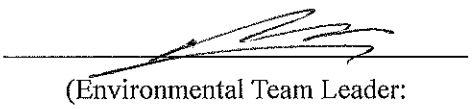
Drainage Services Department

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

Monthly EM&A Report
May 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_0055E.20.docx

12 June 2020

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

Monthly EM&A Report for May 2020

Reference is made to the Environmental Team's submission of Monthly EM&A Report for May 2020 (Version 1) certified by the ET Leader and provided to us via e-mail on 11 June 2020.

Please be informed that we have no adverse comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 3.4 of FEP-02/474/2013.

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	Attn.: Ms Konica Cheung	(By Fax: 3104 6420)
Cinotech	Attn.: Mr K. S. Lee	(By Fax: 3107 1388)

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EXECUTIVE SUMMARY

Introduction

1. This is the 5th EM&A 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". 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 during the reporting month of May 2020.

Summary of Main Works Undertaken and Key Measures Implemented

2. The main works undertaken during the reporting period are as follows:

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

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	• Piling installation • Sheet piling installation • Drainage diversion work • Construction of site hoarding • Tree transplanting
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	• Site daily cleaning tidy up and clearance • Demolition works • Drainage and underground utilities diversion • Sheet pile construction • Excavation
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis	• Site clearance and fencing work in WA3
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	No construction activities in the reporting month.

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

Air Quality
- Water spraying on haul road was done to minimize dust generation.

Water Quality
- Stagnant water was pumped and collected in the sedimentation tank.
- The capacity of water tank was well-maintained to prevent water leakage.

Waste Management
- General refuse and waste stockpile were removed to avoid waste accumulation.
- Chemicals were stored in drip trays properly.

Summary of Exceedances, Investigation and Follow-up

4. Exceedance of Action/Limit levels during the reporting month (May 2020) and the investigation results and/or follow-up actions:

Air Quality Monitoring
- No Action/Limit Level exceedance for 1-hour TSP was recorded.
- No Action/Limit Level exceedance for 24-hour TSP was recorded.

Construction Noise Monitoring
- No Action/Limit Level exceedance for day time construction noise monitoring was recorded in the reporting month.

Ecological Monitoring
- No Action and Limit Level was triggered.

Complaint Handling, Prosecution and Public Engagement

Table II Summary of Complaint/Summons/Prosecution in the Reporting Month

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

5. There were no reporting changes during the reporting month.

Future Key Issues

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

Table III 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	• Piling installation • Sheet piling installation • Drainage diversion work • Construction of site hoarding • Tree transplanting • Plate loading test
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	• Site daily cleaning tidy up and clearance • Demolition works • Drainage and underground utilities diversion • Sheet pile construction • Excavation
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis	• Site clearance in WA3 • Civil work in WA1-B • Site office construction work in WA1-B
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	• Preparation work of E&M installation at temporary filtrate lifting well and equalization tank • Preparation work of modification of existing emergency generator electrical works • Construction of contractor's site office foundation and site installation of the contractor's site office accommodations (MiC) • Erection of contractor's storage area

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 93,000m^2/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 190,000m^3/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 EM&A works for "Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1" (hereinafter called the "Project").

Purpose of the Report

1.5 This is the 5th Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period in May 2020.

Project Organizations

1.6 Different Parties with different levels of involvement in the project organization include:

- Permit Holder – 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)

1.7 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	Ms. Konica Cheung	2594 7463
AECOM	Supervisor Representative	Mr. Henry Tai	3792 0580
Cinotech	Environmental Team	Mr. KS Lee (ET Leader)	2151 2091
		Ms. Betty Choi	2151 2072
Ramboll	Independent Environmental Checker	Mr. Ray Yan	3465 2836
		Mr. Manson Yeung	3465 2888
KLCWJV	Contractor (DC/2018/06)	Mr. Yip Yun Lam	9532 7174
KLCWJV	Contractor (DC/2018/07)	Mr. Karsten Kwong	9771 0059
JEC	Contractor (DE/2018/03)	Mr. Brendan Chan	2807 4264
Bestwise	Contractor (DE/2018/04)	Mr. Albus Cheung	9731 0831

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

Construction Activities undertaken during the Reporting Month

1.9 The major site activities undertaken in the reporting month included:

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

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	• Piling installation • Sheet piling installation • Drainage diversion work • Construction of site hoarding • Tree transplanting
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	• Site daily cleaning tidy up and clearance • Demolition works • Drainage and underground utilities diversion • Sheet pile construction • Excavation
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis	• Site clearance and fencing work in WA3
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	No construction activities in the reporting month.

Summary of EM&A Requirements

1.10 The EM&A programme requires construction noise monitoring, air quality monitoring, water quality monitoring, ecological monitoring and environmental site audit, etc. The EM&A requirements for each parameter are described in the following sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event Action Plans;
- Environmental mitigation measures, as recommended in the Project EIA Report.

1.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 8 of this report.

1.12 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the monitoring parameters of the required environmental monitoring works and audit works for the Project in May 2020.

Statues of Environmental Licensing and Permitting

1.13 All permits/licenses obtained for the Project are summarized in **Table 1.3**.

Table 1.3 Summary of Environmental License and Permit

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Environmental Permit (EP)				
All	FEP-02/474/2013	15 Feb 2018	N/A	Valid
All	EP-474/2013	21 Nov 2013	N/A	Valid
Notification of Construction Works under Air Pollution Control Ordinance (APCO)				
DC/2018/06	449210 (Portion A & C)	23 Sep 2019	11 Mar 2024	Valid
DC/2018/06	449211 (WM1)	23 Sep 2019	11 Mar 2024	Valid
DC/2018/07	N/A	11 Nov 2019	31 Dec 2024	Valid
DE/2018/03	455843	6 May 2020	30 Sep 2020	Valid
Billing Account for Construction Waste Disposal				
DC/2018/06	7035390	11 Oct 2019	N/A	Valid
DC/2018/07	7035985	9 Dec 2019	N/A	Valid
DE/2018/03	7035700	6 Nov 2019	N/A	Valid
DE/2018/04	703621912	2 Jan 2020	N/A	Valid
Registration of Chemical Waste Producer				
DC/2018/06	5213-624-K3371-01	14 Nov 2019	N/A	Valid
DC/2018/07	5213-624-K3371-02	6 Jan 2020	N/A	Valid
DE/2018/03	5213-624-T3861-01	14 Apr 2020	N/A	Valid
Effluent Discharge License				
DC/2018/06	WT00035431-2019 (Portion C)	20 Jan 2020	31 Jan 2025	Valid
DC/2018/06	WT00035718-2020 (Portion A)	2 Apr 2020	30 Apr 2025	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
DC/2018/07	WT00035727-2020	1 Apr 2020	30 Apr 2025	Valid
Construction Noise Permit (Water Pump & Concrete Work at Portion C)				
DC/2018/06	GW-RN0301-20	10 May 2020	9 Aug 2020	Valid
Admission Ticket for Disposal of Special Waste				
DC/2018/07	15646	27 Apr 2020	26 Jul 2020	Valid

2 AIR QUALITY

Monitoring Requirement

2.1 According to the Updated EM&A Manual of SWHEPP, 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted to monitor the air quality for this Project. For regular impact monitoring, a sampling frequency of at least once in every six days at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

2.2 Four designated monitoring stations were selected for air quality monitoring programme. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

Table 2.1 Air Quality Monitoring Locations

Monitoring Stations	Location	Location of Measurement
AM1(1)	Wai Loi Tsuen	Ground Level
AM2(1)	Fu Tei Au	Ground Level
AM1a(2)	Site Boundary of the Shek Wu Hui STW (East)	Ground Level
AM2a(2)	Site Boundary of the Shek Wu Hui STW (North)	Ground Level

Remarks: (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

Monitoring Parameters and Frequency

2.3 **Table 2.2** summarizes the monitoring parameters, monitoring period and frequencies of impact air quality monitoring. The monitoring schedule is shown in **Appendix B**.

Table 2.2 Frequency and Parameters of Air Quality Monitoring

Monitoring Stations	Parameter	Period	Frequency
AM1 & AM2	1-hour TSP	0700 – 1900	3 times/day, once every 6 days
AM1a & AM2a	24-hour TSP	24 hours	Once every 6 days

Monitoring Equipment

2.4 High Volume Samplers (HVS) in compliance with the specification stipulated in the EM&A Manual, Section 2.2.2, were used to carry out 24-hour TSP monitoring. Direct reading dust meter were also used to measure 1-hour average TSP levels. The 1-hour sampling was determined by HVS to check the validity and accuracy of the results measured by direct reading method.

2.5 Wind data monitoring equipment was set on rooftop (about 4/F) of the SWHSTW control room building for logging wind speed and wind direction such that the wind sensors were clear of obstructions or turbulence caused by building. The wind data monitoring equipment was re-calibrated at least once every six months and the wind directions were divided into 16 sectors of 22.5 degrees each.

2.6 **Table 2.3** summarizes the equipment to be used for air quality monitoring. Copies of calibration certificates are attached in **Appendix C**.

Table 2.3 Air Quality Monitoring Equipment

Equipment	Model and Make	Quantity
1-hour TSP Dust Meter	Sibata Model No.: LD-5R	3
HVS Sampler	GMW Model: GS 2310	1
	TISCH Model: TE 5170	1
Calibrator	TISCH Model: TE-5025A	1
Wind Anemometer	Global Water Instrumentation WE800	1

Monitoring Methodology

1-hour TSP Monitoring

Measuring Procedures

2.7 The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(Sibata Model No.: LD-5R)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

Maintenance/Calibration

2.8 The following maintenance/calibration is required for the 1-hour dust meter:

- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP Monitoring

Instrumentation

2.9 High volume samplers (HVS) (TISCH Model: TE-5170) complete with appropriate sampling inlets was employed for 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50). Moreover, the HVS also met all the requirements in Section 2.2 of the Annex II Specification.

2.10 The positioning of the HVS samplers are as follows:

- A horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;
- No two samplers shall be placed less than 2 meter apart;
- The distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;
- A minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;
- A minimum of 2 metres of separation from any supporting structure, measured horizontally is required;
- No furnace or incinerator flue is nearby;
- Airflow around the sampler is unrestricted;
- The sampler is more than 20 metres from the dripline;
- Any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;
- Permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
- A secured supply of electricity is needed to operate the samplers.

Operating/analytical procedures for the operation of HVS

2.11 Operating/analytical procedures for the air quality monitoring are highlighted as follows:

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m^3/min. and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- For TSP sampling, fiberglass filters with a collection efficiency of > 99% for particles of 0.3μm diameter were used.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.

- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the HOKLAS laboratory (Wellab Ltd.) for weighing. The elapsed time was also recorded.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%.

Maintenance/Calibration

2.12 The following maintenance/calibration is required for the HVS:

- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
- High volume samplers were calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

Results and Observations

2.13 Impact air quality monitoring was conducted at four monitoring stations as scheduled. The monitoring schedule is shown in **Appendix B**.

2.14 No Action/Limit Level exceedance was recorded for all 1-hour TSP monitoring in the reporting month.

2.15 No Action/Limit Level exceedance was recorded for all 24-hour TSP monitoring in the reporting month.

2.16 The air temperature, precipitation and the relative humidity data was obtained from daily extract of Ta Kwu Ling Station in Hong Kong Observatory Climate Information Service, where the wind speed and wind direction were recorded by the installed Wind Anemometer at rooftop (about 4/F) of the SWHSTW control room building. This weather information for the reporting month is summarized in **Appendix D**.

2.17 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E** and **Appendix F** respectively.

2.18 According to our field observations, the major dust source identified at the designated air quality monitoring stations are as follows:

Table 2.4 Major Dust Source during Air Quality Monitoring

Monitoring Stations	Major Dust Source
AM1 - Wai Loi Tsuen	Road Traffic at Sheung Shui Tung Hing Road and Village House Renovation Works
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

Comparison of EM&A Result with EIA Prediction

2.19 The air monitoring data was compared with the predictions in the EIA Report (as approved in 2013) as summarised in **Tables 2.5** and **Table 2.6**.

Table 2.5 Comparison of 1-hr TSP Monitoring Data with Predictions in EIA Report (As Approved in 2013)

Monitoring Stations	ASR ID	Predicted 1-hr TSP Concentration in EIA Report (as Approved in 2013), dB(A), µg/m^3	Reporting Month (May 2020), µg/m^3
AM1 - Wai Loi Tsuen	N/A	N/A(1)	38.4 - 108.0
AM2 - Fu Tei Au	FLN-E28	255	13.3 - 98.8

Remarks:
(1) No 1-hr TSP concentration was predicted in EIA Report (As Approved in 2013).

Table 2.6 Comparison of 24-hr TSP Monitoring Data with Predictions in EIA Report (As Approved in 2013)

Monitoring Stations	Predicted 24-hr TSP Concentration in EIA Report (as approved in 2013), dB(A), µg/m^3	Reporting Month (May 2020), µg/m^3
AM1a - Site Boundary of the Shek Wu Hui STW (East)	N/A(1)	12.0 - 58.1
AM2a - Site Boundary of the Shek Wu Hui STW (North)	N/A(1)	43.2 - 72.8

Remarks:
(1) No 24-hr TSP concentration was predicted in EIA Report (as approved in 2013).

2.20 The 1-hour TSP concentration at AM2 in the reporting month was lower than the prediction in the EIA Report (As Approved in 2013). The 1-hour TSP concentrations at AM1 as well as 24-hour TSP concentrations at AM1a and AM2a were not predicted in the EIA Report (As Approved in 2013).

3 NOISE

Monitoring Requirements

3.1 According to the Updated EM&A Manual, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

3.2 Noise monitoring was conducted at three designated monitoring stations in the reporting period. **Table 3.1** and **Figure 3** show the locations of these stations.

Table 3.1 Noise Monitoring Stations

Monitoring Stations	Location	Location of Measurement
NM1	Wai Loi Tsuen	Ground Level
NM2	Fu Tei Au	Ground Level
NM3	Man Kok Village	Ground Level

Monitoring Parameters, Frequency and Duration

3.3 **Table 3.2** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix B**.

Table 3.2 Frequency and Parameters of Noise Monitoring

Monitoring Stations	Time Period	Duration	Frequency	Parameter	Measurement
NM1	0700-1900 hrs on normal weekdays	30 minutes	Once per week	L_{10}(30 min.) dB(A) L_{90}(30 min.) dB(A) L_{eq}(30 min.) dB(A)	Free Field
NM2					Free Field
NM3					Free Field

Monitoring Equipment

3.4 Integrating Sound Level Meter was used for impact noise monitoring. The meters were Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 3.3** summarizes the noise monitoring equipment being used. Copies of calibration certificates are attached in **Appendix G**.

Table 3.3 Noise Monitoring Equipment

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	BSWA 308	2
	SVAN 957	1
Calibrator	ST-120	1

Monitoring Methodology and QA/QC Procedure

3.5 The monitoring procedures are as follows:

- The monitoring station was normally be at a point 1m from the exterior of the sensitive receivers building façade and be at a position 1.2m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB(A).
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - Frequency weighting: A
  - Time weighting: Fast
  - Time measurement: 30 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the L_{eq}, L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise monitoring would be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Supplementary monitoring would be provided to ensure sufficient data would be obtained.

Maintenance and Calibration

3.6 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.

3.7 The sound level meter and calibrator were checked and calibrated at yearly intervals.

3.8 Immediately prior to and following each noise measurement the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

Results and Observations

3.9 No Action/Limit Level exceedance was recorded for all construction noise monitoring in the reporting month.

3.10 Noise monitoring results and graphical presentations are shown in **Appendix H**.

3.11 The major noise sources identified at the noise monitoring stations are shown in **Table 3.4**.

Table 3.4 Other Noise Source Identified during Noise Monitoring

Monitoring Stations	Major Noise Source
NM1	Railway Noise, Village House Renovation Works and Road Traffic at Sheung Shui Tung Hing Road
NM2	N/A
NM3	Road traffic at Po Wan Road

3.12 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured Leq – Baseline Leq = CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in **Table 3.5**.

Table 3.5 Baseline Noise Level and Noise Limit Level for Monitoring Stations

Monitoring Stations	Baseline Noise Level, dB (A) (at 0700 – 1900 hrs on normal weekdays)	Noise Limit Level, dB (A) (at 0700 – 1900 hrs on normal weekdays)
NM1	63.4	75
NM2	58.0	
NM3	63.4	

Comparison of EM&A Result with EIA Prediction

3.13 The noise monitoring data was compared with the predictions in EIA Report (as approved in 2013) as summarised in **Table 3.6**.

Table 3.6 Comparison of Noise Monitoring Data with Predictions in EIA Report (As Approved in 2013)

Monitoring Stations	NSR ID	Predicted Mitigated Construction Noise Levels in EIA Report (as Approved in 2013), dB(A)	Reporting Month (May 2020), Leq (30min) dB(A)
NM1 - Wai Loi Tsuen	N/A	N/A(1)	56.8 – 64.1
NM2 - Fu Tei Au	N/A	N/A(1)	55.9 – 69.2
NM3 – Man Kok Village	FN-18	66-75	59.7 – 61.2

Remarks:
(1) No construction noise level was predicted in EIA Report (As Approved in 2013).

3.14 The results at NM3 were lower than the range of the predicted mitigated construction noise levels in the EIA Report (As Approved in 2013). Construction noise levels at NM1 and NM2 were not predicted in the EIA Report (As Approved in 2013).

4 ECOLOGY

Monitoring Requirements

4.1 According to the Updated EM&A Manual, waterbird species which use rivers near the Project Site were identified and recorded. The monitoring requirement in the EM&A Manual is shown in **Table 4.1**. **Appendix A** shows the established Action/Limit Levels for ecological monitoring works.

Table 4.1 Monitoring of Measures to Minimise Disturbance to Waterbirds on Ng Tung, Sheung Yue and Shek Sheung Rivers during Construction Phase

Phase	Methodology
Construction	Weekly transect at both high and low tides to identify and enumerate all bird species utilising the river channels and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period.

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

Monitoring Locations

4.3 Transect and point count surveys were proposed within the 500m boundary of Ng Tung River, Sheung Yue River and Shek Sheung River of the assessment area. Three transects and seven-point count locations during high and low tides were applied. These locations are shown in **Figure 4** and summarized in **Table 4.2**. The photo of each transect is provided in **Appendix J**.

Table 4.2 Ecological Monitoring Stations

Monitoring Stations	Descriptions	Influenced by Tidal Action
Transect T1	Along Ng Tung River	No
Point Count Location P1		
Point Count Location P2		
Transect T2		Yes
Point Count Location P3		
Point Count Location P4		
Point Count Location P5	At Shek Sheung River (Low-flow Channel)	No
Transect T3	Along Shek Sheung River & Sheung Yue River	Yes
Point Count Location P6	At Shek Sheung River	Yes
Point Count Location P7	At Intersection between Sheung Yue River and Shek Sheung River	Yes

Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology

4.5 Transect survey was undertaken along the concerned rivers (Ng Tung River, Sheung Yue River and Shek Sheung River) adjacent to proposed construction activities. As the sensitive receivers (large waterbirds) are easily visible and the surveyor has used auxiliary equipment such as camera(s) and binoculars (magnification 7-10x). The transect route only follows one bank of these rivers.

4.6 At point count locations, surveyors identified and recorded bird species which were seen or heard along the river channel. For each point count, surveyors quantitatively recorded all species seen and heard for the duration of five minutes up to the distance where birds were still detectable. All avifauna along the walk transect were recorded. Noticeable behaviours (e.g. breeding behaviours such as nesting and presence of recently fledged juveniles, roosting and feeding activities, etc.) were recorded as well.

4.7 Ornithological nomenclature used in report should follow *The Avifauna of Hong Kong* (Carey et al. (2001)), *The Birds of Hong Kong and South China* (Viney et al. (2005)) and the most recent updated list from other sources (e.g. Hong Kong Bird Watching Society).

4.8 Weather conditions, tidal information at the time of the survey and other noticeable activities occurring within or in the vicinity of the survey areas (e.g. ongoing routine drainage channel maintenance works and other human activities that could create disturbances to birds) were recorded.

Analytical Methodology

4.9 The number and species of waterbirds utilizing the rivers fluctuate every day naturally. Therefore, the survey data were collectively analysed on a monthly basis to increase the sample size and to reduce random error on one survey day. Since occurrence of waterbirds has distinctive seasonal pattern, the construction phase data for all waterbirds and representative waterbirds were compared with the baseline data for the respective month and season. The representatives of waterbirds are listed in **Table 4.3**.

Table 4.3 Representative Waterbirds

Species Name	Common Name	Chinese Name
Egretta garzetta	Little Egret	小白鷺
Ardea cinerea	Grey Heron	蒼鷺
Ardeola bacchus	Chinese Pond Heron	池鷺
Phalacrocorax carbo	Great Cormorant	普通鸕鷀
Ardea alba	Great Egret	大白鷺
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺

4.10 When a decline in abundance of all or representative waterbird is identified, one-tailed Student t-test was adopted to statistically analyse whether the drop is significant. If the collected data for the reporting month fails to show no significant difference from that in the baseline phase at 95% confidence level, the action level will be triggered. Likewise, the limit level is set at 99% confidence level.

4.11 In addition, if important behaviours such as breeding, brooding, nesting and presence of recently fledged juveniles of species of conservation importance are observed, the Resident Engineer, Contractor and IEC should be notified immediately after the survey. The Contractor should review current construction programme and minimize disturbance due to construction activities.

Results

4.12 For this reporting month, the numbers of species and individuals recorded were provided in **Table 4.4**. The photo record of waterbirds can be found in **Appendix J**.

Table 4.4 Total Bird Species and Abundance in the Reporting Month

	Number of Species	Abundance
All Avifauna	43	753
Waterbirds	15	203

4.13 **Table 4.5** presents the abundance of representative species.

Table 4.5 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	75
Ardea cinerea	Grey Heron	蒼鷺	0
Ardeola bacchus	Chinese Pond Heron	池鷺	59
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	0
Ardea alba	Great Egret	大白鷺	30
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	22

Analysis

4.14 The result of student t-tests for all waterbirds and representative waterbirds are compiled in **Table 4.6** and **4.7** respectively. Further details are provided in **Appendix I**.

Table 4.6 T-test Result for All Waterbirds in the Reporting Month

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
Abundance	Monthly	4.206	✔	✔
	Seasonal	2.970	✔	✔

Remarks
✔ = T-value falls within the confidence level, the impact monitoring data shows no significant difference to the baseline data.
✖ = T-value falls outside the confidence level, the impact monitoring data shows significant difference to the baseline data.

Table 4.7 T-test Result for Representative Waterbirds in the Reporting Month

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value	Confidence Level (Critical Value)		Overall
	Monthly	95% (-2.353)	99% (-4.541)	Seasonal	95% (-2.353)	99% (-4.541)	
Little Egret	-0.596	✓	✓	-0.596	✓	✔	✔
Grey Heron	N/A*						
Chinese Pond Heron	-0.127	✓	✓	-0.516	✓	✔	✔
Great Cormorant	N/A*						
Great Egret	9.037	✓	✓	7.686	✓	✓	✓
Eastern Cattle Egret	3.657	✓	✓	2.620	✓	✔	✔

Remarks
* Great Cormorant (*Phalacrocorax carbo*) and Grey Heron (*Ardea cinerea*) were not recognised as representative waterbird species during Summer.
✔ = 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.

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

Observations

4.16 Waterbird behaviour observed during ecological monitoring are listed below:

- Flying
- Foraging
- Singing
- Soaring
- Resting
- Fighting

4.17 The anthropogenic activities observed during ecological monitoring are listed in **Table 4.8**.

Table 4.8 Observations during Ecological Monitoring in the Reporting Month

Location	Observations	
	Project Related	**Non-project Related**
T1 (PC1, PC2)	Excavation, sheet-piling, drilling	Singing, fishing
T2 (PC3, PC4)	Excavation, sheet-piling, drilling	Singing, oil stain, fishing
PC5	N/A	N/A
T3 (PC6, PC7)	N/A	Singing, jaywalking, oil stain, fishing

5 WATER QUALITY

Monitoring Requirement

5.1 According to the Updated EM&A Manual, no water monitoring is required before the commencement of outfall construction at Ng Tung River.

5.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of water quality mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix K**.

6 WASTE MANAGEMENT

Monitoring Requirement

6.1 According to the Updated EM&A Manual, waste management would be the contractor's responsibility to ensure that all wastes produced during the construction works for the Project are handled, stored and disposed of in accordance with good waste management practices, EPD's regulations and requirements. No monitoring for waste management is required for the Project. An environmental management plan (EMP) should be prepared and submitted to the Supervisor for approval. The monitoring and auditing requirements of the EMP should be followed with regard to the management of C&D material.

Waste Management Status

6.2 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. The summaries of site audits are attached in **Appendix K**.

6.3 The amount of wastes generated by the major site activities of this Project during the reporting month is shown in **Appendix L**.

7 LANDSCAPE AND VISUAL

Audit Requirement

7.1 According to the Updated EM&A Manual, site audits would be undertaken during the construction phase of the Project to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives. Particularly audits would be carried out during site clearance when proposed tree felling and transplantation may occur. Site inspections would be undertaken at least once every two weeks during the construction period.

7.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix K**.

8 ENVIRONMENTAL AUDIT

Site Audits

8.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix K**.

8.2 Site audits were conducted on 5, 14, 21 & 26 May 2020 in the reporting month. Joint site inspection with the representative of IEC was conducted on 26 May 2020. No non-compliance was observed during the site audit.

Implementation Status of Environmental Mitigation Measures

8.3 According to Environmental Permits, the approved EIA Report (Register No.: AEIAR-175/2013), and the Updated EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix N**.

8.4 The ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Tables 8.1 and 8.2**. Refer to **Appendix K** for the site inspection summary reports in the reporting month.

Table 8.1 Observations and Recommendations of Site Audit of Contract No. DC/2018/06

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	5 May 2020	The water tank at Portion A was overfilled and some of the water was flowed outside the tank. The Contractor should clear the tank regularly and maintain its capacity to prevent water accumulation on-site.	The condition was observed to be improved/rectified by the contractor during the audit session on 14 May 2020.
	14 May 2020	Stagnant water was accumulated at Portion A. It 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 21 May 2020.
	26 May 2020	Water barriers along the site area of Portion A should be completely bounded by sand bags to avoid stagnant water accumulation on-site.	Follow-up actions will be reported in the next month.
Air Quality	28 Apr 2020	Dust generation was observed in the unpaved area at the western side of Portion C. Water spraying should be provided to minimize air quality impact in the area.	The condition was observed to be improved/rectified by the contractor during the audit session on 5 May 2020.
	5 May 2020	The haul road was dirty and dry at Portion A. The Contractor should clean the haul road regularly to minimize dust impact.	The condition was observed to be improved/rectified by the contractor during the audit session on 14 May 2020.

Parameters	Date	Observations and Recommendations	Follow-up
Noise	N/A	There was no observation in the reporting period.	N/A
Waste / Chemical Management	28 Apr 2020	General refuse and construction waste was deposited at Portion A. The Contractor should clear and separate the general refuse and construction waste or cover them with impervious materials to prevent waste accumulation.	The condition was observed to be improved/rectified by the contractor during the audit session on 5 May 2020.
	28 Apr 2020	Chemicals should be stored inside the drip tray properly at Portion C.	The condition was observed to be improved/rectified by the contractor during the audit session on 5 May 2020.
	21 May 2020	Waste stockpile accumulated should be removed or covered by impervious materials at Portion C.	The condition was observed to be improved/rectified by the contractor during the audit session on 28 May 2020.
Ecology and Fisheries	N/A	There was no observation in the reporting period.	N/A
Visual and Landscape	N/A	There was no observation in the reporting period.	N/A
Permits /Licences	N/A	There was no observation in the reporting period.	N/A

Table 8.2 Observations and Recommendations of Site Audit of Contract No. DC/2018/07

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	N/A	There was no observation in the reporting period.	N/A
Air Quality	14 May 2020	The haul road was dirty and dry at Portion B. The Contractor should clean the haul road regularly to avoid dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 21 May 2020.
Noise	N/A	There was no observation in the reporting period.	N/A
Waste / Chemical Management	N/A	There was no observation in the reporting period.	N/A
Ecology and Fisheries	N/A	There was no observation in the reporting period.	N/A

Parameters	Date	Observations and Recommendations	Follow-up
Visual and Landscape	N/A	There was no observation in the reporting period.	N/A
Permits /Licences	N/A	There was no observation in the reporting period.	N/A

Implementation Status of Event and Action Plans

8.5 The Event and Action Plans for air quality, construction noise, ecological monitoring and landscape and visual are presented in **Appendix M**.

Air Quality Monitoring

- No Action/Limit Level exceedance for 1-hour TSP was recorded.
- No Action/Limit Level exceedance for 24-hour TSP was recorded.

Construction Noise Monitoring

- No documented complaint on construction noise was received; no Action Level exceedance for day time construction noise monitoring was recorded.
- No Limit Level exceedance for day time construction noise monitoring was recorded in the reporting month.

Ecological Monitoring

- No Action and Limit Level was triggered.

Landscape and Visual Monitoring

- No non-conformity for landscape and visual was recorded.

9 ENVIRONMENTAL NON-CONFORMANCE

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

9.1 No environmental complaints, warning, notifications of summons and successful prosecutions were received in the reporting month. The summary of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix O**.

Summary of Exceedance

9.2 The summary of exceedance record in reporting month is shown in **Appendix P**.

10 FUTURE KEY ISSUES

10.1 Tentative construction programmes for the next three months are provided in **Appendix Q**.

10.2 Major site activities undertaken for the coming months are summarized in **Table 10.1**.

Table 10.1 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	• Piling installation • Sheet piling installation • Drainage diversion work • Construction of site hoarding • Tree transplanting • Plate loading test
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	• Site daily cleaning tidy up and clearance • Demolition works • Drainage and underground utilities diversion • Sheet pile construction • Excavation
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis	• Site clearance in WA3 • Civil work in WA1-B • Site office construction work in WA1-B
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	• Preparation work of E&M installation at temporary filtrate lifting well and equalization tank • Preparation work of modification of existing emergency generator electrical works • Construction of contractor's site office foundation and site installation of the contractor's site office accommodations (MiC) • Erection of contractor's storage area

10.3 Key environmental issues in the coming months include:

- Stockpile accumulation on-site;
- Water spraying for dust generating activities and on haul road;
- Wastewater and runoff discharge from site;
- No disposition of slurry at the existing Shek Wu Hui Sewage Treatment Works
- Coverage of open manholes to avoid dirty runoff to drainage system;
- Appropriate design of drainage system in order to facilitate storm flow;
- Control of sediment runoff after rainstorms;
- Minimization of soil excavation works during rainstorms to prevent dirty runoff flowing into surrounding waters;
- Noise from operation of the equipment, especially for excavation works and machinery onsite;
- Accumulation of general refuse and construction waste on-site;
- Proper storage of construction materials on-site; and
- Storage of chemicals/fuel and chemical waste/waste oil on-site.

Monitoring Schedule

10.4 The tentative environmental monitoring schedule for the next month is shown in **Appendix B**.

11 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

11.1 This is the 5th Monthly EM&A Report which presents the EM&A works undertaken during the reporting month in accordance with the Updated EM&A Manual and the requirement under EP.

Air Quality Monitoring

11.2 No Action/Limit Level exceedance was recorded for all 1-hour and 24-hour TSP monitoring in the reporting month.

Construction Noise Monitoring

11.3 No Action/Limit Level exceedance was recorded for all noise monitoring in the reporting month.

Ecology

11.4 No Action/Limit Level was triggered for all ecological monitoring in the reporting month.

Site Audit

11.5 4 ET joint weekly environmental site inspections were conducted in the reporting month.

Complaint, Notification of Summons and Successful Prosecution

11.6 No environmental complaints, notifications of summons and successful prosecutions were received in the reporting month.

Recommendations

11.7 According to the environmental audit performed in the reporting month, 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.

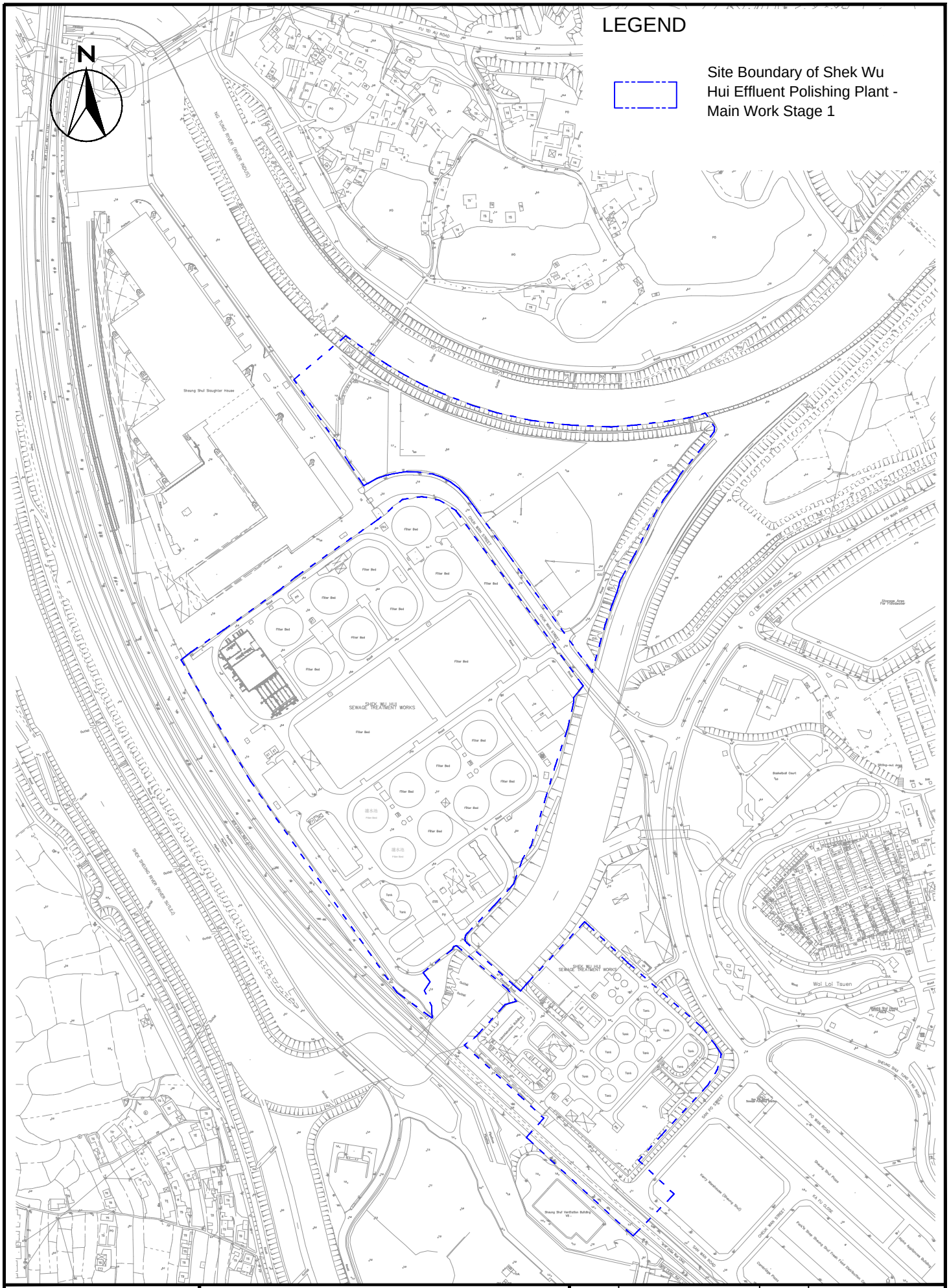
Water Quality

- Ponding water should be removed and pumped through the sedimentation tank.
- The water tank capacity should be well-maintained.
- 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.

