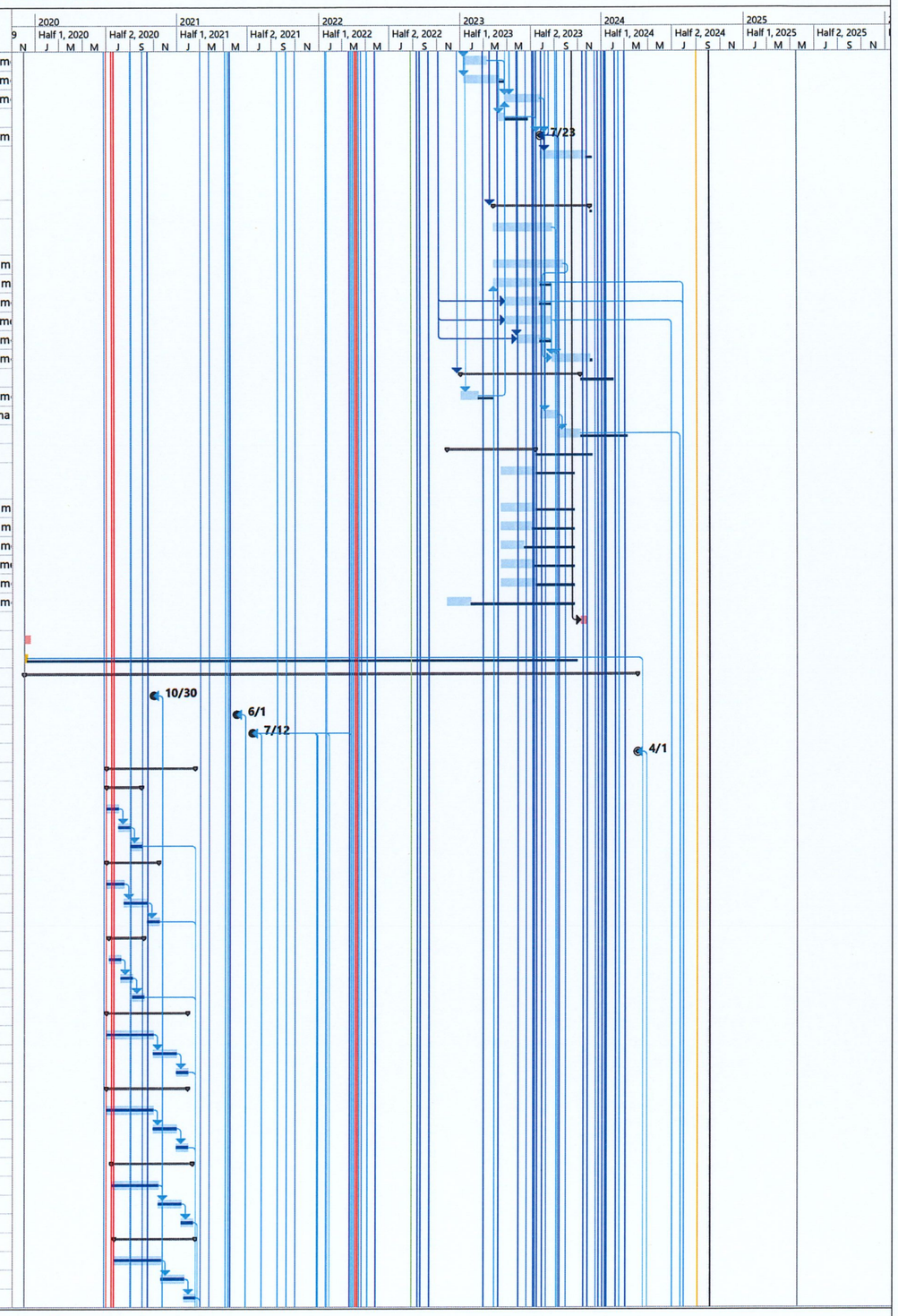
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
312	312	5.17.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Mar 1 '23	0 days	283	313	
313	313	5.17.7.8.2	Shipping and Delivery of Plant to site	60 days	Dec 17 '22	Feb 14 '23	Mar 2 '23	Apr 30 '23	75 days	312,346SS-6	369	
314	**314**	**5.17.7.9**	**Lifting Appliances**	**590 days**	**Mar 30 '21**	**Nov 9 '22**	**Mar 30 '21**	**Mar 1 '23**	**112 days**			
315	315	5.17.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 30 '21	Nov 24 '21	Mar 30 '21	Nov 24 '21	0 days	287	316	
316	316	5.17.7.9.2	Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Jan 16 '23	Mar 1 '23	16 days	315,346SS-6	350	
317	**317**	**5.17.7.10**	**LV Switchboards**	**345 days**	**Mar 16 '22**	**Feb 23 '23**	**Mar 16 '22**	**Mar 11 '23**	**16 days**			
318	318	5.17.7.10.1	IW - Manufacturing of Plant	240 days	Mar 16 '22	Nov 10 '22	Mar 16 '22	Nov 26 '22	0 days	284,286,84S	319	
319	319	5.17.7.10.2	IW - Factory Acceptance Test of Plant (to be witnessed by PM)	60 days	Nov 11 '22	Jan 9 '23	Nov 27 '22	Jan 25 '23	0 days	318	320	
320	320	5.17.7.10.3	IW - Shipping and Delivery of Plant to site	45 days	Jan 10 '23	Feb 23 '23	Jan 26 '23	Mar 11 '23	0 days	346SS-60 ed	375	
321	**321**	**5.17.7.11**	**HV Switchboards, 04SC012**	**1074 days**	**Dec 2 '19**	**Nov 9 '22**	**Dec 2 '19**	**Nov 9 '22**	**0 days**			
322	322	5.17.7.11.1	IW - Manufacturing of Plant	150 days	Dec 2 '19	Apr 29 '20	Dec 2 '19	Apr 29 '20	0 days		323	
323	323	5.17.7.11.2	IW - Factory Acceptance Test of Plant (to be witnessed by PM)	30 days	Apr 30 '20	May 29 '20	Apr 30 '20	May 29 '20	0 days	322	324	
324	324	5.17.7.11.3	IW - Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Sep 26 '22	Nov 9 '22	0 days	323,346SS-6		
325	**325**	**5.17.7.12**	**11kV/380V Stepdown Power Transformers, EQT032**	**369 days**	**Nov 6 '21**	**Nov 9 '22**	**Nov 6 '21**	**Mar 11 '23**	**122 days**			
326	326	5.17.7.12.1	IW - Manufacturing and Factory Acceptance Test of Plant	240 days	Nov 6 '21	Jul 3 '22	Nov 6 '21	Jan 25 '23	84 days	284	327	
327	327	5.17.7.12.2	IW - Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Dec 10 '22	Jan 23 '23	60 days	326,346SS-6	376	
328	**328**	**5.17.7.13**	**Building Services**	**180 days**	**Oct 15 '22**	**Apr 12 '23**	**Oct 15 '22**	**Apr 12 '23**	**0 days**			
329	329	5.17.7.13.1	Equipment Delivery for Mechanical Ventilation and Air Conditioning Syste	180 days	Oct 15 '22	Apr 12 '23	Mar 12 '23	Sep 8 '23	0 days		395	
330	330	5.17.7.13.2	Equipment Delivery for Lighting and Power Distribution System	180 days	Oct 15 '22	Apr 12 '23	Mar 12 '23	Sep 8 '23	0 days		396	
331	331	5.17.7.13.3	Equipment Delivery for Plumbing Installation	180 days	Oct 15 '22	Apr 12 '23	Mar 22 '23	Sep 18 '23	0 days		397	
332	332	5.17.7.13.4	Equipment Delivery for CCTV Installation	180 days	Oct 15 '22	Apr 12 '23	Apr 11 '23	Oct 8 '23	0 days		398	
333	333	5.17.7.13.5	Equipment Delivery for Fire Services Installation	180 days	Oct 15 '22	Apr 12 '23	Mar 17 '23	Sep 13 '23	0 days		399	
334	334	5.17.7.13.6	Equipment Delivery for Earthing and Lightning Protection System	180 days	Oct 15 '22	Apr 12 '23	Mar 12 '23	Sep 8 '23	0 days		400	
335	**335**	**5.17.7.14**	**PLC System**	**420 days**	**Nov 6 '21**	**Dec 30 '22**	**Nov 6 '21**	**Mar 26 '23**	**86 days**			
336	336	5.17.7.14.1	Manufacturing of Plant, PLC for IW	300 days	Nov 6 '21	Sep 1 '22	Nov 6 '21	Nov 26 '22	0 days	284	337	
337	337	5.17.7.14.2	Factory Acceptance Test of Plant, PLC for IW (To be witnessed by PM)	60 days	Sep 2 '22	Oct 31 '22	Oct 11 '22	Dec 9 '22	0 days	336	338	
338	338	5.17.7.14.3	Shipping and Delivery of Plant to site	60 days	Nov 1 '22	Dec 30 '22	Dec 10 '22	Feb 7 '23	0 days	346SS-60 ed	391	
339	**339**	**5.17.7.15**	**Fixed Bar Screen, EQT046**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Jul 21 '23**	**239 days**			
340	340	5.17.7.15.1	IW - Manufacturing and Factory Acceptance Test of Plant	240 days	Jul 24 '21	Mar 20 '22	Jul 24 '21	Mar 20 '22	0 days	283	341	
341	341	5.17.7.15.2	IW - Shipping and Delivery of Plant to site	45 days	Oct 11 '22	Nov 24 '22	Jun 7 '23	Jul 21 '23	143 days	340,346SS-4	361	
342	**342**	**5.17.7.16**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
343	343	5.17.7.16.1	Equipment Delivery for Cable Containment	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		377	
344	344	5.17.7.16.2	Equipment Delivery for Cable Provision	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		378	
345	**345**	**5.17.8**	**Site Installation Work**	**377 days**	**Nov 25 '22**	**Dec 6 '23**	**Nov 25 '22**	**Mar 6 '24**	**91 days**			
346	346	5.17.8.1	Tentative Civil Handover Date, Portion B-2, Inlet Works No. 1 (Rev. 5)	1 day	Nov 25 '22	Nov 25 '22	Oct 15 '22	Oct 15 '22	0 days		350,348,349,	
347	347	5.17.8.2	Tentative Civil Handover Date, HV cables draw pits from MFB2 to IW	1 day	Feb 14 '23	Feb 14 '23	May 23 '23	May 23 '23	98 days		380FF+30 da	
348	**348**	**5.17.8.3**	**Commencement of E&M Installation at Inlet Works No. 1**	**376 days**	**Nov 26 '22**	**Dec 6 '23**	**Nov 26 '22**	**Mar 6 '24**	**0 days**	**346**	**402FS-30 day**	
349	349	5.17.8.3.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., IW	30 days	Nov 26 '22	Dec 25 '22	Nov 26 '22	Dec 6 '23	346 days	346		
350	**350**	**5.17.8.3.2**	**Installation of Lifting Appliances at Inlet Works No. 1**	**142 days**	**Nov 26 '22**	**Apr 16 '23**	**Mar 2 '23**	**Jul 21 '23**	**0 days**	**346,316**	**359SS+30 da**	
351	351	5.17.8.3.2.	1/F EOT Crane LA-01-01 SWL 5t	45 days	Jan 10 '23	Feb 23 '23	May 31 '23	Jul 14 '23	45 days	354,355	358	LA - A x 4~6 m
352	352	5.17.8.3.2.	1/F EOT Crane LA-01-02 SWL 5t	45 days	Jan 10 '23	Feb 23 '23	May 31 '23	Jul 14 '23	45 days	354,355	358	LA - B x 4~6 m
353	353	5.17.8.3.2.	1/F EOT Crane LA-01-03 SWL 5t	45 days	Jan 10 '23	Feb 23 '23	Apr 16 '23	May 30 '23	0 days	354,355	356,358	LA - C x 4~6 m
354	354	5.17.8.3.2.	UG EOT Crane LA-01-04 SWL 10t	45 days	Nov 26 '22	Jan 9 '23	Mar 2 '23	Apr 15 '23	0 days		351,352,353,	LA - A x 4~6 m
355	355	5.17.8.3.2.	UG EOT Crane LA-01-05 SWL 10t	45 days	Nov 26 '22	Jan 9 '23	Mar 2 '23	Apr 15 '23	0 days		351,352,353,	LA - B x 4~6 m
356	356	5.17.8.3.2.	1/F Retractable Crane LA-01-06 SWL 10t	45 days	Feb 24 '23	Apr 9 '23	May 31 '23	Jul 14 '23	0 days	353	358	LA - C x 4~6 m
357	357	5.17.8.3.2.	Submission of T&C Plan and Procedures of LA for acceptance	14 days	Nov 26 '22	Dec 9 '22	Jul 1 '23	Jul 14 '23	121 days		358	
358	358	5.17.8.3.2.	T&C, Loading Test for Lifting Appliances	7 days	Apr 10 '23	Apr 16 '23	Jul 15 '23	Jul 21 '23	0 days	351,352,353	361	LA - B x 4~6 m
359	**359**	**5.17.8.3.3**	**Mechanical Installations for Inlet Works No. 1**	**346 days**	**Dec 26 '22**	**Dec 6 '23**	**Jan 1 '23**	**Dec 6 '23**	**0 days**	**350SS+30 d**	**374SS+14 da**	
360	360	5.17.8.3.3.	Installation of penstocks and stoplogs (Penstock 35nos, Stoplogs 37 nos), EQT013	120 days	Jan 1 '23	Apr 30 '23	Jan 1 '23	Apr 30 '23	0 days	299,293,310	369,370,373	ME - E x 4~6 men
361	361	5.17.8.3.3.	Installation of fixed bar screen (x1), EQT046	7 days	Apr 17 '23	Apr 23 '23	Jul 22 '23	Jul 28 '23	0 days	358,341	365	ME - D x 2~4 n
362	362	5.17.8.3.3.	Installation of mechanical raked coarse bar screens (x4), EQT052	90 days	Dec 26 '22	Mar 25 '23	Apr 10 '23	Jul 8 '23	22 days	295	363	ME - A x 4~6 n
363	363	5.17.8.3.3.	Installation of screening conveyors (x6), EQT053	30 days	Apr 17 '23	May 16 '23	Jul 9 '23	Aug 7 '23	0 days	350,362,298	368	ME - A x 4~6 m
364	364	5.17.8.3.3.	Installation of inlet pumps (x5), EQT006	21 days	Jul 8 '23	Jul 28 '23	Oct 12 '23	Nov 1 '23	0 days	350,369SS+	366	ME - B x 4~6 m
365	365	5.17.8.3.3.	Installation of mechanical raked fine bar screens (x5), EQT052	75 days	Apr 24 '23	Jul 7 '23	Jul 29 '23	Oct 11 '23	0 days	361,295	364	ME - B x 4~6 m
366	366	5.17.8.3.3.	Installation of grit removal system (x3), EQT004	14 days	Jul 29 '23	Aug 11 '23	Nov 2 '23	Nov 15 '23	0 days	364,304	367	ME - B x 4~6 m
367	367	5.17.8.3.3.	Installation of grit classifiers (x2), EQT004	21 days	Aug 12 '23	Sep 1 '23	Nov 16 '23	Dec 6 '23	96 days	366,304		ME - B x 4~6 m
368	368	5.17.8.3.3.	Installation of compactors (x2), EQT003	21 days	May 17 '23	Jun 6 '23	Aug 8 '23	Aug 28 '23	83 days	363,301	373	ME - A x 4~6 n
369	369	5.17.8.3.3.	Installation of pipework and valves, EQT036	30 days	May 1 '23	May 30 '23	May 1 '23	May 30 '23	0 days	360,307,313	364SS+14 da	ME - D x 2~4 n
370	370	5.17.8.3.3.	Pipework pressure tests	30 days	May 1 '23	May 30 '23	May 1 '23	May 30 '23	0 days	360	364SS+14 da	ME - D x 2~4 n
371	371	5.17.8.3.3.	Installation of instrumentations, EQT035-1	90 days	May 31 '23	Aug 28 '23	May 31 '23	Aug 28 '23	0 days	369,370,59	373	ME - A x 4~6 m
372	372	5.17.8.3.3.	Installation of Platforms, Covers etc, EQT050	180 days	Dec 26 '22	Jun 23 '23	Mar 2 '23	Aug 28 '23	66 days		373	ME - D x 2~4 n
373	373	5.17.8.3.3.	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	100 days	Aug 29 '23	Dec 6 '23	Aug 29 '23	Dec 6 '23	0 days	360,368,371		ME - D x 2~4 men
374	**374**	**5.17.8.3.4**	**Electrical Installations for Inlet Works No. 1**	**326 days**	**Jan 9 '23**	**Nov 30 '23**	**Feb 10 '23**	**Dec 6 '23**	**6 days**	**359SS+14 d**		
375	375	5.17.8.3.4.	Installation of LV Switchboards, IW	60 days	Feb 24 '23	Apr 24 '23	Mar 12 '23	May 10 '23	0 days	320	378	LV - A x 4~6 m



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

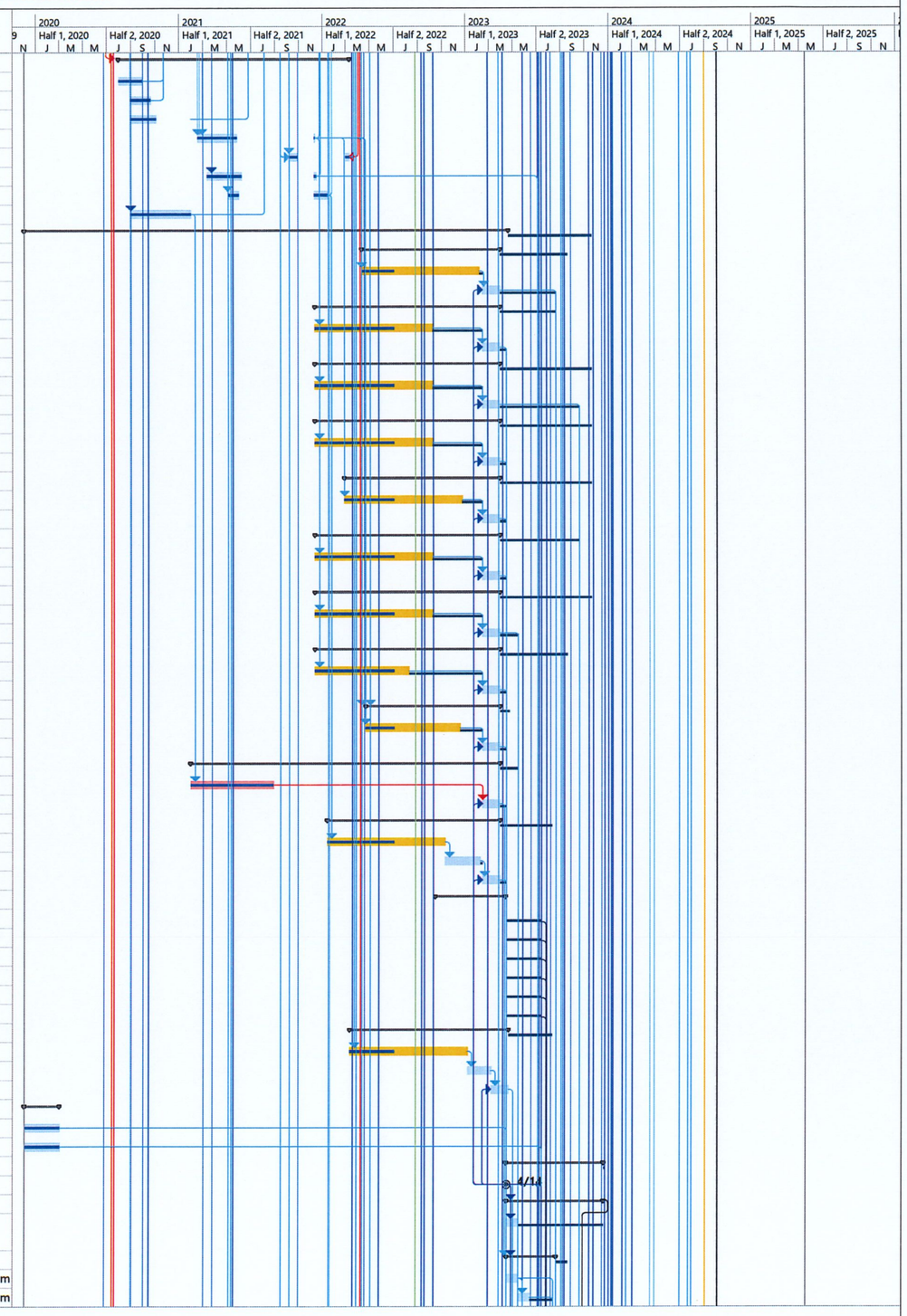
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
376	376	5.17.8.3.4.:	Installation of Transformer, IW, EQT032	60 days	Jan 9 '23	Mar 9 '23	Jan 24 '23	Mar 24 '23	0 days	327	378,379FS+3	EE - A x 4~6 m
377	377	5.17.8.3.4.:	Installation of cable trays and cable containments	90 days	Jan 9 '23	Apr 8 '23	Feb 10 '23	May 10 '23	16 days	343	378	EE - C x 4~6 m
378	378	5.17.8.3.4.4	Cables laying and terminations	90 days	Apr 25 '23	Jul 23 '23	May 11 '23	Aug 8 '23	0 days	375,376,377	380,392,381	EE - C x 4~6 m
379	379	5.17.8.3.4.5	Energisation of Transformer, IW	14 days	Apr 9 '23	Apr 22 '23	Jun 9 '23	Jun 22 '23	61 days	376FS+30 d	380	
380	380	5.17.8.3.4.6	Energisation of LV Switchboards, IW	0 days	Jul 23 '23	Jul 23 '23	Aug 9 '23	Aug 9 '23	0 days	378,347FF+3	381,529	LV - A x 4~6 m
381	381	5.17.8.3.4.7	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipment protection interlock checks, motor rotation direction and electrical tests, control and functional checks etc.	120 days	Jul 24 '23	Nov 20 '23	Aug 9 '23	Dec 6 '23	16 days	378,380		LV - A x 4~6 men
382	382	5.17.8.3.4.	**Building Services Installations for Inlet Works No. 1**	**250 days**	**Mar 26 '23**	**Nov 30 '23**	**Apr 1 '23**	**Dec 6 '23**	**6 days**	**346FS+120 d**		
383	383	5.17.8.3.4.8	Mechanical Ventilation and Air Conditioning System, IW	150 days	Mar 26 '23	Aug 22 '23	Apr 1 '23	Aug 28 '23	0 days		389	MVAC - B x 4~6 men
384	384	5.17.8.3.4.8	Lighting and Power Distribution System, IW	180 days	Mar 26 '23	Sep 21 '23	Apr 1 '23	Sep 27 '23	0 days		389FS-30 day	BS - A x 4~6 m
385	385	5.17.8.3.4.8	Plumbing Installation, IW	120 days	Mar 26 '23	Jul 23 '23	May 1 '23	Aug 28 '23	30 days	1384	1386,389	Pb - A x 4~6 m
386	386	5.17.8.3.4.8	CCTV Installation (5 indoor +5 outdoor Cameras), IW	90 days	Apr 24 '23	Jul 22 '23	May 31 '23	Aug 28 '23	31 days	346SS+150 d	389,1396	BS - B x 4~6 m
387	387	5.17.8.3.4.8	Fire Services Installation, IW	120 days	Apr 24 '23	Aug 21 '23	May 1 '23	Aug 28 '23	1 day	346SS+150 d	1337,1349,13	FS - A x 4~6 m
388	388	5.17.8.3.4.8	Earthing and Lightning Protection System, IW	60 days	May 24 '23	Jul 22 '23	Jun 30 '23	Aug 28 '23	31 days	346SS+180 d	389	BS - C x 2~4 m
389	389	5.17.8.3.4.8	Testing and Commissioning of Building Services Installations, IW	100 days	Aug 23 '23	Nov 30 '23	Aug 29 '23	Dec 6 '23	6 days	383,384FS-3		BS - C x 2~4 m
390	390	5.17.8.3.5	**SCADA Systems, Inlet Works**	**310 days**	**Dec 31 '22**	**Nov 5 '23**	**Mar 27 '23**	**Mar 6 '24**	**86 days**	**346**		
391	391	5.17.8.3.5.:	Installation of PLC Panels, IW	45 days	Dec 31 '22	Feb 13 '23	Feb 8 '23	Mar 24 '23	39 days	338	378	EE - B x 4~6 m
392	392	5.17.8.3.5.:	Configuration of PLC System, IW	45 days	Jul 24 '23	Sep 6 '23	Nov 23 '23	Jan 6 '24	0 days	378	393	PLC - A x 1 ma
393	393	5.17.8.3.5.:	Site Acceptance Test for PLC System at Inlet Works No. 1	60 days	Sep 7 '23	Nov 5 '23	Jan 7 '24	Mar 6 '24	122 days	392	1397	
394	394	5.17.8.3.6	**Building Services Installations, Inlet Works No.1**	**228 days**	**Nov 26 '22**	**Jul 11 '23**	**Sep 8 '23**	**Dec 6 '23**	**148 days**			
395	395	5.17.8.3.6.:	Mechanical Ventilation and Air Conditioning System	90 days	Apr 13 '23	Jul 11 '23	Jul 23 '23	Oct 20 '23	101 days	329		MVAC - B x 4~6 men
396	396	5.17.8.3.6.:	Lighting and Power Distribution System	90 days	Apr 13 '23	Jul 11 '23	Jul 23 '23	Oct 20 '23	101 days	330		BS - A x 4~6 m
397	397	5.17.8.3.6.:	Plumbing Installation	80 days	Apr 13 '23	Jul 1 '23	Aug 2 '23	Oct 20 '23	111 days	331		Pb - B x 4~6 m
398	398	5.17.8.3.6.4	CCTV Installation	60 days	Apr 13 '23	Jun 11 '23	Aug 22 '23	Oct 20 '23	131 days	332		BS - B x 4~6 m
399	399	5.17.8.3.6.5	Fire Services Installation	85 days	Apr 13 '23	Jul 6 '23	Jul 28 '23	Oct 20 '23	106 days	333		FS - A x 4~6 m
400	400	5.17.8.3.6.6	Earthing and Lightning Protection System	90 days	Apr 13 '23	Jul 11 '23	Jul 23 '23	Oct 20 '23	101 days	334		BS - C x 2~4 m
401	401	5.17.8.3.6.7	Testing and Commissioning of Building Services Installations	60 days	Nov 26 '22	Jan 24 '23	Aug 22 '23	Oct 20 '23	269 days			BS - C x 2~4 m
402	402	5.17.9	Site Acceptance Test for E&M Equip & Instrumentations calibration, IW	15 days	Nov 7 '23	Nov 21 '23	Nov 7 '23	Nov 21 '23	0 days	348FS-30 da		
403	403	5.17.10	System Commissioning for E&M Equip at Inlet Works No. 1	15 edays	Dec 2 '19	Dec 17 '19	Dec 2 '19	Dec 17 '19	0 edays			
404	404	5.17.11	Risk Allowances for completion of Processing Plant at Inlet Works No. 1	7 edays	Dec 2 '19	Dec 9 '19	Oct 21 '23	Oct 28 '23	1419 e...		1393	
405	405	5.18	**Primary Sedimentation Tanks No. 1 ~ 4, Portion B-3 (PS 6B2.2)**	**1583 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
406	406	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	440FF,441FF		
407	407	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	442FF		
408	408	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	445FF,444FF		
409	409	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	538FF		
410	410	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**			
411	411	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**			
412	412	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		413	
413	413	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	412	414	
414	414	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	413	443	
415	415	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**			
416	416	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		417	
417	417	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	416	418	
418	418	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	417	443	
419	419	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**			
420	420	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		421	
421	421	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	420	422	
422	422	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	421	443	
423	423	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**			
424	424	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		425	
425	425	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	424	426	
426	426	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	425	443	
427	427	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**			
428	428	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		429	
429	429	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	428	430	
430	430	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	429	443	
431	431	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**			
432	432	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		433	
433	433	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	432	434	
434	434	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	433	443	
435	435	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**			
436	436	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		437	
437	437	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	436	438	
438	438	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	437	443	



