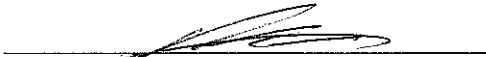


Drainage Services Department

Agreement No. SPW 07/2019 Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Quarterly EM&A Summary Report October to December 2020

(Version 1)

Certified By	
	(Environmental Team Leader: Mr. KS Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

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Ref.: DSDSWHS1EM00_0_0093L.21

29 January 2021

By E-mail and Fax (3922 9797)

AECOM Asia Company Limited
8/F., Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road
Sha Tin, New Territories, Hong Kong

Attention: Mr CHANG Ping Wah

Dear Mr CHANG,

**Re: Contract No. SPW 08/2019
Independent Environmental Checker for
Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

Quarterly EM&A Summary Report for October to December 2020

Reference is made to the Environmental Team's submission of Quarterly EM&A Summary Report for October to December 2020 (Version 1) certified by the ET Leader and provided to us via e-mail on 29 January 2021.

Please be informed that we write hereby to confirm that we have no adverse comments on the captioned submission.

Thank you for your attention. Please do not hesitate to contact us should you have any queries.

Yours sincerely,
For and on behalf of
Ramboll Hong Kong Limited



Manson Yeung
Independent Environmental Checker

C.C.

DSD
Cinotech

Attn.: Ms Konica Cheung
Attn.: Mr K. S. Lee

(By Fax: 3104 6420)
(By Fax: 3107 1388)

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TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY	1
Introduction.....	1
Summary of Main Works Undertaken and Key Measures Implemented	1
Summary of Exceedances, Investigation and Follow-up.....	2
Complaint Handling, Prosecution and Public Engagement.....	3
Reporting Changes.....	3
Future Key Issues.....	4
1 INTRODUCTION.....	5
Background.....	5
Project Organizations.....	5
Construction Activities Undertaken During the Reporting Quarter	6
2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS.....	8
Monitoring Parameters and Monitoring Locations.....	8
Environmental Quality Performance Limits (Action and Limit Levels).....	8
Monitoring Methodology.....	8
Implementation Status of Environmental Mitigation Measures	8
Site Audit Summary.....	8
Status of Waste Management.....	8
3 MONITORING RESULTS.....	9
Weather Conditions	9
Air Quality	9
Construction Noise.....	9
Ecology	9
Water Quality.....	9
Waste Management.....	9
Landscape and Visual	10
Influencing Factors on the Monitoring Results	10
4 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS).....	11
Summary of Exceedances	11
Review of the Reasons for and the Implications of Non-compliance	11
Summary of Complaint, Warning, Notification of Any Summons and Successful Prosecution	11
5 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS.....	12
Review of Monitoring Methodology and the Practicality and Effectiveness of EM&A Programme	12
Review on Effectiveness of Mitigation Measures	12
Recommendations.....	12

LIST OF TABLES

Table I	Summary Table for Major Site Activities in the Reporting Quarter
Table II	Non-compliance Record for the Project in the Reporting Quarter
Table III	Summary Table of Complaints, Summons, Prosecutions and Public Engagement Activities in the Reporting Quarter
Table IV	Summary Table for Site Activities in the Next Reporting Period
Table 1.1	Key Project Contacts
Table 1.2	Summary Table for Major Site Activities in the Reporting Quarter
Table 3.1	Major Dust Sources during the Monitoring in the Reporting Quarter
Table 3.2	Major Noise Sources during the Monitoring in the Reporting Quarter
Table 3.3	Observations during Ecological Monitoring in the Reporting Quarter

LIST OF FIGURES

Figure 1.1	Layout Plan of the Project Site
Figure 1.2	Project Organisation for Environmental Monitoring and Audit
Figure 2	Locations of Air Quality Monitoring Stations
Figure 3	Locations of Construction Noise Monitoring Stations
Figure 4	Survey Location for Impact Ecological Monitoring

LIST OF APPENDICES

Appendix A	Construction Programme
Appendix B	Monitoring Requirements
Appendix C	Action and Limit Levels
Appendix D	Environmental Mitigation Implementation Schedule (EMIS)
Appendix E	Site Audit Summary
Appendix F	Waste Flow Table
Appendix G	Graphical Presentations of Air Quality Monitoring Results (1-hour)
Appendix H	Graphical Presentations of Air Quality Monitoring Results (24-hour)
Appendix I	Graphical Presentations of Noise Monitoring Results
Appendix J	Summary of Ecological Monitoring Analysis
Appendix K	Summary of Exceedances
Appendix L	Summaries of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

EXECUTIVE SUMMARY**Introduction**

1. This is the 4th Quarterly Environmental Monitoring and Audit (EM&A) Summary Report prepared by the Environmental Team, Cinotech Consultants Ltd., for Agreement No. SPW 07/2019 “Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1” (hereinafter called “the Project”). This report summarized the monitoring results and audits findings of the EM&A programme under the issued further EP No. FEP-02/474/2013 and in accordance with the Updated EM&A Manual conducted between 1st October 2020 and 31st December 2020.

Summary of Main Works Undertaken and Key Measures Implemented

2. The construction activities undertaken in the reporting quarter were as follows:

Table I Summary Table for Major Site Activities in the Reporting Quarter

Contract No.	Contract Title	Site Activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	<ul style="list-style-type: none"> • ELS and excavation works • Sheet piling installation • Earth mat installation • Pre-drilling • Construction of tower crane • RC works • Plate load test • Strut installation and blinding layer • Pipe jacking work • MiC office installation
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> • Trial pit excavation • Road and drainage works • Diversion of inlet works • Process pipe of CHR and CHS • Demolition work of existing main facilities • Pre-drilling work and foundation work • Cable diversion works • ELS and construction of inlet reception chamber • Trench excavation • Pre-bored H piles • Alternation of existing powerhouse
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	<ul style="list-style-type: none"> • E&M work for site office in WA1-B • Land survey in sidestream treatment facilities • Paving work in WA3 • Erection of site office in WA1-B • Underground utilities detection • Ground investigation in Portion B-1 • Settlement monitoring works

Contract No.	Contract Title	Site Activities
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> • Construction of temporary filtrate equalisation tank • Dismantle and removal of E&M equipment of the existing primary sedimentation tank no. 6

3. Implementation of the key mitigation measures during the reporting period are as follows:

Air Quality

- Stockpiles were covered by impervious sheets.
- Water spraying on haul road was done to minimize dust generation.

Water Quality

- Stagnant water was removed, pumped and collected in the sedimentation tank.

Summary of Exceedances, Investigation and Follow-up

4. Exceedance of Action/Limit levels between October and December 2020 and summary of the non-compliance in the reporting quarter for the Project is tabulated in **Table II**.

Table II Non-compliance Record for the Project in the Reporting Quarter

Parameter	No. of Exceedance		Investigation Result
	Action Level	Limit Level	
October 2020			
Air Quality (1-hour TSP)	0	0	N/A
Air Quality (24-hour TSP)	0	0	N/A
Noise	0	0	N/A
Ecology	1	0	Non-project related
November 2020			
Air Quality (1-hour TSP)	0	0	N/A
Air Quality (24-hour TSP)	0	0	N/A
Noise	0	0	N/A
Ecology	0	0	N/A
December 2020			
Air Quality (1-hour TSP)	0	0	N/A
Air Quality (24-hour TSP)	0	0	N/A
Noise	0	0	N/A
Ecology	0	0	N/A

5. No exceedance was recorded at any air quality monitoring station during the reporting period.

6. No exceedance was recorded at any noise monitoring station during the reporting period.

7. 1 Action Level and no Limit Level were triggered for ecological monitoring during the reporting period.

Complaint Handling, Prosecution and Public Engagement

8. Summary of complaint handling, prosecution and public engagement in the reporting quarter is tabulated in **Table III**.

Table III Summary Table of Complaints, Summons, Prosecutions and Public Engagement Activities in the Reporting Quarter

Event	Event Details		Follow-up/ Remedial Actions	Status/ Remarks
	Number	Brief Description		
Complaints Received	0	-	-	-
Notification of Summons and Prosecutions Received	0	-	-	-
Public Engagement Activities	0	-	-	-

Reporting Changes

9. There were no reporting changes during the reporting quarter.

Future Key Issues

10. The key works or activities will be anticipated in the next reporting period are as follows:

Table IV Summary Table for Site Activities in the Next Reporting Period

Contract No.	Contract Title	Site Activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	<ul style="list-style-type: none"> • ELS and excavation works • Sheet pile installation • RC works • Strut installation and blinding layer • Pipe jacking work
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> • ELS and construction of inlet reception chamber • Trench excavation • Road and drainage works • Diversion of inlet works • Process pipe of CHR and CHS • Pre-drilling work and foundation work • Cable diversion works • Demolition work of existing main facilities • Piling load test • Pre-bored H piles • Alternation of existing powerhouse
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	<ul style="list-style-type: none"> • Ground investigation in Portion B-1 • Settlement monitoring works • Civil work in Portion B-1
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> • Construction of temporary filtrate equalisation tank • Installation of temporary primary sludge thickener and its accessories • Dismantle and removal of E&M equipment of the existing primary sedimentation tank no. 4 and no. 6

1 INTRODUCTION

Background

- 1.1 The Further Expansion of Shek Wu Hui Effluent Polishing Plant (SWHEPP) is a designated Project (DP) under F.1 and F.2 of Part 1, Schedule 2 of Environmental Impact Assessment Ordinance (EIAO). The “North East New Territories New Development Areas” Environmental Impact Assessment (NENT NDAs EIA) Report (Registered No.: AEIAR-175/2013) covered the assessment for the Further Expansion of SWHSTW Phase 1A, 1B and 2, and the associated Environmental Monitoring and Audit (EM&A) Manual was approved on 18 October 2013.
- 1.2 The existing Shek Wu Hui Sewage Treatment Works (SWHSTW) is operated and maintained 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 year. In 2009, the expansion of SWHSTW was completed and its design capacity was 93,000m²/day at average dry weather flow (ADWF). After the Resource Allocation Exercise 2017, the existing SWHSTW is proposed to be upgraded from secondary to tertiary treatment level as the new SWHEPP at 3 stages: Main Works Stage 1, Stage 2 and Stage 3.
- 1.3 A Further Environmental Permit (EP) (Permit No. FEP-02/474/2013) was issued on 15 February 2018 to DSD as the Permit Holder to assume the responsibility for construction and operating the SWHEPP Project up to a capacity of 190,000m³/day. The updated Environmental Monitoring and Audit (EM&A) Manual was prepared in accordance with Condition 2.3 of the Further EP. The site layout plan for the Project is shown in **Figure 1.1**.
- 1.4 Cinotech Consultants Ltd. was designated as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The construction commencement of the Project was on 3rd January 2020. This is the 4th Quarterly EM&A Summary Report summarizing the EM&A works for the Project between 1st October 2020 and 31st December 2020.

Project Organizations

- 1.5 Different Parties with different levels of involvement in the project organization include:
 - Permit Holder/Project Proponent – Drainage Services Department (DSD)
 - Supervisor Representative – AECOM Asia Company Limited (AECOM)
 - Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
 - Independent Environmental Checker (IEC) – Ramboll Hong Kong Limited (Ramboll)
 - Contractors
 - Contract No.: DC/2018/06 - Kwan Lee - Chun Wo Joint Venture (KLCWJV)
 - Contract No.: DC/2018/07 - Kwan Lee - Chun Wo Joint Venture (KLCWJV)
 - Contract No.: DE/2018/03 - Jardine Engineering Corporation Limited (JEC)
 - Contract No.: DE/2018/04 - Bestwise Envirotech Limited (Bestwise)

1.6 The key contacts of the Project are shown in **Table 1.1**.

Table 1.1 Key Project Contacts

Party	Role	Contact Person	Phone No.
DSD	Permit Holder / Project Proponent	Ms. Konica Cheung	2594 7463
		Public Enquiry	3142 2256
AECOM	Supervisor Representative	Mr. Henry Tai	3792 0580
Cinotech	Environmental Team	Mr. KS Lee (ETL)	2151 2091
		Ms. Betty Choi	2151 2072
Ramboll	Independent Environmental Checker	Mr. Manson Yeung	3465 2888
KLCWJV	Contractor (DC/2018/06)	Ms. Ruby Hui	6218 6408
KLCWJV	Contractor (DC/2018/07)	Mr. Jimmy Cheng	9606 5916
JEC	Contractor (DE/2018/03)	Mr. Brendan Chan	2807 4264
Bestwise	Contractor (DE/2018/04)	Mr. Albus Cheung	9731 0831

1.7 The Organizational Structure for Environmental Management is shown in **Figure 1.2**.

Construction Activities Undertaken During the Reporting Quarter

1.8 The construction programme is presented in **Appendix A**. The major site activities undertaken in the reporting quarter were:

Table 1.2 Summary Table for Major Site Activities in the Reporting Quarter

Contract No.	Contract Title	Site Activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	<ul style="list-style-type: none"> • ELS and excavation works • Sheet piling installation • Earth mat installation • Pre-drilling • Construction of tower crane • RC works • Plate load test • Strut installation and blinding layer • Pipe jacking work • MiC office installation

Contract No.	Contract Title	Site Activities
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> • Trial pit excavation • Road and drainage works • Diversion of inlet works • Process pipe of CHR and CHS • Demolition work of existing main facilities • Pre-drilling work and foundation work • Cable diversion works • ELS and construction of inlet reception chamber • Trench excavation • Pre-bored H piles • Alternation of existing powerhouse
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	<ul style="list-style-type: none"> • E&M work for site office in WA1-B • Land survey in sidestream treatment facilities • Paving work in WA3 • Erection of site office in WA1-B • Underground utilities detection • Ground investigation in Portion B-1 • Settlement monitoring works
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> • Construction of temporary filtrate equalisation tank • Dismantle and removal of E&M equipment of the existing primary sedimentation tank no. 6

2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

Monitoring Parameters and Monitoring Locations

- 2.1 The Updated EM&A Manual designates locations for the ET to monitor environmental impacts in terms of air quality, noise and ecology due to the Project. The Project area and monitoring locations are depicted in **Figures 2-4**. **Appendix B** gives details of monitoring requirements.

Environmental Quality Performance Limits (Action and Limit Levels)

- 2.2 Should the environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in **Appendix C**.

Monitoring Methodology

- 2.3 Monitoring works/equipment were conducted/calibrated regularly in accordance with the Updated EM&A Manual. Copies of calibration certificates are attached in the appendices of the corresponding Monthly EM&A Reports within the reporting period.

Implementation Status of Environmental Mitigation Measures

- 2.4 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Report, the Environmental Permit and Updated EM&A Manual. The implementation status of environmental mitigation measures (EMIS) is given in **Appendix D**.

Site Audit Summary

- 2.5 Site audits were carried out on a weekly basis. During site inspections in the reporting period, no non-conformance was identified. The observations and recommendations made during the reporting period are summarized in **Appendix E**.

Status of Waste Management

- 2.6 The amount of wastes generated by the major site activities of this Project is shown in **Appendix F**.

3 MONITORING RESULTS

Weather Conditions

- 3.1 The weather conditions were generally sunny and cloudy during the monitoring sessions of the reporting period. The details of weather conditions for each individual monitoring session was presented in the corresponding Monthly EM&A Reports within the reporting period.

Air Quality

- 3.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.
- 3.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.
- 3.4 The graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix G** and **Appendix H** respectively.

Construction Noise

- 3.5 All construction noise monitoring was conducted as scheduled in the reporting period. No Action and Limit Level exceedance was recorded.
- 3.6 The graphical presentations of the noise monitoring results are shown in **Appendix I**.

Ecology

- 3.7 All ecological monitoring was conducted as scheduled in the reporting period. 1 Action Level was triggered for ecological monitoring between October and December 2020. No Limit Level was triggered.
- 3.8 A summary of ecological monitoring analysis is shown in **Appendix J**.

Water Quality

- 3.9 According to the Updated EM&A Manual, no water monitoring is required before the commencement of outfall construction at Ng Tung River.
- 3.10 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of water quality mitigation measures of this project. No non-compliance of water quality mitigation measures was observed in the reporting quarter.

Waste Management

- 3.11 Site audits were carried out on a weekly basis to monitor and audit to ensure that proper storage, transportation and disposal practices of waste materials generated during construction activities, such as construction and demolition (C&D) materials and general refuse are being implemented. Details of the amount of wastes generated by the major site activities is shown in **Appendix F**.

Landscape and Visual

- 3.12 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures of this project. No non-compliance of the landscape and visual mitigation measures was recorded in the reporting quarter.

Influencing Factors on the Monitoring Results

- 3.13 During the reporting period, the major dust and noise sources identified at the designated monitoring stations are shown in **Tables 3.1 and 3.2**.

Table 3.1 Major Dust Sources during the Monitoring in the Reporting Quarter

Monitoring Stations	Major Dust Source
AM1 - Wai Loi Tsuen	Road Traffic at Sheung Shui Tung Hing Road
AM2 - Fu Tei Au	N/A
AM1a - Site Boundary of the Shek Wu Hui STW (East)	Vehicle Movement within SWHSTW
AM2a - Site Boundary of the Shek Wu Hui STW (North)	N/A

Table 3.2 Major Noise Sources during the Monitoring in the Reporting Quarter

Monitoring Stations	Major Noise Source
NM1 - Wai Loi Tsuen	Railway Noise and Road Traffic at Sheung Shui Tung Hing Road
NM2 - Fu Tei Au	N/A
NM3 - Man Kok Village	Road traffic at Po Wan Road

- 3.14 The observations identified during ecological monitoring at the designated monitoring stations are shown in **Table 3.3**.

Table 3.3 Observations during Ecological Monitoring in the Reporting Quarter

Location	Project Related	Non-Project Related
T1 (PC1, PC2)	Excavation, sheet-piling and crane	Fishing, excavation, crane and remote boating
T2 (PC3, PC4)	Excavation, sheet-piling and crane	Fishing and jaywalking
PC5	Excavation and crane	N/A
T3 (PC6, PC7)	N/A	Fishing, excavation, breaking works, water sampling and feral dog chasing the birds

4 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

Summary of Exceedances

- 4.1 Environmental monitoring works were performed in the reporting period and all monitoring results were checked and reviewed. A summary of exceedances is attached in **Appendix K**.
- 4.2 No Action/Limit Level exceedance was recorded at all 1-hour and 24-hour TSP monitoring stations in the reporting quarter.
- 4.3 No Action/Limit Level exceedance was recorded at all noise monitoring stations in the reporting quarter.
- 4.4 1 Action Level was triggered and no Limit Level exceedance was recorded for ecological monitoring in the reporting quarter. As the decline in numbers of Grey Heron was considered non-project related, no remedial measure for the project is proposed.
- 4.5 No non-conformity for landscape and visual impact was recorded in the reporting quarter.

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

- 4.6 There was no non-compliance from the site audits in the reporting period. The observations and recommendations made in each individual site audit session were attached in the **Appendix E**.

Summary of Complaint, Warning, Notification of Any Summons and Successful Prosecution

- 4.7 No environmental complaints, warning, notifications of summons and environmental prosecution was received during the reporting quarter.
- 4.8 The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix L**.

5 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

Review of Monitoring Methodology and the Practicality and Effectiveness of EM&A Programme

- 5.1 The EM&A methodology has been effective in monitoring the environmental impacts of the Project and the effectiveness of the mitigation measures. The data collected were useful in determining whether the Project had caused unacceptable impacts on the sensitive receivers. Analysis of all EM&A data collected throughout the baseline and the impact periods demonstrated the environmental acceptability of the Project.

Review on Effectiveness of Mitigation Measures

- 5.2 The mitigation measures recommended in the EIA report are considered effective in minimizing environmental impacts.
- 5.3 The Contractor has implemented the recommended mitigation measures except for those mitigation measures not applicable at this stage.
- 5.4 Environmental monitoring works were performed in the reporting quarter and all monitoring results were checked and reviewed.
- 5.5 The summary record of non-compliance (exceedances) of Action/Limit Level for environmental monitoring in the reporting quarter has been presented in **Table II** above and in **Appendix K**.
- 5.6 No environmental complaints, warning, notifications of summons and environmental prosecution was received in the reporting quarter. The details were attached in the **Appendix L**.
- 5.7 The effectiveness of environmental management is satisfactory given that the recommendations given in the site inspections performed in the reporting period are met.

Recommendations

- 5.8 According to the environmental audits performed in the reporting quarter, the following recommendations were made:

Air Quality

- Regular water spraying on haul road and dry surfaces should be applied to minimize dust generation.
- Stockpiles should be covered by impervious materials.

Water Quality

- Stagnant water should be removed and pumped through the sedimentation tank.
- Muddy water should not be discharged into the surrounding rivers.
- No slurry should be disposed of at the existing Shek Wu Hui Sewage Treatment Works.

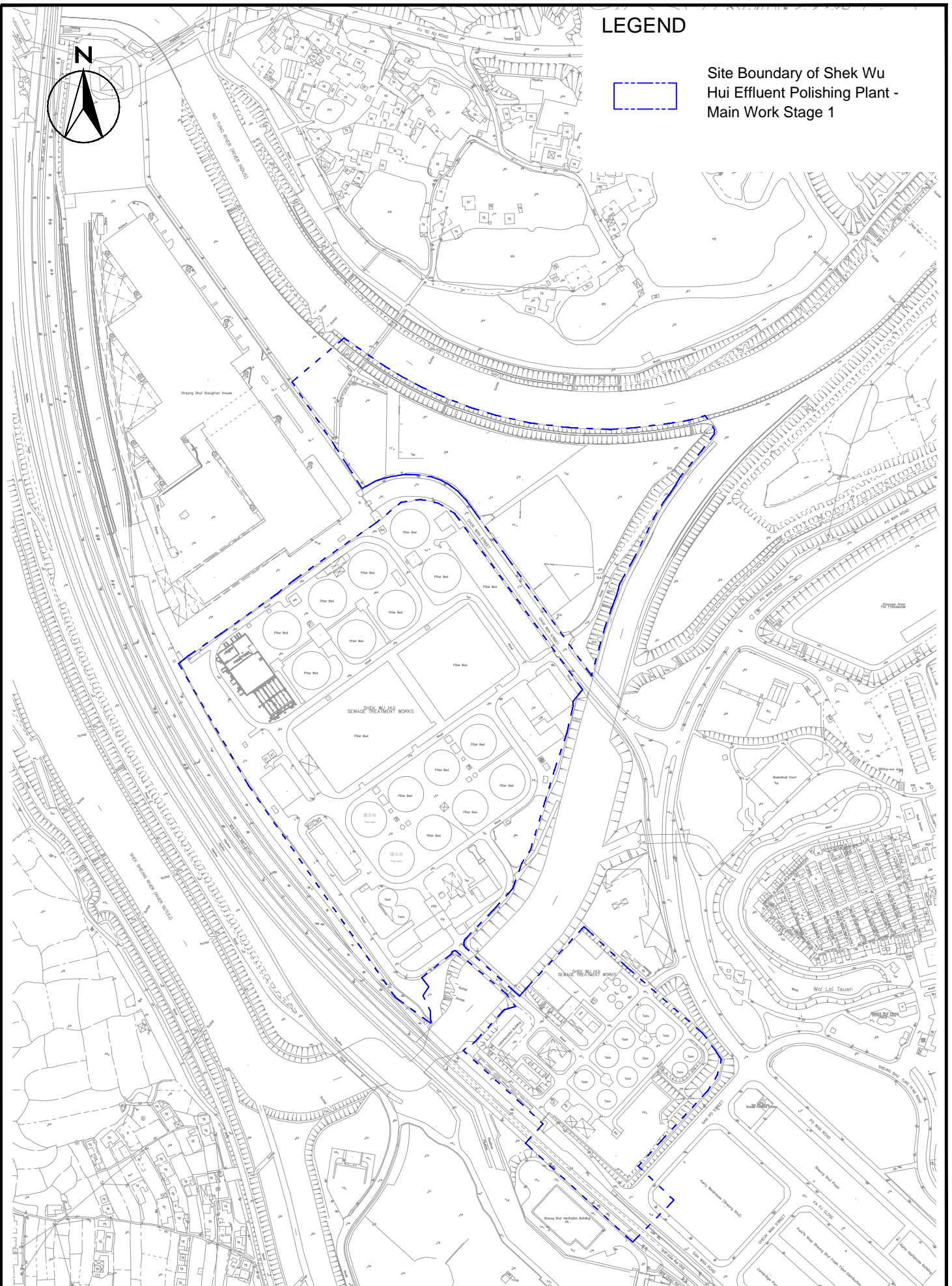
FIGURES



LEGEND



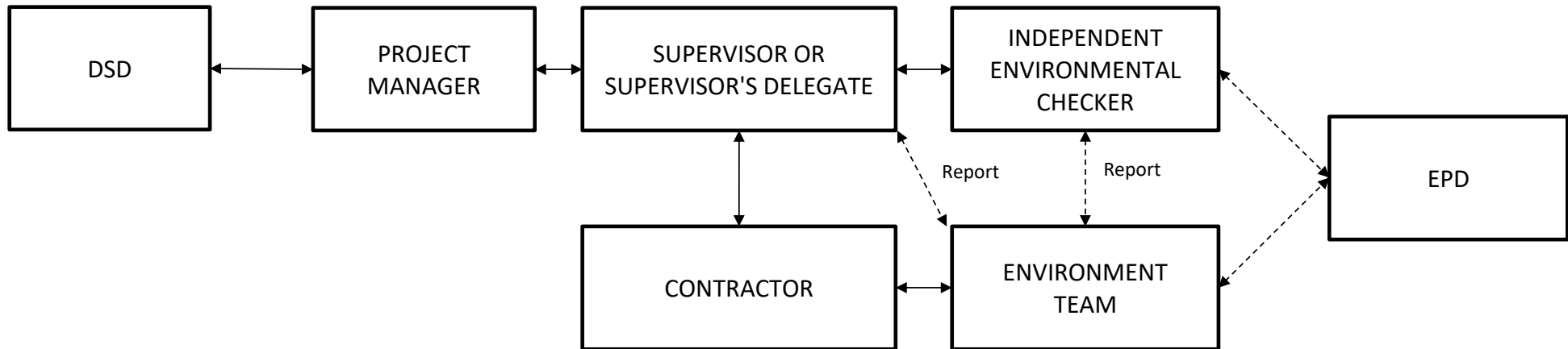
Site Boundary of Shek Wu Hui Effluent Polishing Plant - Main Work Stage 1



Agreement No. SPW07/2019
 Shek Wu Hui Effluent Polishing Plant -
 Main Works Stage 1

Site Layout

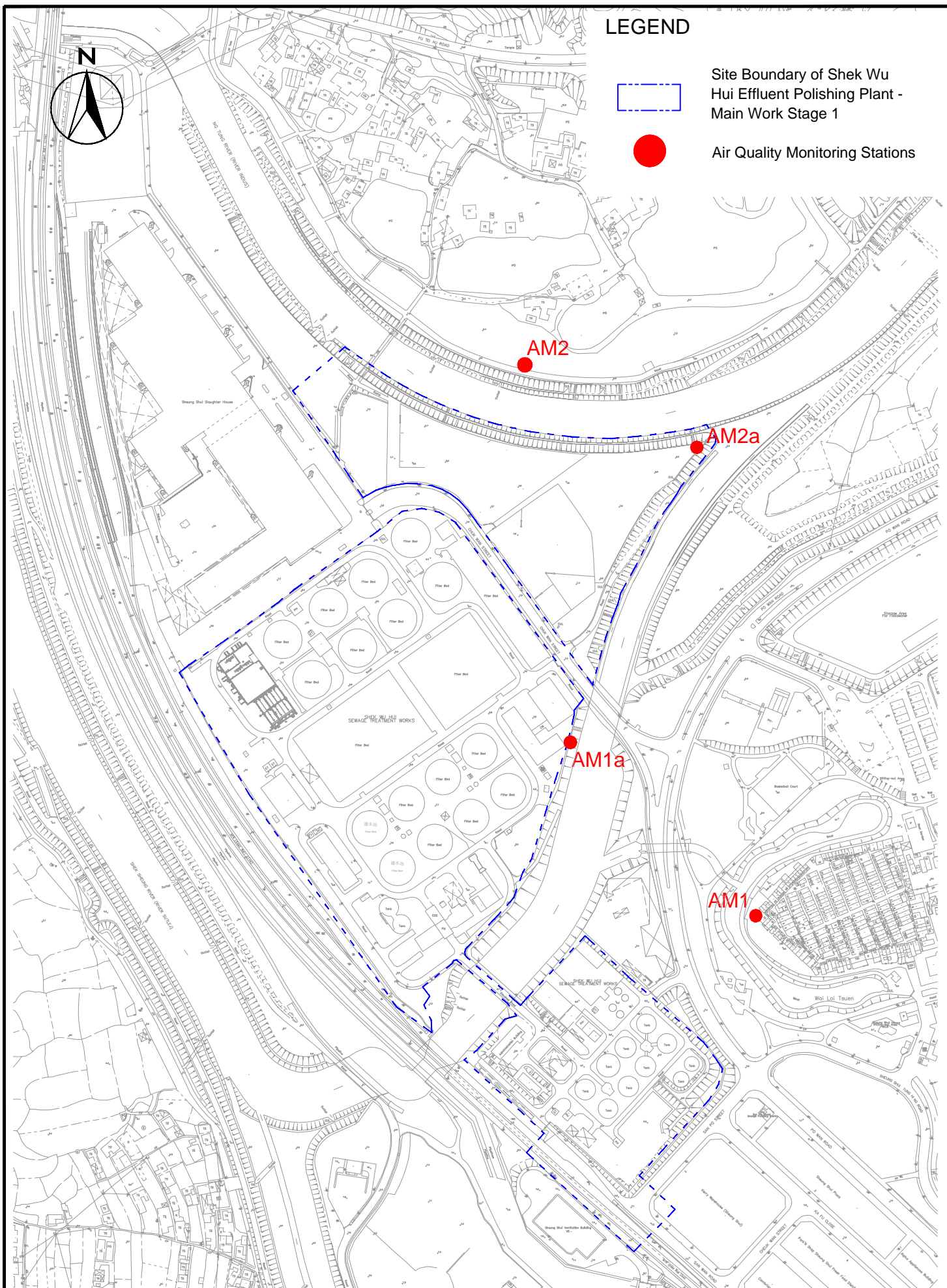
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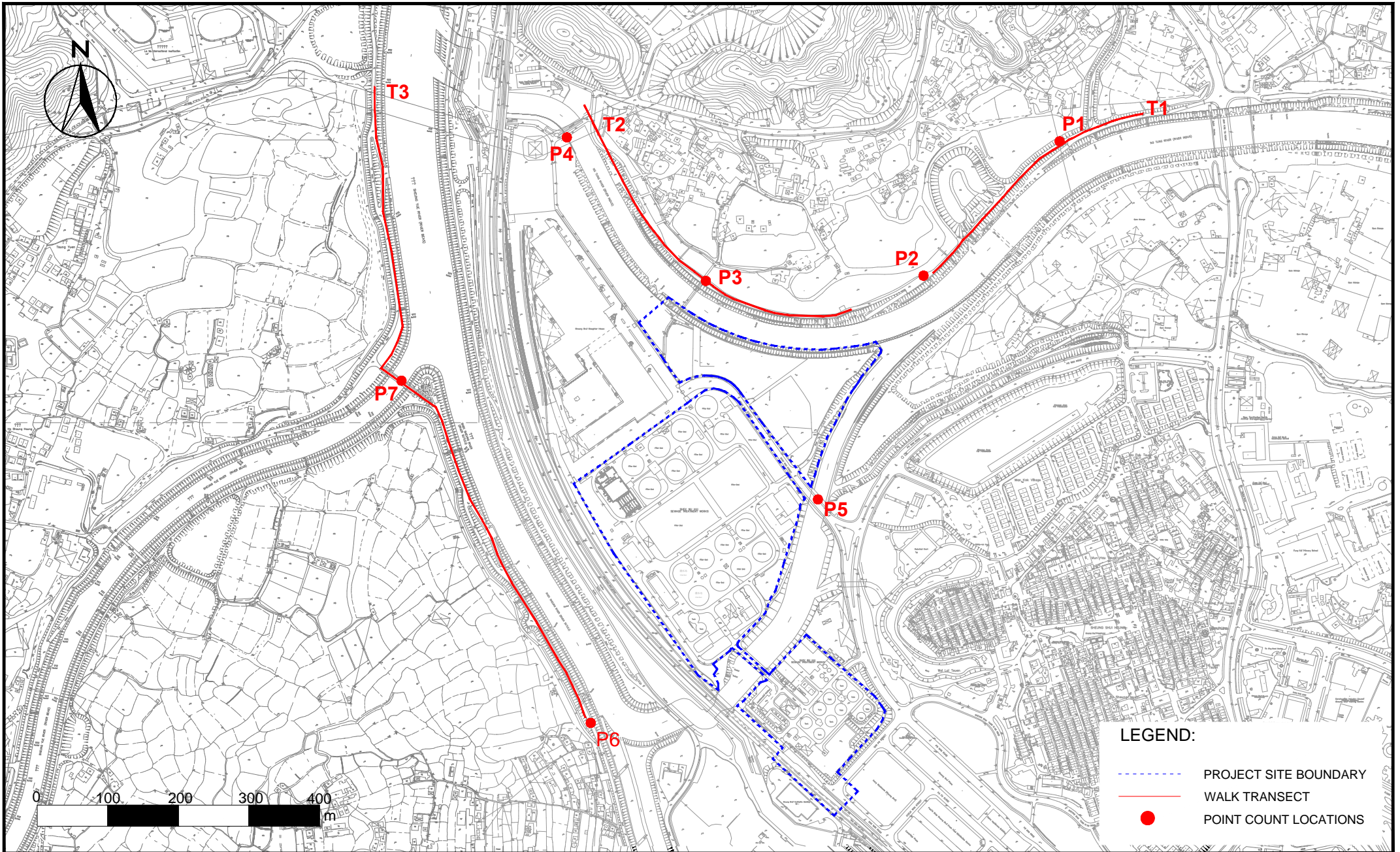
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Agreement No. SPW07/2019
 Shek Wu Hui Effluent Polishing Plant- Main Works Stage 1
Project Organisation For Environmental Monitoring and Audit

SCALE	N.T.S.	DATE	Sep 2019
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JOB NO.	MA19019	FIGURE NO.	1.2



SCALE	1:4000@A4	DATE	OCT 2019
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JOB No.	MA19019	FIGURE NO.	2
		REV	-



LEGEND:

- - - - - PROJECT SITE BOUNDARY
- WALK TRANSECT
- POINT COUNT LOCATIONS



Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Survey Location for Impact Ecological Monitoring