Waste Management

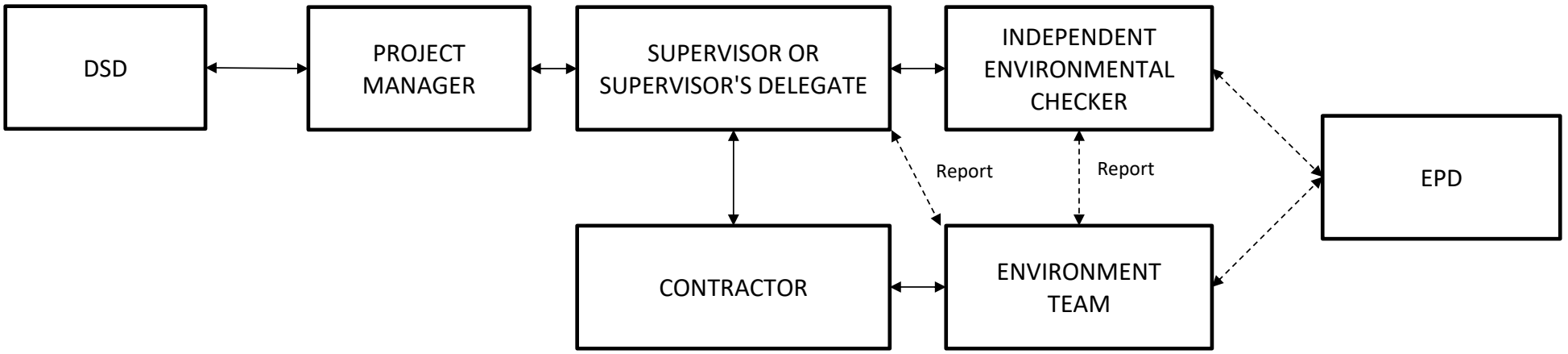
- General refuse and construction waste accumulation should be avoided.
- Chemicals should be stored in drip trays properly.

FIGURES



CINOTECH Cinotech Consultants Limited	Agreement No. SPW07/2019 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Site Layout	SCALE: 1:4000@A4	DATE: OCT 2019
		CHECK: JM	DRAWN: SY
		JOB No.: MA19019	FIGURE NO.: 1.1
			REV: -

F:/Project_drawings

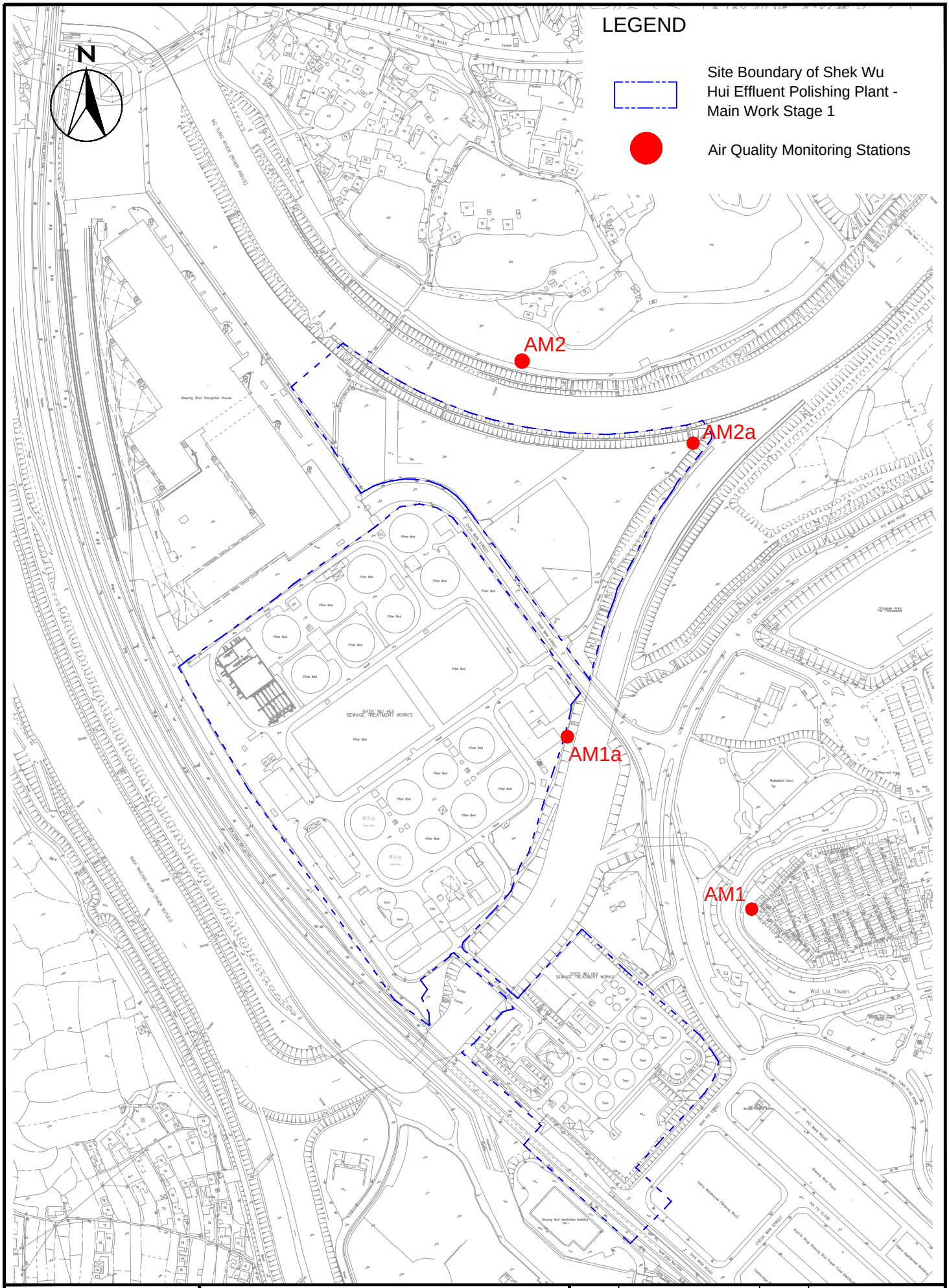


CINOTECH

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

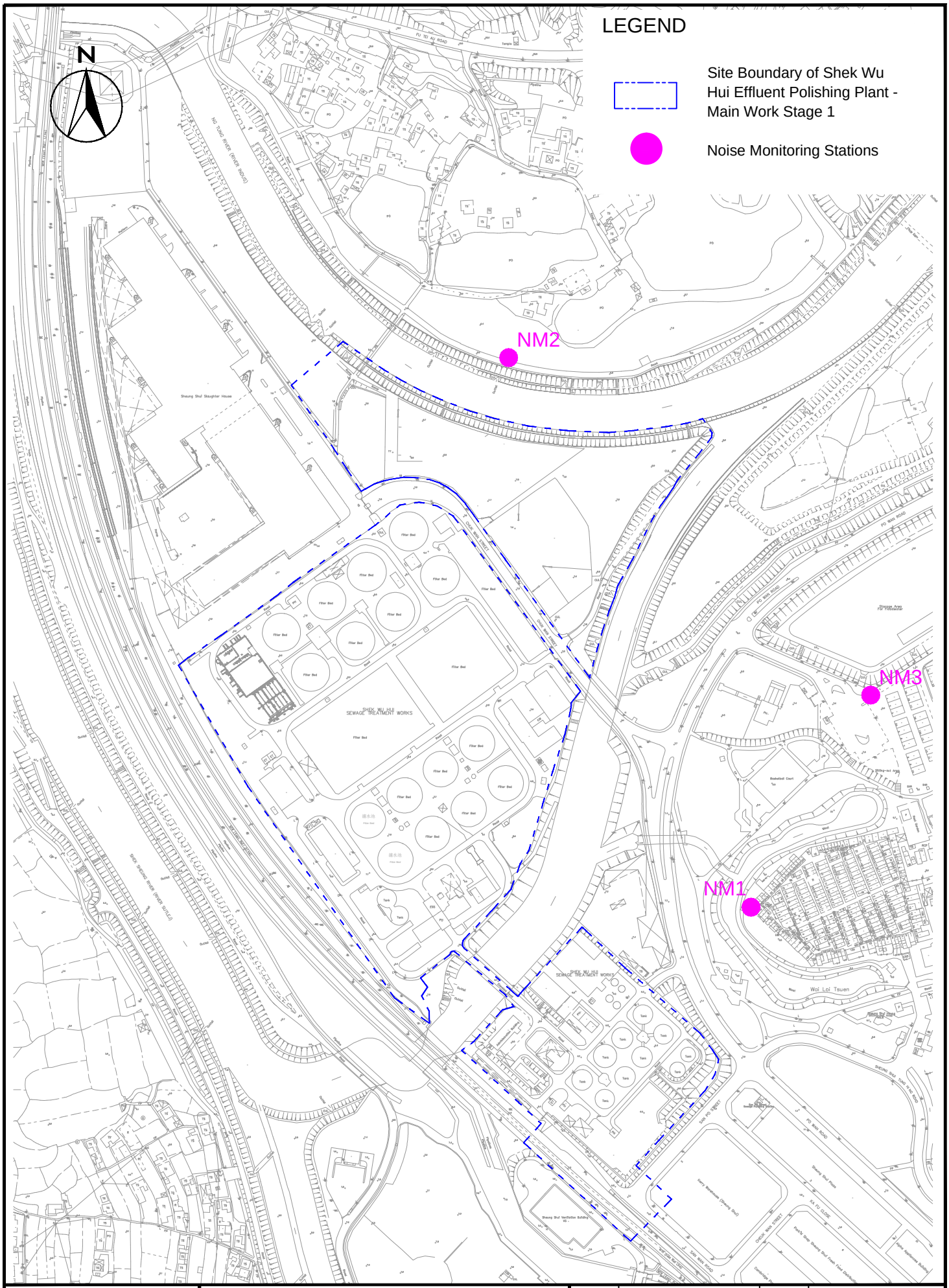
Project Organisation For Environmental Monitoring and Audit

SCALE	N.T.S.	**DATE**	Sep 2019
CHECK	JM	**DRAWN**	SY
JOB NO.	MA19019	**FIGURE NO.**	1.2



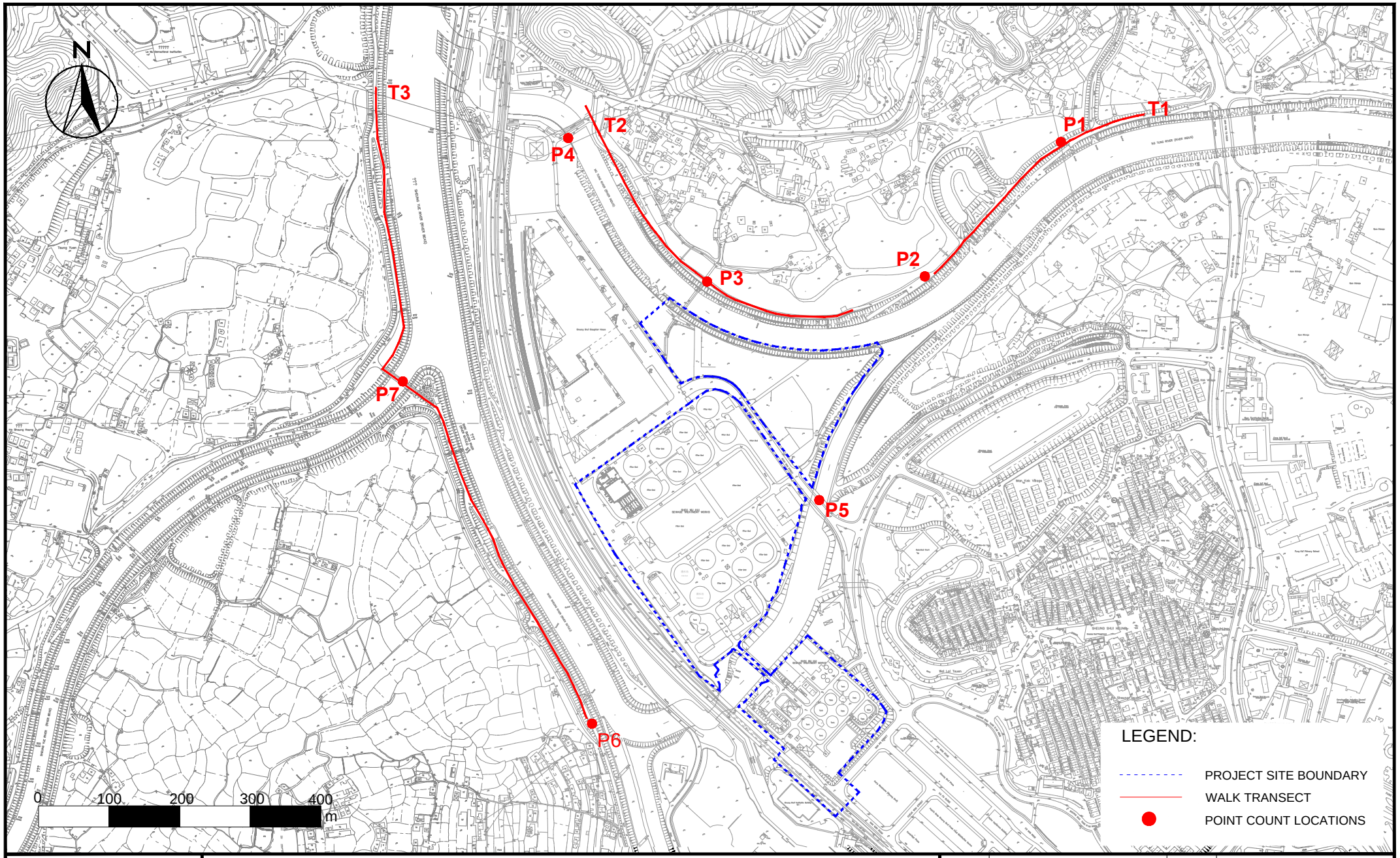
CINOTECH Cinotech Consultants Limited	Agreement No. SPW07/2019 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Location of Air Quality Monitoring Stations	SCALE: 1:4000@A4	DATE: OCT 2019
		CHECK: JM	DRAWN: SY
		JOB No.: MA19019	FIGURE NO.: 2 / REV: -

F:/Project_drawings



CINOTECH Cinotech Consultants Limited	Agreement No. SPW07/2019 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Location of Noise Monitoring Stations	SCALE: 1:4000@A4	DATE: OCT 2019
		CHECK: JM	DRAWN: SY
		JOB No.: MA19019	FIGURE NO.: 3
			REV: -

F:/Project_drawings



CINOTECH
Cinotech Consultants Limited

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
ACTION AND LIMIT LEVELS

Appendix A - Action and Limit Levels

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

Location	Action Level, µg/m^3	Limit Level, µg/m^3
AM1	320	500
AM2	322	

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

Location	Action Level, µg/m^3	Limit Level, µg/m^3
AM1a	189	260
AM2a	187	

Table A-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 A-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 B
ENVIRONMENTAL MONITORING SCHEDULES

Agreement No. SPW07/2019
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Impact Air, Noise and Ecology Monitoring Schedule (May 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-May	2-May
						24 hrs TSP
3-May	4-May	5-May	6-May	7-May	8-May	9-May
		1 hr TSP x 3 Noise Ecology			24 hrs TSP	
10-May	11-May	12-May	13-May	14-May	15-May	16-May
	1 hr TSP x 3 Noise Ecology			24 hrs TSP	1 hr TSP x 3	
17-May	18-May	19-May	20-May	21-May	22-May	23-May
		Ecology	24 hrs TSP	1 hr TSP x 3 Noise		
24-May	25-May	26-May	27-May	28-May	29-May	30-May
		24 hrs TSP Ecology	1 hr TSP x 3 Noise			
31-May						

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Air Quality Monitoring Station
1-hr TSP
AM1 - Wai Loi Tsuen
AM2 - Fu Tei Au

24-hr TSP
AM1a - Site Boundary of the Shek Wu Hui STW (East)
AM2a - Site Boundary of the Shek Wu Hui STW (North)

Noise Monitoring Station

NM1 - Wai Loi Tsuen
NM2 - Fu Tei Au
NM3 - Man kok Village

Agreement No. SPW07/2019
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Tentative Impact Air, Noise and Ecology Monitoring Schedule (June 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jun	2-Jun	3-Jun	4-Jun	5-Jun	6-Jun
	24 hrs TSP	1 hr TSP x 3 Noise			Ecology	24 hrs TSP
7-Jun	8-Jun	9-Jun	10-Jun	11-Jun	12-Jun	13-Jun
	1 hr TSP x 3 Noise			24 hrs TSP Ecology	1 hr TSP x 3	
14-Jun	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun
			24 hrs TSP	1 hr TSP x 3 Noise Ecology		
21-Jun	22-Jun	23-Jun	24-Jun	**25-Jun**	26-Jun	27-Jun
	Ecology	24 hrs TSP	1 hr TSP x 3 Noise			
28-Jun	29-Jun	30-Jun				
	24 hrs TSP	1 hr TSP x 3 Noise				

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Air Quality Monitoring Station
1-hr TSP
AM1 - Wai Loi Tsuen
AM2 - Fu Tei Au

24-hr TSP
AM1a - Site Boundary of the Shek Wu Hui STW (East)
AM2a - Site Boundary of the Shek Wu Hui STW (North)

Noise Monitoring Station

NM1 - Wai Loi Tsuen
NM2 - Fu Tei Au
NM3 - Man kok Village

APPENDIX C
COPIES OF CALIBRATION CERTIFICATES FOR AIR QUALITY MONITORING

Cerificate of Calibration

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description: Digital Dust Indicator
Date of Calibration 6-Apr-20
Manufacturer: Sibata Scientific Technology LTD.
Validity of Calibration Record 6-Jun-20
Model No.: LD-5R
Serial No.: 8Y2374
Equipment No.: SA-01-04
Sensitivity 0.001 mg/m3
High Volume Sampler No.: A-01-03
Before Sensitivity Adjustment 652
Tisch Calibration Orifice No.: 3607
After Sensitivity Adjustment 652

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor**	**HVS**
	Mass Concentration (µg/m3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	46.0	84.5
2	42.0	81.0
3	38.0	76.8
Average	**42.0**	**80.8**

By Linear Regression of Y on X

Slope , mw = **0.9625** **Intercept, bw =** **40.3417**

Correlation coefficient* = **0.9986**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	80.8
Particaulate Concentration by Dust Meter (µg/m^3)	42.0
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **1.9**

In-house method in according to the instruction manual:
The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: Wong Shing Kwai

Approved by: Henry Leung

Cerificate of Calibration

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description: Digital Dust Indicator
Date of Calibration 6-Apr-20
Manufacturer: Sibata Scientific Technology LTD.
Validity of Calibration Record 6-Jun-20
Model No.: LD-5R
Serial No.: 972778
Equipment No.: SA-01-07
Sensitivity 0.001 mg/m3
High Volume Sampler No.: A-01-01A
Before Sensitivity Adjustment 735 CPM
Tisch Calibration Orifice No.: 3607
After Sensitivity Adjustment 735 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor**	**HVS**
	Mass Concentration (µg/m3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	44.0	84.5
2	34.0	81.0
3	25.0	76.8
Average	**34.3**	**80.8**

By Linear Regression of Y on X

Slope , mw = **0.4042** **Intercept, bw =** **66.8876**

Correlation coefficient* = **0.9966**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	80.8
Particaulate Concentration by Dust Meter (µg/m^3)	34.3
Measureing time, (min)	60.0
Set Correlation Factor , SCF **SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)]**	**2.4**

In-house method in according to the instruction manual:
The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: Wong Shing Kwai

Approved by: Henry Leung

Cerificate of Calibration

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description: Digital Dust Indicator
Date of Calibration 6-Apr-20
Manufacturer: Sibata Scientific Technology LTD.
Validity of Calibration Record 6-Jun-20
Model No.: LD-5R
Serial No.: 972779
Equipment No.: SA-01-08
Sensitivity 0.001 mg/m3
High Volume Sampler No.: A-01-01A
Before Sensitivity Adjustment 744 CPM
Tisch Calibration Orifice No.: 3607
After Sensitivity Adjustment 744 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor** Mass Concentration (µg/m3) **X-axis**	**HVS** Mass concentration (µg/m^3) **Y-axis**
1	45.0	84.5
2	32.0	81.0
3	18.0	76.8
Average	**31.7**	**80.8**

By Linear Regression of Y on X

Slope , mw = **0.2854** **Intercept, bw =** **71.7298**

Correlation coefficient* = **0.9995**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	80.8
Particaulate Concentration by Dust Meter (µg/m^3)	31.7
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.6**

In-house method in according to the instruction manual:
The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: Wong Shing Kwai

Approved by: Henry Leung

TISCH Environmental

RECALIBRATION DUE DATE:
January 17, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	January 17, 2020	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 744.2	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **3746**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4340	3.2	2.00
2	3	4	1	1.0180	6.4	4.00
3	5	6	1	0.9080	7.9	5.00
4	7	8	1	0.8700	8.7	5.50
5	9	10	1	0.7150	12.6	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9849	0.6868	1.4066	0.9957	0.6944	0.8904
0.9807	0.9633	1.9892	0.9914	0.9739	1.2592
0.9787	1.0779	2.2240	0.9894	1.0896	1.4078
0.9776	1.1237	2.3325	0.9883	1.1360	1.4765
0.9724	1.3601	2.8131	0.9831	1.3749	1.7808
QSTD	**m=**	**2.09221**	**QA**	**m=**	**1.31010**
	b=	**-0.02779**		**b=**	**-0.01759**
	r=	**0.99994**		**r=**	**0.99994**

Calculations

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

For subsequent flow rate calculations:

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

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

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

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

RECALIBRATION

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

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

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA19019/17/0003

Project No. AM1a - Site boundary of the Shek Wu Hui STW (East)

Date: 5-Mar-20 Next Due Date: 5-May-20 Operator: SK

Equipment No.: A-01-17 Model No.: GS2310 Serial No. 3460

Ambient Condition			
Temperature, Ta (K)	291.2	Pressure, Pa (mmHg)	764.4

Orifice Transfer Standard Information					
Serial No.	3746	Slope, mc	0.0592	Intercept, bc	-0.02740
Last Calibration Date:	17-Jan-20	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	17-Jan-21	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	16.0	4.06	69.01	10.4	3.27
2	12.5	3.59	61.05	7.8	2.83
3	9.2	3.08	52.44	6.2	2.53
4	5.5	2.38	40.65	4.0	2.03
5	3.2	1.81	31.12	2.4	1.57

By Linear Regression of Y on X

Slope , mw = **0.0436** **Intercept, bw =** **0.2268**

Correlation coefficient* = **0.9984**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.30**

Remarks:

Conducted by: SK Wong Signature: Date: 05 March 2020

Checked by: Henry Leung Signature: Date: 05 March 2020

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA19019/17/0004

Project No. AM1a - Site boundary of the Shek Wu Hui STW (East)

Date: 5-May-20 Next Due Date: 5-Jul-20 Operator: SK

Equipment No.: A-01-17 Model No.: GS2310 Serial No. 3460

Ambient Condition			
Temperature, Ta (K)	300.9	Pressure, Pa (mmHg)	756.5

Orifice Transfer Standard Information					
Serial No.	3746	Slope, mc	0.0592	Intercept, bc	-0.02740
Last Calibration Date:	17-Jan-20	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	17-Jan-21	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	15.8	3.95	67.13	10.3	3.19
2	12.4	3.50	59.52	7.7	2.76
3	9.1	3.00	51.06	6.1	2.45
4	5.3	2.29	39.07	3.9	1.96
5	3.1	1.75	29.99	2.3	1.51

By Linear Regression of Y on X

Slope , mw = 0.0438 **Intercept, bw = 0.2121**

Correlation coefficient* = 0.9980

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.45**

Remarks:

Conducted by: SK Wong Signature: Date: 5 May 2020

Checked by: Henry Leung Signature: Date: 5 May 2020

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA19019/24/0003

Project No. AM2a - Site Boundary of the Shek Wu Hui STW (North)

Date: 5-Mar-20 Next Due Date: 5-May-20 Operator: SK

Equipment No.: A-01-24 Model No.: TE 5170 Serial No. 1659

Ambient Condition			
Temperature, Ta (K)	291.2	Pressure, Pa (mmHg)	764.4

Orifice Transfer Standard Information					
Serial No.	3746	Slope, mc	0.0592	Intercept, bc	-0.02740
Last Calibration Date:	17-Jan-20	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	17-Jan-21	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	14.5	3.86	65.72	9.9	3.19
2	11.0	3.36	57.30	7.6	2.80
3	8.1	2.89	49.24	6.1	2.51
4	5.1	2.29	39.16	4.3	2.10
5	3.2	1.81	31.12	3.1	1.79

By Linear Regression of Y on X

Slope , mw = 0.0402 **Intercept, bw = 0.5261**

Correlation coefficient* = 0.9993

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.94**

Remarks:

Conducted by: SK Wong Signature: Date: 05 March 2020

Checked by: Henry Leung Signature: Date: 05 March 2020

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA19019/24/0004

Project No. AM2a - Site Boundary of the Shek Wu Hui STW (North)

Date: 5-May-20 Next Due Date: 5-Jul-20 Operator: SK

Equipment No.: A-01-24 Model No.: TE 5170 Serial No. 1659

Ambient Condition			
Temperature, Ta (K)	300.9	Pressure, Pa (mmHg)	756.5

Orifice Transfer Standard Information					
Serial No.	3746	Slope, mc	0.0592	Intercept, bc	-0.02740
Last Calibration Date:	17-Jan-20	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	17-Jan-21	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	15.9	3.96	67.34	10.1	3.16
2	12.4	3.50	59.52	7.8	2.77
3	9.2	3.01	51.33	6.1	2.45
4	5.6	2.35	40.15	4.3	2.06
5	3.3	1.80	30.93	2.8	1.66

By Linear Regression of Y on X

Slope , mw = **0.0400** **Intercept, bw =** **0.4241**

Correlation coefficient* = **0.9986**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.67**

Remarks:

Conducted by: SK Wong Signature: Date: 5 May 2020

Checked by: Henry Leung Signature: Date: 5 May 2020

Cerificate of Calibration - Wind Monitoring Station

Description:	BM3 - Control Room at SWHSTW
Manufacturer:	Global Water Instrumentation
Model No.:	WE800 Weather Station
Serial No.:	1517001963
Equipment No.:	SA-03-01
Date of Calibration	29-Apr-2020
Next Due Date	29-Oct-2020

1. Performance check of Wind Speed

Wind Speed, m/s		Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V1)	D = V1 – V2
0.0	0.0	0.0
1.2	1.2	0.0
2.0	2.1	-0.1
3.8	3.8	0.0

2. Performance check of Wind Direction

Wind Direction (^{o})		Difference D (^{o})
Wind Direction Reading (V1)	Marine Compass Value (V1)	D = W1 - W2
0	0	0.0
90	90	0.0
180	180	0.0
270	270	0.0

Test Specification:

1. Performance Wind Speed Test - The wind meter was on-site calibrated against the anemometer

2. Performance Wind Direction Test - The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by: _____ Wong Shing Kwai

Approved by: _____ Henry Leung

APPENDIX D
WEATHER INFORMATION

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

I. General Information from Hong Kong Observatory

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1-May-20	25.7	81	0
2-May-20	26.3	77	0
3-May-20	27.3	78	0
4-May-20	27.8	79	0
5-May-20	27.9	80	0
6-May-20	28.7	81	0
7-May-20	29.0	81	0
8-May-20	29.3	81	0.1
9-May-20	29.2	79	0.1
10-May-20	29.0	78	0.8
11-May-20	28.9	76	14.8
12-May-20	27.0	82	3.6
13-May-20	26.6	84	0.3
14-May-20	27.1	83	0.1
15-May-20	28.5	81	0
16-May-20	28.9	80	0
17-May-20	28.9	77	Trace
18-May-20	25.8	88	46.7
19-May-20	28.0	82	0
20-May-20	27.6	87	4.3
21-May-20	27.6	92	84.6
22-May-20	27.9	88	17
23-May-20	25.7	88	1.5
24-May-20	26.7	82	Trace
25-May-20	26.6	91	32.4
26-May-20	28.3	87	14.4
27-May-20	28.2	83	0.1
28-May-20	27.7	86	0.2
29-May-20	28.2	85	0.2
30-May-20	26.0	94	131.3
31-May-20	29.2	83	Trace

* The above information was extracted from the daily extract of Ta Kwu Ling Station in Hong Kong Observatory Climate Information Service.

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
1-May-20	1:00	61.8	0.1
1-May-20	2:00	225.0	0.1
1-May-20	3:00	100.7	0.1
1-May-20	4:00	105.4	0.1
1-May-20	5:00	54.4	0.1
1-May-20	6:00	227.1	0.1
1-May-20	7:00	227.9	0.1
1-May-20	8:00	243.4	0.1
1-May-20	9:00	280.5	0.1
1-May-20	10:00	206.7	0.1
1-May-20	11:00	248.3	0.1
1-May-20	12:00	202.3	0.1
1-May-20	13:00	163.4	0.1
1-May-20	14:00	203.9	0.1
1-May-20	15:00	164.7	0.1
1-May-20	16:00	59.8	0.1
1-May-20	17:00	87.0	0.2
1-May-20	18:00	64.6	0.2
1-May-20	19:00	65.0	0.2
1-May-20	20:00	72.7	0.1
1-May-20	21:00	85.9	0.1
1-May-20	22:00	49.3	0.1
1-May-20	23:00	204.2	0.1
2-May-20	0:00	318.4	0.1
2-May-20	1:00	47.6	0.1
2-May-20	2:00	81.8	0.2
2-May-20	3:00	62.2	0.1
2-May-20	4:00	297.2	0.1
2-May-20	5:00	206.8	0.1
2-May-20	6:00	38.2	0.1
2-May-20	7:00	63.9	0.1
2-May-20	8:00	84.9	0.1
2-May-20	9:00	244.2	0.2
2-May-20	10:00	74.1	0.2
2-May-20	11:00	246.9	0.2
2-May-20	12:00	267.7	1.2

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
2-May-20	13:00	272.8	1.5
2-May-20	14:00	222.9	1.9
2-May-20	15:00	302.9	0.5
2-May-20	16:00	239.8	1.0
2-May-20	17:00	258.3	0.6
2-May-20	18:00	109.1	0.1
2-May-20	19:00	102.6	0.1
2-May-20	20:00	71.3	0.1
2-May-20	21:00	227.4	0.1
2-May-20	22:00	236.2	0.1
2-May-20	23:00	108.0	0.1
3-May-20	0:00	265.7	0.1
3-May-20	1:00	66.7	0.1
3-May-20	2:00	33.9	0.1
3-May-20	3:00	61.8	0.1
3-May-20	4:00	266.9	0.1
3-May-20	5:00	252.2	0.1
3-May-20	6:00	72.9	0.1
3-May-20	7:00	68.6	0.1
3-May-20	8:00	241.3	0.7
3-May-20	9:00	276.3	0.3
3-May-20	10:00	257.0	1.8
3-May-20	11:00	278.7	0.7
3-May-20	12:00	265.8	2.5
3-May-20	13:00	254.4	2.6
3-May-20	14:00	237.3	3.6
3-May-20	15:00	271.5	1.7
3-May-20	16:00	281.9	1.9
3-May-20	17:00	263.1	1.3
3-May-20	18:00	257.9	0.4
3-May-20	19:00	204.0	0.1
3-May-20	20:00	187.9	0.1
3-May-20	21:00	248.5	0.2
3-May-20	22:00	281.1	0.1
3-May-20	23:00	250.7	0.1
4-May-20	0:00	250.3	1.3

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
4-May-20	1:00	237.3	0.1
4-May-20	2:00	291.1	0.3
4-May-20	3:00	265.4	0.1
4-May-20	4:00	201.8	0.1
4-May-20	5:00	40.0	0.1
4-May-20	6:00	250.7	0.1
4-May-20	7:00	237.0	0.1
4-May-20	8:00	212.4	0.1
4-May-20	9:00	280.4	0.3
4-May-20	10:00	198.2	0.2
4-May-20	11:00	270.4	0.3
4-May-20	12:00	247.9	0.2
4-May-20	13:00	249.0	2.8
4-May-20	14:00	306.8	1.4
4-May-20	15:00	242.9	0.8
4-May-20	16:00	207.7	0.7
4-May-20	17:00	224.9	3.2
4-May-20	18:00	193.3	0.7
4-May-20	19:00	281.2	0.1
4-May-20	20:00	153.0	0.2
4-May-20	21:00	265.1	0.1
4-May-20	22:00	243.1	0.8
4-May-20	23:00	238.9	0.2
5-May-20	0:00	228.9	0.1
5-May-20	1:00	215.1	0.2
5-May-20	2:00	214.6	0.1
5-May-20	3:00	229.5	0.1
5-May-20	4:00	310.0	0.1
5-May-20	5:00	232.5	0.1
5-May-20	6:00	213.6	0.1
5-May-20	7:00	242.8	0.1
5-May-20	8:00	188.8	0.2
5-May-20	9:00	251.7	0.5
5-May-20	10:00	255.5	1.1
5-May-20	11:00	278.0	1.6
5-May-20	12:00	238.0	0.9

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
5-May-20	13:00	207.2	1.1
5-May-20	14:00	240.6	2.4
5-May-20	15:00	240.6	4.4
5-May-20	16:00	190.9	4.1
5-May-20	17:00	245.9	3.2
5-May-20	18:00	199.4	0.3
5-May-20	19:00	190.0	0.8
5-May-20	20:00	189.0	0.6
5-May-20	21:00	203.6	0.1
5-May-20	22:00	233.7	0.1
5-May-20	23:00	224.2	0.1
6-May-20	0:00	189.9	0.1
6-May-20	1:00	189.2	0.1
6-May-20	2:00	192.4	0.1
6-May-20	3:00	87.1	0.1
6-May-20	4:00	38.6	0.1
6-May-20	5:00	120.9	0.1
6-May-20	6:00	84.9	0.1
6-May-20	7:00	49.3	0.1
6-May-20	8:00	271.8	0.1
6-May-20	9:00	208.8	1.3
6-May-20	10:00	232.2	3.2
6-May-20	11:00	198.0	3.1
6-May-20	12:00	175.9	1.1
6-May-20	13:00	253.1	0.5
6-May-20	14:00	236.0	1.4
6-May-20	15:00	215.7	1.7
6-May-20	16:00	174.5	1.0
6-May-20	17:00	204.3	1.8
6-May-20	18:00	208.8	1.2
6-May-20	19:00	217.9	0.1
6-May-20	20:00	208.2	0.1
6-May-20	21:00	176.4	0.1
6-May-20	22:00	199.6	0.6
6-May-20	23:00	160.5	0.2
7-May-20	0:00	207.7	0.3

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
7-May-20	1:00	191.2	0.2
7-May-20	2:00	223.4	0.1
7-May-20	3:00	236.0	0.1
7-May-20	4:00	227.7	1.1
7-May-20	5:00	100.6	0.2
7-May-20	6:00	44.1	0.1
7-May-20	7:00	204.6	0.1
7-May-20	8:00	204.5	0.1
7-May-20	9:00	154.6	0.7
7-May-20	10:00	191.7	0.5
7-May-20	11:00	221.1	2.0
7-May-20	12:00	245.5	0.7
7-May-20	13:00	188.7	0.8
7-May-20	14:00	237.3	2.1
7-May-20	15:00	200.0	0.8
7-May-20	16:00	194.0	0.1
7-May-20	17:00	184.9	0.5
7-May-20	18:00	222.1	1.0
7-May-20	19:00	156.7	0.3
7-May-20	20:00	194.9	0.2
7-May-20	21:00	226.8	0.4
7-May-20	22:00	229.1	0.1
7-May-20	23:00	210.9	0.2
8-May-20	0:00	243.6	0.2
8-May-20	1:00	230.9	0.2
8-May-20	2:00	215.2	0.3
8-May-20	3:00	239.1	0.2
8-May-20	4:00	193.9	0.6
8-May-20	5:00	184.5	0.4
8-May-20	6:00	224.5	0.6
8-May-20	7:00	218.2	0.4
8-May-20	8:00	226.4	1.4
8-May-20	9:00	225.0	0.1
8-May-20	10:00	212.9	0.9
8-May-20	11:00	210.4	2.2
8-May-20	12:00	213.6	2.2