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

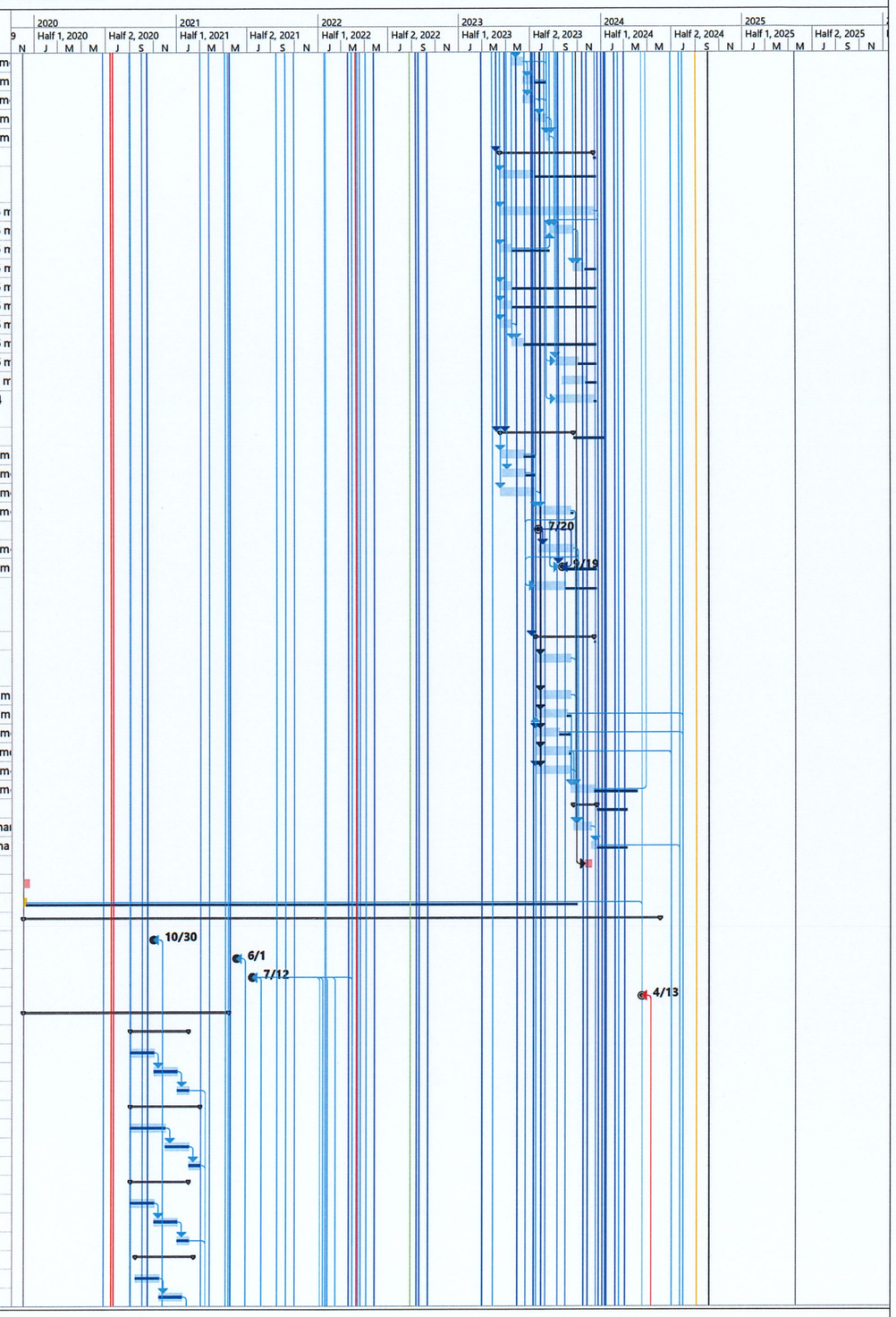
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
439	**439**	**5.18.6**	**Design Submissions for PST No. 1~ 4**	**587 days**	**Aug 1 '20**	**Mar 11 '22**	**Aug 1 '20**	**Mar 11 '22**	**0 days**	**121**		
440	440	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		406FF	
441	441	5.18.6.2	CDS080-2 - Civil and dimensional requirements drawings for PST No. 1~4 up to +8.0	50 days	Sep 1 '20	Oct 20 '20	Sep 1 '20	Oct 20 '20	0 days		406FF	
442	442	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		407FF	
443	443	5.18.6.4	CDS003 - Detailed Design for Primary Sedimentation Tanks No. 1~4	299.2 edays	Feb 15 '21	Dec 11 '21	Feb 15 '21	Dec 11 '21	0 edays	414,418,422	450,453,456,	
444	444	5.18.6.5	CDS022 - Detailed Design for Electrical Installations for PST No. 1~4	154.88 edays	Oct 7 '21	Mar 11 '22	Oct 7 '21	Mar 11 '22	0 edays	82,92,100,2	83,491,408FF	
445	445	5.18.6.6	CDS034-2 - Detailed Design for Electrical Installations BS at PST No. 1~4	277.88 edays	Mar 12 '21	Dec 15 '21	Mar 12 '21	Dec 15 '21	0 edays	156	408FF,531	
446	446	5.18.6.7	CDS025-2 - Detailed Design for LV Switchboards for PST No. 1~4	254 edays	May 3 '21	Jan 12 '22	May 3 '21	Jan 12 '22	0 edays	78	480,408FF	
447	447	5.18.6.8	CDS050-2 - Detailed Design for Lifting Appliances - PST No. 1 ~ 4	150 edays	Sep 1 '20	Jan 29 '21	Sep 1 '20	Jan 29 '21	0 edays	131	477,408FF	
448	**448**	**5.18.7**	**Manufacturing and Delivery of Plant & Materials**	**1235 days**	**Dec 2 '19**	**Apr 19 '23**	**Dec 2 '19**	**Nov 17 '23**	**212 days**			
449	**449**	**5.18.7.1**	**Lamella Plate Settlers, EQT014**	**353 days**	**Apr 11 '22**	**Mar 29 '23**	**Apr 11 '22**	**Sep 18 '23**	**173 days**			
450	450	5.18.7.1.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Apr 11 '22	Feb 4 '23	Apr 11 '22	Aug 4 '23	8 days	443	451	
451	451	5.18.7.1.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Aug 5 '23	Sep 18 '23	143 days	450,498SS-6	512	
452	**452**	**5.18.7.2**	**Reciprocating Type Bottom Scrappers, EQT014**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Aug 19 '23**	**143 days**			
453	453	5.18.7.2.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Jul 5 '23	128 days	443	454	
454	454	5.18.7.2.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Jul 6 '23	Aug 19 '23	16 days	453,498SS-6	513	
455	**455**	**5.18.7.3**	**Surface Scum Skimmers, EQT015**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Nov 17 '23**	**233 days**			
456	456	5.18.7.3.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Oct 3 '23	128 days	443	457	
457	457	5.18.7.3.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Oct 4 '23	Nov 17 '23	203 days	456,498SS-6	514	
458	**458**	**5.18.7.4**	**Surface Scum Collection Pipes, EQT015**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Nov 17 '23**	**233 days**			
459	459	5.18.7.4.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Oct 3 '23	128 days	443	460	
460	460	5.18.7.4.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Oct 4 '23	Nov 17 '23	16 days	459,498SS-6	515	
461	**461**	**5.18.7.5**	**Piston Type Primary Sludge Pumps, EQT016**	**397 days**	**Feb 26 '22**	**Mar 29 '23**	**Feb 26 '22**	**Nov 17 '23**	**233 days**			
462	462	5.18.7.5.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Feb 26 '22	Dec 22 '22	Feb 26 '22	Oct 3 '23	52 days	443	463	
463	463	5.18.7.5.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Oct 4 '23	Nov 17 '23	16 days	462,498SS-6	516	
464	**464**	**5.18.7.6**	**Drain Pumps, EQT007**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Oct 18 '23**	**203 days**			
465	465	5.18.7.6.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Sep 3 '23	128 days	443	466	
466	466	5.18.7.6.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Sep 4 '23	Oct 18 '23	16 days	465,498SS-6	517	
467	**467**	**5.18.7.7**	**Air Blower, EQT018**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Nov 17 '23**	**233 days**			
468	468	5.18.7.7.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Oct 3 '23	128 days	443	469	
469	469	5.18.7.7.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Oct 4 '23	Nov 17 '23	46 days	468,498SS-6	518	
470	**470**	**5.18.7.8**	**Stoplogs and Penstocks, EQT013**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Sep 18 '23**	**173 days**			
471	471	5.18.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 12 '21	Aug 8 '22	Dec 12 '21	Aug 4 '23	188 days	443	472	
472	472	5.18.7.8.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Aug 5 '23	Sep 18 '23	16 days	498SS-60 ed	510	
473	**473**	**5.18.7.9**	**Pipework, Valves and Electric Actuators, EQT036, EQT042 (Rev. 11)**	**343 days**	**Apr 21 '22**	**Mar 29 '23**	**Apr 21 '22**	**Apr 21 '23**	**23 days**	**63,70,66**		
474	474	5.18.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Mar 7 '23	58 days	443	475	
475	475	5.18.7.9.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Mar 8 '23	Apr 21 '23	16 days	474,498SS-6	511	
476	**476**	**5.18.7.10**	**Lifting Appliances**	**790 days**	**Jan 29 '21**	**Mar 29 '23**	**Jan 29 '21**	**May 14 '23**	**46 days**			
477	477	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	447	478	
478	478	5.18.7.10.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Mar 31 '23	May 14 '23	16 days	477,498SS-6	501	
479	**479**	**5.18.7.11**	**LV Switchboards**	**441 days**	**Jan 13 '22**	**Mar 29 '23**	**Jan 13 '22**	**Aug 9 '23**	**133 days**			
480	480	5.18.7.11.1	PST - Manufacturing of Plant	300 days	Jan 13 '22	Nov 8 '22	Jan 13 '22	Mar 27 '23	0 days	446	481	
481	481	5.18.7.11.2	PST - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Nov 9 '22	Feb 6 '23	Mar 28 '23	Jun 25 '23	6 days	480	482	
482	482	5.18.7.11.3	PST - Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Jun 26 '23	Aug 9 '23	16 days	481,498SS-6	523	
483	**483**	**5.18.7.12**	**Building Services**	**180 days**	**Oct 15 '22**	**Apr 12 '23**	**Oct 15 '22**	**Apr 12 '23**	**0 days**			
484	484	5.18.7.12.1	Equipment Delivery for Mechanical Ventilation and Air Conditioning Syste	180 days	Oct 15 '22	Apr 12 '23	May 8 '23	Nov 4 '23	92 days		532	
485	485	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		533	
486	486	5.18.7.12.3	Equipment Delivery for Plumbing Installation	180 days	Oct 15 '22	Apr 12 '23	May 18 '23	Nov 14 '23	92 days		534	
487	487	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		535	
488	488	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		536	
489	489	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		537	
490	**490**	**5.18.7.13**	**PLC System**	**405 days**	**Mar 11 '22**	**Apr 19 '23**	**Mar 11 '22**	**Aug 9 '23**	**112 days**			
491	491	5.18.7.13.1	Manufacturing of Plant, PLC for PST	300 days	Mar 11 '22	Jan 4 '23	Mar 11 '22	Apr 26 '23	0 days	444	492	
492	492	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	Apr 27 '23	Jun 25 '23	0 days	491	493	
493	493	5.18.7.13.3	Shipping and Delivery of Plant to site	45 days	Mar 6 '23	Apr 19 '23	Jun 26 '23	Aug 9 '23	0 days	492,498SS-6	524	
494	**494**	**5.18.7.14**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
495	495	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		525	
496	496	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		526	
497	**497**	**5.18.8**	**Site Installation Work**	**248 days**	**Apr 14 '23**	**Dec 17 '23**	**Apr 18 '23**	**Apr 1 '24**	**4 days**			
498	498	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		501,499,522,	
499	**499**	**5.18.8.2**	**Commencement of E&M Installation at PST No. 1~4**	**247 days**	**Apr 15 '23**	**Dec 17 '23**	**Apr 22 '23**	**Apr 1 '24**	**0 days**	**498**	**542FS-30 day**	**403**
500	500	5.18.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting Welfare facilities etc., PST	30 days	Apr 15 '23	May 14 '23	Nov 18 '23	Dec 17 '23	217 days	498		
501	**501**	**5.18.8.2.2**	**Installation of Lifting Appliances at PST No. 1~4**	**127 days**	**Apr 15 '23**	**Aug 19 '23**	**May 15 '23**	**Sep 18 '23**	**30 days**	**498,478**		
502	502	5.18.8.2.2.:	Basement EOT Crane LA-02-01 SWL 10t	30 days	Apr 15 '23	May 14 '23	May 15 '23	Jun 13 '23	0 days		503,504,508	LA - A x 4~6 m
503	503	5.18.8.2.2.:	Coping Level EOT Crane LA-02-02 SWL 5t	30 days	May 15 '23	Jun 13 '23	Aug 13 '23	Sep 11 '23	60 days	502	508	LA - A x 4~6 m



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

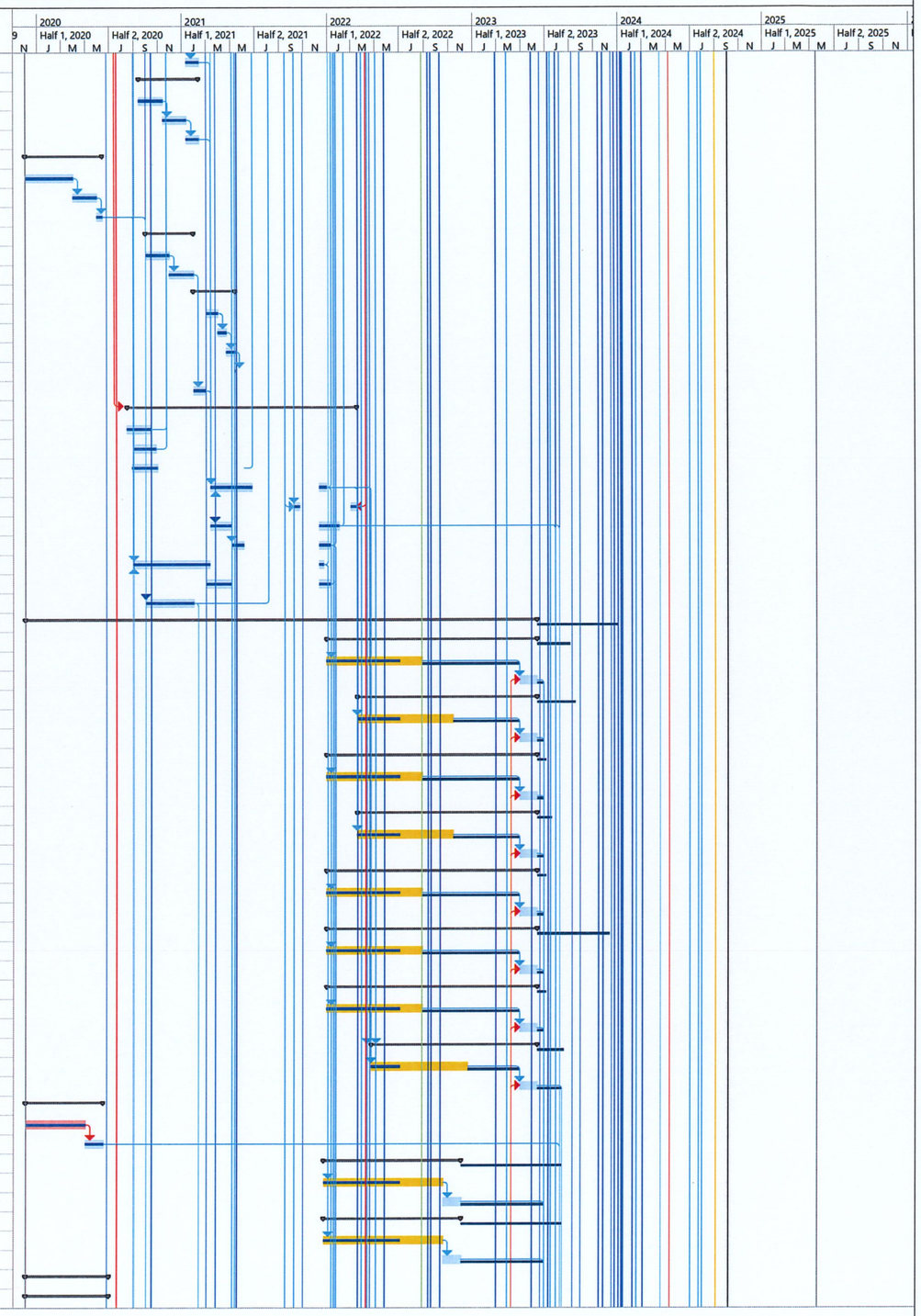
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
504	504	5.18.8.2.2.	Coping Level EOT Crane LA-02-03 SWL 5t	30 days	May 15 '23	Jun 13 '23	Jun 14 '23	Jul 13 '23	0 days	502	505,506,508	LA - B x 4~6 m
505	505	5.18.8.2.2.	Coping Level EOT Crane LA-02-04 SWL 5t	30 days	Jun 14 '23	Jul 13 '23	Aug 13 '23	Sep 11 '23	30 days	504	508	LA - A x 4~6 m
506	506	5.18.8.2.2.	Coping Level EOT Crane LA-02-05 SWL 5t	30 days	Jun 14 '23	Jul 13 '23	Jul 14 '23	Aug 12 '23	0 days	504	507,508	LA - B x 4~6 m
507	507	5.18.8.2.2.	Coping Level EOT Crane LA-02-06 SWL 2t	30 days	Jul 14 '23	Aug 12 '23	Aug 13 '23	Sep 11 '23	0 days	506	508	LA - A x 4~6 m
508	508	5.18.8.2.2.	T&C, Loading Test for Lifting Appliances at PST No. 1~4	7 days	Aug 13 '23	Aug 19 '23	Sep 12 '23	Sep 18 '23	0 days	502,503,504	512	LA - A x 4~6 m
509	509	5.18.8.2.3	**Mechanical Installations at PST No. 1~4**	**240 days**	**Apr 15 '23**	**Dec 10 '23**	**Apr 22 '23**	**Dec 17 '23**	**7 days**	**136**		
510	510	5.18.8.2.3.	Installation of penstocks and stoplogs (Penstock 18nos, Stoplogs 14 nos), EQT013	90 days	Apr 15 '23	Jul 13 '23	Sep 19 '23	Dec 17 '23	157 days	472		ME - E x 4~6 men
511	511	5.18.8.2.3.	Installation of pipework and valves, EQT036	240 days	Apr 15 '23	Dec 10 '23	Apr 22 '23	Dec 17 '23	0 days	475	521FS-100 da	ME - B x 4~6 m
512	512	5.18.8.2.3.	Installation of lamella plate settlers (x4), EQT014	60 days	Aug 20 '23	Oct 18 '23	Sep 19 '23	Nov 17 '23	0 days	513,508,451	514	ME - A x 4~6 m
513	513	5.18.8.2.3.	Installation of reciprocating type bottom scrapers (x4), EQT014	30 days	Apr 15 '23	May 14 '23	Aug 20 '23	Sep 18 '23	97 days	454	512	ME - A x 4~6 m
514	514	5.18.8.2.3.	Installation of surface scum skimmers (x1), EQT015	30 days	Oct 19 '23	Nov 17 '23	Nov 18 '23	Dec 17 '23	30 days	512,457		ME - A x 4~6 m
515	515	5.18.8.2.3.	Installation of scum collector pipes (x1), EQT015	30 days	Apr 15 '23	May 14 '23	Nov 18 '23	Dec 17 '23	217 days	460		ME - B x 4~6 m
516	516	5.18.8.2.3.	Installation of piston type primary sludge pumps (x3), EQT016	30 days	Apr 15 '23	May 14 '23	Nov 18 '23	Dec 17 '23	217 days	463		ME - C x 4~6 m
517	517	5.18.8.2.3.	Installation of drain pumps (x1), EQT007	30 days	Apr 15 '23	May 14 '23	Oct 19 '23	Nov 17 '23	0 days	466	518	ME - C x 4~6 m
518	518	5.18.8.2.3.	Installation of air blowers (x2), EQT018	30 days	May 15 '23	Jun 13 '23	Nov 18 '23	Dec 17 '23	187 days	517,469		ME - C x 4~6 m
519	519	5.18.8.2.3.	Installation of instrumentations, EQT035-1	60 days	Sep 2 '23	Oct 31 '23	Oct 19 '23	Dec 17 '23	47 days	59,511FS-10		ME - C x 4~6 m
520	520	5.18.8.2.3.	Installation of Platforms, Covers etc., PST, EQT050	60 days	Sep 21 '23	Nov 19 '23	Oct 19 '23	Dec 17 '23	28 days			ME - F x 4~6 m
521	521	5.18.8.2.3.	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	100 days	Sep 2 '23	Dec 10 '23	Sep 9 '23	Dec 17 '23	7 days	511FS-100 days		ME - D x 2~4 men
522	522	5.18.8.2.4	**Electrical Installations for PST No. 1~4**	**187 days**	**Apr 15 '23**	**Oct 18 '23**	**Jul 11 '23**	**Jan 6 '24**	**80 days**	**498,141**		
523	523	5.18.8.2.4.	Installation of LV Switchboards, PST	60 days	Apr 15 '23	Jun 13 '23	Aug 10 '23	Oct 8 '23	30 days	482	526	LV - A x 4~6 m
524	524	5.18.8.2.4.	Installation of PLC Panel, PST	60 days	Apr 20 '23	Jun 18 '23	Aug 10 '23	Oct 8 '23	25 days	493	526	EE - A x 4~6 m
525	525	5.18.8.2.4.	Installation of cable trays and cable containments, PST	90 days	Apr 15 '23	Jul 13 '23	Jul 11 '23	Oct 8 '23	0 days	495	526	EE - A x 4~6 m
526	526	5.18.8.2.4.	Cables laying and terminations, PST	90 days	Jul 14 '23	Oct 11 '23	Oct 9 '23	Jan 6 '24	7 days	523,524,525	529FS-30 day	EE - B x 4~6 m
527	527	5.18.8.2.4.	Tentative Civil Handover Date, LV cables draw pits from IW to PST	1 day	Jul 20 '23	Jul 20 '23	Oct 8 '23	Oct 8 '23	0 days		529FF+30 day	
528	528	5.18.8.2.4.	Cables laying and terminations between buildings	90 days	Jul 21 '23	Oct 18 '23	Oct 9 '23	Jan 6 '24	0 days	527	529FS-30 day	EE - B x 4~6 m
529	529	5.18.8.2.4.	Energisation of LV Switchboards, PST	1 day	Sep 19 '23	Sep 19 '23	Dec 17 '23	Dec 17 '23	89 days	526FS-30 da		LV - A x 4~6 m
530	530	5.18.8.2.4.	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.	80 days	Jul 11 '23	Sep 28 '23	Sep 29 '23	Dec 17 '23	80 days	526FS-100 days,528FS- days		LV - A x 4~6 men
531	531	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**	**498FS+90 d**		
532	532	5.18.8.2.5.	Mechanical Ventilation and Air Conditioning System, PST	90 days	Jul 14 '23	Oct 11 '23	Nov 4 '23	Feb 1 '24	0 days	484	538	MVAC - B x 4~6 men
533	533	5.18.8.2.5.	Lighting and Power Distribution System, PST	90 days	Jul 14 '23	Oct 11 '23	Nov 4 '23	Feb 1 '24	0 days	485	538	BS - A x 4~6 m
534	534	5.18.8.2.5.	Plumbing Installation, PST	80 days	Jul 14 '23	Oct 1 '23	Nov 14 '23	Feb 1 '24	10 days	1384,486	1386,538	Pb - B x 4~6 m
535	535	5.18.8.2.5.	CCTV Installation (9 indoor + 2 outdoor Cameras), PST	60 days	Jul 14 '23	Sep 11 '23	Dec 4 '23	Feb 1 '24	30 days	498FS+60 d	538,1396	BS - B x 4~6 m
536	536	5.18.8.2.5.	Fire Services Installation, PST	85 days	Jul 14 '23	Oct 6 '23	Jul 18 '23	Oct 10 '23	4 days	488	1337,1349,1	FS - A x 4~6 m
537	537	5.18.8.2.5.	Earthing and Lightning Protection System, PST	90 days	Jul 14 '23	Oct 11 '23	Nov 4 '23	Feb 1 '24	0 days	184,489	538	BS - C x 2~4 m
538	538	5.18.8.2.5.	Testing and Commissioning of Building Services Installations, PST	60 days	Oct 12 '23	Dec 10 '23	Feb 2 '24	Apr 1 '24	113 days	532,533,534	409FF	BS - C x 2~4 m
539	539	5.18.8.2.6	**SCADA Systems, PST No. 1~4**	**60 days**	**Oct 19 '23**	**Dec 17 '23**	**Jan 7 '24**	**Mar 6 '24**	**80 days**			
540	540	5.18.8.2.6.	Configuration of PLC System	45 days	Oct 19 '23	Dec 2 '23	Jan 7 '24	Feb 20 '24	0 days	526,528	541	PLC - B x 1 ma
541	541	5.18.8.2.6.	Site Acceptance Test for PLC System at PST No. 1~4	15 days	Dec 3 '23	Dec 17 '23	Feb 21 '24	Mar 6 '24	80 days	540	1397	PLC - A x 1 ma
542	542	5.18.9	Site Acceptance Test for E&M Equip and Instrumentations calibrations at PST N	15 edays	Nov 18 '23	Dec 3 '23	Nov 18 '23	Dec 3 '23	0 edays	499FS-30 da		
543	543	5.18.10	System Commissioning for E&M Equip at PST No, 1~4	15 days	Dec 2 '19	Dec 16 '19	Dec 2 '19	Dec 16 '19	0 days			
544	544	5.18.11	Risk Allowances for Completion of Processing Plant at PST No. 1~4	7 edays	Dec 2 '19	Dec 9 '19	Oct 21 '23	Oct 28 '23	1419 e...		1393	
545	545	5.19	**Bioreactors No. 2A & 2B & DOU2A, Portion B-4 (PS 6B2.4)**	**1642 days?**	**Dec 2 '19**	**May 30 '24**	**Dec 2 '19**	**May 30 '24**	**0 days?**			
546	546	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	585FF,586F		
547	547	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	587FF		
548	548	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	588FF,589F		
549	549	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	679FF,680F		
550	550	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**			
551	551	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**			
552	552	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		553	
553	553	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	552	554	
554	554	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	553	588	
555	555	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**			
556	556	5.19.5.2.1	Submission for acceptance of purchasing package including proposed marking sch	90 days	Sep 1 '20	Nov 29 '20	Sep 1 '20	Nov 29 '20	0 days		557	
557	557	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	556	558	
558	558	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	557	588	
559	559	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**			
560	560	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		561	
561	561	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	560	562	
562	562	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	561	588	
563	563	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**			
564	564	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		565	
565	565	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	564	566	