SCALE	1:7000 @ A4	DATE	Jan 2020
CHECK	BC	DRAWN	JM
JOB No.	MA19019	FIGURE NO.	4
		REV	-

APPENDIX A
CONSTRUCTION PROGRAMME

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete	Time Risk Allowance	2018 2019 2020 2021 2022 2023 2024 2025 2026											
1		Contract Dates	1956 days	Mon 16/9/19	Wed 22/1/25	Mon 16/9/19	NA	0 days			36%		16/9											
2		Starting Date	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days		4,5FS+181 days,f	100%		16/9											
3		Access Date (cal. day)	180 days	Mon 16/9/19	Sat 14/3/20	Mon 16/9/19	Sat 14/3/20	0 days			100%		16/9 14/3											
4		Portion A-1	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
5		Portion A-2	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2FS+181 days		100%		16/9											
6		Portion C-1A	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
7		Portion C-1B	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
8		Portion C-2A	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
9		Portion C-2B	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
10		Portion C-2C	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
11		Portion C-2D	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
12		Portion C-3	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
13		Portion C-4	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
14		Portion C-5	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9											
15		Portion C-6	0 days	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	0 days	2FS+181 days	442,417	100%		16/9 14/3											
16		Works Area WA1	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9 16/9											
17		Works Area WA2-A	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%		16/9 16/9											
18		Key Date (cal. day)	840 days	Tue 17/9/19	Mon 3/1/22	Tue 17/9/19	NA	0 days			45%		17/9 3/1											
19		KD1A (525 days after starting date)	525 days	Tue 17/9/19	Mon 22/2/21	Tue 17/9/19	NA	0 days	2FS+1 day		63%		22/2											
20		KD2A (660 days after starting date)	660 days	Tue 17/9/19	Wed 7/7/21	Tue 17/9/19	NA	0 days	2FS+1 day		50%		7/7											
21		KD3A (740 days after starting date)	740 days	Tue 17/9/19	Sat 25/9/21	Tue 17/9/19	NA	0 days	2FS+1 day		42%		25/9											
22		KD3B (725 days after starting date)	725 days	Tue 17/9/19	Fri 10/9/21	Tue 17/9/19	NA	0 days	2FS+1 day		42%		10/9											
23		KD3C (750 days after starting date)	750 days	Tue 17/9/19	Tue 5/10/21	Tue 17/9/19	NA	0 days	2FS+1 day		41%		5/10											
24		KD3D (660 days after starting date)	660 days	Tue 17/9/19	Wed 7/7/21	Tue 17/9/19	NA	0 days	2FS+1 day		47%		7/7											
25		KD3E (840 days after starting date)	840 days	Tue 17/9/19	Mon 3/1/22	Tue 17/9/19	NA	0 days	2FS+1 day		37%		3/1											
26		Completion Date (cal. day)	1955 days	Tue 17/9/19	Wed 22/1/25	Tue 17/9/19	NA	0 days			29%		17/9 22/1											
27		Section 1 of Works (675 days after starting date)	675 days	Tue 17/9/19	Thu 22/7/21	Tue 17/9/19	NA	0 days	2FS+1 day		82%		22/7											
28		Section 2 of Works (1,295 days after starting date)	1295 days	Tue 17/9/19	Mon 3/4/23	Tue 17/9/19	NA	0 days	2FS+1 day		25%		3/4											
29		Section 3 of Works (1,120 days after starting date)	1120 days	Tue 17/9/19	Mon 10/10/22	Tue 17/9/19	NA	0 days	2FS+1 day		28%		10/10											
30		Section 4 of Works (900 days after starting date)	900 days	Tue 17/9/19	Fri 4/3/22	Tue 17/9/19	NA	0 days	2FS+1 day		35%		4/3											
31		Section 5 of Works (1,590 days after starting date)	1590 days	Tue 17/9/19	Tue 23/1/24	Tue 17/9/19	NA	0 days	2FS+1 day	32,33	20%		23/1											
32		Defect Liability Period	365 days	Wed 24/1/24	Wed 22/1/25	NA	NA	0 days	31		0%		22/1											
33		Soft Landscape Establishment Works	365 days	Wed 24/1/24	Wed 22/1/25	NA	NA	0 days	31		0%		22/1											
34	*	Planned Completion - Key Date (cal. day)	275 days	Sat 4/9/21	Mon 6/6/22	NA	NA	-193.5 days			0%		4/9 6/6											
35	KD1A	KD1A (525 days after starting date)	0 days	Sat 16/10/21	Sat 16/10/21	NA	NA	-235.5 days	53FF		0%		16/10											
36	KD2A	KD2A (660 days after starting date)	0 days	Wed 2/3/22	Wed 2/3/22	NA	NA	-237.5 days	59FF		0%		2/3											
37	KD3A	KD3A (740 days after starting date)	0 days	Sat 12/2/22	Sat 12/2/22	NA	NA	-139.5 days	65FF		0%		12/2											
38	KD3B	KD3B (725 days after starting date)	0 days	Sat 5/3/22	Sat 5/3/22	NA	NA	-175.5 days	71FF		0%		5/3											
39	KD3C	KD3C (750 days after starting date)	0 days	Sat 11/12/21	Sat 11/12/21	NA	NA	-66.5 days	76FF		0%		11/12											
40	KD3D	KD3D (660 days after starting date)	0 days	Sat 4/9/21	Sat 4/9/21	NA	NA	-58.5 days	81FF		0%		4/9											
41	KD3E	KD3E (840 days after starting date)	0 days	Mon 6/6/22	Mon 6/6/22	NA	NA	-153.5 days	86FF		0%		6/6											
42	*	Planned Completion - Section of the Works (cal. day)	1133 days	Sat 5/2/22	Fri 14/3/25	NA	NA	-197.5 days			0%		5/2 14/3											
43	SW1	Section 1 of Works (675 days after starting date)	0 days	Sat 5/2/22	Sat 5/2/22	NA	NA	-197.5 days	91FF		0%		5/2											
44	SW2	Section 2 of Works (1,295 days after starting date)	0 days	Wed 26/4/23	Wed 26/4/23	NA	NA	-22.5 days	97FF		0%		26/4											
45	SW3	Section 3 of Works (1,120 days after starting date)	0 days	Tue 19/7/22	Tue 19/7/22	NA	NA	83.5 days	103FF		0%		19/7											
46	SW4	Section 4 of Works (900 days after starting date)	0 days	Thu 21/7/22	Thu 21/7/22	NA	NA	-138.5 days	109FF	485	0%		21/7											
47	SW5	Section 5 of Works (1,590 days after starting date)	0 days	Thu 14/3/24	Thu 14/3/24	NA	NA	-50.5 days	115FF,175FF	48,49	0%		14/3											
48		Defect Liability Period	365 days	Thu 14/3/24	Fri 14/3/25	NA	NA	0 days	47		0%		14/3											
49		Soft Landscape Establishment Works	365 days	Thu 14/3/24	Fri 14/3/25	NA	NA	0 days	47		0%		14/3											
50		Delaying Events Other than Change of Works Information	837.5 days	Thu 20/5/21	Thu 14/3/24	NA	NA	-161.5 days			0%		20/5 14/3											
51		Inclement Weather to KD1A	83.5 days	Thu 8/7/21	Sat 16/10/21	NA	NA	-191.5 days			0%		8/7 16/10											
52		Delay and Disruption of Works before Nov 2020	81.5 days	Thu 8/7/21	Wed 13/10/21	NA	NA	-191.5 days	56	53	0%		8/7 13/10											
53	KD1A	Delay and Disruption of Works for the month of Nov 2020 (NCE no.92)	2 days	Wed 13/10/21	Sat 16/10/21	NA	NA	-191.5 days	52	35FF	0%		13/10 16/10											
54		Other Events affected to KD1A	10 days	Fri 25/6/21	Wed 7/7/21	NA	NA	-191.5 days			0%		25/6 7/7											
55		Unforeseen Social Activities in Hong Kong in November 2019 (NCE no. 0003)	6 days	Fri 25/6/21	Fri 2/7/21	NA	NA	-191.5 days	245,243,468,469,213,56		0%		25/6 2/7											
56		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus (PMI no.005)	4 days	Sat 3/7/21	Wed 7/7/21	NA	NA	-191.5 days	55	52	0%		3/7 7/7											
57		Inclement Weather to KD2A	86.5 days	Mon 15/11/21	Wed 2/3/22	NA	NA	-194.5 days			0%		15/11 2/3											
58		Delay and Disruption of Works before Nov 2020	84.5 days	Mon 15/11/21	Mon 28/2/22	NA	NA	-194.5 days	62	59	0%		15/11 28/2											
59	KD2A	Delay and Disruption of Works for the month of Nov 2020 (NCE no.92)	2 days	Mon 28/2/22	Wed 2/3/22	NA	NA	-194.5 days	58	36FF	0%		28/2 2/3											
60		Other Events affected to KD2A	10 days	Wed 3/11/21	Sat 13/11/21	NA	NA	-194.5 days			0%		3/11 13/11											
61		Unforeseen Social Activities in Hong Kong in November 2019 (NCE no. 0003)	6 days	Wed 3/11/21	Tue 9/11/21	NA	NA	-194.5 days	514,515,512,510,509,62		0%		3/11 9/11											
62		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus (PMI no.005)	4 days	Wed 10/11/21	Sat 13/11/21	NA	NA	-194.5 days	61	58	0%		10/11 13/11											
63		Inclement Weather to KD3A	86.5 days	Thu 28/10/21	Sat 12/2/22	NA	NA	-111.5 days			0%		28/10 12/2											
64		Delay and Disruption of Works before Nov 2020	84.5 days	Thu 28/10/21	Thu 10/2/22	NA	NA	-111.5 days	68	65	0%		28/10 10/2											
65	KD3A	Delay and Disruption of Works for the month of Nov 2020 (NCE no.92)	2 days	Thu 10/2/22	Sat 12/2/22	NA	NA	-111.5 days	64	37FF	0%		10/2 12/2											
66		Other Events affected to KD3A	10 days	Sat 16/10/21	Wed 27/10/21	NA	NA	-111.5 days			0%		16/10 27/10											
67		Unforeseen Social Activities in Hong Kong in November 2019 (NCE no. 0003)	6 days	Sat 16/10/21	Fri 22/10/21	NA	NA	-111.5 days	272,273,268	68	0%		16/10 22/10											
68		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus (PMI no.005)	4 days	Sat 23/10/21	Wed 27/10/21	NA	NA	-111.5 days	67	64	0%		23/10 27/10											
69		Inclement Weather to KD3B	86.5 days	Thu 18/11/21	Sat 5/3/22	NA	NA	-141.5 days			0%		18/11 5/3											


Task  Milestone  Summary  Critical 

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete	Time Risk Allowance	2018	2019	2020	2021	2022	2023	2024	2025	2026
128		Subletting for Contractor's Designer for Temporary Works (NCE no.3)	32 days	Fri 25/10/19	Wed 27/11/19	Fri 25/10/19	Wed 27/11/19	0 days	126SS+15 days	131,130,144,136	100%			25/10	27/11						
129		Subletting for Independent Checking Engineer (NCE no.3)	27 days	Wed 30/10/19	Mon 25/11/19	Wed 30/10/19	Mon 25/11/19	0 days	122	231,261,271,288,	100%			30/10	25/11						
130		Subletting for Sheetpile and ELS Works	58 days	Wed 8/1/20	Fri 20/3/20	Wed 8/1/20	Fri 20/3/20	0 days	128	231,261,271,288,	100%			8/1	20/3						
131		Subletting for R.C Works	60 days	Mon 1/6/20	Thu 30/7/20	NA	NA	-5.5 days	128	289,306,320,503,	0%			1/6	30/7						
132		Subletting for External Waterproofing	60 days	Mon 6/7/20	Thu 3/9/20	NA	NA	-83.5 days	2	236,239,242,262,	0%			6/7	3/9						
133		Subletting for ABWF & BS Works	60 days	Mon 4/1/21	Thu 4/3/21	NA	NA	-90.5 days	122	247,276,296,309,	0%			4/1	4/3						
134		Subletting for External Works including pipeworks and road works for UV System no.1 (Diversion)	12 days	Thu 20/2/20	Mon 2/3/20	Thu 20/2/20	Mon 2/3/20	0 days	122	435,135	100%			20/2	2/3						
135		Subletting for Drainage and Pipe works at UV System no.1	22 days	Wed 15/4/20	Wed 6/5/20	Wed 15/4/20	Wed 6/5/20	0 days	134		100%			15/4	6/5						
136		Subletting for Pipeworks, Utilities, and Roadworks	22 days	Wed 15/4/20	Wed 6/5/20	Wed 15/4/20	Wed 6/5/20	0 days	128	475,472,473,474,	100%			15/4	6/5						
137		Subletting for trenchless construction	7 days	Wed 22/4/20	Tue 28/4/20	Wed 22/4/20	Tue 28/4/20	0 days	122	442	100%			22/4	28/4						
138		Subletting for Traffic Management Consultant	43 days	Thu 9/1/20	Thu 20/2/20	Thu 9/1/20	Thu 20/2/20	0 days	122	151	100%			9/1	20/2						
139		Subletting for Hard Landscape and Soft Landscape	60 days	Mon 5/6/23	Thu 3/8/23	NA	NA	104 days	122	486	0%							5/6	3/8		
140		Statutory Submission, Submission & Approval	1590 days	Mon 16/9/19	Mon 22/1/24	Mon 16/9/19	NA	1 day			62%			16/9						22/1	
141		Prepare and Submit Subcontractor Management Plan (SMP)	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2	253	100%			16/9	16/9						
142		Prepare and Submit Interface Management Plan	60 days	Mon 16/9/19	Thu 6/8/20	Mon 16/9/19	NA	0 days	2	253	90%			16/9		6/8					
143		Prepare, submit & approve the layout plan of the Temporary Site accommodation	51 days	Fri 20/9/19	Thu 6/8/20	Fri 20/9/19	NA	20.4 days	2	213	90%			20/9		6/8					
144		Prepare, submit & accept the ELS design for deep excavation	207 days	Thu 24/10/19	Sun 21/6/20	Thu 24/10/19	Sun 21/6/20	0 days	128	231,261,271,288,	100%			24/10		21/6					
145		Prepare, submit & accept the Method Statement for Drainage Diversion Works	57 days	Tue 21/4/20	Tue 16/6/20	Tue 21/4/20	Tue 16/6/20	0 days	2	146,435	100%			21/4	16/6						
146		PM approve the Method Statement for Drainage Diversion Works	13 days	Wed 17/6/20	Mon 29/6/20	Wed 17/6/20	Mon 29/6/20	0 days	145	435	100%				17/6	29/6					
147		TTA Management	348 days	Mon 16/9/19	Fri 28/8/20	Mon 16/9/19	NA	196.5 days			85%			16/9		28/8					
148		Excavation Permit Application for San Wan Road (Portion A)	288 days	Mon 16/9/19	Mon 29/6/20	Mon 16/9/19	NA	256.5 days		521	99%			16/9		29/6					
149		Excavation Permit Application for Chuk Wan Street (Portion C)	284 days	Mon 7/10/19	Thu 16/7/20	Mon 7/10/19	NA	0 days	2FS+21 days		80%			7/10		16/7					
150		Prepare TTA Plan, submit & approve for footpath for Stage 1 - Drainage Diversion	67 days	Mon 16/9/19	Thu 21/11/19	Mon 16/9/19	Thu 21/11/19	0 days	2	435	100%			16/9		21/11					
151		Prepare TTA Plan, submit & approve for carriageway at San Wan Road for CLP 13kV substation	45 days	Wed 15/7/20	Fri 28/8/20	Wed 15/7/20	NA	196.5 days	138	523	0%				15/7	28/8					
152		Environmental Aspect Submissions	332 days	Mon 16/9/19	Wed 12/8/20	Mon 16/9/19	NA	0 days	2		98%			16/9		12/8					
153		Notification to EPD for Works Commencement	1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	0 days	2	253	100%			18/9	18/9						
154		Apply & approve for Registration as a Chemical Waste Producer	1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	0 days	2	253	100%			18/9	18/9						
155		Apply & approve for a Billing Account for Disposal of Construction Waste	1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	0 days	2	253	100%			18/9	18/9						
156		Apply & approve for Effluent Discharge Licence	21 days	Thu 9/1/20	Mon 3/8/20	Thu 9/1/20	NA	0 days	2	253	90%			9/1		3/8					
157		Prepare & submit of Project Layout Plan & O-Chart for EP	1 day	Fri 20/9/19	Fri 20/9/19	Fri 20/9/19	Fri 20/9/19	0 days	2	253	100%			20/9	20/9						
158		Prepare & submit Construction Noise Permits	121 days	Mon 16/9/19	Tue 14/1/20	Mon 16/9/19	Tue 14/1/20	0 days	2	159	100%			16/9		14/1					
159		Approval of Construction Noise Permits	60 days	Tue 14/1/20	Wed 12/8/20	Tue 14/1/20	NA	0 days	158	253	80%			14/1		12/8					
160		Prepare, submit Site Management Plan for Trip Ticket System	9 days	Mon 16/9/19	Tue 24/9/19	Mon 16/9/19	Tue 24/9/19	0 days	2		100%			16/9	24/9						
161		Approval of Site Management Plan for Trip Ticket System	249 days	Tue 24/9/19	Fri 29/5/20	Tue 24/9/19	Fri 29/5/20	0 days		253	100%			24/9		29/5					
162		Prepare & submit approve Waste Management Plan	9 days	Mon 16/9/19	Tue 24/9/19	Mon 16/9/19	Tue 24/9/19	0 days	2	163	100%			16/9	24/9						
163		Approval of Waste Management Plan	119 days	Tue 24/9/19	Tue 21/1/20	Tue 24/9/19	Tue 21/1/20	0 days	162	253	100%			24/9		21/1					
164		Prepare & submit Environmental Management Plan	15 days	Mon 16/9/19	Mon 30/9/19	Mon 16/9/19	Mon 30/9/19	0 days	2	165	100%			16/9	30/9						
165		Approval of Environmental Management Plan	37 days	Mon 30/9/19	Wed 6/11/19	Mon 30/9/19	Wed 6/11/19	0 days	164	253	100%			30/9	6/11						
166		Prepare & submit for Temporary Drainage and Management Plan	201 days	Mon 16/9/19	Fri 3/4/20	Mon 16/9/19	Fri 3/4/20	0 days	2	167	100%			16/9		3/4					
167		Approval of Temporary Drainage and Management Plan	30 days	Fri 20/12/19	Mon 3/8/20	Fri 20/12/19	NA	0 days	166	435	90%			20/12		3/8					
168		Prepare, submit & approve for the FSD submissions for CLP 132kV Substation	90 days	Sat 20/11/21	Thu 17/2/22	NA	NA	0 days			0%								20/11	17/2	
169		Prepare and submit arrangement and schedule to FSD	30 days	Sat 20/11/21	Sun 19/12/21	NA	NA	0 days		170	0%								20/11	19/12	
170		FSD approve the arrangement and schedule	60 days	Mon 20/12/21	Thu 17/2/22	NA	NA	0 days	169		0%								20/12	17/2	
171		Trees Related Submissions	1590 days	Mon 16/9/19	Mon 22/1/24	Mon 16/9/19	NA	1 day			36%			16/9							22/1
172		Initial Tree survey and report submission	194 days	Fri 4/10/19	Tue 14/4/20	Fri 4/10/19	Tue 14/4/20	0 days	2	210	100%			4/10		14/4					
173		Prepare and submit and approve the Method Statement of Erection of the protective fencing	26 days	Mon 16/9/19	Fri 11/10/19	Mon 16/9/19	Fri 11/10/19	0 days	2	210	100%			16/9		11/10					
174		Prepare and submit and approve the Method Statement of Tree felling, Preservation, Pruning works & Transplanting	74 days	Fri 11/10/19	Mon 23/12/19	Fri 11/10/19	Mon 23/12/19	0 days	2	210,252	100%			11/10		23/12					
175		Submit Yearly Tree Risk Assessment and Inspection Report	1590 days	Mon 16/9/19	Mon 22/1/24	Mon 16/9/19	NA	1 day	2	47FF	20%			16/9							22/1
176		Others	1093.5 days	Fri 20/9/19	Sat 17/9/22	Fri 20/9/19	NA	0 days			64%			20/9							17/9
177		Approval for Lighting Removal at Portion C-1A of the Site from Hyd	114 days	Thu 26/9/19	Fri 17/1/20	Thu 26/9/19	Fri 17/1/20	0 days	2	223	100%			26/9		17/1					
178		Prepare, submit & approve for commencement of Works near MTRCL protection zone at Sun Wan Road from MTRCL	43 days	Fri 20/9/19	Fri 1/11/19	Fri 20/9/19	Fri 1/11/19	0 days	2	494	100%			20/9		1/11					
179		Prepare, submit & approve for commencement Works along the riverbank by DSD	90 days	Sun 19/6/22	Sat 17/9/22	NA	NA	0 days		481,482,484,483f days	0%								19/6	17/9	
180		Procurement	506 days	Mon 16/9/19	Tue 2/2/21	Mon 16/9/19	NA	-45 days			81%			16/9							2/2
181		Prepare and submit the Procurement Procedure	34 days	Mon 16/9/19	Sat 19/10/19	Mon 16/9/19	Sat 19/10/19	0 days	2	182	100%			16/9		19/10					
182		PM Review & Accept Procurement Procedure	0 days	Sat 19/10/19	Sat 19/10/19	Sat 19/10/19	Sat 19/10/19	0 days	181	183,200,204,205,	100%				19/10						
183		Pipe works material	408 days	Fri 8/11/19	Sat 19/12/20	Fri 8/11/19	NA	0 days	182		78%			8/11		19/12					
184		Prepare & submit concrete pipe material particular	199 days	Tue 12/11/19	Thu 28/5/20	Tue 12/11/19	Thu 28/5/20	0 days	2	185	100%			12/11		28/5					
185		Approval of concrete pipe material	205 days	Thu 28/5/20	Sat 19/12/20	Thu 28/5/20	Sat 19/12/20	0 days	184	186	100%				28/5		19/12				
186		Procurement, deliver & testing of concrete pipe material (1st batch)	0 days	Fri 8/11/19	Mon 25/11/19	Fri 8/11/19	Mon 25/11/19	0 days	185	434,435	100%				8/11		25/11				
187		Procurement, deliver & testing of concrete pipe material (remaining)	247 days	Mon 16/12/19																	

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete	Time Risk Allowance	2018	2019	2020	2021	2022	2023	2024	2025	2026
260		Construction of Digesters	327 days	Mon 7/9/20	Fri 15/10/21	Mon 7/9/20	NA	-111.5 days			8%				7/9						
261		ELS Works (incl. Strut (4-layers) Installation & Excavation (17,600 cu.m))	70 days	Mon 7/9/20	Mon 30/11/20	Mon 7/9/20	NA	-117.5 days	144,130,258,129,252F,262,271		50%	6			7/9	30/11					
262		Construction of Digesters Tank no.1 & external waterproofing works	70 days	Tue 1/12/20	Fri 26/2/21		NA	-117.5 days	261,203,132	266,263SS+40 d	0%	10			1/12	26/2					
263		Construction of Digesters Tank no.2 & external waterproofing works	70 days	Sun 10/1/21	Sat 20/3/21		NA	-140.5 days	262SS+40 days	266,264SS+40 d	0%				10/1	20/3					
264		Construction of Digesters Tank no.3 & external waterproofing works	70 days	Fri 19/2/21	Thu 29/4/21		NA	-140.5 days	263SS+40 days	266,265SS+40 d	0%				19/2	29/4					
265		Construction of Digesters Tank no.4 & external waterproofing works	70 days	Wed 31/3/21	Tue 8/6/21		NA	-140.5 days	264SS+40 days	266	0%				31/3	8/6					
266		Water Test	20 days	Wed 9/6/21	Sat 3/7/21		NA	-111.5 days	262,265,264,263	267	0%				9/6	3/7					
267		Apply Internal Anti-corrosion Protective Lining	28 days	Mon 5/7/21	Thu 5/8/21		NA	-111.5 days	266	268	0%				5/7	5/8					
268	KD3A	Construction of Roof Slab	58 days	Fri 6/8/21	Fri 15/10/21		NA	-111.5 days	267	273,67	0%				6/8	15/10					
269		Construction of Distribution Chamber	168 days	Mon 18/1/21	Fri 13/8/21		NA	-60.5 days			0%				18/1	13/8					
270	SP	Sheet Pile Installation	45 days	Mon 18/1/21	Sat 13/3/21		NA	-60.5 days	259	271	0%				18/1	13/3					
271		ELS Works (incl. Strut (3-layers) Installation & Excavation)	45 days	Mon 15/3/21	Tue 11/5/21		NA	-60.5 days	144,130,270,129,261	272,381	0%	10			15/3	11/5					
272	KD3A	Construction of Distribution Chamber	78 days	Wed 12/5/21	Fri 13/8/21		NA	-60.5 days	271,264	276,273,275,274,	0%	10			12/5	13/8					
273	KD3A	Allow access to Contarctor DE/2018/03 for E&M Installation	0 days	Fri 15/10/21	Fri 15/10/21		NA	-111.5 days	272,268	67	0%					15/10					
274		Drainage System (within Bldg/ Structure) Installation	90 days	Sat 14/8/21	Tue 30/11/21		NA	155.5 days	272	105	0%				14/8	30/11					
275		FRP Walkway & Miscellaneous Installation	90 days	Sat 14/8/21	Tue 30/11/21		NA	155.5 days	272	105	0%				14/8	30/11					
276	SW3	ABWF Works & BS Works, incl. External Lining	90 days	Sat 14/8/21	Tue 30/11/21		NA	155.5 days	272,207,133	277,105	0%				14/8	30/11					
277	SW5	Surrounding Site formation works and road works	180 days	Wed 1/12/21	Sun 29/5/22		NA	484.5 days	276	117	0%				1/12	29/5					
278	*	Sludge Dewatering Building	817 days	Tue 26/11/19	Tue 30/8/22	Tue 26/11/19	NA	318.5 days			44%				26/11	30/8					
279		Site Clearance & Site Set Up	6 days	Tue 26/11/19	Mon 2/12/19	Tue 26/11/19	Mon 2/12/19	0 days	2	280	100%				26/11	2/12					
280		Pre-drilling Works (39no.4rig, 3days/drillhole/rig)(additional length NCE no.10)	20 days	Thu 28/11/19	Fri 20/12/19	Thu 28/11/19	Fri 20/12/19	0 days	126,279	282,281	100%				28/11	20/12					
281		Additional Pre-drilling Works (11no.)	8 days	Mon 23/12/19	Mon 30/12/19	Mon 23/12/19	Mon 30/12/19	0 days	280	282	100%				23/12	30/12					
282		Installation of Monitoring Points	4 days	Fri 10/1/20	Tue 14/1/20	Fri 10/1/20	Tue 14/1/20	0 days	280,281	287,283	100%				10/1	14/1					
283		Sheet Pile Installation- stage1 (NCE NO. 18A, 22 & 25, PMI no.005)	52 days	Wed 15/1/20	Fri 6/3/20	Wed 15/1/20	Fri 6/3/20	0 days	282	287,285,284	100%				15/1	6/3					
284		Setting up plant for pre-bored socked H-pile Installation	5 days	Sat 7/3/20	Thu 12/3/20	Sat 7/3/20	Thu 12/3/20	0 days	283	285,415SS-14 da	100%				7/3	12/3					
285		Pre-bored Socketed H-Pile Installation (202 Nos, 4 Rig, 3days/rig/pile) (NCE no. 18A, 25, 27 & 32)	67 days	Fri 13/3/20	Fri 5/6/20	Fri 13/3/20	Fri 5/6/20	0 days	127,284,283	315,286	100%	6			13/3	5/6					
286		Pile Loading Test	20 days	Tue 30/6/20	Thu 23/7/20	Tue 30/6/20	Thu 23/7/20	0 days	285	288	100%				30/6	23/7					
287		Sheet Pile Installation- stage2 (NCE no. 10, 14) (NCE no. 32 & 41)	239 days	Sat 11/1/20	Sat 31/10/20	Sat 11/1/20	Sat 31/10/20	0 days	282,283	417,288	100%				11/1	31/10					
288		ELS Works (incl. Strut (3-layers) Installation & Excavation (25,000 cu.m))	60 days	Mon 2/11/20	Wed 13/1/21	Mon 2/11/20	NA	-141.5 days	144,130,286,129,287	289,290,471,472,	90%	10			2/11	13/1					
289		R.C. Structure	246 days	Thu 14/1/21	Fri 12/11/21		NA	-141.5 days	204,205,206,131,288,	296,295	0%	10			14/1	12/11					
290		Basement Consturction & external waterproofing works	70 days	Thu 14/1/21	Tue 13/4/21		NA	-141.5 days	288	291	0%				14/1	13/4					
291		Ground Floor Construction @ +7.55mpD	72 days	Wed 14/4/21	Sat 10/7/21		NA	-141.5 days	290	292	0%				14/4	10/7					
292		1/F Construction @ +15.3m mPD	72 days	Mon 12/7/21	Tue 5/10/21		NA	-141.5 days	291	293	0%				12/7	5/10					
293	KD3B	Roof Construction @ +25.65mPD	32 days	Wed 6/10/21	Fri 12/11/21		NA	-141.5 days	292	395,294,73	0%				6/10	12/11					
294	KD3B	Allow access to Contarctor DE/2018/03 for E&M Installation	0 days	Fri 12/11/21	Fri 12/11/21		NA	-141.5 days	293	73	0%					12/11					
295		Allow access to Contarctor DE/2018/03 for E&M Installation	90 days	Sat 13/11/21	Fri 4/3/22		NA	80.5 days	289	105	0%				13/11	4/3					
296	SW5	ABWF Works & BS Works	89 days	Sat 13/11/21	Thu 3/3/22		NA	81.5 days	289,207,133	297,105	0%				13/11	3/3					
297	SW5	Surrounding Site formation works and road works	180 days	Fri 4/3/22	Tue 30/8/22		NA	391.5 days	296	117	0%				4/3	30/8					
298	*	Combined Heat Power Building	734 days	Tue 10/12/19	Tue 7/6/22	Tue 10/12/19	NA	389.5 days			14%				10/12	7/6					
299		Site Clearance & Site Set Up	6 days	Tue 10/12/19	Mon 16/12/19	Tue 10/12/19	Mon 16/12/19	0 days	2,300SF		100%				10/12	16/12					
300		Pre-drilling Works (15no. 2rig, 3days/drillhole/rig) (NCE no. 10)	15 days	Tue 10/12/19	Sat 28/12/19	Tue 10/12/19	Sat 28/12/19	0 days	126FS+28 days	301,299SF	100%				10/12	28/12					
301		Installation of Monitoring Points	4 days	Fri 3/1/20	Tue 7/1/20	Fri 3/1/20	Tue 7/1/20	0 days	300	303	100%				3/1	7/1					
302		Setting up plant for pre-bored socked H-pile Installation (NCE no. 10)	6 days	Wed 8/1/20	Tue 14/1/20	Wed 8/1/20	Tue 14/1/20	0 days	303	303	100%				8/1	14/1					
303		Pre-bored Socketed H-Pile Installation (50 Nos, 2 Rig 3days/rig/pile) (NCE no. 18A, 22, 25, PMI no.005)	77 days	Wed 15/1/20	Tue 21/4/20	Wed 15/1/20	Tue 21/4/20	0 days	127,301,302,497	304	100%	6			15/1	21/4					
304		Pile Loading Test	4 days	Wed 22/4/20	Sat 25/4/20		NA	-10.5 days	303	305	0%				22/4	25/4					
305		Excavation for Pile Cap (2,060 cu.m)	85 days	Mon 22/6/20	Wed 30/9/20		NA	-56.5 days	144,130,304,129	306	0%	10			22/6	30/9					
306	KD3C	R.C. Structure	263 days	Sat 3/10/20	Mon 23/8/21		NA	-56.5 days	204,205,206,131,305,	308,309,307,385,	0%	10			3/10	23/8					
307	KD3C	Allow access to Contarctor DE/2018/03 for E&M Installation	1 day	Tue 24/8/21	Tue 24/8/21		NA	-56.5 days	306	78	0%					24/8	24/8				
308		Drainage System (within Bldg/ Structure) Installation	60 days	Tue 24/8/21	Thu 4/11/21		NA	177.5 days	306	105	0%				24/8	4/11					
309	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining	90 days	Tue 24/8/21	Thu 9/12/21		NA	147.5 days	306,207,133	310,105	0%				24/8	9/12					
310	SW5	Surrounding Site formation works and road works	180 days	Fri 10/12/21	Tue 7/6/22		NA	475.5 days	309	117	0%				10/12	7/6					
311	*	Sewage Pumping Station	838 days	Fri 15/11/19	Wed 14/9/22	Fri 15/11/19	NA	306.5 days			10%				15/11	14/9					
312		Site Clearance & Site Set Up	14 days	Fri 15/11/19	Sat 30/11/19	Fri 15/11/19	Sat 30/11/19	0 days	2	313	100%				15/11	30/11					
313		Pre-drilling Works (4no.1rig, 3days/drillhole/rig)	0 days	Mon 2/12/19	Mon 30/12/19	Mon 2/12/19	Mon 30/12/19	0 days	126FS+14 days,312	314	100%				2/12	30/12					
314		Installation of Monitoring Points	4 days	Fri 17/4/20	Tue 21/4/20	Fri 17/4/20	Tue 21/4/20	0 days	313		100%				17/4	21/4					
315		Setting up plant for pre-bored socked H-pile Installation	5 days	Tue 21/4/20	Sun 26/4/20	Tue 21/4/20	Sun 26/4/20	0 days	285	316	100%				21/4	26/4					
316		Pre-bored Socketed H-Pile Installation (22 Nos, 1 Rig, 3days/rig/pile)	27 days	Mon 27/4/20	Fri 29/5/20	Mon 27/4/20	Fri 29/5/20	0 days	127,315	317	100%	6			27/4	29/5					
317		Pile Loading Test	11 days	Sat 27/6/20	Fri 10/7/20	Sat 27/6/20	Fri 10/7/20	0 days	316,329FS+5 days	319,229FS+5 day	100%				27/6	10/7					
318		Sheet Pile Installation	30 days	Wed 11/11/20	Tue 15/12/20		NA	-61.5 days	317,259FS+8 days	319	0%				11/11	15/12					

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete	Time Risk Allowance	2018	2019	2020	2021	2022	2023	2024	2025	2026
333		First Floor Construction @ +13.50mPD	62 days	Fri 15/1/21	Wed 31/3/21		NA	-50.5 days	332	334	0%										
334	KD3D	Roof Construction @+19.00mPD	40 days	Thu 1/4/21	Mon 24/5/21		NA	-50.5 days	333	336,337,335,83FI	0%										
335	KD3D	Allow access to Contractor DE/2018/03 for E&M Installation	0 days	Mon 24/5/21	Mon 24/5/21		NA	-50.5 days	334	83FF	0%										
336		Drainage System (within Bldg/ Structure) Installation	60 days	Tue 25/5/21	Wed 4/8/21		NA	253.5 days	334	105	0%										
337	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining	90 days	Tue 25/5/21	Wed 8/9/21		NA	223.5 days	207,133,334	338,105	0%										
338	SW5	Surrounding Site formation works and road works	180 days	Thu 9/9/21	Mon 7/3/22		NA	567.5 days	337	117	0%										
339	*	Thermal Hydrolysis Pretreatment	456 days	Thu 19/12/19	Thu 8/7/21		Thu 19/12/19	NA 659.5 days			39%										
340		Site Clearance & Site Set Up	18 days	Thu 19/12/19	Sat 11/1/20		Thu 19/12/19	Sat 11/1/20	0 days	2	341,342	100%									
341		Predrilling Works (3no.1rig, 3days/drillhole/rig) (NCE no. 10)	1 day	Fri 10/1/20	Mon 13/1/20		Fri 10/1/20	Mon 13/1/20	0 days	126FS+24 days,340	343	100%									
342		Additional Predrilling Works (4no.) (NCE no. 12)	1 day	Fri 10/1/20	Mon 13/1/20		Fri 10/1/20	Mon 13/1/20	0 days	340	343	100%									
343		Installation of Monitoring Points	6 days	Fri 1/5/20	Fri 8/5/20		Fri 1/5/20	Fri 8/5/20	0 days	341,342	345	100%									
344		Setting up plant for pre-bored socked H-pile Installation	5 days	Tue 12/5/20	Sat 16/5/20		Tue 12/5/20	Sat 16/5/20	0 days		345	100%									
345		Pre-bored Socketed H-Pile Installation (15 Nos, 1 Rig, 3days/rig/pile)	0 days	Mon 18/5/20	Sat 20/6/20		Mon 18/5/20	Sat 20/6/20	0 days	127,343,344,328	346	100% 6									
346		Pile Loading Test	25 days	Mon 27/7/20	Fri 11/9/20		Mon 27/7/20	Fri 11/9/20	0 days	345,229FS+5 days	347,258SS+10 d	100%									
347		Excavation for Pile Cap (160 cu.m)	20 days	Thu 29/10/20	Fri 20/11/20		Thu 29/10/20	Fri 20/11/20	0 days	144,130,346,330	348	100%									
348	KD3E	R.C. Plinth	40 days	Sat 21/11/20	Sat 9/1/21		Sat 21/11/20	Sat 9/1/21	0 days	347	320,349,88	100%									
349	SW5	Surrounding Site formation works and road works	180 days	Sun 10/1/21	Thu 8/7/21		NA	809.5 days	348	117	0%										
350	*	Ferric Chloride Dosing Facilities	374 days	Tue 25/5/21	Thu 25/8/22		NA	NA -89.5 days			0%										
351		Excavation for Raft Footing (105 cu.m)	34 days	Tue 25/5/21	Mon 5/7/21		NA	-89.5 days	2	352	0%										
352		Plate Load Test	18 days	Tue 6/7/21	Mon 26/7/21		NA	-89.5 days	351	353	0%										
353		R.C. Structure	66 days	Tue 27/7/21	Wed 13/10/21		NA	-89.5 days	352,131,203	354	0% 5										
354	KD3E	Steel Roof Structure (On-site Fabrication)	65 days	Fri 15/10/21	Fri 31/12/21		NA	-89.5 days	353	355,88	0%										
355	SW3	ABWF Works & BS Works	45 days	Mon 3/1/22	Sat 26/2/22		NA	85.5 days	354,207,133	356,105	0%										
356	SW5	Surrounding Site formation works and road works	180 days	Sun 27/2/22	Thu 25/8/22		NA	396.5 days	355	117	0%										
357	*	Fire Hydrant and Booster Pump Room	329 days	Mon 19/7/21	Thu 25/8/22		NA	NA -39.5 days			0%										
358		Excavation for Raft Footing (160 cu.m)	10 days	Mon 19/7/21	Thu 29/7/21		NA	-39.5 days	2,364	359,405	0%										
359		Plate Load Test	18 days	Fri 30/7/21	Thu 19/8/21		NA	-39.5 days	358	360	0%										
360	KD3E	R.C. Structure & waterproofing works	60 days	Thu 21/10/21	Fri 31/12/21		NA	-89.5 days	359,131,366,203,132	361,88	0% 5										
361	SW3	ABWF Works & BS Works	45 days	Mon 3/1/22	Sat 26/2/22		NA	85.5 days	360,207,133	362,105	0%										
362	SW5	Surrounding Site formation works and road works	180 days	Sun 27/2/22	Thu 25/8/22		NA	396.5 days	361	117	0%										
363	*	Transformer and Switchroom	324 days	Thu 6/5/21	Thu 9/6/22		NA	NA -49.5 days			0%										
364		Excavation for Raft Footing (310 cu.m)	20 days	Thu 6/5/21	Sat 29/5/21		NA	-49.5 days	2,390	365,358	0%										
365		Plate Load Test	18 days	Mon 31/5/21	Mon 21/6/21		NA	-49.5 days	364	366	0%										
366	KD3E	R.C. Structure	60 days	Mon 9/8/21	Wed 20/10/21		NA	-89.5 days	365,131,392,203	367,360,88	0% 5										
367	SW3	ABWF Works & BS Works	45 days	Thu 21/10/21	Sat 11/12/21		NA	145.5 days	366,207,133	368,105	0%										
368	SW5	Surrounding Site formation works and road works	180 days	Sun 12/12/21	Thu 9/6/22		NA	473.5 days	367	117	0%										
369	*	Water Meter Cabinet	217 days	Tue 3/8/21	Wed 27/4/22		NA	NA -60.5 days			0%										
370		Excavation for Raft Footing (6 cu.m)	10 days	Tue 3/8/21	Fri 13/8/21		NA	-60.5 days	2	371	0%										
371		Plate Load Test	18 days	Sat 14/8/21	Fri 3/9/21		NA	-60.5 days	370	372	0%										
372		R.C. Structure	30 days	Sat 4/9/21	Mon 11/10/21		NA	-60.5 days	371,131,203	373,376	0% 3										
373	SW4	ABWF Works & BS Works	15 days	Tue 12/10/21	Fri 29/10/21		NA	5.5 days	372,207,133	374,111	0%										
374	SW5	Surrounding Site formation works and road works	180 days	Sat 30/10/21	Wed 27/4/22		NA	516.5 days	373	117	0%										
375	*	Guard House	224 days	Tue 12/10/21	Sun 17/7/22		NA	NA -60.5 days			0%										
376		Excavation to Formation	21 days	Tue 12/10/21	Fri 5/11/21		NA	-60.5 days	2,372	377	0%										
377		R.C. Structure	30 days	Sat 6/11/21	Fri 10/12/21		NA	-60.5 days	131,376,203	378	0% 3										
378	SW4	ABWF Works & BS Works	30 days	Sat 11/12/21	Tue 18/1/22		NA	-60.5 days	377,207,133	379,111	0%										
379	SW5	Surrounding Site formation works and road works	180 days	Wed 19/1/22	Sun 17/7/22		NA	435.5 days	378	117	0%										
380	*	Coolers Pumping Station	245 days	Wed 12/5/21	Mon 7/3/22		NA	NA -51.5 days			0%										
381		Excavation for Raft Footing (185 cu.m)	40 days	Wed 12/5/21	Tue 29/6/21		NA	-51.5 days	2,271	382,400	0%										
382	SW4	R.C. Structure	60 days	Wed 30/6/21	Wed 8/9/21		NA	-51.5 days	381,131,203	402,383,88	0% 5										
383	SW5	Surrounding Site formation works and road works	180 days	Thu 9/9/21	Mon 7/3/22		NA	567.5 days	382	117	0%										
384	*	Waste Gas Buner	197 days	Tue 24/8/21	Mon 25/4/22		NA	NA -55.5 days			0%										
385		Excavation for Raft Footing (75cu.m)	15 days	Tue 24/8/21	Thu 9/9/21		NA	-55.5 days	2,306	386,410	0%										
386		Plate Load Test	18 days	Fri 10/9/21	Sat 2/10/21		NA	-55.5 days	385	387	0%										
387	KD3E	R.C. Plinth	20 days	Mon 4/10/21	Wed 27/10/21		NA	-55.5 days	386,131	412,388,88	0%										
388	SW5	Surrounding Site formation works and road works	180 days	Thu 28/10/21	Mon 25/4/22		NA	518.5 days	387	117	0%										
389	*	Plant Services Water System	243 days	Mon 12/4/21	Thu 3/2/22		NA	NA -89.5 days			0%										
390		Excavation for Raft Footing (800 cu.m)	20 days	Mon 12/4/21	Wed 5/5/21		NA	-89.5 days	2	391,364	0%										
391		Plate Load Test	18 days	Thu 6/5/21	Thu 27/5/21		NA	-89.5 days	390	392	0%										
392	KD3E	Basement Construction @+1.20mPD	60 days	Fri 28/5/21	Sat 7/8/21		NA	-89.5 days	391,131	366,393,88	0%										
393	SW5	Surrounding Site formation works and road works	180 days	Sun 8/8/21	Thu 3/2/22		NA	599.5 days	392	117	0%										
394	*	Deodorization System No. 11	218 days	Sat 13/11/21	Wed 10/8/22		NA	NA -121.5 days			0%										
395		Excavation for Raft Footing (1,280 cu.m)	20 days	Sat 13/11/21	Mon 6/12/21		NA	-121.5 days	2,293	396	0%										
396		Plate Load Test	18 days	Tue 7/12/21	Wed 29/12/21		NA	-121.5 days	395	397	0%										
397	KD3E	R.C. Plinth	34 days	Thu 30/12/21	Fri 11/2/22	</															