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
8-May-20	13:00	252.7	1.2
8-May-20	14:00	177.1	1.7
8-May-20	15:00	236.5	2.1
8-May-20	16:00	218.5	2.8
8-May-20	17:00	242.6	0.6
8-May-20	18:00	190.9	0.2
8-May-20	19:00	194.5	0.8
8-May-20	20:00	222.0	0.3
8-May-20	21:00	228.2	0.2
8-May-20	22:00	208.7	0.3
8-May-20	23:00	198.3	0.1
9-May-20	0:00	250.6	0.1
9-May-20	1:00	205.2	0.1
9-May-20	2:00	229.1	0.1
9-May-20	3:00	224.3	0.1
9-May-20	4:00	174.6	0.1
9-May-20	5:00	183.7	0.1
9-May-20	6:00	232.8	0.1
9-May-20	7:00	190.3	0.1
9-May-20	8:00	231.3	0.2
9-May-20	9:00	275.5	0.5
9-May-20	10:00	250.5	0.7
9-May-20	11:00	239.2	0.1
9-May-20	12:00	240.1	0.1
9-May-20	13:00	228.2	2.5
9-May-20	14:00	212.7	1.5
9-May-20	15:00	215.6	2.3
9-May-20	16:00	193.2	1.1
9-May-20	17:00	219.6	2.2
9-May-20	18:00	228.9	0.9
9-May-20	19:00	211.7	0.1
9-May-20	20:00	184.4	0.2
9-May-20	21:00	227.9	0.1
9-May-20	22:00	202.8	0.1
9-May-20	23:00	203.2	0.1
10-May-20	0:00	203.8	0.1

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
10-May-20	1:00	194.5	0.1
10-May-20	2:00	357.4	0.1
10-May-20	3:00	213.6	0.1
10-May-20	4:00	205.7	0.4
10-May-20	5:00	208.5	0.1
10-May-20	6:00	284.8	0.1
10-May-20	7:00	42.2	0.1
10-May-20	8:00	233.4	0.3
10-May-20	9:00	246.7	0.9
10-May-20	10:00	270.9	0.6
10-May-20	11:00	284.1	1.7
10-May-20	12:00	242.6	2.1
10-May-20	13:00	307.6	1.1
10-May-20	14:00	302.9	1.7
10-May-20	15:00	81.4	0.2
10-May-20	16:00	36.9	1.0
10-May-20	17:00	141.1	0.1
10-May-20	18:00	198.9	0.1
10-May-20	19:00	195.0	0.1
10-May-20	20:00	88.1	0.1
10-May-20	21:00	66.7	0.2
10-May-20	22:00	214.3	0.2
10-May-20	23:00	55.6	0.2
11-May-20	0:00	33.3	0.1
11-May-20	1:00	270.6	0.1
11-May-20	2:00	207.1	0.1
11-May-20	3:00	253.1	0.1
11-May-20	4:00	11.7	0.1
11-May-20	5:00	42.6	0.1
11-May-20	6:00	16.3	0.1
11-May-20	7:00	209.4	0.1
11-May-20	8:00	242.2	0.1
11-May-20	9:00	7.6	0.1
11-May-20	10:00	267.8	0.2
11-May-20	11:00	334.7	0.2
11-May-20	12:00	280.8	0.7

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
11-May-20	13:00	85.4	0.1
11-May-20	14:00	68.5	0.1
11-May-20	15:00	77.2	0.2
11-May-20	16:00	116.7	0.1
11-May-20	17:00	192.1	0.1
11-May-20	18:00	102.0	0.1
11-May-20	19:00	69.3	0.1
11-May-20	20:00	62.5	0.1
11-May-20	21:00	321.0	8.2
11-May-20	22:00	245.3	0.2
11-May-20	23:00	75.6	0.2
12-May-20	0:00	121.7	0.1
12-May-20	1:00	248.8	0.1
12-May-20	2:00	229.5	0.1
12-May-20	3:00	204.2	0.1
12-May-20	4:00	230.5	0.1
12-May-20	5:00	248.1	0.1
12-May-20	6:00	238.2	0.1
12-May-20	7:00	62.5	0.4
12-May-20	8:00	165.9	0.4
12-May-20	9:00	74.8	0.2
12-May-20	10:00	46.4	0.3
12-May-20	11:00	25.4	0.5
12-May-20	12:00	75.4	0.5
12-May-20	13:00	330.0	0.2
12-May-20	14:00	12.6	0.1
12-May-20	15:00	72.6	0.2
12-May-20	16:00	97.7	0.1
12-May-20	17:00	139.4	0.1
12-May-20	18:00	233.7	0.1
12-May-20	19:00	241.0	0.1
12-May-20	20:00	272.8	0.1
12-May-20	21:00	4.3	0.1
12-May-20	22:00	247.2	0.1
12-May-20	23:00	236.4	0.1
13-May-20	0:00	229.6	0.1

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
13-May-20	1:00	230.6	0.1
13-May-20	2:00	20.4	0.1
13-May-20	3:00	33.5	0.1
13-May-20	4:00	227.9	0.1
13-May-20	5:00	282.7	0.1
13-May-20	6:00	74.9	0.1
13-May-20	7:00	156.1	0.3
13-May-20	8:00	65.0	0.1
13-May-20	9:00	144.3	0.1
13-May-20	10:00	175.7	0.7
13-May-20	11:00	115.1	0.3
13-May-20	12:00	116.8	0.1
13-May-20	13:00	106.7	0.1
13-May-20	14:00	117.6	0.3
13-May-20	15:00	99.3	0.5
13-May-20	16:00	84.9	0.4
13-May-20	17:00	98.6	0.3
13-May-20	18:00	111.0	0.1
13-May-20	19:00	120.9	0.2
13-May-20	20:00	164.6	0.1
13-May-20	21:00	130.9	1.9
13-May-20	22:00	92.5	0.1
13-May-20	23:00	74.6	0.1
14-May-20	0:00	76.1	0.1
14-May-20	1:00	70.7	0.1
14-May-20	2:00	114.1	0.1
14-May-20	3:00	116.6	0.1
14-May-20	4:00	91.7	0.1
14-May-20	5:00	86.3	0.1
14-May-20	6:00	165.2	0.1
14-May-20	7:00	135.8	0.1
14-May-20	8:00	119.4	0.1
14-May-20	9:00	47.7	0.1
14-May-20	10:00	72.5	0.1
14-May-20	11:00	63.9	0.1
14-May-20	12:00	67.2	0.1

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
14-May-20	13:00	98.5	0.2
14-May-20	14:00	202.0	1.2
14-May-20	15:00	199.5	0.2
14-May-20	16:00	84.8	0.1
14-May-20	17:00	85.4	0.1
14-May-20	18:00	64.9	0.1
14-May-20	19:00	105.5	0.1
14-May-20	20:00	112.1	0.1
14-May-20	21:00	96.1	0.1
14-May-20	22:00	122.4	0.1
14-May-20	23:00	70.3	0.1
15-May-20	0:00	70.3	0.1
15-May-20	1:00	91.7	0.1
15-May-20	2:00	72.0	0.1
15-May-20	3:00	68.6	0.2
15-May-20	4:00	124.2	0.2
15-May-20	5:00	70.7	0.1
15-May-20	6:00	60.7	0.1
15-May-20	7:00	114.4	0.1
15-May-20	8:00	94.7	0.1
15-May-20	9:00	182.2	0.3
15-May-20	10:00	166.9	0.2
15-May-20	11:00	132.2	0.7
15-May-20	12:00	112.0	0.1
15-May-20	13:00	75.2	0.1
15-May-20	14:00	136.0	0.4
15-May-20	15:00	45.1	0.8
15-May-20	16:00	164.5	0.3
15-May-20	17:00	90.5	0.2
15-May-20	18:00	107.3	0.2
15-May-20	19:00	76.3	0.2
15-May-20	20:00	141.8	0.1
15-May-20	21:00	101.2	0.1
15-May-20	22:00	70.8	0.2
15-May-20	23:00	71.7	0.3
16-May-20	0:00	52.1	0.2

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
16-May-20	1:00	72.1	0.1
16-May-20	2:00	136.8	0.1
16-May-20	3:00	82.7	0.1
16-May-20	4:00	-0.1	0.1
16-May-20	5:00	-0.6	0.1
16-May-20	6:00	243.7	0.1
16-May-20	7:00	-0.5	0.1
16-May-20	8:00	64.7	0.1
16-May-20	9:00	217.2	0.1
16-May-20	10:00	307.1	0.1
16-May-20	11:00	150.9	0.1
16-May-20	12:00	111.8	0.1
16-May-20	13:00	137.7	0.2
16-May-20	14:00	51.2	0.1
16-May-20	15:00	64.3	0.1
16-May-20	16:00	203.6	0.7
16-May-20	17:00	80.5	0.1
16-May-20	18:00	72.8	0.2
16-May-20	19:00	78.1	0.1
16-May-20	20:00	136.5	0.1
16-May-20	21:00	83.2	0.1
16-May-20	22:00	89.5	0.1
16-May-20	23:00	82.0	0.1
17-May-20	0:00	275.5	0.1
17-May-20	1:00	74.6	0.1
17-May-20	2:00	357.1	0.1
17-May-20	3:00	72.8	0.1
17-May-20	4:00	271.4	0.2
17-May-20	5:00	84.7	0.2
17-May-20	6:00	235.7	0.2
17-May-20	7:00	330.6	0.2
17-May-20	8:00	260.6	0.1
17-May-20	9:00	266.1	0.1
17-May-20	10:00	240.8	0.7
17-May-20	11:00	262.1	1.1
17-May-20	12:00	265.8	0.4

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
17-May-20	13:00	287.7	0.7
17-May-20	14:00	285.7	1.9
17-May-20	15:00	275.9	2.7
17-May-20	16:00	230.6	0.8
17-May-20	17:00	222.9	2.1
17-May-20	18:00	246.3	0.3
17-May-20	19:00	220.9	0.2
17-May-20	20:00	273.6	0.1
17-May-20	21:00	208.2	0.2
17-May-20	22:00	238.4	0.2
17-May-20	23:00	243.6	0.2
18-May-20	0:00	206.4	0.1
18-May-20	1:00	240.1	0.2
18-May-20	2:00	212.8	0.1
18-May-20	3:00	242.0	0.1
18-May-20	4:00	222.3	0.1
18-May-20	5:00	324.0	0.1
18-May-20	6:00	67.0	0.1
18-May-20	7:00	201.0	0.2
18-May-20	8:00	55.3	0.1
18-May-20	9:00	299.3	0.1
18-May-20	10:00	230.1	0.4
18-May-20	11:00	260.6	0.3
18-May-20	12:00	240.8	0.9
18-May-20	13:00	256.6	0.9
18-May-20	14:00	291.3	1.2
18-May-20	15:00	263.0	1.5
18-May-20	16:00	257.3	0.2
18-May-20	17:00	158.8	0.1
18-May-20	18:00	204.4	0.4
18-May-20	19:00	70.8	0.1
18-May-20	20:00	257.4	0.1
18-May-20	21:00	124.6	0.2
18-May-20	22:00	217.2	0.2
18-May-20	23:00	237.0	0.2
19-May-20	0:00	84.0	0.1

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
19-May-20	1:00	86.3	0.1
19-May-20	2:00	-0.8	0.1
19-May-20	3:00	69.0	0.1
19-May-20	4:00	74.6	0.1
19-May-20	5:00	72.8	0.2
19-May-20	6:00	30.9	0.2
19-May-20	7:00	83.3	0.1
19-May-20	8:00	101.2	0.2
19-May-20	9:00	222.5	0.1
19-May-20	10:00	89.2	0.2
19-May-20	11:00	56.0	0.1
19-May-20	12:00	221.0	0.6
19-May-20	13:00	132.5	0.2
19-May-20	14:00	163.1	0.4
19-May-20	15:00	84.5	0.2
19-May-20	16:00	47.1	0.3
19-May-20	17:00	68.6	0.3
19-May-20	18:00	109.5	0.2
19-May-20	19:00	98.8	0.2
19-May-20	20:00	74.5	0.2
19-May-20	21:00	74.7	0.2
19-May-20	22:00	65.1	0.1
19-May-20	23:00	59.3	0.1
20-May-20	0:00	93.5	0.1
20-May-20	1:00	84.0	0.1
20-May-20	2:00	42.3	0.1
20-May-20	3:00	109.6	0.1
20-May-20	4:00	67.7	0.1
20-May-20	5:00	88.8	0.1
20-May-20	6:00	58.5	0.1
20-May-20	7:00	84.5	0.1
20-May-20	8:00	106.3	0.1
20-May-20	9:00	94.2	0.3
20-May-20	10:00	204.5	0.2
20-May-20	11:00	159.3	0.1
20-May-20	12:00	80.4	0.2

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
20-May-20	13:00	111.7	0.6
20-May-20	14:00	107.6	0.7
20-May-20	15:00	113.1	0.2
20-May-20	16:00	100.7	0.3
20-May-20	17:00	62.0	0.2
20-May-20	18:00	155.5	0.1
20-May-20	19:00	107.5	0.2
20-May-20	20:00	76.7	0.1
20-May-20	21:00	116.8	0.1
20-May-20	22:00	72.0	0.1
20-May-20	23:00	95.9	0.2
21-May-20	0:00	65.5	0.2
21-May-20	1:00	62.9	0.2
21-May-20	2:00	232.4	0.3
21-May-20	3:00	128.2	0.3
21-May-20	4:00	34.8	0.3
21-May-20	5:00	68.3	0.3
21-May-20	6:00	90.7	0.3
21-May-20	7:00	80.4	0.5
21-May-20	8:00	125.5	0.6
21-May-20	9:00	138.1	0.5
21-May-20	10:00	143.7	0.3
21-May-20	11:00	106.7	0.6
21-May-20	12:00	106.7	0.5
21-May-20	13:00	81.0	0.5
21-May-20	14:00	85.2	0.5
21-May-20	15:00	92.6	0.5
21-May-20	16:00	83.4	0.4
21-May-20	17:00	153.0	0.4
21-May-20	18:00	36.9	0.3
21-May-20	19:00	96.0	0.7
21-May-20	20:00	66.8	0.3
21-May-20	21:00	104.0	0.4
21-May-20	22:00	208.0	0.4
21-May-20	23:00	203.1	0.4
22-May-20	0:00	201.4	0.4

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
22-May-20	1:00	319.8	0.4
22-May-20	2:00	187.5	0.4
22-May-20	3:00	270.8	0.4
22-May-20	4:00	248.1	0.5
22-May-20	5:00	264.5	0.5
22-May-20	6:00	281.4	0.5
22-May-20	7:00	252.2	0.8
22-May-20	8:00	269.7	2.2
22-May-20	9:00	254.4	2.6
22-May-20	10:00	269.9	9.7
22-May-20	11:00	297.9	3.0
22-May-20	12:00	269.2	2.6
22-May-20	13:00	215.8	0.9
22-May-20	14:00	278.3	0.9
22-May-20	15:00	190.8	0.5
22-May-20	16:00	245.7	0.6
22-May-20	17:00	205.4	0.6
22-May-20	18:00	235.3	0.5
22-May-20	19:00	220.4	0.4
22-May-20	20:00	59.7	0.4
22-May-20	21:00	44.4	0.4
22-May-20	22:00	57.8	0.5
22-May-20	23:00	83.1	0.4
23-May-20	0:00	67.4	0.5
23-May-20	1:00	52.1	0.6
23-May-20	2:00	85.2	0.5
23-May-20	3:00	186.0	0.5
23-May-20	4:00	79.6	0.5
23-May-20	5:00	76.8	0.5
23-May-20	6:00	113.8	0.5
23-May-20	7:00	56.5	0.6
23-May-20	8:00	93.6	0.6
23-May-20	9:00	92.8	0.5
23-May-20	10:00	64.1	0.6
23-May-20	11:00	100.6	0.8
23-May-20	12:00	119.8	0.8

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
23-May-20	13:00	108.5	0.5
23-May-20	14:00	84.9	0.5
23-May-20	15:00	96.2	0.6
23-May-20	16:00	87.8	0.7
23-May-20	17:00	78.3	0.3
23-May-20	18:00	127.7	0.4
23-May-20	19:00	85.9	0.4
23-May-20	20:00	94.7	0.4
23-May-20	21:00	94.8	0.4
23-May-20	22:00	25.4	0.3
23-May-20	23:00	107.0	0.3
24-May-20	0:00	71.8	0.3
24-May-20	1:00	82.4	0.2
24-May-20	2:00	85.2	0.2
24-May-20	3:00	95.3	0.2
24-May-20	4:00	66.5	0.2
24-May-20	5:00	97.5	0.2
24-May-20	6:00	72.8	0.2
24-May-20	7:00	76.2	0.1
24-May-20	8:00	134.4	0.1
24-May-20	9:00	142.9	0.2
24-May-20	10:00	45.7	0.3
24-May-20	11:00	83.8	0.4
24-May-20	12:00	95.2	0.4
24-May-20	13:00	80.6	0.5
24-May-20	14:00	140.1	0.4
24-May-20	15:00	64.2	0.5
24-May-20	16:00	147.6	0.4
24-May-20	17:00	85.6	0.3
24-May-20	18:00	108.0	0.3
24-May-20	19:00	63.5	0.2
24-May-20	20:00	83.2	0.2
24-May-20	21:00	100.6	0.2
24-May-20	22:00	75.5	0.2
24-May-20	23:00	109.5	0.1
25-May-20	0:00	69.2	0.1

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
25-May-20	1:00	67.1	0.1
25-May-20	2:00	94.9	0.1
25-May-20	3:00	64.9	0.1
25-May-20	4:00	53.3	0.1
25-May-20	5:00	58.9	0.1
25-May-20	6:00	10.2	0.1
25-May-20	7:00	154.4	0.1
25-May-20	8:00	134.4	0.1
25-May-20	9:00	100.4	0.1
25-May-20	10:00	158.7	0.1
25-May-20	11:00	228.1	0.2
25-May-20	12:00	216.3	0.2
25-May-20	13:00	90.4	0.2
25-May-20	14:00	78.9	0.3
25-May-20	15:00	148.0	0.5
25-May-20	16:00	44.9	0.2
25-May-20	17:00	108.8	0.3
25-May-20	18:00	111.3	0.4
25-May-20	19:00	139.9	0.4
25-May-20	20:00	97.7	0.4
25-May-20	21:00	94.0	0.4
25-May-20	22:00	90.4	0.4
25-May-20	23:00	74.1	0.4
26-May-20	0:00	132.3	0.4
26-May-20	1:00	82.6	0.4
26-May-20	2:00	85.4	0.4
26-May-20	3:00	79.2	0.3
26-May-20	4:00	58.7	0.3
26-May-20	5:00	61.4	0.3
26-May-20	6:00	23.8	0.3
26-May-20	7:00	144.0	0.1
26-May-20	8:00	83.2	0.2
26-May-20	9:00	152.3	0.3
26-May-20	10:00	259.8	0.2
26-May-20	11:00	227.1	2.5
26-May-20	12:00	234.2	0.5

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
26-May-20	13:00	11.5	0.2
26-May-20	14:00	133.1	0.4
26-May-20	15:00	75.5	0.6
26-May-20	16:00	55.7	0.5
26-May-20	17:00	73.1	0.5
26-May-20	18:00	277.7	0.4
26-May-20	19:00	234.8	0.3
26-May-20	20:00	199.9	0.3
26-May-20	21:00	281.6	0.3
26-May-20	22:00	257.8	0.3
26-May-20	23:00	200.9	0.3
27-May-20	0:00	252.8	0.2
27-May-20	1:00	218.9	0.2
27-May-20	2:00	159.7	0.2
27-May-20	3:00	231.4	0.2
27-May-20	4:00	318.3	0.2
27-May-20	5:00	122.4	0.2
27-May-20	6:00	74.0	0.2
27-May-20	7:00	110.2	0.2
27-May-20	8:00	39.3	0.1
27-May-20	9:00	143.3	0.2
27-May-20	10:00	71.0	0.3
27-May-20	11:00	140.5	0.3
27-May-20	12:00	303.0	0.4
27-May-20	13:00	215.2	0.5
27-May-20	14:00	289.0	1.1
27-May-20	15:00	252.1	0.7
27-May-20	16:00	112.5	0.4
27-May-20	17:00	99.0	0.3
27-May-20	18:00	83.2	0.4
27-May-20	19:00	77.1	0.4
27-May-20	20:00	89.2	0.4
27-May-20	21:00	71.0	0.4
27-May-20	22:00	32.9	0.3
27-May-20	23:00	33.2	0.3
28-May-20	0:00	76.2	0.3

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
28-May-20	1:00	56.5	0.2
28-May-20	2:00	69.0	0.2
28-May-20	3:00	85.2	0.2
28-May-20	4:00	91.1	0.2
28-May-20	5:00	57.9	0.2
28-May-20	6:00	46.5	0.2
28-May-20	7:00	82.1	0.2
28-May-20	8:00	111.9	0.2
28-May-20	9:00	74.2	0.4
28-May-20	10:00	77.2	0.2
28-May-20	11:00	79.7	0.4
28-May-20	12:00	163.8	0.8
28-May-20	13:00	99.0	0.5
28-May-20	14:00	273.3	0.6
28-May-20	15:00	178.9	0.9
28-May-20	16:00	94.3	0.5
28-May-20	17:00	94.2	0.6
28-May-20	18:00	81.7	0.5
28-May-20	19:00	94.0	0.5
28-May-20	20:00	62.0	0.5
28-May-20	21:00	88.2	0.5
28-May-20	22:00	120.3	0.4
28-May-20	23:00	105.5	0.4
29-May-20	0:00	110.2	0.3
29-May-20	1:00	74.1	0.3
29-May-20	2:00	107.4	0.2
29-May-20	3:00	80.9	0.2
29-May-20	4:00	101.9	0.2
29-May-20	5:00	92.6	0.2
29-May-20	6:00	131.7	0.2
29-May-20	7:00	168.2	0.2
29-May-20	8:00	84.8	0.3
29-May-20	9:00	83.2	0.3
29-May-20	10:00	151.8	0.4
29-May-20	11:00	97.7	0.4
29-May-20	12:00	151.7	0.6

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
29-May-20	13:00	204.3	0.6
29-May-20	14:00	176.0	1.0
29-May-20	15:00	72.0	0.4
29-May-20	16:00	98.0	0.5
29-May-20	17:00	132.4	0.3
29-May-20	18:00	149.6	0.3
29-May-20	19:00	51.3	0.2
29-May-20	20:00	47.5	0.2
29-May-20	21:00	-0.5	0.1
29-May-20	22:00	10.0	0.1
29-May-20	23:00	54.7	0.1
30-May-20	0:00	138.8	0.1
30-May-20	1:00	54.9	0.1
30-May-20	2:00	165.7	0.1
30-May-20	3:00	211.4	0.2
30-May-20	4:00	118.3	0.2
30-May-20	5:00	52.7	0.2
30-May-20	6:00	154.8	0.3
30-May-20	7:00	212.2	0.3
30-May-20	8:00	188.6	0.3
30-May-20	9:00	306.0	0.3
30-May-20	10:00	229.1	0.3
30-May-20	11:00	185.2	0.3
30-May-20	12:00	82.7	0.3
30-May-20	13:00	70.6	0.2
30-May-20	14:00	115.4	0.5
30-May-20	15:00	43.3	0.4
30-May-20	16:00	67.8	0.4
30-May-20	17:00	98.9	0.4
30-May-20	18:00	51.5	0.4
30-May-20	19:00	75.3	0.3
30-May-20	20:00	89.0	0.3
30-May-20	21:00	355.5	0.3
30-May-20	22:00	91.9	0.3
30-May-20	23:00	76.0	0.3
31-May-20	0:00	56.7	0.2

APPENDIX D –
WEATHER CONDITIONS DURING THE MONITORING PERIOD

II. Mean Wind Speed and Wind Direction

Date	Time	Wind Direction (°)	Wind Speed (m/s)
31-May-20	1:00	74.0	0.2
31-May-20	2:00	90.5	0.2
31-May-20	3:00	91.4	0.2
31-May-20	4:00	78.8	0.2
31-May-20	5:00	61.4	0.2
31-May-20	6:00	100.6	0.2
31-May-20	7:00	70.4	0.1
31-May-20	8:00	93.1	0.1
31-May-20	9:00	181.8	1.5
31-May-20	10:00	231.5	0.8
31-May-20	11:00	44.7	0.1
31-May-20	12:00	221.5	1.0
31-May-20	13:00	211.5	1.3
31-May-20	14:00	181.0	0.5
31-May-20	15:00	274.9	1.6
31-May-20	16:00	185.1	0.3
31-May-20	17:00	203.1	1.0
31-May-20	18:00	203.8	0.2
31-May-20	19:00	224.3	0.2
31-May-20	20:00	150.8	0.2
31-May-20	21:00	200.8	0.1
31-May-20	22:00	259.7	0.2
31-May-20	23:00	280.4	0.1

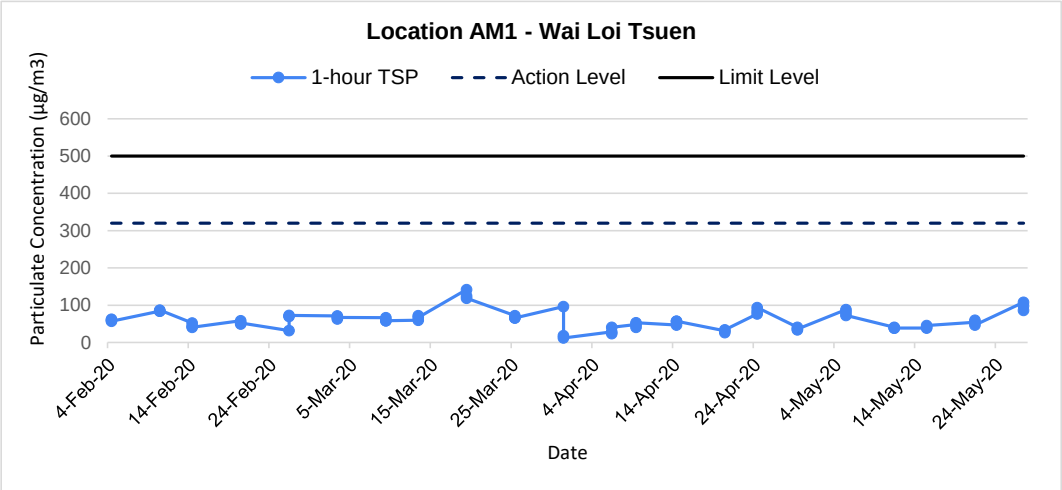
APPENDIX E
1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

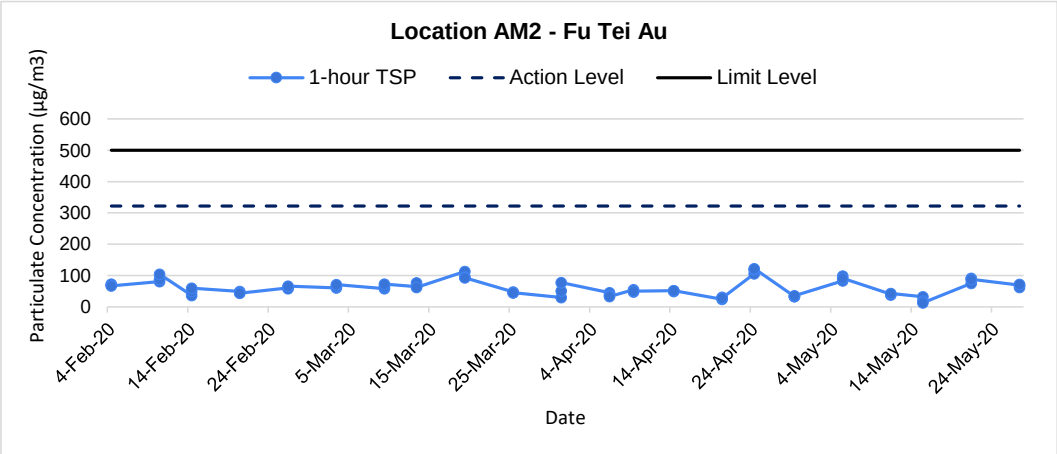
Appendix E - 1-hour TSP Monitoring Results

Location AM1 - Wai Loi Tsuen			
Date	Time	Weather	Particulate Concentration (μg/m^3)
5-May-20	9:05	Sunny	88.4
5-May-20	10:05	Sunny	80.6
5-May-20	11:05	Sunny	72.8
11-May-20	9:20	Fine	40.8
11-May-20	10:20	Fine	38.4
11-May-20	11:20	Fine	38.4
15-May-20	10:00	Sunny	38.4
15-May-20	11:00	Sunny	40.8
15-May-20	12:00	Sunny	45.6
21-May-20	9:05	Cloudy	54.6
21-May-20	10:05	Cloudy	59.8
21-May-20	11:05	Cloudy	46.8
27-May-20	9:10	Cloudy	108.0
27-May-20	10:10	Cloudy	98.4
27-May-20	11:10	Cloudy	86.4
		Average	62.5
		Maximum	108.0
		Minimum	38.4

Location AM2 - Fu Tei Au			
Date	Time	Weather	Particulate Concentration (μg/m^3)
5-May-20	13:00	Sunny	83.2
5-May-20	14:00	Sunny	98.8
5-May-20	15:00	Sunny	91.0
11-May-20	13:30	Fine	40.8
11-May-20	14:30	Fine	38.4
11-May-20	15:30	Fine	43.2
15-May-20	10:25	Sunny	32.3
15-May-20	11:25	Sunny	19.0
15-May-20	12:25	Sunny	13.3
21-May-20	13:20	Cloudy	75.4
21-May-20	14:20	Cloudy	91.0
21-May-20	15:20	Cloudy	88.4
27-May-20	13:40	Cloudy	69.6
27-May-20	14:40	Cloudy	62.4
27-May-20	15:40	Cloudy	72.0
		Average	61.3
		Maximum	98.8
		Minimum	13.3

1-hr TSP Concentration Levels





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

APPENDIX F
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Appendix F - 24-hour TSP Monitoring Results

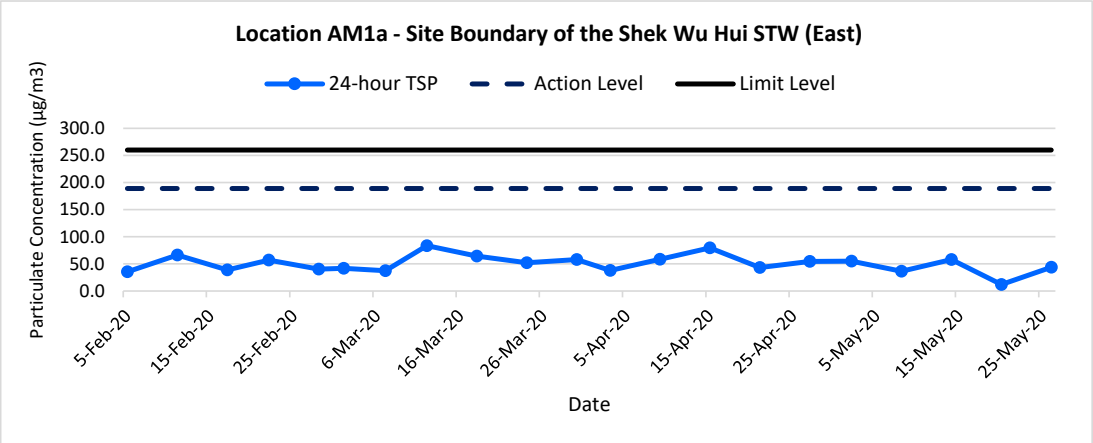
Location AM1a - Site Boundary of the Shek Wu Hui STW (East)

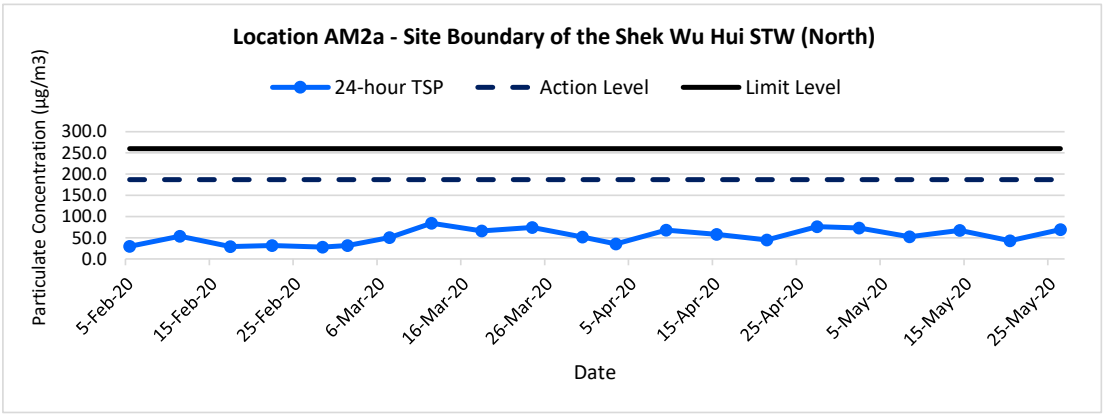
Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m^3/min.)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
				Initial	Final		Initial	Final		Initial	Final			
2-May-20	Sunny	299.8	758.2	3.4884	3.5828	0.0944	8562.6	8586.6	24.0	1.19	1.19	1.19	1718.1	54.9
8-May-20	Fine	302.3	757.7	3.5549	3.6190	0.0641	8586.6	8610.6	24.0	1.21	1.21	1.21	1748.5	36.7
14-May-20	Sunny	300.8	758.3	3.5052	3.6071	0.1019	8610.6	8634.6	24.0	1.22	1.22	1.22	1754.0	58.1
20-May-20	Cloudy	300.6	754.7	3.4984	3.5194	0.0210	8634.6	8658.6	24.0	1.22	1.21	1.22	1750.0	12.0
26-May-20	Cloudy	301.3	757.1	3.5065	3.5834	0.0769	8658.6	8682.6	24.0	1.22	1.22	1.22	1751.0	43.9
													Min	12.0
													Max	58.1
													Average	41.1

Location AM2a - Site Boundary of the Shek Wu Hui STW (North)

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m^3/min.)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
				Initial	Final		Initial	Final		Initial	Final			
2-May-20	Sunny	299.8	758.2	3.4807	3.6053	0.1246	18780.9	18804.9	24.0	1.19	1.19	1.19	1710.4	72.8
8-May-20	Fine	302.3	757.7	3.4971	3.5889	0.0918	18804.9	18828.9	24.0	1.22	1.22	1.22	1750.7	52.4
14-May-20	Sunny	300.8	758.3	3.5059	3.6241	0.1182	18828.9	18852.9	24.0	1.22	1.22	1.22	1753.9	67.4
20-May-20	Rainy	300.6	754.7	3.4801	3.5558	0.0757	18852.9	18876.9	24.0	1.22	1.22	1.22	1752.4	43.2
26-May-20	Cloudy	301.3	757.1	3.5040	3.6256	0.1216	18876.9	18900.9	24.0	1.22	1.22	1.22	1753.4	69.3
													Min	43.2
													Max	72.8
													Average	61.0

24-hr TSP Concentration Levels





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

APPENDIX G
COPIES OF CALIBRATION CERTIFICATES FOR NOISE MONITORING

Equipment no.: N-12-01

Calibration Certificate

0022524

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong Customer Code : SVEC09005	Object 1 : BSWA 308 SLM Serial No. /Ref. No. : 570183 / 550233 Object 2 : Serial No. /Ref. No. : Manufacturer : BSWAtech
Date of calibration: 23/09/2019 Date of the recommended re-calibration: 23/09/2020	Certificate No.: 0022524 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 1.5dB	1
114.0dB	114.0dB	0.0dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1.The resulted values were those obtained at the time of test and applies only to the item calibrated.
2.The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
3.The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
5.The calibrations certificate may not be reproduced.

Measured value(s) **within** **the allowable deviation.**

Performed by

Calibration Technician

Approved by

Quality Manager

Appleone Calibration Laboratory Ltd. Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR Tel: +852 2370 4437 Fax: +852 2114 0393

Equipment no.: N-12-02

Calibration Certificate

0022522

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong Customer Code : SVEC09005	Object 1 : BSWA 308 SLM Serial No. /Ref. No. : 570187 / 550841 Object 2 : Serial No. /Ref. No. : Manufacturer : BSWAtech
Date of calibration: 23/09/2019 Date of the recommended re-calibration: 23/09/2020	Certificate No.: 0022522 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 1.5dB	1
114.0dB	113.9dB	-0.1dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1.The resulted values were those obtained at the time of test and applies only to the item calibrated.
2.The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
3.The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
5.The calibrations certificate may not be reproduced.