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

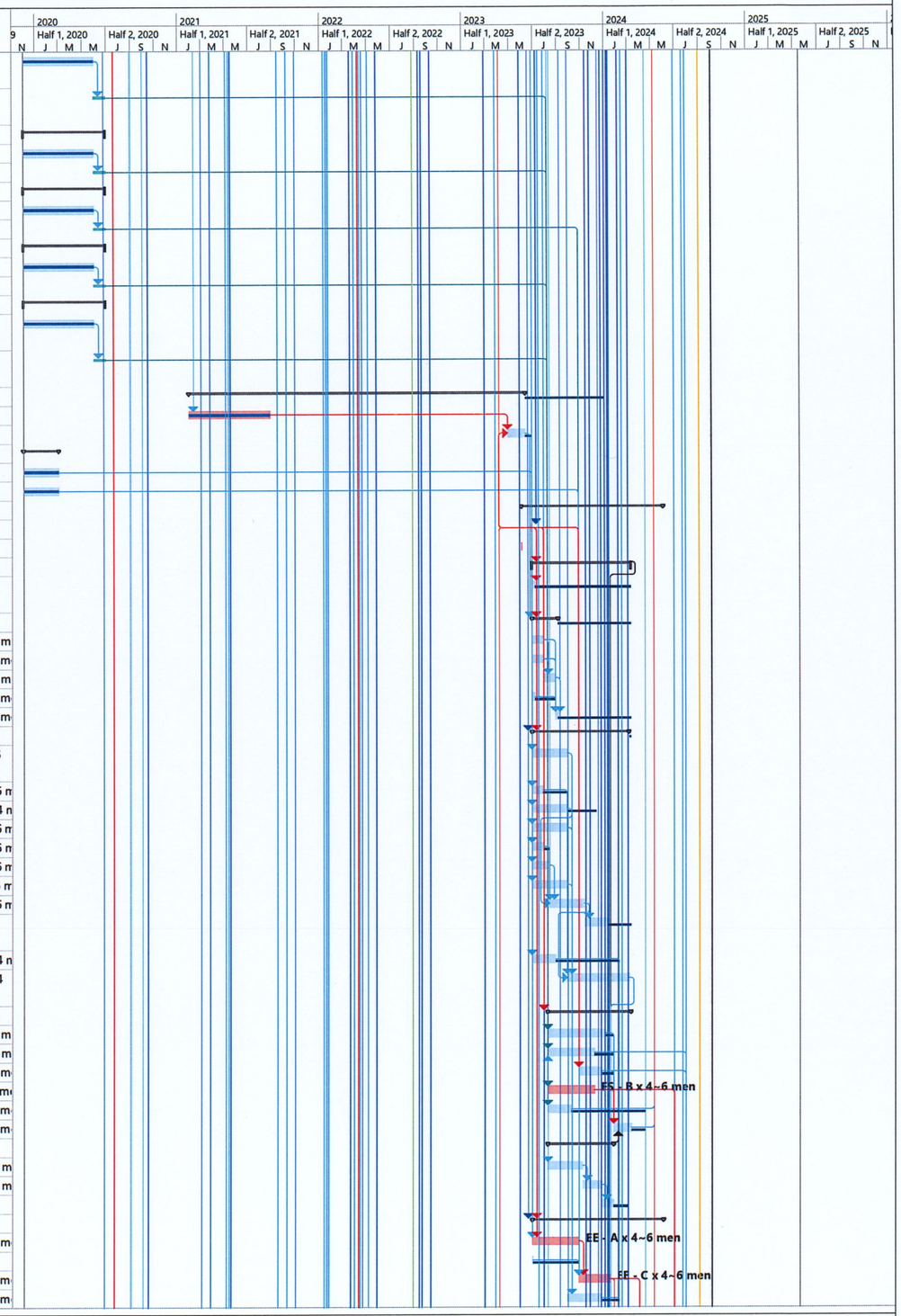
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
566	566	5.19.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Jan 12 '21	Feb 10 '21	Jan 12 '21	Feb 10 '21	0 days	565	588	
567	**567**	**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**			
568	568	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		569	
569	569	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	568	570	
570	570	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	569	588	
571	**571**	**5.19.5.6**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B), C11, ref. EQT0**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
572	572	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		573	
573	573	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	572	574	
574	574	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	573	592,756	
575	**575**	**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**			
576	576	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		577	
577	577	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	576	583	
578	**578**	**5.19.5.8**	**PV System (EQT041)**	**104 days**	**Jan 29 '21**	**May 12 '21**	**Jan 29 '21**	**May 12 '21**	**0 days**			
579	579	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		580	
580	580	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	579	581	
581	581	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	580	582	
582	582	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	581		
583	583	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	577	588	
584	**584**	**5.19.6**	**Design Submissions for BR 2A & 2B**	**578 days**	**Aug 15 '20**	**Mar 15 '22**	**Aug 15 '20**	**Mar 15 '22**	**0 days**	**121**		
585	585	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		546FF	
586	586	5.19.6.2	CDS080-3 - Civil and dimensional requirements drawings for BR 2A&2B up to +8.0 m	55 days	Sep 1 '20	Oct 25 '20	Sep 1 '20	Oct 25 '20	0 days		546FF	
587	587	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		547FF	
588	588	5.19.6.4	CDS004 - Detailed Design for Bioreactor 2A and 2B	291 edays	Mar 12 '21	Dec 28 '21	Mar 12 '21	Dec 28 '21	0 edays	554,558,562	597,600,603,	
589	589	5.19.6.5	CDS023 - Detailed Design for Electrical Installations for BR No. 2A & 2B	159.38 edays	Oct 7 '21	Mar 15 '22	Oct 7 '21	Mar 15 '22	0 edays	82,92,100,2	83,548FF,844	
590	590	5.19.6.6	CDS034-3 - Detailed Design for Electrical Installations BS at BR No. 2A & 2B	323.38 edays	Mar 12 '21	Jan 29 '22	Mar 12 '21	Jan 29 '22	0 edays	156	548FF,674,67	
591	591	5.19.6.7	CDS025-3 - Detailed Design for LV Switchboards for BR 2A and 2B	251 edays	May 3 '21	Jan 9 '22	May 3 '21	Jan 9 '22	0 edays	78	830,548FF	
592	592	5.19.6.8	CDS007-2 - Detailed Design for Deodorisation System, DOU No. 2A	475.38 edays	Sep 1 '20	Dec 20 '21	Sep 1 '20	Dec 20 '21	0 edays	574,740	548FF,624,62	
593	593	5.19.6.9	CDS031 - Detailed Design for MVAC System	311.38 edays	Mar 1 '21	Jan 6 '22	Mar 1 '21	Jan 6 '22	0 edays		216FF	
594	594	5.19.6.10	CDS050-3 - Detailed Design for Lifting Appliances - BR 2A & 2B	120 edays	Oct 1 '20	Jan 29 '21	Oct 1 '20	Jan 29 '21	0 edays	131	646,548FF	
595	**595**	**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**			
596	**596**	**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**			
597	597	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	588	598	
598	598	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	597,652SS-6	664	
599	**599**	**5.19.7.2**	**Air Diffusion System, EQT017**	**451 days**	**Mar 17 '22**	**Jun 10 '23**	**Mar 17 '22**	**Sep 14 '23**	**96 days**			
600	600	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	588	601	
601	601	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	600,652SS-6	665	
602	**602**	**5.19.7.3**	**Submersible Mixer, EQT020**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Jul 1 '23**	**21 days**			
603	603	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	588	604	
604	604	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	603,652SS-6	666	
605	**605**	**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**			
606	606	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	588	607	
607	607	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	606,652SS-6	667	
608	**608**	**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**			
609	609	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	588	610	
610	610	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	609,652SS-6	668	
611	**611**	**5.19.7.6**	**Instrumentations, EQT035-2**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Dec 8 '23**	**181 days**			
612	612	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	588	613	
613	613	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	612,652SS-6	672	
614	**614**	**5.19.7.7**	**Stoplogs and Penstocks, EQT013**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Jul 1 '23**	**21 days**			
615	615	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	588	616	
616	616	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	615,652SS-6	663	
617	**617**	**5.19.7.8**	**Pipework, Valves and Electric Actuators, EQT036, EQT042 (Rev. 11)**	**416 days**	**Apr 21 '22**	**Jun 10 '23**	**Apr 21 '22**	**Aug 15 '23**	**66 days**	**63,70,66**		
618	618	5.19.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Jul 1 '23	131 days	588	619	
619	619	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	618,652SS-6	670	
620	**620**	**5.19.7.9**	**Photovoltaic Power System**	**195 days**	**Dec 2 '19**	**Jun 13 '20**	**Dec 2 '19**	**Jun 13 '20**	**0 days**			
621	621	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		622	
622	622	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	621	682	
623	**623**	**5.19.7.10**	**DOU 2A**	**345 days**	**Dec 21 '21**	**Nov 30 '22**	**Dec 21 '21**	**Aug 10 '23**	**253 days**			
624	624	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	592	625	
625	625	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	624	669	
626	**626**	**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**			
627	627	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	592	628	
628	628	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	627	669	
629	**629**	**5.19.7.12**	**Building Services**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
630	**630**	**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**			



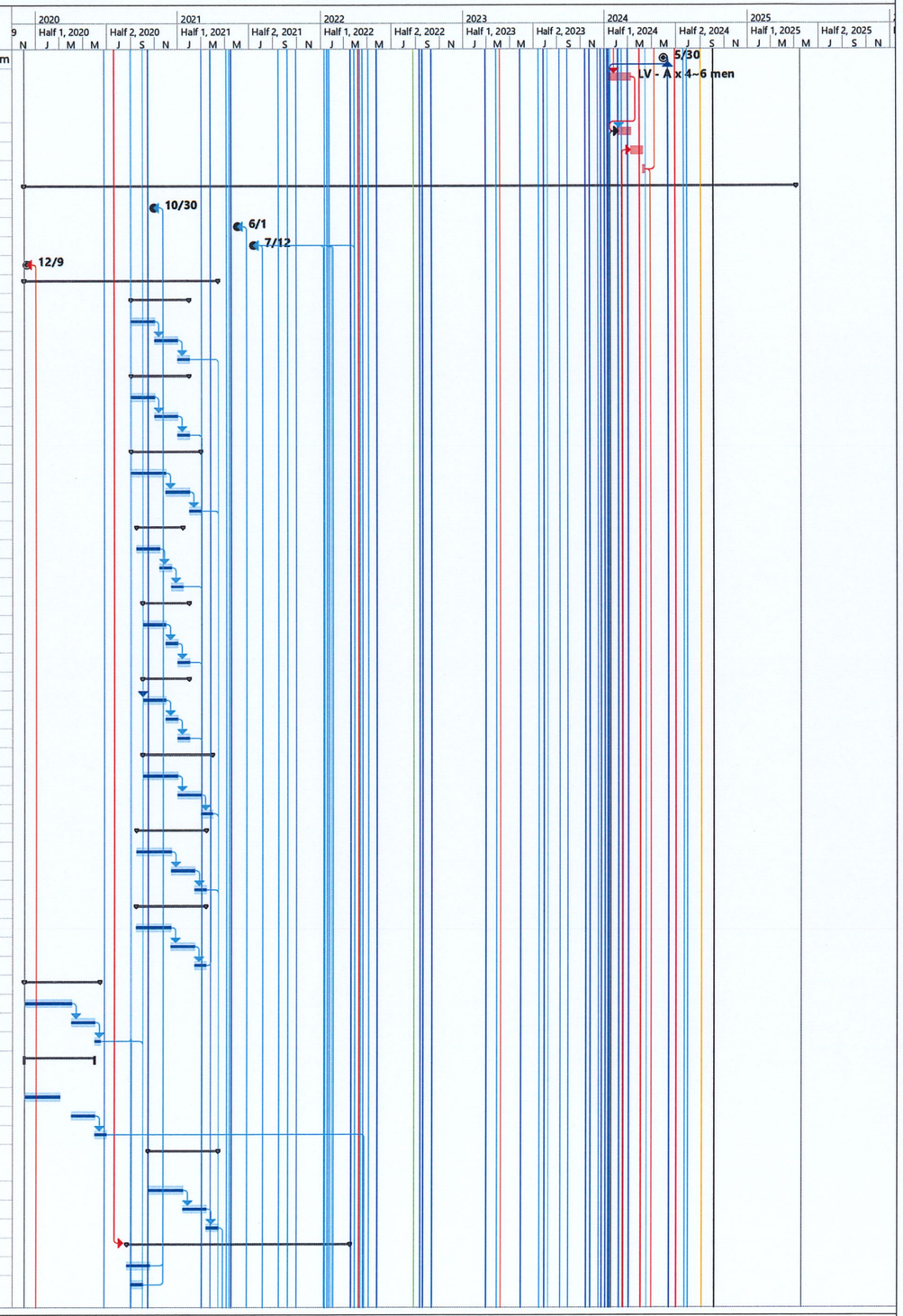
Bestwise
Project: DE/2018/04
Date: 31/07/22

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

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
631	631	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		632	
632	632	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	631	675	
633	**633**	**5.19.7.12.2**	**Plumbing Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
634	634	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		635	
635	635	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	634	676	
636	**636**	**5.19.7.12.3**	**CCTV Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
637	637	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		638	
638	638	5.19.7.12.3	Shipping and Delivery for CCTV Equipment (7 indoor + 2 outdoor Came	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	637	677	
639	**639**	**5.19.7.12.4**	**Fire Services Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
640	640	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		641	
641	641	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	640	678	
642	**642**	**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**			
643	643	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		644	
644	644	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	643	679	
645	**645**	**5.19.7.13**	**Lifting Appliances**	**863 days**	**Jan 29 '21**	**Jun 10 '23**	**Jan 29 '21**	**Dec 31 '23**	**204 days**			
646	646	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	594	647	
647	647	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	646,652	SS-6 656	
648	**648**	**5.19.7.14**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
649	649	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		686	
650	650	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		688	
651	**651**	**5.19.8**	**Site Installation Work**	**365 days?**	**Jun 1 '23**	**May 30 '24**	**Jun 1 '23**	**May 30 '24**	**0 days?**			
652	652	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	656,662,685,	
653	653	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			
654	**654**	**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?**	**652**	**692FS-30 day**	
655	655	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	652		
656	**656**	**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**	**652,647**		
657	657	5.19.8.3.2.	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		659,661	LA - A x 4~6 m
658	658	5.19.8.3.2.	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		659,661	LA - B x 4~6 m
659	659	5.19.8.3.2.	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	657,658	661	LA - A x 4~6 m
660	660	5.19.8.3.2.	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		661	LA - B x 4~6 m
661	661	5.19.8.3.2.	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	657,658,659		LA - B x 4~6 m
662	**662**	**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**	**652,136**		
663	663	5.19.8.3.3.	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	616	673	ME - E x 4~6 men
664	664	5.19.8.3.3.	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	598	673	ME - A x 4~6 m
665	665	5.19.8.3.3.	Installation of air diffusion system (x2), EQT017	90 days	Jun 27 '23	Sep 24 '23	Sep 15 '23	Dec 13 '23	75 days	601	670FS-120 da	ME - D x 2~4 m
666	666	5.19.8.3.3.	Installation of submersible mixers (x16), EQT020	90 days	Jun 27 '23	Sep 24 '23	Jul 2 '23	Sep 29 '23	0 days	604	673	ME - B x 4~6 m
667	667	5.19.8.3.3.	Installation of mixed liquor return pumps (x6), EQT008	30 days	Jun 27 '23	Jul 26 '23	Jul 17 '23	Aug 15 '23	15 days	607	670	ME - A x 4~6 m
668	668	5.19.8.3.3.	Installation of scum removal systems (x2), EQT022	45 days	Jun 27 '23	Aug 10 '23	Jul 2 '23	Aug 15 '23	0 days	610	670	ME - B x 4~6 m
669	669	5.19.8.3.3.	Mechanical Installations for DOU 2A	90 edays	Jun 26 '23	Sep 24 '23	Aug 11 '23	Nov 9 '23	0 edays	625,628	689	ME - F x 4~6 m
670	670	5.19.8.3.3.	Installation of pipework and valves, EQT036	90 days	Aug 11 '23	Nov 8 '23	Aug 16 '23	Nov 13 '23	0 days	619,665FS-1	673FS-45 day	ME - C x 4~6 m
671	671	5.19.8.3.3.	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	670		
672	672	5.19.8.3.3.	Installation of instrumentations, EQT035-2	60 days	Jun 27 '23	Aug 25 '23	Dec 9 '23	Feb 6 '24	165 days	613	692	ME - D x 2~4 m
673	673	5.19.8.3.3.	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	160 days	Sep 25 '23	Mar 2 '24	Sep 30 '23	Mar 7 '24	0 days	663,664,67C days,666	692FS-30 days	ME - D x 2~4 men
674	**674**	**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**	**652FS+40 d**		
675	675	5.19.8.3.4.	Lighting and Power Distribution System, BR2	150 days	Aug 6 '23	Jan 2 '24	Oct 2 '23	Feb 28 '24	20 days	590,632	680	BS - A x 4~6 m
676	676	5.19.8.3.4.	Plumbing Installation, BR2	120 days	Aug 6 '23	Dec 3 '23	Nov 1 '23	Feb 28 '24	50 days	1384,635	1386,680	Pb - A x 4~6 m
677	677	5.19.8.3.4.	CCTV Installation (7 indoor + 2 outdoor Cameras), BR2	60 days	Oct 25 '23	Dec 23 '23	Dec 31 '23	Feb 28 '24	30 days	652FS+120	680,1396	BS - B x 4~6 m
678	678	5.19.8.3.4.	Fire Services Installation, BR2	120 days	Aug 6 '23	Dec 3 '23	Jun 13 '23	Oct 10 '23	0 days	641	1337,1349,1	FS - B x 4~6 m
679	679	5.19.8.3.4.	Lightning Protection System, BR2	60 days	Aug 6 '23	Oct 4 '23	Feb 14 '24	Apr 13 '24	192 days	184,644	549FF	BS - C x 2~4 m
680	680	5.19.8.3.4.	Testing and Commissioning of Building Services Installations, BR2	45 days	Jan 23 '24	Mar 7 '24	Feb 29 '24	Apr 13 '24	37 days	675,676,677	549FF	BS - C x 2~4 m
681	**681**	**5.19.8.3.4.**	**Photovoltaic Power System (PS 6B.6.11)**	**170 days**	**Aug 6 '23**	**Jan 22 '24**	**Sep 12 '23**	**Feb 28 '24**	**0 days**		**680**	
682	682	5.19.8.3.4.	Commencement of Site Installation Work	90 days	Aug 6 '23	Nov 3 '23	Sep 12 '23	Dec 10 '23	0 days	622	683	PV - A x 4~6 m
683	683	5.19.8.3.4.	Technical Assessment, System Test and Installation	50 days	Nov 4 '23	Dec 23 '23	Dec 11 '23	Jan 29 '24	0 days	682	684	PV - A x 4~6 m
684	684	5.19.8.3.4.	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	683		
685	**685**	**5.19.8.3.5**	**Electrical Installations for E&M Equip at BR 2A & 2B**	**339 days?**	**Jun 27 '23**	**May 30 '24**	**Jun 27 '23**	**Mar 7 '24**	**0 days?**	**652,141**		
686	686	5.19.8.3.5.	Installation of cable trays and cable containments	120 days	Jun 27 '23	Oct 24 '23	Jun 27 '23	Oct 24 '23	0 days	652,649	688	EE - A x 4~6 m
687	687	5.19.8.3.5.	Tentative Civil Handover Date LV cable draw pits from MFB No.2 to BR.	1 day?	Jun 27 '23	Jun 27 '23	Oct 24 '23	Oct 24 '23	119 day...		688	
688	688	5.19.8.3.5.	Cables laying and terminations between buildings	80 days	Oct 25 '23	Jan 12 '24	Oct 25 '23	Jan 12 '24	0 days	686,687,65C	691,945	EE - C x 4~6 m
689	689	5.19.8.3.5.	Electrical Installations for DOU 2A	90 edays	Sep 24 '23	Dec 23 '23	Nov 9 '23	Feb 7 '24	45.63 e...	669	692	EE - C x 4~6 m



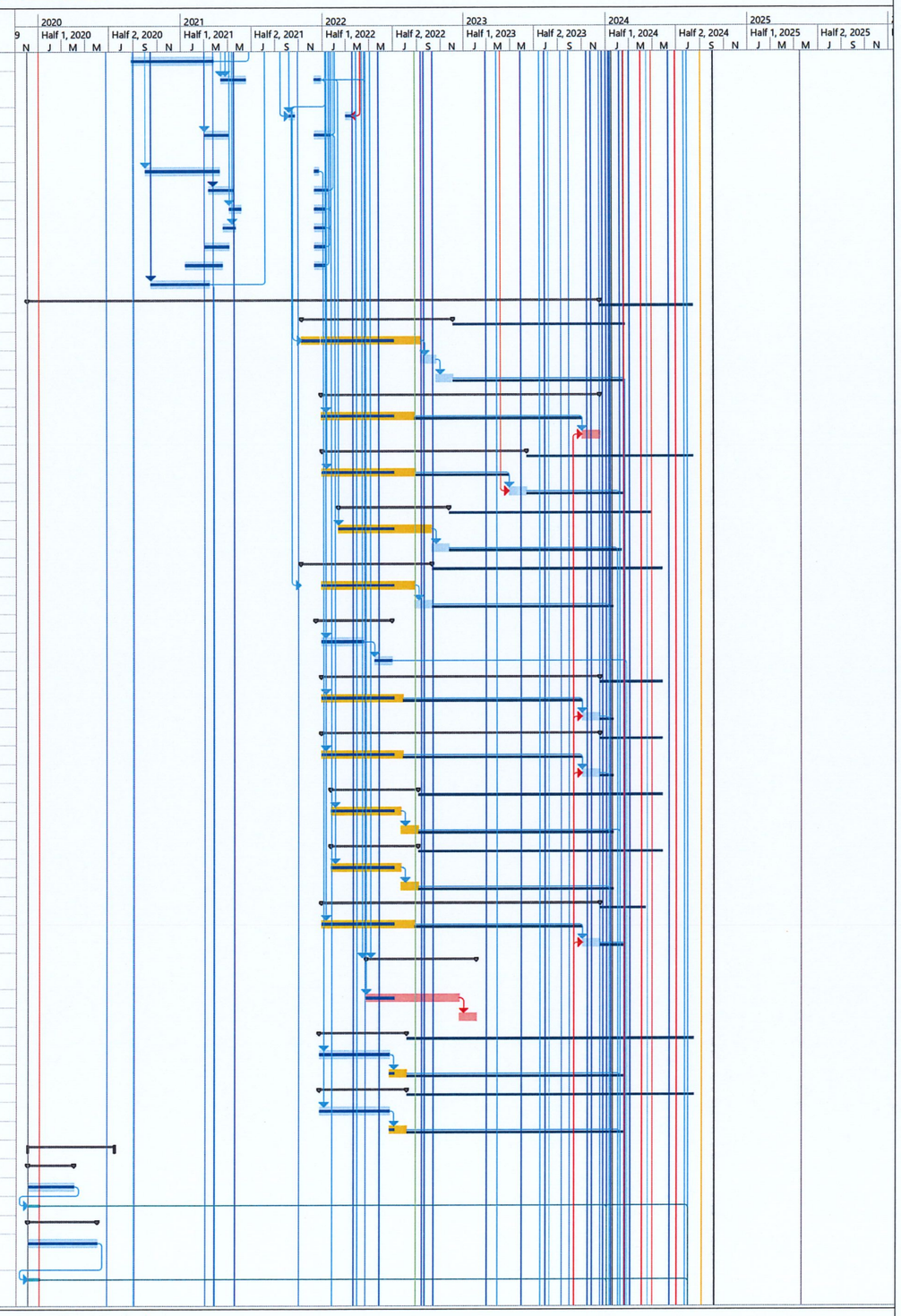
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
690	690	5.19.8.3.5.!	Energisation of LV Switchboards, BR2	1 day	May 30 '24	May 30 '24	Feb 6 '24	Feb 6 '24	0 days	940,941	692	LV - A x 4~6 m
691	691	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	688	692FS-30 days	LV - A x 4~6 men
692	692	5.19.9	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	672,673FS-3		
693	693	5.19.10	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	946		
694	694	5.19.11	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		1393,549FF	
695	**695**	**5.20**	**Membrane Facilities Building & DOU3B, Portion B-5 (PS 6B.2.4)**	**1981 days**	**Dec 2 '19**	**May 4 '25**	**Dec 2 '19**	**May 4 '25**	**0 days**			
696	696	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	750FF,751FI		
697	697	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	752FF		
698	698	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	753FF,754FI		
699	699	5.20.4	Planned Sectional Completion Date - Section 2, MFB No. 2 & DOU3B	0 days	Dec 9 '19	Dec 9 '19	Dec 9 '19	Dec 9 '19	0 days	960FF		
700	**700**	**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**			
701	**701**	**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**			
702	702	5.20.5.1.1	Submission for acceptance of purchasing package including proposed marking sch	60 days	Sep 1 '20	Oct 30 '20	Sep 1 '20	Oct 30 '20	0 days		703	
703	703	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	702	704	
704	704	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	703	753	
705	**705**	**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**			
706	706	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		707	
707	707	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	706	708	
708	708	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	707	755	
709	**709**	**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**			
710	710	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		711	
711	711	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	710	712	
712	712	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	711	753	
713	**713**	**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**			
714	714	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		715	
715	715	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	714	716	
716	716	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	715	755	
717	**717**	**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**			
718	718	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		719	
719	719	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	718	720	
720	720	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	719	755	
721	**721**	**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**			
722	722	5.20.5.6.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days	2,37	723	
723	723	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	722	724	
724	724	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	723	755	
725	**725**	**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**			
726	726	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		727	
727	727	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	726	728	
728	728	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	727	753	
729	**729**	**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**			
730	730	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		731	
731	731	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	730	732	
732	732	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	731	753	
733	**733**	**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**			
734	734	5.20.5.9.1	Submission for acceptance of purchasing package including proposed marking sch	90 days	Sep 14 '20	Dec 12 '20	Sep 14 '20	Dec 12 '20	0 days		735	
735	735	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	734	736	
736	736	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	735	588	
737	**737**	**5.20.5.10**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B), C11, ref. EQT0**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
738	738	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		739	
739	739	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	738	740	
740	740	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	739	592,756	
741	**741**	**5.20.5.11**	**Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamber, C11, ref. EQT036**	**180 days**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
742	742	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			
743	743	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		744	
744	744	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	743	799FS-60 day	
745	**745**	**5.20.5.12**	**Plant Service Water System - booster pumps & hydro-pneumatic pressure tanks, C11, ref. EQT030**	**180 days**	**Oct 15 '20**	**Apr 12 '21**	**Oct 15 '20**	**Apr 12 '21**	**0 days**			
746	746	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		747	
747	747	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	746	748	
748	748	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	747	753	
749	**749**	**5.20.6**	**Design Submissions for MFB No. 2**	**572 days**	**Aug 21 '20**	**Mar 15 '22**	**Aug 21 '20**	**Mar 15 '22**	**0 days**	**121**		
750	750	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		696FF	
751	751	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		696FF	