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete	Time Risk Allowance	2018	2019	2020	2021	2022	2023	2024	2025	2026
409	*	Deodorization System No. 12	200 days	Fri 10/9/21	Wed 18/5/22	NA	NA	-55.5 days			0%										
410		Excavation to Formation	20 days	Fri 10/9/21	Tue 5/10/21	NA	NA	-55.5 days	2,385	411	0%					10/9	5/10	18/5			
411		Plate Load Test	18 days	Wed 6/10/21	Wed 27/10/21	NA	NA	-55.5 days	410	412	0%					6/10	27/10				
412	KD3E	R.C. Plinth	20 days	Thu 28/10/21	Fri 19/11/21	NA	NA	-55.5 days	411,131,387	413,88	0%					28/10	19/11				
413	SW5	Surrounding Site formation works and road works	180 days	Sat 20/11/21	Wed 18/5/22	NA	NA	495.5 days	412	117	0%					20/11	18/5				
414	*	Underpass & Pump House	711 days	Thu 20/2/20	Sat 16/7/22	Thu 20/2/20	NA	356.5 days			13%				20/2		16/7				
415		Temporary Storage for H pile works and access for DSD	150 days	Thu 20/2/20	Fri 21/8/20	Thu 20/2/20	NA	3.5 days	284SS-14 days	417	85%				20/2	21/8					
416		Stage 1 (Bay A1 - B2)	452 days	Mon 4/1/21	Sat 16/7/22	NA	NA	-105.5 days			0%					4/1		16/7			
417		Sheet Pile Installation + ELS Works (incl. Strut (2-layers) Installation & Excavation	50 days	Mon 4/1/21	Fri 5/3/21	NA	NA	-105.5 days	15,287,257,415	418	0%					4/1	5/3				
418		R.C. Structure	80 days	Sat 6/3/21	Tue 15/6/21	NA	NA	-105.5 days	417,131,203	419	0% 10					6/3	15/6				
419	SW4	Backfilling and Road works reinstatement	30 days	Wed 16/6/21	Wed 21/7/21	NA	NA	-105.5 days	418	423,420,111	0%					16/6	21/7				
420		Surrounding Site formation works and road works	180 days	Thu 22/7/21	Mon 17/1/22	NA	NA	436.5 days	419	421	0%					22/7	17/1				
421	SW5	ABWF & BS Works	180 days	Tue 18/1/22	Sat 16/7/22	NA	NA	436.5 days	420	117	0%					18/1	16/7				
422		Stage 2 (Bay B3)	264 days	Thu 22/7/21	Mon 13/6/22	NA	NA	-105.5 days			0%					22/7		13/6			
423		TTA implementation at Chuk Wan Street southeast bound	2 days	Thu 22/7/21	Fri 23/7/21	NA	NA	-105.5 days	419	424	0%					22/7	23/7				
424		Sheet Pile Installation + ELS Works (incl. Strut (2-layers) Installation & Excavation (300 cu.m))	30 days	Sat 24/7/21	Fri 27/8/21	NA	NA	-105.5 days	423	425	0%					24/7	27/8				
425		R.C. Structure	45 days	Sat 28/8/21	Fri 22/10/21	NA	NA	-105.5 days	424	426	0%					28/8	22/10				
426		Backfilling and Reinstatement Works	20 days	Sat 23/10/21	Mon 15/11/21	NA	NA	-105.5 days	425	427	0%					23/10	15/11				
427		TTA Implementation at Chuk Wan Street northwest bound	2 days	Tue 16/11/21	Wed 17/11/21	NA	NA	-105.5 days	426	428	0%					16/11	17/11				
428		Sheet Pile Installation + ELS Works (incl. Strut (2-layers) Installation & Excavation	20 days	Thu 18/11/21	Fri 10/12/21	NA	NA	-105.5 days	427	429	0%					18/11	10/12				
429		R.C. Structure	45 days	Sat 11/12/21	Tue 8/2/22	NA	NA	-105.5 days	428	430	0%					11/12	8/2				
430	SW4	Backfilling and Road works reinstatement	30 days	Wed 9/2/22	Tue 15/3/22	NA	NA	-105.5 days	429	431,111	0%					9/2	15/3				
431	SW5	ABWF & BS Works	90 days	Wed 16/3/22	Mon 13/6/22	NA	NA	469.5 days	430	117	0%					16/3	13/6				
432	*	Pipe Works and Utility Installation	1470 days	Fri 22/11/19	Sat 16/11/24	Fri 22/11/19	NA	0 days			3%				22/11		16/11				
433		Pipe Works At Chuk Wan Street	560 days	Fri 22/11/19	Thu 14/10/21	Fri 22/11/19	NA	578.5 days			27%					22/11	14/10				
434		Drainage Diversion (Existing Drainage Culvert)	508.5 days	Fri 22/11/19	Thu 12/8/21	Fri 22/11/19	NA	-111 days	223,186		56%					22/11	12/8				
435		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and Reconstructed Storm Water Manhole MHD33 - A (PPMI no. 008), (PPMI no. 028)	39.5 days	Fri 22/11/19	Thu 10/9/20	Fri 22/11/19	Thu 10/9/20	0 days	124,145,150,146,134, 436		100%	28,4.5				22/11	10/9				
436		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and Reconstructed Storm Water Manhole MHD33 - A and Additional concrete surround at MH18, MH16 and additional manhole (Type 1) [(PPMI no. 018), (PPMI no. 015)]	108 days	Mon 6/1/20	Sat 3/10/20	Mon 6/1/20	Sat 3/10/20	0 days	435	437	100%	13,5			6/1	3/10					
437	KD1A	Stage 1 - Backfilling Works for Drainage Diversion	9 days	Tue 28/4/20	Wed 6/5/20	Tue 28/4/20	Wed 6/5/20	0 days	436	228	100%					28/4	6/5				
438	KD1A	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMH1003177A, to Abandon of Existing Drainage Culvert (1 Cell, 1000mm x 1150mm) within Portion C-1A & C-1B	64.5 days	Thu 11/3/21	Tue 1/6/21	NA	NA	-111 days	239	439	0%					11/3	1/6				
439	SW1	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMH1003177A, to Abandon of Existing Drainage Culvert (1 Cell, 1000mm x 1150mm) outside Portion C-1A & C-1B	60 days	Tue 1/6/21	Thu 12/8/21	NA	NA	-111 days	438	93	0%					1/6	12/8				
440	SW4	Trenchless Work for Pipe Installation	397 days	Sat 13/6/20	Thu 14/10/21	Sat 13/6/20	NA	578.5 days			7%					13/6	14/10				
441		Installation of Monitoring Points	4 days	Sat 13/6/20	Wed 17/6/20	Sat 13/6/20	Wed 17/6/20	0 days		443	100%					13/6	17/6				
442		Construction of Temporary Jacking Pit	62 days	Thu 18/6/20	Mon 31/8/20	Thu 18/6/20	NA	578.5 days	15,137		50%					18/6	31/8				
443		Trial Pit Excavation & UU Detection Works	0 days	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	0 days	2,441	444	100%					18/6					
444		Pit Construction (11m x 9m)	56 days	Fri 26/6/20	Mon 31/8/20	Fri 26/6/20	NA	578.5 days	443	447	50%					26/6	31/8				
445		Pipe Jacking Operation (NCE no. 034, 060, 062, 066)	154 days	Tue 1/9/20	Tue 9/3/21	NA	NA	0 days			0%					1/9	9/3				
446		Twin DN900 DI pipe (CHAT & CHAU)	107 days	Tue 1/9/20	Sat 9/1/21	NA	NA	565.5 days			0% (x)										
447		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment	7 days	Tue 1/9/20	Tue 8/9/20	NA	NA	578.5 days	444	448	0%					1/9	8/9				
448		Pipe Jacking Operation for CHAT DN900 DI pipe (30m, 3m/day)	16 days	Wed 9/9/20	Sat 26/9/20	NA	NA	578.5 days	447	451,450,449	0% 6					9/9	26/9				
449		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment	7 days	Sun 27/9/20	Sat 3/10/20	NA	NA	716.5 days	448	450	0%					27/9	3/10				
450		Pipe Jacking Operation for CHAU DN900 DI pipe (30m, 3m/day)	16 days	Sun 4/10/20	Mon 19/10/20	NA	NA	716.5 days	448,449	451	0%					4/10	19/10				
451		Installation of grouting pipe and rail	7 days	Tue 20/10/20	Wed 28/10/20	NA	NA	579.5 days	448,450	452	0%					20/10	28/10				
452		Pipe Laying Works	25 days	Thu 29/10/20	Thu 26/11/20	NA	NA	579.5 days	451	453	0%					29/10	26/11				
453		Formwork Erection and grouting works	7 days	Fri 27/11/20	Fri 4/12/20	NA	NA	579.5 days	452	454	0%					27/11	4/12				
454		Backfilling works	14 days	Sat 5/12/20	Mon 21/12/20	NA	NA	579.5 days	453	456	0%					5/12	21/12				
455		Pipe Jacking Operation for DN2200 MS pipe (CHAV)	61 days	Tue 22/12/20	Tue 9/3/21	NA	NA	579.5 days			0% (x)					22/12	9/3				
456		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment	7 days	Tue 22/12/20	Thu 31/12/20	NA	NA	579.5 days	454	457	0%					22/12	31/12				
457		Pipe Jacking Operation for twin DN900 DI pipe (30m, 3m/day)	16 days	Sat 2/1/21	Wed 20/1/21	NA	NA	579.5 days	456	458	0% 6					2/1	20/1				
458		Installation of grouting pipe and rail	7 days	Thu 21/1/21	Thu 28/1/21	NA	NA	579.5 days	457	459	0%					21/1	28/1				
459		Pipe Laying Works	10 days	Fri 29/1/21	Tue 9/2/21	NA	NA	579.5 days	458	460	0%					29/1	9/2				
460		Formwork Erection and grouting works	7 days	Wed 10/2/21	Sat 20/2/21	NA	NA	579.5 days	459	462,461	0%					10/2	20/2				
461		Backfilling works	14 days	Mon 22/2/21	Tue 9/3/21	NA	NA	579.5 days	460	462	0%					22/2	9/3				
462		Reinstatement of Temporary Launching Pit	30 days	Wed 10/3/21	Sat 17/4/21	NA	NA	579.5 days	460,461	463	0%					10/3	17/4				
463	SW5	Surrounding Site formation works and road works	180 days	Sun 18/4/21	Thu 14/10/21	NA	NA	711.5 days	462	117	0%					18/4	14/10				
464		Process Pipeworks, All Sewerage, Utilities & Roadworks in Portion C of the Site	350 days	Thu 14/1/21	Mon 21/3/22	NA	NA	-122.5 days			0%					14/1	21/3				
465		Process Pipeworks	60 days	Thu 11/3/21	Wed 26/5/21	NA	NA	-167.5 days			0%					11/3	26/5				
466	KD1A	Connection pipe at UV System no.1 & Effluent Pumping Station no.1	60 days	Thu 11/3/21	Wed 26/5/21	NA	NA	-167.5 days			0%					11/3	26/5				

Task  Milestone  Summary  Critical 

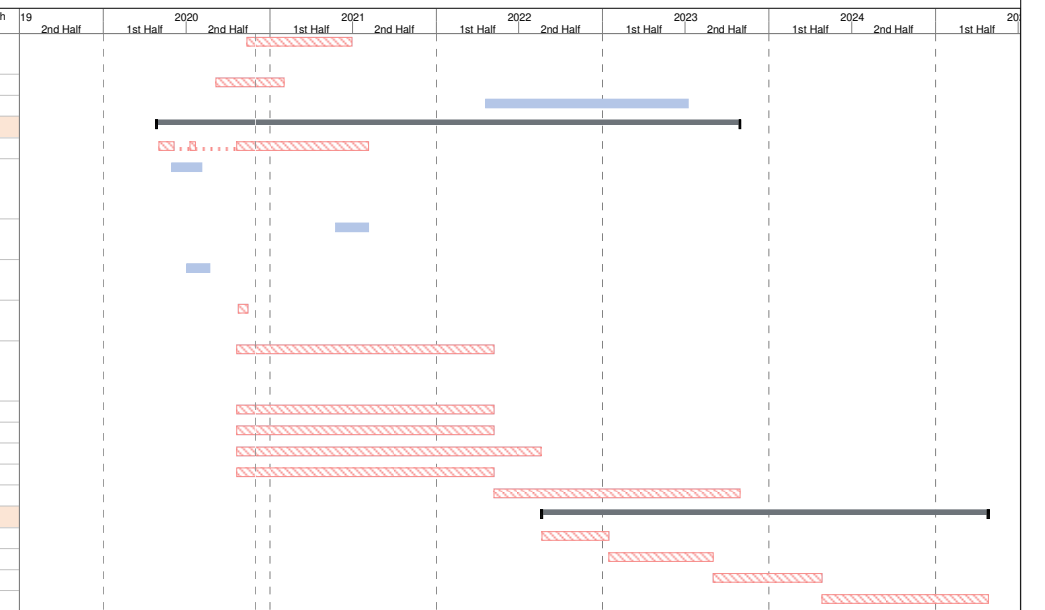
Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1																Revised Works Programme (Status Date: 31/10/2020) [Delay of the works due to some, but not all of, NCE/CE/EWN are shown in this programme]																		
ID	Activity ID	Key Date	Task Name	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete	Individual Critical Path	19	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	20			
71	ET1B-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Wed 20/1/21	Fri 5/2/21		NA	NA 70		1247 days		0%																		
72	ET1B-1200		Other Events to KD1B (not all)	0 days	NA	NA	4 days	Fri 13/11/20	Tue 17/11/20	Fri 13/11/20	NA			1247 days		75%																		
73	ET1B-1210		Special working arrangement due to COVID-19 in January 2020	0 days	NA	NA	4 days	Fri 13/11/20	Tue 17/11/20	Fri 13/11/20	NA 22	70		1247 days		75%																		
74	ET1C-1000		Effects to KD1C	0 days	NA	NA	70 days	Fri 5/8/22	Fri 28/10/22		NA			737 days		0%																		
75	ET1C-1100		Inclement Weather to KD1C (cal. Day)	0 days	NA	NA	66 days	Wed 10/8/22	Fri 28/10/22		NA			737 days		0%																		
76	ET1C-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	51 days	Wed 10/8/22	Tue 11/10/22		NA	79	77	737 days		0%																		
77	ET1C-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Wed 12/10/22	Fri 28/10/22		NA	76		737 days		0%																		
78	ET1C-1200		Other Events to KD1C (not all)	0 days	NA	NA	4 days	Fri 5/8/22	Tue 9/8/22		NA			737 days		0%																		
79	ET1C-1210		Special working arrangement due to COVID-19 in January 2020	0 days	NA	NA	4 days	Fri 5/8/22	Tue 9/8/22		NA	23	76	737 days		0%																		
80	ET1E-1000		Effects to KD1E	0 days	NA	NA	8 days	Tue 3/1/23	Wed 11/1/23		NA			676 days		0%																		
81	ET1E-1100		Inclement Weather to KD1E (cal. Day)	0 days	NA	NA	8 days	Tue 3/1/23	Wed 11/1/23		NA			676 days		0%																		
82	ET1E-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	8 days	Tue 3/1/23	Wed 11/1/23		NA	25	83	676 days		0%																		
83	ET1E-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	8 days	Wed 11/1/23	Wed 11/1/23		NA	82		676 days		0%																		
84	ET1F-1000		Effects to KD1F	0 days	NA	NA	61 days	Fri 7/1/22	Tue 22/3/22		NA			915 days		0%																		
85	ET1F-1100		Inclement Weather to KD1F (cal. Day)	0 days	NA	NA	61 days	Fri 7/1/22	Tue 22/3/22		NA			915 days		0%																		
86	ET1F-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	46 days	Fri 7/1/22	Fri 4/3/22		NA	26	87	915 days		0%																		
87	ET1F-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Sat 5/3/22	Tue 22/3/22		NA	86		915 days		0%																		
88	ET1G-1000		Effects to KD1G	0 days	NA	NA	61 days	Mon 6/6/22	Tue 16/8/22		NA			797 days		0%																		
89	ET1G-1100		Inclement Weather to KD1G (cal. Day)	0 days	NA	NA	61 days	Mon 6/6/22	Tue 16/8/22		NA			797 days		0%																		
90	ET1G-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	46 days	Mon 6/6/22	Fri 29/7/22		NA	27	91	797 days		0%																		
91	ET1G-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Sat 30/7/22	Tue 16/8/22		NA	90		797 days		0%																		
92	ET1H-1000		Effects to KD1H	0 days	NA	NA	61 days	Tue 10/8/21	Fri 22/10/21		NA			1038 days		0%																		
93	ET1H-1100		Inclement Weather to KD1H (cal. Day)	0 days	NA	NA	61 days	Tue 10/8/21	Fri 22/10/21		NA			1038 days		0%																		
94	ET1H-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	46 days	Tue 10/8/21	Mon 4/10/21		NA	28	95	1038 days		0%																		
95	ET1H-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Tue 5/10/21	Fri 22/10/21		NA	94		1038 days		0%																		
96	ET2A-1000		Effects to KD2A	0 days	NA	NA	69 days	Mon 29/3/21	Wed 23/6/21		NA			1138 days		0%																		
97	ET2A-1100		Inclement Weather to KD2A (cal. Day)	0 days	NA	NA	65 days	Tue 6/4/21	Wed 23/6/21		NA			1138 days		0%																		
98	ET2A-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	50 days	Tue 6/4/21	Fri 4/6/21		NA	101	99	1138 days		0%																		
99	ET2A-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Sat 5/6/21	Wed 23/6/21		NA	98		1138 days		0%																		
100	ET2A-1200		Other Events to KD2A (not all)	0 days	NA	NA	4 days	Mon 29/3/21	Thu 1/4/21		NA			1138 days		0%																		
101	ET2A-1210		Special working arrangement due to COVID-19 in January 2020	0 days	NA	NA	4 days	Mon 29/3/21	Thu 1/4/21		NA	31	98	1138 days		0%																		
102	ET2A-1000		Effects to KD2B	0 days	NA	NA	62 days	Tue 12/1/21	Sat 27/3/21		NA			1207 days		0%																		
103	ET2A-1100		Inclement Weather to KD2B (cal. Day)	0 days	NA	NA	62 days	Tue 12/1/21	Sat 27/3/21		NA			1207 days		0%																		
104	ET2A-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	47 days	Tue 12/1/21	Wed 10/3/21		NA	32	105	1207 days		0%																		
105	ET2A-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Thu 11/3/21	Sat 27/3/21		NA	104		1207 days		0%																		
106	ET3A-1000		Effects to KD3A	0 days	NA	NA	70 days	Mon 30/10/23	Mon 22/1/24		NA			371 days		0%																		
107	ET3A-1100		Inclement Weather to KD3A (cal. Day)	0 days	NA	NA	66 days	Fri 3/11/23	Mon 22/1/24		NA			371 days		0%																		
108	ET3A-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	51 days	Fri 3/11/23	Thu 4/1/24		NA	111	109	371 days		0%																		
109	ET3A-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Fri 5/1/24	Mon 22/1/24		NA	108		371 days		0%																		
110	ET3A-1200		Other Events to KD3A (not all)	0 days	NA	NA	4 days	Mon 30/10/23	Thu 2/11/23		NA			371 days		0%																		
111	ET3A-1210		Special working arrangement due to COVID-19 in January 2020	0 days	NA	NA	4 days	Mon 30/10/23	Thu 2/11/23		NA	33	108	371 days		0%																		
112	ETS1-1000		Effects to Section 1 of the Works	0 days	NA	NA	74 days	Sat 18/11/23	Mon 19/2/24		NA			350 days		0%																		
113	ETS1-1100		Inclement Weather to Section 1 of the Works (cal. Day)	0 days	NA	NA	70 days	Thu 23/11/23	Mon 19/2/24		NA			350 days		0%																		
114	ETS1-1110		Delay and Disruption of Works before September 2020	0 days	NA	NA	55 days	Thu 23/11/23	Mon 29/1/24		NA	117	115	350 days		0%																		
115	ETS1-1120		Delay and Disruption of Works for the month of September 2020	0 days	NA	NA	15 days	Tue 30/1/24	Mon 19/2/24		NA	114		350 days		0%																		
116	ETS1-1200		Other Events to Section 1 of the Works (not all)	0 days	NA	NA	4 days	Sat 18/11/23	Wed 22/11/23		NA			350 days		0%																		
117	ETS1-1210		Special working arrangement due to COVID-19 in January 2020	0 days	NA	NA	4 days	Sat 18/11/23	Wed 22/11/23		NA	35	114	350 days		0%																		
118	ETS2-1000		Effects to Section 2 of the Works	0 days	NA	NA	69 days	Sat 7/5/22	Fri 29/7/22		NA			812 days		0%																		
119	ETS2-1100		Inclement Weather to Section 2 of the Works (cal. Day)	0 days	NA	NA</																												

Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1																Revised Works Programme (Status Date: 31/10/2020) [Delay of the works due to some, but not all of, NCE/CE/EWN are shown in this programme]																						
ID	Activity ID	Key Date	Task Name	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete	Individual Critical Path	19	2nd Half	1st Half	2020	2nd Half	1st Half	2021	2nd Half	1st Half	2022	2nd Half	1st Half	2023	2nd Half	1st Half	2024	2nd Half	1st Half	2025		
222	CW-1310		Construction of concrete plinth	0 days	NA	NA	24 days	Wed 11/3/20	Wed 8/4/20	Wed 11/3/20	Wed 8/4/20/219	223		0 days		100%																						
223	CW-1320		Installation of Deodorizer	0 days	NA	NA	40 days	Thu 9/4/20	Sat 30/5/20	Thu 9/4/20	Sat 30/5/20/222	224		0 days		100%																						
224	CW-1330		Testing & commissioning	0 days	NA	NA	15 days	Mon 1/6/20	Wed 17/6/20	Mon 1/6/20	Wed 17/6/20/223	225FS-1 day		0 days		100%																						
225	CW-1340		Demolishment of the existing carbon deodorization unit	0 days	NA	NA	20 days	Mon 17/6/20	Sat 11/7/20	Wed 17/6/20	Sat 11/7/20/224FS-1 day			0 days		100%																						
226	CW-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	393 days	Tue 18/2/20	Wed 16/6/21	Tue 18/2/20	NA			0 days		69%																						
227	CW-1405		Joint Initial Survey arrangement with MTRCL (NCE)	0 days	NA	NA	92 days	Tue 18/2/20	Wed 10/6/20	Tue 18/2/20	Wed 10/6/20	228		0 days		100%																						
228	CW-1410		Remedial Works for uncharted sludge pipe leakage (CE 030)	0 days	NA	NA	1 day	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20/227	229		0 days		100%																						
229	CW-1420		Diversion of uncharted DN250 sludge pipe (CE 030)	0 days	NA	NA	32 days	Sat 14/3/20	Fri 24/4/20	Sat 14/3/20	Fri 24/4/20/228	235,230,231		0 days		100%																						
230	CW-1421		Diversion of uncharted 2' water pipe (CE 24)	0 days	NA	NA	9 days	Wed 15/4/20	Fri 24/4/20	Wed 15/4/20	Fri 24/4/20/229	235		0 days		100%																						
231	CW-1422		Additional Underground Utility Scanning for existing sludge pipe (CE 032)	0 days	NA	NA	1 day	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20/229	232,233		0 days		100%																						
232	CW-1423		HV Cable Diversion for Inlet Works (PMI 84)	0 days	NA	NA	60 days	Mon 20/4/20	Thu 2/7/20	Mon 20/4/20	Thu 2/7/20/231			0 days		100%																						
233	CW-1424		Diversion of Existing Sludge Rising Main and Sewerage System (PMI 081)	0 days	NA	NA	0 days	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20/231			0 days		100%																						
234	CW-1425		Demolition of Deodorization System and Facilities between Existing Primary Sludge Thickeners and Primary Sludge Pump Pit (PMI 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%																						
235	CW-1430		Removal of concrete surround and uncharted sludge pipe (CE 030)	0 days	NA	NA	20 days	Fri 24/4/20	Tue 19/5/20	Fri 24/4/20	Tue 19/5/20/229,230	236		0 days		100%																						
236	CW-1440		Remedial works for uncharted pipe and unforeseen water seepage (NCE 0021)	0 days	NA	NA	10 days	Fri 8/5/20	Tue 19/5/20	Fri 8/5/20	Tue 19/5/20/235	237,238		0 days		100%																						
237	CW-1450		Trench Excavation for 1800mm dia pipeline and manholes	146 days	Thu 6/2/20	Mon 3/8/20	132 days	Wed 20/5/20	Sat 24/10/20	Wed 20/5/20	Sat 24/10/20/220,236			0 days		100%																						
238	CW-1451		Sheetpile installation (on hold due to identification of uncharted obstruction) (EWN 0045)	0 days	NA	NA	26 days	Wed 20/5/20	Thu 18/6/20	Wed 20/5/20	Thu 18/6/20/236	239		0 days		100%																						
239	CW-1456		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 15/7/20/238	240		0 days		100%																						
240	CW-1452		Identification of uncharted concrete surround and pipes near MHA01 (EWN 0045)	0 days	NA	NA	29 days	Thu 16/7/20	Tue 18/8/20	Thu 16/7/20	Tue 18/8/20/239	243		0 days		100%																						
241	CW-1455		Removal of existing DSD drawlps near IRC & exposure of CLP cables with installation of additional temporary support (EWN 0051)	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%																						
242	CW-1453		Removal of uncharted concrete surround and pipes near MHA01 (EWN 0045) and Sheetpile installation	0 days	NA	NA	10 days	Fri 7/8/20	Tue 18/8/20	Fri 7/8/20	Tue 18/8/20	243		0 days		100%																						
243	CW-1454		Removal of top 500mm soil and replace with rockfill at MHA01, MHA02, IRC, trench MHA01 to MHA02 (NCE 0073 & 78)	0 days	NA	NA	16 days	Wed 12/8/20	Sat 5/9/20	Wed 12/8/20	Sat 5/9/20/242,240	244		0 days		100%																						
244	CW-1461		Replacement of Grade 200 Rockfill below Proposed Manhole MHA02 at Inlet Works No. 1 (NCE 0072, PMI 079, CE 079)	0 days	NA	NA	40 days	Sun 6/9/20	Sat 24/10/20	Sun 6/9/20	Sat 24/10/20/243	245		0 days		100%																						
245	CW-1460		Construct MH MHA01, MHA02, MHA03, MHA04 and Inlet Reception Chamber (NCE 0022)	65 days	Mon 30/3/20	Fri 19/6/20	88 days	Tue 27/10/20	Tue 9/2/21	Tue 27/10/20	NA/244	246,271		-260 days		6%																						
246	CW-1470		Lay 1800mm dia concrete pipe (NCE for additional concrete bedding)	24 days	Sat 20/6/20	Mon 20/7/20	88 days	Wed 10/2/21	Tue 1/6/21	NA	NA/245	247		-260 days		0%																						
247	CW-1480	KD1B	Connection to existing Inlet Chamber	12 days	Tue 21/7/20	Mon 3/8/20	12 days	Wed 2/6/21	Wed 16/6/21	NA	NA/246	43FF,293		-260 days		0%																						
248	CW-1500		Diversion of Leachate Rising Main, Sludge Pipes and Tank Drain	150 days	Thu 6/2/20	Fri 7/8/20	459 days	Tue 26/11/19	Wed 16/6/21	Tue 26/11/19	NA			0 days		57%																						
249	CW-1520	KD1B	Diversion of Tank Drain MHD8.5 (approx. 70m CHES1 & CHES2)	150 days	Thu 6/2/20	Fri 7/8/20	63 days	Sat 19/9/20	Fri 4/12/20	Sat 19/9/20	NA/269	43FF,293		-106 days		54%																						
250	CW-1510		Diversion of Tank Drain MHD9.5 to MHA04 (approx. 70m 675mm dia concrete pipe, 24m DN250 DI leachate rising main, 90m CHES1&S2 DN250 CI)	150 days	Thu 6/2/20	Fri 7/8/20	459 days	Tue 26/11/19	Wed 16/6/21	Tue 26/11/19	NA/220			0 days		56%																						
251			Joint Initial Survey arrangement with MTRCL (NCE)	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%																						
252			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%																						
253	CW-1511		Tank Drain Diversion near MTRCL track	0 days	NA	NA	79 days	Thu 11/6/20	Sat 12/9/20	Thu 11/6/20	Sat 12/9/20			0 days		100%																						
254	CW-1511a		Excavation of trial pit near MHD9.5 (TP45 & 47) (CE 040)	0 days	NA	NA	12 days	Mon 27/7/20	Sat 8/8/20	Mon 27/7/20	Sat 8/8/20	255		0 days		100%																						
255	CW-1511b		Relocation of Proposed Manhole MHD9.5 and MHA04 (PMI 051)	0 days	NA	NA	30 days	Mon 10/8/20	Sat 12/9/20	Mon 10/8/20	Sat 12/9/20/254	256		0 days		100%																						
256	CW-1511c		Uncharted cables found near MTRC track and identification(EWN 044)	0 days	NA	NA	1 day	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20/255	257		0 days		100%																						
257	CW-1511d		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 24/6/20/256	258		0 days		100%																						
258	CW-1511e		Lower the ground surface, opening and additional trial pit (TP38) (EWN 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	CW-1511f		Excavation of Trial Pits near Manhole MHA04 and MH09 (PMI 040)	0 days	NA	NA	60 days	Thu 11/6/20	Fri 21/8/20	Thu 11/6/20	Fri 21/8/20/258	260		0 days		100%																						
260	CW-1511h		Awaiting for AECOM instruction for alignment confirmation for sludge pipe, tank drain & drainage works (CE 051)	0 days	NA	NA	12 days	Mon 10/8/20	Sat 22/8/20	Mon 10/8/20	Sat 22/8/20/259	261		0 days		100%																						
261			Additional Special manhole for tank drain (NCE)	0 days	NA	NA	35 days																															

Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1															Revised Works Programme (Status Date: 31/10/2020) (Delay of the works due to some, but not all of, NCE/CE/EWN are shown in this programme)																						
ID	Activity ID	Key Date	Task Name	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete	Individual Critical Path	19	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half		
293	CW-3100		Predrilling (32hrs, 3rigs, 2.5days/drillhole/rig)	40 days	Mon 4/1/21	Mon 22/2/21	27 days	Thu 17/6/21	Mon 19/7/21		NA	NA 242,249,263,270,271	294	-260 days	1	0%																					
294	CW-3200		Pre-bored H piles (167nos, 2rigs, 2days/pile/rig)	133 days	Tue 23/2/21	Wed 4/8/21	145 days	Tue 20/7/21	Tue 11/1/22		NA	NA 144,293	295SS+110 days,297,296	-260 days	5	0%																					
295	CW-3300		Sheetpile Installation (3,840sq.m, 1rigs, 50sqm/rig/day)	80 days	Tue 23/3/21	Wed 30/6/21	80 days	Mon 29/11/21	Tue 8/3/22		NA	NA 294SS+110 days,145	297	-260 days		0%																					
296	CW-3400		Pile Load Test	26 days	Thu 5/8/21	Fri 3/9/21	21 days	Wed 12/1/22	Tue 8/2/22		NA	NA 294	297,298,299,302	-236 days		0%																					
297	CW-3500		ELS works (strutting 4 layers, excavate soil 7445cu.m)	77 days	Sat 4/9/21	Mon 4/12/21	120 days	Wed 9/3/22	Thu 4/8/22		NA	NA 295,294,146,296		-260 days	5	0%																					
298	CW-3510		Phase C (Grid A1 to G3) - Excavation to -3.3mPD and blinding	77 days	Fri 4/6/21	Mon 6/12/21	120 days	Wed 9/3/22	Thu 4/8/22		NA	NA 296		807 days		0%																					
299	CW-3520		Phase B (Grid A1 to G3) - Excavation to -7.5mPD and blinding	77 days	Fri 4/6/21	Mon 6/12/21	120 days	Wed 9/3/22	Thu 4/8/22		NA	NA 296	306,310	-260 days		0%																					
300	CW-3600		R.C. Structure works	296 days	Thu 5/8/21	Thu 4/8/22	404 days	Wed 9/2/22	Wed 21/6/23		NA	NA 148,192,193,196,194		-260 days	5	0%																					
301	CW-3610		Phase A (Grid G3 to L7)	105 days	Thu 5/8/21	Wed 8/12/21	105 days	Wed 9/2/22	Fri 16/9/22		NA	NA		-36 days		0%																					
302	CW-3611		Rebar fix and formwork and concreting for the pile cap (G/F)	40 days	Thu 5/8/21	Mon 20/9/21	70 days	Wed 9/2/22	Fri 6/5/22		NA	NA 296	303	-36 days		0%																					
303	CW-3612		Rebar fix and formwork and concreting upto +13.45mPD (1/F)	25 days	Tue 21/9/21	Fri 22/10/21	55 days	Sat 7/5/22	Wed 13/7/22		NA	NA 302	304	-36 days		0%																					
304	CW-3613		Rebar fix and formwork and concreting upto +25.80mPD (R/F)	40 days	Sat 23/10/21	Thu 8/12/21	55 days	Thu 14/7/22	Fri 16/9/22		NA	NA 303	44FF	-36 days		0%																					
305	CW-3620		Phase B (Grid A1 to G3) (621 sqm)	193 days	Tue 7/12/21	Thu 4/8/22	260 days	Fri 5/8/22	Wed 21/6/23		NA	NA		-260 days		0%																					
306	CW-3621		Rebar fix and formwork and concreting for the Inlet Works structure upto Ground Level	54 days	Tue 7/12/21	Mon 14/2/22	100 days	Fri 5/8/22	Fri 21/2/22		NA	NA 299	307	-260 days		0%																					
307	CW-3622		Apply waterproofing membrane and backfilling	14 days	Tue 15/2/22	Wed 2/3/22	28 days	Sat 3/12/22	Sat 7/1/23		NA	NA 306,191	308	-260 days		0%																					
308	CW-3623		Rebar fix and formwork and concreting for the Inlet Works structure upto Roof Level	105 days	Thu 3/3/22	Thu 4/8/22	132 days	Mon 9/1/23	Wed 21/6/23		NA	NA 307	313,314,44FF	-260 days		0%																					
309	CW-3630		Phase C (G1 to L3) (662 sqm)	260 days	Thu 16/9/21	Thu 4/8/22	260 days	Fri 5/8/22	Wed 21/6/23		NA	NA		-260 days		0%																					
310	CW-3631		Rebar fix and formwork and concreting for the Inlet Works structure upto Ground Level	54 days	Tue 7/12/21	Mon 14/2/22	100 days	Fri 5/8/22	Fri 21/2/22		NA	NA 299	311	-260 days		0%																					
311	CW-3632		Apply waterproofing membrane and backfilling	14 days	Tue 15/2/22	Wed 2/3/22	28 days	Sat 3/12/22	Sat 7/1/23		NA	NA 310,191	312	-260 days		0%																					
312	CW-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	132 days	Mon 9/1/23	Wed 21/6/23		NA	NA 311	314,44FF,313	-260 days		0%																					
313	CW-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	Wed 21/6/23	Wed 21/6/23		NA	NA 312,308	44FF	-260 days		0%																					
314	CW-3800	SW1	ABWF works + BS works	90 days	Fri 5/8/22	Mon 21/11/22	150 days	Fri 23/6/23	Tue 19/12/23		NA	NA 312,195,153,308	56FF	397 days		0%																					
315	CW-3900	SW2	Process Pipe CHE chainage 0-20 & CHF chainage 0-20	0 days	NA	NA	180 days	Wed 2/9/20	Tue 13/4/21	Wed 2/9/20	NA	NA 279SS	57FF	1196 days		27%																					
316	CPS-0000	*	Primary Sedimentation Tanks, B-3	1115 days	Mon 18/11/19	Wed 23/8/23	1270 days	Mon 18/11/19	Fri 1/3/24	Mon 18/11/19	NA 8			340 days		21%																					
317	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	NA 2		318	-25 days		57%																					
318	CPS-1100		Identification of existing cables near Primary Sedimentation Tank (PMI 88, CE 88)	0 days	NA	NA	60 days	Mon 26/7/21	Tue 5/10/21		NA	NA 317	319	-21 days		0%																					
319	CPS-1200		Reinstatement and re-commissioning of existing Primary Sedimentation Tank No. 4 and 6 (by others)	0 days	NA	NA	30 days	Wed 6/10/21	Wed 10/11/21		NA	NA 318	320	-50 days		0%																					
320	CPS-2000		Demolition of existing primary sedimentation tanks no. 1 & 2	45 days	Mon 13/12/21	Wed 9/2/22	40 days	Thu 11/11/21	Wed 29/12/21		NA	NA 134,172,174,319	321	-50 days		0%																					
321	CPS-3000		Predrilling (88hrs, 3rigs, 3days/drillhole/rig)	38 days	Thu 10/2/22	Fri 25/3/22	68 days	Thu 30/12/21	Wed 23/3/22		NA	NA 320,139,394	322	-50 days	1	0%																					
322	CPS-4000		Pre-bored H piles (205nos, 4rigs, 2days/pile/rig)	102 days	Sat 26/3/22	Mon 1/8/22	115 days	Thu 24/3/22	Sat 13/8/22		NA	NA 321,144,395	323FS-40 days,325,324	-50 days	5	0%																					
323	CPS-5000		Sheetpile Installation (FSP-II, 3360sq.m, 1rigs, 50sqm/rig/day)	85 days	Wed 25/5/22	Fri 2/9/22	70 days	Tue 28/6/22	Mon 19/9/22		NA	NA 322FS-40 days,145	325	-50 days		0%																					
324	CPS-6000		Pile Load Test	26 days	Tue 2/8/22	Wed 31/8/22	21 days	Mon 15/8/22	Wed 7/9/22		NA	NA 322	325	-41 days		0%																					
325	CPS-7000		ELS works (20000cu.m soil with 2 layers walling / strutting)	45 days	Sat 3/9/22	Fri 28/10/22	70 days	Tue 20/9/22	Mon 12/12/22		NA	NA 322,147,324,323,140	326	-50 days	3	0%																					
326	CPS-8000	KD1D	R.C. Structure works	92 days	Sat 29/10/22	Mon 20/2/23	104 days	Tue 13/12/22	Mon 24/4/23		NA	NA 325,149	327,328,45FF,329,330	-50 days	3	0%																					
327	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 20/4/23	Mon 24/4/23		NA	NA 326	45FF	-50 days		0%																					
328	CPS-10000	SW1	ABWF works + BS works	150 days	Tue 21/2/23	Wed 23/8/23	170 days	Tue 25/4/23	Thu 16/11/23		NA	NA 326,195,153	56FF	425 days		0%																					
329	CPS-11000	SW1	Flowmeter Chamber no.1	60 days	Tue 21/2/23	Sat 6/5/23	60 days	Tue 25/4/23	Fri 7/7/23		NA	NA 326	56FF	535 days		0%																					
330	CPS-12000	SW3	Process Pipe CHG chainage 0-50, CHH chainage 0-80, CHI chainage 0-95 & CHJ chainage 0-40	0 days	NA	NA	255 days	Tue 25/4/23	Fri 1/3/24		NA	NA 326	58FF	340 days		0%																					
331	CBR-0000	*	Bioreactors No.2A & 2B, B-4	1106 days	Mon 18/11/19	Sat 12/8/23	1577 days	Mon 18/11/19	Tue 18/3/25	Mon 18/11/19	NA 9			33 days		17%																					
332	CBR-1000		Operation of 2no. Existing 8000m air mains over bioreactor no.2	360 days	Mon 18/11/19	Wed 11/11/20	360 days	Mon 18/11/19	Wed 11/11/20	Mon 18/11/19	NA 2	336FF		90 days		99%																					
333	CBR-2000		Trial dewatering works and installation of additional stop logs at BR2 common channel due to malfunctioned of existing penstock at FST no. 5 and 7 (EWN 055)	0 days	NA																																

Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1														Revised Works Programme (Status Date: 31/10/2020) (Delay of the works due to some, but not all of, NCE/CE/EWN are shown in this programme)																							
ID	Activity ID	Task Name	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete	Individual Critical Path	19	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half			
374	CMF-7200	KD1F	112 days	Fri 10/9/21	Tue 25/1/22	90 days	Fri 12/11/21	Thu 3/3/22	NA	NA	NA.373SS+30 days,371	377,47FF,376	-107 days		0%																						
375	CMF-7300	KD1G	120 days	Wed 26/1/22	Sat 25/6/22	180 days	Tue 25/1/22	Sat 3/9/22	NA	NA	NA.373	379,48FF,380,378	-77 days		0%																						
376	CMF-7400	KD1G	120 days	Wed 26/1/22	Sat 25/6/22	180 days	Fri 4/3/22	Wed 12/10/22	NA	NA	NA.374	48FF,378,379,380	-107 days		0%																						
377	CMF-8000	KD1F	0 days	Tue 25/1/22	Tue 25/1/22	0 days	Thu 3/3/22	Thu 3/3/22	NA	NA	NA.374,373	47FF,378	-45 days		0%																						
378	CMF-9000	KD1G	0 days	Sat 25/6/22	Sat 25/6/22	0 days	Wed 12/10/22	Wed 12/10/22	NA	NA	NA.377,376,375	48FF	-107 days		0%																						
379	CMF-10000	SW1	210 days	Mon 27/6/22	Thu 9/3/23	210 days	Thu 13/10/22	Thu 29/6/23	NA	NA	NA.375,195,153,376	56FF	541 days		0%																						
380	CMF-11000	SW3	0 days	NA	NA	450 days	Thu 13/10/22	Mon 29/4/24	NA	NA	NA.375,376	58FF	301 days		0%																						
381	CSA-0000	*	455 days	Wed 20/5/20	Thu 25/11/21	693 days	Mon 18/11/19	Sat 19/3/22	Mon 18/11/19	NA	NA	NA	917 days		23%																						
382	CSA-1000	*	0 days	NA	NA	333 days	Mon 18/11/19	Thu 31/12/20	Mon 18/11/19	NA	NA	NA	1277 days		43%																						
383	CSA-1100		0 days	NA	NA	80 days	Tue 9/6/20	Fri 11/9/20	Tue 9/6/20	Fri 11/9/20	NA	NA	0 days		100%																						
384	CSA-1101		0 days	NA	NA	12 days	Mon 18/11/19	Sat 30/11/19	Mon 18/11/19	Sat 30/11/19	NA	NA	0 days		100%																						
385	CSA-1200		0 days	NA	NA	60 days	Mon 5/10/20	Thu 31/12/20	Mon 5/10/20	NA	NA	NA	1277 days		38%																						
386	CSA-1300		0 days	NA	NA	60 days	Mon 5/10/20	Mon 14/12/20	Mon 5/10/20	NA	NA	NA	1290 days		38%																						
387	CSA-1400		0 days	NA	NA	50 days	Thu 22/10/20	Sat 19/12/20	Thu 22/10/20	NA	NA	392SS	1285 days		16%																						
388	CSA-1500		0 days	NA	NA	50 days	Thu 22/10/20	Sat 19/12/20	Thu 22/10/20	NA	NA	NA	1285 days		16%																						
389	CSA-1600		0 days	NA	NA	50 days	Thu 22/10/20	Sat 19/12/20	Thu 22/10/20	NA	NA	NA	1285 days		16%																						
390	CSA-1700		0 days	NA	NA	50 days	Thu 22/10/20	Sat 19/12/20	Thu 22/10/20	NA	NA	NA	1285 days		16%																						
391			0 days	NA	NA	10 days	Tue 6/10/20	Fri 16/10/20	Tue 6/10/20	Fri 16/10/20	NA	NA	0 days		100%																						
392	CSA-2000		0 days	NA	NA	50 days	Thu 22/10/20	Sat 19/12/20	Thu 22/10/20	NA	NA	387SS	395	-78 days		16%																					
393	CSA-1800		0 days	NA	NA	50 days	Thu 22/10/20	Sat 19/12/20	Thu 22/10/20	NA	NA	163	397	-9 days		16%																					
394	CSA-3000		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	NA	321,395	0 days		100%																						
395	CSA-4000		60 days	Mon 8/6/20	Tue 18/8/20	48 days	Mon 21/12/20	Sat 20/2/21	NA	NA	NA	144,394,392	322,396	-78 days		2																					
396	CSA-5000		26 days	Wed 19/8/20	Thu 17/9/20	21 days	Mon 22/2/21	Wed 17/3/21	NA	NA	NA	395	398,397	-78 days		0%																					
397	CSA-6000		28 days	Wed 19/8/20	Sat 14/9/20	21 days	Thu 18/3/21	Wed 14/4/21	NA	NA	NA	145,396,393	398	-78 days		0%																					
398	CSA-7000		75 days	Mon 21/9/20	Wed 19/2/21	60 days	Thu 15/4/21	Sat 26/6/21	NA	NA	NA	397,147,396,140	399	-78 days		2																					
399	CSA-8000	KD1H	186 days	Mon 21/12/20	Mon 9/6/21	114 days	Mon 28/6/21	Thu 11/1/21	NA	NA	NA	152,192,193,398,196,194	400,401,49FF	-78 days		5																					
400	CSA-9000	KD1H	0 days	Mon 9/8/21	Mon 9/8/21	0 days	Thu 11/1/21	Thu 11/1/21	NA	NA	NA	399	49FF	-78 days		0%																					
401	CSA-10000	SW1	90 days	Tue 10/8/21	Thu 25/11/21	90 days	Mon 29/11/21	Sat 19/3/22	NA	NA	NA	399,195,153,437SS	56FF	917 days		0%																					
402	CSA-0000	*	503 days	Mon 7/9/20	Sat 21/5/22	404 days	Mon 9/11/20	Sat 19/3/22	Mon 9/11/20	NA	NA	NA	917 days		0%																						
403	CSA-1000		120 days	Mon 7/9/20	Sat 30/1/21	120 days	Mon 9/11/20	Wed 7/4/21	Mon 9/11/20	NA	NA	134,172,174	413,420,426,432,438	48 days		6%																					
404	CCS-1000	*	168 days	Mon 1/2/21	Thu 26/8/21	380 days	Mon 7/12/20	Sat 19/3/22	NA	NA	NA	NA	104 days		0%																						
405	CCS-1100		10 days	Mon 1/2/21	Thu 11/2/21	10 days	Mon 7/12/20	Thu 17/12/20	NA	NA	NA	140	414,406	104 days		0%																					
406	CCS-1110		0 days	NA	NA	30 days	Fri 18/12/20	Mon 25/1/21	NA	NA	NA	405	407	104 days		0%																					
407	CCS-1200		14 days	Tue 16/2/21	Wed 3/3/21	14 days	Tue 26/1/21	Wed 10/2/21	NA	NA	NA	406	408	104 days		0%																					
408	CCS-1300	KD1J	45 days	Mon 15/3/21	Mon 10/5/21	60 days	Thu 11/2/21	Wed 28/4/21	NA	NA	NA	407	51FF,412,409	104 days		2																					
409	CCS-1310		0 days	NA	NA	60 days	Thu 29/4/21	Mon 12/7/21	NA	NA	NA	408	410	104 days		0%																					
410	CCS-1310		0 days	NA	NA	60 days	Tue 13/7/21	Mon 20/9/21	NA	NA	NA	409	411	104 days		0%																					
411	CCS-1400	KD1J	0 days	Mon 10/5/21	Mon 10/5/21	0 days	Mon 20/9/21	Mon 20/9/21	NA	NA	NA	410	51FF	104 days		0%																					
412	CCS-1500	SW1	90 days	Tue 11/5/21	Thu 26/8/21	90 days	Mon 29/11/21	Sat 19/3/22	NA	NA	NA	195,153,408,437SS	56FF	917 days		0%																					
413	CCS-2000	*	189 days	Thu 4/3/21	Thu 21/10/21	284 days	Thu 8/4/21	Sat 19/3/22	NA	NA	NA	403	48 days		0%																						
414	CCS-2100		15 days	Thu 4/3/21	Sat 20/3/21	30 days	Thu 8/4/21	Thu 13/5/21	NA	NA	NA	140,405	415,421	48 days		0%																					
415	CCS-2200		14 days	Mon 22/3/21	Fri 9/4/21	14 days	Fri 14/5/21	Mon 31/5/21	NA	NA	NA	414	416	153 days		0%																					
416	CCS-2300	KD1J	45 days	Tue 11/5/21	Mon 5/7/21	45 days	Tue 1/6/21	Sat 24/7/21	NA	NA	NA	415	417,51FF,418,419	153 days		2																					
417	CCS-2400	KD1J	0 days	Mon 5/7/21	Mon 5/7/21																																

Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1																	
Revised Works Programme (Status Date: 31/10/2020) [Delay of the works due to some, but not all of, NCE/CE/EWN are shown in this programme]																	
ID	Activity ID	Key Date	Task Name	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete	Individual Critical Path
456	CAA-1500		Re-alignment of DN800 Temporary Air Main (CHTA) and Provision of FRP Staircases (PM064, CE064)	0 days	NA	NA	185 days	Wed 11/11/20	Mon 28/6/21	NA	NA	NA 452,453,454		-135 days		0%	
457	CAA-2000	KD11	B7-A Alternation works for existing Power House	122 days	Fri 4/9/20	Sat 30/1/21	122 days	Fri 4/9/20	Sat 30/1/21	Fri 4/9/20	NA	13FS-1 day,134,172,174,182,50FF,446		0 days		39%	
458	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,181	58FF	536 days		0%	
459	CUU-0000	*	External Underground Service, Utilities, Road/Drain	1091 days	Mon 24/2/20	Sat 28/10/23	1041 days	Mon 27/4/20	Sat 28/10/23	Mon 27/4/20	NA 16			441 days		7%	
460	CUU-1000	KD2A	Process Pipes CHR and CHS (approx. 93m twin DN900 D.I.)	325 days	Mon 24/2/20	Sat 27/3/21	272 days	Mon 27/4/20	Wed 4/8/21	Mon 27/4/20	NA	190,154	469SS+48 days,467SS+48 days,46-103.8 days			18%	
461	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 (NCE 029)	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%	
462	CUU-1000b		Trenchless work for Process Pipes CHR and CHS (approx. 7m twin DN900 D.I.) (PPMI 040)	0 days	NA	NA	60 days	Mon 24/5/21	Wed 4/8/21	NA	NA	463,460FF		1103.2 days		0%	
463	CUU-1001		Removal of Abandoned DN1800 Concrete Pipe and Concrete Mass near Existing UV Disinfection Channel at CHR & CHS Process Pipe Works Area (CE 033)	0 days	NA	NA	43 days	Thu 2/7/20	Thu 20/8/20	Thu 2/7/20	Thu 20/8/20		462	0 days		100%	
464	CUU-1002		Grouting for Sheung Shui Slaughter House Boundary Walls along CHR & CHS Pipes Works Area (PPMI 064)	0 days	NA	NA	20 days	Fri 23/10/20	Mon 16/11/20	Fri 23/10/20	NA			0 days		84%	
465	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	190,460SS+48 days,154	57FF,470			0 days	2%
466	CUU-3000	SW2	Drainage	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	190,460SS+48 days,154	57FF,470		0 days	5	2%
467	CUU-4000	SW2	Sewerage	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	460SS+48 days,190,154	57FF,470		0 days	5	2%
468	CUU-5000	SW2	Waterworks	550 days	Mon 29/6/20	Fri 6/5/22	542 days	Mon 19/10/20	Wed 17/8/22	Mon 19/10/20	NA	460SS+48 days,190,154	472FS+2 days,57FF		0 days	5	2%
469	CUU-6000	SW2	Cable Ducts	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	460SS+48 days,190,154	470,57FF		0 days	5	2%
470	CUU-7000	KD3A	Roadworks	540 days	Fri 31/12/21	Sat 28/10/23	440 days	Sat 7/5/22	Sat 28/10/23	NA	NA	469,466,467,465	54FF		0 days	5	0%
471	CLW-0000	*	Landscaping Works	854 days	Wed 11/5/22	Thu 27/3/25	794 days	Sat 20/8/22	Fri 25/4/25	NA	NA 16			0 days		0%	
472	CLW-1000	SW3	Irrigation System	120 days	Wed 11/5/22	Fri 30/9/22	120 days	Sat 20/8/22	Fri 13/1/23	NA	NA	468FS+2 days,190	473,58FF		0 days		0%
473	CLW-2000	SW3	Hard Landscaping Works	220 days	Mon 3/10/22	Mon 3/7/23	185 days	Sat 14/1/23	Wed 30/8/23	NA	NA	472,155	474,58FF		0 days	5	0%
474	CLW-3000	SW3	Soft Landscaping Works	220 days	Tue 4/7/23	Tue 26/3/24	185 days	Thu 31/8/23	Thu 25/4/24	NA	NA	473,155	475,58FF		0 days	5	0%
475	CLW-4000	DLP	Establishment Works (365 days)	294 days	Wed 27/3/24	Thu 27/3/25	365 days	Fri 26/4/24	Fri 25/4/25	NA	NA	474,155	58FF,60FF		0 days	5	0%



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	2020				2021				2022				2023				2024																	
								J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A

SWH - Main Works Stage 1 Sidestream Treatment Facilities & E&M Works for Sludge Treatment Facilities

Contract Data

Starting Date & Completion Date							
AS000010	Contract Date (LOA)	0	11-Oct-19 A		21-Nov-20		
AS000020	Starting Date	0	23-Oct-19 A		21-Nov-20		
AS000110	Whole Contract Period (1626 days from starting date)	1626	23-Oct-19 A	04-Apr-24	21-Nov-20	04-Apr-24	0
AS000220	Completion Date for the whole of the Works	0		04-Apr-24		04-Apr-24	0

Access Date

AS001100	Portion C-1A (within 480 to 550 days from starting date)	550	23-Oct-19 A	24-Apr-21	21-Nov-20	24-Apr-21	0
AS001120	Planned Access Date for Portion C-1A	1	24-Apr-21	24-Apr-21*	24-Apr-21	24-Apr-21	0
AS001200	Portion C-2A (within 705 to 795 days from starting date)	795	23-Oct-19 A	25-Dec-21	21-Nov-20	25-Dec-21	0
AS001220	Planned Access Date for Portion C-2A	1	25-Dec-21	25-Dec-21*	25-Dec-21	25-Dec-21	0
AS001300	Portion C-2B (within 765 to 855 days from starting date)	855	23-Oct-19 A	23-Feb-22	21-Nov-20	23-Feb-22	0
AS001320	Planned Access Date for Portion C-2B	1	23-Feb-22	23-Feb-22*	23-Feb-22	23-Feb-22	0
AS001400	Portion C-2C (within 715 to 805 days from starting date)	805	23-Oct-19 A	04-Jan-22	21-Nov-20	04-Jan-22	0
AS001420	Planned Access Date for Portion C2-C	1	04-Jan-22	04-Jan-22*	04-Jan-22	04-Jan-22	0
AS001500	Portion C-2D (within 825 to 945 days from starting date)	945	23-Oct-19 A	24-May-22	21-Nov-20	24-May-22	0
AS001520	Planned Access Date for Portion C-2D	1	24-May-22	24-May-22*	24-May-22	24-May-22	0
AS001600	Portion C-3 (within 615 to 705 days from starting date)	705	23-Oct-19 A	26-Sep-21	21-Nov-20	26-Sep-21	0
AS001620	Planned Access Date for Portion C-3	1	26-Sep-21	26-Sep-21*	26-Sep-21	26-Sep-21	0
AS001700	Portion B-1 (within 285 to 345 days from starting date)	345	23-Oct-19 A	30-Sep-20 A	21-Nov-20	21-Nov-20	0
AS001720	Planned Access Date for Portion B-1	1	30-Sep-20 A	30-Sep-20 A	21-Nov-20	21-Nov-20	0
AS001800	Portion B-2 (within 615 to 705 days from starting date)	705	23-Oct-19 A	26-Sep-21	21-Nov-20	26-Sep-21	0
AS001820	Planned Access Date for Portion B-2	1	26-Sep-21	26-Sep-21*	26-Sep-21	26-Sep-21	0
AS001900	Works Area WA1-B (starting date)	1	23-Oct-19 A	23-Oct-19 A	22-Nov-20	22-Nov-20	0
AS001910	Planned Access Date for Works Area WA1-B	1	23-Oct-19 A	23-Oct-19 A	22-Nov-20	22-Nov-20	0
AS001920	Works Area WA3 (starting date)	1	23-Oct-19 A	23-Oct-19 A	22-Nov-20	22-Nov-20	0
AS001930	Planned Access Date for Works Area WA3	1	23-Oct-19 A	23-Oct-19 A	22-Nov-20	22-Nov-20	0

Key Dates

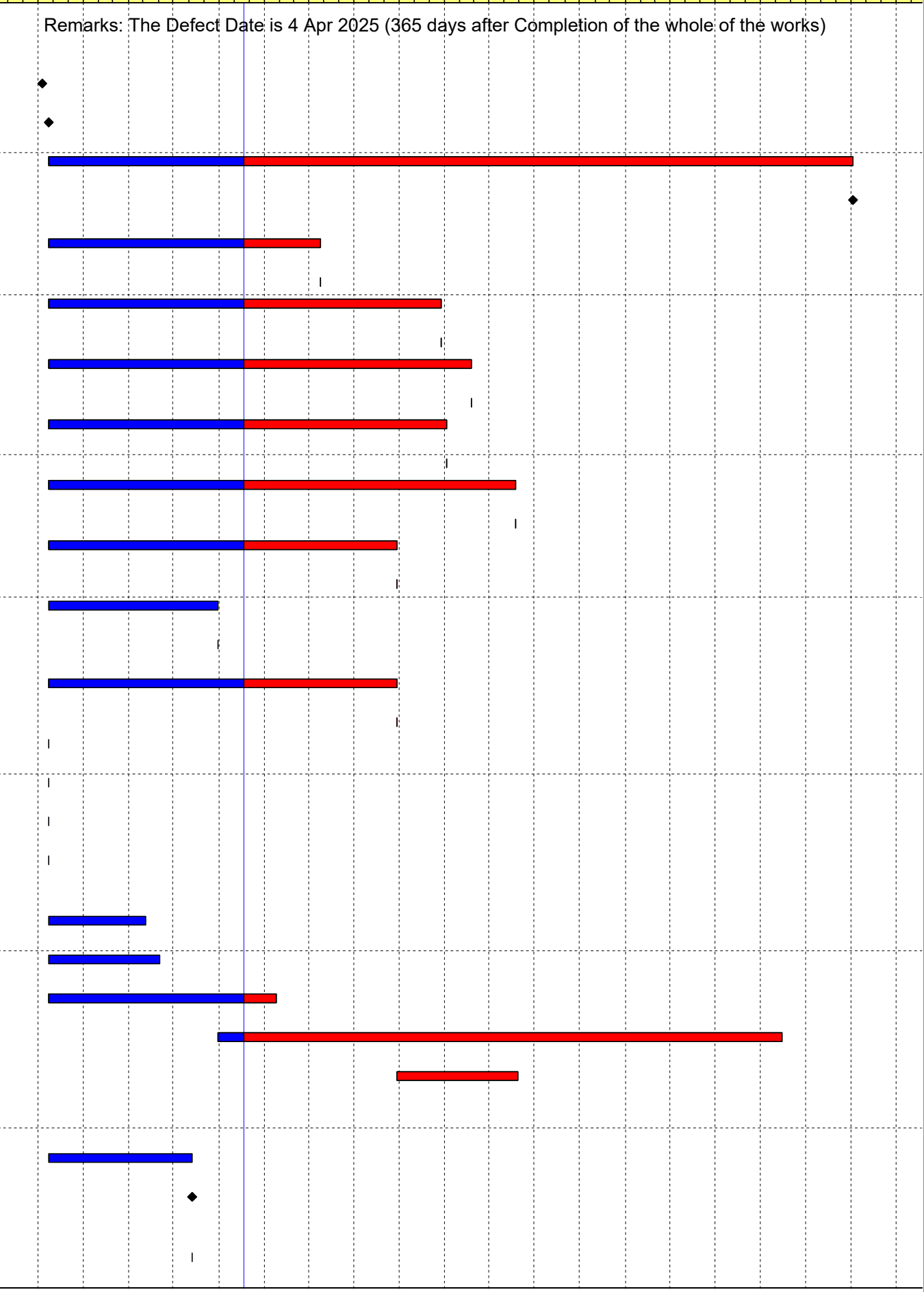
AS002010	KD1A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of UV System No.1 and Effluent Pumping Station No.1	196	23-Oct-19 A	05-May-20 A	01-Feb-21	01-Feb-21	0
AS002020	KD2A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, Workshop No.2, etc.	226	23-Oct-19 A	04-Jun-20 A	21-Nov-20	21-Nov-20	0
AS002040	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	461	23-Oct-19 A	25-Jan-21*	21-Nov-20	25-Jan-21	0
AS002050	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	21-Nov-20	14-Nov-23	0
AS002060	KD5A - Completion of the BS Fittings Installation at CLP Sub-Station at Workshop No. 2 (245d after Portion C-3 Access)	246	26-Sep-21	29-May-22*	26-Sep-21	29-May-22	0

Completion Date

Section 1 - Complete All Design at UV System No.1 & EP Station No. 1							
AS003100	Contract Duration of Section 1	291	23-Oct-19 A	08-Aug-20 A	04-Apr-24	04-Apr-24	0
AS003110	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20 A		04-Apr-24	0

Time Risk Allowance and Planned Completion

AS003105	Time Risk Allowance for Section 1	1	08-Aug-20 A	08-Aug-20 A	04-Apr-24	04-Apr-24	0
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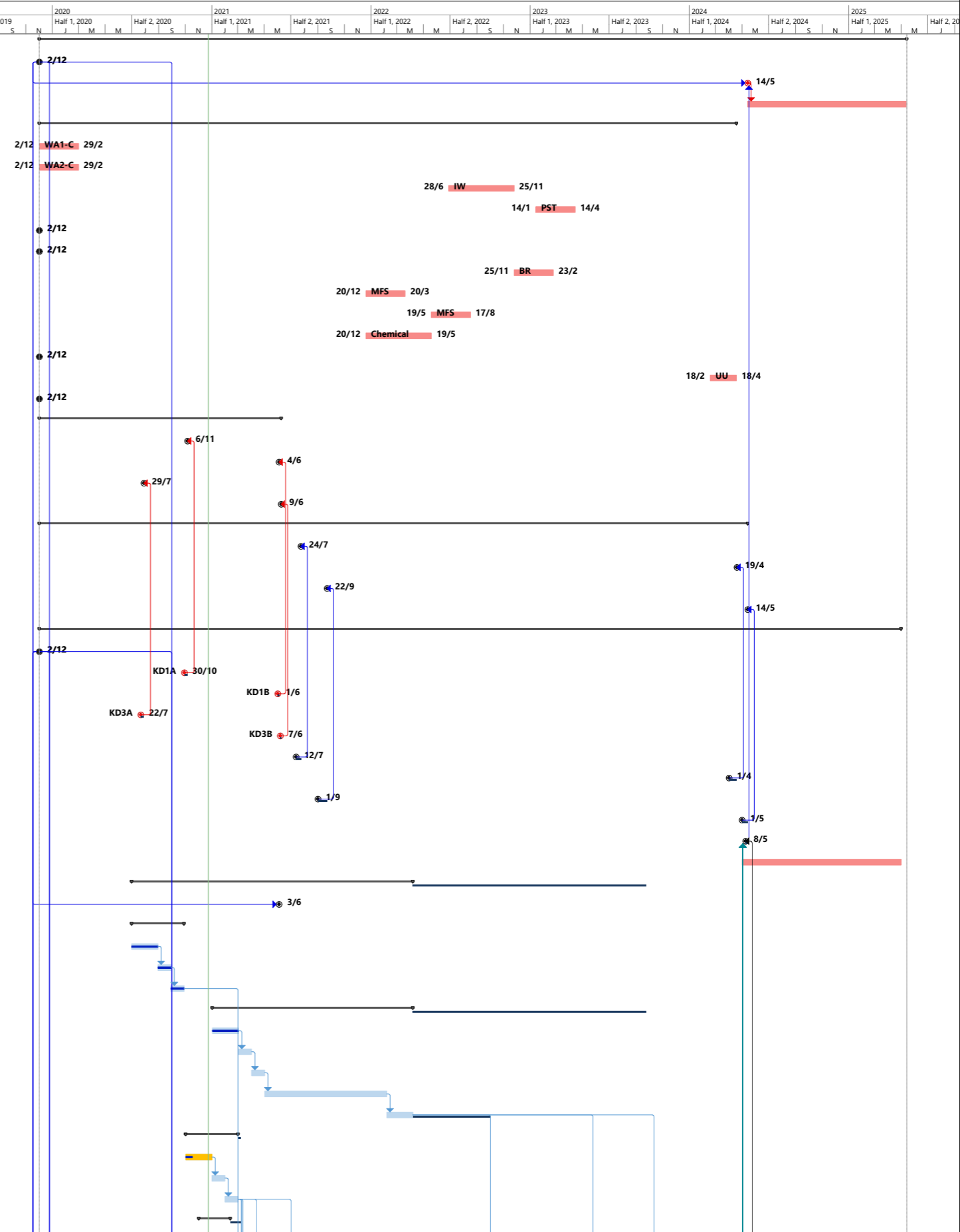
File Name: DE/2018/03 RP R4
Layout: DE1803 RP (Nov 2020) - WBS
Page 1 of 18

- Remaining Work
- Critical Activity
- Actual Progress
- ◆ Milestone

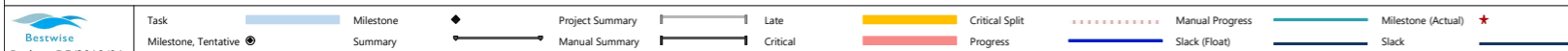
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - Nov 2020

Date	Revision	Checked	Approved
24-Jul-20	Rev.0	LT	KM
21-Aug-20	Rev.1	LT	KM
25-Sep-20	Rev.2	LT	KM
30-Oct-20	Rev.3	LT	KM
02-Dec-20	Rev.4	LT	KM

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2020		2021		2022		2023		2024		2025	
										Half 1	Half 2	Half 1	Half 2	Half 1	Half 2	Half 1	Half 2	Half 1	Half 2		
1	1.1	DE/2018/04 - Contract Master Programme	1990 days	Mon 2/12/19	Tue 13/5/25	0 days															
2	2.1.1	Starting Date	0 days	Mon 2/12/19	Mon 2/12/19	0 days															
3	3.1.2	Completion Date	0 days	Tue 14/5/24	Tue 14/5/24	0 days	255+1625 edays,354														
4	4.1.3	Defect Dates with respect to Completion Date	365 days	Tue 14/5/24	Tue 13/5/25	0 days	3														
5	5.2	Access Dates	1599 days	Mon 2/12/19	Thu 18/4/24	0 days															
6	6.2.1	Access Date for Works Area WA1-C	90 days	Mon 2/12/19	Sat 29/2/20	0 days															
7	7.2.2	Access Date for Works Area WA2-C	90 days	Mon 2/12/19	Sat 29/2/20	0 days															
8	8.2.3	Access Date for Portion B-2, Inlet Works No. 1	150 edays	Tue 28/6/22	Fri 25/11/22	0 edays															
9	9.2.4	Access Date for Portion B-3, PST No. 1~4	90 edays	Sat 14/1/23	Fri 14/4/23	0 edays															
10	10.2.5	Access Date for Portion B-3A, Existing PST No. 4 and No. 6	0 days	Mon 2/12/19	Mon 2/12/19	0 days															
11	11.2.6	Access Date for Portion B-3B, Temporary Filtrate Lifting Well and Eq. Tank	0 days	Mon 2/12/19	Mon 2/12/19	0 days															
12	12.2.7	Access Date for Portion B-4, BR 2A & 2B	90 edays	Fri 25/11/22	Thu 23/2/23	0 edays															
13	13.2.8	Access Date for Portion B-5A, MFB No. 2 below 1st floor level	90 edays	Mon 20/12/21	Sun 20/3/22	0 edays															
14	14.2.9	Access Date for Portion B-5B, MFB No. 2 remaining portion	90 edays	Thu 19/5/22	Wed 17/8/22	0 edays															
15	15.2.10	Access Date for Portion B-7 & 7B, Chemical Dosing, Concrete Plinth for DOs, Chemical Sys 1 & 2	150 edays	Mon 20/12/21	Thu 19/5/22	0 edays															
16	16.2.11	Access Date for Portion B-7A & 7B, area for modification of existing emergency generator elect	0 edays	Mon 2/12/19	Mon 2/12/19	0 edays															
17	17.2.12	Access Date for Portion B-9B, underground pipework	60 edays	Sun 18/2/24	Thu 18/4/24	0 edays															
18	18.2.13	Access Date for B-10, existing sludge thickening building	0 edays	Mon 2/12/19	Mon 2/12/19	0 edays															
19	19.3	Key Dates	555 days	Mon 2/12/19	Wed 9/6/21	0 days															
20	20.3.1	KD1A - Submission of civil and dimensional requirement drawings, electrical schematic drawing	340 edays	Mon 2/12/19	Fri 6/11/20	0 edays	31FF														
21	21.3.2	KD1B - Submission of remaining civil and dimensional requirement drawings, electrical schema	550 edays	Mon 2/12/19	Fri 4/6/21	0 edays	32FF														
22	22.3.3	KD3A - Completion of E&M Installation works of existing power house in Portions B-7A and B-7	240 edays	Mon 2/12/19	Wed 29/7/20	0 edays	33FF														
23	23.3.4	KD3B - Completion of all work for reprovision of the existing Primary Sedimentation Tanks No.	555 edays	Mon 2/12/19	Wed 9/6/21	0 edays	34FF														
24	24.4	Sectional Completion Dates	1625 days	Mon 2/12/19	Tue 14/5/24	0 days															
25	25.4.1	Section 1 - Completion of the design of E&M Works for all works as defined in WI_GP Cl. 10.1(a)	600 edays	Mon 2/12/19	Sat 24/7/21	0 edays	35FF														
26	26.4.2	Section 2 - Completion of all works for Inlet Works, PST No. 1~4, BR No. 2A & 2B, MFB No. 2, te	1600 edays	Mon 2/12/19	Fri 19/4/24	0 edays	36FF														
27	27.4.3	Section 3 - Completion of all works for retrofitting of the existing PST...etc (660 days after starti	660 edays	Mon 2/12/19	Wed 22/9/21	0 edays	37FF														
28	28.4.4	Section 4 - Completion of Work for remainder of the works (1625 days after starting date)	1625 edays	Mon 2/12/19	Tue 14/5/24	0 edays	38FF														
29	29.5	DE/2018/04 - the Contractor's Programme (w/ Defects Date of Planned Completion Date)	1977 days	Mon 2/12/19	Wed 30/4/25	0 days															
30	30.5.1	Starting Date	0 days	Mon 2/12/19	Mon 2/12/19	0 days	623,19755+30 edays														
31	31.5.2	Planned Key Date Completion Date - KD1A	0 days	Fri 30/10/20	Fri 30/10/20	7 days	20FF														
32	32.5.3	Planned Key Date Completion Date - KD1B	0 days	Tue 1/6/21	Tue 1/6/21	3 days	21FF														
33	33.5.4	Planned Key Date Completion Date - KD3A	0 days	Wed 22/7/20	Wed 22/7/20	7 days	22FF														
34	34.5.5	Planned Key Date Completion Date - KD3B	0 days	Mon 7/6/21	Mon 7/6/21	2 days	23FF														
35	35.5.6	Planned Sectional Completion Date - Section 1	0 days	Mon 12/7/21	Mon 12/7/21	11 days	25FF														
36	36.5.7	Planned Sectional Completion Date - Section 2	0 days	Mon 1/4/24	Mon 1/4/24	18 days	26FF														
37	37.5.8	Planned Sectional Completion Date - Section 3	0 days	Wed 1/9/21	Wed 1/9/21	21 days	27FF														
38	38.5.9	Planned Sectional Completion Date - Section 4	0 days	Wed 1/5/24	Wed 1/5/24	13 days	28FF														
39	39.5.10	Planned Completion Date	0 days	Wed 8/5/24	Wed 8/5/24	5 days	1271,1272,1273,1:3														
40	40.5.11	Defect Dates with respect to planned completion date	365 days	Wed 1/5/24	Wed 30/4/25	0 days															
41	41.5.12	Part A: Procurement and Delivery of Major Plant and Materials	645 days	Wed 1/7/20	Wed 6/4/22	535 days															
42	42.5.12.1	Planned Completion Date for Procurement of major plant and materials	0 days	Thu 3/6/21	Thu 3/6/21	0 days	3055+550 days														
43	43.5.12.2	General - stoplogs and penstocks, C11, EQT013	120 days	Wed 1/7/20	Wed 28/10/20	0 days															
44	44.5.12.2.1	Submission for acceptance of purchasing package	60 days	Wed 1/7/20	Sat 29/8/20	0 days	45														
45	45.5.12.2.2	Invitation of quotations for purchasing package	30 days	Sun 30/8/20	Mon 28/9/20	0 days	44														
46	46.5.12.2.3	Acceptance of conforming quotation (Completed)	30 days	Tue 29/9/20	Wed 28/10/20	0 days	45														
47	47.5.12.3	General - Instrumentations except use at BR, C11, EQT035-1	460 days	Sat 2/1/21	Wed 6/4/22	535 days															
48	48.5.12.3.1	Submission for acceptance of purchasing package	60 days	Sat 2/1/21	Tue 2/3/21	0 days	49														
49	49.5.12.3.2	Invitation of quotations for purchasing package	30 days	Wed 3/3/21	Thu 1/4/21	0 days	48														
50	50.5.12.3.3	Acceptance of conforming quotation	30 days	Fri 2/4/21	Sat 1/5/21	0 days	49														
51	51.5.12.3.4	Manufacturing and Factory Acceptance Test of Plant	280 days	Sun 2/5/21	Sat 5/2/22	0 days	50														
52	52.5.12.3.5	Shipping and Delivery of Plant	60 days	Sun 6/2/22	Wed 6/4/22	178 days	51														
53	53.5.12.4	General - pipework and valves, C11, ref. EQT036 (Rev. 5)	120 days	Mon 2/11/20	Mon 1/3/21	6 days															
54	54.5.12.4.1	Submission for acceptance of purchasing package	60 days	Mon 2/11/20	Thu 31/12/20	0 days	55														
55	55.5.12.4.2	Invitation of quotations for purchasing package	30 days	Fri 1/1/21	Sat 30/1/21	0 days	54														
56	56.5.12.4.3	Acceptance of conforming quotation	30 days	Sun 31/1/21	Mon 1/3/21	0 days	55														
57	57.5.12.5	General - electric actuators, C11, ref. EQT042	72 days	Wed 2/12/20	Thu 11/2/21	24 days															