Measured value(s) within **the allowable deviation.**

Performed by

Calibration Technician

Approved by

Quality Manager

Calibration Certificate

0022999

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong Customer Code : SVEC09005	Object 1 : SVAN957 SLM Serial No. /Ref. No. : 23851 / N-08-12 Object 2 : Microphone Serial No. /Ref. No. : 43676 Manufacturer : Svantek
Date of calibration: 19/12/2019 Date of the recommended re-calibration: 19/12/2020	Certificate No.: 0022999 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 1.5dB	1
114.0dB	114.0dB	0.0dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1.The resulted values were those obtained at the time of test and applies only to the item calibrated.
2.The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
3.The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
5.The calibrations certificate may not be reproduced.

Measured value(s) within **the allowable deviation.**

Performed by

Calibration Technician

Approved by

Quality Manager

Appleone Calibration Laboratory Ltd. Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR Tel: +852 2370 4437 Fax: +852 2114 0393

Calibration Certificate

0022676

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong Customer Code : SVEC09005	Object 1 : ST-120 sound calibrator Serial No. /Ref. No. : 181001636 Object 2 : Serial No. /Ref. No. : Manufacturer : Soundtek
Date of calibration: 24/10/2019 Date of the recommended re-calibration: 24/10/2020	Certificate No.: 0022676 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.7dB	-0.3dB	+/- 0.3dB	1
114.0dB	113.7dB	-0.3dB	+/- 0.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

1.The resulted values were those obtained at the time of test and applies only to the item calibrated.
2.The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
3.The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
5.The calibrations certificate may not be reproduced.

Measured value(s) within **the allowable deviation.**

Performed by

Calibration Technician

Approved by

Quality Manager

Appleone Calibration Laboratory Ltd. Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR Tel: +852 2370 4437 Fax: +852 2114 0393

APPENDIX H
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Appendix H - Noise Monitoring Results

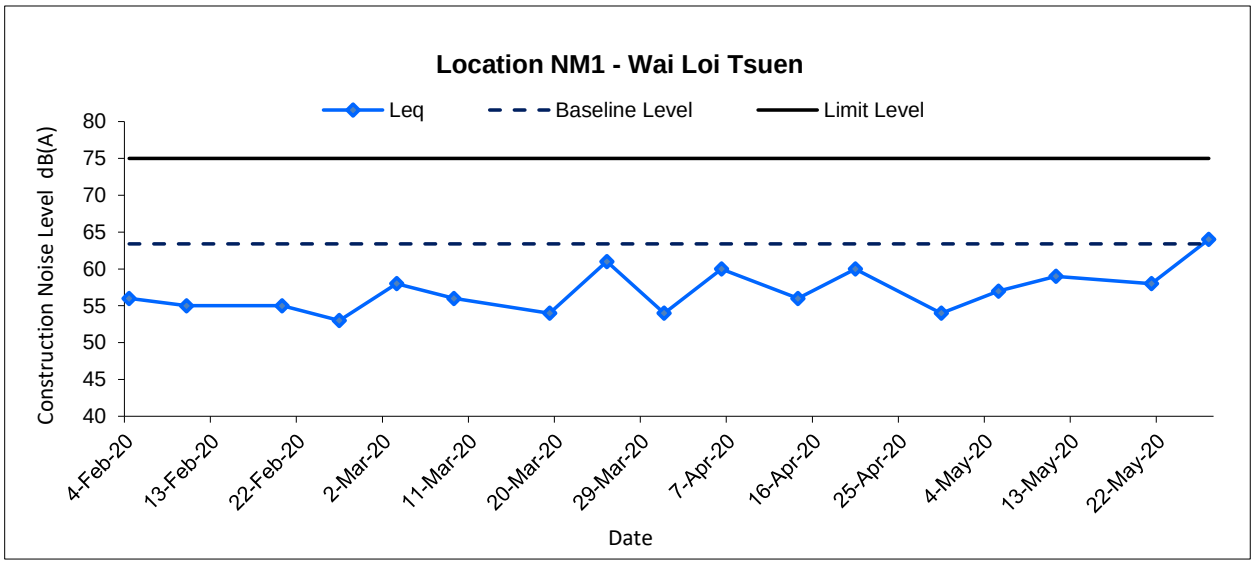
(0700-1900 hrs on Normal Weekdays)

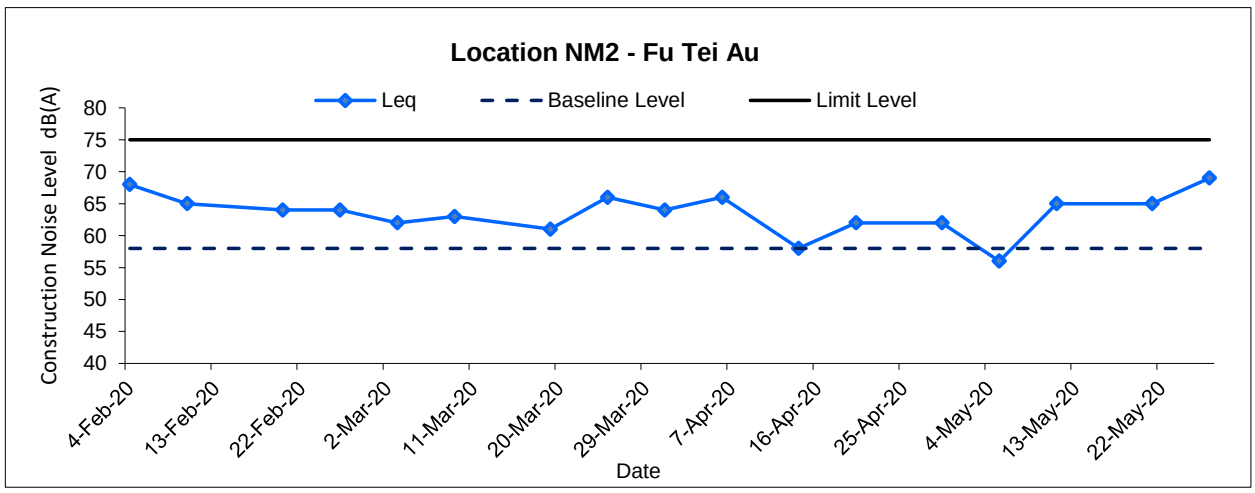
Location NM1 - Wai Loi Tsuen							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
5-May-20	9:05	Sunny	56.8	59.4	53.3	63.4	56.8 Measured ≦ Baseline
11-May-20	13:30	Fine	59.1	61.4	53.5	63.4	59.1 Measured ≦ Baseline
21-May-20	9:00	Cloudy	58.2	61.3	56.9	63.4	58.2 Measured ≦ Baseline
27-May-20	13:00	Cloudy	66.8	68.4	60.1	63.4	64.1

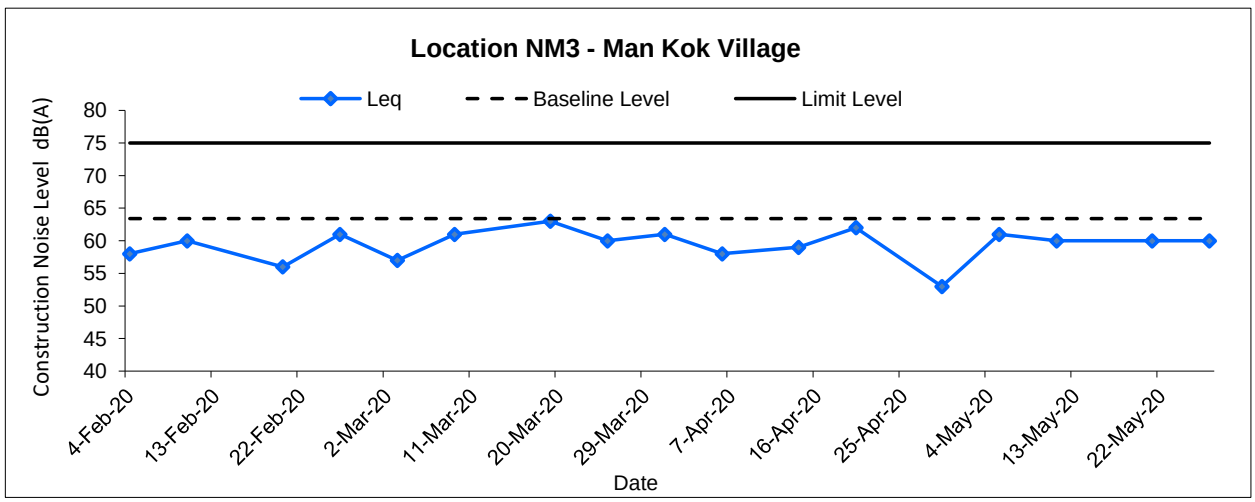
Location NM2 - Fu Tei Au							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
5-May-20	13:00	Sunny	60.1	64.2	56.9	58.0	55.9
11-May-20	15:30	Fine	65.9	69.2	58.8	58.0	65.1
21-May-20	13:30	Cloudy	66.2	69.6	62.1	58.0	65.5
27-May-20	16:00	Cloudy	69.5	73.3	63.1	58.0	69.2

Location NM3 - Man Kok Village							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
5-May-20	10:00	Sunny	61.2	64.9	56.8	63.4	61.2 Measured ≦ Baseline
11-May-20	14:45	Fine	59.7	62.5	54.6	63.4	59.7 Measured ≦ Baseline
21-May-20	10:00	Cloudy	59.8	63.2	57.2	63.4	59.8 Measured ≦ Baseline
27-May-20	15:15	Cloudy	60.4	63.6	54.5	63.4	60.4 Measured ≦ Baseline

Noise Levels







Title	Date	Project
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Graphical Presentation of Construction Noise Monitoring Results	May 2020	No. MA19019 Appendix H

CINOTECH

APPENDIX I
ECOLOGICAL MONITORING RESULTS AND ANALYSIS

MA19019 - Ecological Monitoring Result and Analysis

Table I: Recorded Bird Species and their Abundance in the Reporting Month					
Scientific Name	**Common Name**	**Chinese Name**	**Waterbird**	**Point Count Abundance**	**Transect Abundance**
Acridotheres cristatellus	Crested Myna	八哥		160	+++++
Acridotheres tristis	Common Myna	家八哥		1	+
Actitis hypoleucos	Common Sandpiper	磯鷸	*	4	+
Alcedo atthis	Common Kingfisher	普通翠鳥	*	0	+
Anthus hodgsoni	Olive Backed Pipit	樹鷚		43	++++
Ardea alba	Great Egret	大白鷺	*	30	+++
Ardea cinerea	Grey Heron	蒼鷺	*	0	+
Ardeola bacchus	Chinese Pond Heron	池鷺	*	59	+++++
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	*	22	+++
Centropus sinensis	Greater Coucal	褐翅鴉鵑		2	++
Ceryle rudis	Pied Kingfisher	斑魚狗	*	0	+
Copsychus saularis	Magpie Robin	鵲鴝		0	+
Corvus macrorhynchus	Jungle Crow	大嘴烏鴉		8	+
Corvus torquatus	Collared Crow	白頸鴉	*	2	+
Egretta garzetta	Little Egret	小白鷺	*	75	+++++
Egretta intermedia	Intermediate Egret	中白鷺	*	1	+
Eudynamys scolopacea	Common Koel	噪鵑		21	++
Gallinula chloropus	Common Moorhen	黑水雞	*	0	+
Garrulax perspicillatus	Masked Laughing Thrush	黑臉噪鶥		39	+++++
Hierococcyx sparverioides	Large Hawk Cuckoo	大鷹鵑		16	++
Hirundo rustica	Barn Swallow	家燕		39	+++++
Milvus migrans	Black Kite	黑鳶	*	5	+
Motacilla alba	White Wagtail	白鶺鴒		39	++++
Myophonus caeruleus	Blue Whistling Thrush	紫嘯鶇		1	
Nycticorax nycticorax	Black-crowned Night Heron	夜鷺	*	1	+
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		5	+++++
Parus cinereus	Cinereous Tit	蒼背山雀		0	+
Passer montanus	Eurasian Tree Sparrow	樹麻雀		4	+
Phylloscopus fuscatus	Dusky Warbler	褐柳鶯		2	++
Phylloscopus inornatus	Yellow-browed Warbler	黃眉柳鶯		19	++++
Phylloscopus proregulus	Pallas's Leaf Warbler	黃腰柳鶯		6	++
Pica pica	Magpie	喜鵲		6	+
Prinia inornata	Plain Prinia	純色鷦鶯		6	+
Psittacula eupatria	Alexandrine Parakeet	亞歷山大鸚鵡		6	+
Pycnonotus jocosus	Crested bulbul	紅耳鵯		10	+++
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		10	++
Spilornis cheela	Crested Serpent Eagle	蛇鵰	*	1	+
Streptopelia chinensis	Spotted Dove	珠頸斑鳩		47	+++++
Sturnus nigricollis	Black-necked Starling	黑領椋鳥		52	+++++
Tringa glareola	Wood Sandpiper	林鷸	*	3	+
Urocissa erythrorhyncha	Red-billed Blue Magpie	紅咀藍鵲		2	
Zitting cisticola	Streaked Fantail Warbler	棕扇尾鶯		0	+
Zosterops japonicus	Japanese White-eye	暗綠繡眼鳥		6	++++
			Total Point Count Abundance	753	
			Total Waterbirds	203	

*For waterbird

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

Remarks: (1) According to S4.7 of the approved Baseline Monitoring Report (Ecology), "waterbirds" was defined as "waterbirds and wetland-dependent species", which was referenced to Monthly Waterbird Monitoring Biannual Reports prepared by the Hong Kong Bird Watching Society (Anon, 2018). Also, S.13.11.3.2 of NENT NDA EIA Study requires "Monitoring of Measures to Mitigate for Impacts of the Project on Wetland-dependent Fauna using the Ng Tung, Sheung Yue and Shek Sheung Rivers". Therefore, "wetland-dependent birds" should be considered as "waterbirds". As raptors and Collared Crow are "wetland-dependent species", they should be taken into consideration in data analysis and impact assessment on waterbirds.

MA19019 - Waterbird Ecological Monitoring Result

Monitoring Month May
Season Summer

Table II : Total Bird Abundance from Point Count						
Survey Information				Total Bird Abundance from Point Count		
No.	Date	Time	Tide Level	Individuals Recorded	Total	Species Recorded
#1	5 May 2020	11:00	High	59	**165**	11
		15:00	Low	106		21
#2	11 May 2020	10:30	High	66	**206**	20
		8:00	Low	140		26
#3	19 May 2020	9:00	High	56	**159**	13
		14:30	Low	103		17
#4	26 May 2020	14:00	High	114	**223**	18
		16:00	Low	109		19
				Overall Total	**753**	

Table III: Total Waterbird Abundance from Point Count					
Survey Information				Numbers of Waterbirds	
No.	Date	Time	Tide Level	Individuals Recorded	Total
#1	5 May 2020	11:00	High	14	**46**
		15:00	Low	32	
#2	11 May 2020	10:30	High	12	**48**
		8:00	Low	36	
#3	19 May 2020	9:00	High	18	**55**
		14:30	Low	37	
#4	26 May 2020	14:00	High	17	**54**
		16:00	Low	37	
				Overall Total	**203**
				Average	**51**

Table IV: T-Test Analysis for All Waterbirds

Baseline Data
Monthly Average Abundance (May) 41.44
Seasonal Average Abundance (Summer) 44.18

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

H_0 The data collected in the reporting month falls within the normal distrubution when compared to the baseline monitoring data.

H_1 The data collected does not falls within the normal distrubution when compared to the baseline monitoring data.

If t-test value is smaller than the critical value, then rejects H_0.
For the data in the reporting month, the critical values are:
Crit. Value = -2.353 (95% Confidence Level)
Crit. Value = -4.541 (99% Confidence Level)

			Confidence Level	
T-values of Data in Reporting Month			95%	99%
Abundance	Monthly	4.206	✓	✓
	Season	2.970	✓	✓
		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.

MA19019 - Waterbird Ecological Monitoring Result

Monitoring Month May
Season Summer

Table V: Abundance of Representative Waterbirds from Point Count

Representative Species			Recorded Abundance							Baseline Data	
Species Name	**Common Name**	**Chinese Name**	**5 May 2020**	**11 May 2020**	**19 May 2020**	**26 May 2020**		**Total**	**Average**	**Avg (May)**	**Avg (Summer)**
Egretta garzetta	Little Egret	小白鷺	13	19	20	23		75	19	20	20
Ardea cinerea	Grey Heron	蒼鷺	0	0	0	0		0	0	0	1
Ardeola bacchus	Chinese Pond Heron	池鷺	16	9	16	18		59	15	15	16
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	0	0	0	0		0	0	0	0
Ardea alba	Great Egret	大白鷺	9	7	8	6		30	8	2	3
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	4	4	7	7		22	6	2	3

Table VI: T-test Analysis for Representative Waterbirds from Point Count

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

H_0 The data collected in the reporting month falls within the normal distrubution when compare to the baseline monitoring data.

H_1 The data collected does not falls within the normal distrubution when compare to the baseline monitoring data.

If t-test value for a specific representative is smaller than the critical value, then rejects H_0.

For the data in the reporting month, the critical values are:

Crit. Value = -2.353 (95% Confidence Level)
Crit. Value = -4.541 (99% Confidence Level)

Representative Species			T-value	Confidence Level		T-value	Confidence Level		Overall
Species Name	Common Name	Chinese Name	Monthly	95%	99%	Seasonal	95%	99%	
Egretta garzetta	Little Egret	小白鷺	-0.596	✓	✓	-0.596	✓	✓	✓
*Ardea cinerea**	Grey Heron*	蒼鷺*	N/A*						
Ardeola bacchus	Chinese Pond Heron	池鷺	-0.127	✓	✓	-0.516	✓	✓	✓
*Phalacrocorax carbo**	Great Cormorant*	普通鸕鷀*	N/A*						
Ardea alba	Great Egret	大白鷺	9.037	✓	✓	7.686	✓	✓	✓
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	3.657	✓	✓	2.620	✓	✓	✓

Remarks

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

✓ = 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 J
PHOTO RECORDS OF ECOLOGICAL MONITORING

Appendix J - Photo Records of Ecological Monitoring

Part A - Conditions of Rivers

Sheung Yue River (Taken on 11 May 20)

Ng Tung River (Taken on 19 May 20)

Shek Sheung River (Taken on 26 May 20)

Part B – Waterbird Species

	
Ardea alba (Taken on 19 May 20)	*Ardea cinerea* (Taken on 19 May 20)
	
Ardeola bacchus (Taken on 11 May 20)	*Bubulcus coromandus* (Taken on 11 May 20)
	
Egretta garzetta (Taken on 11 May 20)	*Egretta intermedia* (Taken on 11 May 20)

	
Himantopus himantopus (Taken on 19 May 20)	*Nycticorax nycticorax* (Taken on 19 May 20)

Part C – Human Activities & Site Conditions

	
Fishing (Taken on 19 May 20)	Jaywalking (Taken on 26 May 20)
	
Excavation (Taken on 26 May 20)	Sheet piling (Taken on 19 May 20)
	
Oil stain (Taken on 26 May 20)	

APPENDIX K
SITE AUDIT SUMMARY

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200505
Date	5 May 2020 (Tuesday)
Time	14:00 – 16:00

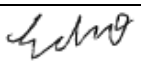
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
200505-R2	• The water tank at Portion A was overfilled and some of the water was flowed outside the tank. The Contractor should clear the tank regularly and maintain its capacity to prevent water accumulation on-site.	B3iii
	C. Air Quality	
200505-R1	• The haul road was dirty and dry at Portion A. The Contractor should clean the haul road regularly to minimize dust impact.	C5
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Following up on the previous site inspection (ref no.: 200428): Items 200428-R1, 200428-R2 and 200428-R3 were rectified/improved by the Contractor.	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		5 May 2020
Checked by	Mr. Samson Yuen		6 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200514
Date	14 May 2020 (Thursday)
Time	9:30 – 10:45

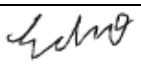
Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
200514-R1	• Stagnant water was accumulated at Portion A. It should be removed or pumped through the sedimentation tank.	B8
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Following up on the previous site inspection (ref no.: 200505): Items 200505-R1 and 200505-R2 were rectified/improved by the Contractor.	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		14 May 2020
Checked by	Mr. Samson Yuen		15 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200521
Date	21 May 2020 (Thursday)
Time	14:00 – 15:45

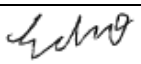
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200521-R1	• Waste stockpile accumulated should be removed or covered by impervious materials at Portion C.	E2iii, iv
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Following up on the previous site inspection (ref no.: 200514): Item 200514-R1 was rectified/improved by the Contractor.	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		21 May 2020
Checked by	Mr. Samson Yuen		22 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200526
Date	26 May 2020 (Tuesday)
Time	14:20 – 16:15

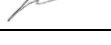
Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
200526-R1	• Water barriers along the site area of Portion A should be completely bounded by sand bags to avoid stagnant water accumulation on-site.	B4
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Following up on the previous site inspection (ref no.: 200521): Item 200521-R1 was rectified/improved by the Contractor.	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		26 May 2020
Checked by	Mr. Samson Yuen		28 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200505
Date	5 May 2020 (Tuesday)
Time	14:00 – 16:00

Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	No follow-up items from the previous site inspection (ref no.: 200428).	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		5 May 2020
Checked by	Mr. Samson Yuen		6 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200514
Date	14 May 2020 (Thursday)
Time	14:10 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
200514-R1	• The haul road was dirty and dry at Portion B. The Contractor should clean the haul road regularly to avoid dust generation.	C5
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	No follow-up items from the previous site inspection (ref no.: 200505).	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		14 May 2020
Checked by	Mr. Samson Yuen		15 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200521
Date	21 May 2020 (Thursday)
Time	14:00 – 15:45

Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Following up on the previous site inspection (ref no.: 200514): Item 200514-R1 was rectified/improved by the Contractor.	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		21 May 2020
Checked by	Mr. Samson Yuen		22 May 2020

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	200526
Date	26 May 2020 (Tuesday)
Time	14:20 – 16:15

Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	No follow-up items from the previous site inspection (ref no.: 200521).	

	Name	Signature	Date
Recorded by	Ms. Echo Hung		26 May 2020
Checked by	Mr. Samson Yuen		28 May 2020

APPENDIX L
WASTE FLOW TABLE

Name of Department: DSD

Contract No. DC/2018/06

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	2.256	0.000	0.000	0.161	2.096	0.000	0.000	0.000	0.000	0.060	0.101
Jun											
Sub-total	8.896	0.000	0.000	1.115	7.781	0.000	0.000	0.000	0.000	0.060	0.388
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	8.896	0.000	0.000	1.115	7.781	0.000	0.000	0.000	0.000	0.060	0.388

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 each truck of C&D wastes is 5m3
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38
5. The slurry and bentonite are disposed at Tseung Kwun O 137
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7.850 kg/m3
8. Assume the density of plastic is 941 kg/m3
9. Assume the density of general refuse is 0.9 kg/l
10. Density of waste oil is assued to be 0.001 m3/l & 0.8 kg/l. Chemical waste includes waste oil.

Name of Department: DSD

Contract No. DC/2018/07

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 kg)	(in '000kg)
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.760
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.490
Mar	0.075	0.000	0.000	0.000	0.075	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.068	0.000	0.000	0.000	0.068	0.000	19.090	0.000	0.000	0.000	2.540
May	0.372	0.000	0.000	0.000	0.372	0.000	0.000	0.000	0.000	0.000	4.510
Jun											
Sub-total	0.515	0.000	0.000	0.000	0.515	0.000	19.090	0.000	0.000	0.000	17.300
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.515	0.000	0.000	0.000	0.515	0.000	19.090	0.000	0.000	0.000	17.300

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 mixed rock and soil is 1.9 ton/m3.
4. Assume the density of slurry and bentonite is 2.8 ton/m3.
5. The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank.
6. The non-inert C&D wastes 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	-	-	-	-	-	-	-	-	-	-	-
Sub-total	0	0	0	0	0	0	0	0	0	0	12.46 T
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct											
Nov											
Dec											
Total	0	0	0	0	0	0	0	0	0	0	12.46 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 m^3. (PS Clause 6.21.7(4)(b) refers)

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

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

Notes: (1) The performance targets are given in PS Clause 6.21.8(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
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APPENDIX M
EVENT AND ACTION PLANS

Appendix M - Event Action Plans

Table M-1 Event/Action Plan for Air Quality

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

Appendix M - Event Action Plans

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

Appendix M - Event Action Plans

Event	Action			
	ET	**IEC**	**ER**	**Contractor**
	4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix M - Event Action Plans

Table M-2 Event/Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level	1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem;	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals;

Appendix M - Event Action Plans

Event	Action			
	ET	**IEC**	**ER**	**Contractor**
	Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	3. Supervise the implementation of remedial measures.	4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix M - Event Action Plans

Table M-3 Event/Action Plan for Ecology

Action Level	Response	Limit Level	Response
Construction Phase			
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to the Project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to the Project instigate remedial action.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to the Project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to the Project instigate remedial action.

Appendix M - Event Action Plans

Table M-4 Event/Action Plan for Landscape and Visual

Event	Action			
	ET	IEC	ER	Contractor
Non-conformity on one occasion	1. Inform the Contractor, IEC and ER; 2. Discuss remedial actions with IEC, ER and Contractor 3. Monitor remedial actions until rectification has been completed.	1. Check inspection report; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise ER on effectiveness of proposed remedial measures.	1. Confirm receipt of notification of non-conformity in writing; 2. Review and agree on the remedial measures proposed by the Contractor; 3. Supervise implementation of remedial measures.	1. Identify source and investigate the non-conformity; 2. Implement remedial measures; 3. Amend working methods agreed with ER as appropriate; 4. Rectify damage and undertake any necessary replacement.

Appendix M - Event Action Plans

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

APPENDIX N
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	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:	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 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;						^
	Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;						^
	A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;						^
	The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;						^
	Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;						^
	When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.						^
	The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;						^

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;						^
	Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;						^
	Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and						^
	Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	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/m² on a skid footing with 25mm thick internal sound absorptive lining.	To minimize construction noise impact arising from the Project at the affected noise sensitive receivers (NSRs)	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, Noise Control Ordinance (NCO)	N/A
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 bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of contaminated soil to minimize contaminated runoff and construction materials should be properly covered and located away from nearby water bodies; and						^
	Supply of suitable clean backfill material after excavation, if required.						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	Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^
	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	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	For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction phase		N/A
	With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.						N/A
S7.3.2.1	MM4 – Tree Protection & Preservation Existing trees to be retained within the Project Site should be carefully protected during construction. In particular Old and Valuable Trees (OVTs) will be preserved according to ETWB TC (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Designer / Contractor	Work Sites	Prior to construction and construction phase	ETWB TCW No. 29/2004 and DEVB TC(W) No.7/2015	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S7.3.2.1	MM5 - Tree Transplantation Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC No. 2/2004 and DEVB TC(W) No. 7/2015 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	Designer / Contractor	Work Sites where possible. Otherwise consider offsite locations	Prior to construction, construction phase and operation phase	DEVB TC(W) No. 7/2015 and ETWB TCW No.2/2004 HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit	N/A
S7.3.2.1	MM6 - Slope Landscaping Site formation should be reduced as far as possible. Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape recourses and charter. Woodland tree seedings and/or shrubs should be planted where slope gradient and site conditions allow.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Designer / Contractor	Work Sites	Prior to construction, construction phase and operation phase	GEO Publication (1999) - Use of Vegetation as Surface Protection on Slope; GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes	N/A
	In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GWO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.						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	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 *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.						N/A
S7.3.2.1	MM9 - Vertical Greening Planting of climbers to grow up vertical surfaces were appropriate.	Soften hard surfaces and facilities	Designer / Contractor	On appropriate structures	Prior to construction, construction phase and operation phase	ETWB TCW No.11/2004 – Cyber Manual for Greening	N/A
S7.3.2.1	MM10 - Green Roof Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to visually sensitive receivers (VSRs) at high levels. Provide greening.	Designer / Contractor	On appropriate buildings	Prior to construction, construction phase and operation phase	CIBSE HK Branch, Technical Guidelines for Green Roof Systems in Hong Kong (2011); ArchSD/Urbis Study on Green Roof Application in HK (2007)	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	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 N/A(1)	Not applicable at this stage; Not observed;
*	Recommendation was made during site audit but improved/retified by the contractor;
#	Recommendation was made during site audit but not yet improved/retified by the contractor;
X	Non-compliance of mitigation measure;
●	Non-compliance but rectified by the contractor.

APPENDIX O
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 O – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: May 2020

Log Ref.	Location	Received Date	Details of Complaint/Warning/Summon and Prosecution	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	• 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/warning/summon and prosecution was received in the reporting period.

APPENDIX P
SUMMARY OF EXCEEDANCE

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

Appendix P – Summary of Exceedance

Reporting Month: May 2020

(A) Exceedance Report for Air Quality
(NIL in the reporting month)

(B) Exceedance Report for Construction Noise
(NIL in the reporting month)

(C) Exceedance Report for Ecology
(NIL in the reporting month)

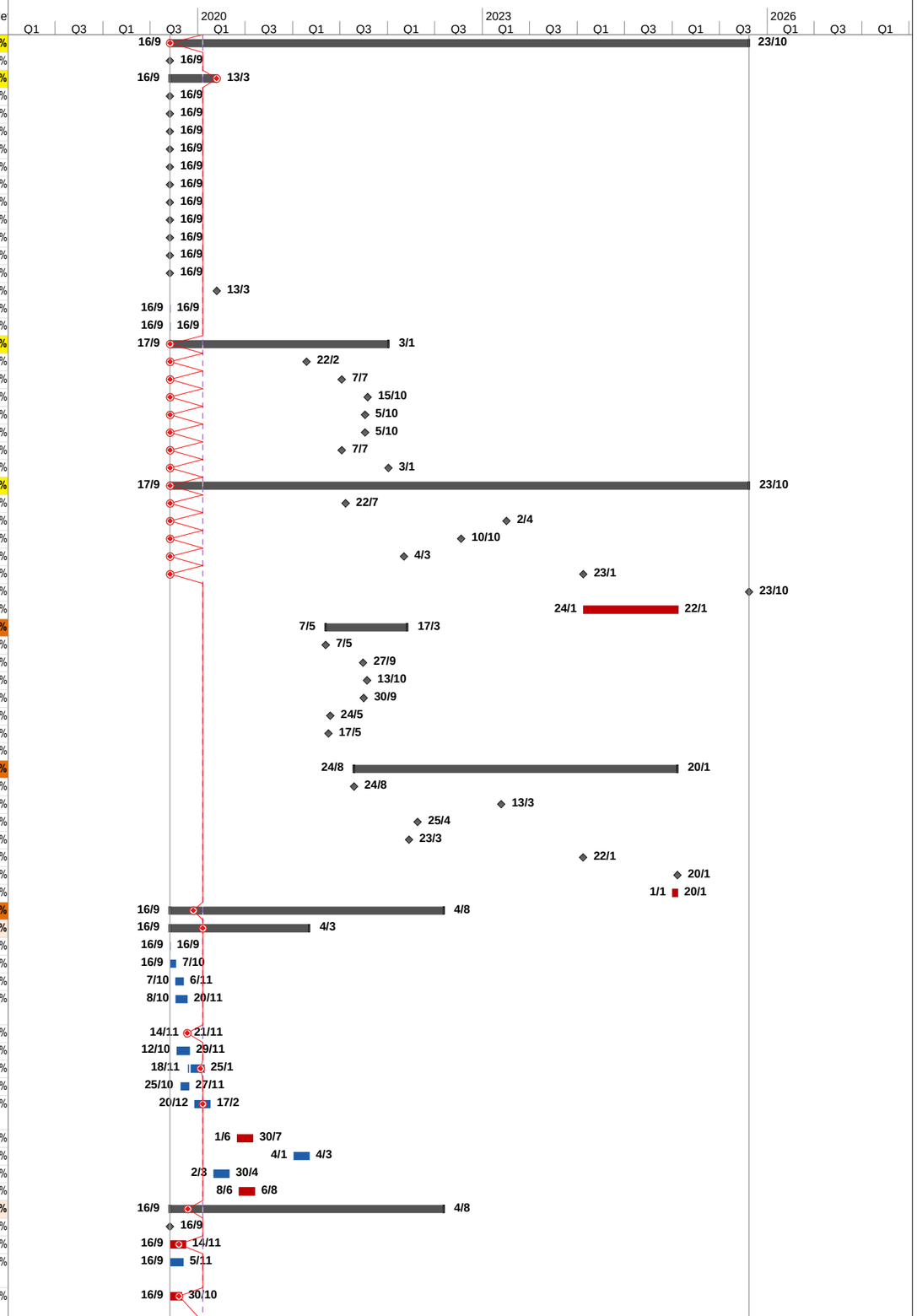
APPENDIX Q
TENTATIVE CONSTRUCTION PROGRAMME

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

Revised Works Programme (Status Date: 20/01/2020)