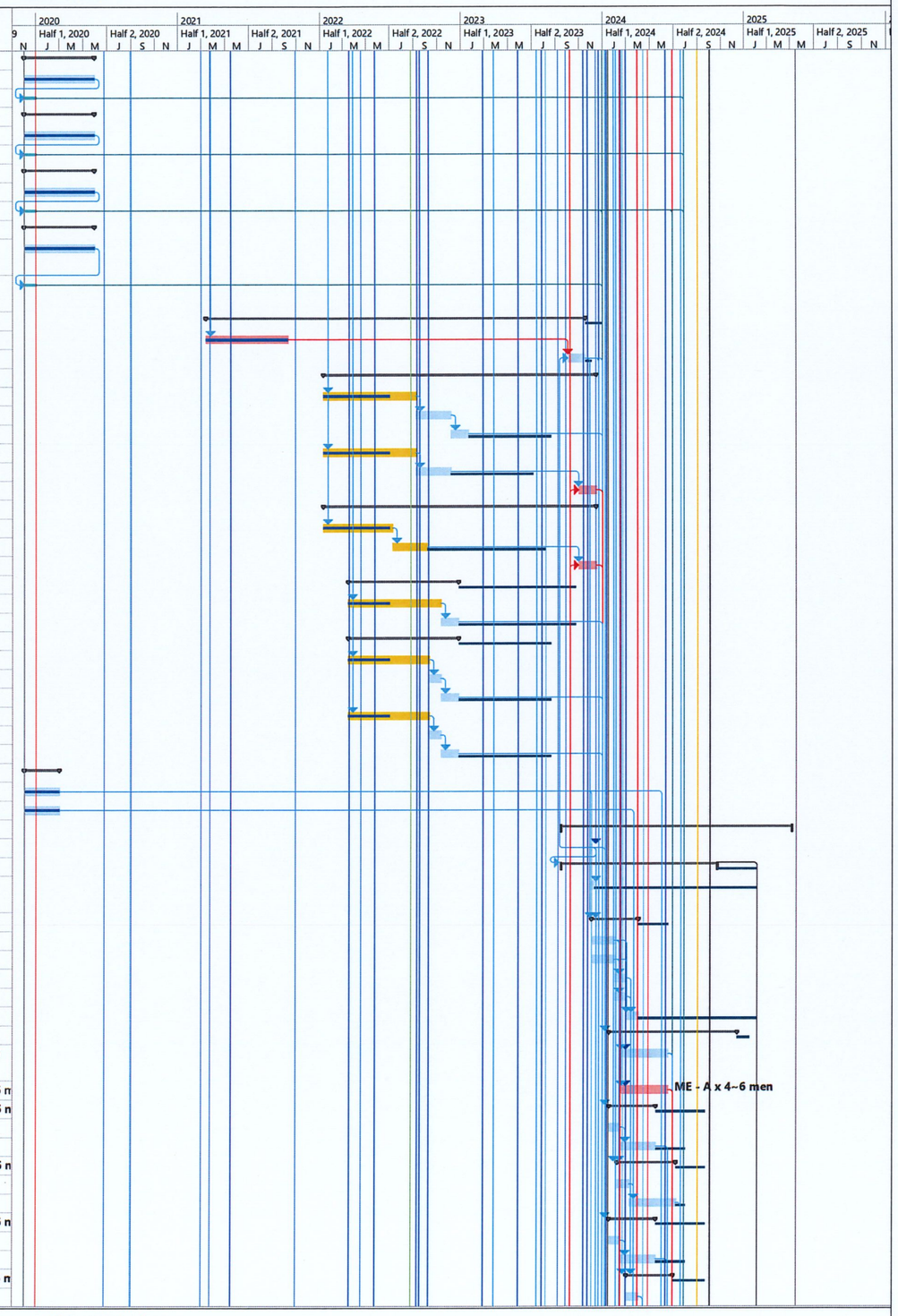
Bestwise
Project: DE/2018/04
Date: 31/07/22

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

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
752	752	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		697FF	
753	753	5.20.6.4	CDS005 - Detailed Design for Membrane Filtration System, Pumps and Membrane Modules	258 edays	Apr 12 '21	Dec 26 '21	Apr 12 '21	Dec 26 '21	0 edays	704,712,72	765,769,775,	
754	754	5.20.6.5	CDS024 - Detailed Design for Electrical Installations for MFB No. 2	159.38 edays	Oct 7 '21	Mar 15 '22	Oct 7 '21	Mar 15 '22	0 edays	82,92,88,96	83,841,847,6	
755	755	5.20.6.6	CDS008 - Detailed Design for Membrane Filtration System, Air Blowers, Dosing Systems etc.	324 edays	Mar 1 '21	Jan 19 '22	Mar 1 '21	Jan 19 '22	0 edays	708,716,72	790,793,698	
756	756	5.20.6.7	CDS007-3 - Detailed Design for Deodorisation System, DOU No. 3B	445.38 edays	Oct 1 '20	Dec 20 '21	Oct 1 '20	Dec 20 '21	0 edays	574,740	802,805	
757	757	5.20.6.8	CDS034-4 - Detailed Design for Electrical Installations BS at MFB No. 2	308.38 edays	Mar 12 '21	Jan 14 '22	Mar 12 '21	Jan 14 '22	0 edays	156	698FF	
758	758	5.20.6.9	CDS025-4 - Detailed Design for LV Switchboards for Membrane Filtration Sys	251 edays	May 3 '21	Jan 9 '22	May 3 '21	Jan 9 '22	0 edays	78	833,698FF	
759	759	5.20.6.10	CDS026-2 - Detailed Design for HV Switchboards for MFB No. 2	266 edays	Apr 18 '21	Jan 9 '22	Apr 18 '21	Jan 9 '22	0 edays	74	698FF,837	
760	760	5.20.6.11	CDS031 - Detailed Design for MVAC System	311.38 edays	Mar 1 '21	Jan 6 '22	Mar 1 '21	Jan 6 '22	0 edays		216FF	
761	761	5.20.6.12	CDS042 - Detailed Design for Lightning Protection System	357.38 edays	Jan 11 '21	Jan 3 '22	Jan 11 '21	Jan 3 '22	0 edays		216FF	
762	762	5.20.6.13	CDS050-4 - Detailed Design for Lifting Appliances - MFB No. 2	150 edays	Oct 15 '20	Mar 14 '21	Oct 15 '20	Mar 14 '21	0 edays	131	827,698FF	
763	**763**	**5.20.7**	**Manufacturing and Delivery of Plant & Materials**	**1474 days**	**Dec 2 '19**	**Dec 14 '23**	**Dec 2 '19**	**Aug 12 '24**	**241 days**			
764	**764**	**5.20.7.1**	**Hollow Fibre Membrane Modules, EQT023**	**389 days**	**Nov 8 '21**	**Dec 1 '22**	**Nov 8 '21**	**Feb 16 '24**	**442 days**			
765	765	5.20.7.1.1	MFS - Manufacturing of Plant (M.I. issued)	300 days	Nov 8 '21	Sep 7 '22	Nov 8 '21	Nov 23 '23	0 days	753	766	
766	766	5.20.7.1.2	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	40 days	Sep 8 '22	Oct 17 '22	Nov 24 '23	Jan 2 '24	0 days	765	767	
767	767	5.20.7.1.3	MFS - Shipping and Delivery of Plant to site	45 days	Oct 18 '22	Dec 1 '22	Jan 3 '24	Feb 16 '24	442 days	766	865	
768	**768**	**5.20.7.2**	**Air Scour Blowers, EQT040**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**Dec 14 '23**	**0 days**			
769	769	5.20.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 27 '21	Aug 23 '22	Dec 27 '21	Oct 30 '23	433 days	753	770	
770	770	5.20.7.2.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Oct 31 '23	Dec 14 '23	0 days	769,889SS-6		
771	**771**	**5.20.7.3**	**Aeration Blowers, EQT039**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Aug 11 '24**	**428 days**			
772	772	5.20.7.3.1	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Jun 27 '24	244 days	588	773	
773	773	5.20.7.3.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Jun 28 '24	Aug 11 '24	248 days	772,652SS-6	910	
774	**774**	**5.20.7.4**	**Permeate Pump, EQT024**	**285 days**	**Feb 9 '22**	**Nov 20 '22**	**Feb 9 '22**	**Apr 23 '24**	**520 days**			
775	775	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 9 '24	0 days	753	776	
776	776	5.20.7.4.2	Shipping and Delivery of Plant to site	45 days	Oct 7 '22	Nov 20 '22	Mar 10 '24	Apr 23 '24	444 days	775	869	
777	**777**	**5.20.7.5**	**Return Activated Sludge Pump, EQT010**	**337 days**	**Nov 5 '21**	**Oct 7 '22**	**Nov 5 '21**	**May 23 '24**	**594 days**			
778	778	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 8 '24	0 days	753	779	
779	779	5.20.7.5.2	Shipping and Delivery of Plant to site	45 days	Aug 24 '22	Oct 7 '22	Apr 9 '24	May 23 '24	466 days	778	872	
780	**780**	**5.20.7.6**	**Membrane Tank Drain Pump, EQT009**	**196 days**	**Dec 13 '21**	**Jun 26 '22**	**Dec 13 '21**	**Jun 26 '22**	**0 days**			
781	781	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	753	782FS+30 da	
782	782	5.20.7.6.2	Shipping and Delivery of Plant to site	45 days	May 13 '22	Jun 26 '22	May 13 '22	Jun 26 '22	0 days	781FS+30 d	875	
783	**783**	**5.20.7.7**	**Plant Service Water System, EQT030**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**May 23 '24**	**161 days**			
784	784	5.20.7.7.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Dec 27 '21	Jul 24 '22	Dec 27 '21	Apr 8 '24	463 days	753	785	
785	785	5.20.7.7.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Apr 9 '24	May 23 '24	33 days	784,889SS-6	882	
786	**786**	**5.20.7.8**	**Compressed Air System, EQT029**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**May 23 '24**	**161 days**			
787	787	5.20.7.8.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Dec 27 '21	Jul 24 '22	Dec 27 '21	Apr 8 '24	463 days	753	788	
788	788	5.20.7.8.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Apr 9 '24	May 23 '24	33 days	787,889SS-6	866	
789	**789**	**5.20.7.9**	**Chemical Storage Tanks, EQT025**	**225 days**	**Jan 20 '22**	**Sep 1 '22**	**Jan 20 '22**	**May 23 '24**	**630 days**			
790	790	5.20.7.9.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 20 '22	Jul 18 '22	Jan 20 '22	Apr 8 '24	0 days	755	791	
791	791	5.20.7.9.2	Shipping and Delivery of Plant to site	45 days	Jul 19 '22	Sep 1 '22	Apr 9 '24	May 23 '24	502 days	790	878,903	
792	**792**	**5.20.7.10**	**Chemical Dosing and Transfer Pumps, EQT026**	**225 days**	**Jan 20 '22**	**Sep 1 '22**	**Jan 20 '22**	**May 23 '24**	**630 days**			
793	793	5.20.7.10.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 20 '22	Jul 18 '22	Jan 20 '22	Apr 8 '24	0 days	755	794	
794	794	5.20.7.10.2	Shipping and Delivery of Plant to site	45 days	Jul 19 '22	Sep 1 '22	Apr 9 '24	May 23 '24	502 days	793	878	
795	**795**	**5.20.7.11**	**Stoplogs and Penstocks, EQT013**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**Apr 8 '24**	**116 days**			
796	796	5.20.7.11.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 27 '21	Aug 23 '22	Dec 27 '21	Feb 23 '24	433 days	753	797	
797	797	5.20.7.11.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Feb 24 '24	Apr 8 '24	64 days	796,889SS-6	864	
798	**798**	**5.20.7.12**	**Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamber, EQT036**	**285 days**	**Apr 21 '22**	**Jan 30 '23**	**Apr 21 '22**	**Jan 30 '23**	**0 days**	**63,70,66**		
799	799	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	753,744FS-6	800	
800	800	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	799		
801	**801**	**5.20.7.13**	**DOU 3B**	**225 days**	**Dec 20 '21**	**Aug 2 '22**	**Dec 20 '21**	**Aug 12 '24**	**740 days**			
802	802	5.20.7.13.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Dec 20 '21	Jun 18 '22	Dec 20 '21	Jun 18 '22	0 edays	756	803	
803	803	5.20.7.13.2	Shipping and Delivery of Plant to Site	45 edays	Jun 18 '22	Aug 2 '22	Jun 18 '22	Aug 12 '24	560.63 ...	802	913	
804	**804**	**5.20.7.14**	**FRP Air Ductwork for DOU3B**	**225 days**	**Dec 20 '21**	**Aug 2 '22**	**Dec 20 '21**	**Aug 12 '24**	**740 days**			
805	805	5.20.7.14.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Dec 20 '21	Jun 18 '22	Dec 20 '21	Jun 18 '22	0 edays	756	806	
806	806	5.20.7.14.2	Shipping and Delivery of Plant to Site	45 edays	Jun 18 '22	Aug 2 '22	Jun 18 '22	Aug 12 '24	560.63 ...	805	913	
807	**807**	**5.20.7.15**	**Building Services**	**225 days**	**Dec 2 '19**	**Jul 13 '20**	**Dec 2 '19**	**Jul 13 '20**	**0 days?**			
808	**808**	**5.20.7.15.1**	**MVAC Equipment**	**120 days?**	**Dec 2 '19**	**Mar 30 '20**	**Dec 2 '19**	**Mar 30 '20**	**0 days?**			
809	809	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		810	
810	810	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	809	957,951	
811	**811**	**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?**			
812	812	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		813	
813	813	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	812	957,952	



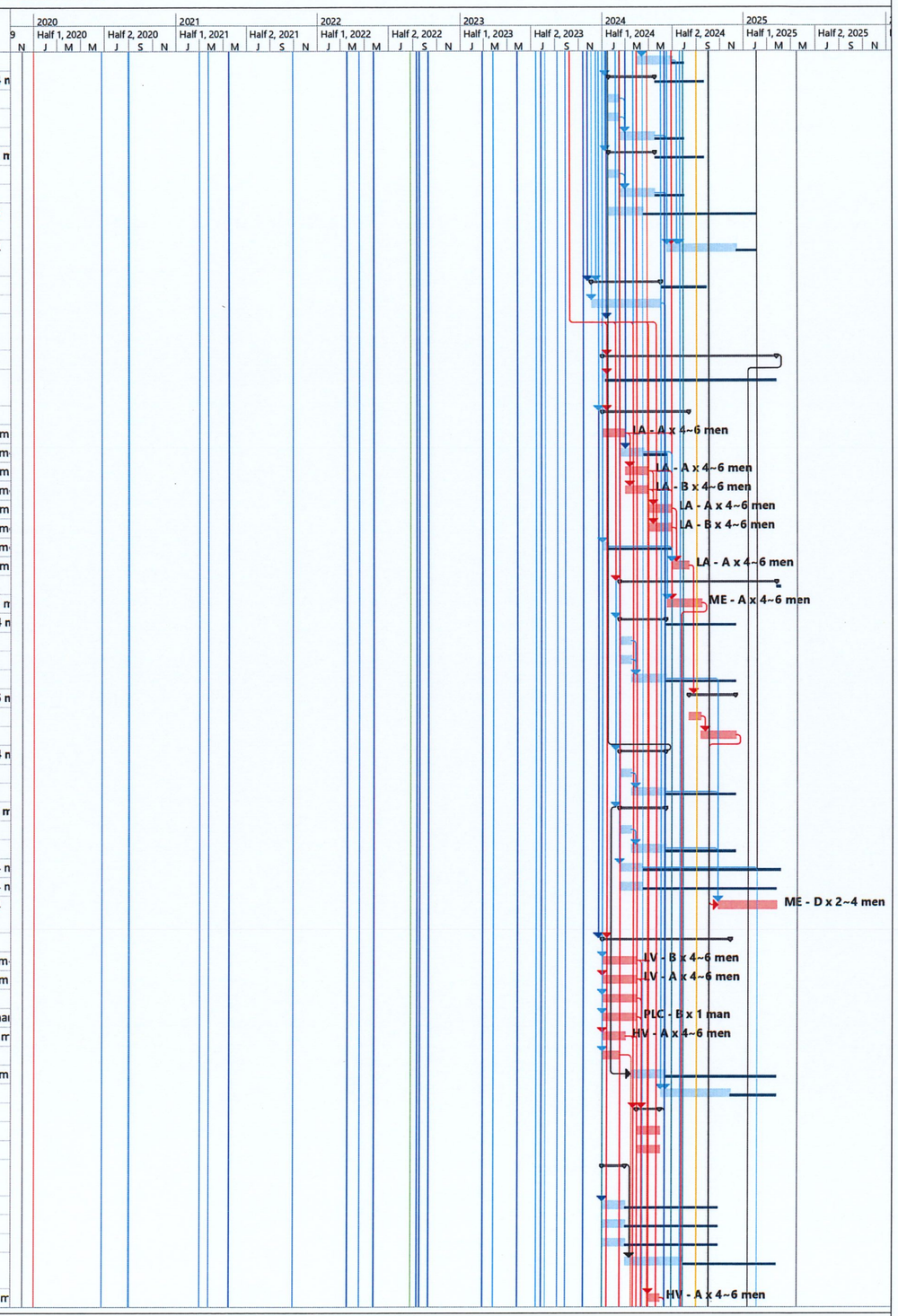
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
814	**814**	**5.20.7.15.3**	**Plumbing Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
815	815	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		816	
816	816	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	815	1386,957	
817	**817**	**5.20.7.15.4**	**CCTV Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
818	818	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		819	
819	819	5.20.7.15.4	Shipping and Delivery for CCTV Equipment (10 indoor + 3 outdoor Cam	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	818	957,1396	
820	**820**	**5.20.7.15.5**	**Fire Service Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
821	821	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		822	
822	822	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	821	1337,1349,13	
823	**823**	**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**			
824	824	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		825	
825	825	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	824	956	
826	**826**	**5.20.7.16**	**Lifting Appliances**	**978 days**	**Mar 14 '21**	**Nov 16 '23**	**Mar 14 '21**	**Dec 30 '23**	**44 days**			
827	827	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	762	828	
828	828	5.20.7.16.2	Shipping and Delivery of Plant to site	45 days	Oct 3 '23	Nov 16 '23	Nov 16 '23	Dec 30 '23	16 days	827,854SS-6	857,892,899	
829	**829**	**5.20.7.17**	**LV Switchboards**	**704 days**	**Jan 10 '22**	**Dec 14 '23**	**Jan 10 '22**	**Aug 18 '23**	**0 days**			
830	830	5.20.7.17.1	BR - Manufacturing of Plant	240 days	Jan 10 '22	Sep 6 '22	Jan 10 '22	Apr 5 '23	0 days	591	831	
831	831	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 6 '23	Jul 4 '23	0 days	830	832	
832	832	5.20.7.17.3	BR - Shipping and Delivery of Plant to site	45 days	Dec 6 '22	Jan 19 '23	Jul 5 '23	Aug 18 '23	211 days	831	920	
833	833	5.20.7.17.4	MFS - Manufacturing of Plant	240 days	Jan 10 '22	Sep 6 '22	Jan 10 '22	Apr 5 '23	0 days	758	834	
834	834	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 6 '23	Jul 4 '23	211 days	833	835	
835	835	5.20.7.17.6	MFS - Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Jul 5 '23	Aug 18 '23	0 days	834,889SS-6	921	
836	**836**	**5.20.7.18**	**HV Switchboards, 04SC012**	**704 days**	**Jan 10 '22**	**Dec 14 '23**	**Jan 10 '22**	**Sep 17 '23**	**0 days**			
837	837	5.20.7.18.1	MFS - Manufacturing of Plant	180 days	Jan 10 '22	Jul 8 '22	Jan 10 '22	May 5 '23	0 days	759	838	
838	838	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 6 '23	Aug 3 '23	301 days	837	839	
839	839	5.20.7.18.3	MFS - Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Aug 4 '23	Sep 17 '23	0 days	838,889SS-6	924	
840	**840**	**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**			
841	841	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	754	842	
842	842	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	301 days	841	925	
843	**843**	**5.20.7.20**	**PLC System**	**285 days**	**Mar 16 '22**	**Dec 25 '22**	**Mar 16 '22**	**Aug 18 '23**	**236 days**			
844	844	5.20.7.20.1	Manufacturing of Plant, PLC for BR2A &B	210 days	Mar 16 '22	Oct 11 '22	Mar 16 '22	Jun 4 '23	0 days	589	845	
845	845	5.20.7.20.2	Factory Acceptance Test of Plant, PLC for BR2A &B (To be witnessed by PI	30 days	Oct 12 '22	Nov 10 '22	Jun 5 '23	Jul 4 '23	0 days	844	846	
846	846	5.20.7.20.3	Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Jul 5 '23	Aug 18 '23	236 days	845	922	
847	847	5.20.7.20.4	Manufacturing of Plant, PLC for MFB2	210 days	Mar 16 '22	Oct 11 '22	Mar 16 '22	Jun 4 '23	0 days	754	848	
848	848	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 5 '23	Jul 4 '23	0 days	847	849	
849	849	5.20.7.20.6	Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Jul 5 '23	Aug 18 '23	236 days	848	923	
850	**850**	**5.20.7.21**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
851	851	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		888,927	
852	852	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		928	
853	**853**	**5.20.8**	**Site Installation Work**	**598 days?**	**Sep 15 '23**	**May 4 '25**	**Sep 15 '23**	**May 4 '25**	**0 days**			
854	854	5.20.8.1	Tentative Civil Handover Date, Portion B-5A, MFB No. 2	1 day	Dec 2 '23	Dec 2 '23	Dec 30 '23	Dec 30 '23	0 days	13	857,863FS+4	
855	**855**	**5.20.8.2**	**Commencement of E&M Installation at MFB No. 2 Lower Part**	**404 days**	**Sep 15 '23**	**Oct 22 '24**	**Feb 17 '24**	**Feb 2 '25**	**103 days**	**854**	**958**	
856	856	5.20.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., MFB2	7 days	Dec 3 '23	Dec 9 '23	Jan 27 '25	Feb 2 '25	421 days	854		
857	**857**	**5.20.8.2.2**	**Installation of Lifting Appliances at MFB No. 2**	**120 days**	**Dec 3 '23**	**Mar 31 '24**	**Feb 17 '24**	**Feb 2 '25**	**76 days**	**854,828**		
858	858	5.20.8.2.2.	B2 EOT Crane LA-04-01 SWL 5t	60 days	Dec 3 '23	Jan 31 '24	Feb 17 '24	Apr 16 '24	0 days		860,861,862,	
859	859	5.20.8.2.2.	B2 EOT Crane LA-04-02 SWL 5t	60 days	Dec 3 '23	Jan 31 '24	Feb 17 '24	Apr 16 '24	0 days		860,861,862,	
860	860	5.20.8.2.2.	B2 MR LA-04-03 SWL 5t	30 days	Feb 1 '24	Mar 1 '24	Dec 5 '24	Jan 3 '25	0 days	858,859	862	
861	861	5.20.8.2.2.	B1 MR LA-04-04 SWL 3t	30 days	Feb 1 '24	Mar 1 '24	Apr 24 '24	May 23 '24	0 days	858,859	862,875	
862	862	5.20.8.2.2.	T&C, Loading Test for Lifting Appliances	30 days	Mar 2 '24	Mar 31 '24	Jan 4 '25	Feb 2 '25	308 days	858,859,860		
863	**863**	**5.20.8.2.3**	**Mechanical Installations for E&M Equip. at MFB No. 2 Lower Part**	**331 days**	**Jan 17 '24**	**Dec 12 '24**	**Feb 17 '24**	**Feb 2 '25**	**31 days**	**854FS+45 e**		
864	864	5.20.8.2.3.	Installation of penstocks and stoplogs (Penstocks 18nos, Stoplogs 11nos), EQT013	120 days	Feb 17 '24	Jun 15 '24	Apr 9 '24	Aug 6 '24	0 days	797,15	886	ME - E x 4~6 men
865	865	5.20.8.2.3.	Installation of hollow fibre membrane modules rack (x9), EQT023	120 days	Feb 17 '24	Jun 15 '24	Feb 17 '24	Jun 15 '24	0 days	767,15	886,902	ME - A x 4~6 m
866	**866**	**5.20.8.2.3.**	**Installation of compressed air system**	**120 days**	**Jan 17 '24**	**May 15 '24**	**May 24 '24**	**Sep 20 '24**	**128 days**	**788**		**ME - B x 4~6 n**
867	867	5.20.8.2.3.	Installation of compressor, air dryer & air receiver (x2)	30 days	Jan 17 '24	Feb 15 '24	May 24 '24	Jun 22 '24	0 days		868	
868	868	5.20.8.2.3.	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Jun 23 '24	Sep 20 '24	76 days	867	886FS-45 day	
869	**869**	**5.20.8.2.3.**	**Installation of permeate pumping system**	**150 days**	**Feb 8 '24**	**Jul 6 '24**	**Apr 24 '24**	**Sep 20 '24**	**76 days**	**776,858FS+**		**ME - A x 4~6 n**
870	870	5.20.8.2.3.	Installation of permeate pumps (x10), EQT024	30 days	Feb 8 '24	Mar 8 '24	Apr 24 '24	May 23 '24	0 days		871	
871	871	5.20.8.2.3.	Installation of pipework and valves, EQT036	120 days	Mar 9 '24	Jul 6 '24	May 24 '24	Sep 20 '24	24 days	870	886FS-45 day	
872	**872**	**5.20.8.2.3.**	**Installation of return activated sludge pumping system**	**120 days**	**Jan 17 '24**	**May 15 '24**	**May 24 '24**	**Sep 20 '24**	**128 days**	**779**		**ME - B x 4~6 n**
873	873	5.20.8.2.3.	Installation of RAS pump (x5), EQT010	30 days	Jan 17 '24	Feb 15 '24	May 24 '24	Jun 22 '24	0 days		874	
874	874	5.20.8.2.3.	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Jun 23 '24	Sep 20 '24	76 days	873	886FS-45 day	
875	**875**	**5.20.8.2.3.**	**Installation of membrane tank drain pumping system**	**120 days**	**Mar 2 '24**	**Jun 29 '24**	**May 24 '24**	**Sep 20 '24**	**83 days**	**861,782**		**ME - C x 4~6 n**
876	876	5.20.8.2.3.	Installation of drain pump (x2), EQT009	30 days	Mar 2 '24	Mar 31 '24	May 24 '24	Jun 22 '24	0 days		877	