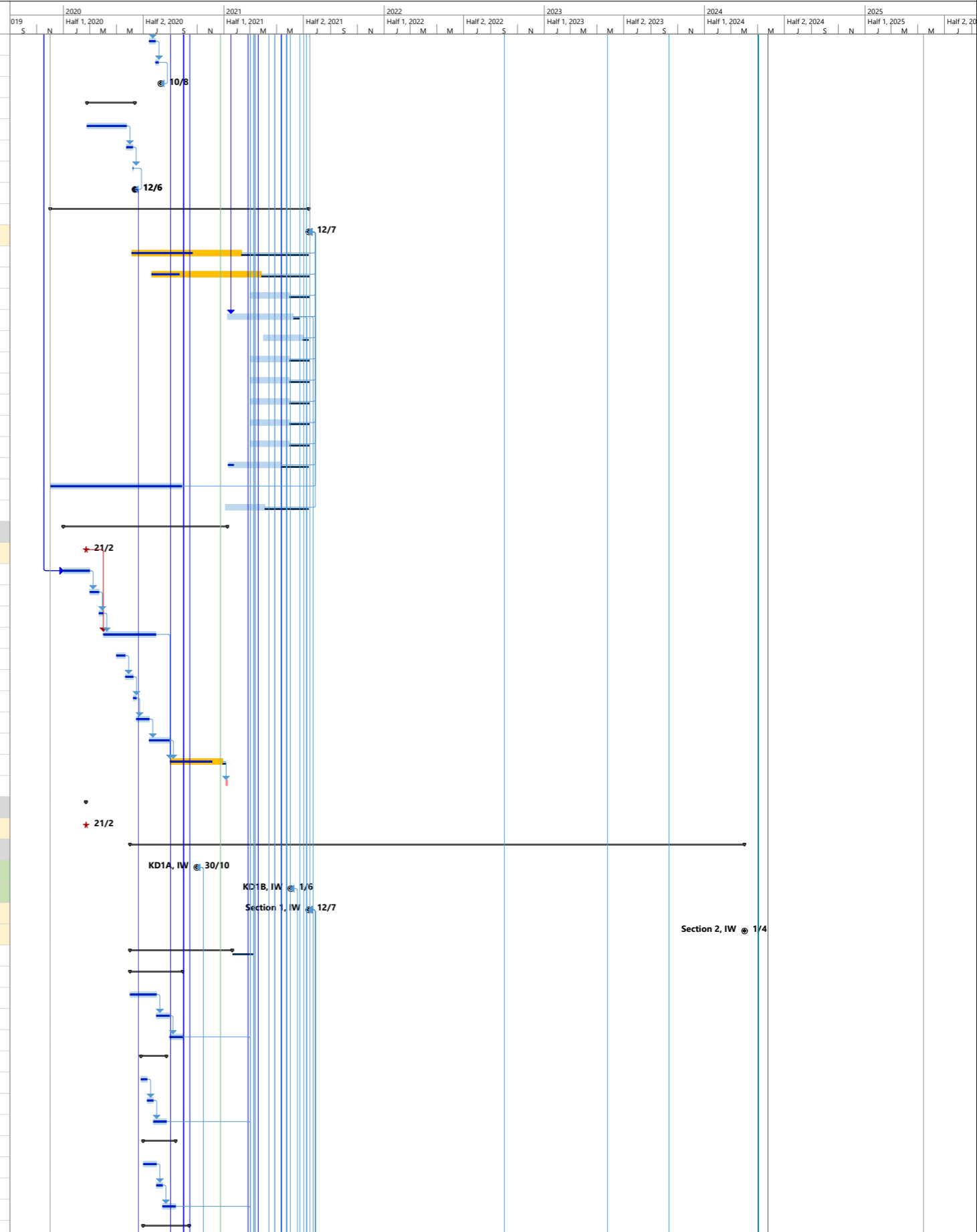
ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023	Half 2, 2023	Half 1, 2024	Half 2, 2024	Half 1, 2025	Half 2, 2025
58	58.5.12.5.1	Submission for acceptance of purchasing package	30 days	Wed 2/12/20	Thu 31/12/20	0 days		59															
59	59.5.12.5.2	Invitation of quotations for purchasing package	21 days	Fri 1/1/21	Thu 21/1/21	0 days	58	60															
60	60.5.12.5.3	Acceptance of conforming quotation	21 days	Fri 22/1/21	Thu 11/2/21	18 days	59	248,294,523,646,64															
61	61.5.12.6	General - HV Switchboards, C9, ref. EQT031 (Rev. 5)	105 days	Mon 4/1/21	Sun 18/4/21	25 days																	
62	62.5.12.6.1	Submission for acceptance of purchasing package	45 days	Mon 4/1/21	Wed 17/2/21	0 days		63															
63	63.5.12.6.2	Invitation of quotations for purchasing package	30 days	Thu 18/2/21	Fri 19/3/21	0 days	62	64															
64	64.5.12.6.3	Acceptance of conforming quotation	30 days	Sat 20/3/21	Sun 18/4/21	0 days	63	651,252															
65	65.5.12.7	General - LV Switchboards, C9, ref. EQT033 (Rev. 5)	120 days	Mon 4/1/21	Mon 3/5/21	10 days																	
66	66.5.12.7.1	Submission for acceptance of purchasing package	60 days	Mon 4/1/21	Thu 4/3/21	0 days		67															
67	67.5.12.7.2	Invitation of quotations for purchasing package	30 days	Fri 5/3/21	Sat 3/4/21	0 days	66	68															
68	68.5.12.7.3	Acceptance of conforming quotation	30 days	Sun 4/4/21	Mon 3/5/21	0 days	67	251,526,397,650															
69	69.5.12.8	General - VSDs & Passive Type Harmonic Filters, C11, ref. EQT034 (Rev. 5)	323 days	Fri 1/1/21	Fri 19/11/21	403 days																	
70	70.5.12.8.1	Submission for acceptance of purchasing package	60 days	Fri 1/1/21	Mon 1/3/21	0 days		71															
71	71.5.12.8.2	Invitation of quotations for purchasing package	30 days	Tue 2/3/21	Wed 31/3/21	0 days	70	72															
72	72.5.12.8.3	Acceptance of conforming quotation	30 days	Thu 1/4/21	Fri 30/4/21	23 days	71	249,395,524,647															
73	73.5.12.8.4	Manufacturing and Factory Acceptance Test of Plant	90 days	Thu 8/7/21	Tue 5/10/21	0 days	249,395,524,647	74															
74	74.5.12.8.5	Shipping and Delivery of Plant to LVSB Sub-Contractor	45 days	Wed 6/10/21	Fri 19/11/21	0 days	73	28755-90 edays															
75	75.5.12.9	General - 11kV/380V Stepdown Power Transformers, C11, EQT032 (Rev. 5)	110 days	Mon 18/1/21	Fri 7/5/21	21 days																	
76	76.5.12.9.1	Submission for acceptance of purchasing package	50 days	Mon 18/1/21	Mon 8/3/21	0 days		77															
77	77.5.12.9.2	Invitation of quotations for purchasing package	30 days	Tue 9/3/21	Wed 7/4/21	0 days	76	78															
78	78.5.12.9.3	Acceptance of conforming quotation	30 days	Thu 8/4/21	Fri 7/5/21	16 days	77	249,647															
79	79.5.12.10	General - UPS, C11, EQT061 (Rev. 5)	105 days	Mon 8/2/21	Sun 23/5/21	5 days																	
80	80.5.12.10.1	Submission for acceptance of purchasing package	45 days	Mon 8/2/21	Wed 24/3/21	0 days		81															
81	81.5.12.10.2	Invitation of quotations for purchasing package	30 days	Thu 25/3/21	Fri 23/4/21	0 days	80	82															
82	82.5.12.10.3	Acceptance of conforming quotation	30 days	Sat 24/4/21	Sun 23/5/21	0 days	81	249,395,524,647															
83	83.5.12.11	General - HV Cables, C11, EQT041 (Rev. 5)	65 days	Mon 8/3/21	Tue 11/5/21	17 days																	
84	84.5.12.11.1	Submission for acceptance of purchasing package	14 days	Mon 8/3/21	Sun 21/3/21	0 days		85															
85	85.5.12.11.2	Invitation of quotations for purchasing package	21 days	Mon 22/3/21	Sun 11/4/21	0 days	84	86															
86	86.5.12.11.3	Acceptance of conforming quotation	30 days	Mon 12/4/21	Tue 11/5/21	12 days	85	249,647															
87	87.5.12.12	General - LV Cables, C11, EQT042 (Rev. 5)	65 days	Mon 8/3/21	Tue 11/5/21	17 days																	
88	88.5.12.12.1	Submission for acceptance of purchasing package	14 days	Mon 8/3/21	Sun 21/3/21	0 days		89															
89	89.5.12.12.2	Invitation of quotations for purchasing package	21 days	Mon 22/3/21	Sun 11/4/21	0 days	88	90															
90	90.5.12.12.3	Acceptance of conforming quotation	30 days	Mon 12/4/21	Tue 11/5/21	12 days	89	249,395,524,647															
91	91.5.13	Part B: Subletting of major sub-contract works	761 days	Wed 1/1/20	Sun 30/1/22	0 days 2,30																	
92	92.5.13.1	Planned Completion Date for major sub-contract works	0 days	Thu 12/8/21	Thu 12/8/21	0 days	255+620 days,3055																
93	93.5.13.2	General - Independent BEAM Plus Consultant (045C007)	150 days	Wed 1/1/20	Fri 29/5/20	0 days																	
94	94.5.13.2.1	Submission for acceptance of proposed Independent BEAM Plus Consultant	60 edays	Wed 1/1/20	Sun 1/3/20	0 edays		95															
95	95.5.13.2.2	Acceptance of proposed Independent BEAM Plus Consultant	14 edays	Sun 1/3/20	Sun 15/3/20	0 edays	94	96															
96	96.5.13.2.3	Engagement with an Independent BEAM Plus Consultant	7 days	Sun 15/3/20	Sat 21/3/20	0 days	95																
97	97.5.13.2.4	Actual Date for engagement with an independent BEAM Plus Consultant (Completed)	0 days	Fri 29/5/20	Fri 29/5/20	0 days																	
98	98.5.13.3	General - Conduction of Pump sump physical model test	270 days	Fri 15/5/20	Mon 8/2/21	0 days																	
99	99.5.13.3.1	Submission for acceptance of proposed hydraulic laboratory to conduct the test	7 edays	Fri 15/5/20	Fri 22/5/20	0 edays		100															
100	100.5.13.3.2	Invitation to quotations for provision of service	7 edays	Fri 22/5/20	Fri 29/5/20	0 edays	99	101															
101	101.5.13.3.3	Acceptance of proposed hydraulic laboratory	6 days	Fri 29/5/20	Wed 3/6/20	0 days	100	102															
102	102.5.13.3.4	Commencement of detailed proposal and conduction of test (Extended)	245 days	Thu 4/6/20	Wed 3/2/21	0 days	101	103															
103	103.5.13.3.5	Acceptance of hydraulic Report (Extended)	5 days	Thu 4/2/21	Mon 8/2/21	0 days	102																
104	104.5.13.4	General - Independent Checking Engineer (045C004)	127 days	Wed 11/3/20	Wed 15/7/20	0 days																	
105	105.5.13.4.1	Submission for acceptance of proposed Independent Checking Engineer	90 edays	Wed 11/3/20	Tue 9/6/20	0 edays		106															
106	106.5.13.4.2	Acceptance of proposed Independent Checking Engineer	1 eday	Wed 24/6/20	Thu 25/6/20	0 edays	105	107															
107	107.5.13.4.3	Engagement with an Independent Checking Engineer	21 days	Thu 25/6/20	Wed 15/7/20	0 days	106	108															
108	108.5.13.4.4	Actual Date for engagement with an ICE (Completed)	0 days	Wed 15/7/20	Wed 15/7/20	0 days	107																
109	109.5.13.5	General - Lifting Appliances (045C008)	81 days	Fri 1/5/20	Tue 21/7/20	0 days																	
110	110.5.13.5.1	Submission for acceptance of subcontract works package	30 edays	Fri 1/5/20	Sun 31/5/20	0 edays		111															
111	111.5.13.5.2	Invitation of tender for subcontract works	21 edays	Sun 31/5/20	Sun 21/6/20	0 edays	110	112															
112	112.5.13.5.3	Acceptance of conforming tender	30 edays	Sun 21/6/20	Tue 21/7/20	0 edays	111	113															
113	113.5.13.5.4	Sub-contract work commencement date (Completed)	0 days	Tue 21/7/20	Tue 21/7/20	0 days	112	253,398,527,652,10															
114	114.5.13.6	General - Mechanical Installations	244 days	Tue 1/6/21	Sun 30/1/22	0 days																	



ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	J	M	M	J	S	N	J	M	M	J	S	N
115	115.5.13.6.1	Submission for acceptance of subcontract works package	120 days	Tue 1/6/21	Tue 28/9/21	0 days		116															
116	116.5.13.6.2	Invitation of tender for subcontract works	75 days	Wed 29/9/21	Sun 12/12/21	0 days	115	117															
117	117.5.13.6.3	Acceptance of conforming tender	30 days	Mon 13/12/21	Tue 11/1/22	19 days	116	118FF															
118	118.5.13.6.4	Sub-contract work commencement date	1 day	Sun 30/1/22	Sun 30/1/22	0 days	117FF																
119	119.5.13.7	General - Electrical Installations	244 days	Tue 1/6/21	Sun 30/1/22	0 days																	
120	120.5.13.7.1	Submission for acceptance of subcontract works package	120 edays	Tue 1/6/21	Wed 29/9/21	0 edays		121															
121	121.5.13.7.2	Invitation of tender for subcontract works	75 edays	Wed 29/9/21	Mon 13/12/21	0 edays	120	122															
122	122.5.13.7.3	Acceptance of conforming tender	30 edays	Mon 13/12/21	Wed 12/1/22	18.38 edays	121	123FF															
123	123.5.13.7.4	Sub-contract work commencement date	1 day	Sun 30/1/22	Sun 30/1/22	0 days	122FF																
124	124.5.13.8	General - Facility Computerized Systems (SCADA, CMMS, PMS, IDMS)	130 days	Tue 1/9/20	Sat 9/1/21	35 days																	
125	125.5.13.8.1	Submission for acceptance of subcontract works package	60 edays	Tue 1/9/20	Sat 31/10/20	0 edays		126															
126	126.5.13.8.2	Invitation of tender for subcontract works	30 edays	Sat 31/10/20	Mon 30/11/20	0 edays	125	127															
127	127.5.13.8.3	Acceptance of conforming tender	30 edays	Mon 30/11/20	Wed 30/12/20	10 edays	126	128															
128	128.5.13.8.4	Sub-contract work commencement date	0 days	Sat 9/1/21	Sat 9/1/21	0 days	127	185															
129	129.5.13.9	General - Building Services Installations	130 days	Mon 2/11/20	Fri 12/3/21	3 days																	
130	130.5.13.9.1	Submission for acceptance of subcontract works package	60 edays	Mon 2/11/20	Fri 1/1/21	0 edays		131															
131	131.5.13.9.2	Invitation of tender for subcontract works	30 edays	Fri 1/1/21	Sun 31/1/21	0 edays	130	132															
132	132.5.13.9.3	Acceptance of conforming tender	30 edays	Sun 31/1/21	Tue 2/3/21	10 edays	131	133FF															
133	133.5.13.9.4	Sub-contract work commencement date	0 days	Fri 12/3/21	Fri 12/3/21	0 days	132FF	250,396,525,649,79															
134	134.5.13.10	General - Mechanical Ventilation and Air Conditioning Installation	130 days	Mon 2/11/20	Fri 12/3/21	0 days																	
135	135.5.13.10.1	Submission for acceptance of subcontract works package	60 days	Mon 2/11/20	Thu 31/12/20	0 days		136															
136	136.5.13.10.2	Invitation of tender for subcontract works	30 edays	Thu 31/12/20	Sat 30/1/21	0.63 edays	135	137															
137	137.5.13.10.3	Acceptance of conforming tender	30 days	Sun 31/1/21	Mon 1/3/21	10 days	136	138FF															
138	138.5.13.10.4	Sub-contract work commencement date	0 days	Fri 12/3/21	Fri 12/3/21	0 days	137FF																
139	139.5.13.11	General - Emergency Power Generator Set (04SC006)	146 days	Wed 1/7/20	Mon 23/11/20	0 days																	
140	140.5.13.11.1	Submission for acceptance of subcontract works package	60 edays	Wed 1/7/20	Sun 30/8/20	0 edays		141															
141	141.5.13.11.2	Invitation of tender for subcontract works	30 edays	Sun 30/8/20	Tue 29/9/20	0 edays	140	142															
142	142.5.13.11.3	Acceptance of conforming tender	30 edays	Tue 29/9/20	Thu 29/10/20	0 edays	141	143FF															
143	143.5.13.11.4	Sub-contract work commencement date (Completed)	24 days	Sat 31/10/20	Mon 23/11/20	0 days	142FF																
144	144.5.13.12	General - Plumbing Installation (Rev. 5)	231 days	Wed 1/7/20	Tue 16/2/21	0 days																	
145	145.5.13.12.1	Submission for acceptance of subcontract works package	30 edays	Wed 1/7/20	Fri 31/7/20	0 edays		146															
146	146.5.13.12.2	Invitation of tender for subcontract works	75 edays	Fri 31/7/20	Wed 14/10/20	0 edays	145	147															
147	147.5.13.12.3	Retender of subcontract works (Rev. 5)	14 days	Mon 4/1/21	Sun 17/1/21	0 days	146	148															
148	148.5.13.12.4	Acceptance of conforming tender	30 edays	Sun 17/1/21	Tue 16/2/21	0 edays	147	149FF															
149	149.5.13.12.5	Sub-contract work commencement date (Extended)	0 days	Tue 16/2/21	Tue 16/2/21	0 days	148FF	1225															
150	150.5.13.13	General - Fire Services Installation (Rev. 5)	120 days	Mon 4/1/21	Mon 3/5/21	0 days																	
151	151.5.13.13.1	Submission for acceptance of subcontract works package	60 days	Mon 4/1/21	Thu 4/3/21	0 days		152															
152	152.5.13.13.2	Invitation of tender for subcontract works	30 days	Fri 5/3/21	Sat 3/4/21	0 days	151	153															
153	153.5.13.13.3	Acceptance of conforming tender	30 days	Sun 4/4/21	Mon 3/5/21	0 days	152	154FF															
154	154.5.13.13.4	Sub-contract work commencement date	0 days	Mon 3/5/21	Mon 3/5/21	0 days	153FF	1176															
155	155.5.13.14	General - Lightning Protection System and Main Earthing System (Rev. 5)	90 days	Mon 11/1/21	Sun 11/4/21	0 days																	
156	156.5.13.14.1	Submission for acceptance of subcontract works package	30 edays	Mon 11/1/21	Wed 10/2/21	0 edays		157															
157	157.5.13.14.2	Invitation of tender for subcontract works	30 edays	Wed 10/2/21	Fri 12/3/21	0 edays	156	158															
158	158.5.13.14.3	Acceptance of conforming tender	30 edays	Fri 12/3/21	Sun 11/4/21	0 edays	157	159FF															
159	159.5.13.14.4	Sub-contract work commencement date	0 days	Sun 11/4/21	Sun 11/4/21	0 days	158FF																
160	160.5.13.15	General - CCTV Installation	183 days	Thu 1/7/21	Fri 31/12/21	0 days																	
161	161.5.13.15.1	Submission for acceptance of subcontract works package	60 edays	Thu 1/7/21	Mon 30/8/21	0 edays		162															
162	162.5.13.15.2	Invitation of tender for subcontract works	30 edays	Mon 30/8/21	Wed 29/9/21	0 edays	161	163															
163	163.5.13.15.3	Acceptance of conforming tender	30 edays	Wed 29/9/21	Fri 29/10/21	63 edays	162	164FF															
164	164.5.13.15.4	Sub-contract work commencement date	0 days	Fri 31/12/21	Fri 31/12/21	0 days	163FF																
165	165.5.13.16	General - Civil Construction Work for underground pipework	40 days	Wed 1/7/20	Mon 10/8/20	0 days																	
166	166.5.13.16.1	Submission for acceptance of subcontract works package	14 days	Wed 1/7/20	Tue 14/7/20	0 days		167															
167	167.5.13.16.2	Invitation of tender for subcontract works	14 days	Wed 15/7/20	Tue 28/7/20	0 days	166	168															
168	168.5.13.16.3	Acceptance of conforming tender	7 days	Wed 29/7/20	Tue 4/8/20	0 days	167	169FF															
169	169.5.13.16.4	Sub-contract work commencement date (Completed)	0 days	Mon 10/8/20	Mon 10/8/20	0 days	168FF																
170	170.5.13.17	General - Civil Construction Work for Temp. Filtrate Eq. System	40 days	Wed 1/7/20	Mon 10/8/20	0 days																	
171	171.5.13.17.1	Submission for acceptance of subcontract works package	14 days	Wed 1/7/20	Tue 14/7/20	0 days		172															

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

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023	Half 2, 2023	Half 1, 2024	Half 2, 2024	Half 1, 2025	Half 2, 2025
172	172.5.13.17.2	Invitation of tender for subcontract works	14 days	Wed 15/7/20	Tue 28/7/20	0 days	171	173															
173	173.5.13.17.3	Acceptance of conforming tender	7 days	Wed 29/7/20	Tue 4/8/20	0 days	172	174FF															
174	174.5.13.17.4	Sub-contract work commencement date (Completed)	0 days	Mon 10/8/20	Mon 10/8/20	0 days	173FF																
175	175.5.13.18	Mis - Modification of existing power house	109 days	Mon 24/2/20	Fri 12/6/20	0 days																	
176	176.5.13.18.1	Submission for acceptance of subcontract works package	90 days	Mon 24/2/20	Sat 23/5/20	0 days		177															
177	177.5.13.18.2	Invitation of tender for subcontract works	14 days	Sun 24/5/20	Sat 6/6/20	0 days	176	178															
178	178.5.13.18.3	Acceptance of conforming tender	1 day	Sun 7/6/20	Sun 7/6/20	0 days	177	179FF															
179	179.5.13.18.4	Sub-contract work commencement date (Completed)	0 days	Fri 12/6/20	Fri 12/6/20	0 days	178FF	1147															
180	180.5.14	Part C: General Design Submissions	589 days	Mon 2/12/19	Mon 12/7/21	0 days																	
181	181.5.14.1	Planned Sectional Completion Date - Section 1	0 days	Mon 12/7/21	Mon 12/7/21	0 days	182FF,183FF,184FF																
182	182.5.14.2	CDS001 - General Design Parameters	250 edays	Fri 5/6/20	Wed 10/2/21	152.38 edays		181FF															
183	183.5.14.3	CDS020 - Electrical Installation Typical Details	250 edays	Mon 20/7/20	Sat 27/3/21	107.38 edays		181FF															
184	184.5.14.4	CDS009 - Detailed Design for Plant Service Water System	90 edays	Mon 1/3/21	Sun 30/5/21	43.38 edays		181FF															
185	185.5.14.5	CDS012 - Detailed Design for SCADA System	150 edays	Sat 9/1/21	Tue 8/6/21	14.38 edays	128	181FF,249FF,395FF,															
186	186.5.14.6	CDS13-1 - Detailed Design for CCTV System	90 edays	Thu 1/4/21	Wed 30/6/21	12.38 edays		181FF															
187	187.5.14.7	CDS13-2 - Detailed Design for Gas Detection and Monitoring System	90 edays	Mon 1/3/21	Sun 30/5/21	43.38 edays		181FF															
188	188.5.14.8	CDS14-1 - Detailed Design for Power monitoring system (PMS)	90 edays	Mon 1/3/21	Sun 30/5/21	43.38 edays		181FF															
189	189.5.14.9	CDS14-2 - Detailed Design for Computerized maintenance and management (CMMS)	90 edays	Mon 1/3/21	Sun 30/5/21	43.38 edays		181FF															
190	190.5.14.10	CDS14-3 - Detailed Design for Information and documents management system (IDMS)	90 edays	Mon 1/3/21	Sun 30/5/21	43.38 edays		181FF															
191	191.5.14.11	CDS031 - Detailed Design for MVAC System	90 edays	Mon 1/3/21	Sun 30/5/21	43.38 edays		181FF															
192	192.5.14.12	CDS042 - Detailed Design for Lightning Protection System	120 edays	Mon 11/1/21	Tue 11/5/21	62.38 edays		181FF															
193	193.5.14.13	Design submissions for E&M installation works of existing sludge thickening building	300 edays	Mon 2/12/19	Sun 27/9/20	0 days		181FF															
194	194.5.14.14	Design Submission for Earthing and Lightning (Rev. 5)	90 edays	Mon 4/1/21	Sun 4/4/21	99.38 edays		181FF															
195	195.5.15	Works Area WA1-C	374 days	Wed 1/1/20	Fri 8/1/21	0 days																	
196	196.5.15.1	Actual Access / Handover Date	1 day	Fri 21/2/20	Fri 21/2/20	0 days		200															
197	197.5.15.2	Submission for acceptance of subcontract works package (Site Office) (04SC003)	60 days	Wed 1/1/20	Sat 29/2/20	0 days	25S+30 edays,30SS	198															
198	198.5.15.3	Invitation of quotations for subcontract works (Site Office)	21 days	Sun 1/3/20	Sat 21/3/20	0 days	197	199															
199	199.5.15.4	Acceptance of conforming quotation (Site Office)	10 days	Sun 22/3/20	Tue 31/3/20	0 days	198	200															
200	200.5.15.5	Design and Fabrication of the Contractor's Site Accommodations	120 days	Wed 1/4/20	Wed 29/7/20	0 days	196,199	206															
201	201.5.15.6	Submission for acceptance of subcontract works package (Site Office Foundation)	20 days	Fri 1/5/20	Wed 20/5/20	0 days		202															
202	202.5.15.7	Invitation of quotations for subcontract works (Site Office Foundation)	18 days	Thu 21/5/20	Sun 7/6/20	0 days	201	203															
203	203.5.15.8	Acceptance of conforming quotation (Site Foundation)	7 days	Mon 8/6/20	Sun 14/6/20	0 days	202	204															
204	204.5.15.9	Design and Construction of the Contractor's Site Office foundation	30 days	Mon 15/6/20	Tue 14/7/20	0 days	203	205															
205	205.5.15.10	Construction of Contractor's Site Office foundation (Completed)	47 days	Wed 15/7/20	Sun 30/8/20	0 days	204	206															
206	206.5.15.11	Site Installation of the Contractor's Site Accommodations (MiC) (Rev. 5)	120 days	Mon 31/8/20	Mon 28/12/20	7 days	200,205	207															
207	207.5.15.12	Anticipated date of working at site (Rev. 5)	4 days	Tue 5/1/21	Fri 8/1/21	0 days	206																
208	208.5.16	Works Area WA2-C	1 day	Fri 21/2/20	Fri 21/2/20	0 days																	
209	209.5.16.1	Actual Access / Handover Date	1 day	Fri 21/2/20	Fri 21/2/20	0 days																	
210	210.5.17	Inlet Works No. 1, Portion B-2 (PS 6B.2.1)	1400 days	Mon 1/6/20	Mon 1/4/24	0 days																	
211	211.5.17.1	Planned Key Date Completion Date - KD1A, IW	0 days	Fri 30/10/20	Fri 30/10/20	0 days	245FF,246FF																
212	212.5.17.2	Planned Key Date Completion Date - KD1B, IW	0 days	Tue 1/6/21	Tue 1/6/21	0 days	247FF																
213	213.5.17.3	Planned Sectional Completion Date - Section 1, IW	0 days	Mon 12/7/21	Mon 12/7/21	0 days	248FF,249FF,250FF																
214	214.5.17.4	Planned Sectional Completion Date - Section 2, IW	0 days	Mon 1/4/24	Mon 1/4/24	0 days																	
215	215.5.17.5	Selection of Suppliers for major plant and materials for Inlet Works No. 1	233 days	Mon 1/6/20	Tue 19/1/21	47 days																	
216	216.5.17.5.1	Inlet Works - inlet Pumps (Marking Scheme Approach), C11, ref. EQT006	120 days	Mon 1/6/20	Mon 28/9/20	0 days																	
217	217.5.17.5.1.1	Submission for acceptance of purchasing package including proposed marking scheme	60 days	Mon 1/6/20	Thu 30/7/20	0 days		218															
218	218.5.17.5.1.2	Invitation of quotations for purchasing package	30 days	Fri 31/7/20	Sat 29/8/20	0 days	217	219															
219	219.5.17.5.1.3	Acceptance of conforming quotation (Completed)	30 days	Sun 30/8/20	Mon 28/9/20	0 days	218	248															
220	220.5.17.5.2	Inlet Works - mechanical raked bar screens, C11, ref. EQT052	58 days	Fri 26/6/20	Sat 22/8/20	0 days																	
221	221.5.17.5.2.1	Submission for acceptance of purchasing package	14 days	Fri 26/6/20	Thu 9/7/20	0 days		222															
222	222.5.17.5.2.2	Invitation of quotations for purchasing package	14 days	Fri 10/7/20	Thu 23/7/20	0 days	221	223															
223	223.5.17.5.2.3	Acceptance of conforming quotation (Completed)	30 days	Fri 24/7/20	Sat 22/8/20	0 days	222	248															
224	224.5.17.5.3	Inlet Works - screening conveyors and Diverters, C11, ref. EQT053	74 days	Wed 1/7/20	Sat 12/9/20	0 days																	
225	225.5.17.5.3.1	Submission for acceptance of purchasing package	30 days	Wed 1/7/20	Thu 30/7/20	0 days		226															
226	226.5.17.5.3.2	Invitation of quotations for purchasing package	14 days	Fri 31/7/20	Thu 13/8/20	0 days	225	227															
227	227.5.17.5.3.3	Acceptance of conforming quotation (Completed)	30 days	Fri 14/8/20	Sat 12/9/20	0 days	226	248															
228	228.5.17.5.4	Inlet Works - screening screw type compactors, C11, ref. EQT003	105 days	Wed 1/7/20	Tue 13/10/20	0 days																	



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

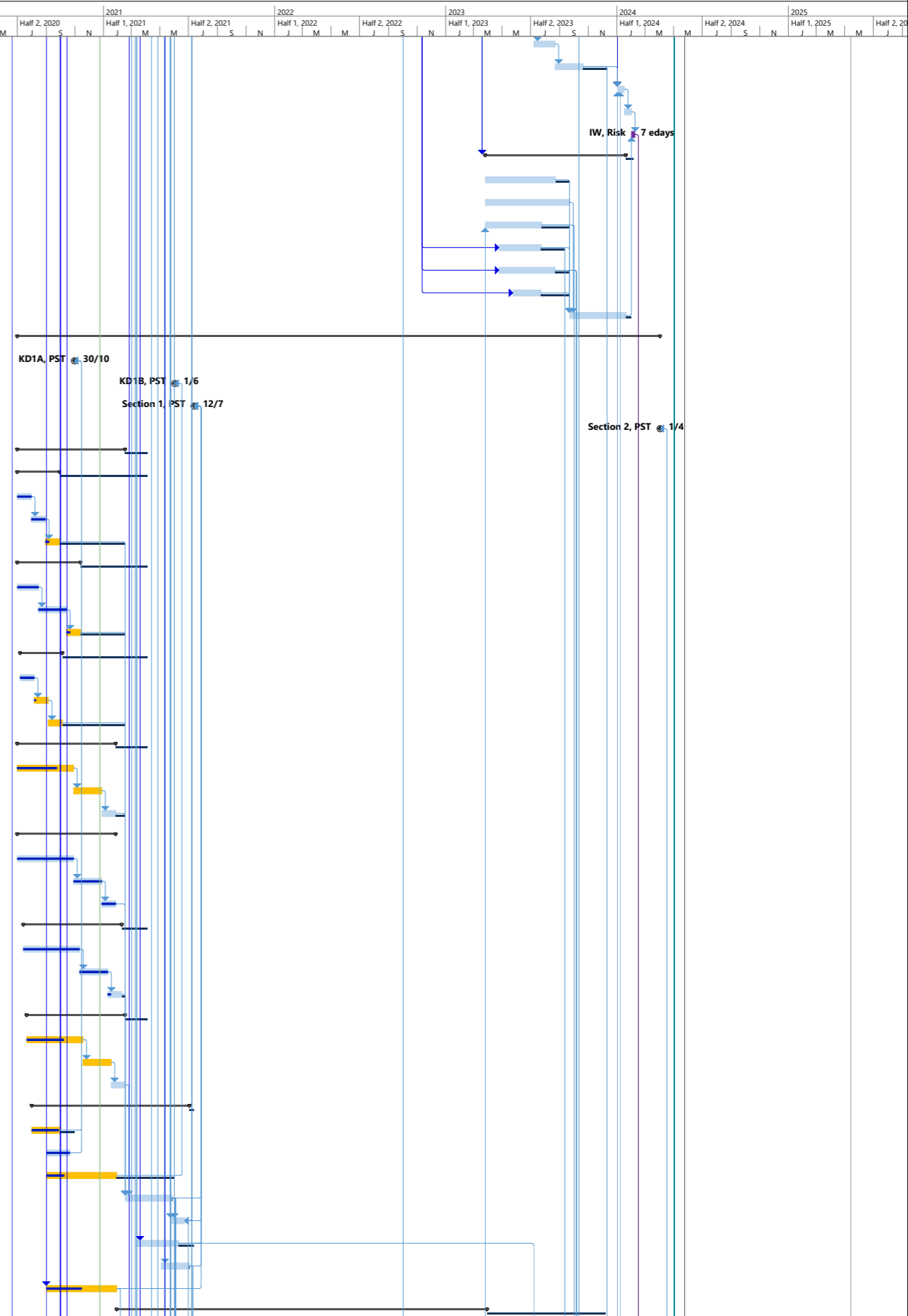
Bestwise Project: DE/2018/04 Date: Thu 24/12/20

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	J	M	J	M	J	M	J	M	J	M	J	M
229	229 5.17.5.4.1	Submission for acceptance of purchasing package	45 days	Wed 1/7/20	Fri 14/8/20	0 days		230															
230	230 5.17.5.4.2	Invitation of quotations for purchasing package	30 days	Sat 15/8/20	Sun 13/9/20	0 days	229	231															
231	231 5.17.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Mon 14/9/20	Tue 13/10/20	0 days	230	248															
232	232 5.17.5.5	Inlet Works - grit removal system, C11, ref. EQT004	90 days	Wed 1/7/20	Mon 28/9/20	0 days																	
233	233 5.17.5.5.1	Submission for acceptance of purchasing package	30 days	Wed 1/7/20	Thu 30/7/20	0 days		234															
234	234 5.17.5.5.2	Invitation of quotations for purchasing package	30 days	Fri 31/7/20	Sat 29/8/20	0 days	233	235															
235	235 5.17.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Sun 30/8/20	Mon 28/9/20	0 days	234	248															
236	236 5.17.5.6	Inlet Works - grit classifiers, C11, ref. EQT005	90 days	Wed 1/7/20	Mon 28/9/20	0 days																	
237	237 5.17.5.6.1	Submission for acceptance of purchasing package	30 days	Wed 1/7/20	Thu 30/7/20	0 days		238															
238	238 5.17.5.6.2	Invitation of quotations for purchasing package	30 days	Fri 31/7/20	Sat 29/8/20	0 days	237	239															
239	239 5.17.5.6.3	Acceptance of conforming quotation (Completed)	30 days	Sun 30/8/20	Mon 28/9/20	0 days	238	248															
240	240 5.17.5.7	Inlet Works - Fixed Bar Screen, C11, ref. EQT046	208 days	Fri 26/6/20	Tue 19/1/21	47 days																	
241	241 5.17.5.7.1	Submission for acceptance of purchasing package	14 days	Fri 26/6/20	Thu 9/7/20	0 days		242															
242	242 5.17.5.7.2	Invitation of quotations for purchasing package	14 days	Fri 10/7/20	Thu 23/7/20	0 days	241	243															
243	243 5.17.5.7.3	Acceptance of conforming quotation (Extended)	180 days	Fri 24/7/20	Tue 19/1/21	41 days	242	248															
244	244 5.17.6	Design Submissions for IW	360 days	Wed 15/7/20	Sat 10/7/21	3 days																	
245	245 5.17.6.1	Electrical schematic drawings for Inlet Works No. 1	90 days	Wed 15/7/20	Mon 12/10/20	18 days		211FF															
246	246 5.17.6.2	CDS080-1 - Civil and dimensional requirements drawings for Inlet Works No. 1 up to +8.0 r	45 days	Tue 1/9/20	Thu 15/10/20	0 days		211FF															
247	247 5.17.6.3	CDS081-1 - Civil and dimensional requirements drawings for Inlet Works No. 1	210 days	Fri 28/8/20	Thu 25/3/21	68 days		212FF															
248	248 5.17.6.4	CDS002 - Detailed Design for Inlet Works No. 1	120 edays	Mon 1/3/21	Tue 29/6/21	0.63 edays	56,223,227,219,23256,278,263,266,26																
249	249 5.17.6.5	CDS021 - Detailed Design for Electrical Installations for Inlet Works No. 1	45 edays	Sun 23/5/21	Wed 7/7/21	0.63 edays	72,78,82,86,90,187,73,295,287,298,213																
250	250 5.17.6.6	CDS034-1 - Detailed Design for Electrical Installations BS at Inlet Works No. 1	120 edays	Fri 12/3/21	Sat 10/7/21	2.38 edays	133	348,213FF															
251	251 5.17.6.7	CDS025-1 - Detailed Design for LV Switchboards for Inlet Works No. 1	60 edays	Mon 3/5/21	Fri 2/7/21	5.63 edays	68	287,213FF															
252	252 5.17.6.8	CDS026-1 - Detailed Design for HV Switchboards for Inlet Works No. 1	60 edays	Sun 18/4/21	Thu 17/6/21	0.63 edays	64	291,213FF															
253	253 5.17.6.9	CDS050-1 - Detailed Design for Lifting Appliances - Inlet Works No. 1	210 edays	Tue 1/9/20	Tue 30/3/21	0 edays	113	284,213FF															
254	254 5.17.7	Manufacturing and Delivery of Plant & Materials	605 days	Tue 30/3/21	Thu 24/11/22	338 days																	
255	255 5.17.7.1	Inlet Pumps, EQT006	513 days	Wed 30/6/21	Thu 24/11/22	352 days																	
256	256 5.17.7.1.1	Manufacturing of Inlet Pumps, EQT006	240 days	Wed 30/6/21	Thu 24/2/22	0 days	248	257															
257	257 5.17.7.1.2	Factory Acceptance Test of Plant (to be witnessed by PM)	60 days	Fri 25/2/22	Mon 25/4/22	153 days	256	258															
258	258 5.17.7.1.3	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	225 days	257,305SS-60 eday	323															
259	259 5.17.7.2	Mechanical Raked Bar Screen, EQT052	513 days	Wed 30/6/21	Thu 24/11/22	31 days		319															
260	260 5.17.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	261															
261	261 5.17.7.2.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	31 days	260,305SS-60 eday	321,324															
262	262 5.17.7.3	Screening Conveyors and Diverters, EQT053	513 days	Wed 30/6/21	Thu 24/11/22	357 days																	
263	263 5.17.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	264															
264	264 5.17.7.3.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	143 days	263,305SS-60 eday	322															
265	265 5.17.7.4	Screening Screw Type Compactors, EQT003	513 days	Wed 30/6/21	Thu 24/11/22	31 days		319															
266	266 5.17.7.4.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	267															
267	267 5.17.7.4.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	173 days	266,305SS-60 eday	327															
268	268 5.17.7.5	Grit Removal System, EQT004	513 days	Wed 30/6/21	Thu 24/11/22	373 days																	
269	269 5.17.7.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	270															
270	270 5.17.7.5.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	246 days	269,305SS-60 eday	325															
271	271 5.17.7.6	Grit Classifiers, EQT005	513 days	Wed 30/6/21	Thu 24/11/22	387 days																	
272	272 5.17.7.6.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	273															
273	273 5.17.7.6.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	260 days	272,305SS-60 eday	326															
274	274 5.17.7.7	DI Pipework, EQT036	513 days	Wed 30/6/21	Thu 24/11/22	288 days																	
275	275 5.17.7.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	276															
276	276 5.17.7.7.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	151 days	275,305SS-60 eday	328															
277	277 5.17.7.8	Stoplogs and Penstocks, EQT013	513 days	Wed 30/6/21	Thu 24/11/22	168 days																	
278	278 5.17.7.8.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Wed 30/6/21	Mon 25/4/22	153 days	248	279															
279	279 5.17.7.8.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	31 days	278,305SS-60 eday	319															
280	280 5.17.7.9	Valves, EQT036	513 days	Wed 30/6/21	Thu 24/11/22	288 days																	
281	281 5.17.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 30/6/21	Thu 24/2/22	213 days	248	282															
282	282 5.17.7.9.2	Shipping and Delivery of Plant to site	60 days	Mon 26/9/22	Thu 24/11/22	151 days	281,305SS-60 eday	328															
283	283 5.17.7.10	Lifting Appliances	590 days	Tue 30/3/21	Wed 9/11/22	143 days																	
284	284 5.17.7.10.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Tue 30/3/21	Wed 24/11/21	305 days	253	285															
285	285 5.17.7.10.2	Shipping and Delivery of Plant to site	45 days	Mon 26/9/22	Wed 9/11/22	16 days	284,305SS-60 eday	309															