群利－俊和聯營體
KL－CW JV

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Comple
1		**Contract Dates**	**2229.2 da**	**Mon 16/9/19**	**Thu 23/10/25**	**Mon 16/9/19**	**NA**	**0 days**			**0%**
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+180 days,6,7,8,9,11,12,1	100%
3		**Access Date (cal. day)**	**180 days**	**Mon 16/9/19**	**Fri 13/3/20**	**Mon 16/9/19**	**NA**	**0 days**			**99%**
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%
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+180 days		100%
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%
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%
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%
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%
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%
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%
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%
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%
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%
15		Portion C-6	0 days	Fri 13/3/20	Fri 13/3/20	NA	NA	0 days	2FS+180 days	311,303	0%
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%
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%
18		**Key Date (cal. day)**	**840 days**	**Tue 17/9/19**	**Mon 3/1/22**	**NA**	**NA**	**0 days**			**0%**
19		KD1A (525 days after starting date)	525 days	Tue 17/9/19	Mon 22/2/21	NA	NA	0 days			0%
20		KD2A (660 days after starting date)	660 days	Tue 17/9/19	Wed 7/7/21	NA	NA	0 days			0%
21		KD3A (760 days after starting date)	760 days	Tue 17/9/19	Fri 15/10/21	NA	NA	0 days			0%
22		KD3B (750 days after starting date)	750 days	Tue 17/9/19	Tue 5/10/21	NA	NA	0 days			0%
23		KD3C (750 days after starting date)	750 days	Tue 17/9/19	Tue 5/10/21	NA	NA	0 days			0%
24		KD3D (660 days after starting date)	660 days	Tue 17/9/19	Wed 7/7/21	NA	NA	0 days			0%
25		KD3E (840 days after starting date)	840 days	Tue 17/9/19	Mon 3/1/22	NA	NA	0 days			0%
26		**Completion Date (cal. day)**	**2228.2 da**	**Tue 17/9/19**	**Thu 23/10/25**	**NA**	**NA**	**0 days**			**0%**
27		Section 1 of Works (675 days after starting date)	675 days	Tue 17/9/19	Thu 22/7/21	NA	NA	0 days			0%
28		Section 2 of Works (1,295 days after starting date)	1294 days	Tue 17/9/19	Sun 2/4/23	NA	NA	0 days			0%
29		Section 3 of Works (1,120 days after starting date)	1120 days	Tue 17/9/19	Mon 10/10/22	NA	NA	0 days			0%
30		Section 4 of Works (900 days after starting date)	900 days	Tue 17/9/19	Fri 4/3/22	NA	NA	0 days			0%
31		Section 5 of Works (1,590 days after starting date)	1590 days	Tue 17/9/19	Tue 23/1/24	NA	NA	0 days		32,33	0%
32		Defect Liability Period	365 days	Wed 24/1/24	Thu 23/10/25	NA	NA	0 days	31		0%
33		Soft Landscape Establishment Works	365 days	Wed 24/1/24	Wed 22/1/25	NA	NA	0 days	31		0%
34	*	**Planned Completion - Key Date (cal. day)**	**314 days**	**Fri 7/5/21**	**Thu 17/3/22**	**NA**	**NA**	**-74.8 days**			**0%**
35	KD1A	KD1A (525 days after starting date)	0 days	Fri 7/5/21	Fri 7/5/21	NA	NA	-74.8 days	140FF,138FF,330,		0%
36	KD2A	KD2A (660 days after starting date)	0 days	Mon 27/9/21	Mon 27/9/21	NA	NA	-83 days	366FF		0%
37	KD3A	KD3A (760 days after starting date)	0 days	Wed 13/10/21	Wed 13/10/21	NA	NA	0 days	180FF,181FF		0%
38	KD3B	KD3B (750 days after starting date)	0 days	Thu 30/9/21	Thu 30/9/21	NA	NA	4 days	198FF,199FF		0%
39	KD3C	KD3C (750 days after starting date)	0 days	Mon 24/5/21	Mon 24/5/21	NA	NA	133 days	210FF,211FF		0%
40	KD3D	KD3D (660 days after starting date)	0 days	Mon 17/5/21	Mon 17/5/21	NA	NA	50 days	236FF,237FF		0%
41	KD3E	KD3E (840 days after starting date)	0 days	Thu 17/3/22	Thu 17/3/22	NA	NA	-73.8 days	253FF,248FF,284F		0%
42	*	**Planned Completion - Section of the Works (cal. day)**	**1245.2 da**	**Tue 24/8/21**	**Mon 20/1/25**	**NA**	**NA**	**-33.8 days**			**0%**
43	SW1	Section 1 of Works (675 days after starting date)	0 days	Tue 24/8/21	Tue 24/8/21	NA	NA	-33.8 days	142FF,309FF,141F		0%
44	SW2	Section 2 of Works (1,295 days after starting date)	0 days	Mon 13/3/23	Mon 13/3/23	NA	NA	20 days	371FF,368FF,370F		0%
45	SW3	Section 3 of Works (1,120 days after starting date)	0 days	Mon 25/4/22	Mon 25/4/22	NA	NA	167 days	212FF,213FF,238F		0%
46	SW4	Section 4 of Works (900 days after starting date)	0 days	Wed 23/3/22	Wed 23/3/22	NA	NA	-20 days	269FF,273FF,304F		0%
47	SW5	Section 5 of Works (1,590 days after starting date)	0 days	Mon 22/1/24	Mon 22/1/24	NA	NA	0 days	341FF,339FF,340F		0%
48		Defect Liability Period	0 days	Mon 20/1/25	Mon 20/1/25	NA	NA	0 days	343FF		0%
49		Soft Landscape Establishment Works	20 days	Wed 1/1/25	Mon 20/1/25	NA	NA	0 days	343FF		0%
50		**Submissions (cal. day)**	**1054 days**	**Mon 16/9/19**	**Thu 4/8/22**	**Mon 16/9/19**	**NA**	**20 days**			**62%**
51		**Subletting Package**	**536 days**	**Mon 16/9/19**	**Thu 4/3/21**	**Mon 16/9/19**	**NA**	**63.8 days**			**52%**
52		Prepare & Submit Subletting Procedures	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2	53	100%
53		PM Review & Accept Subletting Procedures	21 days	Mon 16/9/19	Mon 7/10/19	Mon 16/9/19	Mon 7/10/19	0 days	52	55,57,54,56	100%
54		Subletting for Preliminary Works (Instrumentation Monitoring etc.)	30 days	Mon 7/10/19	Wed 6/11/19	Mon 7/10/19	Wed 6/11/19	0 days	53	311	100%
55		Subletting for Drainage Diversion Works for UV System no.1& Effluent Pumping Station No.1	44 days	Tue 8/10/19	Wed 20/11/19	Tue 8/10/19	Wed 20/11/19	0 days	53	308	100%
56		Subletting for the Temporary Site accommodation (On hold)	8 days	Thu 14/11/19	Thu 21/11/19	Thu 14/11/19	NA	32 days	53	111	99%
57		Subletting for Pre-drilling Works	49 days	Sat 12/10/19	Fri 29/11/19	Sat 12/10/19	Fri 29/11/19	0 days	53	58SS+15 days,59SS+15 days,1	100%
58		Subletting for Pre-bored Socketed Steel H-Pile	45 days	Mon 18/11/19	Sat 25/1/20	Mon 18/11/19	NA	7.25 days	57SS+15 days	355,150,191,207,220,230,245,1	90%
59		Subletting for Contractor's Designer for Temporary Works	32 days	Fri 25/10/19	Wed 27/11/19	Fri 25/10/19	Wed 27/11/19	0 days	57SS+15 days	61,60,74,62,63,64	100%
60		Subletting for ELS Works	60 days	Fri 20/12/19	Mon 17/2/20	Fri 20/12/19	NA	105 days	59	127,154,160,166,172,179,193,2	80%
61		Subletting for R.C Works	60 days	Mon 1/6/20	Thu 30/7/20	NA	NA	-4 days	59	128,194,210,223,359,272,252,2	0%
62		Subletting for ABWS & BS Works	60 days	Mon 4/1/21	Thu 4/3/21	NA	NA	63.8 days	59	142,184,201,213,224,239,254,2	0%
63		Subletting for Pipeworks, Utilities, and Roadworks	60 days	Mon 2/3/20	Thu 30/4/20	NA	NA	227 days	59	336,333,334,335,332	0%
64		Subletting for Hard Landscape, Soft Landscape, and others	60 days	Mon 8/6/20	Thu 6/8/20	NA	NA	0 days	59	339,340,341,343	0%
65		**Statutory Submission, Submission & Approval**	**1054 days**	**Mon 16/9/19**	**Thu 4/8/22**	**Mon 16/9/19**	**NA**	**20 days**			**82%**
66		Prepare and Submit Subcontractor Management Plan (SMP)	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
67		Prepare and Submit Interface Management Plan	60 days	Mon 16/9/19	Thu 14/11/19	Mon 16/9/19	NA	0 days	2		58%
68		Prepare TTA Plan, submit & approve for footpath for Stage 1 - Drainage Diversion	51 days	Mon 16/9/19	Tue 5/11/19	Mon 16/9/19	Tue 5/11/19	0 days	2	308,70	100%
69		Prepare TTA Plan, submit & approve for carriageway at Chuk Wan Road for CLP 13kV substation	45 days	Mon 16/9/19	Wed 30/10/19	Mon 16/9/19	NA	0 days	2		78%



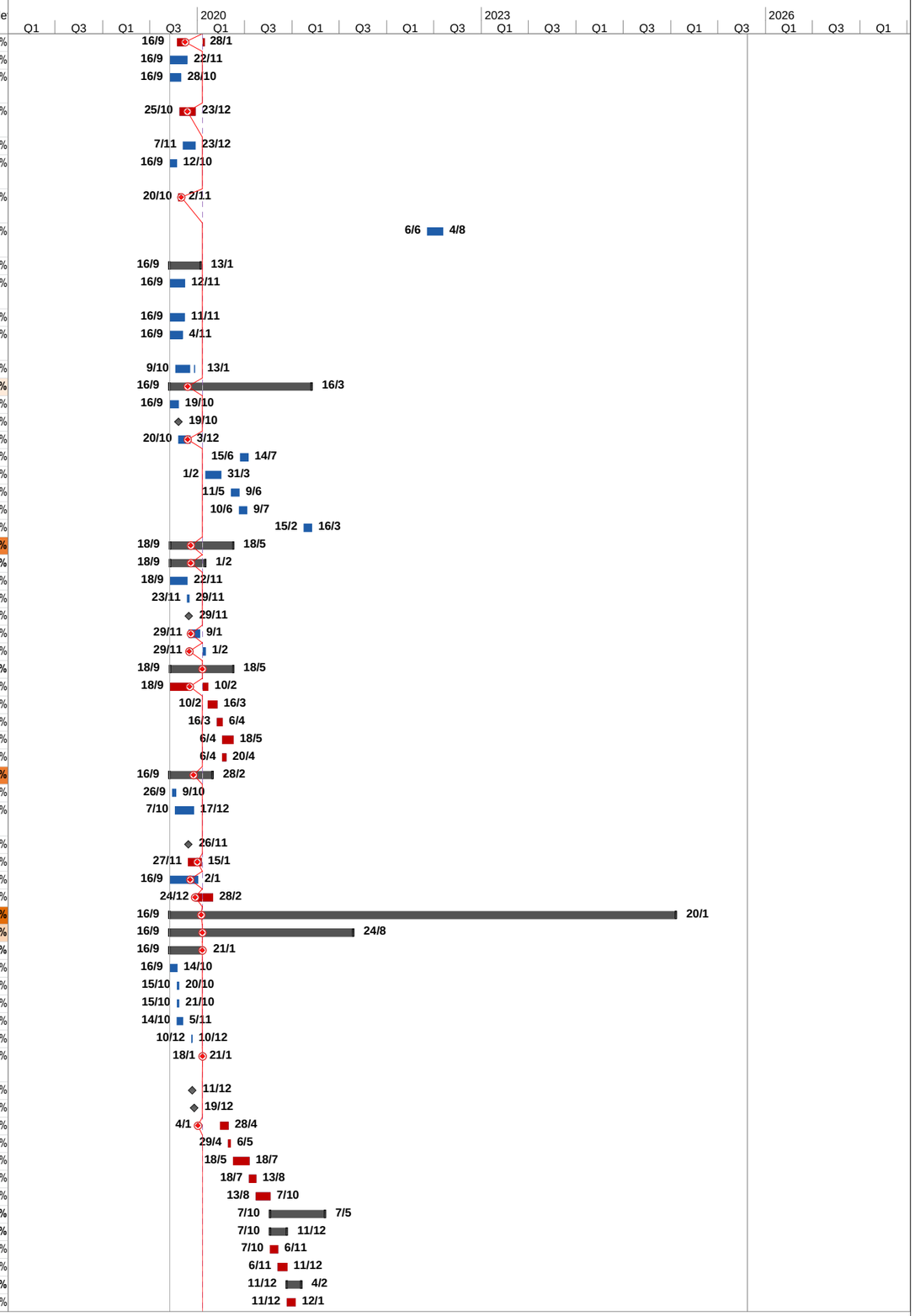
Task ▬ Milestone ◆ Summary ▬ Critical ▬

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

Revised Works Programme (Status Date: 20/01/2020)

群利－俊和聯營體
KL－CW JV

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete
70		Excavation Permit Application	38 days	Mon 16/9/19	Tue 28/1/20	Mon 16/9/19	NA	-88.6 days	68	374FS+60 days,373FS+60 days	80%
71		Approval for Lighting Removal at Portion C-1A of the Site from Hyd	68 days	Mon 16/9/19	Fri 22/11/19	Mon 16/9/19	Fri 22/11/19	0 days	2	120	100%
72		Prepare, submit & approve for commencement of Works near MTRCL protection zone at Sun Wan Road from MTRCL	43 days	Mon 16/9/19	Mon 28/10/19	Mon 16/9/19	Mon 28/10/19	0 days	2	353,350	100%
73		Prepare, submit & approve the layout plan of the Temporary Site accommodation (PPMI no.001) (On hold)	60 days	Fri 25/10/19	Mon 23/12/19	Fri 25/10/19	NA	0 days	2	111	50%
74		Prepare, submit & approve the ELS design for deep excavation	47 days	Thu 7/11/19	Mon 23/12/19	Thu 7/11/19	Mon 23/12/19	0 days	59	127,154,160,166,172,179,193,2	100%
75		Prepare, submit & approve the Method Statement for Drainage Diversion Works	27 days	Mon 16/9/19	Sat 12/10/19	Mon 16/9/19	Sat 12/10/19	0 days	2	308,76	100%
76		PM approve the Method Statement for Drainage Diversion Works	14 days	Sun 20/10/19	Sat 2/11/19	Sun 20/10/19	NA	0 days	75		80%
77		Prepare, submit & approve for the FSD submissions for CLP 132kV Substation	60 days	Mon 6/6/22	Thu 4/8/22	NA	NA	20 days		371	0%
78		Environmental Aspect Submissions	120 days	Mon 16/9/19	Mon 13/1/20	Mon 16/9/19	Mon 13/1/20	0 days	2		100%
79		Prepare, submit & approve Site Management Plan for Trip Tricket System	58 days	Mon 16/9/19	Tue 12/11/19	Mon 16/9/19	Tue 12/11/19	0 days	2		100%
80		Prepare, submit & approve Waste Management Plan	57 days	Mon 16/9/19	Mon 11/11/19	Mon 16/9/19	Mon 11/11/19	0 days	2		100%
81		Prepare, submit & approve Environmental Management Plan	50 days	Mon 16/9/19	Mon 4/11/19	Mon 16/9/19	Mon 4/11/19	0 days	2		100%
82		Notification to EPD for Works Commencement	55.44 days	Wed 9/10/19	Mon 13/1/20	Wed 9/10/19	Mon 13/1/20	0 days		308,329	100%
83		**Procurement**	**548 days**	**Mon 16/9/19**	**Tue 16/3/21**	**Mon 16/9/19**	**NA**	**51.8 days**			**27%**
84		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		85	100%
85		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	84	86,87,88	100%
86		Prepare, submit and approve the pipe works material	45 days	Sun 20/10/19	Tue 3/12/19	Sun 20/10/19	NA	44.1 days	85	305	80%
87		Prepare, submit and approve the water proofing material	30 days	Mon 15/6/20	Tue 14/7/20	NA	NA	12 days	85	128,194,210,223,359	0%
88		Prepare, submit and approve the concrete mix	60 days	Sat 1/2/20	Tue 31/3/20	NA	NA	57 days	85	128,194,210,223,359,89	0%
89		Prepare, submit and approve the rebar material	30 days	Mon 11/5/20	Tue 9/6/20	NA	NA	17 days	88	90,128,194,210,223,359	0%
90		Prepare, submit and approve the metal works material	30 days	Wed 10/6/20	Thu 9/7/20	NA	NA	17 days	89	91,128,194,210,223,359	0%
91		Prepare, submit and approve the ABWF works material	30 days	Mon 15/2/21	Tue 16/3/21	NA	NA	51.8 days	90	142,184,201,213,224,239,254,2	0%
92		**Preparation of Cost Saving Design**	**243.8 days**	**Wed 18/9/19**	**Mon 18/5/20**	**Wed 18/9/19**	**NA**	**-77.8 days**			**48%**
93		**Prepare, submit and approve CSD package no.1**	**136.2 days**	**Wed 18/9/19**	**Sat 1/2/20**	**Wed 18/9/19**	**NA**	**10.8 days**	**2**	**150,191**	**65%**
94		Prepare and submit CSD proposal	66 days	Wed 18/9/19	Fri 22/11/19	Wed 18/9/19	Fri 22/11/19	0 days	2	95	100%
95		PM review and approval of CSD	7 days	Sat 23/11/19	Fri 29/11/19	Sat 23/11/19	Fri 29/11/19	0 days	94	96	100%
96		Obtain AIP	0 days	Fri 29/11/19	Fri 29/11/19	Fri 29/11/19	Fri 29/11/19	0 days	95	98,97	100%
97		PM review and approval of CSD	42 days	Fri 29/11/19	Thu 9/1/20	Fri 29/11/19	NA	33 days	96	150,191	20%
98		Obtain DDA	14 days	Fri 29/11/19	Sat 1/2/20	Fri 29/11/19	NA	10.8 days	96	150,191	20%
99		**Prepare, submit and approve CSD package no.2**	**243.8 days**	**Wed 18/9/19**	**Mon 18/5/20**	**Wed 18/9/19**	**NA**	**-77.8 days**	**2**	**125,220**	**37%**
100		Prepare and submit CSD proposal	95 days	Wed 18/9/19	Mon 10/2/20	Wed 18/9/19	NA	-77.8 days	2	101	80%
101		PM review and approval of CSD	35 days	Mon 10/2/20	Mon 16/3/20	NA	NA	-77.8 days	100	102	0%
102		Obtain AIP	21 days	Mon 16/3/20	Mon 6/4/20	NA	NA	-77.8 days	101	104,103	0%
103		PM review and approval of CSD	42 days	Mon 6/4/20	Mon 18/5/20	NA	NA	-77.8 days	102	125,220	0%
104		Obtain DDA	14 days	Mon 6/4/20	Mon 20/4/20	NA	NA	-49.8 days	102	125,220	0%
105		**Site Preliminary Works**	**166 days**	**Mon 16/9/19**	**Fri 28/2/20**	**Mon 16/9/19**	**NA**	**0 days**			**68%**
106		Initial Tree survey and report submission	14 days	Thu 26/9/19	Wed 9/10/19	Thu 26/9/19	Wed 9/10/19	0 days	2	108	100%
107		Prepare and submit and approve the Method Statement of Tree felling & Prunning works	72 days	Mon 7/10/19	Tue 17/12/19	Mon 7/10/19	Tue 17/12/19	0 days	2	108	100%
108		Mobilization for Hoarding	0 days	Thu 21/11/19	Tue 26/11/19	Thu 21/11/19	Tue 26/11/19	0 days	2,116,106,107	109	100%
109		Hoarding Erection at Portion C	40 days	Wed 27/11/19	Wed 15/1/20	Wed 27/11/19	NA	0 days	108	121	70%
110		Utility applications and Connection	89 days	Mon 16/9/19	Thu 2/1/20	Mon 16/9/19	NA	46 days	2	111FF	75%
111		Construction of Site Accommodation in Works Area (On hold)	52 days	Tue 24/12/19	Fri 28/2/20	NA	NA	0 days	73,110FF,56		0%
112	*	**Construction Works of Portion C of the Site**	**1954 days**	**Mon 16/9/19**	**Mon 20/1/25**	**Mon 16/9/19**	**NA**	**0 days**			**1%**
113	*	**UV System No. 1 & Effluent Pumping Station No. 1**	**575.8 days**	**Mon 16/9/19**	**Tue 24/8/21**	**Mon 16/9/19**	**NA**	**0 days**			**12%**
114		**Preliminary Works**	**105 days**	**Mon 16/9/19**	**Tue 21/1/20**	**Mon 16/9/19**	**Tue 21/1/20**	**0 days**			**100%**
115		Site Clearance & Site Set Up	23 days	Mon 16/9/19	Mon 14/10/19	Mon 16/9/19	Mon 14/10/19	0 days	2	116,117,118	100%
116		Tree Felling Works	5 days	Tue 15/10/19	Sun 20/10/19	Tue 15/10/19	Sun 20/10/19	0 days	115	108	100%
117		Trial Pit Excavation & UU Detection Works	6 days	Tue 15/10/19	Mon 21/10/19	Tue 15/10/19	Mon 21/10/19	0 days	115		100%
118		Temporary Footpath Diversion	20 days	Mon 14/10/19	Tue 5/11/19	Mon 14/10/19	Tue 5/11/19	0 days	115	120FS-15 days,119	100%
119		Temporary diverted foorpath open to public	1 day	Tue 10/12/19	Tue 10/12/19	Tue 10/12/19	Tue 10/12/19	0 days	118	308	100%
120		Removal of Existing Street light and Provision of Temporary Street light	3 days	Sat 18/1/20	Tue 21/1/20	Sat 18/1/20	Tue 21/1/20	0 days	71,118FS-15 days	308FS-5 days	100%
121		Predrilling Works (8no, 1rig, 4days/drillhole/rig)	0 days	Tue 3/12/19	Wed 11/12/19	Tue 3/12/19	Wed 11/12/19	0 days	308,331,330,57,10	122FS+14 days	100%
122		Installation of Monitoring Points	0 days	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	0 days	121FS+14 days	123	100%
123		Sheetpile Installation (FSP IV, 2200sq.m, 2 Rig, 50sqm/rig/day)	22 days	Sat 4/1/20	Tue 28/4/20	Sat 4/1/20	NA	-51 days	122,308,329	124	5%
124		Setting up plant for pre-bored socked H-pile Installation	5 days	Wed 29/4/20	Wed 6/5/20	NA	NA	-51 days	123	125	0%
125		Pre-bored Socketed H-Pile Installation (34 Nos, 2 Rig, 3days/rig/pile)	51 days	Mon 18/5/20	Sat 18/7/20	NA	NA	-60.8 days	58,124,99,104,103	126	0%
126		Pile Loading Test	26 days	Sat 18/7/20	Thu 13/8/20	NA	NA	-72.8 days	125	127	0%
127		ELS Works (incl. Strut (4-layers) Installation & Excavation (3,700 cu.m)	45 days	Thu 13/8/20	Wed 7/10/20	NA	NA	-60.8 days	74,60,126	130	0%
128		**R.C. Structure (370sq.m)**	**171 days**	**Wed 7/10/20**	**Fri 7/5/21**	**NA**	**NA**	**-60.8 days**	**87,88,89,90,61**		**0%**
129		**Below Ground Level Stage no.1 @ -1.10mPD**	**55 days**	**Wed 7/10/20**	**Fri 11/12/20**	**NA**	**NA**	**-60.8 days**			**0%**
130		Base slab Construction (162 sq.m)	25 days	Wed 7/10/20	Fri 6/11/20	NA	NA	-60.8 days	127	131	0%
131		Walls and Slabs Construction @-1.10mPD to +2.50mPD	30 days	Fri 6/11/20	Fri 11/12/20	NA	NA	-60.8 days	130	133	0%
132		**Below Ground Level Stage no.2 @ +1.50mPD**	**44 days**	**Fri 11/12/20**	**Thu 4/2/21**	**NA**	**NA**	**-60.8 days**			**0%**
133		Base slab Construction (170sq.m)	24 days	Fri 11/12/20	Tue 12/1/21	NA	NA	-60.8 days	131	134	0%



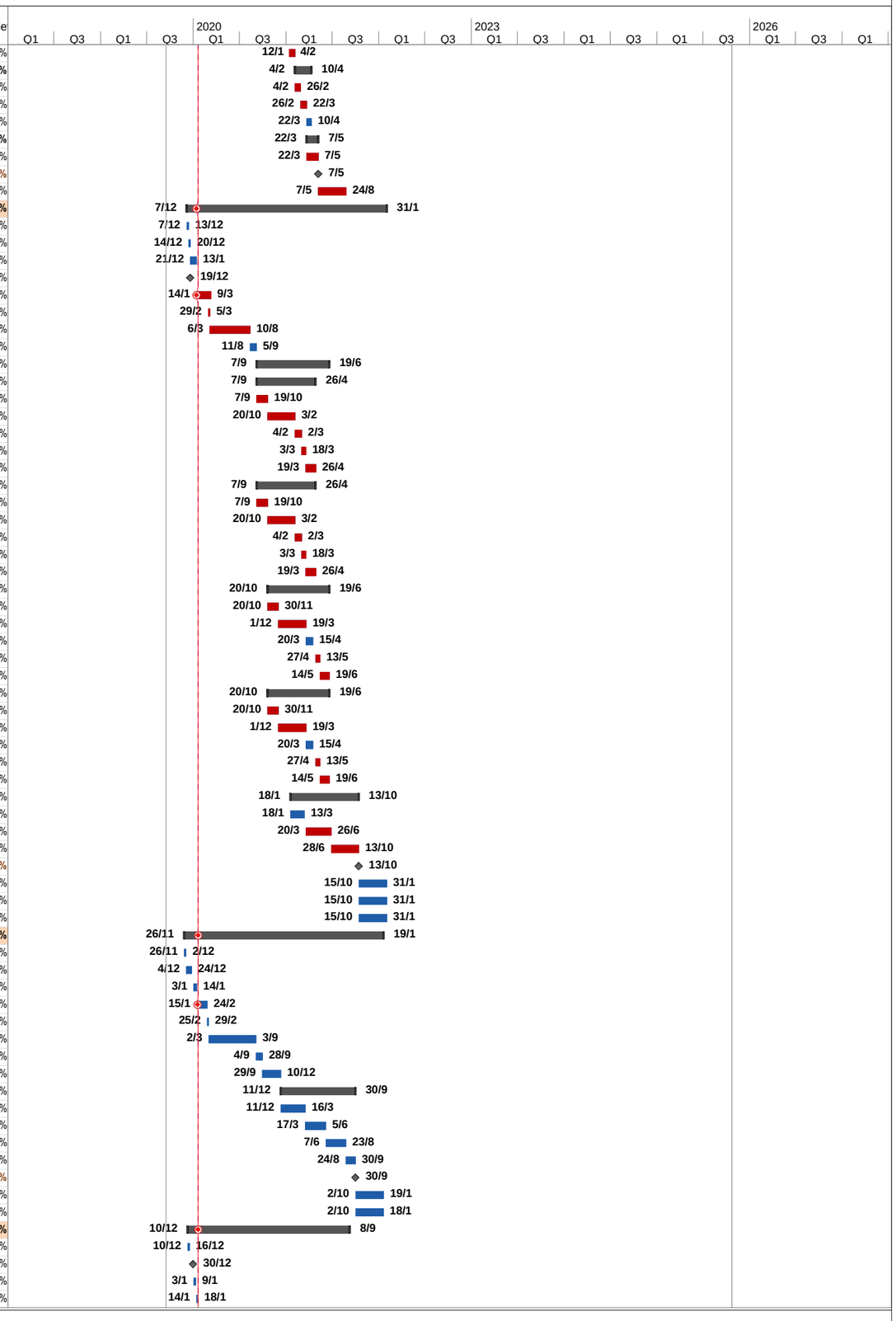
Task ▬ Milestone ◆ Summary ▬ Critical ▬

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

Revised Works Programme (Status Date: 20/01/2020)

群利－俊和聯營體
KL－CW JV

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Comple
134		Walls and Slabs Construction @+1.5mPD to +4.9mPD	20 days	Tue 12/1/21	Thu 4/2/21	NA	NA	-60.8 days	133	136	0%
135		**Below Ground Level Stage no.3 @ +3.80mPD**	**50 days**	**Thu 4/2/21**	**Sat 10/4/21**	**NA**	**NA**	**-60.8 days**			**0%**
136		Base slab Construction (15 sq.m + 40 sq.m)	16 days	Thu 4/2/21	Fri 26/2/21	NA	NA	-60.8 days	134	137	0%
137		Walls and Slabs Construction @+3.80mPD to +7.4mPD	20 days	Fri 26/2/21	Mon 22/3/21	NA	NA	-60.8 days	136	138,140	0%
138		Extraction of Sheetpiles	14 days	Mon 22/3/21	Sat 10/4/21	NA	NA	22 days	137	35FF	0%
139		**Above Ground Level @ +7.4mPD**	**36 days**	**Mon 22/3/21**	**Fri 7/5/21**	**NA**	**NA**	**-60.8 days**			**0%**
140	KD1A	Walls, Slabs and staircase Construction @+7.4mPD to 16.4mPD	36 days	Mon 22/3/21	Fri 7/5/21	NA	NA	-60.8 days	137	35FF,141,142,282	0%
141		**Allow access to Contarctor DE/2018/03 for E&M Installation**	**0 days**	**Fri 7/5/21**	**Fri 7/5/21**	**NA**	**NA**	**90 days**	**140**	**43FF**	**0%**
142	SW1	ABWF Works + BS Works	90 days	Fri 7/5/21	Tue 24/8/21	NA	NA	0 days	91,62,140	43FF	0%
143	*	**Sludge Digesters and Distribution Chamber**	**638 days**	**Sat 7/12/19**	**Mon 31/1/22**	**Sat 7/12/19**	**NA**	**201 days**			**2%**
144		Site Clearance & Site Set Up	6 days	Sat 7/12/19	Fri 13/12/19	Sat 7/12/19	Fri 13/12/19	0 days	145SF		100%
145		Trial Pit Excavation & UU Detection Works	6 days	Sat 14/12/19	Fri 20/12/19	Sat 14/12/19	Fri 20/12/19	0 days	146SF	144SF	100%
146		Predrilling Works (23no., 3rig, 4days/drillhole/rig)	17 days	Sat 21/12/19	Mon 13/1/20	Sat 21/12/19	Mon 13/1/20	0 days	57FS+14 days	147,145SF,148	100%
147		Installation of Monitoring Points	0 days	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	0 days	146	150	100%
148		Sheet Pile Installation	45 days	Tue 14/1/20	Mon 9/3/20	NA	NA	0 days	146	150FS-23 days,178	0%
149		Setting up plant for pre-bored socked H-pile Installation	5 days	Sat 29/2/20	Thu 5/3/20	NA	NA	-20 days		150	0%
150		Pre-bored Socketed H-Pile Installation (127nos, 3 Rig, 3days/rig/pile)	127 days	Fri 6/3/20	Mon 10/8/20	NA	NA	-20 days	58,147,148FS-23 d	151,303	0%
151		Pile Load Test (2no.)	26 days	Tue 11/8/20	Sat 5/9/20	NA	NA	1 day	150	154,160,153,159,165,171	0%
152		Construction of Digestors	231 days	Mon 7/9/20	Sat 19/6/21	NA	NA	0 days			0%
153		Digester No. 1	187 days	Mon 7/9/20	Mon 26/4/21	NA	NA	0 days	151		0%
154		ELS Works (incl. Strut (3-layers) Installation & Excavation (4,440 cu.m))	35 days	Mon 7/9/20	Mon 19/10/20	NA	NA	0 days	74,60,151	166,155	0%
155		Construction of Digesters	88 days	Tue 20/10/20	Wed 3/2/21	NA	NA	0 days	154	156,179,167FS-58 days	0%
156		Water Test	20 days	Thu 4/2/21	Tue 2/3/21	NA	NA	0 days	155	157	0%
157		Apply Internal Anti-corrosion Protective Lining	14 days	Wed 3/3/21	Thu 18/3/21	NA	NA	0 days	156	158	0%
158		Construction of Roof Slab	30 days	Fri 19/3/21	Mon 26/4/21	NA	NA	0 days	157	169	0%
159		Digester No. 2	187 days	Mon 7/9/20	Mon 26/4/21	NA	NA	0 days	151		0%
160		ELS Works (incl. Strut (3-layers) Installation & Excavation (4,440 cu.m))	35 days	Mon 7/9/20	Mon 19/10/20	NA	NA	0 days	74,60,151	172,161	0%
161		Construction of Digesters	88 days	Tue 20/10/20	Wed 3/2/21	NA	NA	0 days	160	162,179,173FS-58 days	0%
162		Water Test	20 days	Thu 4/2/21	Tue 2/3/21	NA	NA	0 days	161	163	0%
163		Apply Internal Anti-corrosion Protective Lining	14 days	Wed 3/3/21	Thu 18/3/21	NA	NA	0 days	162	164	0%
164		Construction of Roof Slab	30 days	Fri 19/3/21	Mon 26/4/21	NA	NA	0 days	163	175	0%
165		Digester No. 3	196 days	Tue 20/10/20	Sat 19/6/21	NA	NA	0 days	151		0%
166		ELS Works (incl. Strut (3-layers) Installation & Excavation (4,440 cu.m))	35 days	Tue 20/10/20	Mon 30/11/20	NA	NA	0 days	74,60,154	167,332,333,334,336,335	0%
167		Construction of Digesters	88 days	Tue 1/12/20	Fri 19/3/21	NA	NA	0 days	166,155FS-58 days	168,179	0%
168		Water Test	20 days	Sat 20/3/21	Thu 15/4/21	NA	NA	9 days	167	169	0%
169		Apply Internal Anti-corrosion Protective Lining	14 days	Tue 27/4/21	Thu 13/5/21	NA	NA	0 days	168,158	170	0%
170		Construction of Roof Slab	30 days	Fri 14/5/21	Sat 19/6/21	NA	NA	0 days	169		0%
171		Digester No. 4	196 days	Tue 20/10/20	Sat 19/6/21	NA	NA	0 days	151		0%
172		ELS Works (incl. Strut (3-layers) Installation & Excavation (4,440 cu.m))	35 days	Tue 20/10/20	Mon 30/11/20	NA	NA	0 days	74,60,160	173,332,333,334,336,335	0%
173		Construction of Digesters	88 days	Tue 1/12/20	Fri 19/3/21	NA	NA	0 days	172,161FS-58 days	174,179,180	0%
174		Water Test	20 days	Sat 20/3/21	Thu 15/4/21	NA	NA	9 days	173	175	0%
175		Apply Internal Anti-corrosion Protective Lining	14 days	Tue 27/4/21	Thu 13/5/21	NA	NA	0 days	174,164	176	0%
176		Construction of Roof Slab	30 days	Fri 14/5/21	Sat 19/6/21	NA	NA	0 days	175		0%
177		Construction of Distribution Chamber	219 days	Mon 18/1/21	Wed 13/10/21	NA	NA	0 days			0%
178	SP	Sheet Pile Installation	45 days	Mon 18/1/21	Sat 13/3/21	NA	NA	5 days	148	179	0%
179		ELS Works (incl. Strut (3-layers) Installation & Excavation (8,880 cu.m))	79 days	Sat 20/3/21	Sat 26/6/21	NA	NA	0 days	167,173,161,155,7	180,275	0%
180	KD3A	Construction of Distribution Chamber	90 days	Mon 28/6/21	Wed 13/10/21	NA	NA	0 days	179,173	184,181,37FF,183,182	0%
181	KD3A	**Allow access to Contarctor DE/2018/03 for E&M Installation**	**0 days**	**Wed 13/10/21**	**Wed 13/10/21**	**NA**	**NA**	**0 days**	**180**	**37FF**	**0%**
182		Drainage System (within Bldg/ Structure) Installation	90 days	Fri 15/10/21	Mon 31/1/22	NA	NA	201 days	180	45FF	0%
183		FRP Walkway & Miscellanous Installation	90 days	Fri 15/10/21	Mon 31/1/22	NA	NA	201 days	180	45FF	0%
184	SW3	ABWF Works & BS Works, incl. External Linning	90 days	Fri 15/10/21	Mon 31/1/22	NA	NA	201 days	180,91,62	45FF	0%
185	*	**Sludge Dewatering Building**	**638 days**	**Tue 26/11/19**	**Wed 19/1/22**	**Tue 26/11/19**	**NA**	**211 days**			**5%**
186		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	187	100%
187		Predrilling Works (39no.4rig, 4days/drillhole/rig))	18 days	Wed 4/12/19	Tue 24/12/19	Wed 4/12/19	Tue 24/12/19	0 days	57FS+14 days,186	188	100%
188		Installation of Monitoring Points	10 days	Fri 3/1/20	Tue 14/1/20	Fri 3/1/20	Tue 14/1/20	0 days	187	189	100%
189		Sheet Pile Installation	30 days	Wed 15/1/20	Mon 24/2/20	Wed 15/1/20	NA	3 days	188	191,303,190	10%
190		Setting up plant for pre-bored socked H-pile Installation	5 days	Tue 25/2/20	Sat 29/2/20	NA	NA	3 days	189	191,302SS-14 days	0%
191		Pre-bored Socketed H-Pile Installation (202 Nos, 4 Rig, 3days/rig/pile)	152 days	Mon 2/3/20	Thu 3/9/20	NA	NA	3 days	189,58,190,93,98,9	219,192	0%
192		Pile Loading Test	25 days	Fri 4/9/20	Mon 28/9/20	NA	NA	4 days	191	193	0%
193		ELS Works (incl. Strut (3-layers) Installation & Excavation (25,000 cu.m))	60 days	Tue 29/9/20	Thu 10/12/20	NA	NA	2 days	74,60,192	194,195,332,333,334,336,335	0%
194		R.C. Structure	238 days	Fri 11/12/20	Thu 30/9/21	NA	NA	2 days	87,88,89,90,61,193	201,200,199	0%
195		Basement Consturction @	76 days	Fri 11/12/20	Tue 16/3/21	NA	NA	2 days	193	196	0%
196		Ground Floor Construction @ +7.55mpD	65 days	Wed 17/3/21	Sat 5/6/21	NA	NA	2 days	195	197	0%
197		1/F Construction @ +15.3m mPD	65 days	Mon 7/6/21	Mon 23/8/21	NA	NA	2 days	196	198	0%
198	KD3B	Roof Construction @ +25.65mPD	32 days	Tue 24/8/21	Thu 30/9/21	NA	NA	2 days	197	38FF,286	0%
199	KD3B	**Allow access to Contarctor DE/2018/03 for E&M Installation**	**0 days**	**Thu 30/9/21**	**Thu 30/9/21**	**NA**	**NA**	**2 days**	**194**	**38FF**	**0%**
200		Drainage System (within Bldg/ Structure) Installation	90 days	Sat 2/10/21	Wed 19/1/22	NA	NA	211 days	194	45FF	0%
201	SW5	ABWF Works & BS Works	89 days	Sat 2/10/21	Tue 18/1/22	NA	NA	212 days	194,91,62	45FF	0%
202	*	**Combined Heat Power Building**	**518 days**	**Tue 10/12/19**	**Wed 8/9/21**	**Tue 10/12/19**	**NA**	**319 days**			**4%**
203		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	2,204SF		100%
204		Predrilling Works (15no. 2rig, 4days/drillhole/rig)	0 days	Tue 17/12/19	Mon 30/12/19	Tue 17/12/19	Mon 30/12/19	0 days	57FS+28 days	205,203SF	100%
205		Installation of Monitoring Points	6 days	Fri 3/1/20	Thu 9/1/20	Fri 3/1/20	Thu 9/1/20	0 days	204	207	100%
206		Setting up plant for pre-bored socked H-pile Installation	5 days	Tue 14/1/20	Sat 18/1/20	Tue 14/1/20	Sat 18/1/20	0 days		207	100%