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

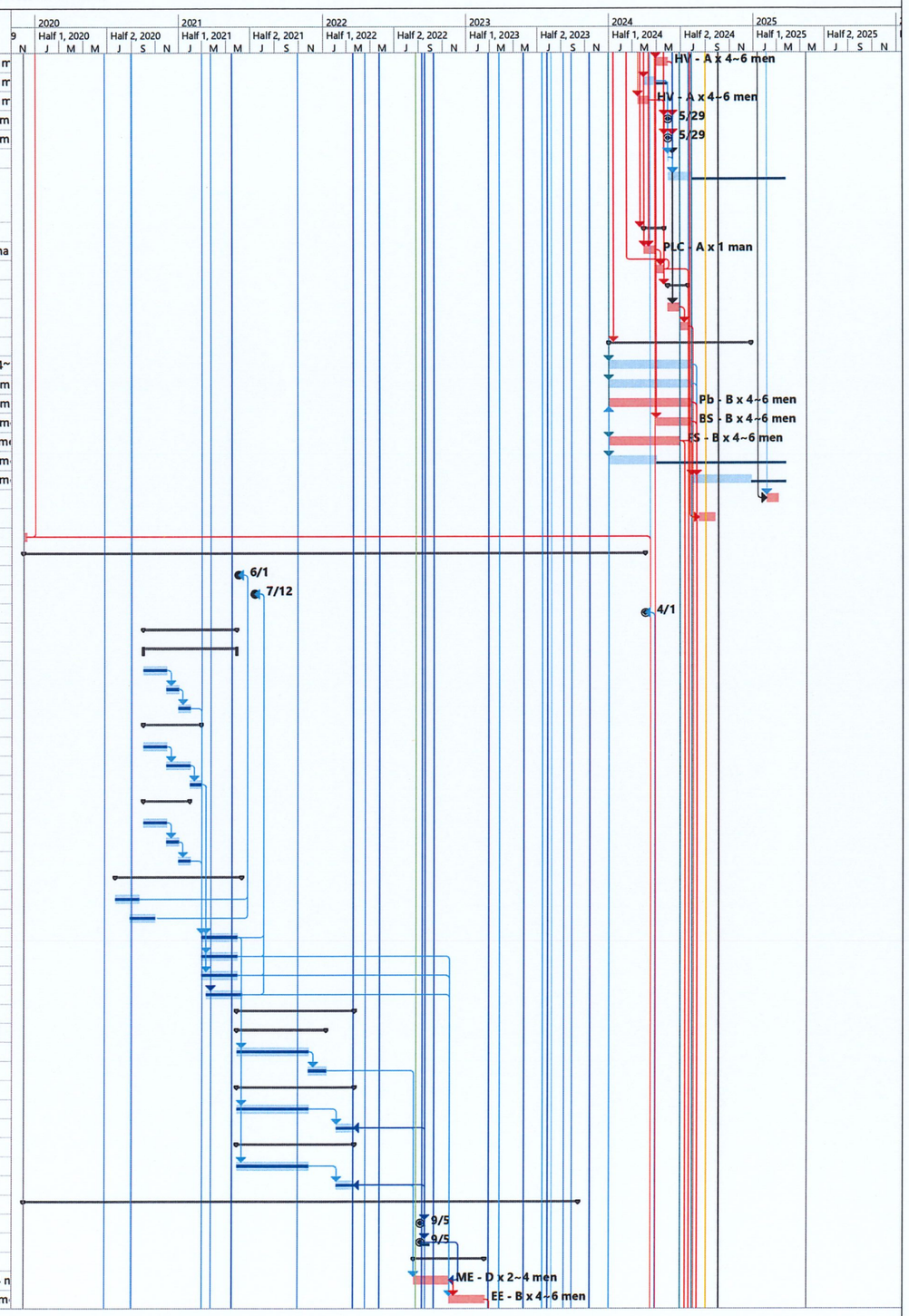
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
877	877	5.20.8.2.3.(	Installation of pipework and valves, EQT036	90 days	Apr 1 '24	Jun 29 '24	Jun 23 '24	Sep 20 '24	31 days	876	886FS-45 day	
878	**878**	**5.20.8.2.3.**	**Installation of chemical system (Citric Acid)**	**120 days**	**Jan 17 '24**	**May 15 '24**	**May 24 '24**	**Sep 20 '24**	**128 days**	**791,794**		**ME - D x 2~4 n**
879	879	5.20.8.2.3.7	Installation of storage tank (x2), EQT091	30 days	Jan 17 '24	Feb 15 '24	May 24 '24	Jun 22 '24	0 days	881		
880	880	5.20.8.2.3.7	Installation of dosing pump (x2), EQT090	30 days	Jan 17 '24	Feb 15 '24	May 24 '24	Jun 22 '24	0 days	881		
881	881	5.20.8.2.3.7	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Jun 23 '24	Sep 20 '24	76 days	879,880	886FS-45 day	
882	**882**	**5.20.8.2.3.**	**Installation of plant service water system**	**120 days**	**Jan 17 '24**	**May 15 '24**	**May 24 '24**	**Sep 20 '24**	**128 days**	**785**		**ME - C x 4~6 n**
883	883	5.20.8.2.3.8	Installation of pump (x4), pressure tank (x2), EQT030	30 days	Jan 17 '24	Feb 15 '24	May 24 '24	Jun 22 '24	0 days	884		
884	884	5.20.8.2.3.8	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Jun 23 '24	Sep 20 '24	76 days	883	886FS-45 day	
885	885	5.20.8.2.3.9	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.18)	90 days	Jan 17 '24	Apr 15 '24	Nov 5 '24	Feb 2 '25	293 days			ME - C x 4~6 men
886	886	5.20.8.2.3.:	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	180 days	Jun 16 '24	Dec 12 '24	Aug 7 '24	Feb 2 '25	52 days	864,865,868 days,871FS~		ME - D x 2~4 men
887	**887**	**5.20.8.2.4**	**Electrical Installations for E&M Equip. at MFB No. 2 Lower Part**	**180 days**	**Dec 3 '23**	**May 30 '24**	**Mar 30 '24**	**Sep 25 '24**	**118 days**	**141,854**		
888	888	5.20.8.2.4.:	Installation of cable trays and cable containments	180 days	Dec 3 '23	May 30 '24	Mar 30 '24	Sep 25 '24	0 days	851	927	
889	889	5.20.8.3	Tentative Civil Handover Date, Portion B-5B, MFB No. 2 remaining portion (Rev. 5)	1 day	Dec 30 '23	Dec 30 '23	Apr 13 '23	Apr 13 '23	0 days	14	892,901FS+4 edays,891,89	
890	**890**	**5.20.8.4**	**Commencement of E&M Installation at MFB No. 2 Upper Part**	**450 days**	**Dec 31 '23**	**Mar 24 '25**	**Apr 14 '23**	**Apr 3 '25**	**0 days**	**889**	**958FS-50 day**	
891	891	5.20.8.4.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., MFB2	7 days	Dec 31 '23	Jan 6 '24	Mar 18 '25	Mar 24 '25	443 days	889		
892	**892**	**5.20.8.4.2**	**Installation of Lifting Appliances at MFB No. 2**	**225 days**	**Dec 31 '23**	**Aug 11 '24**	**Dec 31 '23**	**Aug 11 '24**	**0 days**	**889,828**		
893	893	5.20.8.4.2.:	GF EOT Crane LA-04-05 SWL 5t	60 days	Dec 31 '23	Feb 28 '24	Dec 31 '23	Feb 28 '24	0 days		895,896,900	LA - A x 4~6 m
894	894	5.20.8.4.2.:	GF Gantry Crane LA-04-06 SWL 6t	60 days	Feb 17 '24	Apr 16 '24	Apr 17 '24	Jun 15 '24	60 days	15	900,902	LA - B x 4~6 m
895	895	5.20.8.4.2.:	1F EOT Crane LA-04-07 SWL 15t	60 days	Feb 29 '24	Apr 28 '24	Feb 29 '24	Apr 28 '24	0 days	893	897,898,900	LA - A x 4~6 m
896	896	5.20.8.4.2.4	1F EOT Crane LA-04-08 SWL 15t	60 days	Feb 29 '24	Apr 28 '24	Feb 29 '24	Apr 28 '24	0 days	893	897,898,900	LA - B x 4~6 m
897	897	5.20.8.4.2.5	RF EOT Crane LA-04-09 SWL 2t	60 days	Apr 29 '24	Jun 27 '24	Apr 29 '24	Jun 27 '24	0 days	895,896	900	LA - A x 4~6 m
898	898	5.20.8.4.2.(	RF Retractable MR LA-04-10 SWL 2t	60 days	Apr 29 '24	Jun 27 '24	Apr 29 '24	Jun 27 '24	0 days	895,896	900	LA - B x 4~6 m
899	899	5.20.8.4.2.7	Mobile A-frame LA-04-11 SWL 2t	15 days	Dec 31 '23	Jan 14 '24	Jun 13 '24	Jun 27 '24	165 days	828	900	LA - C x 4~6 m
900	900	5.20.8.4.2.8	T&C, Loading Test for Lifting Appliances	45 days	Jun 28 '24	Aug 11 '24	Jun 28 '24	Aug 11 '24	0 days	893,894,895	907	LA - A x 4~6 m
901	**901**	**5.20.8.4.3**	**Mechanical Installations for E&M Equip. at MFB No. 2 Upper Part**	**405 days**	**Feb 14 '24**	**Mar 24 '25**	**Jun 16 '24**	**Apr 3 '25**	**10 days**	**889FS+45 e**		
902	902	5.20.8.4.3.:	Installation of hollow fibre membrane modules (x9), EQT023	90 days	Jun 16 '24	Sep 13 '24	Jun 16 '24	Sep 13 '24	0 days	865,894	959FS-30 day	ME - A x 4~6 m
903	**903**	**5.20.8.4.3.**	**Installation of chemical system (Citric Acid + NaOCl)**	**120 days**	**Feb 14 '24**	**Jun 12 '24**	**Aug 12 '24**	**Dec 9 '24**	**180 days**	**791**		**ME - D x 2~4 n**
904	904	5.20.8.4.3.:	Installation of storage tank, EQT091	30 days	Feb 14 '24	Mar 14 '24	Aug 12 '24	Sep 10 '24	0 days		906	
905	905	5.20.8.4.3.:	Installation of dosing pump (x4) and transfer pump (x4), EQT090	30 days	Feb 14 '24	Mar 14 '24	Aug 12 '24	Sep 10 '24	0 days		906	
906	906	5.20.8.4.3.:	Installation of pipework and valves, EQT036	90 days	Mar 15 '24	Jun 12 '24	Sep 11 '24	Dec 9 '24	180 days	904,905	918FS-45 day	
907	**907**	**5.20.8.4.3.**	**Installation of air scour blower system**	**120 days**	**Aug 12 '24**	**Dec 9 '24**	**Aug 12 '24**	**Dec 9 '24**	**0 days**	**900**		**ME - A x 4~6 n**
908	908	5.20.8.4.3.:	Installation of blowers (x3), EQT040	30 days	Aug 12 '24	Sep 10 '24	Aug 12 '24	Sep 10 '24	0 days		909	
909	909	5.20.8.4.3.:	Installation of pipework and valves, EQT036	90 days	Sep 11 '24	Dec 9 '24	Sep 11 '24	Dec 9 '24	0 days	908	918FS-45 day	
910	**910**	**5.20.8.4.3.**	**Installation of aeration blower system**	**120 days**	**Feb 14 '24**	**Jun 12 '24**	**Aug 12 '24**	**Dec 9 '24**	**0 days**	**773**	**692**	**ME - D x 2~4 n**
911	911	5.20.8.4.3.4	Installation of blowers (x4), EQT039	30 days	Feb 14 '24	Mar 14 '24	Aug 12 '24	Sep 10 '24	0 days		912	
912	912	5.20.8.4.3.4	Installation of pipework and valves, EQT036	90 days	Mar 15 '24	Jun 12 '24	Sep 11 '24	Dec 9 '24	180 days	911	918FS-45 day	
913	**913**	**5.20.8.4.3.**	**Mechanical Installations for DOU 3B**	**120 days**	**Feb 14 '24**	**Jun 12 '24**	**Aug 12 '24**	**Dec 9 '24**	**0 days**	**803,806**	**926SS+30 ed**	**ME - F x 4~6 m**
914	914	5.20.8.4.3.5	Installation of extraction fan, filter, dehumidifier	30 days	Feb 14 '24	Mar 14 '24	Aug 12 '24	Sep 10 '24	0 days		915	
915	915	5.20.8.4.3.5	Installation of FRP ductwork	90 days	Mar 15 '24	Jun 12 '24	Sep 11 '24	Dec 9 '24	180 days	914	918FS-45 day	
916	916	5.20.8.4.3.(	Installation of instrumentations, EQT035-1	60 days	Feb 14 '24	Apr 13 '24	Feb 3 '25	Apr 3 '25	355 days	59	958FS-60 day	ME - D x 2~4 n
917	917	5.20.8.4.3.7	Installation of FRP covers, walkways, platforms and ladders , EQT050	60 days	Feb 14 '24	Apr 13 '24	Jan 24 '25	Mar 24 '25	345 days			ME - D x 2~4 n
918	918	5.20.8.4.3.8	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	150 days	Oct 26 '24	Mar 24 '25	Oct 26 '24	Mar 24 '25	0 days	906FS-45 days,909FS~		ME - D x 2~4 men
919	**919**	**5.20.8.4.4**	**Electrical Installations for E&M Equip. at MFB No. 2 Upper Part**	**332 days**	**Dec 31 '23**	**Nov 26 '24**	**Aug 19 '23**	**Mar 24 '25**	**0 days**	**141,889**		
920	920	5.20.8.4.4.:	Installation of LV Switchboards, BR2	90 days	Dec 31 '23	Mar 29 '24	Aug 19 '23	Nov 16 '23	0 days	832	937FS+30 da	LV - B x 4~6 m
921	921	5.20.8.4.4.:	Installation of LV Switchboards, MFB No. 2	90 days	Dec 31 '23	Mar 29 '24	Aug 19 '23	Nov 16 '23	0 days	835	936FS+30 da	LV - A x 4~6 m
922	922	5.20.8.4.4.:	Installation of PLC Panels, BR2	90 days	Dec 31 '23	Mar 29 '24	Aug 19 '23	Nov 16 '23	0 days	846	945,928	
923	923	5.20.8.4.4.4	Installation of PLC Panels, MFB No. 2	90 days	Dec 31 '23	Mar 29 '24	Aug 19 '23	Nov 16 '23	0 days	849	945,928	PLC - B x 1 ma
924	924	5.20.8.4.4.5	Installation of HV Switchboards, MFB No. 2	60 days	Dec 31 '23	Feb 28 '24	Sep 18 '23	Nov 16 '23	0 days	839	938FS+30 da	HV - A x 4~6 m
925	925	5.20.8.4.4.(	Installation of transformer, MFB No. 2, EQT032	45 days	Dec 31 '23	Feb 13 '24	Oct 23 '23	Dec 6 '23	0 days	842	939FS+30 da	
926	926	5.20.8.4.4.7	Electrical Installations for DOU 3B	90 edays	Mar 15 '24	Jun 13 '24	Dec 24 '24	Mar 24 '25	284.38 ...	913SS+30 e		EE - D x 4~6 m
927	927	5.20.8.4.4.8	Installation of cable trays and cable containments	180 days	May 31 '24	Nov 26 '24	Sep 26 '24	Mar 24 '25	118 days	888,851		
928	**928**	**5.20.8.4.4.**	**Cables laying and terminations**	**60 days**	**Mar 30 '24**	**May 28 '24**	**Nov 17 '23**	**Jan 15 '24**	**0 days**	**920,921,922**	**943,940,942,**	
929	929	5.20.8.4.4.9	LV and control cables in MFB no.2	60 days	Mar 30 '24	May 28 '24	Nov 17 '23	Jan 15 '24	0 days			
930	930	5.20.8.4.4.9	HV and control cables in MFB no.2	60 days	Mar 30 '24	May 28 '24	Nov 17 '23	Jan 15 '24	0 days			
931	**931**	**5.20.8.4.4.**	**Tentative Civil Handover Date HV cable draw pits from MFB No.2 to DE/2018/03 (Rev. 18)**	**60 days**	**Dec 31 '23**	**Feb 28 '24**	**Aug 27 '24**	**Oct 25 '24**	**0 days**		**935**	
932	932	5.20.8.4.4.:	HV cables between MFB no.1 and MFB no.2	60 days	Dec 31 '23	Feb 28 '24	Aug 27 '24	Oct 25 '24	240 days	209		
933	933	5.20.8.4.4.:	LV and control cables between MFB no.2 and BR2	60 days	Dec 31 '23	Feb 28 '24	Aug 27 '24	Oct 25 '24	240 days			
934	934	5.20.8.4.4.:	LV and control cables between MFB no.2 and Emeregency Genset H	60 days	Dec 31 '23	Feb 28 '24	Aug 27 '24	Oct 25 '24	240 days			
935	935	5.20.8.4.4.:	Cable provision and laying between buildings for DE/2018/03 Sidestream Building Facility (Rev. 17)	150 days	Feb 29 '24	Jul 27 '24	Oct 26 '24	Mar 24 '25	240 days	931		
936	936	5.20.8.4.4.:	Testing of LV Switchboards, MFB No. 2	30 days	Apr 29 '24	May 28 '24	Jan 6 '24	Feb 4 '24	0 days	921FS+30 d	940,941	HV - A x 4~6 m



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

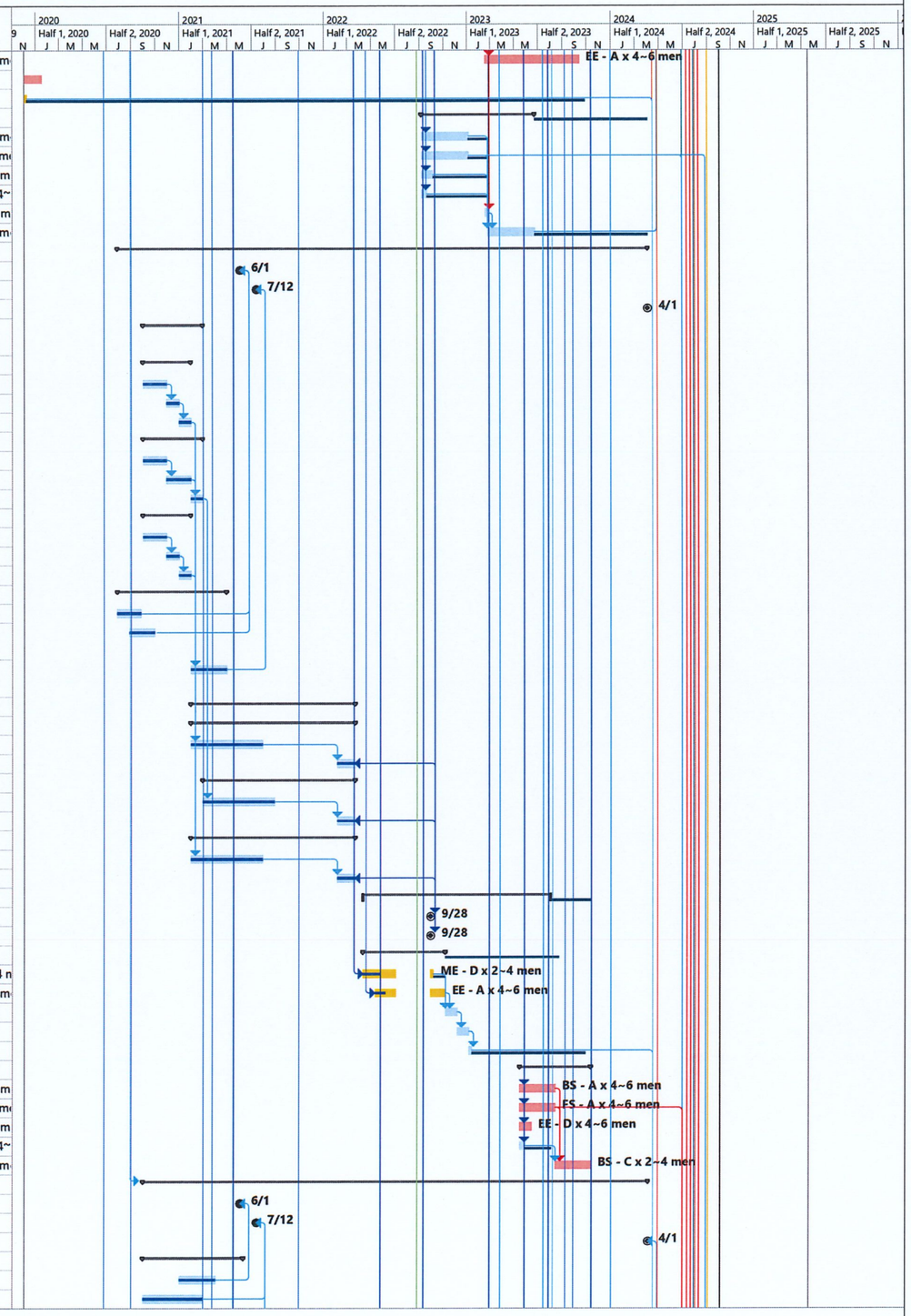
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
937	937	5.20.8.4.4.:	Testing of LV Switchboards, BR2	30 days	Apr 29 '24	May 28 '24	Jan 6 '24	Feb 4 '24	0 days	920FS+30 d:	940,941	HV - A x 4~6 m
938	938	5.20.8.4.4.:	Testing of HV Switchboards, MFB No. 2	30 days	Mar 30 '24	Apr 28 '24	Dec 24 '24	Jan 22 '25	30 days	924FS+30 d:	942	HV - A x 4~6 m
939	939	5.20.8.4.4.:	Testing of Transformers, MFB No. 2	30 days	Mar 15 '24	Apr 13 '24	Jan 6 '24	Feb 4 '24	0 days	925FS+30 d:	940,941	HV - A x 4~6 m
940	940	5.20.8.4.4.:	Energisation of LV Switchboards, MFB No. 2 (Rev. 17)	1 day	May 29 '24	May 29 '24	Feb 5 '24	Feb 5 '24	0 days	936,937,93	943,690	LA - A x 4~6 m
941	941	5.20.8.4.4.:	Energisation of LV Switchboards, BR2A2B	1 day	May 29 '24	May 29 '24	Feb 5 '24	Feb 5 '24	0 days	936,937,93	943,690	LA - A x 4~6 m
942	942	5.20.8.4.4.:	Energisation of HV Switchboards, MFB No.2 (Rev. 17)	1 day	May 29 '24	May 29 '24	Jan 23 '25	Jan 23 '25	0 days	938,928	943	
943	943	5.20.8.4.4.:	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	May 30 '24	Jul 28 '24	Jan 24 '25	Mar 24 '25	239 days	928,940,942		LV - A x 4~6 men
944	944	5.20.8.4.5	**SCADA Systems, BR No.1 & No.2**	**51 days**	**Mar 30 '24**	**May 19 '24**	**Jan 16 '24**	**Mar 6 '24**	**0 days**	**889**		
945	945	5.20.8.4.5.:	Configuration of PLC System for BR No. 2A&B	30 days	Mar 30 '24	Apr 28 '24	Jan 16 '24	Feb 14 '24	0 days	922,688,92	946	PLC - A x 1 ma
946	946	5.20.8.4.5.:	Site Acceptance Test for PLC System at BR 2A&B	21 days	Apr 29 '24	May 19 '24	Feb 15 '24	Mar 6 '24	0 days	945	693,1397	
947	947	5.20.8.4.6	**SCADA Systems, MFB No. 2**	**51 days**	**May 29 '24**	**Jul 18 '24**	**Jan 16 '24**	**Mar 6 '24**	**0 days**	**889**		
948	948	5.20.8.4.6.:	Configuration of PLC System for MFB No. 2	30 days	May 29 '24	Jun 27 '24	Jan 16 '24	Feb 14 '24	0 days	928	949	
949	949	5.20.8.4.6.:	Site Acceptance Test for PLC System at MFB No. 2	21 days	Jun 28 '24	Jul 18 '24	Feb 15 '24	Mar 6 '24	0 days	948	1397	
950	950	5.20.8.4.7	**Building Services Installations for MFB No. 2**	**360 days**	**Dec 31 '23**	**Dec 24 '24**	**Apr 14 '23**	**Mar 24 '25**	**0 days**	**889FS-30 da**		
951	951	5.20.8.4.7.:	Mechanical Ventilation and Air Conditioning System, MFB No. 2	210 days	Dec 31 '23	Jul 27 '24	Mar 30 '24	Oct 25 '24	0 days	810	957	MVAC - A x 4~
952	952	5.20.8.4.7.:	Lighting and Power Distribution System, MFB No. 2	210 days	Dec 31 '23	Jul 27 '24	Mar 30 '24	Oct 25 '24	0 days	813	957	BS - A x 4~6 m
953	953	5.20.8.4.7.:	Plumbing Installation, MFB No. 2	210 days	Dec 31 '23	Jul 27 '24	Dec 31 '23	Jul 27 '24	0 days	1384	1386,957	Pb - B x 4~6 m
954	954	5.20.8.4.7.:	CCTV Installation (10 indoor + 3 outdoor Cameras), MFB No. 2	90 days	Apr 29 '24	Jul 27 '24	Dec 6 '23	Mar 4 '24	0 days	889FS+120	957,1396	BS - B x 4~6 m
955	955	5.20.8.4.7.:	Fire Services Installation, MFB No. 2	180 days	Dec 31 '23	Jun 27 '24	Apr 14 '23	Oct 10 '23	0 days	822	1337,1349,1	FS - B x 4~6 m
956	956	5.20.8.4.7.:	Earthing and Lightning Protection System, MFB No. 2	120 days	Dec 31 '23	Apr 28 '24	Nov 25 '24	Mar 24 '25	330 days	184,825		BS - C x 2~4 m
957	957	5.20.8.4.7.:	Testing and Commissioning of Building Services Installations, MFB No. 2	150 days	Jul 28 '24	Dec 24 '24	Oct 26 '24	Mar 24 '25	90 days	951,952,953		BS - C x 2~4 m
958	958	5.20.9	Site Acceptance Test for E&M Equip at MFB No. 2	30 days	Feb 3 '25	Mar 4 '25	Feb 3 '25	Mar 4 '25	0 days	855,890FS-5		
959	959	5.20.10	System Commissioning for E&M Equip at MFB No. 2	40 days	Aug 15 '24	Sep 23 '24	Aug 15 '24	Sep 23 '24	0 days	902FS-30 da		
960	960	5.20.11	Risk Allowances for Completion of Processing Plant at MFB No. 2	7 edays	Dec 2 '19	Dec 9 '19	Dec 2 '19	Dec 9 '19	0 edays		1393,699FF	
961	961	5.21	**Chemical System No. 1 and No. 2, Portion B-7 & B-7B (PS 6B.2.3)**	**1583 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
962	962	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	979FF,980F		
963	963	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	981FF,982F		
964	964	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	1010FF		
965	965	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**			
966	966	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**			
967	967	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		968	
968	968	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	967	969	
969	969	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	968	981	
970	970	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**			
971	971	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		972	
972	972	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	971	973	
973	973	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	972	981,982,983	
974	974	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**			
975	975	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		976	
976	976	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	975	977	
977	977	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	976	981	
978	978	5.21.5	**Design Submissions for Chemical System No. 1 and No. 2**	**324 days**	**Jul 21 '20**	**Jun 10 '21**	**Jul 21 '20**	**Jun 10 '21**	**0 days**			
979	979	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		962FF	
980	980	5.21.5.2	CDS081-5 - Civil and dimensional requirements drawings for Chemical Syste	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		962FF	
981	981	5.21.5.3	CDS006 - Detailed Design for Chemical Dosing System	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	May 28 '21	0 edays	969,973,977	987,990,993,	
982	982	5.21.5.4	CDS027 - Detailed Design for Electrical Installations for Chemical System No.	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	May 28 '21	0 edays	973	1000,963FF	
983	983	5.21.5.5	CDS028 - Detailed Design for Electrical Installations for Chemical System No.	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	May 28 '21	0 edays	973	1000,963FF	
984	984	5.21.5.6	CDS034-5 - Detailed Design for Electrical Installations BS at Chemical System	90 edays	Mar 12 '21	Jun 10 '21	Mar 12 '21	Jun 10 '21	0 edays	156	1000,963FF	
985	985	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**			
986	986	5.21.6.1	**Chemical Storage Tanks, EQT025**	**225 days**	**May 29 '21**	**Jan 8 '22**	**May 29 '21**	**Jan 8 '22**	**0 days**			
987	987	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	981	988	
988	988	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	987	999	
989	989	5.21.6.2	**Chemical Dosing Pumps, EQT027**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
990	990	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	981	991	
991	991	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	990,996FF-6	999	
992	992	5.21.6.3	**Chemical Transfer Pumps, EQT026**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
993	993	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	981	994	
994	994	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	993,996FF-6	999	
995	995	5.21.7	**Site Installation Work**	**1412 days**	**Dec 2 '19**	**Oct 13 '23**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
996	996	5.21.7.1	Tentative Civil Handover Date, Portion B-7 & B-7B (Rev. 5)	1 day	Sep 5 '22	Sep 5 '22	Jul 12 '23	Jul 12 '23	0 days	18	994FF-60 eda	
997	997	5.21.7.2	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	1 day	Sep 5 '22	Sep 5 '22	Sep 28 '22	Sep 28 '22	23 days	18	999FF+50 da	
998	998	5.21.7.3	**Commencement of E&M Installation at Chemical Dosing System 1 and Syst**	**180 days**	**Aug 20 '22**	**Feb 16 '23**	**Aug 20 '22**	**Feb 16 '23**	**0 days**			
999	999	5.21.7.3.1	Mechanical Installations for E&M Equip. for Chemical Dosing System (Rev	90 edays	Aug 20 '22	Nov 18 '22	Aug 20 '22	Nov 18 '22	0 edays	997FF+50 d:	1000	ME - D x 2~4 n
1000	1000	5.21.7.3.2	Electrical Installations for E&M Equip. for Chemical Dosing System	90 edays	Nov 18 '22	Feb 16 '23	Nov 18 '22	Feb 16 '23	0 edays	999,982,98	1001,1009	EE - B x 4~6 m