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

Milestone, Tentative Summary Manual Summary Critical Progress Slack

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023	Half 2, 2023	Half 1, 2024	Half 2, 2024	Half 1, 2025	Half 2, 2025
343	343.5.17.8.3.5.1	Configuration of PLC System, IW	45 days	Sat 8/7/23	Mon 21/8/23	0 days	339	344	PLC - A x 1 man														
344	344.5.17.8.3.5.2	Site Acceptance Test for PLC System at Inlet Works No. 1	60 days	Tue 22/8/23	Fri 20/10/23	51 days	343	345,1262															
345	345.5.17.8.3.6	Site Acceptance Test for E&M Equip & Instrumentations calibration, IW	15 days	Tue 2/1/24	Tue 16/1/24	0 days	318,333,340,470,5346																
346	346.5.17.8.3.7	System Commissioning for E&M Equip at Inlet Works No. 1	15 edays	Tue 16/1/24	Wed 31/1/24	0 edays	345	347															
347	347.5.17.8.3.8	Risk Allowances for completion of Processing Plant at Inlet Works No. 1	7 edays	Wed 31/1/24	Wed 7/2/24	0.63 edays	346,355	1258															
348	348.5.17.8.3.9	Building Services Installations for Inlet Works No. 1	300 days	Sun 26/3/23	Fri 19/1/24	17 days	305FS+120 days,2!																
349	349.5.17.8.3.9.1	Mechanical Ventilation and Air Conditioning System, IW	150 days	Sun 26/3/23	Tue 22/8/23	30 days		355	MVAC - B x 4~6 men														
350	350.5.17.8.3.9.2	Lighting and Power Distribution System, IW	180 days	Sun 26/3/23	Thu 21/9/23	0 days		355	BS - A x 4~6 men														
351	351.5.17.8.3.9.3	Plumbing Installation, IW	120 days	Sun 26/3/23	Sun 23/7/23	60 days	1229	1231,355	Pb - A x 4~6 men														
352	352.5.17.8.3.9.4	CCTV Installation (5 indoor +5 outdoor Cameras), IW	90 days	Mon 24/4/23	Sat 22/7/23	51 days	305SS+150 days	355,1261	BS - B x 4~6 men														
353	353.5.17.8.3.9.5	Fire Services Installation, IW	120 days	Mon 24/4/23	Mon 21/8/23	31 days	305SS+150 days	1182,1194,1195,35!FS	A - A x 4~6 men														
354	354.5.17.8.3.9.6	Earthing and Lightning Protection System, IW	60 days	Wed 24/5/23	Sat 22/7/23	61 days	305SS+180 days	355	BS - C x 2~4 men														
355	355.5.17.8.3.9.7	Testing and Commissioning of Building Services Installations, IW	120 days	Fri 22/9/23	Fri 19/1/24	12 days	349,350,351,352,3347		BS - C x 2~4 men														
356	356.5.18	Primary Sedimentation Tanks No. 1 ~ 4, Portion B-3 (PS 6B2.2)	1371 days	Wed 1/7/20	Mon 1/4/24	0 days																	
357	357.5.18.1	Planned Key Date Completion Date - KD1A, PST No. 1~4	0 days	Fri 30/10/20	Fri 30/10/20	0 days	391FF,392FF																
358	358.5.18.2	Planned Key Date Completion Date - KD1B, PST No. 1~4	1 day	Tue 1/6/21	Tue 1/6/21	0 days	393FF																
359	359.5.18.3	Planned Sectional Completion Date - Section 1, PST No. 1~4	0 days	Mon 12/7/21	Mon 12/7/21	0 days	396FF,395FF,394FI																
360	360.5.18.4	Planned Sectional Completion Date - Section 2, PST No. 1~4	0 days	Mon 1/4/24	Mon 1/4/24	0 days	484FF																
361	361.5.18.5	Selection of Suppliers for major plant and materials for PST No. 1~4	230 days	Wed 1/7/20	Mon 15/2/21	47 days																	
362	362.5.18.5.1	PST - lamella plate settlers, C11, ref. EQT014	90 days	Wed 1/7/20	Mon 28/9/20	187 days																	
363	363.5.18.5.1.1	Submission for acceptance of purchasing package	30 days	Wed 1/7/20	Thu 30/7/20	0 days		364															
364	364.5.18.5.1.2	Invitation of quotations for purchasing package	30 days	Fri 31/7/20	Sat 29/8/20	0 days	363	365															
365	365.5.18.5.1.3	Acceptance of conforming quotation	30 days	Sun 30/8/20	Mon 28/9/20	140 days	364	394															
366	366.5.18.5.2	PST - reciprocating type bottom scrapers, C11, ref. EQT014	135 days	Wed 1/7/20	Thu 12/11/20	142 days																	
367	367.5.18.5.2.1	Submission for acceptance of purchasing package	45 days	Wed 1/7/20	Fri 14/8/20	0 days		368															
368	368.5.18.5.2.2	Invitation of quotations for purchasing package	60 days	Sat 15/8/20	Tue 13/10/20	0 days	367	369															
369	369.5.18.5.2.3	Acceptance of conforming quotation	30 days	Wed 14/10/20	Thu 12/11/20	95 days	368	394															
370	370.5.18.5.3	PST - surface scum skimmers, C11, ref. EQT015	90 days	Tue 7/7/20	Sun 4/10/20	181 days																	
371	371.5.18.5.3.1	Submission for acceptance of purchasing package	30 days	Tue 7/7/20	Wed 5/8/20	0 days		372															
372	372.5.18.5.3.2	Invitation of quotations for purchasing package	30 days	Thu 6/8/20	Fri 4/9/20	0 days	371	373															
373	373.5.18.5.3.3	Acceptance of conforming quotation	30 days	Sat 5/9/20	Sun 4/10/20	134 days	372	394															
374	374.5.18.5.4	PST - scum collector pipes, C11, ref. EQT015	210 days	Wed 1/7/20	Tue 26/1/21	67 days																	
375	375.5.18.5.4.1	Submission for acceptance of purchasing package	120 days	Wed 1/7/20	Wed 28/10/20	0 days		376															
376	376.5.18.5.4.2	Invitation of quotations for purchasing package	60 days	Thu 29/10/20	Sun 27/12/20	0 days	375	377															
377	377.5.18.5.4.3	Acceptance of conforming quotation	30 days	Mon 28/12/20	Tue 26/1/21	20 days	376	394															
378	378.5.18.5.5	PST - piston type primary sludge pumps, C11, ref. EQT016	210 days	Wed 1/7/20	Tue 26/1/21	0 days																	
379	379.5.18.5.5.1	Submission for acceptance of purchasing package	120 days	Wed 1/7/20	Wed 28/10/20	0 days		380															
380	380.5.18.5.5.2	Invitation of quotations for purchasing package	60 days	Thu 29/10/20	Sun 27/12/20	0 days	379	381															
381	381.5.18.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Mon 28/12/20	Tue 26/1/21	0 days	380	394															
382	382.5.18.5.6	PST - drain pumps, C11, ref. EQT007	210 days	Tue 14/7/20	Mon 8/2/21	54 days																	
383	383.5.18.5.6.1	Submission for acceptance of purchasing package	120 days	Tue 14/7/20	Tue 10/11/20	0 days		384															
384	384.5.18.5.6.2	Invitation of quotations for purchasing package	60 days	Wed 11/11/20	Sat 9/1/21	0 days	383	385															
385	385.5.18.5.6.3	Acceptance of conforming quotation	30 days	Sun 10/1/21	Mon 8/2/21	7 days	384	394															
386	386.5.18.5.7	PST - air blowers, C11, ref. EQT018	210 days	Tue 21/7/20	Mon 15/2/21	47 days																	
387	387.5.18.5.7.1	Submission for acceptance of purchasing package	120 days	Tue 21/7/20	Tue 17/11/20	0 days		388															
388	388.5.18.5.7.2	Invitation of quotations for purchasing package	60 days	Wed 18/11/20	Sat 16/1/21	0 days	387	389															
389	389.5.18.5.7.3	Acceptance of conforming quotation	30 days	Sun 17/1/21	Mon 15/2/21	0 days	388	394															
390	390.5.18.6	Design Submissions for PST No. 1~4	336 days	Sat 1/8/20	Fri 2/7/21	10 days																	
391	391.5.18.6.1	Electrical schematic drawings for PST No. 1~4	60 days	Sat 1/8/20	Tue 29/9/20	31 days		357FF															
392	392.5.18.6.2	CDS080-2 - Civil and dimensional requirements drawings for PST No. 1~4 up to +8.0 mPD	50 days	Tue 1/9/20	Tue 20/10/20	0 days		357FF															
393	393.5.18.6.3	CDS081-2 - Civil and dimensional requirements drawings for PST No. 1~4	150 days	Tue 1/9/20	Thu 28/1/21	124 days		358FF															
394	394.5.18.6.4	CDS003 - Detailed Design for Primary Sedimentation Tanks No. 1~4	100 edays	Mon 15/2/21	Wed 26/5/21	0.63 edays	365,369,373,377,3401,404,407,410,41																
395	395.5.18.6.5	CDS022 - Detailed Design for Electrical Installations for PST No. 1~4	30 edays	Sun 23/5/21	Tue 22/6/21	0.63 edays	72,82,90,185FF	73,435,359FF															
396	396.5.18.6.6	CDS034-2 - Detailed Design for Electrical Installations BS at PST No. 1~4	90 edays	Fri 12/3/21	Thu 10/6/21	32.38 edays	133	477,359FF															
397	397.5.18.6.7	CDS025-2 - Detailed Design for LV Switchboards for PST No. 1~4	60 edays	Mon 3/5/21	Fri 2/7/21	0.63 edays	68	431,359FF															
398	398.5.18.6.8	CDS050-2 - Detailed Design for Lifting Appliances - PST No. 1~4	150 edays	Tue 1/9/20	Fri 29/1/21	0 edays	113	428,359FF															
399	399.5.18.7	Manufacturing and Delivery of Plant & Materials	790 days	Fri 29/1/21	Wed 29/3/23	253 days																	



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

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	J	M	J	S	J	M	J	S	J	M	J	S
400	400.5.18.7.1	Lamella Plate Settlers, EQT014	672 days	Thu 27/5/21	Wed 29/3/23	193 days																	
401	401.5.18.7.1.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	402															
402	402.5.18.7.1.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	143 days	401,439SS-60 eday	453															
403	403.5.18.7.2	Reciprocating Type Bottom Scrappers, EQT014	672 days	Thu 27/5/21	Wed 29/3/23	163 days																	
404	404.5.18.7.2.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	405															
405	405.5.18.7.2.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	16 days	404,439SS-60 eday	454															
406	406.5.18.7.3	Surface Scum Skimmers, EQT015	672 days	Thu 27/5/21	Wed 29/3/23	253 days																	
407	407.5.18.7.3.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	408															
408	408.5.18.7.3.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	203 days	407,439SS-60 eday	455															
409	409.5.18.7.4	Surface Scum Collection Pipes, EQT015	672 days	Thu 27/5/21	Wed 29/3/23	253 days																	
410	410.5.18.7.4.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	411															
411	411.5.18.7.4.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	203 days	410,439SS-60 eday	456															
412	412.5.18.7.5	Piston Type Primary Sludge Pumps, EQT016	672 days	Thu 27/5/21	Wed 29/3/23	133 days																	
413	413.5.18.7.5.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	414															
414	414.5.18.7.5.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	106 days	413,439SS-60 eday	457															
415	415.5.18.7.6	Drain Pumps, EQT007	672 days	Thu 27/5/21	Wed 29/3/23	163 days																	
416	416.5.18.7.6.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	417															
417	417.5.18.7.6.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	136 days	416,439SS-60 eday	458															
418	418.5.18.7.7	Air Blower, EQT018	672 days	Thu 27/5/21	Wed 29/3/23	193 days																	
419	419.5.18.7.7.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Thu 27/5/21	Tue 22/3/22	327 days	394	420															
420	420.5.18.7.7.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	166 days	419,439SS-60 eday	459															
421	421.5.18.7.8	Stoplogs and Penstocks, EQT013	672 days	Thu 27/5/21	Wed 29/3/23	43 days																	
422	422.5.18.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Thu 27/5/21	Fri 21/1/22	387 days	394	423															
423	423.5.18.7.8.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	16 days	439SS-60 edays,	42451															
424	424.5.18.7.9	Valves, EQT036	672 days	Thu 27/5/21	Wed 29/3/23	43 days																	
425	425.5.18.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Thu 27/5/21	Fri 21/1/22	387 days	394	426															
426	426.5.18.7.9.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	16 days	425,439SS-60 eday	452															
427	427.5.18.7.10	Lifting Appliances	790 days	Fri 29/1/21	Wed 29/3/23	66 days																	
428	428.5.18.7.10.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Fri 29/1/21	Thu 26/8/21	535 days	398	429															
429	429.5.18.7.10.2	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	16 days	428,439SS-60 eday	442															
430	430.5.18.7.11	LV Switchboards	635 days	Sat 3/7/21	Wed 29/3/23	53 days																	
431	431.5.18.7.11.1	PST - Manufacturing of Plant	300 days	Sat 3/7/21	Thu 28/4/22	0 days	397	432															
432	432.5.18.7.11.2	PST - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Fri 29/4/22	Wed 27/7/22	200 days	431	433															
433	433.5.18.7.11.3	PST - Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	16 days	432,439SS-60 eday	464															
434	434.5.18.7.12	PLC System	645 days	Wed 23/6/21	Wed 29/3/23	53 days																	
435	435.5.18.7.12.1	Manufacturing of Plant, PLC for PST	300 days	Wed 23/6/21	Mon 18/4/22	0 days	395	436															
436	436.5.18.7.12.2	Factory Acceptance Test of Plant, PLC for PST (To be witnessed by PM)	60 days	Tue 19/4/22	Fri 17/6/22	240 days	435	437															
437	437.5.18.7.12.3	Shipping and Delivery of Plant to site	45 days	Mon 13/2/23	Wed 29/3/23	16 days	436,439SS-60 eday	465															
438	438.5.18.8	Site Installation Work	298 days	Fri 14/4/23	Mon 5/2/24	0 days																	
439	439.5.18.8.1	Tentative Civil Handover Date, Portion B-3, PST No. 1~4 (Rev. 5)	1 day	Fri 14/4/23	Fri 14/4/23	0 days		442,477FS+90 days,															
440	440.5.18.8.2	Commencement of E&M Installation at PST No. 1~4	297 days	Sat 15/4/23	Mon 5/2/24	0 days	439	403															
441	441.5.18.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting Welfare facilities etc., I	30 days	Sat 15/4/23	Sun 14/5/23	0 days	439																
442	442.5.18.8.2.2	Installation of Lifting Appliances at PST No. 1~4	127 days	Sat 15/4/23	Sat 19/8/23	50 days	439,429																
443	443.5.18.8.2.2.1	Basement EOT Crane LA-02-01 SWL 10t	30 days	Sat 15/4/23	Sun 14/5/23	0 days	444,445,449	LA - A x 4~6 men															
444	444.5.18.8.2.2.2	Coping Level EOT Crane LA-02-02 SWL 5t	30 days	Mon 15/5/23	Tue 13/6/23	60 days	443	449															
445	445.5.18.8.2.2.3	Coping Level EOT Crane LA-02-03 SWL 5t	30 days	Mon 15/5/23	Tue 13/6/23	0 days	443	446,447,449	LA - B x 4~6 men														
446	446.5.18.8.2.2.4	Coping Level EOT Crane LA-02-04 SWL 5t	30 days	Wed 14/6/23	Thu 13/7/23	30 days	445	449	LA - A x 4~6 men														
447	447.5.18.8.2.2.5	Coping Level EOT Crane LA-02-05 SWL 5t	30 days	Wed 14/6/23	Thu 13/7/23	0 days	445	448,449	LA - B x 4~6 men														
448	448.5.18.8.2.2.6	Coping Level EOT Crane LA-02-06 SWL 2t	30 days	Fri 14/7/23	Sat 12/8/23	0 days	447	449	LA - A x 4~6 men														
449	449.5.18.8.2.2.7	T&C, Loading Test for Lifting Appliances at PST No. 1~4	7 days	Sun 13/8/23	Sat 19/8/23	0 days	443,444,445,446,4453	LA - A x 4~6 men															
450	450.5.18.8.2.3	Mechanical Installations at PST No. 1~4	240 days	Sat 15/4/23	Sun 10/12/23	20 days		474															
451	451.5.18.8.2.3.1	Installation of penstocks and stoplogs (Penstock 18nos, Stoplogs 14 nos), EQT013	90 days	Sat 15/4/23	Thu 13/7/23	0 days	423	457,462	ME - E x 4~6 men														
452	452.5.18.8.2.3.2	Installation of pipework and valves, EQT036	240 days	Sat 15/4/23	Sun 10/12/23	27 days	426		ME - B x 4~6 men														
453	453.5.18.8.2.3.3	Installation of lamella plate settlers (x4), EQT014	60 days	Sun 20/8/23	Wed 18/10/23	0 days	454,449,402	455,456	ME - A x 4~6 men														
454	454.5.18.8.2.3.4	Installation of reciprocating type bottom scrapers (x4), EQT014	30 days	Sat 15/4/23	Sun 14/5/23	97 days	405	453	ME - A x 4~6 men														
455	455.5.18.8.2.3.5	Installation of surface scum skimmers (x1), EQT015	30 days	Thu 19/10/23	Fri 17/11/23	50 days	453,408		ME - A x 4~6 men														
456	456.5.18.8.2.3.6	Installation of scum collector pipes (x1), EQT015	30 days	Thu 19/10/23	Fri 17/11/23	50 days	453,411		ME - B x 4~6 men														

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

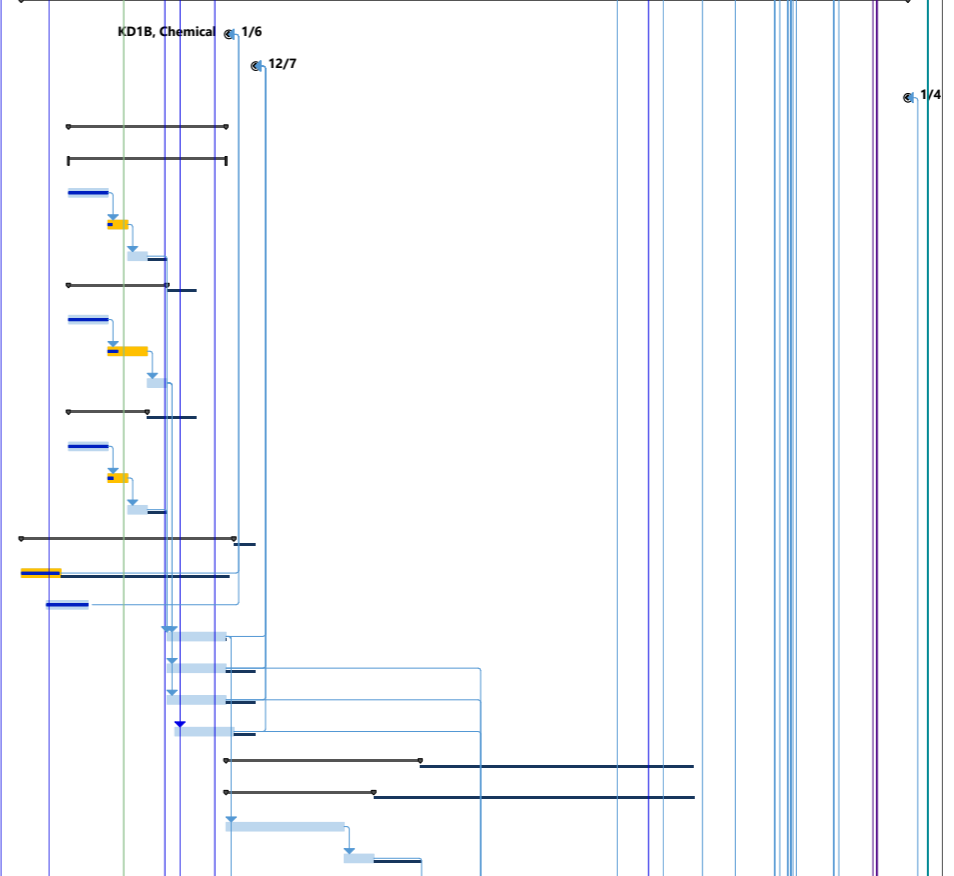
ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023	Half 2, 2023	Half 1, 2024	Half 2, 2024	Half 1, 2025	Half 2, 2025
514	514.5.19.5.6.3	Acceptance of conforming quotation	30 days	Thu 11/2/21	Fri 12/3/21	0 days	513	523															
515	515.5.19.5.7	BR - instrumentations, C11, EQT035-2	150 days	Thu 1/10/20	Sat 27/2/21	19 days																	
516	516.5.19.5.7.1	Submission for acceptance of purchasing package	60 days	Thu 1/10/20	Sun 29/11/20	0 days		517															
517	517.5.19.5.7.2	Invitation of quotations for purchasing package	60 days	Mon 30/11/20	Thu 28/1/21	0 days	516	518															
518	518.5.19.5.7.3	Acceptance of conforming quotation	30 days	Fri 29/1/21	Sat 27/2/21	13 days	517	523															
519	519.5.19.6	Design Submissions for BR 2A & 2B	330 days	Sat 15/8/20	Sat 10/7/21	2 days																	
520	520.5.19.6.1	Electrical schematic drawings for BR No. 2A & 2B	60 days	Sat 15/8/20	Tue 13/10/20	17 days		486FF															
521	521.5.19.6.2	CDS080-3 - Civil and dimensional requirements drawings for BR 2A&2B up to +8.0 mPD	55 days	Tue 1/9/20	Sun 25/10/20	0 days		486FF															
522	522.5.19.6.3	CDS081-3 - Civil and dimensional requirements drawings for BR 2A & 2B	210 days	Fri 28/8/20	Thu 25/3/21	68 days		487FF															
523	523.5.19.6.4	CDS004 - Detailed Design for Bioreactor 2A and 2B	120 edays	Fri 12/3/21	Sat 10/7/21	0.63 edays	494,498,502,506,530,533,536,539,54																
524	524.5.19.6.5	CDS023 - Detailed Design for Electrical Installations for BR No. 2A & 2B	30 edays	Sun 23/5/21	Tue 22/6/21	0.63 edays	72,82,90,185FF	73,488FF,697															
525	525.5.19.6.6	CDS034-3 - Detailed Design for Electrical Installations BS at BR No. 2A & 2B	100 edays	Fri 12/3/21	Sun 20/6/21	22.38 edays	133	589,488FF,590															
526	526.5.19.6.7	CDS025-3 - Detailed Design for LV Switchboards for BR 2A and 2B	60 edays	Mon 3/5/21	Fri 2/7/21	0.63 edays	68	683,488FF															
527	527.5.19.6.8	CDS050-3 - Detailed Design for Lifting Appliances - BR 2A & 2B	120 edays	Thu 1/10/20	Fri 29/1/21	0 edays	113	557,488FF															
528	528.5.19.7	Manufacturing and Delivery of Plant & Materials	740 days	Fri 29/1/21	Tue 7/2/23	258 days																	
529	529.5.19.7.1	Pre-treatment Fine Screens, EQT019	577 days	Sun 11/7/21	Tue 7/2/23	185 days																	
530	530.5.19.7.1.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	531															
531	531.5.19.7.1.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	16 days	530,560SS-60 eday	573															
532	532.5.19.7.2	Air Diffusion System, EQT017	577 days	Sun 11/7/21	Tue 7/2/23	168 days																	
533	533.5.19.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	534															
534	534.5.19.7.2.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	83 days	533,560SS-60 eday	574															
535	535.5.19.7.3	Submersible Mixer, EQT020	577 days	Sun 11/7/21	Tue 7/2/23	213 days																	
536	536.5.19.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	537															
537	537.5.19.7.3.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	44 days	536,560SS-60 eday	575															
538	538.5.19.7.4	Mixed Liquor Return Pumps, EQT008	577 days	Sun 11/7/21	Tue 7/2/23	228 days																	
539	539.5.19.7.4.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	540															
540	540.5.19.7.4.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	16 days	539,560SS-60 eday	576															
541	541.5.19.7.5	Sum Removal System, EQT021, EQT022	577 days	Sun 11/7/21	Tue 7/2/23	258 days																	
542	542.5.19.7.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	543															
543	543.5.19.7.5.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	46 days	542,560SS-60 eday	577															
544	544.5.19.7.6	Aeration Blowers, EQT039	577 days	Sun 11/7/21	Tue 7/2/23	258 days																	
545	545.5.19.7.6.1	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by PM)	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	546															
546	546.5.19.7.6.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	173 days	545,560SS-60 eday	578															
547	547.5.19.7.7	Instrumentations, EQT035-2	577 days	Sun 11/7/21	Tue 7/2/23	243 days																	
548	548.5.19.7.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	549															
549	549.5.19.7.7.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	166 days	548,560SS-60 eday	579															
550	550.5.19.7.8	Stoplogs and Penstocks, EQT013	577 days	Sun 11/7/21	Tue 7/2/23	33 days																	
551	551.5.19.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	552															
552	552.5.19.7.8.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	16 days	551,560SS-60 eday	571															
553	553.5.19.7.9	Valves, EQT036	577 days	Sun 11/7/21	Tue 7/2/23	93 days																	
554	554.5.19.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Sun 11/7/21	Mon 7/3/22	292 days	523	555															
555	555.5.19.7.9.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	16 days	554,560SS-60 eday	572															
556	556.5.19.7.10	Lifting Appliances	740 days	Fri 29/1/21	Tue 7/2/23	101 days																	
557	557.5.19.7.10.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Fri 29/1/21	Thu 26/8/21	485 days	527	558															
558	558.5.19.7.10.2	Shipping and Delivery of Plant to site	45 days	Sun 25/12/22	Tue 7/2/23	16 days	557,560SS-60 eday	564															
559	559.5.19.8	Site Installation Work	348 days	Thu 23/2/23	Mon 5/2/24	0 days																	
560	560.5.19.8.1	Tentative Civil Handover Date, Portion B-4, BR2A & 2B (Rev. 5)	1 day	Thu 23/2/23	Thu 23/2/23	0 days		564,570,581,589FS															
561	561.5.19.8.2	Tentative Civil Handover Date, LV cables draw pits from MFB2 to BR2	1 day	Thu 1/6/23	Thu 1/6/23	0 days		584FF+30 days															
562	562.5.19.8.3	Commencement of E&M Installation at Bioreactor No. 2A & 2B	347 days	Fri 24/2/23	Mon 5/2/24	0 days	560																
563	563.5.19.8.3.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc.,	7 days	Fri 24/2/23	Thu 2/3/23	0 days	560																
564	564.5.19.8.3.2	Installation of Lifting Appliances at BR 2A & 2B	67 days	Fri 24/2/23	Mon 1/5/23	85 days	560,558																
565	565.5.19.8.3.2.1	Coping Level EOT Crane LA-03-01 SWL 5t	30 days	Fri 24/2/23	Sat 25/3/23	0 days		567,568,569	LA - A x 4~6 men														
566	566.5.19.8.3.2.2	Coping Level EOT Crane LA-03-02 SWL 5t	30 days	Fri 24/2/23	Sat 25/3/23	0 days		567,568,569	LA - B x 4~6 men														
567	567.5.19.8.3.2.3	Coping Level EOT Crane LA-03-03 SWL 5t	30 days	Sun 26/3/23	Mon 24/4/23	0 days	565,566	569	LA - A x 4~6 men														
568	568.5.19.8.3.2.4	Coping Level Mobile A-frame LA-03-04 SWL 4t	7 days	Sun 26/3/23	Sat 1/4/23	23 days	565,566	569	LA - B x 4~6 men														
569	569.5.19.8.3.2.5	T&C, Loading Test for Lifting Appliances at Bioreactor No. 2A & 2B	7 days	Tue 25/4/23	Mon 1/5/23	0 days	565,566,567,568	574	LA - B x 4~6 men														
570	570.5.19.8.3.3	Mechanical Installations for E&M Equip at BR 2A & 2B	270 days	Fri 24/2/23	Mon 20/11/24	10 days	560	586															

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

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	J	M	J	S	J	M	J	S	J	M	J	S
628	628.5.20.5.7.2	Invitation of quotations for purchasing package	60 days	Wed 30/12/20	Sat 27/2/21	0 days	627	629															
629	629.5.20.5.7.3	Acceptance of conforming quotation	30 days	Sun 28/2/21	Mon 29/3/21	14 days	628	646															
630	630.5.20.5.8	MFS - membrane tank drain pumps, C11, ref. EQT009	180 days	Tue 15/9/20	Sat 13/3/21	41 days																	
631	631.5.20.5.8.1	Submission for acceptance of purchasing package	90 days	Tue 15/9/20	Sun 13/12/20	0 days		632															
632	632.5.20.5.8.2	Invitation of quotations for purchasing package	60 days	Mon 14/12/20	Thu 11/2/21	0 days	631	633															
633	633.5.20.5.8.3	Acceptance of conforming quotation	30 days	Fri 12/2/21	Sat 13/3/21	30 days	632	646															
634	634.5.20.5.9	Plant Service Water System - booster pumps, C11, ref. EQT030	180 days	Thu 15/10/20	Mon 12/4/21	11 days																	
635	635.5.20.5.9.1	Submission for acceptance of purchasing package	90 days	Thu 15/10/20	Tue 12/1/21	0 days		636															
636	636.5.20.5.9.2	Invitation of quotations for purchasing package	60 days	Wed 13/1/21	Sat 13/3/21	0 days	635	637															
637	637.5.20.5.9.3	Acceptance of conforming quotation	30 days	Sun 14/3/21	Mon 12/4/21	0 days	636	646															
638	638.5.20.5.10	Plant Service Water System - hydro-pneumatic pressure tanks, C11, ref. EQT030	120 days	Thu 1/10/20	Thu 28/1/21	85 days																	
639	639.5.20.5.10.1	Submission for acceptance of purchasing package	60 days	Thu 1/10/20	Sun 29/11/20	0 days		640															
640	640.5.20.5.10.2	Invitation of quotations for purchasing package	30 days	Mon 30/11/20	Tue 29/12/20	0 days	639	641															
641	641.5.20.5.10.3	Acceptance of conforming quotation	30 days	Wed 30/12/20	Thu 28/1/21	74 days	640	646															
642	642.5.20.6	Design Submissions for MFB No. 2	316 days	Fri 21/8/20	Fri 2/7/21	10 days																	
643	643.5.20.6.1	Electrical schematic drawings for MFB No. 2	60 days	Fri 21/8/20	Mon 19/10/20	11 days		597FF															
644	644.5.20.6.2	CDS080-4 - Civil and dimensional requirements drawings for MFB no. 2 up to +8.0 mPD	30 days	Tue 1/9/20	Wed 30/9/20	0 days		597FF															
645	645.5.20.6.3	CDS081-4 - Civil and dimensional requirements drawings for MFB No. 2	210 days	Fri 28/8/20	Thu 25/3/21	68 days		598FF															
646	646.5.20.6.4	CDS005 - Detailed Design for Membrane Filtration System, Pumps and Membrane Module	80 edays	Mon 12/4/21	Thu 1/7/21	0.63 edays	605,613,629,633,6655,659,662,665,67																
647	647.5.20.6.5	CDS024 - Detailed Design for Electrical Installations for MFB No. 2	30 edays	Sun 23/5/21	Tue 22/6/21	0.63 edays	72,82,78,86,90,187,73,694,700,599FF																
648	648.5.20.6.6	CDS008 - Detailed Design for Membrane Filtration System, Air Blowers, Dosing Systems etc	100 edays	Mon 1/3/21	Wed 9/6/21	0.63 edays	609,617,621,625,5668,671,599FF																
649	649.5.20.6.7	CDS034-4 - Detailed Design for Electrical Installations BS at MFB No. 2	100 edays	Fri 12/3/21	Sun 20/6/21	22.38 edays	133	763,599FF															
650	650.5.20.6.8	CDS025-4 - Detailed Design for LV Switchboards for Membrane Filtration System	60 edays	Mon 3/5/21	Fri 2/7/21	0.63 edays	68	686,599FF															
651	651.5.20.6.9	CDS026-2 - Detailed Design for HV Switchboards for MFB No. 2	60 edays	Sun 18/4/21	Thu 17/6/21	0.63 edays	64	599FF,690															
652	652.5.20.6.10	CDS050-4 - Detailed Design for Lifting Appliances - MFB No. 2	150 edays	Thu 15/10/20	Sun 14/3/21	0 edays	113	680,599FF															
653	653.5.20.7	Manufacturing and Delivery of Plant & Materials	506 days	Sun 14/3/21	Mon 1/8/22	301 days																	
654	654.5.20.7.1	Hollow Fibre Membrane Modules, EQT023	385 days	Fri 2/7/21	Thu 21/7/22	191 days																	
655	655.5.20.7.1.1	MFS - Manufacturing of Plant	300 days	Fri 2/7/21	Wed 27/4/22	0 days	646	656															
656	656.5.20.7.1.2	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	40 days	Thu 28/4/22	Mon 6/6/22	0 days	655	657															
657	657.5.20.7.1.3	MFS - Shipping and Delivery of Plant to site	45 days	Tue 7/6/22	Thu 21/7/22	0 days	656	715															
658	658.5.20.7.2	Air Scour Blowers, EQT040	396 days	Fri 2/7/21	Mon 1/8/22	208 days																	
659	659.5.20.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 2/7/21	Sat 26/2/22	111 days	646	660															
660	660.5.20.7.2.2	Shipping and Delivery of Plant to site	45 days	Sat 18/6/22	Mon 1/8/22	0 days	659,727SS-60 eday	716															
661	661.5.20.7.3	Permeate Pump, EQT024	285 days	Fri 2/7/21	Tue 12/4/22	409 days																	
662	662.5.20.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 2/7/21	Sat 26/2/22	0 days	646	663															
663	663.5.20.7.3.2	Shipping and Delivery of Plant to site	45 days	Sun 27/2/22	Tue 12/4/22	201 days	662	717															
664	664.5.20.7.4	Compressed Air System, EQT029	396 days	Fri 2/7/21	Mon 1/8/22	208 days																	
665	665.5.20.7.4.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Fri 2/7/21	Thu 27/1/22	141 days	646	666															
666	666.5.20.7.4.2	Shipping and Delivery of Plant to site	45 days	Sat 18/6/22	Mon 1/8/22	0 days	665,727SS-60 eday	716															
667	667.5.20.7.5	Chemical Storage Tanks, EQT025	225 days	Thu 10/6/21	Thu 20/1/22	403 days																	
668	668.5.20.7.5.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Thu 10/6/21	Mon 6/12/21	0 days	648	669															
669	669.5.20.7.5.2	Shipping and Delivery of Plant to site	45 days	Tue 7/12/21	Thu 20/1/22	104 days	668	721															
670	670.5.20.7.6	Chemical Dosing Pumps, EQT026	225 days	Thu 10/6/21	Thu 20/1/22	403 days																	
671	671.5.20.7.6.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Thu 10/6/21	Mon 6/12/21	0 days	648	672															
672	672.5.20.7.6.2	Shipping and Delivery of Plant to site	45 days	Tue 7/12/21	Thu 20/1/22	104 days	671	722															
673	673.5.20.7.7	Stoplogs and Penstocks, EQT013	396 days	Fri 2/7/21	Mon 1/8/22	208 days																	
674	674.5.20.7.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 2/7/21	Sat 26/2/22	111 days	646	675															
675	675.5.20.7.7.2	Shipping and Delivery of Plant to site	45 days	Sat 18/6/22	Mon 1/8/22	0 days	674,727SS-60 eday	714															
676	676.5.20.7.8	Valves, EQT036	285 days	Fri 2/7/21	Tue 12/4/22	499 days																	
677	677.5.20.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 2/7/21	Sat 26/2/22	0 days	646	678															
678	678.5.20.7.8.2	Shipping and Delivery of Plant to site	45 days	Sun 27/2/22	Tue 12/4/22	291 days	677	720															
679	679.5.20.7.9	Lifting Appliances	356 days	Sun 14/3/21	Fri 4/3/22	206 days																	
680	680.5.20.7.9.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Sun 14/3/21	Sat 9/10/21	101 days	652	681															
681	681.5.20.7.9.2	Shipping and Delivery of Plant to site	45 days	Wed 19/1/22	Fri 4/3/22	16 days	680,704SS-60 eday	707,730															
682	682.5.20.7.10	LV Switchboards	395 days	Sat 3/7/21	Mon 1/8/22	178 days																	
683	683.5.20.7.10.1	BR - Manufacturing of Plant	240 days	Sat 3/7/21	Sun 27/2/22	0 days	526	684															
684	684.5.20.7.10.2	BR - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Mon 28/2/22	Sat 28/5/22	0 days	683	685															