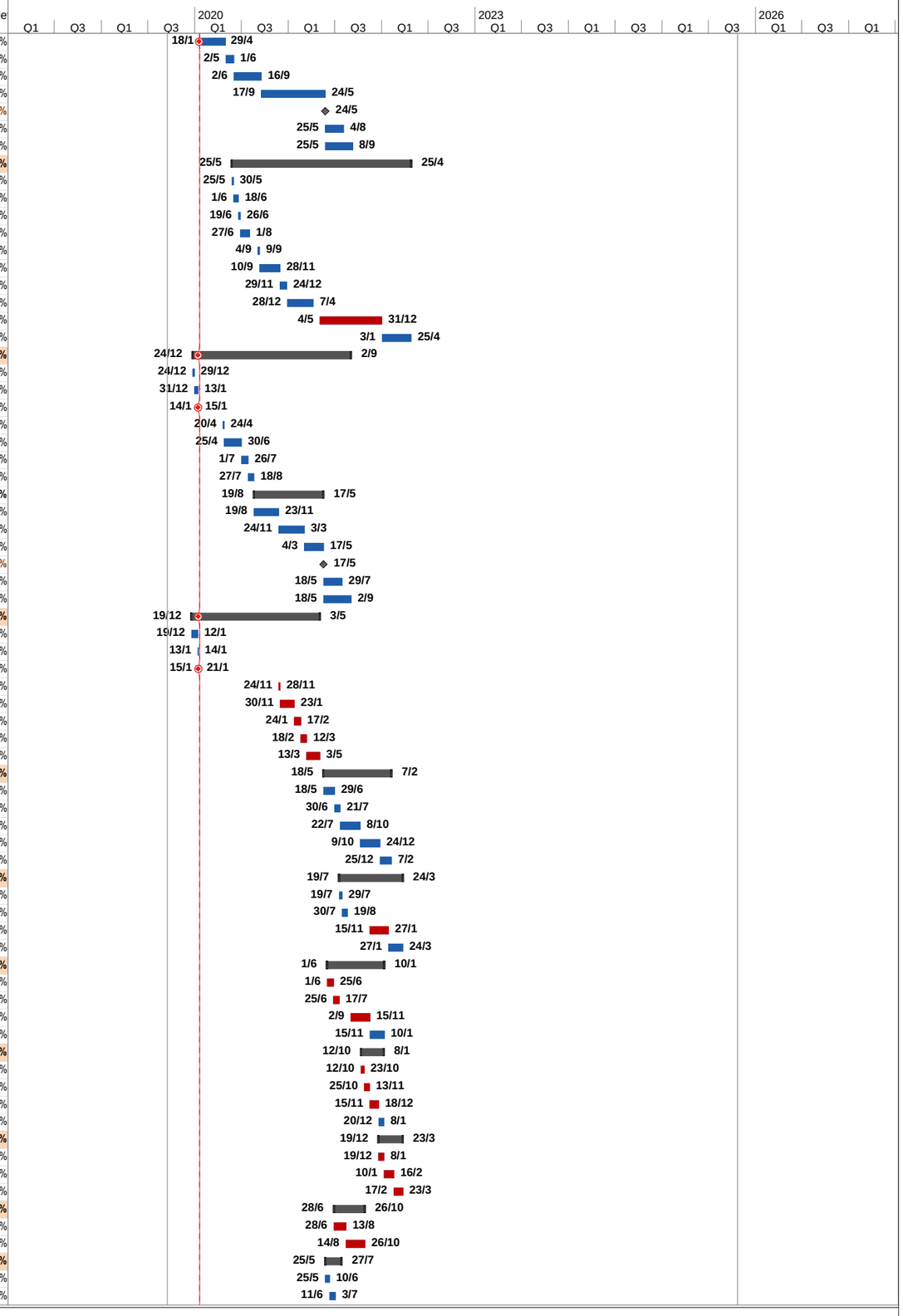
Task | Milestone | Summary | Critical

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

Revised Works Programme (Status Date: 20/01/2020)

群利－俊和聯營體
KL－CW JV

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Comple
207		Pre-bored Socketed H-Pile Installation (50 Nos, 2 Rig 3days/rig/pile)	75 days	Sat 18/1/20	Wed 29/4/20	Sat 18/1/20	NA	110 days	58,205,206	208	5%
208		Pile Loading Test	26 days	Sat 2/5/20	Mon 1/6/20	NA	NA	110 days	207	209	0%
209		Excavation for Pile Cap (2,060 cu.m)	90 days	Tue 2/6/20	Wed 16/9/20	NA	NA	110 days	74,60,208	210	0%
210	KD3C	R.C. Structure	200 days	Thu 17/9/20	Mon 24/5/21	NA	NA	110 days	87,88,89,90,61,209	39FF,212,213,211,278	0%
211	**KD3C**	**Allow access to Contarctor DE/2018/03 for E&M Installation**	**0 days**	**Mon 24/5/21**	**Mon 24/5/21**	**NA**	**NA**	**110 days**	**210**	**39FF**	**0%**
212		Drainage System (within Bldg/ Structure) Installation	60 days	Tue 25/5/21	Wed 4/8/21	NA	NA	349 days	210	45FF	0%
213	SW3	ABWF Works & BS Works	90 days	Tue 25/5/21	Wed 8/9/21	NA	NA	319 days	210,91,62	45FF	0%
214	*	**Sewage Pumping Station**	**570 days**	**Mon 25/5/20**	**Mon 25/4/22**	**NA**	**NA**	**55 days**			**0%**
215		Site Clearance & Site Set Up	6 days	Mon 25/5/20	Sat 30/5/20	NA	NA	55 days	2	216	0%
216		Predrilling Works (4no.1rig, 4days/drillhole/rig)	16 days	Mon 1/6/20	Thu 18/6/20	NA	NA	55 days	57FS+14 days,215	217	0%
217		Installation of Monitoring Points	6 days	Fri 19/6/20	Fri 26/6/20	NA	NA	55 days	216	218	0%
218		Sheet Pile Installation	30 days	Sat 27/6/20	Sat 1/8/20	NA	NA	55 days	217	220	0%
219		Setting up plant for pre-bored socked H-pile Installation	5 days	Fri 4/9/20	Wed 9/9/20	NA	NA	22 days	191	220	0%
220		Pre-bored Socketed H-Pile Installation (22 Nos, 1 Rig, 3days/rig/pile)	66 days	Thu 10/9/20	Sat 28/11/20	NA	NA	22 days	58,218,219,99,104	221	0%
221		Pile Loading Test	26 days	Sun 29/11/20	Thu 24/12/20	NA	NA	28 days	220	222	0%
222		ELS Works (incl. Strut (3-layers) Installation & Excavation (1,440 cu.m))	80 days	Mon 28/12/20	Wed 7/4/21	NA	NA	21 days	74,60,221	223	0%
223	KD3E	R.C. Structure	200 days	Tue 4/5/21	Fri 31/12/21	NA	NA	0 days	87,88,89,90,61,248	41FF,224	0%
224	SW3	ABWF Works & BS Works	90 days	Mon 3/1/22	Mon 25/4/22	NA	NA	136 days	91,62,223	45FF	0%
225	*	**Workshop No. 2**	**501 days**	**Tue 24/12/19**	**Thu 2/9/21**	**Tue 24/12/19**	**NA**	**324 days**			**3%**
226		Site Clearance & Site Set Up	3 days	Tue 24/12/19	Sun 29/12/19	Tue 24/12/19	Sun 29/12/19	0 days	2	227	100%
227		Predrilling Works (10no.1rig, 4days/drillhole/rig)	11 days	Tue 31/12/19	Mon 13/1/20	Tue 31/12/19	Mon 13/1/20	0 days	57,226	228	100%
228		Installation of Monitoring Points	2 days	Tue 14/1/20	Wed 15/1/20	NA	NA	77 days	227	230,229	0%
229		Setting up plant for pre-bored socked H-pile Installation	5 days	Mon 20/4/20	Fri 24/4/20	NA	NA	3 days	228	230	0%
230		Pre-bored Socketed H-Pile Installation (36 Nos, 2 Rig, 3days/rig/pile)	54 days	Sat 25/4/20	Tue 30/6/20	NA	NA	3 days	58,228,229	231	0%
231		Pile Loading Test	26 days	Wed 1/7/20	Sun 26/7/20	NA	NA	4 days	230	232	0%
232		Excavation for Pile Cap (1,800 cu.m)	20 days	Mon 27/7/20	Tue 18/8/20	NA	NA	4 days	74,60,231	234,332,333,334,336,335	0%
233		**R.C. Structure**	**220 days**	**Wed 19/8/20**	**Mon 17/5/21**	**NA**	**NA**	**4 days**			**0%**
234		Ground Floor Construction @ +6.30mpD	80 days	Wed 19/8/20	Mon 23/11/20	NA	NA	4 days	232	235	0%
235		First Floor Construction @ +13.50mpD	80 days	Tue 24/11/20	Wed 3/3/21	NA	NA	4 days	234	236	0%
236	KD3D	Roof Construction @+19.00mPD	60 days	Thu 4/3/21	Mon 17/5/21	NA	NA	4 days	235	238,239,40FF,237,250	0%
237	**KD3D**	**Allow access to Contarctor DE/2018/03 for E&M Installation**	**0 days**	**Mon 17/5/21**	**Mon 17/5/21**	**NA**	**NA**	**40 days**	**236**	**40FF**	**0%**
238		Drainage System (within Bldg/ Structure) Installation	60 days	Tue 18/5/21	Thu 29/7/21	NA	NA	354 days	236	45FF	0%
239	SW3	ABWF Works & BS Works	90 days	Tue 18/5/21	Thu 2/9/21	NA	NA	324 days	91,62,236	45FF	0%
240	*	**Thermal Hydrolysis Pretreatment**	**403 days**	**Thu 19/12/19**	**Mon 3/5/21**	**Thu 19/12/19**	**NA**	**0 days**			**11%**
241		Site Clearance & Site Set Up	16.12 day	Thu 19/12/19	Sun 12/1/20	Thu 19/12/19	Sun 12/1/20	0 days	2	242	100%
242		Predrilling Works (3no.1rig, 4days/drillhole/rig)	2 days	Mon 13/1/20	Tue 14/1/20	Mon 13/1/20	Tue 14/1/20	0 days	57FS+24 days,241	243	100%
243		Installation of Monitoring Points	6 days	Wed 15/1/20	Tue 21/1/20	NA	NA	254 days	242	245	0%
244		Setting up plant for pre-bored socked H-pile Installation	5 days	Tue 24/11/20	Sat 28/11/20	NA	NA	0 days		245	0%
245		Pre-bored Socketed H-Pile Installation (15 Nos, 1 Rig, 3days/rig/pile)	45 days	Mon 30/11/20	Sat 23/1/21	NA	NA	0 days	58,243,244	246	0%
246		Pile Loading Test	25 days	Sun 24/1/21	Wed 17/2/21	NA	NA	0 days	245	247	0%
247		Excavation for Pile Cap (160 cu.m)	20 days	Thu 18/2/21	Fri 12/3/21	NA	NA	0 days	74,60,246	248	0%
248	KD3E	R.C. Plinth	40 days	Sat 13/3/21	Mon 3/5/21	NA	NA	0 days	247	41FF,223	0%
249	*	**Ferric Chloride Dosing Facilities**	**216 days**	**Tue 18/5/21**	**Mon 7/2/22**	**NA**	**NA**	**4 days**			**0%**
250		Excavation for Raft Footing (105 cu.m)	35 days	Tue 18/5/21	Tue 29/6/21	NA	NA	4 days	2,236	251	0%
251		Plate Load Test	18 days	Wed 30/6/21	Wed 21/7/21	NA	NA	4 days	250	252	0%
252		R.C. Structure	66 days	Thu 22/7/21	Fri 8/10/21	NA	NA	4 days	251,61	253	0%
253	KD3E	Steel Roof Structure (On-site Fabrication)	65 days	Sat 9/10/21	Fri 24/12/21	NA	NA	4 days	252	41FF,254	0%
254	SW3	ABWF Works & BS Works	45 days	Sat 25/12/21	Mon 7/2/22	NA	NA	244 days	253,91,62	45FF	0%
255	*	**Fire Hydrant and Booster Pump Room**	**204.8 day**	**Mon 19/7/21**	**Thu 24/3/22**	**NA**	**NA**	**11 days**			**0%**
256		Excavation for Raft Footing (160 cu.m)	10 days	Mon 19/7/21	Thu 29/7/21	NA	NA	11 days	2,261	257,294	0%
257		Plate Load Test	18 days	Fri 30/7/21	Thu 19/8/21	NA	NA	11 days	256	258	0%
258	KD3E	R.C. Structure	60 days	Mon 15/11/21	Thu 27/1/22	NA	NA	-60.8 days	257,61,263	259,41FF,296FS-1 day	0%
259	SW3	ABWF Works & BS Works	45 days	Thu 27/1/22	Thu 24/3/22	NA	NA	159.2 days	258,91,62	45FF	0%
260	*	**Transformer and Switchroom**	**183 days**	**Tue 1/6/21**	**Mon 10/1/22**	**NA**	**NA**	**-20.8 days**			**0%**
261		Excavation for Raft Footing (310 cu.m)	20 days	Tue 1/6/21	Fri 25/6/21	NA	NA	-20.8 days	2,282	262,256	0%
262		Plate Load Test	18 days	Fri 25/6/21	Sat 17/7/21	NA	NA	-20.8 days	261	263	0%
263	KD3E	R.C. Structure	60 days	Thu 2/9/21	Mon 15/11/21	NA	NA	-60.8 days	262,61,284	264,41FF,258	0%
264	SW3	ABWF Works & BS Works	45 days	Mon 15/11/21	Mon 10/1/22	NA	NA	219.2 days	263,91,62	45FF	0%
265	*	**Water Meter Cabinet**	**73 days**	**Tue 12/10/21**	**Sat 8/1/22**	**NA**	**NA**	**-20 days**			**0%**
266		Excavation for Raft Footing (6 cu.m)	10 days	Tue 12/10/21	Sat 23/10/21	NA	NA	-20 days	2,304	267	0%
267		Plate Load Test	18 days	Mon 25/10/21	Sat 13/11/21	NA	NA	-20 days	266	268	0%
268		R.C. Structure	30 days	Mon 15/11/21	Sat 18/12/21	NA	NA	-20 days	267,61	269,271	0%
269	SW4	ABWF Works & BS Works	15 days	Mon 20/12/21	Sat 8/1/22	NA	NA	43 days	268,91,62	46FF	0%
270	*	**Guard House**	**75 days**	**Sun 19/12/21**	**Wed 23/3/22**	**NA**	**NA**	**-20 days**			**0%**
271		Excavation to Formation	21 days	Sun 19/12/21	Sat 8/1/22	NA	NA	-23 days	2,268	272	0%
272		R.C. Structure	30 days	Mon 10/1/22	Wed 16/2/22	NA	NA	-17 days	61,271	273	0%
273	SW4	ABWF Works & BS Works	30 days	Thu 17/2/22	Wed 23/3/22	NA	NA	-17 days	272,91,62	46FF	0%
274	*	**Coolers Pumping Station**	**100 days**	**Mon 28/6/21**	**Tue 26/10/21**	**NA**	**NA**	**0 days**			**0%**
275		Excavation for Raft Footing (185 cu.m)	40 days	Mon 28/6/21	Fri 13/8/21	NA	NA	0 days	2,179	276,290	0%
276	SW4	R.C. Structure	60 days	Sat 14/8/21	Tue 26/10/21	NA	NA	0 days	275,61	41FF,292	0%
277	*	**Waste Gas Buner**	**53 days**	**Tue 25/5/21**	**Tue 27/7/21**	**NA**	**NA**	**110 days**			**0%**
278		Excavation for Raft Rooting (75cu.m)	15 days	Tue 25/5/21	Thu 10/6/21	NA	NA	110 days	2,210	279,298	0%
279		Plate Load Test	18 days	Fri 11/6/21	Sat 3/7/21	NA	NA	110 days	278	280	0%



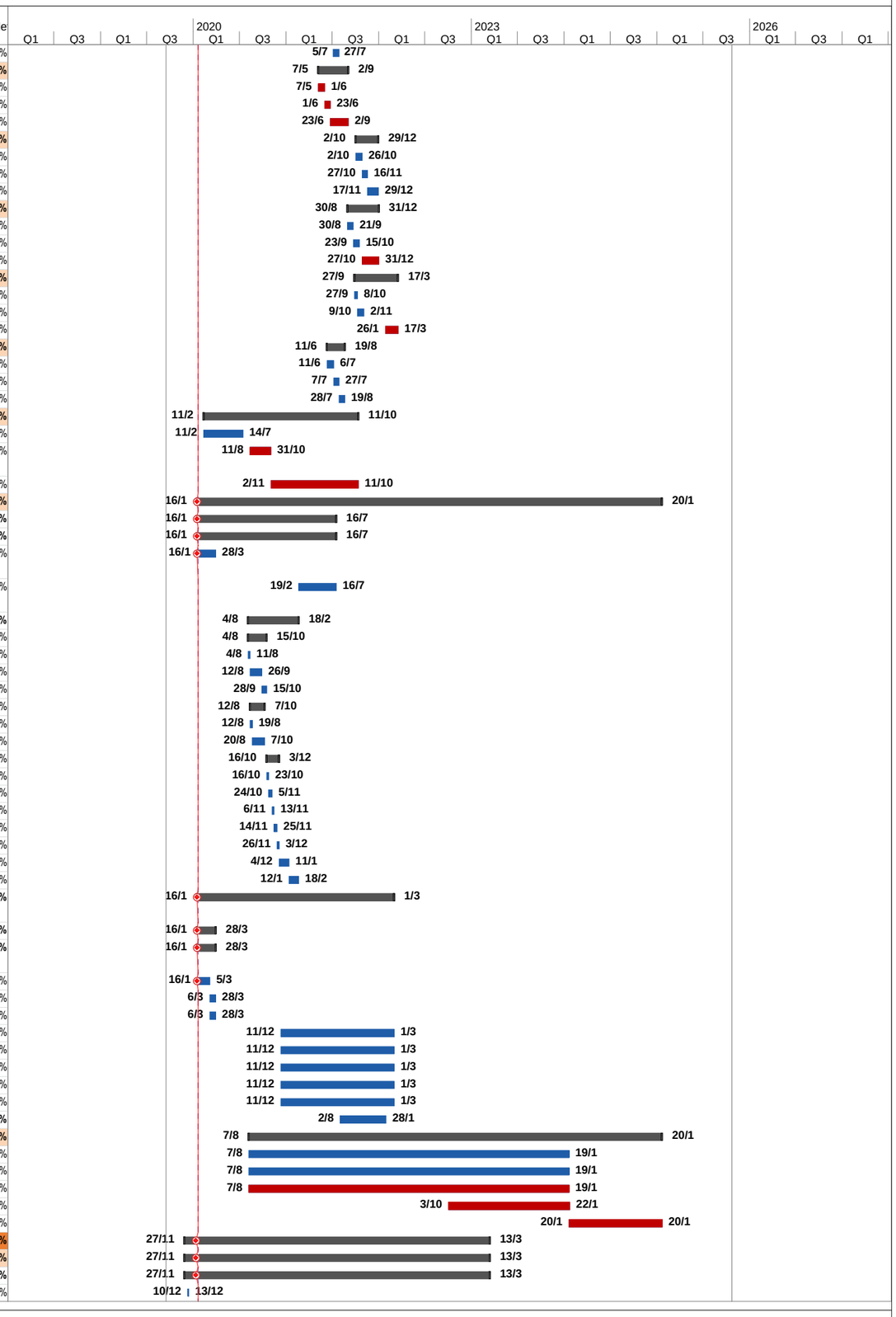
Task ▬ Milestone ◆ Summary ▬ Critical ▬

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

Revised Works Programme (Status Date: 20/01/2020)

群利－俊和聯營體
KL－CW JV

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete
280	KD3E	R.C. Plinth	20 days	Mon 5/7/21	Tue 27/7/21	NA	NA	110 days	279,61	41FF,300	0%
281	*	**Plant Services Water System**	**98 days**	**Fri 7/5/21**	**Thu 2/9/21**	**NA**	**NA**	**-60.8 days**			**0%**
282		Excavation for Raft Footing (800 cu.m)	20 days	Fri 7/5/21	Tue 1/6/21	NA	NA	-60.8 days	2,140	283,261	0%
283		Plate Load Test	18 days	Tue 1/6/21	Wed 23/6/21	NA	NA	-60.8 days	282	284	0%
284	KD3E	Basement Construction @+1.20mPD	60 days	Wed 23/6/21	Thu 2/9/21	NA	NA	-60.8 days	283,61	41FF,263	0%
285	*	**Deodorization System No. 11**	**73 days**	**Sat 2/10/21**	**Wed 29/12/21**	**NA**	**NA**	**2 days**			**0%**
286		Excavation for Raft Footing (1,280 cu.m)	20 days	Sat 2/10/21	Tue 26/10/21	NA	NA	2 days	2,198	287	0%
287		Plate Load Test	18 days	Wed 27/10/21	Tue 16/11/21	NA	NA	2 days	286	288	0%
288	KD3E	R.C. Plinth	35 days	Wed 17/11/21	Wed 29/12/21	NA	NA	2 days	287,61	41FF	0%
289	*	**Biogas Holder**	**102 days**	**Mon 30/8/21**	**Fri 31/12/21**	**NA**	**NA**	**0 days**			**0%**
290		Excavation for Raft Footing (1,120 cu.m)	20 days	Mon 30/8/21	Tue 21/9/21	NA	NA	9 days	2,275	291	0%
291		Plate Load Test	18 days	Thu 23/9/21	Fri 15/10/21	NA	NA	9 days	290	292	0%
292	KD3E	R.C. Plinth	55 days	Wed 27/10/21	Fri 31/12/21	NA	NA	0 days	291,61,276	41FF	0%
293	*	**H2S Removal System**	**139.8 days**	**Mon 27/9/21**	**Thu 17/3/22**	**NA**	**NA**	**-60.8 days**			**0%**
294		Excavation for Raft Footing (396 cu.m)	10 days	Mon 27/9/21	Fri 8/10/21	NA	NA	9 days	2,256	295	0%
295		Plate Load Test	20 days	Sat 9/10/21	Tue 2/11/21	NA	NA	9 days	294	296	0%
296	KD3E	R.C. Plinth	40 days	Wed 26/1/22	Thu 17/3/22	NA	NA	-60.8 days	295,61,258FS-1 da	41FF	0%
297	*	**Deodorization System No. 12**	**58 days**	**Fri 11/6/21**	**Thu 19/8/21**	**NA**	**NA**	**110 days**			**0%**
298		Excavation to Formation	20 days	Fri 11/6/21	Tue 6/7/21	NA	NA	110 days	2,278	299	0%
299		Plate Load Test	18 days	Wed 7/7/21	Tue 27/7/21	NA	NA	110 days	298	300	0%
300	KD3E	R.C. Plinth	20 days	Wed 28/7/21	Thu 19/8/21	NA	NA	110 days	299,61,280	41FF	0%
301	*	**Underpass**	**496 days**	**Tue 11/2/20**	**Mon 11/10/21**	**NA**	**NA**	**-20 days**			**0%**
302		Temporary Storage for H pile works and access for DSD	155 days	Tue 11/2/20	Tue 14/7/20	NA	NA	3 days	190SS-14 days	303	0%
303		Sheet Pile Installation + ELS Works (incl. Strut (2-layers) Installation & Excavation (300 cu.m))	68 days	Tue 11/8/20	Sat 31/10/20	NA	NA	-20 days	15,189,150,302	304	0%
304	SW4	R.C. Structure	280 days	Mon 2/11/20	Mon 11/10/21	NA	NA	-20 days	303,61	46FF,266	0%
305	*	**Pipe Works and Utility Installation**	**1832 days**	**Thu 16/1/20**	**Mon 20/1/25**	**NA**	**NA**	**0 days**	**86**		**0%**
306		**Pipe Works At Chuk Wan Street**	**548 days**	**Thu 16/1/20**	**Fri 16/7/21**	**NA**	**NA**	**1.1 days**			**0%**
307		**Drainage Diversion (Existing Drainage Culvert)**	**443 days**	**Thu 16/1/20**	**Fri 16/7/21**	**NA**	**NA**	**1.1 days**			**0%**
308	KD1A	Stage 1 - Drainage Diversion of Drainage b/w Reconstructed Storm Water Manhole SMH1003177A and Reconstructed Storm Water Manhole MHD22	60 days	Thu 16/1/20	Sat 28/3/20	NA	NA	1.1 days	68,55,75,120FS-5 days,82,119	121,329SS,123	0%
309	KD1A	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage Culvert (1 Cell, 1000mm x 1150mm)	120 days	Fri 19/2/21	Fri 16/7/21	NA	NA	32.8 days	325	43FF	0%
310	SW4	**Trenchless Work for Pipe Installation**	**162 days**	**Tue 4/8/20**	**Thu 18/2/21**	**NA**	**NA**	**32.8 days**			**0%**
311		**Construction of Temporary Jacking Pit**	61 days	Tue 4/8/20	Thu 15/10/20	NA	NA	32.8 days	15,54		0%
312		Trial Pit Excavation & UU Detection Works	7 days	Tue 4/8/20	Tue 11/8/20	NA	NA	32.8 days	2FS+210 days	313,316	0%
313		Pit Construction (11m x 9m)	40 days	Wed 12/8/20	Sat 26/9/20	NA	NA	32.8 days	312	314	0%
314		Setting up of Entrance Ring and Gantry	14 days	Mon 28/9/20	Thu 15/10/20	NA	NA	32.8 days	313	319	0%
315		**Construction of Temporary Receiving Pit**	47 days	Wed 12/8/20	Wed 7/10/20	NA	NA	56.8 days			0%
316		Trial Pit Excavation & UU Detection Works	7 days	Wed 12/8/20	Wed 19/8/20	NA	NA	56.8 days	312	317	0%
317		Pit Construction (6m x 9m)	40 days	Thu 20/8/20	Wed 7/10/20	NA	NA	56.8 days	316	320FF	0%
318		**Pipe Jacking Operation**	41 days	Fri 16/10/20	Thu 3/12/20	NA	NA	32.8 days			0%
319		Setting Up of Trenchless Equipment	7 days	Fri 16/10/20	Fri 23/10/20	NA	NA	32.8 days	314	320	0%
320		Pipe Jacking Operation (30m, 3m/day)	10 days	Sat 24/10/20	Thu 5/11/20	NA	NA	32.8 days	319,317FF	321	0%
321		Installation of grouting pipe and rail	7 days	Fri 6/11/20	Fri 13/11/20	NA	NA	32.8 days	320	322	0%
322		Pipe Laying Works	10 days	Sat 14/11/20	Wed 25/11/20	NA	NA	32.8 days	321	323	0%
323		Formwork Erection and grouting works	7 days	Thu 26/11/20	Thu 3/12/20	NA	NA	32.8 days	322	324	0%
324		Reinstatement of Temporary Launching Pit	30 days	Fri 4/12/20	Mon 11/1/21	NA	NA	32.8 days	323	325	0%
325		Reinstatement of Temporary Receiving Pit	30 days	Tue 12/1/21	Thu 18/2/21	NA	NA	32.8 days	324	309	0%
326		**Process Pipeworks, All Sewerage, Utilities & Roadworks in Portion C of the Site**	**629 days**	**Thu 16/1/20**	**Tue 1/3/22**	**NA**	**NA**	**19 days**			**0%**
327		**Process Pipeworks**	**60 days**	**Thu 16/1/20**	**Sat 28/3/20**	**NA**	**NA**	**21.1 days**			**0%**
328	KD1A	**Connection pipe at UV System no.1 & Effluent Pumping Stataion no.1**	**60 days**	**Thu 16/1/20**	**Sat 28/3/20**	**NA**	**NA**	**21.1 days**			**0%**
329		Effluent Pipe (aprox. 70m, dia 300 - 1600)	40 days	Thu 16/1/20	Thu 5/3/20	NA	NA	21.1 days	308SS,82	331,330,123	0%
330		Effluent Pipe Flowmeter Chamber (3.8mx3.95mx3.42m(D))	20 days	Fri 6/3/20	Sat 28/3/20	NA	NA	265 days	329	121,35	0%
331		Plant Services Water Pipe (approx. 15m, dia 150-350)	20 days	Fri 6/3/20	Sat 28/3/20	NA	NA	265 days	329	121,35	0%
332	SW4	Remaining Effluent Pipes	360 days	Fri 11/12/20	Tue 1/3/22	NA	NA	19 days	63,166,172,193,23	46FF	0%
333	SW4	Stormdrain Pipeworks	360 days	Fri 11/12/20	Tue 1/3/22	NA	NA	2 days	63,166,172,193,23	46FF	0%
334	SW4	Seawage Pipeworks	360 days	Fri 11/12/20	Tue 1/3/22	NA	NA	2 days	63,166,172,193,23	46FF	0%
335	SW4	Watermain Pipeworks	360 days	Fri 11/12/20	Tue 1/3/22	NA	NA	2 days	63,166,172,193,23	46FF	0%
336	SW4	Cable & Other Underground Utility Pipeworks	360 days	Fri 11/12/20	Tue 1/3/22	NA	NA	2 days	63,166,172,193,23	46FF	0%
337	SW4	**Pipe Bridge No.1**	**180 days**	**Mon 2/8/21**	**Fri 28/1/22**	**NA**	**NA**	**54 days**	**2**	**46FF**	**0%**
338	*	**Remaining Pipe Works & Lanscape Works**	**1316 days**	**Fri 7/8/20**	**Mon 20/1/25**	**NA**	**NA**	**0 days**			**0%**
339	SW5	Irrigation System	1025 days	Fri 7/8/20	Fri 19/1/24	NA	NA	2 days	64,2FS+231 days	47FF	0%
340	SW5	Hard Landscape Works	1025 days	Fri 7/8/20	Fri 19/1/24	NA	NA	2 days	64,2FS+235 days	47FF	0%
341	SW5	Soft Landscape Works	1025 days	Fri 7/8/20	Fri 19/1/24	NA	NA	0 days	64,2FS+235 days	343,47FF	0%
342	SW5	Outfall and River Embankment works & Retaining Wall	388 days	Mon 3/10/22	Mon 22/1/24	NA	NA	0 days		47FF	0%
343		Establishment Works (365 Calendar Days)	291 days	Sat 20/1/24	Mon 20/1/25	NA	NA	0 days	341,64	48FF,49FF	0%
344	*	**Construction of Portion A of the Site**	**1203 days**	**Wed 27/11/19**	**Mon 13/3/23**	**Wed 27/11/19**	**NA**	**20 days**			**4%**
345	*	**CLP 132kV Substation**	**975 days**	**Wed 27/11/19**	**Mon 13/3/23**	**Wed 27/11/19**	**NA**	**17 days**			**4%**
346		**Internal Works**	**1203 days**	**Wed 27/11/19**	**Mon 13/3/23**	**Wed 27/11/19**	**NA**	**20 days**			**5%**
347		Site Clearance & Site Set Up	4 days	Tue 10/12/19	Fri 13/12/19	Tue 10/12/19	Fri 13/12/19	0 days	2	348	100%



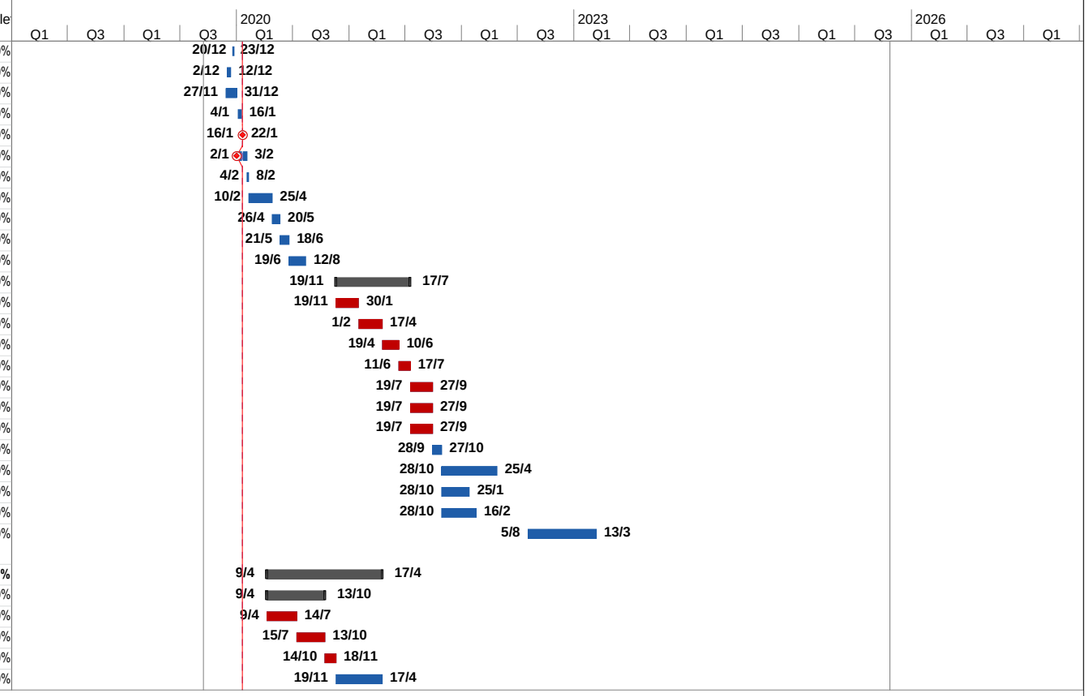
Task ▬ Milestone ◆ Summary ▬ Critical ▬

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

Revised Works Programme (Status Date: 20/01/2020)