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

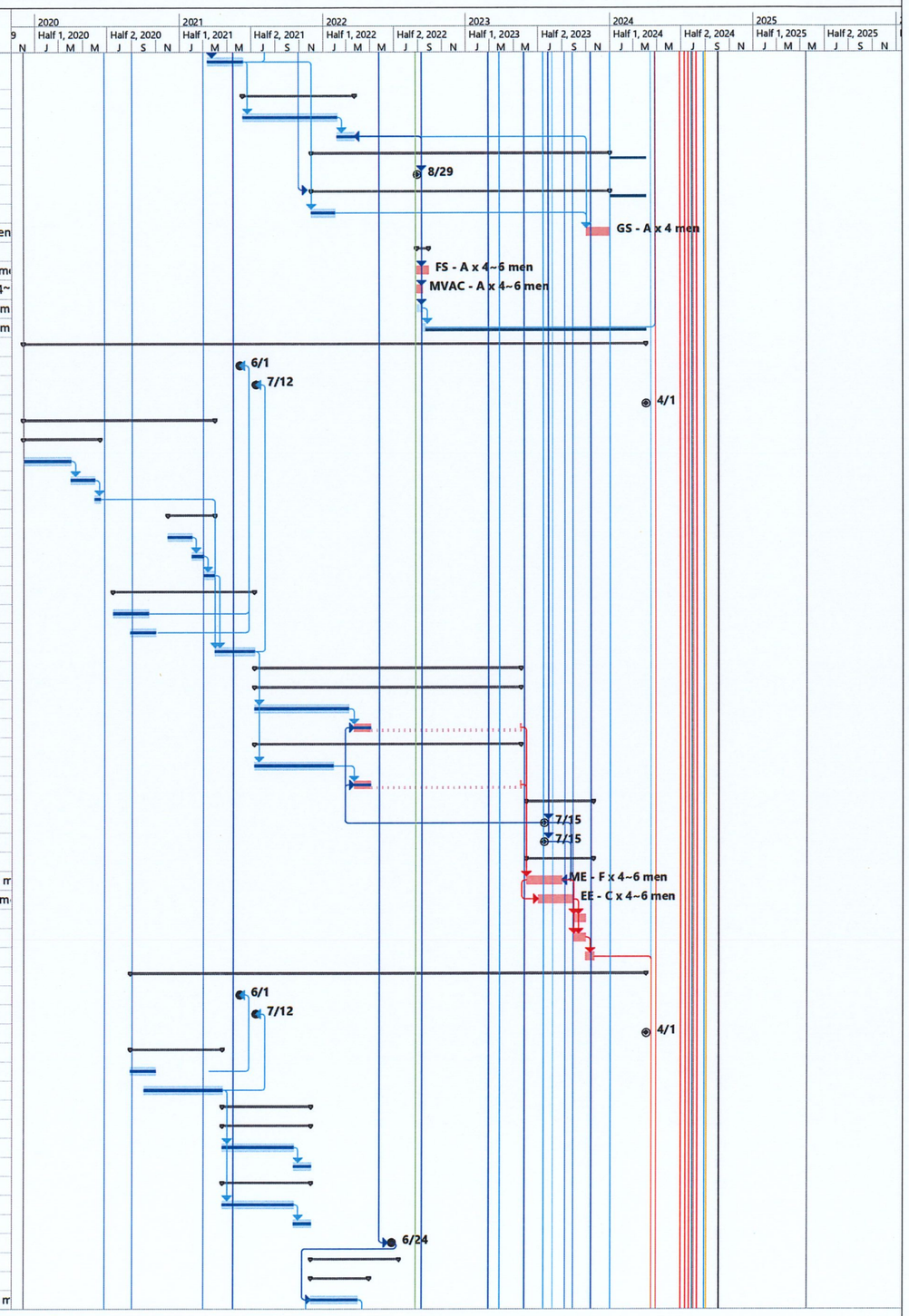
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1001	1001	5.21.7.4	Site Acceptance Test for E&M Equip for Chemical Dosing System	240 days	Feb 16 '23	Oct 13 '23	Feb 16 '23	Oct 13 '23	0 days	1000		EE - A x 4~6 m
1002	1002	5.21.7.5	System Commissioning for E&M Equip for Chemical Dosing System	45 days	Dec 2 '19	Jan 15 '20	Dec 2 '19	Jan 15 '20	0 days			
1003	1003	5.21.7.6	Risk Allowances for Completion of Processing Plant at Chemical Dosing Syste	7 edays	Dec 2 '19	Dec 9 '19	Oct 21 '23	Oct 28 '23	1419 e...		1393	
1004	**1004**	**5.21.7.7**	**Building Services Installations at Chemical Dosing System areas**	**290 days**	**Sep 6 '22**	**Jun 22 '23**	**Jul 13 '23**	**Apr 1 '24**	**284 days**			
1005	1005	5.21.7.7.1	Lighting and Power Distribution System, Chem 1&2	120 days	Sep 6 '22	Jan 3 '23	Aug 6 '23	Dec 3 '23	50 days	996	1010	BS - B x 4~6 m
1006	1006	5.21.7.7.2	Fire Services Installation, DG Stores	120 days	Sep 6 '22	Jan 3 '23	Jul 13 '23	Nov 9 '23	50 days	996	1349,1350,1	FS - A x 4~6 m
1007	1007	5.21.7.7.3	Lightning Protection System, Chem 1&2	30 days	Sep 6 '22	Oct 5 '22	Nov 4 '23	Dec 3 '23	140 days	996	1010	EE - D x 4~6 m
1008	1008	5.21.7.7.4	Mechanical Ventilation System, Chem 2	14 days	Sep 6 '22	Sep 19 '22	Nov 20 '23	Dec 3 '23	156 days	996	1010	MVAC - A x 4~
1009	1009	5.21.7.7.5	Plumbing Installation, Chem 1	7 days	Feb 16 '23	Feb 22 '23	Nov 27 '23	Dec 3 '23	0 days	1000	1010	Pb - A x 4~6 m
1010	1010	5.21.7.7.6	Testing and Commissioning of Building Services Installations, Chem 1&2	120 days	Feb 23 '23	Jun 22 '23	Dec 4 '23	Apr 1 '24	284 days	1005,1006,1	964FF	BS - C x 2~4 m
1011	**1011**	**5.22**	**Temporary Chemical Dosing System, Portion B7 & B-7B (PS 6B.2.3)**	**1344 days**	**Jul 28 '20**	**Apr 1 '24**	**Jul 28 '20**	**Apr 1 '24**	**0 days**			
1012	1012	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	1029FF,103		
1013	1013	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	1031FF		
1014	1014	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			
1015	**1015**	**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**			
1016	**1016**	**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**			
1017	1017	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		1018	
1018	1018	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	1017	1019	
1019	1019	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	1018	1031,1034	
1020	**1020**	**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**			
1021	1021	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		1022	
1022	1022	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	1021	1023	
1023	1023	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	1022	1037	
1024	**1024**	**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**			
1025	1025	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		1026	
1026	1026	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	1025	1027	
1027	1027	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	1026	1040	
1028	**1028**	**5.22.5**	**Design Submissions for Temporary Chemical Dosing System**	**275 days**	**Jul 28 '20**	**Apr 28 '21**	**Jul 28 '20**	**Apr 28 '21**	**0 days**			
1029	1029	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		1012FF	
1030	1030	5.22.5.2	CDS081-6 - Civil and dimensional requirements drawings for Temporary Chemical Dosing System	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		1012FF	
1031	1031	5.22.5.3	CDS029 - Detailed Design for Electrical Installations for Temporary Chemical System	90 edays	Jan 28 '21	Apr 28 '21	Jan 28 '21	Apr 28 '21	0 edays	1019	1013FF	
1032	**1032**	**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**			
1033	**1033**	**5.22.6.1**	**Chemical Storage Tanks, EQT025**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1034	1034	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	1019	1035	
1035	1035	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	1034,1043F		
1036	**1036**	**5.22.6.2**	**Chemical Dosing Pumps, EQT027**	**386 days**	**Feb 28 '21**	**Mar 20 '22**	**Feb 28 '21**	**Mar 20 '22**	**0 days**			
1037	1037	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	1023	1038	
1038	1038	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	1037,1043F		
1039	**1039**	**5.22.6.3**	**Chemical Transfer Pumps, EQT026**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1040	1040	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	1027	1041	
1041	1041	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	1040,1043F		
1042	**1042**	**5.22.7**	**Site Installation Work**	**479 days**	**Apr 9 '22**	**Aug 1 '23**	**Apr 9 '22**	**Nov 10 '23**	**101 days**			
1043	1043	5.22.7.1	Tentative Civil Handover Date, Temporary Chemical Dosing (Rev. 5)	1 day	Sep 28 '22	Sep 28 '22	Sep 28 '22	Sep 28 '22	0 days	16	1035FF-60 ec	
1044	1044	5.22.7.2	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	1 day	Sep 28 '22	Sep 28 '22	Sep 28 '22	Sep 28 '22	0 days	16		
1045	**1045**	**5.22.7.3**	**Commencement of E&M Installation at Temporary Chemical Dosing Syster**	**209 days**	**Apr 9 '22**	**Nov 5 '22**	**Apr 9 '22**	**Aug 22 '23**	**290 days**			
1046	1046	5.22.7.3.1	Mechanical Installations for E&M Equip. for Chemical Dosing System	179.63 edays	Apr 9 '22	Oct 6 '22	Apr 9 '22	Aug 22 '23	30 edays	16	1048	ME - D x 2~4 n
1047	1047	5.22.7.3.2	Electrical Installations for E&M Equip. for Chemical Dosing System	179.63 edays	May 9 '22	Nov 5 '22	May 9 '22	Aug 22 '23	0 edays	16	1048	EE - A x 4~6 m
1048	1048	5.22.7.4	Site Acceptance Test for E&M Equip for Chemical Dosing System	30 edays	Nov 5 '22	Dec 5 '22	Aug 22 '23	Sep 21 '23	0 edays	1046,1047	1049	
1049	1049	5.22.7.5	System Commissioning for E&M Equip for Chemical Dosing System	30 edays	Dec 5 '22	Jan 4 '23	Sep 21 '23	Oct 21 '23	0 edays	1048	1050	
1050	1050	5.22.7.6	Risk Allowances for Completion of Processing Plant at Chemical Dosing Syste	7 edays	Jan 4 '23	Jan 11 '23	Oct 21 '23	Oct 28 '23	290 eda...	1049	1393	
1051	**1051**	**5.22.7.7**	**Building Services Installations at Temp. Chemical Dosing System areas**	**180 days**	**May 15 '23**	**Nov 10 '23**	**May 4 '23**	**Nov 10 '23**	**0 days**			
1052	1052	5.22.7.7.1	Lighting and Power Distribution System, Temp. Chem	90 days	May 15 '23	Aug 12 '23	May 4 '23	Aug 1 '23	0 days	19	1056	BS - A x 4~6 m
1053	1053	5.22.7.7.2	Fire Services Installation, DG Stores, Temp. Chem	90 days	May 15 '23	Aug 12 '23	May 4 '23	Aug 1 '23	0 days	19	1349,1350,1	FS - A x 4~6 m
1054	1054	5.22.7.7.3	Lightning Protection System, Temp. Chem	30 days	May 15 '23	Jun 13 '23	May 15 '23	Jun 13 '23	0 days	19		EE - D x 4~6 m
1055	1055	5.22.7.7.4	Mechanical Ventilation System, Temp. Chem	14 days	May 15 '23	May 28 '23	Jul 19 '23	Aug 1 '23	65 days	19	1056	MVAC - A x 4~
1056	1056	5.22.7.7.5	Testing and Commissioning of Building Services Installations, Temp. Chem	90 days	Aug 13 '23	Nov 10 '23	Aug 1 '23	Nov 10 '23	0 days	1052,1053,1		BS - C x 2~4 m
1057	**1057**	**5.23**	**Emergency Generator House, Portion B7 & B-7B (PS 6B.6.6)**	**1279 days**	**Oct 1 '20**	**Apr 1 '24**	**Oct 1 '20**	**Apr 1 '24**	**0 days**	**168**		
1058	1058	5.23.1	Planned Key Date Completion Date - KD1B, Emergency Generator House	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1062FF		
1059	1059	5.23.2	Planned Sectional Completion Date - Section 1, Emergency Generator House	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1063FF,106		
1060	1060	5.23.3	Planned Sectional Completion Date - Section 2, Emergency Generator House	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days	1077FF		
1061	**1061**	**5.23.4**	**Design Submissions for Emergency Generator Set**	**252 days**	**Oct 1 '20**	**Jun 10 '21**	**Oct 1 '20**	**Jun 10 '21**	**0 days**			
1062	1062	5.23.4.1	CDS081-10 - Civil and dimensional requirements drawings for Emergency Ge	90 days	Jan 1 '21	Mar 31 '21	Jan 1 '21	Mar 31 '21	0 days		1058FF	
1063	1063	5.23.4.2	CDS061 - Detailed Design for Emergency Generator Set	150 edays	Oct 1 '20	Feb 28 '21	Oct 1 '20	Feb 28 '21	0 edays		1059FF	



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

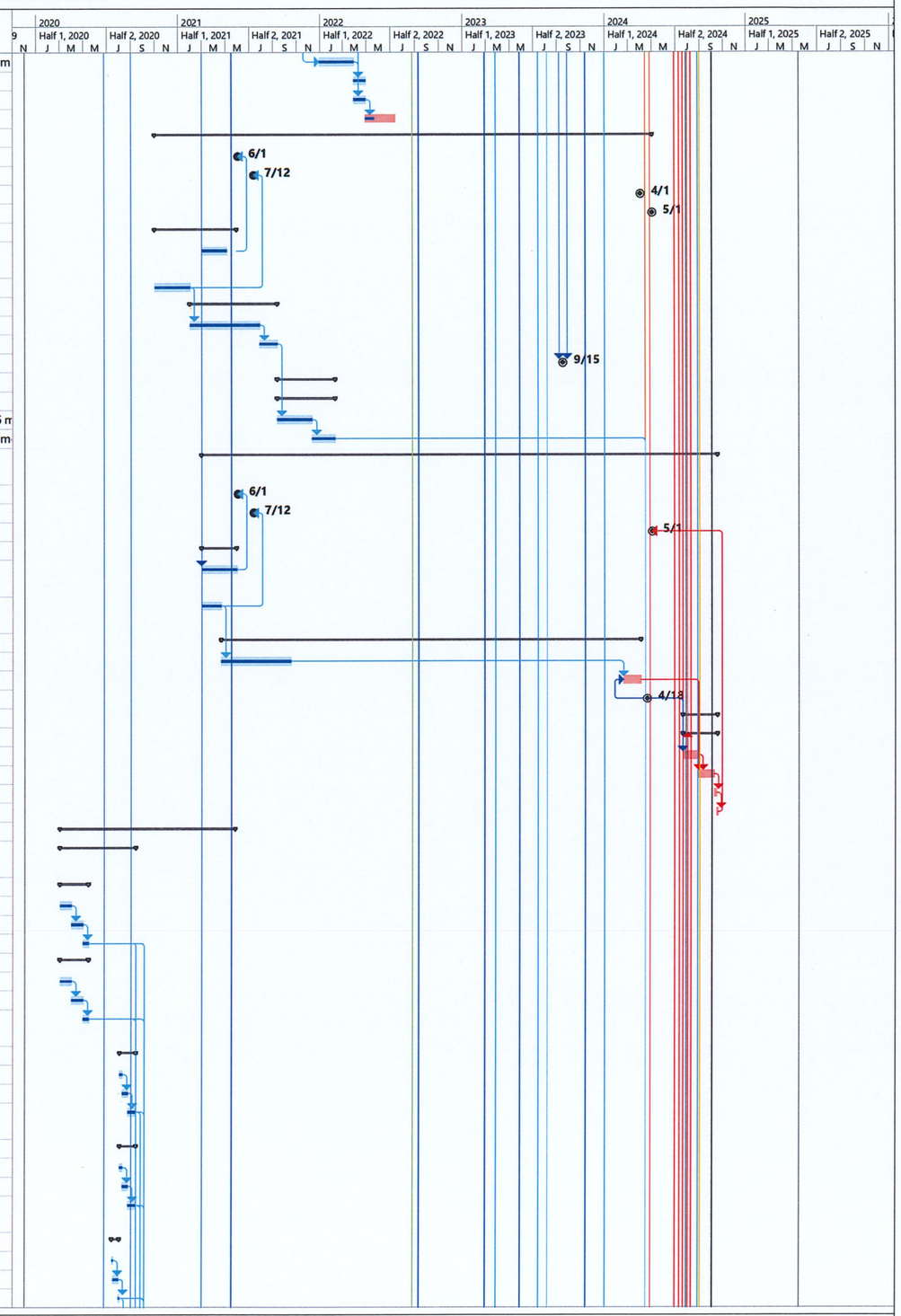
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1064	1064	5.23.4.3	CDS034-6 - Detailed Design for Electrical Installations BS at Emergency Generator House, FS and Sprinkler Pump Room, Street Fire Hydrant Pump	90 edays	Mar 12 '21	Jun 10 '21	Mar 12 '21	Jun 10 '21	0 edays	156	1066,1071,1(	
1065	**1065**	**5.23.5**	**Manufacturing and Delivery of Plant & Materials**	**285 days**	**Jun 10 '21**	**Mar 21 '22**	**Jun 10 '21**	**Mar 21 '22**	**0 days**			
1066	1066	5.23.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Jun 10 '21	Feb 4 '22	Jun 10 '21	Feb 4 '22	0 days	1064	1067	
1067	1067	5.23.5.2	Shipping and Delivery of Plant to Site	45 days	Feb 5 '22	Mar 21 '22	Feb 5 '22	Mar 21 '22	0 days	1066,1069F	1072	
1068	**1068**	**5.23.6**	**Site Installation Work**	**760 days**	**Dec 1 '21**	**Dec 30 '23**	**Dec 1 '21**	**Apr 1 '24**	**93 days**			
1069	1069	5.23.6.1	Tentative Civil Handover Date, Emergency Generator House (Rev. 5)	1 day	Aug 29 '22	Aug 29 '22	Aug 29 '22	Aug 29 '22	0 days	17	1067FF-60 ec	
1070	**1070**	**5.23.6.2**	**Commencement of E&M Installation at Emergency Generator House**	**760 days**	**Dec 1 '21**	**Dec 30 '23**	**Dec 1 '21**	**Apr 1 '24**	**93 days**	**17**		
1071	1071	5.23.6.2.1	Application for EPD's Approval for Installation of Diesel Engine Generator	60 days	Dec 1 '21	Jan 29 '22	Dec 1 '21	Jan 29 '22	0 days	1064	1072	
1072	1072	5.23.6.2.2	Installation and SAT of Emergency Power Generator and associated work,	60 days	Nov 1 '23	Dec 30 '23	Nov 1 '23	Dec 30 '23	0 days	1071,1067		GS - A x 4 men
1073	**1073**	**5.23.6.2.3**	**Building Services Installation at Emergency Generator House**	**30 days**	**Aug 29 '22**	**Sep 27 '22**	**Aug 29 '22**	**Mar 25 '24**	**0 days**			
1074	1074	5.23.6.2.3.:	Fire Services Installation, GH	30 days	Aug 29 '22	Sep 27 '22	Aug 29 '22	Sep 27 '22	0 days	17		FS - A x 4~6 m
1075	1075	5.23.6.2.3.:	Mechanical Ventilation System, GH	14 days	Aug 29 '22	Sep 11 '22	Aug 29 '22	Sep 11 '22	0 days	17		MVAC - A x 4~
1076	1076	5.23.6.2.3.:	Lightning Protection System, GH	15 days	Aug 29 '22	Sep 12 '22	Mar 11 '24	Mar 25 '24	0 days	17	1077	EE - D x 4~6 m
1077	1077	5.23.6.2.4	Testing and Commissioning of Building Services Installation, GH	7 days	Sep 13 '22	Sep 19 '22	Mar 26 '24	Apr 1 '24	560 days	1076	1060FF	BS - A x 4~6 m
1078	**1078**	**5.24**	**Deodorization System, DOU 1, Portion B7 & B-7B (PS 6B.2.6)**	**1583 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
1079	1079	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	1092FF,109:		
1080	1080	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	1094FF		
1081	1081	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			
1082	**1082**	**5.24.4**	**Selection of Plant and Materials**	**485 days**	**Dec 2 '19**	**Mar 30 '21**	**Dec 2 '19**	**Mar 30 '21**	**0 days**			
1083	**1083**	**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**			
1084	1084	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		1085	
1085	1085	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	1084	1086	
1086	1086	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	1085	1094	
1087	**1087**	**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**			
1088	1088	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		1089	
1089	1089	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	1088	1090	
1090	1090	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	1089	1094	
1091	**1091**	**5.24.5**	**Design Submissions for DOU No. 1**	**359 days**	**Jul 15 '20**	**Jul 8 '21**	**Jul 15 '20**	**Jul 8 '21**	**0 days**			
1092	1092	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		1079FF	
1093	1093	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		1079FF	
1094	1094	5.24.5.3	CDS007-1 - Detailed Design for Deodorisation System, DOU No. 1	100 edays	Mar 30 '21	Jul 8 '21	Mar 30 '21	Jul 8 '21	0 edays	1086,1090	1097,1100,1(	
1095	**1095**	**5.24.6**	**Manufacturing and Delivery of Plant & Materials**	**679 days**	**Jul 9 '21**	**May 18 '23**	**Jul 9 '21**	**May 10 '23**	**0 days**			
1096	**1096**	**5.24.6.1**	**DOU 1**	**679 days**	**Jul 9 '21**	**May 18 '23**	**Jul 9 '21**	**May 10 '23**	**0 days**			
1097	1097	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	1094	1098	
1098	1098	5.24.6.1.2	Shipping and Delivery of Plant to site	45 days	Mar 20 '22	May 18 '23	Mar 20 '22	May 10 '23	0 days	1097,1103S	1106	
1099	**1099**	**5.24.6.2**	**FRP Air Ductwork**	**679 days**	**Jul 9 '21**	**May 18 '23**	**Jul 9 '21**	**May 10 '23**	**0 days**			
1100	1100	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	1094	1101	
1101	1101	5.24.6.2.2	Shipping and Delivery of Plant to Site	45 days	Mar 20 '22	May 18 '23	Mar 20 '22	May 10 '23	0 days	1100,1103S	1106	
1102	**1102**	**5.24.7**	**Site Installation Work**	**171 days**	**May 31 '23**	**Nov 18 '23**	**May 10 '23**	**Oct 28 '23**	**0 days**			
1103	1103	5.24.7.1	Tentative Civil Handover, DOU 1 (Rev. 5)	1 day	Jul 15 '23	Jul 15 '23	Jun 23 '23	Jun 23 '23	0 days	20	1106FF+45 d	
1104	1104	5.24.7.2	Tentative Civil Handover Date, underground air pipework for DOU 1 (by oth	1 day	Jul 15 '23	Jul 15 '23	Jun 23 '23	Jun 23 '23	0 days	20	1106FF+45 d	
1105	**1105**	**5.24.7.3**	**Commencement of E&M Installation at DOU 1**	**171 days**	**May 31 '23**	**Nov 18 '23**	**May 10 '23**	**Oct 28 '23**	**0 days**			
1106	1106	5.24.7.3.1	Mechanical Installations for DOU 1	90 edays	May 31 '23	Aug 29 '23	May 10 '23	Aug 8 '23	0 edays	1104FF+45 (	1107SS+30 e(	ME - F x 4~6 m
1107	1107	5.24.7.3.2	Electrical Installations for DOU 1	90 edays	Jun 30 '23	Sep 28 '23	Jun 9 '23	Sep 7 '23	0 edays	1106SS+30 (	1109,1108	EE - C x 4~6 m
1108	1108	5.24.7.3.3	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.	30 days	Sep 29 '23	Oct 28 '23	Sep 29 '23	Oct 28 '23	0 days	1106,1107		
1109	1109	5.24.7.3.4	Site Acceptance Test for DOU1	30 edays	Sep 28 '23	Oct 28 '23	Sep 7 '23	Oct 7 '23	0 edays	1106,1107	1110	
1110	1110	5.24.7.3.5	System Commissioning for DOU 1	21 edays	Oct 28 '23	Nov 18 '23	Oct 7 '23	Oct 28 '23	0 edays	1109	1393	
1111	**1111**	**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**			
1112	1112	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	1116FF		
1113	1113	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	1117FF		
1114	1114	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			
1115	**1115**	**5.25.4**	**Design Submissions for DOU No. 3A**	**234 days**	**Aug 28 '20**	**Apr 19 '21**	**Aug 28 '20**	**Apr 19 '21**	**0 days**			
1116	1116	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		1112FF	
1117	1117	5.25.4.2	CDS007-3 - Detailed Design for Deodorisation System, DOU No. 3A	200 edays	Oct 1 '20	Apr 19 '21	Oct 1 '20	Apr 19 '21	0 edays		1113FF,1120,	
1118	**1118**	**5.25.5**	**Manufacturing and Delivery of Plant & Materials**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Nov 30 '21**	**0 days**			
1119	**1119**	**5.25.5.1**	**DOU 3A**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Nov 30 '21**	**0 days**			
1120	1120	5.25.5.1.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Apr 19 '21	Oct 16 '21	Apr 19 '21	Oct 16 '21	0 edays	1117	1121	
1121	1121	5.25.5.1.2	Shipping and Delivery of Plant to Site	45 edays	Oct 16 '21	Nov 30 '21	Oct 16 '21	Nov 30 '21	0 edays	1120		
1122	**1122**	**5.25.5.2**	**FRP Air Ductwork**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Nov 30 '21**	**0 days**			
1123	1123	5.25.5.2.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Apr 19 '21	Oct 16 '21	Apr 19 '21	Oct 16 '21	0 edays	1117	1124	
1124	1124	5.25.5.2.2	Shipping and Delivery of Plant to Site	45 edays	Oct 16 '21	Nov 30 '21	Oct 16 '21	Nov 30 '21	0 edays	1123		
1125	1125	5.25.6	Tentative Civil Handover, DOU 3A (Rev. 5)	1 day	Jun 24 '22	Jun 24 '22	Jun 24 '22	Jun 24 '22	0 days	16	1128	
1126	**1126**	**5.25.7**	**Site Installation Work**	**226 days**	**Nov 30 '21**	**Jul 14 '22**	**Nov 30 '21**	**Jul 14 '22**	**0 days**			
1127	**1127**	**5.25.7.1**	**Commencement of E&M Installation at DOU 3A**	**150 days**	**Nov 30 '21**	**Apr 28 '22**	**Nov 30 '21**	**Apr 28 '22**	**0 days**			
1128	1128	5.25.7.1.1	Mechanical Installations for DOU 3A	120 edays	Nov 30 '21	Mar 30 '22	Nov 30 '21	Mar 30 '22	0 edays	1125	1129SS+30 e(	ME - F x 4~6 m