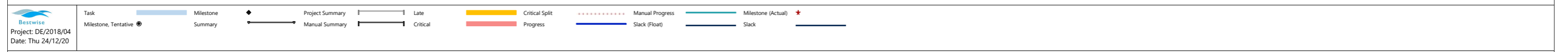
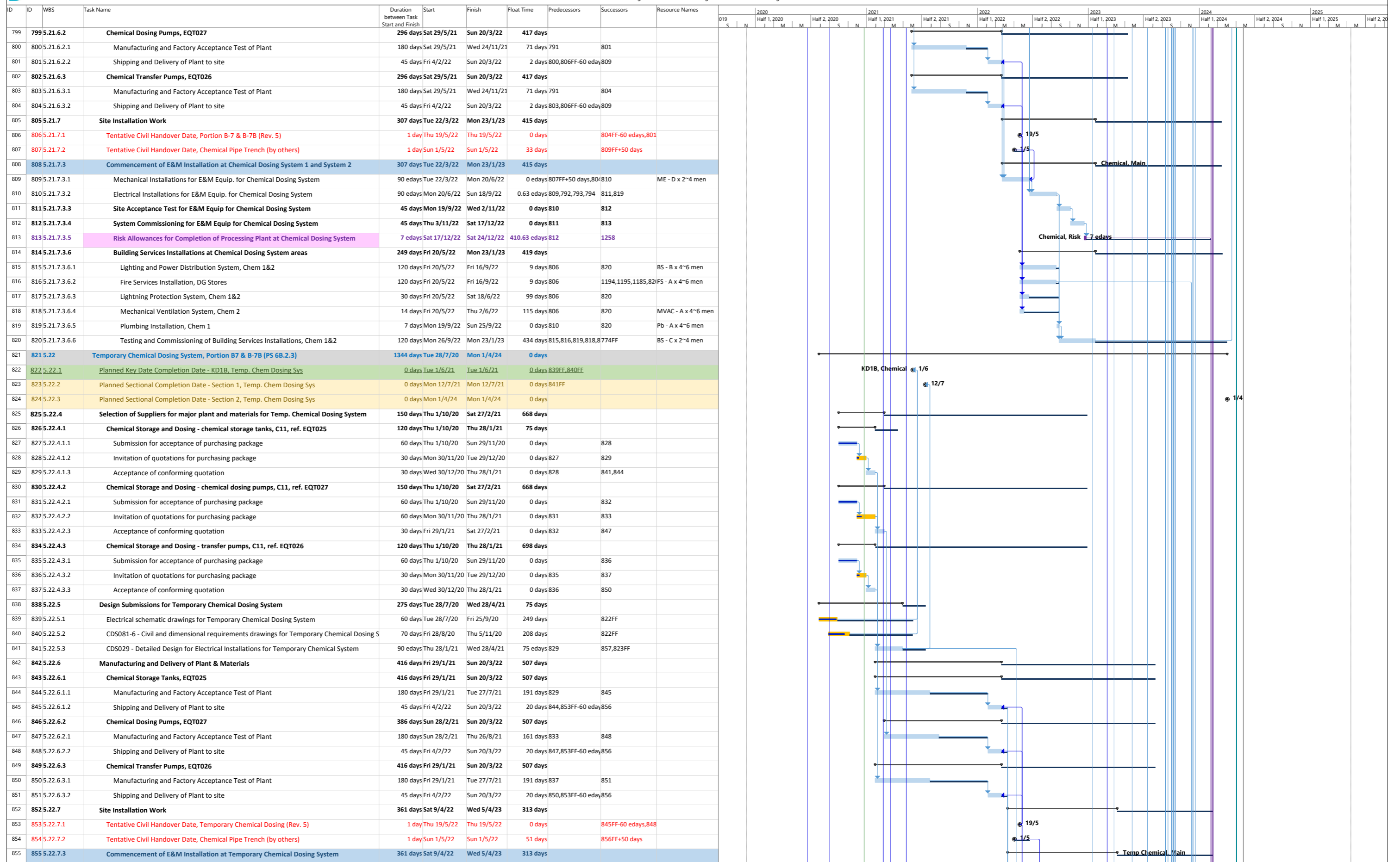
Task Milestone Project Summary Late Critical Split Manual Progress Milestone (Actual) +
Milestone, Tentative Summary Manual Summary Critical Progress Slack (Float) Slack

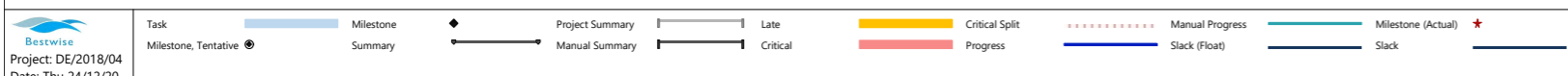
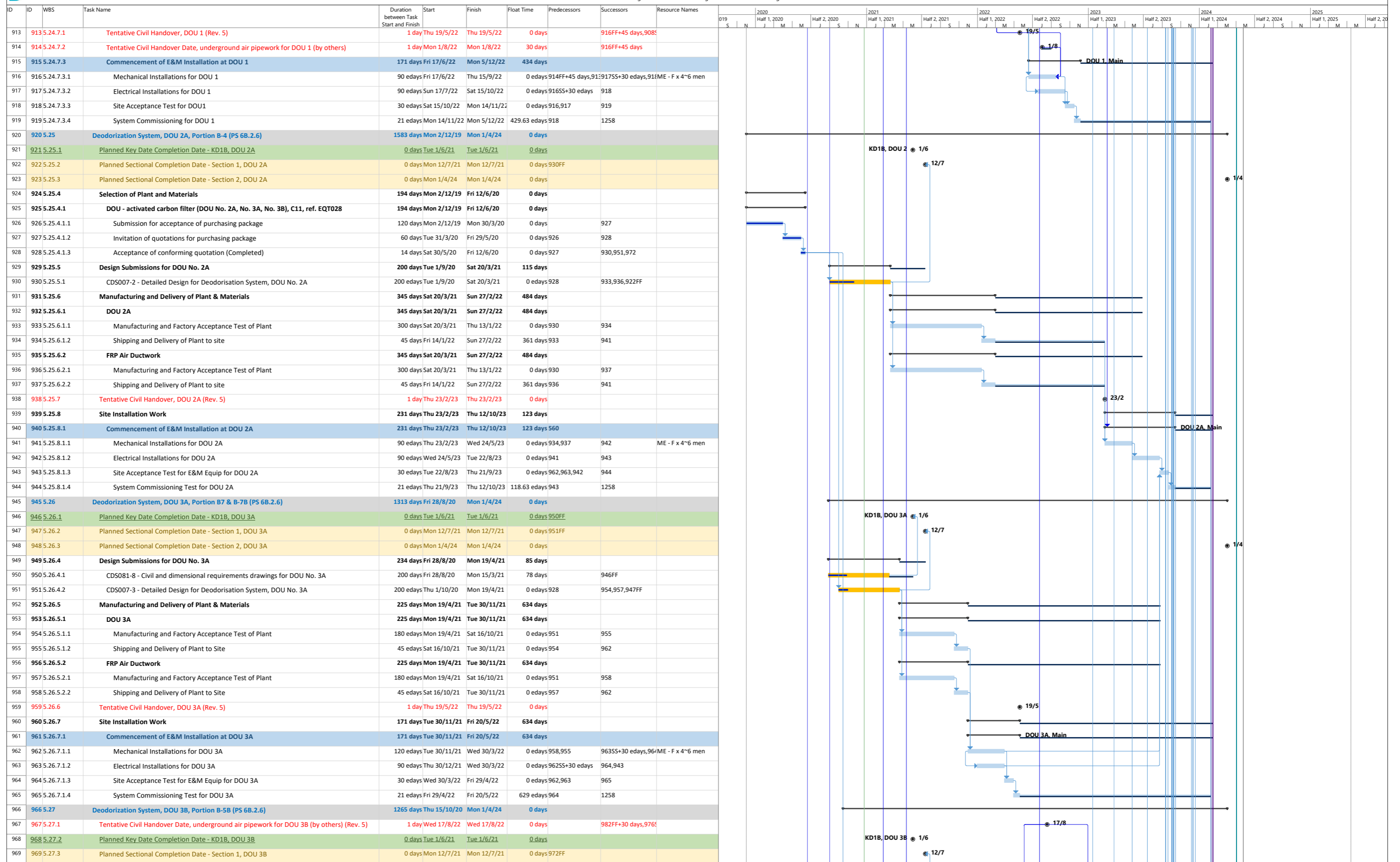
ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025		
										S	N	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023	Half 2, 2023	Half 1, 2024	Half 2, 2024	Half 1, 2025	Half 2, 2025	
742	742.5.20.8.4.3.3	Installation of instrumentations, EQT035-1	60 days	Sun 2/10/22	Wed 30/11/22	357 days	52		ME - D x 2~4 men															
743	743.5.20.8.4.3.4	Site Acceptance Tests - mechanical aspects including alignment and levels checks, lea	180 days	Mon 17/4/23	Fri 13/10/23	40 days	740		ME - D x 2~4 men															
744	744.5.20.8.4.4	Electrical Installations for E&M Equip. at MFB No. 2 Upper Part	300 days	Wed 16/11/22	Mon 11/9/23	32 days	73955+45 edays	760																
745	745.5.20.8.4.4.1	Installation of LV Switchboards, BR2	90 days	Wed 16/11/22	Mon 13/2/23	0 days	685	752	LV - B x 4~6 men															
746	746.5.20.8.4.4.2	Installation of LV Switchboards, MFB No. 2	90 days	Wed 16/11/22	Mon 13/2/23	0 days	688	752	LV - A x 4~6 men															
747	747.5.20.8.4.4.3	Installation of PLC Panels, BR2	90 days	Wed 16/11/22	Mon 13/2/23	0 days	699	752,756																
748	748.5.20.8.4.4.4	Installation of PLC Panels, MFB No. 2	90 days	Wed 16/11/22	Mon 13/2/23	282 days	702		PLC - B x 1 man															
749	749.5.20.8.4.4.5	Installation of HV Switchboards, MFB No. 2	60 days	Wed 16/11/22	Sat 14/1/23	30 days	692	752	HV - A x 4~6 men															
750	750.5.20.8.4.4.6	Installation of transformer, MFB No. 2, EQT032	45 days	Wed 16/11/22	Fri 30/12/22	327 days	695																	
751	751.5.20.8.4.4.7	Installation of cable trays and cable containments	180 days	Wed 16/11/22	Sun 14/5/23	192 days	726																	
752	752.5.20.8.4.4.8	Cables laying and terminations	150 days	Tue 14/2/23	Thu 13/7/23	0 days	745,746,747,749	757,754																
753	753.5.20.8.4.4.9	Energisation of LV Switchboards, MFB	1 day	Wed 30/8/23	Wed 30/8/23	84 days			LA - A x 4~6 men															
754	754.5.20.8.4.4.10	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipme	60 days	Fri 14/7/23	Mon 11/9/23	32 days	752	760	LV - A x 4~6 men															
755	755.5.20.8.4.5	SCADA Systems, BR No. 1 & No 2, MFB No. 2	131 days	Fri 14/7/23	Tue 21/11/23	31 days																		
756	756.5.20.8.4.5.1	Configuration of PLC System for BR No. 1 & No. 2	30 days	Mon 2/10/23	Tue 31/10/23	0 days	747,583	758	PLC - A x 1 man															
757	757.5.20.8.4.5.2	Configuration of PLC System for MFB No. 2	30 days	Fri 14/7/23	Sat 12/8/23	0 days	752	759																
758	758.5.20.8.4.5.3	Site Acceptance Test for PLC System at BR No. 1 and No. 2	21 days	Wed 1/11/23	Tue 21/11/23	19 days	756	761,587,1262																
759	759.5.20.8.4.5.4	Site Acceptance Test for PLC System at MFB No. 2	21 days	Sun 13/8/23	Sat 2/9/23	99 days	757	761,1262																
760	760.5.20.8.4.6	Site Acceptance Test for E&M Equip at MFB No. 2	30 edays	Fri 13/10/23	Sun 12/11/23	28.63 edays	739,744,754,724	761																
761	761.5.20.8.4.7	System Commissioning for E&M Equip at MFB No. 2	45 days	Mon 11/12/23	Wed 24/1/24	0 days	758,760,770,759,7762																	
762	762.5.20.8.4.8	Risk Allowances for Completion of Processing Plant at MFB No. 2	7 edays	Wed 24/1/24	Wed 31/1/24	7.63 edays	761	1258																
763	763.5.20.8.4.9	Building Services Installations for MFB No. 2	330 days	Sun 15/1/23	Sun 10/12/23	12 days	727FS+150 edays,																	
764	764.5.20.8.4.9.1	Mechanical Ventilation and Air Conditioning System, MFB No. 2	120 days	Sun 15/1/23	Sun 14/5/23	90 days		770	MVAC - A x 4~6 men															
765	765.5.20.8.4.9.2	Lighting and Power Distribution System, MFB No. 2	210 days	Sun 15/1/23	Sat 12/8/23	0 days		770	BS - A x 4~6 men															
766	766.5.20.8.4.9.3	Plumbing Installation, MFB No. 2	180 days	Sun 15/1/23	Thu 13/7/23	30 days	1229	1231,770	Pb - B x 4~6 men															
767	767.5.20.8.4.9.4	CCTV Installation (10 indoor + 3 outdoor Cameras), MFB No. 2	90 days	Sun 15/1/23	Fri 14/4/23	120 days	727FS+120 days	770,1261	BS - B x 4~6 men															
768	768.5.20.8.4.9.5	Fire Services Installation, MFB No. 2	120 days	Sun 15/1/23	Sun 14/5/23	90 days		1182,1194,1195,771FS	FS - B x 4~6 men															
769	769.5.20.8.4.9.6	Earthing and Lightning Protection System, MFB No. 2	60 days	Sun 15/1/23	Wed 15/3/23	315 days		761FF	BS - C x 2~4 men															
770	770.5.20.8.4.9.7	Testing and Commissioning of Building Services Installations, MFB No. 2	120 days	Sun 13/8/23	Sun 10/12/23	0 days	764,765,766,767,7761		BS - C x 2~4 men															
771	771.5.21	Chemical System No. 1 and No. 2, Portion B-7 & B-7B (PS 6B.2.3)	1351 days	Tue 21/7/20	Mon 1/4/24	0 days																		
772	772.5.21.1	Planned Key Date Completion Date - KD1B, Chem Sys No. 1 & 2	0 days	Tue 1/6/21	Tue 1/6/21	0 days	789FF,790FF																	
773	773.5.21.2	Planned Sectional Completion Date - Section 1, Chem Sys No. 1 & 2	0 days	Mon 12/7/21	Mon 12/7/21	0 days	791FF,792FF,793FF																	
774	774.5.21.3	Planned Sectional Completion Date - Section 2, Chem Sys No. 1 & 2	0 days	Mon 1/4/24	Mon 1/4/24	0 days	820FF																	
775	775.5.21.4	Selection of Suppliers for major plant and materials for Chemical Systems	240 days	Thu 1/10/20	Fri 28/5/21	0 days																		
776	776.5.21.4.1	Chemical Storage and Dosing - chemical storage tanks, C11, ref. EQT025	240 days	Thu 1/10/20	Fri 28/5/21	0 days																		
777	777.5.21.4.1.1	Submission for acceptance of purchasing package	60 days	Thu 1/10/20	Sun 29/11/20	0 days		778																
778	778.5.21.4.1.2	Invitation of quotations for purchasing package	30 days	Mon 30/11/20	Tue 29/12/20	0 days	777	779																
779	779.5.21.4.1.3	Acceptance of conforming quotation	30 days	Wed 30/12/20	Thu 28/1/21	30 days	778	791																
780	780.5.21.4.2	Chemical Storage and Dosing - chemical dosing pumps, C11, ref. EQT027	150 days	Thu 1/10/20	Sat 27/2/21	45 days																		
781	781.5.21.4.2.1	Submission for acceptance of purchasing package	60 days	Thu 1/10/20	Sun 29/11/20	0 days		782																
782	782.5.21.4.2.2	Invitation of quotations for purchasing package	60 days	Mon 30/11/20	Thu 28/1/21	0 days	781	783																
783	783.5.21.4.2.3	Acceptance of conforming quotation	30 days	Fri 29/1/21	Sat 27/2/21	0 days	782	791,792,793																
784	784.5.21.4.3	Chemical Storage and Dosing - transfer pumps, C11, ref. EQT026	120 days	Thu 1/10/20	Thu 28/1/21	75 days																		
785	785.5.21.4.3.1	Submission for acceptance of purchasing package	60 days	Thu 1/10/20	Sun 29/11/20	0 days		786																
786	786.5.21.4.3.2	Invitation of quotations for purchasing package	30 days	Mon 30/11/20	Tue 29/12/20	0 days	785	787																
787	787.5.21.4.3.3	Acceptance of conforming quotation	30 days	Wed 30/12/20	Thu 28/1/21	30 days	786	791																
788	788.5.21.5	Design Submissions for Chemical System No. 1 and No. 2	324 days	Tue 21/7/20	Thu 10/6/21	33 days																		
789	789.5.21.5.1	Electrical schematic drawings for Chemical Systems No. 1 and No. 2	60 days	Tue 21/7/20	Fri 18/9/20	256 days		772FF																
790	790.5.21.5.2	CDS081-5 - Civil and dimensional requirements drawings for Chemical Systems	70 days	Fri 28/8/20	Thu 5/11/20	0 days		772FF																
791	791.5.21.5.3	CDS006 - Detailed Design for Chemical Dosing System	90 edays	Sat 27/2/21	Fri 28/5/21	0.63 edays	779,783,787	797,800,803,773FF																
792	792.5.21.5.4	CDS027 - Detailed Design for Electrical Installations for Chemical System No. 1	90 edays	Sat 27/2/21	Fri 28/5/21	45 edays	783	810,773FF																
793	793.5.21.5.5	CDS028 - Detailed Design for Electrical Installations for Chemical System No. 2	90 edays	Sat 27/2/21	Fri 28/5/21	45 edays	783	810,773FF																
794	794.5.21.5.6	CDS034-5 - Detailed Design for Electrical Installations BS at Chemical Systems	90 edays	Fri 12/3/21	Thu 10/6/21	32.38 edays	133	810,773FF																
795	795.5.21.6	Manufacturing and Delivery of Plant & Materials	296 days	Sat 29/5/21	Sun 20/3/22	417 days																		
796	796.5.21.6.1	Chemical Storage Tanks, EQT025	225 days	Sat 29/5/21	Sat 8/1/22	488 days																		
797	797.5.21.6.1.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Sat 29/5/21	Wed 24/11/21	0 days	791	798																
798	798.5.21.6.1.2	Shipping and Delivery of Plant to site	45 days	Thu 25/11/21	Sat 8/1/22	73 days	797	809																

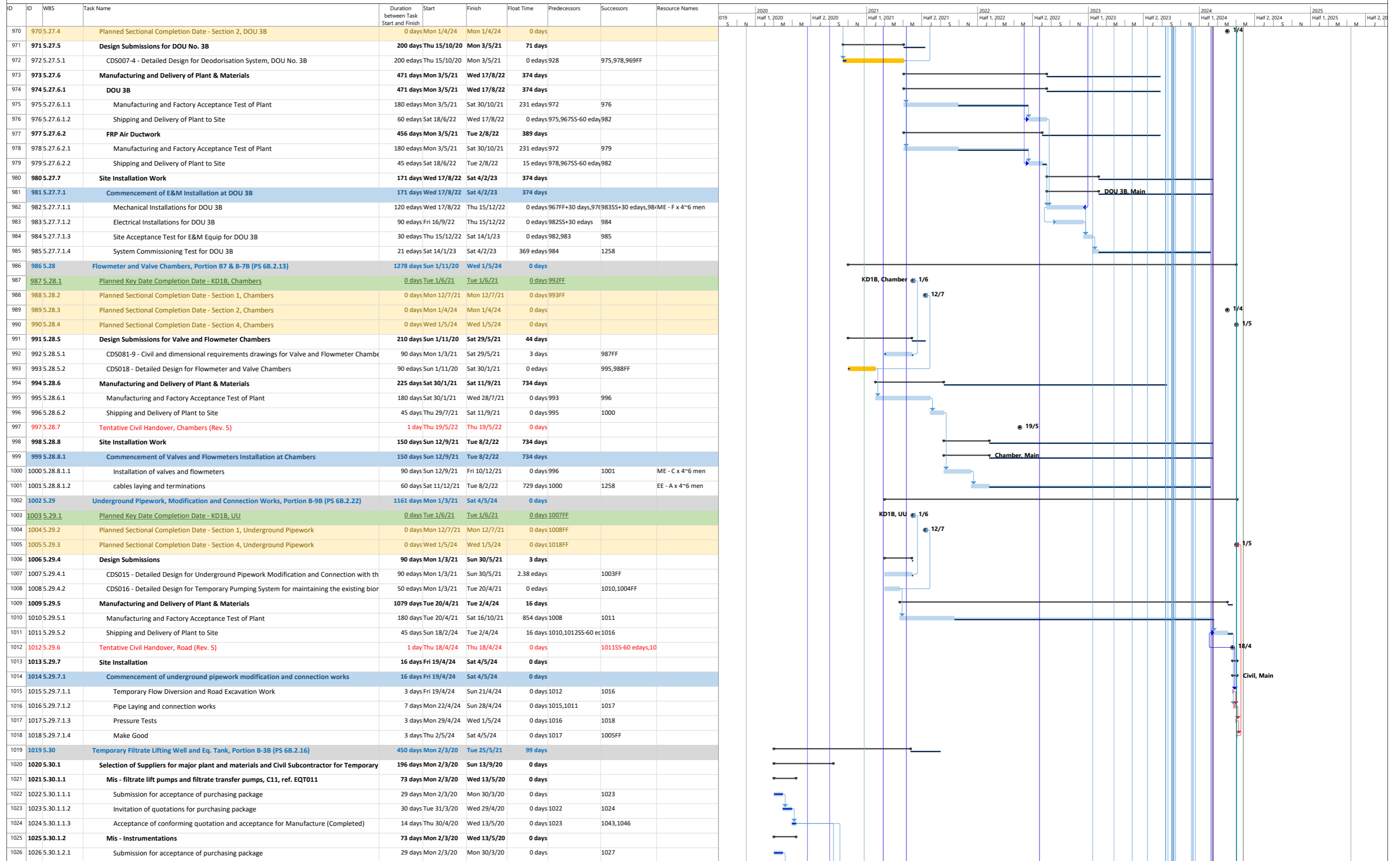


Task Milestone Project Summary Late Critical Split Manual Progress Milestone (Actual) +
 Milestone, Tentative Summary Manual Summary Critical Progress Slack (Float) Slack

Bestwise
 Project: DE/2018/04
 Date: Thu 24/12/20

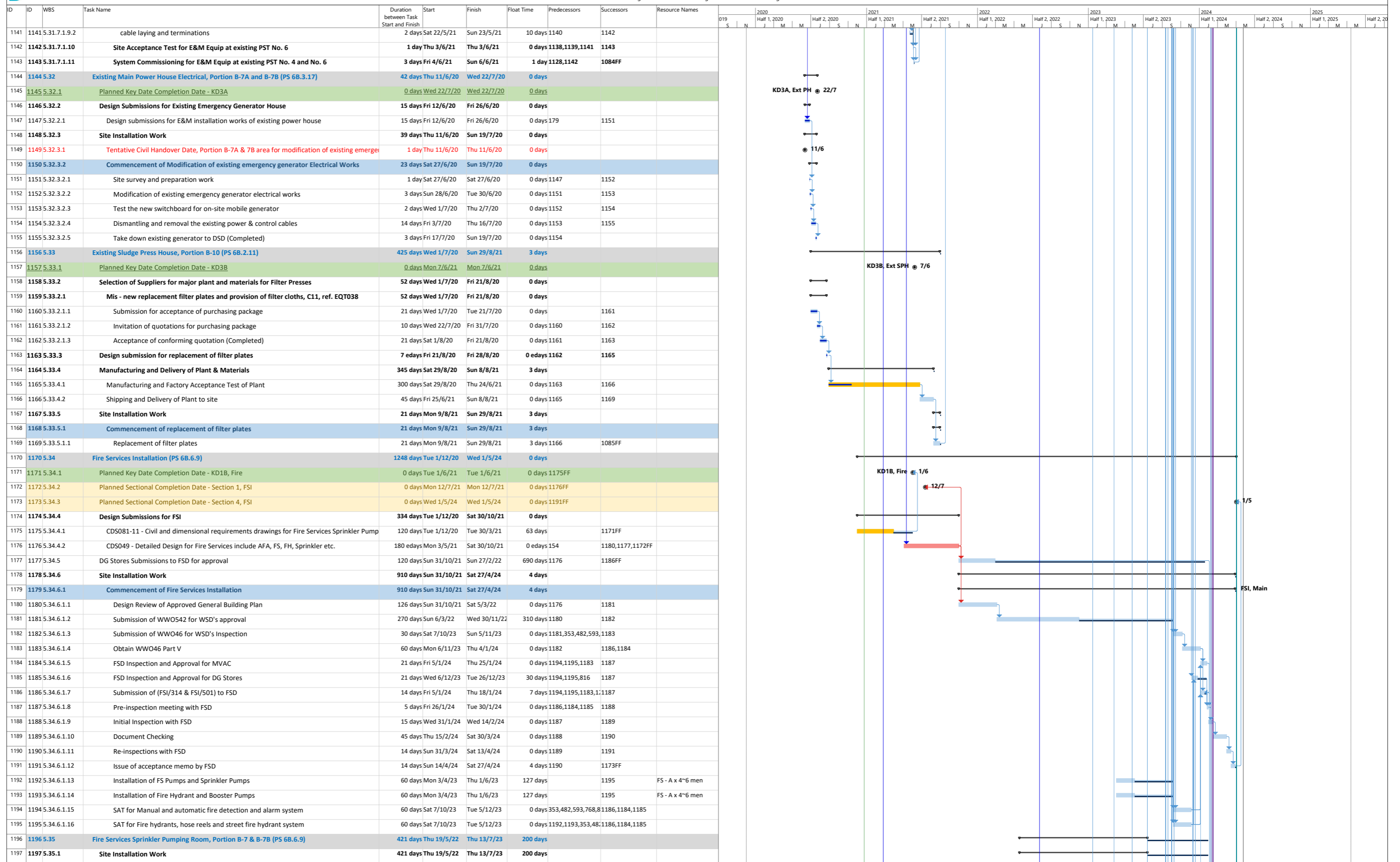




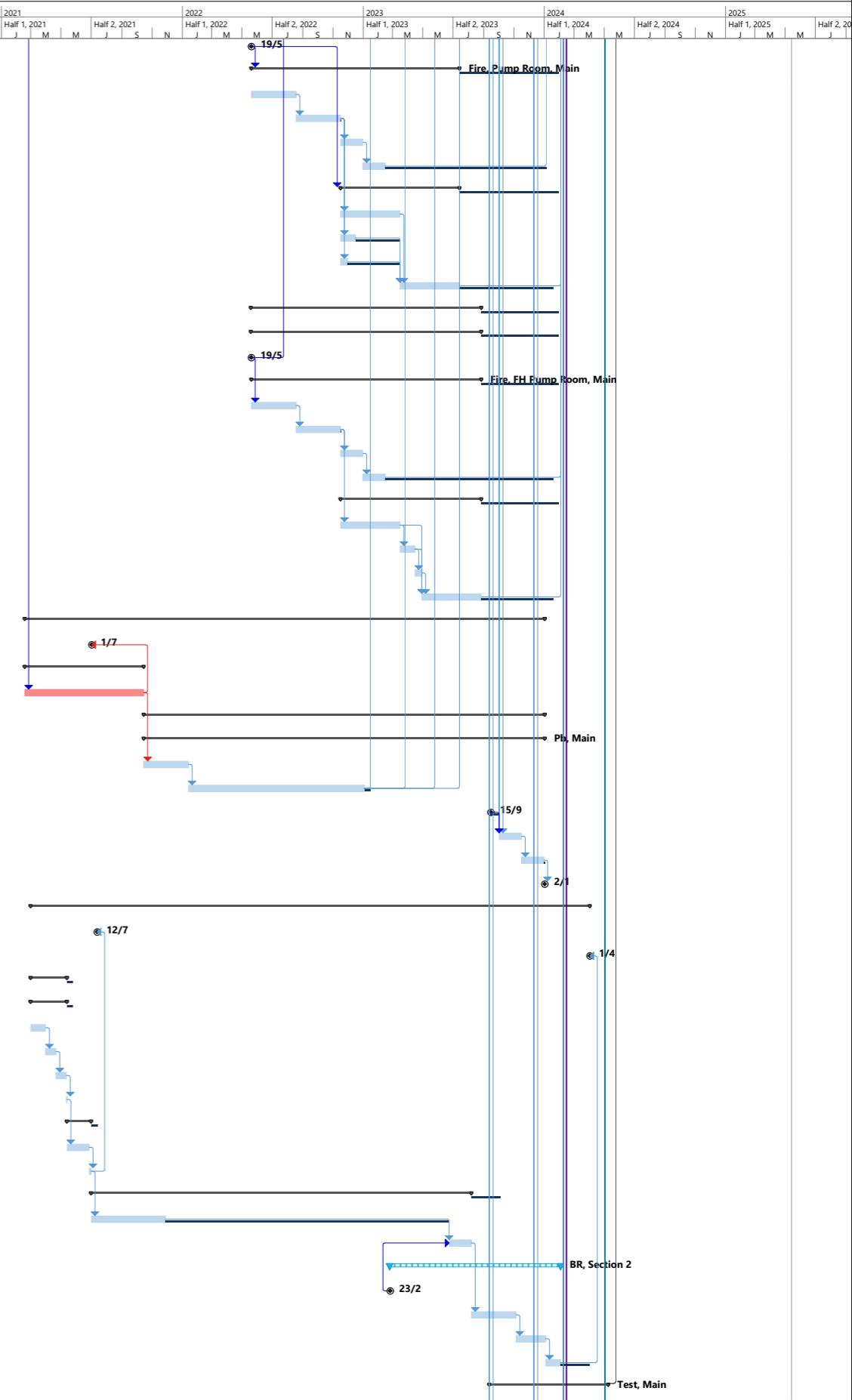


ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2019		2020		2021		2022		2023		2024		2025	
										S	N	J	M	J	M	J	M	J	M	J	M	J	M
1027	1027.5.30.1.2.2	Invitation of quotations for purchasing package	30 days	Tue 31/3/20	Wed 29/4/20	0 days	1026	1028															
1028	1028.5.30.1.2.3	Acceptance of conforming quotation and acceptance for Manufacture (Completed)	14 days	Thu 30/4/20	Wed 13/5/20	0 days	1027	1043,1049															
1029	1029.5.30.1.3	Mis - Pipework (To be provided by Mechanical Sub-Contractor)	42 days	Mon 3/8/20	Sun 13/9/20	0 days																	
1030	1030.5.30.1.3.1	Submission for acceptance of purchasing package	7 days	Mon 3/8/20	Sun 9/8/20	0 days		1031															
1031	1031.5.30.1.3.2	Invitation of quotations for purchasing package	14 days	Mon 10/8/20	Sun 23/8/20	0 days	1030	1032															
1032	1032.5.30.1.3.3	Acceptance of conforming quotation and acceptance for Manufacture	21 days	Mon 24/8/20	Sun 13/9/20	0 days	1031	1043,1052															
1033	1033.5.30.1.4	Mis - Valve (To be provided by Mechanical Sub-Contractor)	42 days	Mon 3/8/20	Sun 13/9/20	0 days																	
1034	1034.5.30.1.4.1	Submission for acceptance of purchasing package	7 days	Mon 3/8/20	Sun 9/8/20	0 days		1035															
1035	1035.5.30.1.4.2	Invitation of quotations for purchasing package	14 days	Mon 10/8/20	Sun 23/8/20	0 days	1034	1036															
1036	1036.5.30.1.4.3	Acceptance of conforming quotation and acceptance for Manufacture	21 days	Mon 24/8/20	Sun 13/9/20	0 days	1035	1043,1055															
1037	1037.5.30.1.5	Civil Work Subletting Package (Repeated WBS 5.13.17)	19 days	Tue 14/7/20	Sat 1/8/20	0 days																	
1038	1038.5.30.1.5.1	Submission for acceptance of subletting package	3 days	Tue 14/7/20	Thu 16/7/20	0 days		1039															
1039	1039.5.30.1.5.2	Invitation of tender for subletting package	14 days	Fri 17/7/20	Thu 30/7/20	0 days	1038	1040															
1040	1040.5.30.1.5.3	Acceptance of conforming quotation and acceptance for Manufacture	2 days	Fri 31/7/20	Sat 1/8/20	0 days	1039	1046,1049,1052,10															
1041	1041.5.30.2	Design Submissions for Temporary Filtrate Lifting Well and Eq. Tank	34 days	Tue 1/9/20	Sun 4/10/20	199 days																	
1042	1042.5.30.2.1	CDS050-5 - Detailed Design for Lifting Appliances - Temp. Filtrate Eq. System, Existing Slud	30 edays	Tue 1/9/20	Thu 1/10/20	163 edays	113	1071															
1043	1043.5.30.2.2	Design submission for E&M Installation works for temp. filtrate eq. system	21 days	Mon 14/9/20	Sun 4/10/20	0 days	1024,1028,1032,11	1045,1051,1048,10															
1044	1044.5.30.3	Manufacturing and Delivery of Plant & Materials	165 days	Mon 5/10/20	Thu 18/3/21	16 days																	
1045	1045.5.30.3.1	Filtrate Lift Pumps and Filtrate Transfer Pump, EQT011	165 days	Mon 5/10/20	Thu 18/3/21	16 days		1043															
1046	1046.5.30.3.1.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 5/10/20	Mon 1/2/21	0 days	1040,1024	1047															
1047	1047.5.30.3.1.2	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 18/3/21	14 days	1046	1076															
1048	1048.5.30.3.2	Instrumentations	165 days	Mon 5/10/20	Thu 18/3/21	16 days		1043															
1049	1049.5.30.3.2.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 5/10/20	Mon 1/2/21	0 days	1040,1028	1050															
1050	1050.5.30.3.2.2	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 18/3/21	0 days	1049	1077															
1051	1051.5.30.3.3	Pipework	165 days	Mon 5/10/20	Thu 18/3/21	2 days		1043															
1052	1052.5.30.3.3.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 5/10/20	Mon 1/2/21	0 days	1040,1032	1053															
1053	1053.5.30.3.3.2	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 18/3/21	0 days	1052	1075															
1054	1054.5.30.3.4	Valve	165 days	Mon 5/10/20	Thu 18/3/21	2 days		1043															
1055	1055.5.30.3.4.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 5/10/20	Mon 1/2/21	0 days	1040,1036	1056															
1056	1056.5.30.3.4.2	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 18/3/21	0 days	1055	1075															
1057	1057.5.30.4	Site Installation Work	297 days	Sat 1/8/20	Tue 25/5/21	99 days																	
1058	1058.5.30.4.1	Commencement of Civil Construction and E&M Installation at Temp. Filtrate Lifting Well	297 days	Sat 1/8/20	Tue 25/5/21	99 days																	
1059	1059.5.30.4.1.1	Civil Construction Work	297 days	Sat 1/8/20	Tue 25/5/21	99 days																	
1060	1060.5.30.4.1.1.1	Civil on-site survey and report submission for acceptance	5 edays	Sat 1/8/20	Thu 6/8/20	0 edays	1040	1061,1062															
1061	1061.5.30.4.1.1.2	Civil structural design and drawing submission for acceptance	30 days	Fri 7/8/20	Sat 5/9/20	0 days	1060	1063															
1062	1062.5.30.4.1.1.3	Site Clearance, UU diversion and construction of U-channel	21 days	Fri 7/8/20	Thu 27/8/20	0 days	1060	1063															
1063	1063.5.30.4.1.1.4	ELS (Sheeting and Excavation)	60 days	Sun 6/9/20	Wed 4/11/20	0 days	1062,1061	1064															
1064	1064.5.30.4.1.1.5	Grouting Works	60 days	Thu 5/11/20	Sun 3/1/21	0 days	1063	1065															
1065	1065.5.30.4.1.1.6	RC structure works including cast-in items	60 days	Mon 4/1/21	Thu 4/3/21	0 days	1064	1074,1071,1066															
1066	1066.5.30.4.1.1.7	Removal Formwork and Flasework	8 days	Fri 5/3/21	Fri 12/3/21	0 days	1065	1071,1072,1075,10															
1067	1067.5.30.4.1.1.8	Waterproofing	14 days	Sat 13/3/21	Fri 26/3/21	0 days	1066	1068															
1068	1068.5.30.4.1.1.9	Other architectural works and finishing works	60 days	Sat 27/3/21	Tue 25/5/21	99 days	1067	1085FF															
1069	1069.5.30.4.1.2	E&M Installation Work	34 days	Sat 13/3/21	Thu 15/4/21	8 days																	
1070	1070.5.30.4.1.2.1	Installation of Lifting Appliances at Temporary Filtrate Lifting Well and Eq. Tank	10 days	Sat 13/3/21	Mon 22/3/21	40 days																	
1071	1071.5.30.4.1.2.1.1	GF MR LA-09-01 SWL 1t	7 days	Sat 13/3/21	Fri 19/3/21	0 days	1065,1042,1066	1073	LA - A x 4~6 men														
1072	1072.5.30.4.1.2.1.2	GF MR LA-09-02 SWL 1t	7 days	Sat 13/3/21	Fri 19/3/21	0 days	1066	1073	LA - A x 4~6 men														
1073	1073.5.30.4.1.2.1.3	Site Acceptance test and loading test of LA	3 days	Sat 20/3/21	Mon 22/3/21	40 days	1071,1072	1108FF	LA - A x 4~6 men														
1074	1074.5.30.4.1.2.2	Mechanical Installations for Temp. Filtrate Lifting Well and Eq. Tank	21 days	Fri 19/3/21	Thu 8/4/21	2 days	1065	1078FS-30 days															
1075	1075.5.30.4.1.2.2.1	Installation of pipework, chemical pipework and valves, EQT036	14 days	Fri 19/3/21	Thu 1/4/21	0 days	1066,1053,1056	1076	ME - A x 4~6 men														
1076	1076.5.30.4.1.2.2.2	Installation of pumps	7 days	Fri 2/4/21	Thu 8/4/21	0 days	1075,1047	1080	ME - A x 4~6 men														
1077	1077.5.30.4.1.2.2.3	Installation of instrumentations, EQT035-3	7 days	Fri 19/3/21	Thu 25/3/21	14 days	1066,1050	1080	ME - A x 4~6 men														
1078	1078.5.30.4.1.2.3	Electrical Installations for Temp. Filtrate Lifting Well and Eq. Tank	34 days	Sat 13/3/21	Thu 15/4/21	2 days	1074FS-30 days																
1079	1079.5.30.4.1.2.3.1	Installation of cable trays and cable containments	21 days	Sat 13/3/21	Fri 2/4/21	6 days	1066	1080															
1080	1080.5.30.4.1.2.3.2	Cables laying and terminations	7 days	Fri 9/4/21	Thu 15/4/21	0 days	1079,1076,1077	1081															
1081	1081.5.30.4.1.3	Site Acceptance Test for E&M Equip at Filtrate Lifting Well and Eq. Tank	7 days	Fri 16/4/21	Thu 22/4/21	0 days	1080	1082															
1082	1082.5.30.4.1.4	System Commissioning for E&M Equip at Temp. Filtrate Lifting Well and Eq. Tank	7 days	Fri 23/4/21	Thu 29/4/21	2 days	1081	1108FF															
1083	1083.5.31	Existing PST No. 4 and No. 6, Portion B-3A (PS 6B.2.15)	397 days	Sat 1/8/20	Wed 1/9/21	0 days																	