群利－俊和聯營體
KL－CW JV

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Comple
348		Additional tree felling works (NCE no. xx)	4 days	Fri 20/12/19	Mon 23/12/19	Fri 20/12/19	Mon 23/12/19	0 days	347	350,349	100%
349		Trial Pit Excavation & UU Detection Works	10 days	Mon 2/12/19	Thu 12/12/19	Mon 2/12/19	Thu 12/12/19	0 days	348	351	100%
350		Additional demolition of existing warehouse structures (NCE no. xx)	27 days	Wed 27/11/19	Tue 31/12/19	Wed 27/11/19	Tue 31/12/19	0 days	72,348	353,351	100%
351		Predrilling Works (11no., 1rig, 4days/drillhole/rig)	10 days	Sat 4/1/20	Thu 16/1/20	Sat 4/1/20	Thu 16/1/20	0 days	57,350,349	352	100%
352		Instsallation of Monitoring Points	5 days	Thu 16/1/20	Wed 22/1/20	Thu 16/1/20	NA	16 days	351	354	70%
353		Demolition of Existing Boundary Wall for Temproary Access	25 days	Thu 2/1/20	Mon 3/2/20	NA	NA	9 days	72,350	354	0%
354		Setting up plant for pre-bored socked H-pile Installation	5 days	Tue 4/2/20	Sat 8/2/20	NA	NA	9 days	352,353	355	0%
355		Pre-bored Socketed H-Pile Installation (41 Nos, 2 Rig, 3days/rig/pile)	62 days	Mon 10/2/20	Sat 25/4/20	NA	NA	9 days	58,354	356	0%
356		Pile Load Test	25 days	Sun 26/4/20	Wed 20/5/20	NA	NA	13 days	355	357	0%
357		Additional Sheetpile Installation (NCE no.xx)	25 days	Thu 21/5/20	Thu 18/6/20	NA	NA	11 days	356	358	0%
358		ELS Works (incl. Strut (3-layers) Installation & Excavation (NCE no.xx)	45 days	Fri 19/6/20	Wed 12/8/20	NA	NA	11 days	357	359	0%
359		R.C. Structure (880 sq.m)	194 days	Thu 19/11/20	Sat 17/7/21	NA	NA	-70 days	87,88,89,90,61,376		0%
360		Basement	60 days	Thu 19/11/20	Sat 30/1/21	NA	NA	-70 days		361	0%
361		Ground Floor	60 days	Mon 1/2/21	Sat 17/4/21	NA	NA	-70 days	360	362	0%
362		First Floor	44 days	Mon 19/4/21	Thu 10/6/21	NA	NA	-70 days	361	363	0%
363		Roof Floor (461sq.m)	30 days	Fri 11/6/21	Sat 17/7/21	NA	NA	-70 days	362	364,366	0%
364		ABWF Works & BS Works	60 days	Mon 19/7/21	Mon 27/9/21	NA	NA	0 days	363,91,62	365SS	0%
365		Installation of telephone line/ direct link for FSD Inspection	60 days	Mon 19/7/21	Mon 27/9/21	NA	NA	0 days	364SS		0%
366	KD2A	Architectual Works	60 days	Mon 19/7/21	Mon 27/9/21	NA	NA	-70 days	363	367,36FF	0%
367		**Handover to CLP for Electrical System Installation**	30 days	Tue 28/9/21	Wed 27/10/21	NA	NA	301 days	366	368,370,371,369	0%
368		**E&M Installation, Testing & Commissioning by CLP**	180 days	Thu 28/10/21	Mon 25/4/22	NA	NA	342 days	367	44FF	0%
369		Testing & Commissioning of the E&M Works	90 days	Thu 28/10/21	Tue 25/1/22	NA	NA	432 days	367	44FF	0%
370		ABWF Works - External Finishing & BS Works	90 days	Thu 28/10/21	Wed 16/2/22	NA	NA	334 days	367,91,62	44FF	0%
371	SW2	Building Services Installation Works (incl. Fire Services, Plumbing, Drainage, etc.) & FS Inspection	180 days	Fri 5/8/22	Mon 13/3/23	NA	NA	17 days	367,77	44FF	0%
372		**External Works**	**302 days**	**Thu 9/4/20**	**Sat 17/4/21**	**NA**	**NA**	**-70 days**			**0%**
373		**Road Widening Works**	152 days	Thu 9/4/20	Tue 13/10/20	NA	NA	-70 days	70FS+60 days		0%
374		Drainage Works	76 days	Thu 9/4/20	Tue 14/7/20	NA	NA	-70 days	70FS+60 days	375	0%
375		Road Works	76 days	Wed 15/7/20	Tue 13/10/20	NA	NA	-70 days	374	376	0%
376		Temporary Site Access	30 days	Wed 14/10/20	Wed 18/11/20	NA	NA	-70 days	375	377,359	0%
377	SW2	Construction of New Boundary Wall	120 days	Thu 19/11/20	Sat 17/4/21	NA	NA	582 days	376	44FF	0%

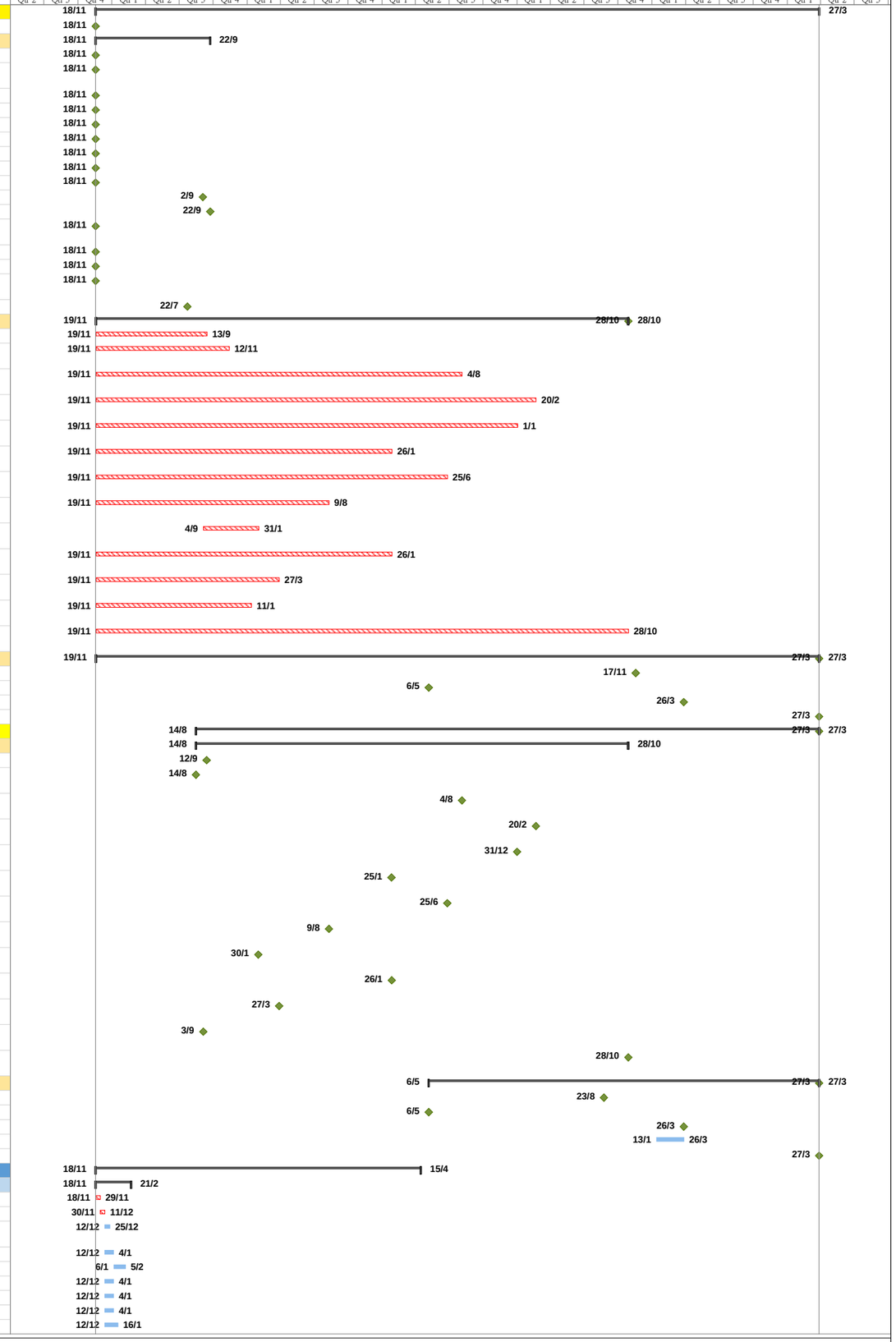


Task ▬ Milestone ◆ Summary ▬ Critical ▬

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

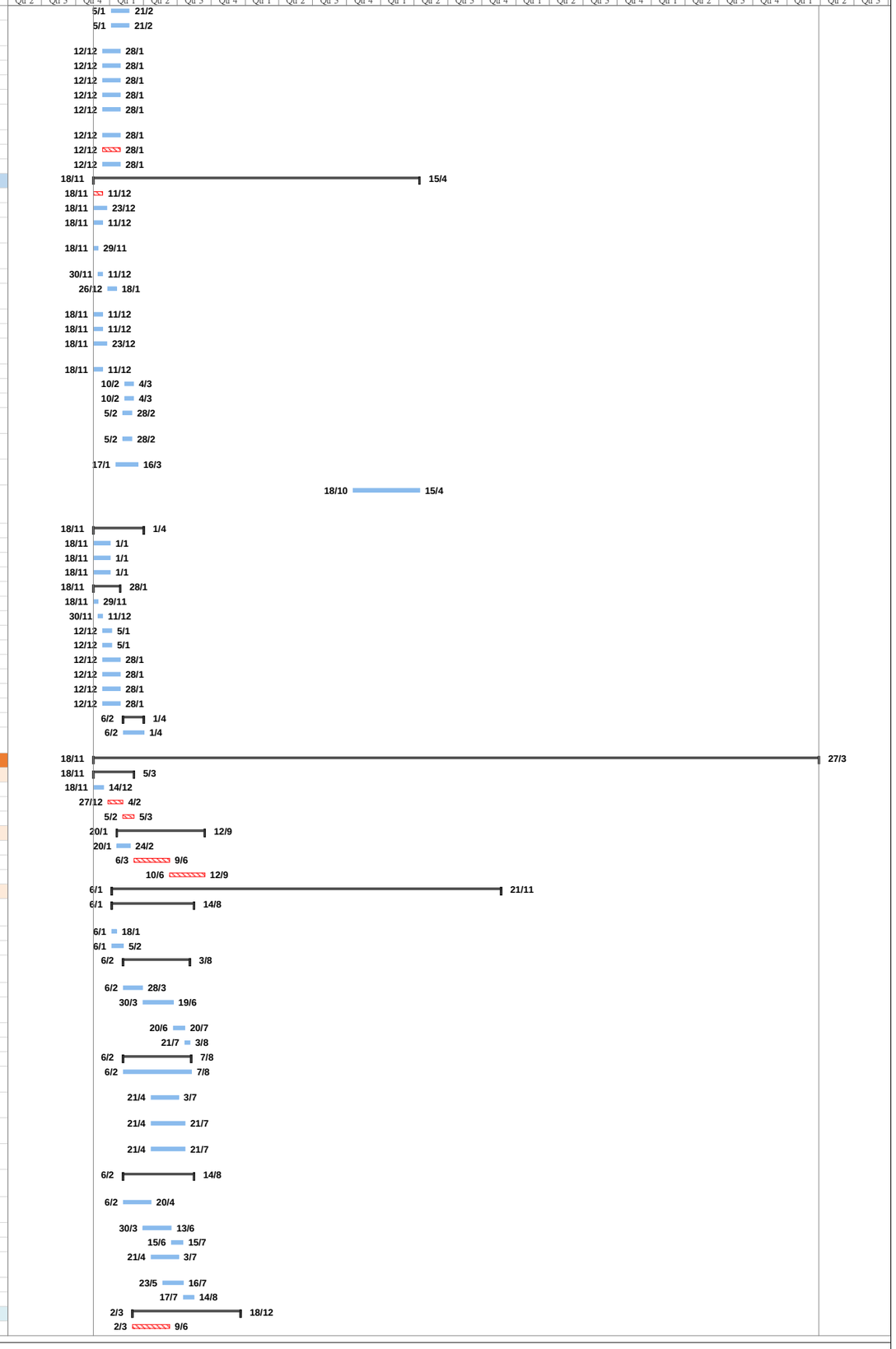
First Programme

ID	Key Date	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	Task Calendar	trade
1		**Contract Dates**	**1585 days**	**Mon 18/11/19**	**Thu 27/3/25**			**0 days**	**None**	
2		Starting Date	0 days	Mon 18/11/19	Mon 18/11/19		35FS+1 day,36FS+1 day,3	0 days	Calendar Day	
3		**Access Dates (cal. day)**	**310 days**	**Mon 18/11/19**	**Tue 22/9/20**			**0 days**	**Calendar Day**	
4		Portion B-1 (Access Road AR3)	0 days	Mon 18/11/19	Mon 18/11/19	2	118	77 days	Calendar Day	
5		Portion B-1A (Area for the works for Sidestream Treatment Facilities by Others	0 days	Mon 18/11/19	Mon 18/11/19	2		1957 days	Calendar Day	
6		Portion B-2 (Inlet Works No.1)	0 days	Mon 18/11/19	Mon 18/11/19	2	122,143,148	105 days	Calendar Day	
7		Portion B-2A (Area for the pipe-jacking works by others)	0 days	Mon 18/11/19	Mon 18/11/19	2		1957 days	Calendar Day	
8		Portion B-3 (Primary Sedimentation Tanks No. 1-4)	0 days	Mon 18/11/19	Mon 18/11/19	2	177	0 days	Calendar Day	
9		Portion B-4 (Bioreactor No. 2A & 2B)	0 days	Mon 18/11/19	Mon 18/11/19	2	189	0 days	Calendar Day	
10		Portion B-5 (Membrane Facilities Building No.2)	0 days	Mon 18/11/19	Mon 18/11/19	2	203	49 days	Calendar Day	
11		Portion B-6 (SAS Pumping Station)	0 days	Mon 18/11/19	Mon 18/11/19	2	224	184 days	Calendar Day	
12		Portion B-7 (Ancillary structures)	0 days	Mon 18/11/19	Mon 18/11/19	2	233	299 days	Calendar Day	
13		Portion B-7A (Alternation works for existing Power House)	0 days	Wed 2/9/20	Wed 2/9/20	2FS+290 days	280,29FS+1 day	0 days	Calendar Day	
14		Portion B-8 (Alternation for existing Membrane Facilities Building No.1)	0 days	Tue 22/9/20	Tue 22/9/20	2FS+310 days	281	838 days	Calendar Day	
15		Portion B-8A (Alternation of air supply main for existing Air Blower House No.2)	0 days	Mon 18/11/19	Mon 18/11/19	2	279	72 days	Calendar Day	
16		Portion B-9 (remainder works in Zone B)	0 days	Mon 18/11/19	Mon 18/11/19	2	282,290	98 days	Calendar Day	
17		Portion B-9A (Area for the pipe-jacking works by others)	0 days	Mon 18/11/19	Mon 18/11/19	2		1957 days	Calendar Day	
18		Portion B-9B (Area for underground pipework modification and connection works by others)	0 days	Mon 18/11/19	Mon 18/11/19	2		1957 days	Calendar Day	
19		Portion B-9C (Area for the works for pipeworks)	0 days	Wed 22/7/20	Wed 22/7/20	2FS+248 days		1709 days	Calendar Day	
20		**Key Dates (cal. day)**	**1440 days**	**Tue 19/11/19**	**Sat 28/10/23**			**0 days**	**Calendar Day**	
21	KD1A	KD1A completion of AR3 in Portion B-1 (300days after starting date)	300 days	Tue 19/11/19	Sun 13/9/20	2FS+1 day,41FF		0 days	Calendar Day	
22	KD1B	KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (360days after starting date)	360 days	Tue 19/11/19	Thu 12/11/20	2FS+1 day,42FF		0 days	Calendar Day	
23	KD1C	KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (990days after starting date)	990 days	Tue 19/11/19	Thu 4/8/22	2FS+1 day,43FF		0 days	Calendar Day	
24	KD1D	KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3 (1190days after starting date)	1190 days	Tue 19/11/19	Mon 20/2/23	2FS+1 day,44FF		0 days	Calendar Day	
25	KD1E	KD1E completion of civil and structural works of Bioreactor in Portion B-4 (1,140days after starting date)	1140 days	Tue 19/11/19	Sun 1/1/23	2FS+1 day,45FF		0 days	Calendar Day	
26	KD1F	KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (800days after starting date)	800 days	Tue 19/11/19	Wed 26/1/22	2FS+1 day,46FF		0 days	Calendar Day	
27	KD1G	KD1G completion of civil and structural works of MFB in Portion B-5 (950days after starting date)	950 days	Tue 19/11/19	Sat 25/6/22	2FS+1 day,47FF		0 days	Calendar Day	
28	KD1H	KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6 (630days after starting date)	630 days	Tue 19/11/19	Mon 9/8/21	2FS+1 day,48FF		0 days	Calendar Day	
29	KD1I	KD1I completion alternation works for existing Power House in Portion B-7A (150days after access date of B-7A)	150 days	Fri 4/9/20	Sun 31/1/21	13FS+1 day,49FF		0 days	Calendar Day	
30	KD1J	KD1J completion of auxiliary facilites in Portion B-7 (800days after starting date)	800 days	Tue 19/11/19	Wed 26/1/22	2FS+1 day,50FF		0 days	Calendar Day	
31	KD2A	KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9 (495days after starting date)	495 days	Tue 19/11/19	Sat 27/3/21	2FS+1 day,51FF		0 days	Calendar Day	
32	KD2B	KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (420days after starting date)	420 days	Tue 19/11/19	Mon 11/1/21	2FS+1 day,52FF		0 days	Calendar Day	
33	KD3A	KD3A completion of all utilities and road works (1440days after starting date)	1440 days	Tue 19/11/19	Sat 28/10/23	2FS+1 day,53FF		0 days	Calendar Day	
34		**Completion Date (cal. Day)**	**1956 days**	**Tue 19/11/19**	**Thu 27/3/25**			**0 days**	**Calendar Day**	
35	SW1	Section 1 of the Works (1,460 after starting date)	1460 days	Tue 19/11/19	Fri 17/11/23	2FS+1 day,55FF		0 days	Calendar Day	
36	SW2	Section 2 of the Works (900 after starting date)	900 days	Tue 19/11/19	Fri 6/5/22	2FS+1 day,56FF		0 days	Calendar Day	
37	SW3	Section 3 of the Works (1,590 after starting date)	1590 days	Tue 19/11/19	Tue 26/3/24	2FS+1 day,57FF	38FS+1 day	0 days	Calendar Day	
38	DLP	Defects Liability Period and Landscape Establishment Works	365 days	Thu 28/3/24	Thu 27/3/25	37FS+1 day,59F		0 days	Calendar Day	
39		**Planned Completion**	**1686 days**	**Fri 14/8/20**	**Thu 27/3/25**			**0 days**	**Calendar Day**	
40		**Planned Completion - Key Dates (cal. day)**	**1170 days**	**Fri 14/8/20**	**Sat 28/10/23**			**0 days**	**Calendar Day**	
41	KD1A	KD1A completion of AR3 in Portion B-1 (300days after starting date)	0 days	Sat 12/9/20	Sat 12/9/20	121FF	21FF	0 days	Calendar Day	
42	KD1B	KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (360days after starting date)	0 days	Fri 14/8/20	Fri 14/8/20	123FF	22FF	90 days	Calendar Day	
43	KD1C	KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (990days after starting date)	0 days	Thu 4/8/22	Thu 4/8/22	175FF,174FF	23FF	0 days	Calendar Day	
44	KD1D	KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3 (1190days after starting date)	0 days	Mon 20/2/23	Mon 20/2/23	186FF,185FF	24FF	0 days	Calendar Day	
45	KD1E	KD1E completion of civil and structural works of Bioreactor in Portion B-4 (1,140days after starting date)	0 days	Sat 31/12/22	Sat 31/12/22	197FF,198FF	25FF	0 days	Calendar Day	
46	KD1F	KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (800days after starting date)	0 days	Tue 25/1/22	Tue 25/1/22	219FF,220FF	26FF	0 days	Calendar Day	
47	KD1G	KD1G completion of civil and structural works of MFB in Portion B-5 (950days after starting date)	0 days	Sat 25/6/22	Sat 25/6/22	221FF,222FF	27FF	0 days	Calendar Day	
48	KD1H	KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6 (630days after starting date)	0 days	Mon 9/8/21	Mon 9/8/21	231FF,230FF	28FF	0 days	Calendar Day	
49	KD1I	KD1I completion alternation works for existing Power House in Portion B-7A (150days after access date of B-7A)	0 days	Sat 30/1/21	Sat 30/1/21	280FF	29FF	0 days	Calendar Day	
50	KD1J	KD1J completion of auxiliary facilites in Portion B-7 (800days after starting date)	0 days	Wed 26/1/22	Wed 26/1/22	276FF,275FF,27	30FF	0 days	Calendar Day	
51	KD2A	KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9 (495days after starting date)	0 days	Sat 27/3/21	Sat 27/3/21	283FF	31FF	0 days	Calendar Day	
52	KD2B	KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (420days after starting date)	0 days	Thu 3/9/20	Thu 3/9/20	279FF	32FF	130 days	Calendar Day	
53	KD3A	KD3A completion of all utilities and road works (1440days after starting date)	0 days	Sat 28/10/23	Sat 28/10/23	289FF	33FF	0 days	Calendar Day	
54		**Planned Completion Date (cal. Day)**	**1056 days**	**Fri 6/5/22**	**Thu 27/3/25**			**0 days**	**Calendar Day**	
55	SW1	Section 1 of the Works (1,460 after starting date)	0 days	Wed 23/8/23	Wed 23/8/23	277FF,271FF,2	35FF	86 days	Calendar Day	
56	SW2	Section 2 of the Works (900 after starting date)	0 days	Fri 6/5/22	Fri 6/5/22	284FF,287FF,2	36FF	0 days	Calendar Day	
57	SW3	Section 3 of the Works (1,590 after starting date)	0 days	Tue 26/3/24	Tue 26/3/24	281FF,291FF,2	37FF,58FF	0 days	Calendar Day	
58		Planned Time Risk Allowance (14days per 365day)	60 days	Sat 13/1/24	Tue 26/3/24	57FF		294 days	None	
59	DLP	Defects Liability Period and Landscape Establishment Works	0 days	Thu 27/3/25	Thu 27/3/25	294FF	38FF	0 days	Calendar Day	
60		**Submissions (cal.day)**	**880 days**	**Mon 18/11/19**	**Fri 15/4/22**			**0 days**	**Calendar Day**	
61		**Subletting Package**	**96 days**	**Mon 18/11/19**	**Fri 21/2/20**			**0 days**	**Calendar Day**	
62		Prepare & submit subletting procedure	12 days	Mon 18/11/19	Fri 29/11/19	2	63	0 days	Calendar Day	
63		PM review and accept subletting procedure	12 days	Sat 30/11/19	Wed 11/12/19	62	64,65,68,69,70,71,72,73,7	0 days	Calendar Day	
64		Subletting for Preliminary Works (surveying, condition survey, site clearacne etc)	14 days	Thu 12/12/19	Wed 25/12/19	63,82	87,116	1 day	Calendar Day	
65		Subletting for Contractor desinger for temporary works and ICE	24 days	Thu 12/12/19	Sat 4/1/20	63,82	71,72,66	212 days	Calendar Day	
66		Subletting for independent BIM consultant	24 days	Mon 6/1/20	Wed 5/2/20	65	112	1474 days	None	
67		Subletting for demolition works	24 days	Thu 12/12/19	Sat 4/1/20	82,63	179,191,234,143,204,207,2	1 day	Calendar Day	dem
68		Subletting for AR3 access road and UU diversion for Inlet Works No.1	24 days	Thu 12/12/19	Sat 4/1/20	63,82	119	29 days	Calendar Day	
69		Subletting for pre-drilling works	24 days	Thu 12/12/19	Sat 4/1/20	63,82	225,150,180,192,208	136 days	Calendar Day	pd
70		Subletting for pre-bored H pile works	36 days	Thu 12/12/19	Thu 16/1/20	63,82	151,181,193,209,226	143 days	Calendar Day	hp



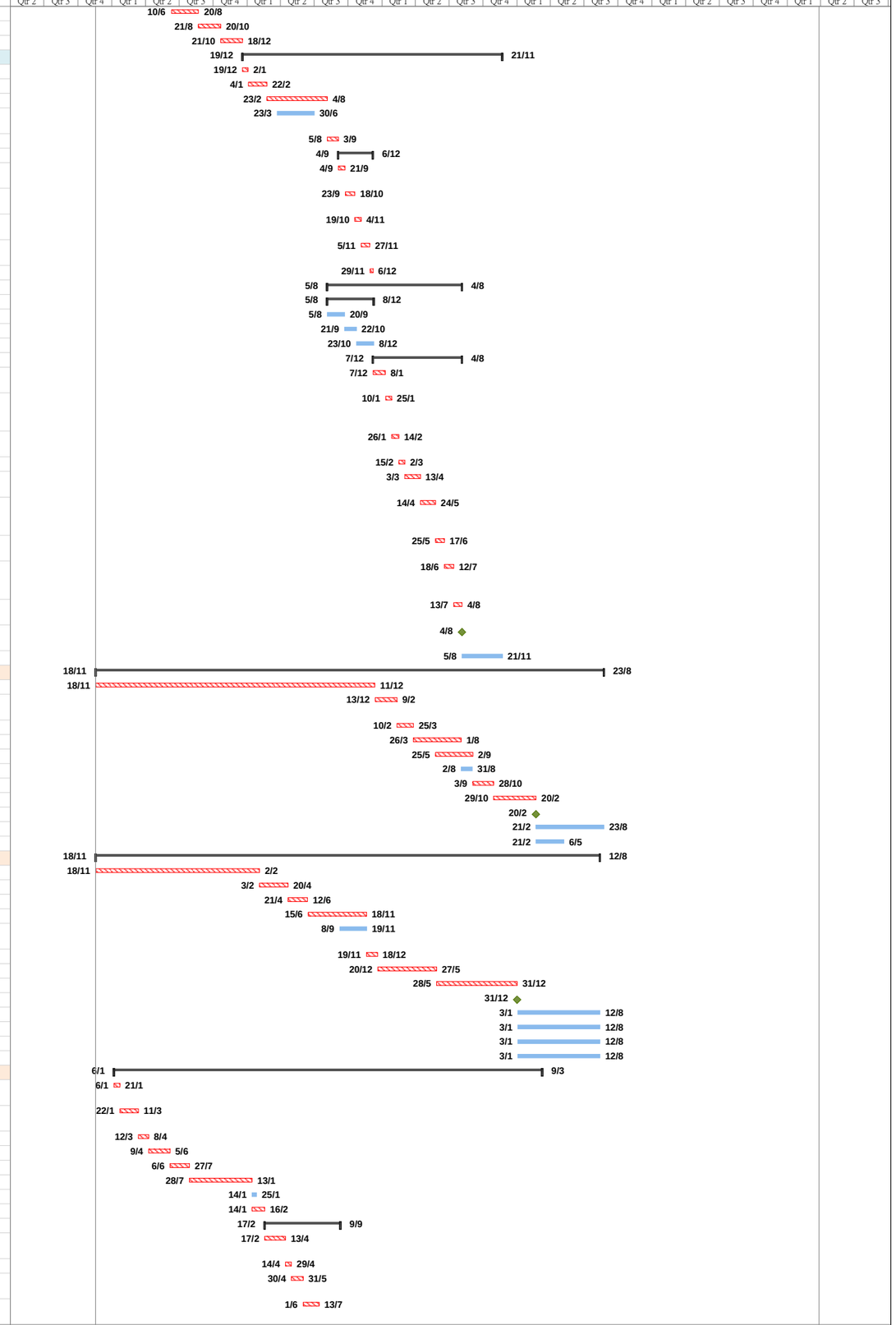
Critical Task Milestone Summary

ID	Key Date	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	Task Calendar	trade
71		Subletting for ELS works for Inlet Works No.1	48 days	Sun 5/1/20	Fri 21/2/20	63,65,82	154	560 days	Calendar Day	ex
72		Subletting for ELS works for Membrance Facilities Building and other buildings	48 days	Sun 5/1/20	Fri 21/2/20	63,65,82	184,196,213,229	212 days	Calendar Day	ex
73		Subletting for structural works for Inlet Works Building	48 days	Thu 12/12/19	Tue 28/1/20	63,82	160	635 days	Calendar Day	rc
74		Subletting for structural works for Primary Sedimentation Tanks	48 days	Thu 12/12/19	Tue 28/1/20	63,82		1885 days	Calendar Day	rc
75		Subletting for structural works for Bioreactors	48 days	Thu 12/12/19	Tue 28/1/20	63,82	197	850 days	Calendar Day	rc
76		Subletting for structural works for Membrance Facilities Building	48 days	Thu 12/12/19	Tue 28/1/20	63,82	219	590 days	Calendar Day	rc
77		Subletting for structural works for SAS pumping house and ancillary structures	48 days	Thu 12/12/19	Tue 28/1/20	63,82	230	327 days	Calendar Day	rc
78		Subletting for ABWF works	48 days	Thu 12/12/19	Tue 28/1/20	63,82	176,187,202,223,232,240,2	1132 days	Calendar Day	abwf
79		Subletting for Process Pipeworks, Utilities and Roadworks	48 days	Thu 12/12/19	Tue 28/1/20	63,82	279,283FS+22 days	0 days	Calendar Day	uu
80		Subletting for Landscape Hardworks and Softworks	48 days	Thu 12/12/19	Tue 28/1/20	63,82	292,293,294	978 days	Calendar Day	land
81		**Statutory Submission, Submission and Approval**	**880 days**	**Mon 18/11/19**	**Fri 15/4/22**			**0 days**	**Calendar Day**	
82		Prepare and submit Subcontractor Management Plan (SMP)	24 days	Mon 18/11/19	Wed 11/12/19	2	64,65,67,68,69,70,71,72,7	0 days	Calendar Day	
83		Prepare and submit Interface Management Plan	36 days	Mon 18/11/19	Mon 23/12/19	2		1921 days	Calendar Day	
84		Prepare and submit the TTA plans inside Treatment Plant for UU diversion and buildings construction	24 days	Mon 18/11/19	Wed 11/12/19	2	118	53 days	Calendar Day	
85		Prepare and submit method statement for UU diversion for Inlet Works No.1	12 days	Mon 18/11/19	Fri 29/11/19	2	86	116 days	Calendar Day	
86		PM review and accept the method statement	12 days	Sat 30/11/19	Wed 11/12/19	85	124,125	116 days	Calendar Day	
87		Prepare and submit combine underground services drawing for PM's review the alignment	24 days	Thu 26/12/19	Sat 18/1/20	64	118	15 days	Calendar Day	
88		Prepare and submit method statement for demolition existing structures	24 days	Mon 18/11/19	Wed 11/12/19	2	204,179,191,234,143,207,2	25 days	Calendar Day	dem
89		Prepare and submit method statement for structural works for buildings	24 days	Mon 18/11/19	Wed 11/12/19	2		1933 days	Calendar Day	rc
90		Prepare and submit method statements to MTRC regarding the works within railing protection boundary	36 days	Mon 18/11/19	Mon 23/12/19	2	179,191,234,143,204,207,2	13 days	Calendar Day	dem
91		Prepare and submit & approve Safety Management Plan	24 days	Mon 18/11/19	Wed 11/12/19	2		1933 days	Calendar Day	
92		Prepare and submit Excavation and lateral support (ELS) proposal	24 days	Mon 10/2/20	Wed 4/3/20	2	206	7 days	Calendar Day	ex
93		Prepare and submit Dewatering proposal for basement construction	24 days	Mon 10/2/20	Wed 4/3/20	2	206	7 days	Calendar Day	ex
94		Prepare and submit Pre-construction condition survey of existing structures/ services	24 days	Wed 5/2/20	Fri 28/2/20	116		1854 days	Calendar Day	
95		Prepare and submit Settlement and movement monitoring proposal of existing structures/ services	24 days	Wed 5/2/20	Fri 28/2/20	116		1854 days	Calendar Day	
96		Prepare and submit design of structure elements of the temporary activated carbon deodourization unit	60 days	Fri 17/1/20	Mon 16/3/20	2FS+60 days		1837 days	Calendar Day	
97		Prepare of RSE and structural design for alternation and additional (A&A) works at Membrane Facilities Building No.1 and Main Power House	180 days	Mon 18/10/21	Fri 15/4/22		223	324 days	Calendar Day	
98		**Environmental Aspect Submissions**	**136 days**	**Mon 18/11/19**	**Wed 1/4/20**			**23 days**	**Calendar Day**	
99		Prepare, submit & approve Site Management Plan for Trip Tricket System	45 days	Mon 18/11/19	Wed 1/1/20	2		1912 days	Calendar Day	
100		Prepare, submit & approve Waste Management Plan	45 days	Mon 18/11/19	Wed 1/1/20	2		1912 days	Calendar Day	
101		Prepare, submit & approve Environmental Management Plan	45 days	Mon 18/11/19	Wed 1/1/20	2		1912 days	Calendar Day	
102		**Procurement**	**72 days**	**Mon 18/11/19**	**Tue 28/1/20**			**23 days**	**Calendar Day**	
103		Prepare and submit the Procurement Procedure	12 days	Mon 18/11/19	Fri 29/11/19	2	104	23 days	Calendar Day	
104		PM Review & Accept Procurement Procedure	12 days	Sat 30/11/19	Wed 11/12/19	103	105,106,107,108,109,110	23 days	Calendar Day	
105		Prepare, submit and approve the pipe works material	25 days	Thu 12/12/19	Sun 5/1/20	104	123,279,285,286,288,287,2	23 days	Calendar Day	uu
106		Prepare, submit and approve the pipe water proofing material	25 days	Thu 12/12/19	Sun 5/1/20	104	123,279,285,286,288,287,2	23 days	Calendar Day	uu
107		Prepare, submit and approve the concrete mix material	48 days	Thu 12/12/19	Tue 28/1/20	104	160,197,219,230	327 days	Calendar Day	rc
108		Prepare, submit and approve the rebar material	48 days	Thu 12/12/19	Tue 28/1/20	104	160,197,219,230	327 days	Calendar Day	rc
109		Prepare, submit and approve the metal works material	48 days	Thu 12/12/19	Tue 28/1/20	104		1885 days	Calendar Day	
110		Prepare, submit and approve the ABWF works material	48 days	Thu 12/12/19	Tue 28/1/20	104	176,187,202,223,232,240,2	1132 days	Calendar Day	abwf
111		**BIM**	**48 days**	**Thu 6/2/20**	**Wed 1/4/20**			**1474 days**	**None**	
112		Prepare, submit and approve the proposal of details of Common data environment (CDE)	48 days	Thu 6/2/20	Wed 1/4/20	66		1474 days	None	
113		Construction Works	1957 days	Mon 18/11/19	Thu 27/3/25			0 days	Calendar Day	
114		**Preliminary Works**	**109 days**	**Mon 18/11/19**	**Thu 5/3/20**			**0 days**	**Calendar Day**	
115		Initial Survey	24 days	Mon 18/11/19	Sat 14/12/19	2	116	8 days	Normal Working Hours	
116		Condition Survey	30 days	Fri 27/12/19	Tue 4/2/20	64,115	117,94,95	0 days	Normal Working Hours	
117		Installation of Monitoring Markers	26 days	Wed 5/2/20	Thu 5/3/20	116	120	0 days	Normal Working Hours	
118		**Access Road (AR3), B-1**	**193 days**	**Mon 20/1/20**	**Sat 12/9/20**	**4,84,87**		**0 days**	**Normal Working Hou**	
119		Site setup and clearance wroks	28 days	Mon 20/1/20	Mon 24/2/20	68	120	9 days	Normal Working Hours	
120		Drainage and Utilities Works	76 days	Fri 6/3/20	Tue 9/6/20	119,117	121	0 days	Normal Working Hours	
121	KD1A	Roadworks	80 days	Wed 10/6/20	Sat 12/9/20	120	41FF	0 days	Normal Working Hours	
122		**Inlet Works No.1, B-2**	**854 days**	**Mon 6/1/20**	**Mon 21/11/22**	**6**		**45 days**	**Normal Working Hou**	
123		**Diversion Works (1. Inlet Truck Sewer, Leachate Rising Mains, Sludge Pipes, Tank Drains and Pipelines near Primary Sludge Thinkeners)**	**180 days**	**Mon 6/1/20**	**Fri 14/8/20**	**105,106**	**42FF**	**74 days**	**Normal Working Hours_20190924**	
124		Utilities scanning to idenify existing UU arrangement	12 days	Mon 6/1/20	Sat 18/1/20	86	125SS	74 days	Normal Working Hours	
125		Trial pits to locate the collection points	24 days	Mon 6/1/20	Wed 5/2/20	86,124SS	127,133,137,134,135,132	74 days	Normal Working Hours	
126		**Diversion of Inlet Truck Sewer (approx. 40m 1800mm dia concrete pipe, 4 deep manholes and Inlet Reception Chamber)**	**146 days**	**Thu 6/2/20**	**Mon 3/8/20**			**84 days**	**Normal Working Hours_20190924**	
127		Trench Excavation for 1800mm dia pipeline and manholes	45 days	Thu 6/2/20	Sat 28/3/20	125	128	84 days	Normal Working Hours	uu
128		Construct M/H MHA01, MHA02, MHA03, MHA04 and Inlet Reception Chamber	65 days	Mon 30/3/20	Fri 19/6/20	127	129	84 days	Normal Working Hours_20190924	uu
129		Lay 1800mm dia concretre pipe	24 days	Sat 20/6/20	Mon 20/7/20	128	130	84 days	Normal Working Hours	uu
130		Collection to existing Inlet Chamber	12 days	Tue 21/7/20	Mon 3/8/20	129		84 days	Normal Working Hours	uu
131		**Diversion of Leachate Rising Main, Sludge Pipes and Tank Drain**	**150 days**	**Thu 6/2/20**	**Fri 7/8/20**			**80 days**	**Normal Working Hou**	
132		Diversion of tank drain, approx. 70m 675mm dia conrete pipe and 2 manholes MHD8.5 & MHD9.5)	150 days	Thu 6/2/20	Fri 7/8/20	125	135SS+60 days,134SS+60	80 days	Normal Working Hours_20190924	uu
133		Diversion of leachate rising main, CHLC, approx. 24m DN250 DI	60 days	Tue 21/4/20	Fri 3/7/20	125,132SS+60 days		110 days	Normal Working Hours_20190924	uu
134		Diversion of sludge pipe, CHES1 approx. 154m DN250 CI	75 days	Tue 21/4/20	Tue 21/7/20	125,132SS+60 days		95 days	Normal Working Hours_20190924	uu
135		Diversion of sludge pipe, CHES2 approx. 106m DN250 CI	75 days	Tue 21/4/20	Tue 21/7/20	125,132SS+60 days		95 days	Normal Working Hours_20190924	uu
136		**Diversion of pipelines near Primary Sludge Thickeners (approx. 180m long 150mm to 375mm concrete pipes)**	**156 days**	**Thu 6/2/20**	**Fri 14/8/20**			**74 days**	**Normal Working Hours_20190924**	**uu**
137		Trench Excavation from M/H MHD1E to MHD5 (approx. 90m long with M/Hs MHD1A, 1B, 1C, 1D & 1E)	60 days	Thu 6/2/20	Mon 20/4/20	125	138SS+45 days,140	74 days	Normal Working Hours_20190924	uu
138		Manholes construction and Pipe laying	60 days	Mon 30/3/20	Sat 13/6/20	137SS+45 days	139	100 days	Normal Working Hours	uu
139		Backfilling	25 days	Mon 15/6/20	Wed 15/7/20	138		100 days	Normal Working Hours	uu
140		Trench Excavation from MHD5 to MHD9.5 (approx. 90m long with M/Hs MHD5A & 5B)	60 days	Tue 21/4/20	Fri 3/7/20	137	141SS+26 days	74 days	Normal Working Hours_20190924	uu
141		Manholes construction and Pipe laying	45 days	Sat 23/5/20	Thu 16/7/20	140SS+26 days	142	74 days	Normal Working Hours	uu
142	KD1B	Backfilling	25 days	Fri 17/7/20	Fri 14/8/20	141		74 days	Normal Working Hours	uu
143		**Decommission and Demolition of Existing Faciliates and Structures**	**240 days**	**Mon 2/3/20**	**Fri 18/12/20**	**6,67,88,90**	**149**	**0 days**	**Normal Working Hou**	
144		Primary Sludge Thickening Tank No.1 and No.2	80 days	Mon 2/3/20	Tue 9/6/20		145	0 days	Normal Working Hours	dem