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

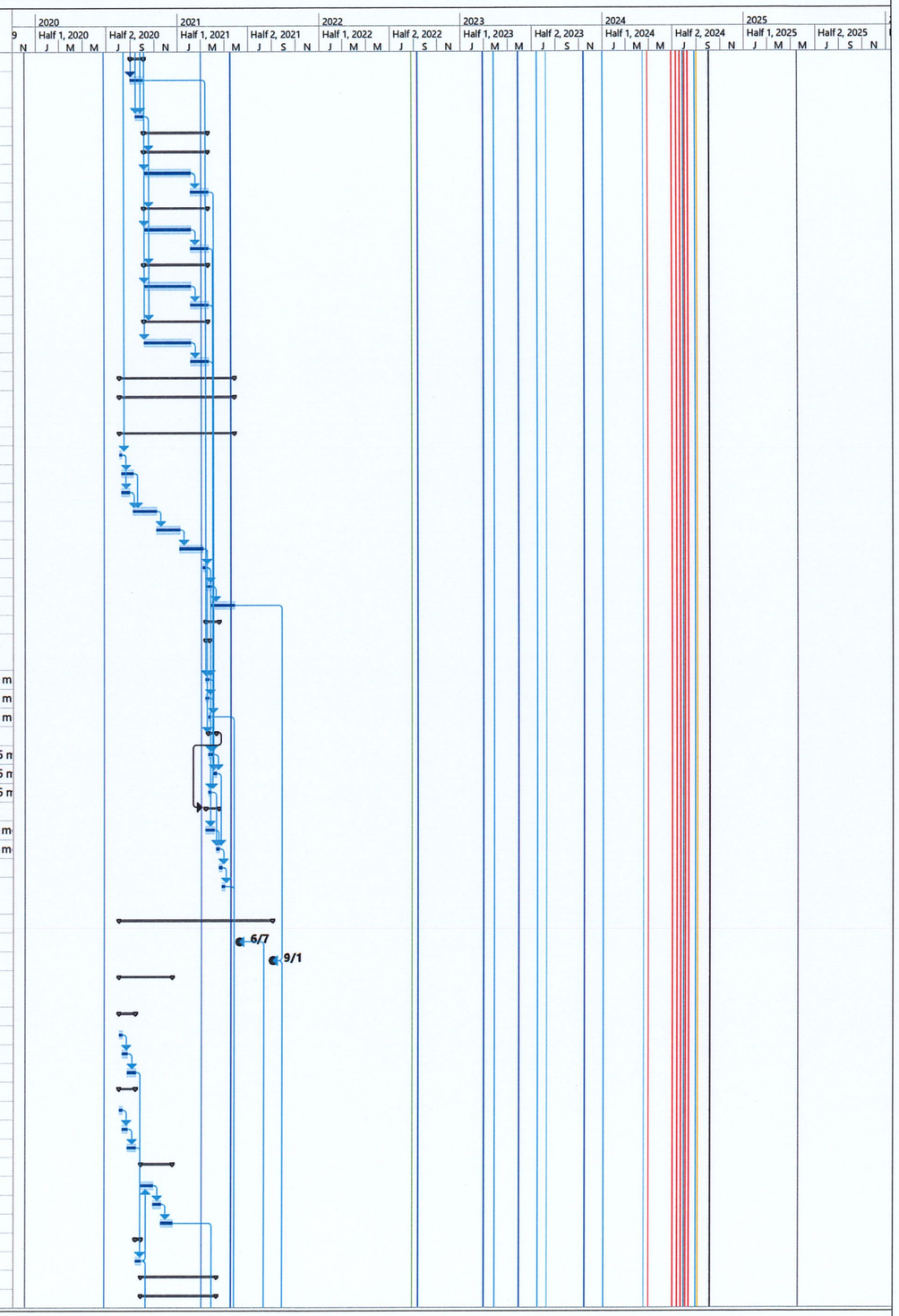
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1129	1129	5.25.7.1.2	Electrical Installations for DOU 3A	90 edays	Dec 30 '21	Mar 30 '22	Dec 30 '21	Mar 30 '22	0 edays	1128SS+30 (	1131,1130	EE - D x 4~6 m
1130	1130	5.25.7.1.3	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.	30 days	Mar 30 '22	Apr 28 '22	Mar 30 '22	Apr 28 '22	0 days	1128,1129		
1131	1131	5.25.7.2	Site Acceptance Test for E&M Equip for DOU 3A	30 edays	Mar 30 '22	Apr 29 '22	Mar 30 '22	Apr 29 '22	0 edays	1128,1129	1132	
1132	1132	5.25.7.3	System Commissioning Test for DOU 3A	76 edays	Apr 29 '22	Jul 14 '22	Apr 29 '22	Jul 14 '22	0 edays	1131		
1133	**1133**	**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**			
1134	1134	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	1139FF		
1135	1135	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	1140FF		
1136	1136	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			
1137	1137	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			
1138	**1138**	**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**			
1139	1139	5.26.5.1	CDS081-9 - Civil and dimensional requirements drawings for Valve and Flowmeter Chambers	90 days	Mar 1 '21	May 29 '21	Mar 1 '21	May 29 '21	0 days		1134FF	
1140	1140	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		1142,1135FF	
1141	**1141**	**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**			
1142	1142	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	1140	1143	
1143	1143	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	1142	1147	
1144	1144	5.26.7	Tentative Civil Handover, Chambers (Rev. 5)	1 day	Sep 15 '23	Sep 15 '23	Sep 15 '23	Sep 15 '23	0 days	21,22		
1145	**1145**	**5.26.8**	**Site Installation Work**	**150 days**	**Sep 12 '21**	**Feb 8 '22**	**Sep 12 '21**	**Feb 8 '22**	**0 days**			
1146	**1146**	**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**			
1147	1147	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	1143	1148	ME - C x 4~6 m
1148	1148	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	1147	1393	EE - A x 4~6 m
1149	**1149**	**5.27**	**Underground Pipework, Modification and Connection Works, Portion B-9B (PS 6B.2.22)**	**1327 days**	**Mar 1 '21**	**Oct 17 '24**	**Mar 1 '21**	**May 1 '24**	**0 days**			
1150	1150	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	1154FF		
1151	1151	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	1155FF		
1152	1152	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	1165FF		
1153	**1153**	**5.27.4**	**Design Submissions**	**90 days**	**Mar 1 '21**	**May 30 '21**	**Mar 1 '21**	**May 30 '21**	**0 days**			
1154	1154	5.27.4.1	CDS015 - Detailed Design for Underground Pipework Modification and Connection with the existing Bioreactor 1, 3 & 4 (Rev. 8)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays	194	1150FF	
1155	1155	5.27.4.2	CDS016 - Detailed Design for Temporary Pumping System for maintaining the existing bioreactors 1, 3 and 4 operation (Rev. 8)	50 edays	Mar 1 '21	Apr 20 '21	Mar 1 '21	Apr 20 '21	0 edays		1157,1151FF	
1156	**1156**	**5.27.5**	**Manufacturing and Delivery of Plant & Materials**	**1079 days**	**Apr 20 '21**	**Apr 2 '24**	**Apr 20 '21**	**Mar 12 '24**	**0 days**			
1157	1157	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	1155	1158	
1158	1158	5.27.5.2	Shipping and Delivery of Plant to Site	45 days	Feb 18 '24	Apr 2 '24	Jan 28 '24	Mar 12 '24	0 days	1157,1159S	1163	
1159	1159	5.27.6	Tentative Civil Handover, Road (Rev. 5)	1 day	Apr 18 '24	Apr 18 '24	Feb 1 '24	Feb 1 '24	0 days		1158SS-60 ec	
1160	**1160**	**5.27.7**	**Site Installation**	**90 days**	**Jul 20 '24**	**Oct 17 '24**	**Feb 2 '24**	**May 1 '24**	**0 days**			
1161	**1161**	**5.27.7.1**	**Commencement of underground pipework modification and connection works**	**90 days**	**Jul 20 '24**	**Oct 17 '24**	**Feb 2 '24**	**May 1 '24**	**0 days**	**1395**		
1162	1162	5.27.7.1.1	Temporary Flow Diversion and Road Excavation Work	40 days	Jul 20 '24	Aug 28 '24	Feb 2 '24	Mar 12 '24	0 days	1159	1163	
1163	1163	5.27.7.1.2	Pipe Laying and connection works	40 days	Aug 29 '24	Oct 7 '24	Mar 13 '24	Apr 21 '24	0 days	1162,1158	1164	
1164	1164	5.27.7.1.3	Pressure Tests	7 days	Oct 8 '24	Oct 14 '24	Apr 22 '24	Apr 28 '24	0 days	1163	1165	
1165	1165	5.27.7.1.4	Make Good	3 days	Oct 15 '24	Oct 17 '24	Apr 29 '24	May 1 '24	0 days	1164	1152FF	
1166	**1166**	**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**			
1167	**1167**	**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**			
1168	**1168**	**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**			
1169	1169	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		1170	
1170	1170	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	1169	1171	
1171	1171	5.28.1.1.3	Acceptance of conforming quotation and acceptance for Manufacture (Complete	14 days	Apr 30 '20	May 13 '20	Apr 30 '20	May 13 '20	0 days	1170	1190,1193	
1172	**1172**	**5.28.1.2**	**Mis - Instrumentations**	**73 days**	**Mar 2 '20**	**May 13 '20**	**Mar 2 '20**	**May 13 '20**	**0 days**			
1173	1173	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		1174	
1174	1174	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	1173	1175	
1175	1175	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	1174	1190,1196	
1176	**1176**	**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**			
1177	1177	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		1178	
1178	1178	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	1177	1179	
1179	1179	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	1178	1190,1199	
1180	**1180**	**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**			
1181	1181	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		1182	
1182	1182	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	1181	1183	
1183	1183	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	1182	1190,1202	
1184	**1184**	**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**			
1185	1185	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		1186	
1186	1186	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	1185	1187	
1187	1187	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	1186	1193,1196,1	



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1188	**1188**	**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**			
1189	1189	5.28.2.1	CDS050-5 - Detailed Design for Lifting Appliances - Temp. Filtrate Eq. System, Existing Sludge Press House	30 edays	Sep 1 '20	Oct 1 '20	Sep 1 '20	Oct 1 '20	0 edays	131	1218	
1190	1190	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	1171,1175,1	1192,1198,1	
1191	**1191**	**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**			
1192	**1192**	**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**	**1190**		
1193	1193	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	1187,1171	1194	
1194	1194	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	1193	1223	
1195	**1195**	**5.28.3.2**	**Instrumentations**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1190**		
1196	1196	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	1187,1175	1197	
1197	1197	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	1196	1224	
1198	**1198**	**5.28.3.3**	**Pipework**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1190**		
1199	1199	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	1187,1179	1200	
1200	1200	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	1199	1222	
1201	**1201**	**5.28.3.4**	**Valve**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1190**		
1202	1202	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	1187,1183	1203	
1203	1203	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	1202	1222	
1204	**1204**	**5.28.4**	**Site Installation Work**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1205	**1205**	**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**			
1206	**1206**	**5.28.4.1.1**	**Civil Construction Work**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1207	1207	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	1187	1208,1209	
1208	1208	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	1207	1210	
1209	1209	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	1207	1210	
1210	1210	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	1209,1208	1211	
1211	1211	5.28.4.1.1.	Grouting Works	60 days	Nov 5 '20	Jan 3 '21	Nov 5 '20	Jan 3 '21	0 days	1210	1212	
1212	1212	5.28.4.1.1.	RC structure works including cast-in items	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days	1211	1221,1218,1	
1213	1213	5.28.4.1.1.	Removal Formwork and Flasework	8 days	Mar 5 '21	Mar 12 '21	Mar 5 '21	Mar 12 '21	0 days	1212	1218,1219,1	
1214	1214	5.28.4.1.1.	Waterproofing	14 days	Mar 13 '21	Mar 26 '21	Mar 13 '21	Mar 26 '21	0 days	1213	1215	
1215	1215	5.28.4.1.1.	Other architectual works and finishing works	60 days	Mar 27 '21	May 25 '21	Mar 27 '21	May 25 '21	0 days	1214	1232FF	
1216	**1216**	**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**			
1217	**1217**	**5.28.4.1.2.**	**Installation of Lifting Appliances at Temporary Filtrate Lifting Well and Eq. Tank**	**10 days**	**Mar 13 '21**	**Mar 22 '21**	**Mar 13 '21**	**Mar 22 '21**	**0 days**			
1218	1218	5.28.4.1.2.	GF MR LA-09-01 SWL 1t	7 days	Mar 13 '21	Mar 19 '21	Mar 13 '21	Mar 19 '21	0 days	1212,1189,1	1220	LA - A x 4~6 m
1219	1219	5.28.4.1.2.	GF MR LA-09-02 SWL 1t	7 days	Mar 13 '21	Mar 19 '21	Mar 13 '21	Mar 19 '21	0 days	1213	1220	LA - A x 4~6 m
1220	1220	5.28.4.1.2.	Site Acceptance test and loading test of LA	3 days	Mar 20 '21	Mar 22 '21	Mar 20 '21	Mar 22 '21	0 days	1218,1219	1255FF	LA - A x 4~6 m
1221	**1221**	**5.28.4.1.2.**	**Mechanical Installations for Temp. Filtrate Lifting Well and Eq. Tank**	**21 days**	**Mar 19 '21**	**Apr 8 '21**	**Mar 19 '21**	**Apr 8 '21**	**0 days**	**1212**	**1225FS-30 da**	
1222	1222	5.28.4.1.2.	Installation of pipework, chemical pipework and valves, EQT036	14 days	Mar 19 '21	Apr 1 '21	Mar 19 '21	Apr 1 '21	0 days	1213,1200,1	1223	ME - A x 4~6 m
1223	1223	5.28.4.1.2.	Installation of pumps	7 days	Apr 2 '21	Apr 8 '21	Apr 2 '21	Apr 8 '21	0 days	1222,1194	1227	ME - A x 4~6 m
1224	1224	5.28.4.1.2.	Installation of instrumentations, EQT035-3	7 days	Mar 19 '21	Mar 25 '21	Mar 19 '21	Mar 25 '21	0 days	1213,1197	1227	ME - A x 4~6 m
1225	**1225**	**5.28.4.1.2.**	**Electrical Installations for Temp. Filtrate Lifting Well and Eq. Tank**	**34 days**	**Mar 13 '21**	**Apr 15 '21**	**Mar 13 '21**	**Apr 15 '21**	**0 days**	**1221FS-30 d**		
1226	1226	5.28.4.1.2.	Installation of cable trays and cable containments	21 days	Mar 13 '21	Apr 2 '21	Mar 13 '21	Apr 2 '21	0 days	1213	1227	EE - A x 4~6 m
1227	1227	5.28.4.1.2.	Cables laying and terminations	7 days	Apr 9 '21	Apr 15 '21	Apr 9 '21	Apr 15 '21	0 days	1226,1223,1	1228	EE - A x 4~6 m
1228	1228	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	1227	1229	
1229	1229	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	1228	1255FF	
1230	**1230**	**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**			
1231	1231	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	1298FF		
1232	1232	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	1215FF,132		
1233	**1233**	**5.29.3**	**Selection of Suppliers for major plant and materials and Subcontractor for PST No. 4 and No. 6**	**137 days**	**Aug 1 '20**	**Dec 15 '20**	**Aug 1 '20**	**Dec 15 '20**	**0 days**			
1234	**1234**	**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**			
1235	1235	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		1236	
1236	1236	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	1235	1237	
1237	1237	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	1236	1247	
1238	**1238**	**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**			
1239	1239	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		1240	
1240	1240	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	1239	1241	
1241	1241	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	1240	1247	
1242	**1242**	**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**			
1243	1243	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	1247	1244	
1244	1244	5.29.3.3.2	Invitation to tender	21 days	Oct 26 '20	Nov 15 '20	Oct 26 '20	Nov 15 '20	0 days	1243	1245	
1245	1245	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	1244	1262	
1246	**1246**	**5.29.4**	**Design Submissions**	**14 days**	**Sep 12 '20**	**Sep 25 '20**	**Sep 12 '20**	**Sep 25 '20**	**0 days**			
1247	1247	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	1237,1241	1250,1253,1	
1248	**1248**	**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**			
1249	**1249**	**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**			

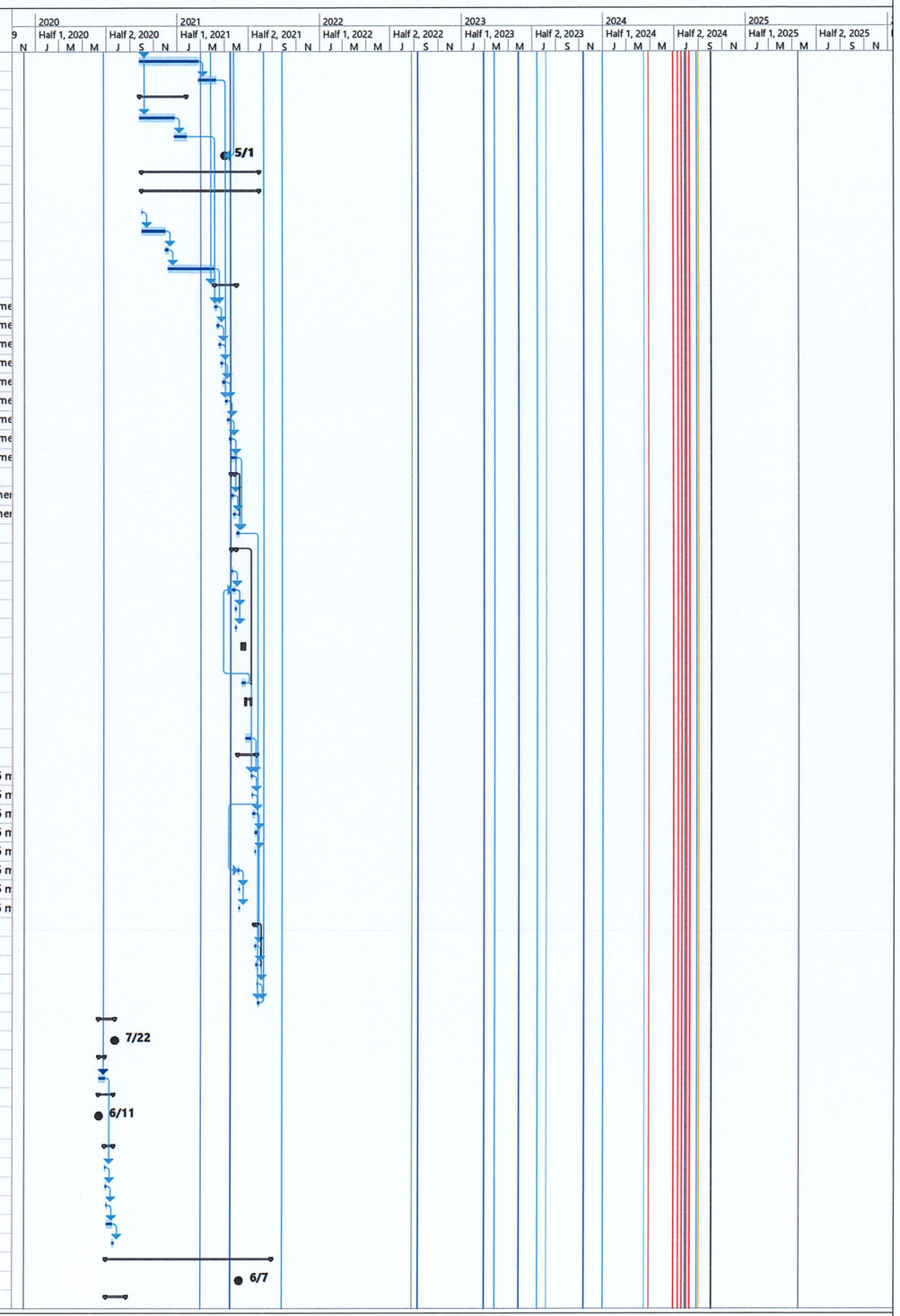


Drainage Services Department
The Government of the Hong Kong Special Administrative Region

Proposed Work Programme for DE/2018/04
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

AECOM

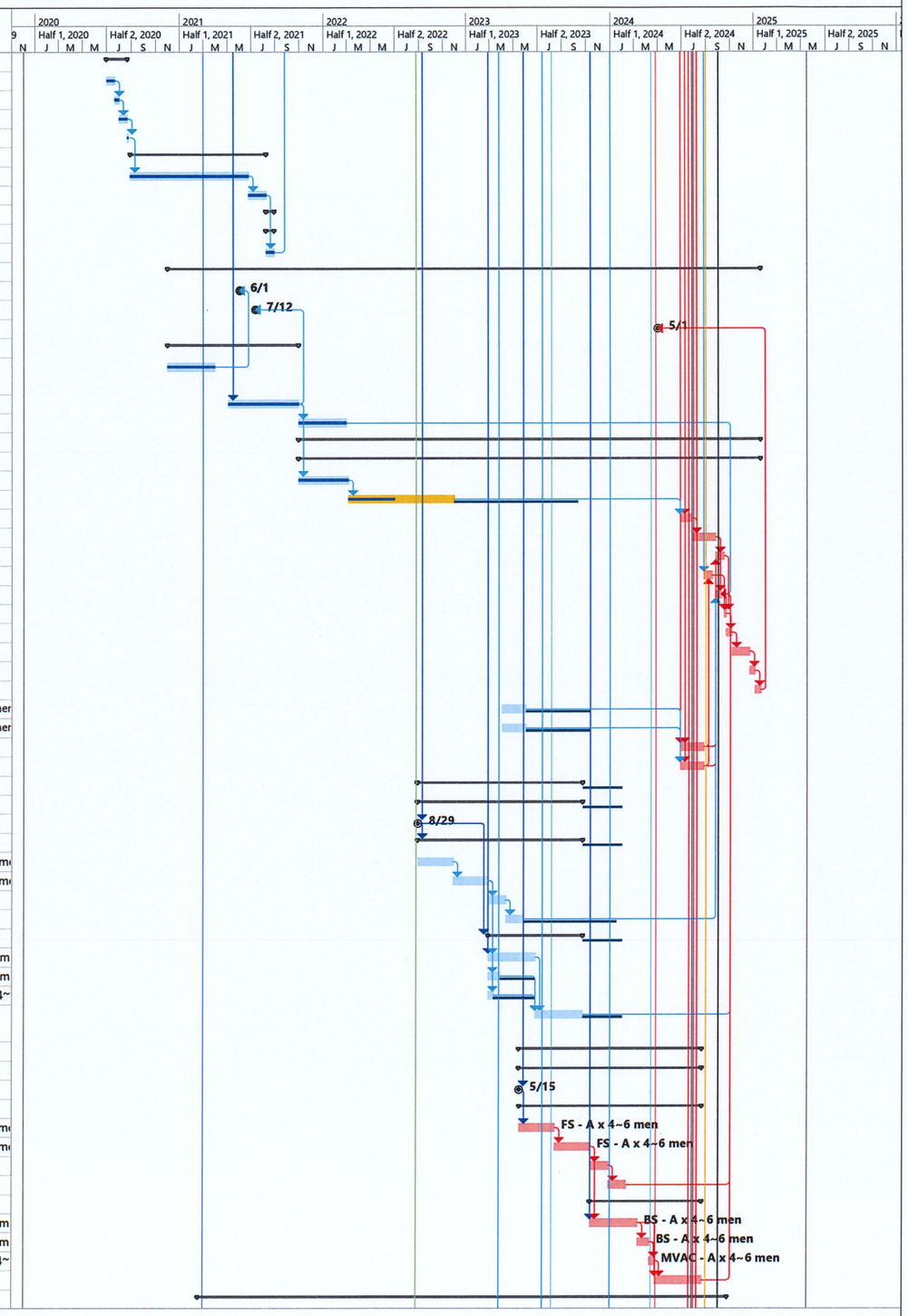
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1250	1250	5.29.5.1.1	Manufacturing and Factory Acceptance Test of Plant	150 days	Sep 26 '20	Feb 22 '21	Sep 26 '20	Feb 22 '21	0 days	1247	1251	
1251	1251	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	1250	1268	
1252	**1252**	**5.29.5.2**	**Pipework**	**120 days**	**Sep 26 '20**	**Jan 23 '21**	**Sep 26 '20**	**Jan 23 '21**	**0 days**			
1253	1253	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	1247	1254	
1254	1254	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	1253	1263	
1255	1255	5.29.6	Tentative Civil Handover, Filtrate Lifting Well and Eq. Tank (Completion of worl	1 day	May 1 '21	May 1 '21	May 1 '21	May 1 '21	0 days	1229FF,122(		
1256	**1256**	**5.29.7**	**Site Installation Work**	**300 days**	**Oct 1 '20**	**Jul 27 '21**	**Oct 1 '20**	**Jul 27 '21**	**0 days**			
1257	**1257**	**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**			
1258	1258	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		1259	
1259	1259	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	1258	1260	
1260	1260	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	1259	1261	
1261	1261	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	1260	1263	
1262	**1262**	**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**	**1245**		
1263	1263	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	1261,1254	1264	ME - A x 4~6 me
1264	1264	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	1263	1265	ME - A x 4~6 me
1265	1265	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	1264	1266	ME - A x 4~6 me
1266	1266	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	1265	1267	ME - A x 4~6 me
1267	1267	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	1266	1268	ME - A x 4~6 me
1268	1268	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	1267,1251	1269	ME - A x 4~6 me
1269	1269	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	1268	1270	ME - A x 4~6 me
1270	1270	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	1269	1271,1273	ME - A x 4~6 me
1271	1271	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	1270	1275	ME - A x 4~6 me
1272	**1272**	**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**		**1275**	
1273	1273	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	1270	1274	EE - A x 4~6 mer
1274	1274	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	1273	1275	EE - A x 4~6 mer
1275	1275	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	1272,1271,12	1298	
1276	**1276**	**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**		**1286**	
1277	1277	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		1278	
1278	1278	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	1277,1282	1279,1280	
1279	1279	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	1278		
1280	1280	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	1278		
1281	**1281**	**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**			
1282	1282	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		1278,1286	
1283	**1283**	**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**			
1284	1284	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		1286	
1285	**1285**	**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**			
1286	1286	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	1276,1282,1	1287	ME - A x 4~6 m
1287	1287	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	1286	1288,1291	ME - A x 4~6 m
1288	1288	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	1287	1295,1289,1	ME - A x 4~6 m
1289	1289	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	1288		ME - A x 4~6 m
1290	1290	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	1288		ME - A x 4~6 m
1291	1291	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	1287	1292,1293	ME - A x 4~6 m
1292	1292	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	1291		ME - A x 4~6 m
1293	1293	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	1291		ME - A x 4~6 m
1294	**1294**	**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**		**1297**	
1295	1295	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	1288	1296	
1296	1296	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	1295	1297	
1297	1297	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	1294,1296	1298	
1298	1298	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	1275,1297	1231FF	
1299	**1299**	**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**			
1300	1300	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			
1301	**1301**	**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**			
1302	1302	5.30.2.1	Design submissions for E&M installation works of existing power house	15 days	Jun 12 '20	Jun 26 '20	Jun 12 '20	Jun 26 '20	0 days	214	1306	
1303	**1303**	**5.30.3**	**Site Installation Work**	**39 days**	**Jun 11 '20**	**Jul 19 '20**	**Jun 11 '20**	**Jul 19 '20**	**0 days**			
1304	1304	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			
1305	**1305**	**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**			
1306	1306	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	1302	1307	
1307	1307	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	1306	1308	
1308	1308	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	1307	1309	
1309	1309	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	1308	1310	
1310	1310	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	1309		
1311	**1311**	**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**			
1312	1312	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			
1313	**1313**	**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**			