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



ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Float Time	Predecessors	Successors	Resource Names	2020		2021		2022		2023		2024		2025	
										Half 1	Half 2	Half 1	Half 2	Half 1	Half 2	Half 1	Half 2	Half 1	Half 2	Half 1	Half 2
1198	1198.5.35.1.1	Tentative Civil Handover Date, FS Sprinkler Pump Room (Rev. 5)	1 day	Thu 19/5/22	Thu 19/5/22	0 days		1199,1204													
1199	1199.5.35.1.2	Commencement of E&M Installation at FS & Sprinkler Pump Room	420 days	Thu 19/5/22	Thu 13/7/23	200 days	1198														
1200	1200.5.35.1.2.1	Mechanical Installations for FS & Sprinkler Pumps	90 edays	Thu 19/5/22	Wed 17/8/22	0 edays		1201													
1201	1201.5.35.1.2.2	Electrical Installations for FS & Sprinkler Pumps	90 edays	Wed 17/8/22	Tue 15/11/22	0.63 edays	1200	1202,1205,1206,121													
1202	1202.5.35.1.2.3	Site Acceptance Test for FS & Sprinkler Pumps	45 days	Wed 16/11/22	Fri 30/12/22	0 days	1201	1203													
1203	1203.5.35.1.2.4	System Commissioning for FS & Sprinkler Pumps	45 days	Sat 31/12/22	Mon 13/2/23	325 days	1202	1186													
1204	1204.5.35.1.2.5	Building Services Installations at FS & Sprinkler Pump Room	240 days	Wed 16/11/22	Thu 13/7/23	200 days	1198														
1205	1205.5.35.1.2.5.1	Lighting and Power Distribution System, Chem 1&2	120 days	Wed 16/11/22	Wed 15/3/23	0 days	1201	1208													
1206	1206.5.35.1.2.5.2	Lightning Protection System, FS & Sprinkler Pump Room	30 days	Wed 16/11/22	Thu 15/12/22	90 days	1201	1208													
1207	1207.5.35.1.2.5.3	Mechanical Ventilation System, FS & Sprinkler PR	14 days	Wed 16/11/22	Tue 29/11/22	106 days	1201	1208													
1208	1208.5.35.1.2.5.4	Testing and Commissioning of Building Services Installations, FS & Sprinkler PR	120 days	Thu 16/3/23	Thu 13/7/23	189 days	1205,1206,1207	1186FF													
1209	1209.5.36	Fire Hydrant and Booster Pumping Room, Portion B7 & B-7B (PS 6B.6.9)	465 days	Thu 19/5/22	Sat 26/8/23	156 days															
1210	1210.5.36.1	Site Installation Work	465 days	Thu 19/5/22	Sat 26/8/23	156 days															
1211	1211.5.36.1.1	Tentative Civil Handover Date, Fire Hydrant and Booster Pumping Room (Rev. 5)	1 day	Thu 19/5/22	Thu 19/5/22	0 days		856FF+50 days,1211													
1212	1212.5.36.1.2	Commencement of E&M Installation at Street FH Pump Room	464 days	Thu 19/5/22	Sat 26/8/23	156 days															
1213	1213.5.36.1.2.1	Mechanical Installations for Street FH Pumps	90 edays	Thu 19/5/22	Wed 17/8/22	0 edays	1211	1214													
1214	1214.5.36.1.2.2	Electrical Installations for Street FH Pump	90 edays	Wed 17/8/22	Tue 15/11/22	0.63 edays	1213	1215,1218													
1215	1215.5.36.1.2.3	Site Acceptance Test for Street FH Pump	45 days	Wed 16/11/22	Fri 30/12/22	0 days	1214	1216													
1216	1216.5.36.1.2.4	System Commissioning for Street FH Pumps	45 days	Sat 31/12/22	Mon 13/2/23	339 days	1215	1186FF													
1217	1217.5.36.1.2.5	Building Services Installations at Street FH Pump Room	284 days	Wed 16/11/22	Sat 26/8/23	156 days															
1218	1218.5.36.1.2.5.1	Lighting and Power Distribution System, Street FH PR	120 days	Wed 16/11/22	Wed 15/3/23	0 days	1214	1221,1219													
1219	1219.5.36.1.2.5.2	Lightning Protection System, Street FH PR	30 days	Thu 16/3/23	Fri 14/4/23	0 days	1218	1220,1221													
1220	1220.5.36.1.2.5.3	Mechanical Ventilation System, Street FH PR	14 days	Sat 15/4/23	Fri 28/4/23	0 days	1219	1221	MVAC - A x 4~6 men												
1221	1221.5.36.1.2.5.4	Testing and Commissioning of Building Services Installations, FH PR	120 days	Sat 29/4/23	Sat 26/8/23	145 days	1218,1219,1220	1186FF													
1222	1222.5.37	Plumbing Installation (PS 6B.6.8)	1049 days	Tue 16/2/21	Tue 2/1/24	0 days															
1223	1223.5.37.1	Planned Sectional Completion Date - Section 1, Plumbing	0 days	Thu 1/7/21	Thu 1/7/21	0 days	1225FF														
1224	1224.5.37.2	Design Submissions for Plumbing	240 days	Tue 16/2/21	Thu 14/10/21	0 days															
1225	1225.5.37.2.1	CDS033 - Detailed Design for Plumbing System	240 edays	Tue 16/2/21	Thu 14/10/21	0 edays	149	1228,1223FF													
1226	1226.5.37.3	Site Installation Work	809 days	Fri 15/10/21	Tue 2/1/24	0 days															
1227	1227.5.37.3.1	Commencement of Plumbing Installation	809 days	Fri 15/10/21	Tue 2/1/24	0 days															
1228	1228.5.37.3.1.1	Submission of detail design for acceptance	90 days	Fri 15/10/21	Wed 12/1/22	0 days	1225	1229	Pb - A x 4~6 men												
1229	1229.5.37.3.1.2	Submission of WWOS42 for WSD's approval	355 days	Thu 13/1/22	Mon 2/1/23	12 days	1228	351,480,591,766	Pb - B x 4~6 men												
1230	1230.5.37.3.1.3	Connection of External Pumping System (By others)	0 days	Fri 15/9/23	Fri 15/9/23	17 days		1231													
1231	1231.5.37.3.1.4	Submission of WWO46 for WSD's Inspection	45 days	Mon 2/10/23	Wed 15/11/23	0 days	1230,351,480,591,1232														
1232	1232.5.37.3.1.5	Obtain WWO46 Part V	45 days	Thu 16/11/23	Sat 30/12/23	2 days	1231	1233													
1233	1233.5.37.3.1.6	Tentative Date for connection of external water pipework (by others)	0 days	Tue 2/1/24	Tue 2/1/24	0 days	1232														
1234	1234.5.38	Photovoltaic Power System (PS 6B.6.11)	1128 days	Mon 1/3/21	Mon 1/4/24	0 days															
1235	1235.5.38.1	Planned Sectional Completion Date - Section 1, BR 2A & 2B	0 days	Mon 12/7/21	Mon 12/7/21	0 days	1245FF														
1236	1236.5.38.2	Planned Sectional Completion Date - Section 2, BR 2A & 2B	0 days	Mon 1/4/24	Mon 1/4/24	0 days	1253FF														
1237	1237.5.38.3	Selection of Suppliers for major plant and materials for BR 2A & 2B	73 days	Mon 1/3/21	Wed 12/5/21	12 days															
1238	1238.5.38.3.1	PV System (EQT041)	73 days	Mon 1/3/21	Wed 12/5/21	12 days															
1239	1239.5.38.3.1.1	Submission for acceptance of purchasing package	30 days	Mon 1/3/21	Tue 30/3/21	0 days		1240													
1240	1240.5.38.3.1.2	Invitation of quotations for purchasing package	21 days	Wed 31/3/21	Tue 20/4/21	0 days	1239	1241													
1241	1241.5.38.3.1.3	Acceptance of conforming quotation	21 days	Wed 21/4/21	Tue 11/5/21	0 days	1240	1242													
1242	1242.5.38.3.1.4	Commencement of Design Work	1 day	Wed 12/5/21	Wed 12/5/21	0 days	1241	1244													
1243	1243.5.38.4	Design Submissions	49 days	Wed 12/5/21	Wed 30/6/21	12 days															
1244	1244.5.38.4.1	CDS060 - Detailed Design for PV System	45 edays	Wed 12/5/21	Sat 26/6/21	0.63 edays	1242	1245													
1245	1245.5.38.4.2	Complete the CLP's Electronic Application Form and Upload Required Documents	4 days	Sun 27/6/21	Wed 30/6/21	0 days	1244	1235FF,1247													
1246	1246.5.38.5	Material ordering and delivery to site	767 days	Thu 1/7/21	Sun 6/8/23	59 days															
1247	1247.5.38.5.1	Manufacturing and Factory Acceptance Test of Plant	150 days	Thu 1/7/21	Sat 27/11/21	572 days	1245	1248													
1248	1248.5.38.5.2	Shipping and Delivery of Plant to site	45 days	Fri 23/6/23	Sun 6/8/23	0 days	1247,1250SS+120	1251													
1249	1249.5.38.6	Site Installation Work	345 days	Thu 23/2/23	Fri 2/2/24	0 days															
1250	1250.5.38.6.1	Tentative Civil Handover Date, Portion B-4, BR2A & 2B (Rev. 5)	1 day	Thu 23/2/23	Thu 23/2/23	0 days		1248SS+120 edays													
1251	1251.5.38.6.2	Commencement of Site Installation Work	90 days	Mon 7/8/23	Sat 4/11/23	0 days	1248	1252	PV - A x 4~6 men												
1252	1252.5.38.6.3	Technical Assessment, System Test and Installation	60 days	Sun 5/11/23	Wed 3/1/24	0 days	1251	1253	PV - A x 4~6 men												
1253	1253.5.38.6.4	CLP's smart meter installation and Final on-grid test with CLP	30 days	Thu 4/1/24	Fri 2/2/24	59 days	1252	1236FF													
1254	1254.5.39	Plant Commissioning	240 days	Tue 12/9/23	Wed 8/5/24	0 days		39FF													



APPENDIX B
MONITORING REQUIREMENTS

Agreement No. SPW 07/2019

Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix B - Environmental Impact Monitoring Requirements

Table B-1 Air Quality Monitoring

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Air Quality	1-hour TSP	3 times/day, once every 6 days	<ul style="list-style-type: none">• AM1 – Wai Loi Tsuen• AM2 – Fu Tei Au	<ul style="list-style-type: none">• AM1 – Ground Level• AM2 – Ground Level
	24-hour TSP	Once every 6 days	<ul style="list-style-type: none">• AM1a – Site Boundary of the Shek Wu Hui STW (East)• AM2a – Site Boundary of the Shek Wu Hui STW (North)	<ul style="list-style-type: none">• AM1a – Ground Level• AM2a – Ground Level

Agreement No. SPW 07/2019

Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix B - Environmental Impact Monitoring Requirements

Table B-2 Noise Monitoring

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Construction Noise	L _{eq} , L ₉₀ & L ₁₀ at 30 minute intervals during (0700 to 1900 on normal weekdays)	Once per week	<ul style="list-style-type: none">• NM1 – Wai Loi Tsuen• NM2 – Fu Tei Au• NM3 – Man Kok Village	<ul style="list-style-type: none">• NM1 – Ground Level – Free Field• NM2 – Ground Level – Free Field• NM3 – Ground Level – Free Field

Agreement No. SPW 07/2019
Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix B - Environmental Impact Monitoring Requirements

Table B3 Ecological Monitoring

Type of Monitoring	Methodology	Location	Descriptions	Influenced by Tidal Action
Ecology	Weekly transect at both high and low tides to identify and enumerate all bird species utilizing the river channels and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period.	<ul style="list-style-type: none"> • Transect T1 • Point Count Location P1 • Point Count Location P2 	Along Ng Tung River	No
		<ul style="list-style-type: none"> • Transect T2 • Point Count Location P3 • Point Count Location P4 		Yes
		<ul style="list-style-type: none"> • Point Count Location P5 	At Shek Sheung River (Low –flow Channel)	No
		<ul style="list-style-type: none"> • Transect T3 	Along Shek Sheung River & Sheung Yue River	Yes
		<ul style="list-style-type: none"> • Point Count Location P6 	At Shek Sheung River	Yes
		<ul style="list-style-type: none"> • Point Count Location P7 	At Interscetion between Sheung Yue River and Shek Sheung River	Yes

APPENDIX C
ACTION AND LIMIT LEVELS

Appendix C - Action and Limit Levels

Table C-1 Action and Limit Levels for 1-hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	320	500
AM2	322	

Table C-2 Action and Limit Levels for 24-hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1a	189	260
AM2a	187	

Table C-3 Action and Limit Levels for Noise during Construction Period

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

*Remarks:

- 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 have to be followed.
- Reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

Table C-4 Action and Limit Levels of Disturbance to 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 the 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 survey data.

**APPENDIX D
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)**

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	Status
Air Quality Impact							
S2.3.1.3	<p>Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:</p> <p>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;</p> <p>Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</p> <p>A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;</p> <p>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;</p> <p>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;</p> <p>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.</p> <p>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;</p>	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) Regulation	<p>^</p> <p>*</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

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	Status
S2.3.1.3	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;	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) Regulation	^
	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;						N/A
	Any skip hoist for material transport should be totally enclosed by impervious sheeting;						N/A
	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;						N/A
	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;						N/A
	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						N/A
	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						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	Status
Noise Impact							
S3.2.1.1	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/m ² 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)	^
S3.2.1.2	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.						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	Status
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 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	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;						^
	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;						^

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	Status
S4.2.1.4	Proper locations for discharge outlets of temporary wastewater treatment facilities well away from sensitive receivers should be identified;	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	^
	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;						N/A
	Stockpiling sites should be lined with impermeable sheeting and banded. 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.						N/A
	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						^

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	Status
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	<p>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.</p> <p>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</p>	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
Waste Management							
S6.2.2.1	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	Contractor	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	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	Contractor	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	Status
6.2.4.1	Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and						^
	Different locations should be designated to stockpile each material to enhance reuse.						^
S6.2.4.2	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						^
	Disposal of waste should be done at licensed waste disposal facilities.						^
S6.2.5.2	Maintain temporary stockpiles and reuse excavated fill material for backfilling;	Minimize waste impacts from excavated and C&D materials	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						N/A
	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	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 from building demolition and new building construction	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	^

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	Status
S6.2.5.3	The use of wooden hoardings shall not be allowed. An alternative material, such as metal, aluminium or alloy etc, could be used.	Minimize waste impacts from building demolition and new building construction	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	^
	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	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 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	Status
Landscape and Visual							
S7.3.1.1	<p>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.</p> <p>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.</p>	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction phase		N/A
S7.3.2.1	<p>MM4 – Tree Protection & Preservation</p> <p>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.</p>	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	Status
S7.3.2.1	<p>MM5 - Tree Transplantation</p> <p>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.</p>	<p>Transplant Trees where suitable for transplantation</p>	<p>Designer / Contractor</p>	<p>Work Sites where possible. Otherwise consider offsite locations</p>	<p>Prior to construction, construction phase and operation phase</p>	<p>DEVB TC(W) No. 7/2015 and ETWB TCW No.2/2004</p> <p>HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit</p>	<p>^</p>
S7.3.2.1	<p>MM6 - Slope Landscaping</p> <p>Site formation should be reduced as far as possible. Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedings and/or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GWO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Designer / Contractor</p>	<p>Work Sites</p>	<p>Prior to construction, construction phase and operation phase</p>	<p>GEO Publication (1999) - Use of Vegetation as Surface Protection on Slope; GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes</p>	<p>N/A</p> <p>N/A</p>

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	Status
S7.3.2.1	MM7 - Compensatory Planting 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 <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodymyrtus tomentosa</i> , <i>Rhaphiolepis indica</i> , and <i>Rhododendron simsii</i> 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	Status
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.	To screen undesirable views of the works site.	Designer	Work Sites	Construction phase		^
S7.3.2.1	MM17 - Light Control Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs.	Designer / Contractor	Work Sites and/or the Plant	Construction phase and operation phase		^

Remarks: EM&A Programme under FEP-02/474/2013	
^	Compliance of mitigation measure;
N/A	Not applicable at this stage;
N/A(1)	Not observed;
*	Recommendation was made during site audit but improved/rectified by the contractor;
#	Recommendation was made during site audit but not yet improved/rectified by the contractor;
X	Non-compliance of mitigation measure;
●	Non-compliance but rectified by the contractor.

APPENDIX E
SITE AUDIT SUMMARY

Appendix E – Summary of Observations and Recommendations of Site Audit

Reporting Quarter: October – December 2020

Table E-1 Observations and Recommendations of Site Audit of Contract No. DC/2018/06

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	8 Oct 2020	Stagnant water accumulated on the site area and haul road of Portion C should be removed or pumped through the sedimentation tank.	The condition was observed to be improved/rectified by the contractor during the audit session on 15 Oct 2020.
<i>Air Quality</i>	N/A	There was no observation in the reporting period.	N/A
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	N/A	There was no observation in the reporting period.	N/A
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Visual and Landscape</i>	N/A	There was no observation in the reporting period.	N/A
<i>Permits /Licences</i>	N/A	There was no observation in the reporting period.	N/A

Table E-2 Observations and Recommendations of Site Audit of Contract No. DC/2018/07

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	N/A	There was no observation in the reporting period.	N/A
<i>Air Quality</i>	N/A	There was no observation in the reporting period.	N/A
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	N/A	There was no observation in the reporting period.	N/A
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Visual and Landscape</i>	N/A	There was no observation in the reporting period.	N/A
<i>Permits /Licences</i>	N/A	There was no observation in the reporting period.	N/A

Table E-3 Observations and Recommendations of Site Audit of Contract No. DE/2018/03

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	N/A	There was no observation in the reporting period.	N/A
<i>Air Quality</i>	N/A	There was no observation in the reporting period.	N/A
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	N/A	There was no observation in the reporting period.	N/A
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Visual and Landscape</i>	N/A	There was no observation in the reporting period.	N/A
<i>Permits /Licences</i>	N/A	There was no observation in the reporting period.	N/A

Table E-3 Observations and Recommendations of Site Audit of Contract No. DE/2018/04

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	N/A	There was no observation in the reporting period.	N/A
<i>Air Quality</i>	1 Dec 2020	Stockpile should be covered with impervious materials to prevent dust generation at Portion B-3-B.	The condition was observed to be improved/rectified by the contractor during the audit session on 8 Dec 2020.
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	N/A	There was no observation in the reporting period.	N/A
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Visual and Landscape</i>	N/A	There was no observation in the reporting period.	N/A
<i>Permits /Licences</i>	N/A	There was no observation in the reporting period.	N/A

APPENDIX F
WASTE FLOW TABLE

Monthly Summary Waste Flow Table for 2020 (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	Chemical Waste	Others, e.g. general refuse
	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	0.376	0.000	0.000	0.000	0.376	0.000	0.000	0.000	0.000	0.000	0.083
Feb	1.168	0.000	0.000	0.332	0.836	0.000	0.000	0.000	0.000	0.000	0.052
Mar	2.436	0.000	0.000	0.497	1.939	0.000	0.000	0.000	0.000	0.000	0.134
Apr	2.660	0.000	0.000	0.126	2.534	0.000	0.000	0.000	0.000	0.000	0.018
May	2.260	0.000	0.000	0.161	2.100	0.000	0.000	0.000	0.000	0.060	0.138
Jun	2.271	0.000	0.000	0.000	2.271	0.000	0.000	0.000	0.000	0.000	0.018
Sub-total	11.171	0.000	0.000	1.115	10.056	0.000	0.000	0.000	0.000	0.060	0.443
Jul	1.227	0.000	0.000	0.076	1.151	0.000	0.000	0.000	0.000	0.000	0.070
Aug	2.922	0.000	0.000	0.514	2.408	0.000	0.000	0.000	0.016	0.000	0.022
Sep	3.328	0.000	0.000	0.046	3.283	0.000	0.000	0.000	0.008	0.000	0.020
Oct	9.586	0.000	0.000	5.444	4.143	0.000	7.790	0.000	0.000	0.000	0.015
Nov	23.094	0.000	0.000	0.000	23.094	0.000	5.070	0.000	0.000	0.000	0.015
Dec	15.673	0.000	0.000	6.395	9.278	0.000	0.000	0.000	0.009	0.000	0.038
Total	67.001	0.000	0.000	13.589	53.412	0.000	12.860	0.000	0.033	0.060	0.621

- 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 assumed to be 0.8 kg/L.
 5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
 6. The slurry and bentonite are disposed at Tseung Kwun O 137.
 7. The non-inert C&D wastes are disposed at NENT.

Monthly Summary Waste Flow Table for 2020 (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	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 '000m ³)
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.006
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.005
Mar	0.143	0.000	0.000	0.000	0.143	0.000	0.00	0.000	0.000	0.000	0.000
Apr	0.121	0.000	0.000	0.000	0.121	0.000	31.23	0.000	0.000	0.000	0.003
May	0.372	0.000	0.000	0.000	0.372	0.000	19.71	0.000	0.000	0.000	0.005
Jun	0.227	0.000	0.000	0.000	0.227	0.000	151.78	0.000	0.000	0.000	0.009
Sub-total	0.862	0.000	0.000	0.000	0.862	0.000	202.72	0.000	0.000	0.000	0.028
Jul	0.180	0.000	0.000	0.056	0.124	0.076	92.86	0.000	0.000	9.600	0.006
Aug	0.842	0.000	0.000	0.000	0.842	0.478	115.29	0.000	0.016	0.000	0.010
Sep	0.455	0.000	0.000	0.000	0.455	0.000	0.000	0.000	0.008	0.000	0.009
Oct	1.507	0.000	0.000	0.000	1.507	0.039	0.000	0.000	0.000	0.000	0.041
Nov	1.820	0.000	0.000	0.000	1.820	0.000	0.00	0.000	0.000	0.000	0.005
Dec	1.609	0.000	0.000	0.000	1.609	0.000	0.00	0.000	0.008	0.000	0.010
Total	7.275	0.000	0.000	0.056	7.219	0.593	410.87	0.000	0.032	9.600	0.109

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

Environmental Aspect Evaluation Form

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD

Contract No.: DE/2018/03

Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	0	0	0	0	0	0	0	0	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	12.46 T
June	0	0	0	0	0	0	0	0	0	0	51.46 T
Sub-total	0	0	0	0	0	0	0	0	0	0	63.92 T
July	0	0	0	0	0	0	0	0	0	0	0
Aug	92.45 T	0	0	0	92.45 T	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	8.2T	0	0	0	8.2T	0	0	0	0	0	0
Total	100.65 T	0	0	0	100.65 T	0	0	0	0	0	63.92 T

Environmental Aspect Evaluation Form

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
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)
TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA

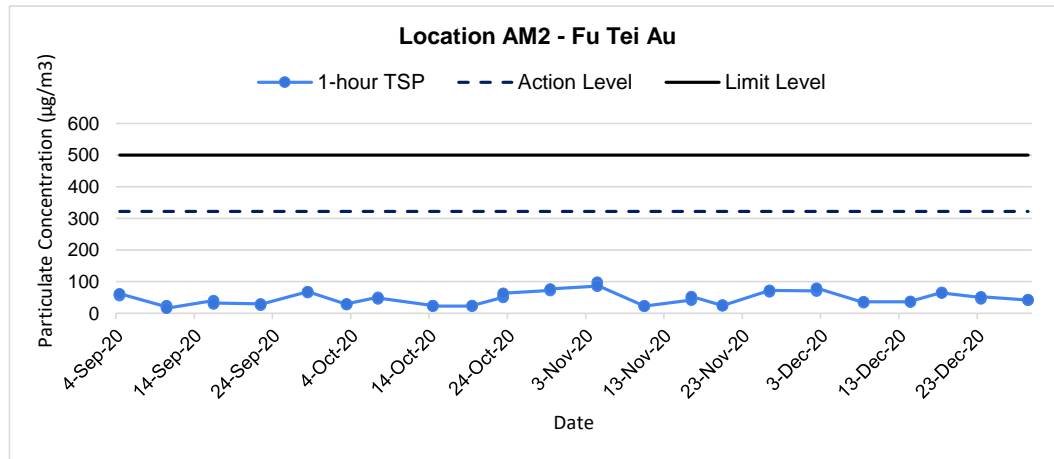
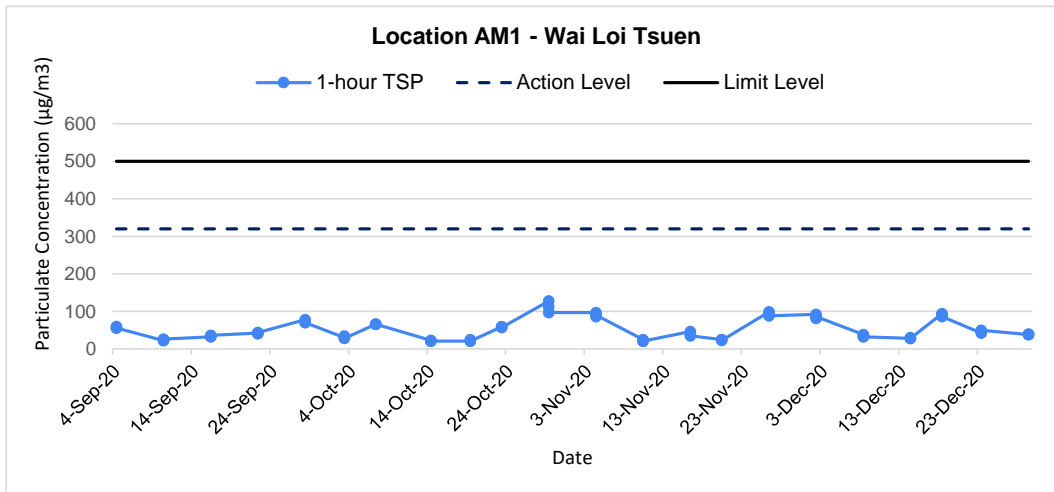
- Notes:
- (1) The performance targets are given in PS Clause 6A.27.8(14).
 - (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
 - (4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m³. (PS Clause 6.21.7(4)(b) refers)

Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Oct	69.27	0	0	0	69.27	0	0	0	0	0	0
Nov	38.69	0	0	0	38.69	0	0	0	0	0	0
Dec	142.16	0	0	0	142.16	0	0	0	0	0	0
Total	250.12	0	0	0	250.12	0	0	0	0	0	0

**APPENDIX G
GRAPHICAL PRESENTATIONS OF AIR
QUALITY MONITORING RESULTS (1-
HOUR)**

1-hr TSP Concentration Levels



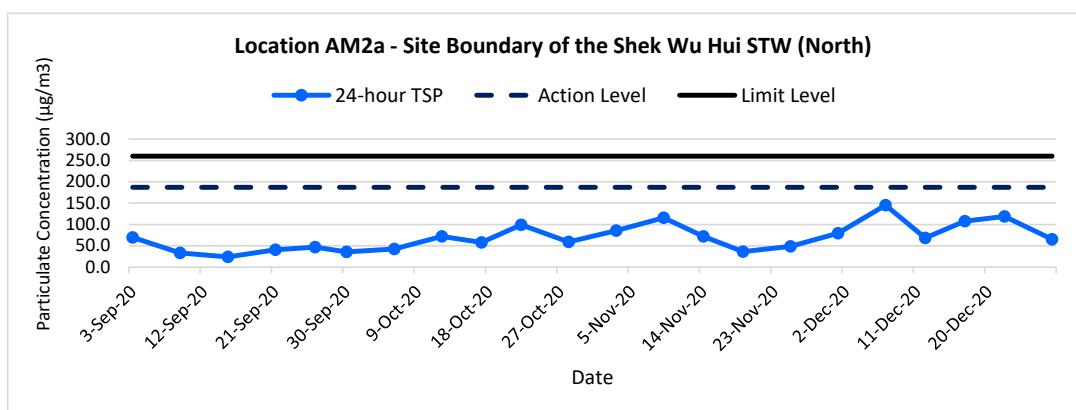
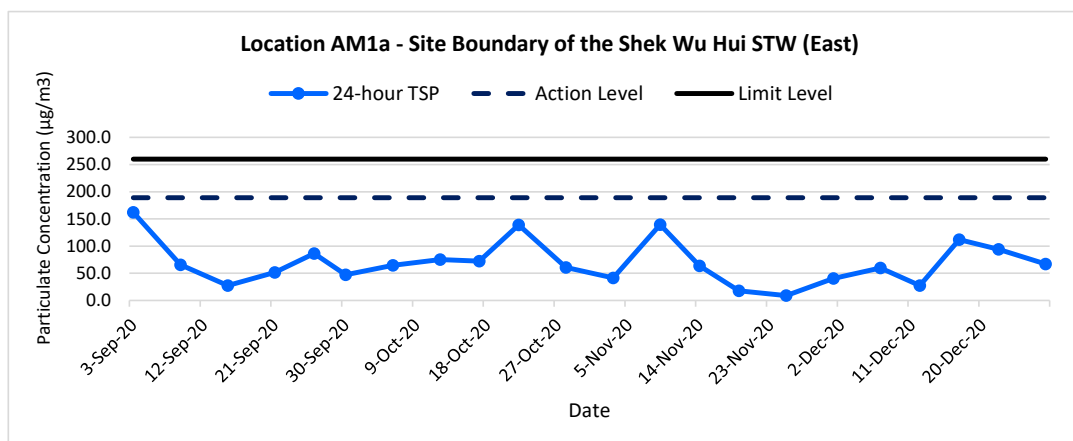
Remarks:

- (1) Weather conditions within the reporting period were generally sunny and cloudy.
- (2) Major construction activities carried out during the reporting period include ELS and excavation works, sheet-piling installation, earth mat installation, pre-drilling, tower crane construction, RC works, plate load test, strut installation and blinding layer, pipe jacking work, trial pit excavation, road and drainage works, diversion of inlet works, demolition work, cable diversion works, trench excavation, pre-bored H piles, land survey, paving work, underground utilities detection, ground investigation and settlement monitoring works.
- (3) Other factors which might affect the monitoring results include road traffic at Sheung Shui Tung Hing Road.

Title	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1	Date	Dec 2020	Project No.	MA19019	CINOTECH
	Graphical Presentation of 1-hour TSP Monitoring Results			Appendix	G	

**APPENDIX H
GRAPHICAL PRESENTATIONS OF AIR
QUALITY MONITORING RESULTS (24-
HOUR)**

24-hr TSP Concentration Levels



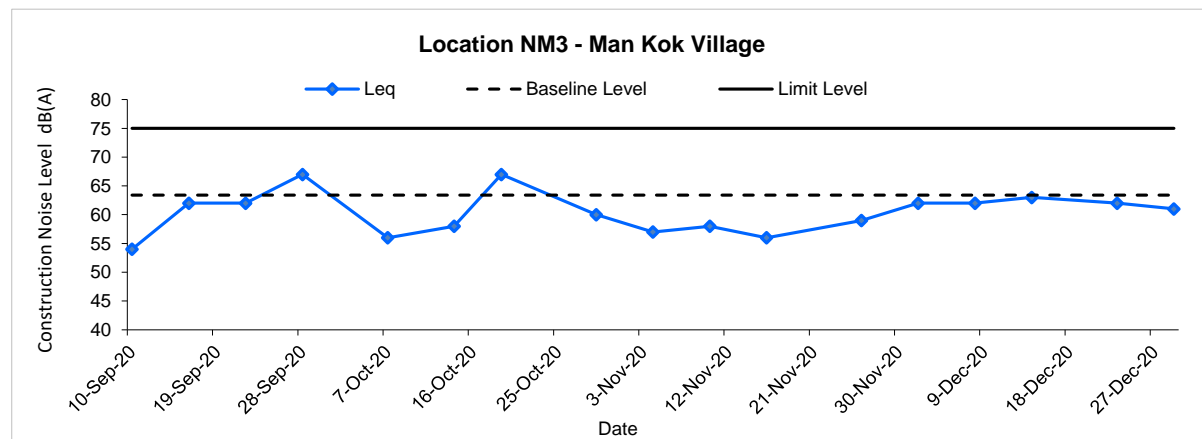
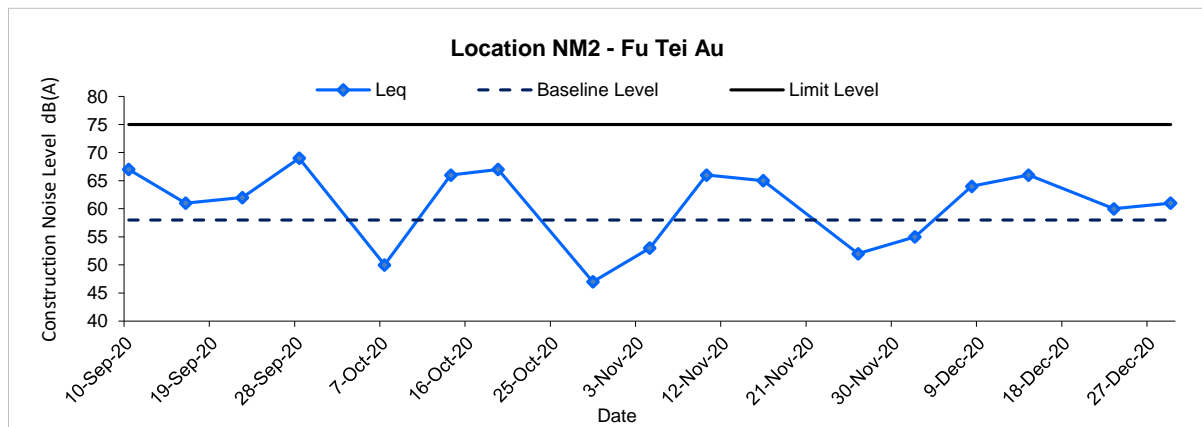
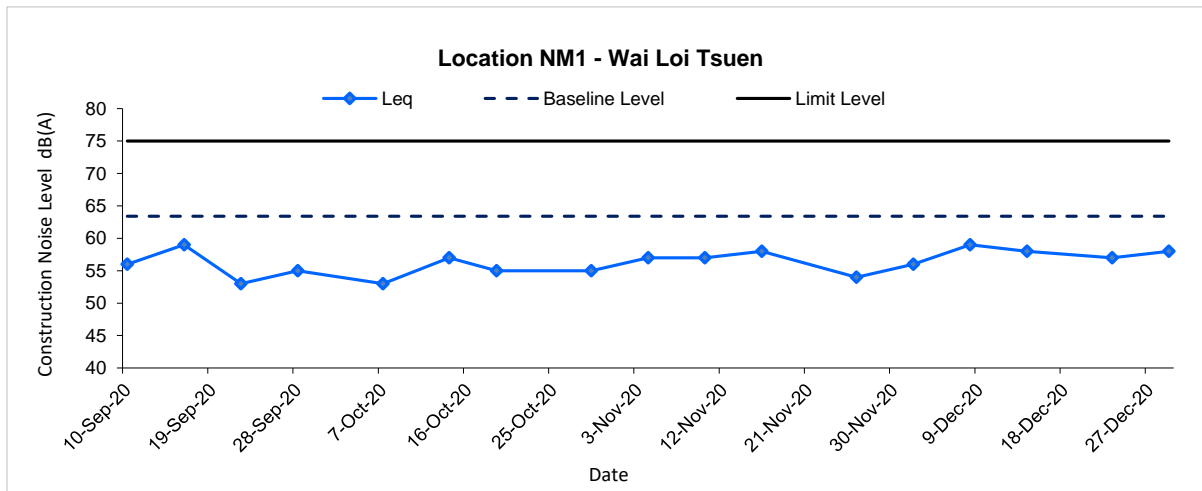
Remarks:

- (1) Weather conditions within the reporting period were generally sunny and cloudy.
- (2) Major construction activities carried out during the reporting period include ELS and excavation works, sheet-piling installation, earth mat installation, pre-drilling, tower crane construction, RC works, plate load test, strut installation and blinding layer, pipe jacking work, trial pit excavation, road and drainage works, diversion of inlet works, demolition work, cable diversion works, trench excavation, pre-bored H piles, land survey, paving work, underground utilities detection, ground investigation and settlement monitoring works.
- (3) Other factors which might affect the monitoring results include vehicle movement within SWHSTW.

Title Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1	Date Dec 2020	Project No. MA19019	
Graphical Presentation of 24-hour TSP Monitoring Results		Appendix H	

**APPENDIX I
GRAPHICAL PRESENTATIONS OF
NOISE MONITORING RESULTS**

Noise Levels



Remarks:

- (1) Weather conditions within the reporting period were generally sunny and cloudy.
- (2) Major construction activities carried out during the reporting period include ELS and excavation works, sheet-piling installation, earth mat installation, pre-drilling, tower crane construction, RC works, plate load test, strut installation and blinding layer, pipe jacking work, trial pit excavation, road and drainage works, diversion of inlet works, demolition work, cable diversion works, trench excavation, pre-bored H piles, land survey, paving work, underground utilities detection, ground investigation and settlement monitoring works.
- (3) Other factors which might affect the monitoring results include railway noise and road traffic at Sheung Shui Tung Hing Road and Po Wan Road.

Title Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Graphical Presentation of Construction Noise Monitoring Results	Date Dec 2020	Project No. MA19019 Appendix I	
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**APPENDIX J
SUMMARY OF ECOLOGICAL
MONITORING ANALYSIS**

Agreement No. SPW 07/2019
Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix J – Summary of Ecology Monitoring Analysis

Reporting Quarter: October– December 2020

Table J-1 Summary Result of T-Test Analysis for All Waterbirds

T-values of Data*		Confidence Level	
		95%	99%
October 2020	Monthly	✓	✓
	Season	✗	✗
	Overall	✓	✓
November 2020	Monthly	✓	✓
	Season	✓	✓
	Overall	✓	✓
December 2020	Monthly	✓	✓
	Season	✓	✓
	Overall	✓	✓

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.

Agreement No. SPW 07/2019

Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix J – Summary of Ecology Monitoring Analysis

Table J-2 Summary Result of T-test Analysis for Representative Waterbirds from Point Count

Representative Species			Compliance*		
Species Name	Common Name	Chinese Name	October 2020	November 2020	December 2020
<i>Egretta garzetta</i>	Little Egret	小白鷺	✓	✓	✓
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	Action Level	✓	✓
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	✓	✓	✓
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	✓	✓	✓
<i>Ardea alba</i>	Great Egret	大白鷺	✓	✓	✓
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	✓	✓	✓

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.

APPENDIX K
SUMMARY OF EXCEEDANCES

Agreement No. SPW 07/2019

Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix K – Summary of Exceedance

Reporting Quarter: October – December 2020

(A) Exceedance Report for Air Quality

(NIL in the reporting quarter)

(B) Exceedance Report for Construction Noise

(NIL in the reporting quarter)

(C) Exceedance Report for Ecology

One (1) Action Level of ecological monitoring was triggered in October 2020.

No Action Level of ecological monitoring was triggered in November and December 2020.

No Limit Level of ecological monitoring was triggered between October and December 2020.

**APPENDIX L
SUMMARIES OF ENVIRONMENTAL
COMPLAINT, WARNING, SUMMON
AND NOTIFICATION OF SUCCESSFUL
PROSECUTION**

Agreement No. SPW 07/2019
Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix L – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Quarter: October – December 2020

Table L-1 Environmental Complaint Records

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
1	Expansion Site of SWHSTP (Portion C)	18 March 2020	Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby	<ul style="list-style-type: none"> • 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 	Complaint Investigation Report was submitted in April 2020

Remarks: No environmental complaint was received in the reporting quarter.

Agreement No. SPW 07/2019

Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

Appendix L – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Table L-2 Environmental Warning/Summon and Prosecution Records

Log Ref.	Location	Received Date	Details of Warning/Summon and Prosecution	Status
N/A	N/A	N/A	N/A	N/A

Remarks: No environmental warning/summon and prosecution was received in the reporting quarter.