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

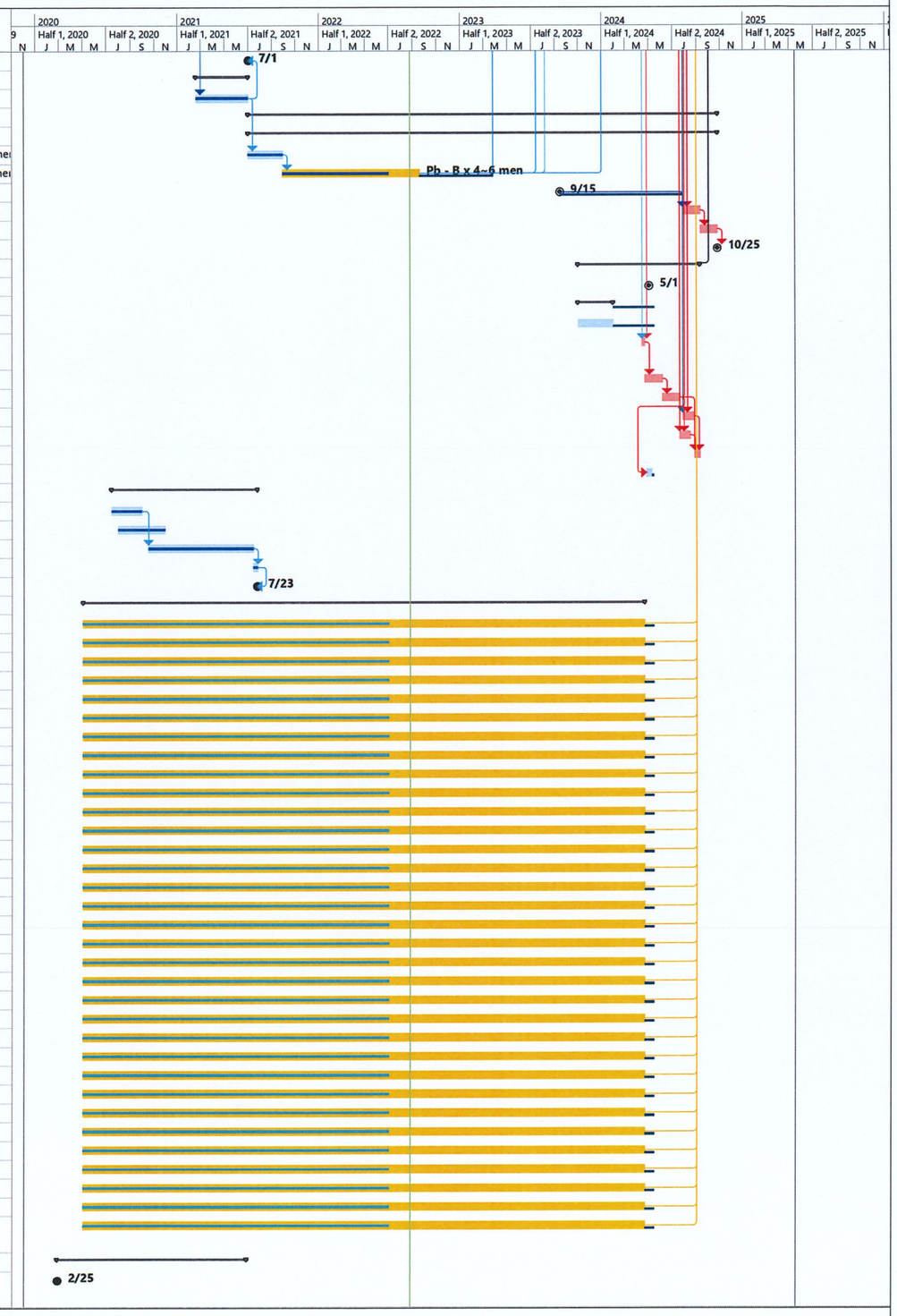
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1314	1314	5.31.2.1	**Mis - new replacement filter plates and provision of filter cloths, C11, ref. EQT038**	**52 days**	**Jul 1 '20**	**Aug 21 '20**	**Jul 1 '20**	**Aug 21 '20**	**0 days**			
1315	1315	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		1316	
1316	1316	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	1315	1317	
1317	1317	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	1316	1318	
1318	1318	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	1317	1320	
1319	1319	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**			
1320	1320	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	1318	1321	
1321	1321	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	1320	1324	
1322	1322	5.31.5	**Site Installation Work**	**21 days**	**Aug 9 '21**	**Aug 29 '21**	**Aug 9 '21**	**Aug 29 '21**	**0 days**			
1323	1323	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**			
1324	1324	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	1321	1232FF	
1325	1325	5.32	**Fire Services Installation (PS 6B.6.9)**	**1509 days**	**Dec 1 '20**	**Jan 17 '25**	**Dec 1 '20**	**May 1 '24**	**0 days**			
1326	1326	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	1330FF		
1327	1327	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	1331FF		
1328	1328	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	1346FF		
1329	1329	5.32.4	**Design Submissions for FSI**	**334 days**	**Dec 1 '20**	**Oct 30 '21**	**Dec 1 '20**	**Oct 30 '21**	**0 days**			
1330	1330	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		1326FF	
1331	1331	5.32.4.2	CDS049 - Detailed Design for Fire Services include AFA, FS, FH, Sprinkler etc.	180 edays	May 3 '21	Oct 30 '21	May 3 '21	Oct 30 '21	0 edays	179	1335,1332,13	
1332	1332	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	1331	1341FF	
1333	1333	5.32.6	**Site Installation Work**	**1175 days**	**Oct 31 '21**	**Jan 17 '25**	**Oct 31 '21**	**May 1 '24**	**0 days**			
1334	1334	5.32.6.1	**Commencement of Fire Services Installation**	**1175 days**	**Oct 31 '21**	**Jan 17 '25**	**Oct 31 '21**	**May 1 '24**	**0 days**			
1335	1335	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	1331	1336	
1336	1336	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	1335	1337	
1337	1337	5.32.6.1.3	Submission of WWO46 for WSD's Inspection	30 days	Jun 28 '24	Jul 27 '24	Oct 11 '23	Nov 9 '23	0 days	1336,955,678	1338	
1338	1338	5.32.6.1.4	Obtain WWO46 Part V	60 days	Jul 28 '24	Sep 25 '24	Nov 10 '23	Jan 8 '24	0 days	1337	1341,1339	
1339	1339	5.32.6.1.5	FSD Inspection and Approval for MVAC	21 days	Sep 26 '24	Oct 16 '24	Jan 9 '24	Jan 29 '24	0 days	1349,1350,13	1342	
1340	1340	5.32.6.1.6	FSD Inspection and Approval for DG Stores	21 days	Aug 27 '24	Sep 16 '24	Jan 9 '24	Jan 29 '24	0 days	1349,1350,10	1342	
1341	1341	5.32.6.1.7	Submission of (FSI/314 & FSI/501) to FSD	14 days	Sep 26 '24	Oct 9 '24	Jan 16 '24	Jan 29 '24	0 days	1349,1350,13	1342	
1342	1342	5.32.6.1.8	Pre-inspection meeting with FSD	5 days	Oct 17 '24	Oct 21 '24	Jan 30 '24	Feb 3 '24	0 days	1341,1339,13	1343	
1343	1343	5.32.6.1.9	Initial Inspection with FSD	15 days	Oct 22 '24	Nov 5 '24	Feb 4 '24	Feb 18 '24	0 days	1342	1344	
1344	1344	5.32.6.1.10	Document Checking	45 days	Nov 6 '24	Dec 20 '24	Feb 19 '24	Apr 3 '24	0 days	1343	1345	
1345	1345	5.32.6.1.11	Re-inspections with FSD	14 days	Dec 21 '24	Jan 3 '25	Apr 4 '24	Apr 17 '24	0 days	1344	1346	
1346	1346	5.32.6.1.12	Issue of acceptance memo by FSD	14 days	Jan 4 '25	Jan 17 '25	Apr 18 '24	May 1 '24	0 days	1345	1328FF	
1347	1347	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		1350	FS - A x 4~6 mer
1348	1348	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		1350	FS - A x 4~6 mer
1349	1349	5.32.6.1.15	SAT for Manual and automatic fire detection and alarm system	60 days	Jun 28 '24	Aug 26 '24	Nov 10 '23	Jan 8 '24	0 days	1053,1006,95	1341,1339,134	
1350	1350	5.32.6.1.16	SAT for Fire hydrants, hose reels and street fire hydrant system	60 days	Jun 28 '24	Aug 26 '24	Nov 10 '23	Jan 8 '24	0 days	1347,1348,10	1341,1339,134	
1351	1351	5.33	**Fire Services Sprinkler Pumping Room, Portion B-7 & B-7B (PS 6B.6.9)**	**421 days**	**Aug 29 '22**	**Oct 23 '23**	**Dec 5 '22**	**Jan 29 '24**	**98 days**			
1352	1352	5.33.1	**Site Installation Work**	**421 days**	**Aug 29 '22**	**Oct 23 '23**	**Dec 5 '22**	**Jan 29 '24**	**98 days**			
1353	1353	5.33.1.1	Tentative Civil Handover Date, FS Sprinkler Pump Room (Rev. 5)	1 day	Aug 29 '22	Aug 29 '22	Dec 5 '22	Dec 5 '22	0 days	17	1354,1359	
1354	1354	5.33.1.2	**Commencement of E&M Installation at FS & Sprinkler Pump Room**	**420 days**	**Aug 29 '22**	**Oct 23 '23**	**Dec 6 '22**	**Jan 29 '24**	**98 days**	**1353**		
1355	1355	5.33.1.2.1	Mechanical Installations for FS & Sprinkler Pumps	90 edays	Aug 29 '22	Nov 27 '22	Dec 6 '22	Mar 6 '23	0 edays		1356	FS - A x 4~6 m
1356	1356	5.33.1.2.2	Electrical Installations for FS & Sprinkler Pumps	90 edays	Nov 27 '22	Feb 25 '23	Mar 6 '23	Jun 4 '23	0.63 ed...	1355	1357,1360,1	FS - A x 4~6 m
1357	1357	5.33.1.2.3	Site Acceptance Test for FS & Sprinkler Pumps	45 days	Feb 26 '23	Apr 11 '23	Oct 18 '23	Dec 1 '23	0 days	1356	1358	
1358	1358	5.33.1.2.4	System Commissioning for FS & Sprinkler Pumps	45 days	Apr 12 '23	May 26 '23	Dec 2 '23	Jan 15 '24	234 days	1357	1341	
1359	1359	5.33.1.2.5	**Building Services Installations at FS & Sprinkler Pump Room**	**240 days**	**Feb 26 '23**	**Oct 23 '23**	**Jun 4 '23**	**Jan 29 '24**	**98 days**	**1353**		
1360	1360	5.33.1.2.5.	Lighting and Power Distribution System, Chem 1&2	120 days	Feb 26 '23	Jun 25 '23	Jun 4 '23	Oct 1 '23	0 days	1356,204	1363	BS - A x 4~6 m
1361	1361	5.33.1.2.5.	Lightning Protection System, FS & Sprinkler Pump Room	30 days	Feb 26 '23	Mar 27 '23	Sep 2 '23	Oct 1 '23	90 days	1356	1363	BS - A x 4~6 m
1362	1362	5.33.1.2.5.	Mechanical Ventilation System, FS & Sprinkler PR	14 days	Feb 26 '23	Mar 11 '23	Sep 18 '23	Oct 1 '23	106 days	1356	1363	MVAC - A x 4~
1363	1363	5.33.1.2.5.	Testing and Commissioning of Building Services Installations, FS & Sprinkler PR	120 days	Jun 26 '23	Oct 23 '23	Oct 2 '23	Jan 29 '24	98 days	1360,1361,1	1341FF	
1364	1364	5.34	**Fire Hydrant and Booster Pumping Room, Portion B7 & B-7B (PS 6B.6.9)**	**465 days**	**May 15 '23**	**Aug 21 '24**	**Oct 22 '22**	**Jan 29 '24**	**0 days**			
1365	1365	5.34.1	**Site Installation Work**	**465 days**	**May 15 '23**	**Aug 21 '24**	**Oct 22 '22**	**Jan 29 '24**	**0 days**			
1366	1366	5.34.1.1	Tentative Civil Handover Date, Fire Hydrant and Booster Pumping Room (Re	1 day	May 15 '23	May 15 '23	Oct 22 '22	Oct 22 '22	0 days	19	1368	
1367	1367	5.34.1.2	**Commencement of E&M Installation at Street FH Pump Room**	**464 days**	**May 15 '23**	**Aug 21 '24**	**Oct 23 '22**	**Jan 29 '24**	**0 days**			
1368	1368	5.34.1.2.1	Mechanical Installations for Street FH Pumps	90 edays	May 15 '23	Aug 13 '23	Oct 23 '22	Jan 21 '23	0 edays	1366	1369	FS - A x 4~6 m
1369	1369	5.34.1.2.2	Electrical Installations for Street FH Pump	90 edays	Aug 13 '23	Nov 11 '23	Jan 21 '23	Apr 21 '23	0 edays	1368	1370,1373	FS - A x 4~6 m
1370	1370	5.34.1.2.3	Site Acceptance Test for Street FH Pump	45 days	Nov 12 '23	Dec 26 '23	Nov 1 '23	Dec 15 '23	0 days	1369	1371	
1371	1371	5.34.1.2.4	System Commissioning for Street FH Pumps	45 days	Dec 27 '23	Feb 9 '24	Dec 16 '23	Jan 29 '24	0 days	1370	1341FF	
1372	1372	5.34.1.2.5	**Building Services Installations at Street FH Pump Room**	**284 days**	**Nov 12 '23**	**Aug 21 '24**	**Apr 21 '23**	**Jan 29 '24**	**0 days**			
1373	1373	5.34.1.2.5.	Lighting and Power Distribution System, Street FH PR	120 days	Nov 12 '23	Mar 10 '24	Apr 21 '23	Aug 18 '23	0 days	1369,204	1376,1374	BS - A x 4~6 m
1374	1374	5.34.1.2.5.	Lightning Protection System, Street FH PR	30 days	Mar 11 '24	Apr 9 '24	Aug 19 '23	Sep 17 '23	0 days	1373	1375,1376	BS - A x 4~6 m
1375	1375	5.34.1.2.5.	Mechanical Ventilation System, Street FH PR	14 days	Apr 10 '24	Apr 23 '24	Sep 18 '23	Oct 1 '23	0 days	1374	1376	MVAC - A x 4~
1376	1376	5.34.1.2.5.	Testing and Commissioning of Building Services Installations, FH PR	120 days	Apr 24 '24	Aug 21 '24	Oct 2 '23	Jan 29 '24	0 days	1373,1374,1	1341FF	
1377	1377	5.35	**Plumbing Installation (PS 6B.6.8)**	**1347 days**	**Feb 16 '21**	**Oct 25 '24**	**Feb 16 '21**	**Oct 25 '24**	**0 days**			



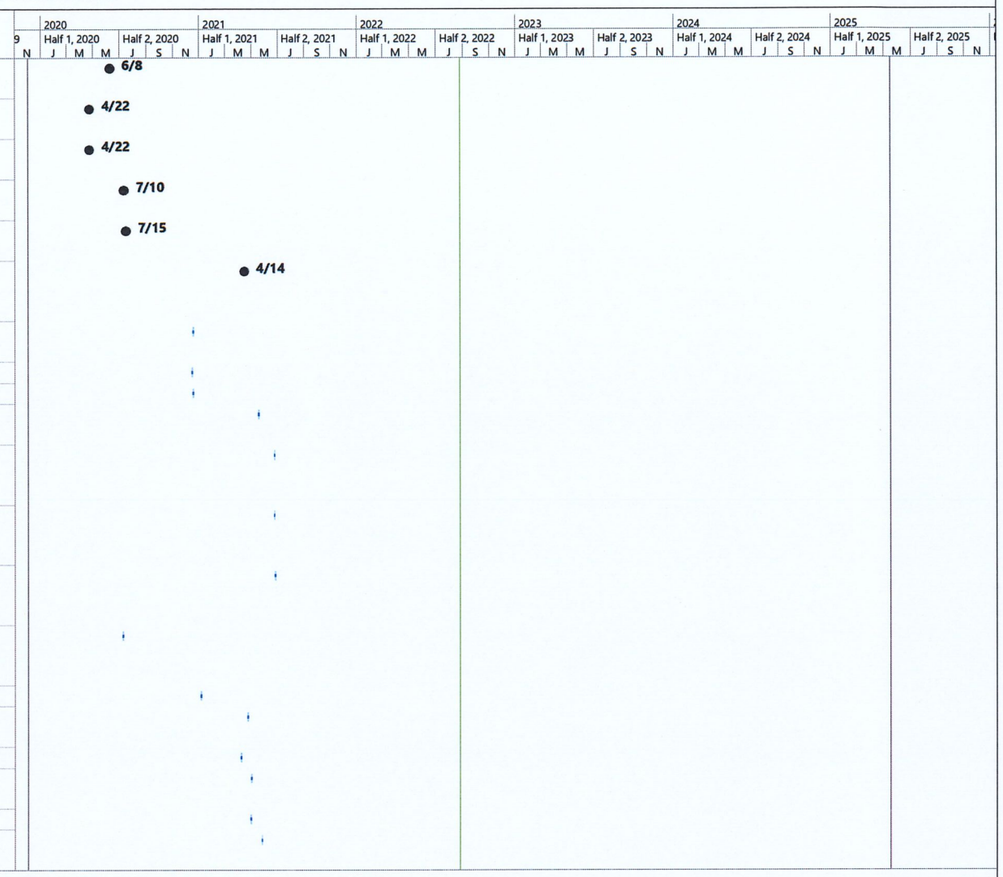
Bestwise
Project: DE/2018/04
Date: 31/07/22

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

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1378	1378	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	1380FF		
1379	**1379**	**5.35.2**	**Design Submissions for Plumbing**	**134 days**	**Feb 16 '21**	**Jun 30 '21**	**Feb 16 '21**	**Jun 30 '21**	**0 days**			
1380	1380	5.35.2.1	CDS033 - Detailed Design for Plumbing System	134 edays	Feb 16 '21	Jun 30 '21	Feb 16 '21	Jun 30 '21	0 edays	174	1383,1378FF	
1381	**1381**	**5.35.3**	**Site Installation Work**	**1213 days**	**Jul 1 '21**	**Oct 25 '24**	**Jul 1 '21**	**Oct 25 '24**	**0 days**			
1382	**1382**	**5.35.3.1**	**Commencement of Plumbing Installation**	**1213 days**	**Jul 1 '21**	**Oct 25 '24**	**Jul 1 '21**	**Oct 25 '24**	**0 days**			
1383	1383	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	1380	1384	Pb - A x 4~6 me
1384	1384	5.35.3.1.2	Submission of WWO542 for WSD's approval	355 days	Sep 29 '21	Sep 18 '22	Sep 29 '21	Apr 30 '23	188 days	1383	953,676,385,5	Pb - B x 4~6 me
1385	1385	5.35.3.1.3	Connection of External Pumping System (By others)	0 days	Sep 15 '23	Sep 15 '23	Jul 28 '24	Jul 28 '24	317 days		1386	
1386	1386	5.35.3.1.4	Submission of WWO46 for WSD's Inspection	45 days	Jul 28 '24	Sep 10 '24	Jul 28 '24	Sep 10 '24	0 days	1385,953,676	1387	
1387	1387	5.35.3.1.5	Obtain WWO46 Part V	45 days	Sep 11 '24	Oct 25 '24	Sep 11 '24	Oct 25 '24	0 days	1386	1388	
1388	1388	5.35.3.1.6	Tentative Date for connection of external water pipework (by others)	0 days	Oct 25 '24	Oct 25 '24	Oct 25 '24	Oct 25 '24	0 days	1387		
1389	**1389**	**5.36**	**Plant Commissioning**	**314 days**	**Nov 1 '23**	**Sep 9 '24**	**Oct 28 '23**	**May 14 '24**	**0 days**		**46FF**	
1390	1390	5.36.1	Planned Sectional Completion Date - Section 4, Plant Commissioning	0 days	May 1 '24	May 1 '24	May 1 '24	May 1 '24	0 days			
1391	**1391**	**5.36.2**	**Design Submission for Treatment Process Plant Testing & Commissioning**	**90 days**	**Nov 1 '23**	**Jan 29 '24**	**Feb 15 '24**	**May 14 '24**	**106 days**			
1392	1392	5.36.2.1	Document Submission and Resubmission for T&C procedures	90 days	Nov 1 '23	Jan 29 '24	Feb 15 '24	May 14 '24	106 days			
1393	1393	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	Apr 14 '24	Apr 20 '24	Oct 28 '23	Nov 3 '23	0 days	1110,404,69	1394	
1394	1394	5.36.4	MBR System Process Startup	45 days	Apr 21 '24	Jun 4 '24	Nov 4 '23	Dec 18 '23	0 days	1393	1395	
1395	1395	5.36.5	Plant Commissioning	45 days	Jun 5 '24	Jul 19 '24	Dec 19 '23	Feb 1 '24	0 days	1394	1398,1399FS-	
1396	1396	5.36.6	Overall commissioning of CCTV system	30 days	Jul 28 '24	Aug 26 '24	Mar 5 '24	Apr 3 '24	0 days	954,677,386,	1398	
1397	1397	5.36.7	Overall commissioning of Facility Computerized Systems (SCADA, CMMS, PMS, IDMS)	28 days	Jul 19 '24	Aug 15 '24	Mar 7 '24	Apr 3 '24	0 days	393,541,946,	1398	
1398	1398	5.36.8	Overall Plant Commissioning and DSD pre-handover inspections	14 days	Aug 27 '24	Sep 9 '24	Apr 4 '24	Apr 17 '24	0 days	1395,1396,13		
1399	1399	5.36.9	O&M manual for overall system	14 days	Apr 25 '24	May 8 '24	May 1 '24	May 14 '24	6 days	1395FS-90 d		
1400	**1400**	**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**			
1401	1401	5.37.1	Detail Design Submission and Approval	77 days	Jul 14 '20	Sep 28 '20	Jul 14 '20	Sep 28 '20	0 days		1403	
1402	1402	5.37.2	Subletting, Procurement, Manufacturing and Delivery	120 days	Jul 31 '20	Nov 27 '20	Jul 31 '20	Nov 27 '20	0 days			
1403	1403	5.37.3	Site Installation	270 days	Oct 17 '20	Jul 13 '21	Oct 17 '20	Jul 13 '21	0 days	1401	1404	
1404	1404	5.37.4	Testing and Commissioning (Rev. 15)	10 days	Jul 14 '21	Jul 23 '21	Jul 14 '21	Jul 23 '21	0 days	1403	1405FF	
1405	1405	5.37.5	Planned Completion Date	1 day	Jul 23 '21	Jul 23 '21	Jul 23 '21	Jul 23 '21	0 days	1404FF		
1406	1406	6	**Beam Plus Submissions**	**1450 days**	**May 1 '20**	**Apr 19 '24**	**May 1 '20**	**Apr 19 '24**	**0 days**			
1407	1407	6.1	SA10 - Environmental Management Plan	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1408	1408	6.2	SA11 - Air Pollution During Construction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1409	1409	6.3	SA12 - Noise During Construction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1410	1410	6.4	SA14 - Noise from Building Equipment	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1411	1411	6.5	SA15 - Light Pollution	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1412	1412	6.6	MAP1 - Timber used for Temporary Works	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1413	1413	6.7	MAP2 - Use of Non-CFC Based Refrigerants	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1414	1414	6.8	MAP3 - Waste Management Plan	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1415	1415	6.9	MA2 - Modular and Standardized Design	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1416	1416	6.10	MA8 - Ozone Depleting Substances	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1417	1417	6.11	MA11 - Construction Waste Reduction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1418	1418	6.12	EUP1 - Minimum Energy Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1419	1419	6.13	EU1 - Reduction of CO2 Emissions	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1420	1420	6.14	EU2 - Peak Electricity Demand Reduction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1421	1421	6.15	EU6 - Renewable Energy Systems	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1422	1422	6.16	EU9 - Energy Efficient Appliances	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1423	1423	6.17	EU10 - Testing and Commissioning	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1424	1424	6.18	EU11 - Operation and Maintenance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1425	1425	6.19	EU12 - Meter and Monitoring	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1426	1426	6.20	WUP1 - Water Quality Survey	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1427	1427	6.21	WUP2 - Minimum Water Saving Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1428	1428	6.22	WU1 / WU6 - Annual Water Use / Effluent Discharge to Foul Sewers	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1429	1429	6.23	IEQP1 - Minimum Ventilation Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1430	1430	6.24	IEQ1 - Security	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1431	1431	6.25	IEQ2 - Plumbing and Drainage	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1432	1432	6.26	IEQ3 - Biological Contamination	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1433	1433	6.27	IEQ5 - Construction IAQ Management	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1434	1434	6.28	IEQ6 / IEQ7 - IAQ	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1435	1435	6.29	IEQ9 - Increased Ventilation	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1436	1436	6.30	IEQ11 - Localised Ventilation	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1437	1437	6.31	IEQ12 - Ventilation in Common Areas	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1438	1438	6.32	IEQ13 - Thermal Comfort in Air - Conditioned Premises	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1439	1439	6.33	IEQ16 / IEQ17 - Interior Lighting in Normally Occupied Area / Interior Lighting in Areas not Normally Occupied	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1440	**1440**	**7**	**Summary of compensation events notified**	**487 days**	**Feb 25 '20**	**Jun 25 '21**	**Feb 25 '20**	**Jun 25 '21**	**0 days**			
1441	1441	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			



Bestwise
Project: DE/2018/04
Date: 31/07/22

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

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1442	1442	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			
1443	1443	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			
1444	1444	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			
1445	1445	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			
1446	1446	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			
1447	1447	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			
1448	1448	7.8	NCE-PPMI-0202 (CE) Revised GA for F.S. & Sprinkler Pumping Room and Emergency Generator Room	1 day	Dec 18 '20	Dec 18 '20	Dec 18 '20	Dec 18 '20	0 days			
1449	1449	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			
1450	1450	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			
1451	1451	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			
1452	1452	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			
1453	1453	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			
1454	1454	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			
1455	1455	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			
1456	1456	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			
1457	1457	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			
1458	1458	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			
1459	1459	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			
1460	1460	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			
1461	1461	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