Critical Task Milestone Summary

ID	Key Date	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	Task Calendar	trade
145		Primary Sludge Pump Pit	60 days	Wed 10/6/20	Thu 20/8/20	144	146	0 days	Normal Working Hours	dem
146		Septic Tank	50 days	Fri 21/8/20	Tue 20/10/20	145	147	0 days	Normal Working Hours	dem
147		Diesel Tank	50 days	Wed 21/10/20	Fri 18/12/20	146		0 days	Normal Working Hours	dem
148		**Inlet Works No.1 Building**	**569 days**	**Sat 19/12/20**	**Mon 21/11/22**	**6**		**0 days**	**Normal Working Hou**	
149		Excavate to +6.5mPD (1980sqm excavated soil)	10 days	Sat 19/12/20	Sat 2/1/21	143	150	0 days	Normal Working Hours	ex
150		Predrilling (59nrs, 6rigs, 4days/drillhole/rig)	40 days	Mon 4/1/21	Mon 22/2/21	149,69	151	0 days	Normal Working Hours	pd
151		Pre-bored H piles (186nos, 7rigs, 5days/rig/pile)	133 days	Tue 23/2/21	Wed 4/8/21	150,70	152SS+24 days,154,162,1	0 days	Normal Working Hours	hp
152		Sheetpile Installation (FSPIV, 3,840sq.m, 1rigs, 50sqm/rig/day) with toe grouting	80 days	Tue 23/3/21	Wed 30/6/21	151SS+24 days	154	55 days	Normal Working Hours_20190924	sp
153		Pile Load Test	26 days	Thu 5/8/21	Fri 3/9/21	151	154	0 days	Normal Working Hours	lt
154		ELS works (strutting 4 layers, excavate soil 7445cu.m)	77 days	Sat 4/9/21	Mon 6/12/21	152,151,71,153		0 days	Normal Working Hours	ex
155		Excavate to +5.0mPD and S1 wailing / strutting (960sqm excavated soil)	15 days	Sat 4/9/21	Tue 21/9/21		156	0 days	Normal Working Hours_20190924	ex
156		Excavate to +2.0mPD and S2 wailing / strutting (1920sqm excavated soil)	20 days	Thu 23/9/21	Mon 18/10/21	155	157	0 days	Normal Working Hours_20190924	ex
157		Excavate to +0.0mPD and S3 wailing / strutting (1280sqm excavated soil)	15 days	Tue 19/10/21	Thu 4/11/21	156	158	0 days	Normal Working Hours_20190924	ex
158		Excavate to -3.0mPD and S4 wailing / strutting (1920sqm excavated soil)	20 days	Fri 5/11/21	Sat 27/11/21	157	159	0 days	Normal Working Hours_20190924	ex
159		Excavate -7.4mPD (1365sqm excavated soil)	7 days	Mon 29/11/21	Mon 6/12/21	158	166	0 days	Normal Working Hours	ex
160		R.C. Structure works	296 days	Thu 5/8/21	Thu 4/8/22	73,107,108		0 days	Normal Working Hours	rc
161		Phase A (floor area 585 sqm)	105 days	Thu 5/8/21	Wed 8/12/21			66 days	Normal Working Hours	rc
162		Rebar fix and formwork and concreting for the pile cap (G/F)	40 days	Thu 5/8/21	Mon 20/9/21	151	163	66 days	Normal Working Hours	rc
163		Rebar fix and formwork and concreting upto +13.45mPD (1/F)	25 days	Tue 21/9/21	Fri 22/10/21	162	164	66 days	Normal Working Hours	rc
164		Rebar fix and formwork and concreting upto +25.80mPD (R/F)	40 days	Sat 23/10/21	Wed 8/12/21	163	170	66 days	Normal Working Hours	rc
165		Phase B (621 sqm) and Phase C (662 sqm)	193 days	Tue 7/12/21	Thu 4/8/22			0 days	Normal Working Hours	rc
166		Rebar fix and formwork and concreting for the Inlet Works structure upto level -3.0mPD and removal of S4 wailing/strutting	26 days	Tue 7/12/21	Sat 8/1/22	159	167	0 days	Normal Working Hours_20190924	rc
167		Rebar fix and formwork and concreting for the Inlet Works structure upto level +0.0mPD and removal of S3 and S2 wailing/strutting	14 days	Mon 10/1/22	Tue 25/1/22	166	168	0 days	Normal Working Hours_20190924	rc
168		Rebar fix and formwork and concreting for the Inlet Works structure upto level +5.0mPD and removal of S1 wailing/strutting	14 days	Wed 26/1/22	Mon 14/2/22	167	169	0 days	Normal Working Hours_20190924	rc
169		Apply waterproofing membrance and backfilling	14 days	Tue 15/2/22	Wed 2/3/22	168	170	0 days	Normal Working Hours	
170		Rebar fix and formwork and concreting for the Inlet Works structure of ground floor levels	35 days	Thu 3/3/22	Wed 13/4/22	169,164	171	0 days	Normal Working Hours_20190924	rc
171		Rebar fix and formwork and concreting for the Inlet Works structure of 1/F levels (Phase B +20.11mPD and Phase C +13.45mPD)	30 days	Thu 14/4/22	Tue 24/5/22	170	172	0 days	Normal Working Hours_20190924	rc
172		Rebar fix and formwork and concreting for the Inlet Works structure of double part levels (Phase B +21.31mPD)	20 days	Wed 25/5/22	Fri 17/6/22	171	173	0 days	Normal Working Hours_20190924	rc
173		Rebar fix and formwork and concreting for the Inlet Works structure of R/F levels (Phase B +27.50mPD and Phase C +25.80mPD)	20 days	Sat 18/6/22	Tue 12/7/22	172	174	0 days	Normal Working Hours_20190924	rc
174	KD1C	Rebar fix and formwork and concreting for the Inlet Works structure upto level +27.8mPD (upper roof floor level)	20 days	Wed 13/7/22	Thu 4/8/22	173	176,43FF,175	0 days	Normal Working Hours_20190924	rc
175	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	174	43FF	0 days	Normal Working Hours_20190924	
176	SW1	ABWF works	90 days	Fri 5/8/22	Mon 21/11/22	174,110,78	55FF	293 days	Normal Working Hours	abwf
177		**Primary Sedimentation Tanks, B-3**	**1115 days**	**Mon 18/11/19**	**Wed 23/8/23**	**8**		**0 days**	**Normal Working Hou**	
178		Operation of the Existing Primary sedimentation Tanks	615 days	Mon 18/11/19	Sat 11/12/21	2	179	0 days	None	
179		Decommission and Demolition of existing primary sedimentation tanks no. 1 & 2	45 days	Mon 13/12/21	Wed 9/2/22	67,88,90,178	180	0 days	Normal Working Hours_20190924	dem
180		Predrilling (68nrs, 7rigs, 4days/drillhole/rig)	38 days	Thu 10/2/22	Fri 25/3/22	179,69,225	181	0 days	Normal Working Hours	pd
181		Pre-bored H piles (205nos, 8rigs, 4days/pile/rig)	102 days	Sat 26/3/22	Mon 1/8/22	180,70,226	182SS+45 days,184,183	0 days	Normal Working Hours	hp
182		Sheetpile Installation (FSP-II, 3360sq.m) with toe grouting	85 days	Wed 25/5/22	Fri 2/9/22	181SS+45 days	184	0 days	Normal Working Hours	sp
183		Pile Load Test	26 days	Tue 2/8/22	Wed 31/8/22	181	184	2 days	Normal Working Hours	lt
184		ELS works (20000cu.m soil with 2 layers wailing / strutting)	45 days	Sat 3/9/22	Fri 28/10/22	181,72,183,182	185	0 days	Normal Working Hours	ex
185	KD1D	R.C. Structure works	92 days	Sat 29/10/22	Mon 20/2/23	184	186,187,44FF,188	0 days	Normal Working Hours	rc
186	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	185	44FF	0 days	Normal Working Hours	
187	SW1	ABWF works	150 days	Tue 21/2/23	Wed 23/8/23	185,110,78	55FF	71 days	Normal Working Hours	abwf
188	SW1	Flowmeter Chamber no.1	60 days	Tue 21/2/23	Sat 6/5/23	185	55FF	161 days	None	
189		**Bioreactors No.2A & 2B, B-4**	**1106 days**	**Mon 18/11/19**	**Sat 12/8/23**	**9**		**0 days**	**Normal Working Hou**	
190		Operation of 2no. Existing 800mm air mains over bioreactor no.2	360 days	Mon 18/11/19	Tue 2/2/21	2	191	0 days	None	
191		Decommission and Demolition of existing bioreactor no.2	60 days	Wed 3/2/21	Tue 20/4/21	67,88,90,190	192	0 days	Normal Working Hours	dem
192		Predrilling (76nrs, 7rigs, 4days/drillhole/rig)	44 days	Wed 21/4/21	Sat 12/6/21	191,69	193	0 days	Normal Working Hours	pd
193		Pre-bored H piles (157nos, 6rigs, 5days/pile/rig)	131 days	Tue 15/6/21	Thu 18/11/21	192,70,209	194SS+72 days,196,195	0 days	Normal Working Hours	hp
194		Sheetpile Installation (FSP-II, 3000sq.m, 50sqm/rig/day) with toe grouting	60 days	Wed 8/9/21	Fri 19/11/21	193SS+72 days	196	25 days	Normal Working Hours_20190924	sp
195		Pile Load Test	26 days	Fri 19/11/21	Sat 18/12/21	193	196	0 days	Normal Working Hours	lt
196		ELS works (18100cu.m soil with 4 layers wailing / strutting)	125 days	Mon 20/12/21	Fri 27/5/22	193,194,72,195	197	0 days	Normal Working Hours	ex
197	KD1E	R.C. Structure works	180 days	Sat 28/5/22	Sat 31/12/22	75,107,108,196	198,202,45FF,199,200,201	0 days	Normal Working Hours	rc
198	KD1E	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Sat 31/12/22	Sat 31/12/22	197	45FF	0 days	Normal Working Hours	
199	SW1	Flowmeter no. 2-4	180 days	Tue 3/1/23	Sat 12/8/23	197	55FF	80 days	None	
200	SW1	Gate Valve Chamber no.1-3	180 days	Tue 3/1/23	Sat 12/8/23	197	55FF	80 days	None	
201	SW1	Plug Vakve Chamber no.1-2	180 days	Tue 3/1/23	Sat 12/8/23	197	55FF	80 days	None	
202	SW1	ABWF works	180 days	Tue 3/1/23	Sat 12/8/23	197,110,78	55FF	80 days	Normal Working Hours	abwf
203		**Membrane Facilities Building, B-5**	**941 days**	**Mon 6/1/20**	**Thu 9/3/23**	**10**		**0 days**	**Normal Working Hou**	
204		Decommission and Demolition of existing final sedimentation tanks no. 3 & 4 (Partial)	14 days	Mon 6/1/20	Tue 21/1/20	88,67,90	205	0 days	Normal Working Hours_20190924	dem
205		Installation of sheetpile, FSP-IV 2460sq.m & FSP-II 1680sq.m (50sq.m/rig/day, 2rigs) with toe grout	40 days	Wed 22/1/20	Wed 11/3/20	204	206	0 days	Normal Working Hours_20190924	sp
206		Excavation to level +5.5mPD (5700cu.m soil, 250cu.m/day)	23 days	Thu 12/3/20	Wed 8/4/20	205,92,93	207	0 days	Normal Working Hours	ex
207		Demolition of remaining final sedimentation tanks	45 days	Thu 9/4/20	Fri 5/6/20	206,67,88,90	208	0 days	Normal Working Hours	dem
208		Predrilling (83nrs, 8rigs, 4days/drillhole/rig)	42 days	Sat 6/6/20	Mon 27/7/20	207,69	209	0 days	Normal Working Hours	pd
209		Pre-bored H piles (224nos, 8rigs, 5days/pile/rig)	140 days	Tue 28/7/20	Wed 13/1/21	208,70	211,210,193	0 days	Normal Working Hours	hp
210		Install S1 wailing / strutting	10 days	Thu 14/1/21	Mon 25/1/21	209	213	16 days	Normal Working Hours	ex
211		Pile Load Test	26 days	Thu 14/1/21	Tue 16/2/21	209	212	0 days	Normal Working Hours	lt
212		**ELS works**	**169 days**	**Wed 17/2/21**	**Thu 9/9/21**	**211**		**0 days**	**None**	
213		Excavate to level +2mPD and install S2 wailing / strutting (8090cu.m soil, 250cu.m/day)	45 days	Wed 17/2/21	Tue 13/4/21	210,72	214	0 days	Normal Working Hours_20190924	ex
214		Installation of sheetpile, FSP-IV 380sq.m (50sq.m/rig/day, 1rigs)	14 days	Wed 14/4/21	Thu 29/4/21	213	215	0 days	Normal Working Hours	sp
215		Excavate to level -1.5mPD and install S3 wailing / strutting (4000cu.m soil, 160cu.m/day)	25 days	Fri 30/4/21	Mon 31/5/21	214	216	0 days	Normal Working Hours_20190924	ex
216		Excavate to level -4.6mPD and install S4 wailing / strutting (5200cu.m soil, 160cu.m/day)	35 days	Tue 1/6/21	Tue 13/7/21	215	217	0 days	Normal Working Hours_20190924	ex

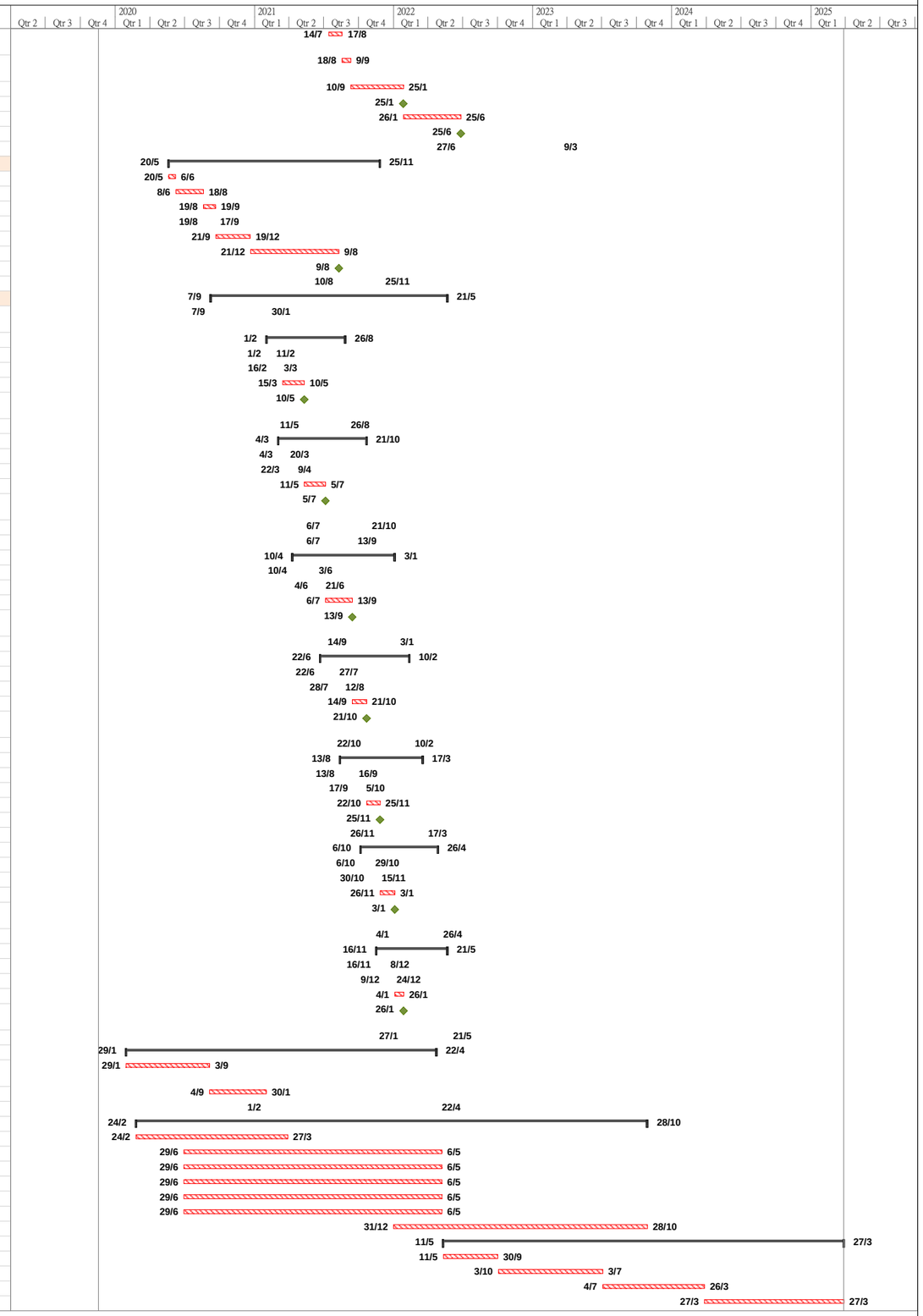


Critical Task Milestone Summary

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

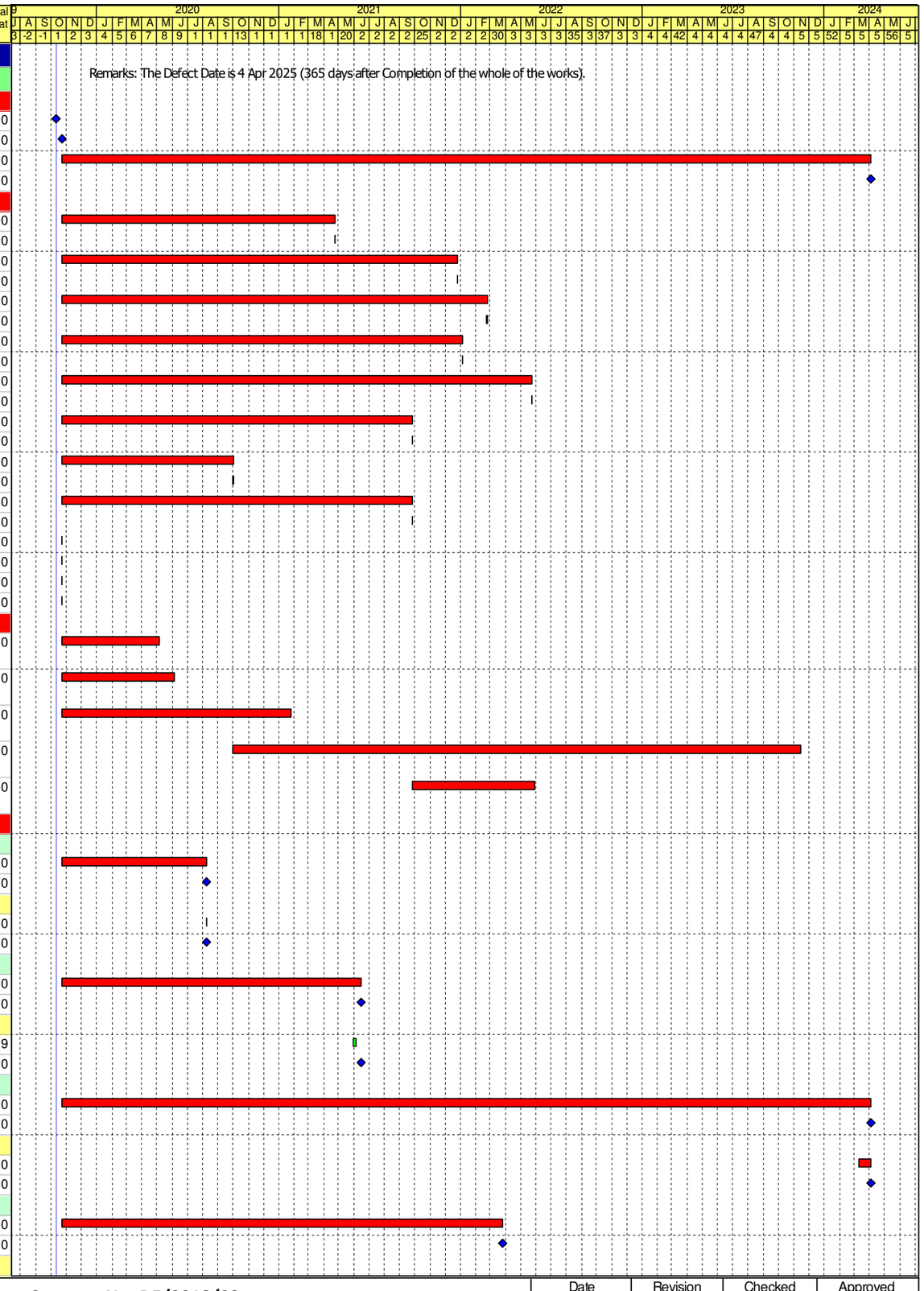
First Programme

ID	Key Date	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	Task Calendar	trade
217		Excavate to level -7.3mPD and install S5 wailing / strutting (4540cu.m soil, 160cu.m/day)	30 days	Wed 14/7/21	Tue 17/8/21	216	218	0 days	Normal Working Hours_20190924	ex
218		Excavate to final formation level -9.0mPD and install S5 wailing / strutting (2860cu.m soil, 160cu.m/day)	20 days	Wed 18/8/21	Thu 9/9/21	217	219	0 days	Normal Working Hours_20190924	ex
219	KD1F	R.C. Structure works (from B2 - Level 1)	112 days	Fri 10/9/21	Tue 25/1/22	76,107,108,230,	46FF,220,221	0 days	Normal Working Hours	rc
220	KD1F	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Tue 25/1/22	Tue 25/1/22	219	46FF	0 days	Normal Working Hours	
221	KD1G	R.C. Structure works (from Level 1 to Roof)	120 days	Wed 26/1/22	Sat 25/6/22	219	223,47FF,222	0 days	Normal Working Hours	rc
222	KD1G	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Sat 25/6/22	Sat 25/6/22	221	47FF	0 days	Normal Working Hours	
223	SW1	ABWF works	210 days	Mon 27/6/22	Thu 9/3/23	221,110,78,97	55FF	206 days	Normal Working Hours	abwf
224		**SAS Pumping Station, B-6**	**455 days**	**Wed 20/5/20**	**Thu 25/11/21**	**11**		**0 days**	**Normal Working Hou**	
225		Predrilling (4nrs, 1rig, 4days/drillhole/rig)	16 days	Wed 20/5/20	Sat 6/6/20	69	226,180	0 days	Normal Working Hours	pd
226		Pre-bored H piles (12nos, 1rigs, 5days/pile/rig)	60 days	Mon 8/6/20	Tue 18/8/20	225,70	227,181,228	0 days	Normal Working Hours	hp
227		Sheetpile Installation (FSP-II, 690sq.m, 50sqm/day) with toe grouting	28 days	Wed 19/8/20	Sat 19/9/20	226	229	0 days	Normal Working Hours	sp
228		Pile Load Test	26 days	Wed 19/8/20	Thu 17/9/20	226	229	2 days	Normal Working Hours	lt
229		ELS works (1300cu.m soil with 2 layers wailing / strutting)	75 days	Mon 21/9/20	Sat 19/12/20	227,72,228	230	0 days	Normal Working Hours	ex
230	KD1H	R.C. Structure works	186 days	Mon 21/12/20	Mon 9/8/21	77,107,108,229	231,232,48FF,219	0 days	Normal Working Hours	rc
231	KD1H	Allow access to Contractor DE/2018/03 for E&M installation and T&C works	0 days	Mon 9/8/21	Mon 9/8/21	230	48FF	0 days	Normal Working Hours	
232	SW1	ABWF works	90 days	Tue 10/8/21	Thu 25/11/21	230,110,78	55FF	585 days	Normal Working Hours	abwf
233		**Ancillary Structures, B-7**	**503 days**	**Mon 7/9/20**	**Sat 21/5/22**	**12**		**5 days**	**Normal Working Hou**	
234		Demolition of Existing Faciliates and Structures (leachate pump pit & pumping station)	120 days	Mon 7/9/20	Sat 30/1/21	67,88,90	235,241,248,254,260,266,2	5 days	Normal Working Hours_20190924	dem
235		**Chemical System No.1**	**168 days**	**Mon 1/2/21**	**Thu 26/8/21**	**234**		**5 days**	**Normal Working Hou**	
236		Excavation for Raft Footing (20cu.m)	10 days	Mon 1/2/21	Thu 11/2/21		237	5 days	Normal Working Hours	ex
237		Plate load test	14 days	Tue 16/2/21	Wed 3/3/21	236	238,242	5 days	Normal Working Hours	
238	KD1J	R.C. structure works	45 days	Mon 15/3/21	Mon 10/5/21	237	239,50FF,244,240	0 days	Normal Working Hours	rc
239	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Mon 10/5/21	Mon 10/5/21	238	50FF	215 days	Normal Working Hours_20190924	
240	SW1	ABWF works + BS works	90 days	Tue 11/5/21	Thu 26/8/21	110,78,238	55FF	660 days	Normal Working Hours	abwf
241		**Chemical System No.2**	**189 days**	**Thu 4/3/21**	**Thu 21/10/21**	**234**		**5 days**	**Normal Working Hou**	
242		Excavation for Raft Footing (100cu.m)	15 days	Thu 4/3/21	Sat 20/3/21	237	243	5 days	Normal Working Hours	ex
243		Plate load test	14 days	Mon 22/3/21	Fri 9/4/21	242	244,249	5 days	Normal Working Hours	
244	KD1J	R.C. structure works	45 days	Tue 11/5/21	Mon 5/7/21	243,238	245,251,50FF,246,247	0 days	Normal Working Hours	rc
245	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Mon 5/7/21	Mon 5/7/21	244	50FF	170 days	Normal Working Hours_20190924	
246	SW1	ABWF works + BS works	90 days	Tue 6/7/21	Thu 21/10/21	110,78,244	55FF	615 days	Normal Working Hours	abwf
247	SW1	Demolition of existing chemical room	60 days	Tue 6/7/21	Mon 13/9/21	244	55FF	645 days	Normal Working Hours	
248		**Fire Services Sprinkler Pumping Room**	**220 days**	**Sat 10/4/21**	**Mon 3/1/22**	**234**		**5 days**	**Normal Working Hou**	
249		Excavation for Raft Footing (800cu.m)	45 days	Sat 10/4/21	Thu 3/6/21	243	250	5 days	Normal Working Hours	ex
250		Plate load test	14 days	Fri 4/6/21	Mon 21/6/21	249	251,255	5 days	Normal Working Hours	
251	KD1J	R.C. structure works	60 days	Tue 6/7/21	Mon 13/9/21	250,244	253,257,252,50FF	0 days	Normal Working Hours	rc
252	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Mon 13/9/21	Mon 13/9/21	251	50FF	110 days	Normal Working Hours_20190924	
253	SW1	ABWF works + BS works	90 days	Tue 14/9/21	Mon 3/1/22	110,78,251	55FF	555 days	Normal Working Hours	abwf
254		**Temporary Chemical Dosing System**	**191 days**	**Tue 22/6/21**	**Thu 10/2/22**	**234**		**5 days**	**Normal Working Hou**	
255		Excavation for Raft Footing (300cu.m)	30 days	Tue 22/6/21	Tue 27/7/21	250	256	5 days	Normal Working Hours	ex
256		Plate load test	14 days	Wed 28/7/21	Thu 12/8/21	255	257,261	5 days	Normal Working Hours	
257	KD1J	R.C. structure works	30 days	Tue 14/9/21	Thu 21/10/21	256,251	258,50FF,263,259	0 days	Normal Working Hours	rc
258	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Thu 21/10/21	Thu 21/10/21	257	50FF	80 days	Normal Working Hours_20190924	
259	SW1	ABWF works + BS works	90 days	Fri 22/10/21	Thu 10/2/22	110,78,257	55FF	525 days	Normal Working Hours	abwf
260		**Fire Hydrant and Booster Pump Room**	**177 days**	**Fri 13/8/21**	**Thu 17/3/22**	**234**		**5 days**	**Normal Working Hou**	
261		Excavation for Raft Footing (200cu.m)	30 days	Fri 13/8/21	Thu 16/9/21	256	262	5 days	Normal Working Hours	ex
262		Plate load test	14 days	Fri 17/9/21	Tue 5/10/21	261	263,267	5 days	Normal Working Hours	
263	KD1J	R.C. structure works	30 days	Fri 22/10/21	Thu 25/11/21	262,257	264,265,50FF,269	0 days	Normal Working Hours	rc
264	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Thu 25/11/21	Thu 25/11/21	263	50FF	50 days	Normal Working Hours	
265	SW1	ABWF works + BS works	90 days	Fri 26/11/21	Thu 17/3/22	263,110,78	55FF	495 days	Normal Working Hours	abwf
266		**Emergency Generator House**	**163 days**	**Wed 6/10/21**	**Tue 26/4/22**	**234**		**5 days**	**Normal Working Hou**	
267		Excavation for Raft Footing (100cu.m)	20 days	Wed 6/10/21	Fri 29/10/21	262	268	5 days	Normal Working Hours	ex
268		Plate load test	14 days	Sat 30/10/21	Mon 15/11/21	267	269,273	5 days	Normal Working Hours	
269	KD1J	R.C. structure works	30 days	Fri 26/11/21	Mon 3/1/22	268,263	270,50FF,271,275	0 days	Normal Working Hours	rc
270	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Mon 3/1/22	Mon 3/1/22	269	50FF	20 days	Normal Working Hours_20190924	
271	SW1	ABWF works + BS works	90 days	Tue 4/1/22	Tue 26/4/22	110,78,269	55FF	465 days	Normal Working Hours	abwf
272		**Deodorization System No.1 and No.3A**	**149 days**	**Tue 16/11/21**	**Sat 21/5/22**	**234**		**5 days**	**Normal Working Hou**	
273		Excavation for Raft Footing (400cu.m)	20 days	Tue 16/11/21	Wed 8/12/21	268	274	5 days	Normal Working Hours	ex
274		Plate load test	14 days	Thu 9/12/21	Fri 24/12/21	273	275	5 days	Normal Working Hours	
275	KD1J	R.C. structure works	20 days	Tue 4/1/22	Wed 26/1/22	274,269	276,277,50FF	0 days	Normal Working Hours	rc
276	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	Wed 26/1/22	Wed 26/1/22	275	50FF	0 days	Normal Working Hours_20190924	
277	SW1	ABWF works + BS works	90 days	Thu 27/1/22	Sat 21/5/22	275	55FF	445 days	Normal Working Hours	
278		**Additional and Alternation Works for Existing Facilities (B-7A, B-8, B-8A)**	**662 days**	**Wed 29/1/20**	**Fri 22/4/22**			**0 days**	**Normal Working Hou**	
279	KD2B	B-8A Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)	180 days	Wed 29/1/20	Thu 3/9/20	15,79,105,106	52FF,280	0 days	Normal Working Hours_20190924	uu
280	KD1I	B7-A Alternation works for exisiting Power House	122 days	Fri 4/9/20	Sat 30/1/21	13,67,88,90,279	49FF,281	0 days	Normal Working Hours	dem
281	SW3	Alternation works for existing Membrane Facilities Building No.1	360 days	Mon 1/2/21	Fri 22/4/22	14,280	57FF	573 days	Normal Working Hours	
282		**External Underground Service, Utilities, Road/Drain**	**1091 days**	**Mon 24/2/20**	**Sat 28/10/23**	**16**		**0 days**	**Normal Working Hou**	
283	KD2A	Process Pipes CHR and CHS (approx. 100m twin DN900 D.I.)	325 days	Mon 24/2/20	Sat 27/3/21	105,106,79FS+2	289,288SS+101 days,286S	0 days	Normal Working Hours	uu
284	SW2	Process Pipes, exclude CHR and CHS	550 days	Mon 29/6/20	Fri 6/5/22	283SS+101 days	289FS-100 days,56FF	0 days	Normal Working Hours	uu
285	SW2	Drainage	550 days	Mon 29/6/20	Fri 6/5/22	283SS+101 days	289FS-100 days,56FF	0 days	Normal Working Hours	uu
286	SW2	Sewerage	550 days	Mon 29/6/20	Fri 6/5/22	283SS+101 days	289FS-100 days,56FF	0 days	Normal Working Hours	uu
287	SW2	Waterworks	550 days	Mon 29/6/20	Fri 6/5/22	283SS+101 days	291FS+2 days,56FF	0 days	Normal Working Hours	uu
288	SW2	Cable Ducts	550 days	Mon 29/6/20	Fri 6/5/22	283SS+101 days	289FS-100 days,56FF	0 days	Normal Working Hours	uu
289	KD3A	Roadworks	540 days	Fri 31/12/21	Sat 28/10/23	285FS-100 days	53FF	0 days	Normal Working Hours	
290		**Landscaping Works**	**854 days**	**Wed 11/5/22**	**Thu 27/3/25**	**16**		**0 days**	**Normal Working Hou**	
291	SW3	Irrigation System	120 days	Wed 11/5/22	Fri 30/9/22	287FS+2 days,1	292,57FF	0 days	Normal Working Hours	uu
292	SW3	Hard Landscaping Works	220 days	Mon 3/10/22	Mon 3/7/23	291,80	293,57FF	0 days	Normal Working Hours	land
293	SW3	Soft Landscaping Works	220 days	Tue 4/7/23	Tue 26/3/24	292,80	294,57FF	0 days	Normal Working Hours	land
294	DLP	Establishment Works (365 days)	294 days	Wed 27/3/24	Thu 27/3/25	293,80	59FF	0 days	Normal Working Hours	



Critical Task Milestone Summary

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
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		11-Oct-19		0
AS000020	Starting Date	0	23-Oct-19		23-Oct-19		0
AS000110	Whole Contract Period (1626 days from starting date)	1626	23-Oct-19	04-Apr-24	23-Oct-19	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	24-Apr-21	23-Oct-19	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	25-Dec-21	23-Oct-19	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	23-Feb-22	23-Oct-19	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	04-Jan-22	23-Oct-19	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	24-May-22	23-Oct-19	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	26-Sep-21	23-Oct-19	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	01-Oct-20	23-Oct-19	01-Oct-20	0
AS001720	Planned Access Date for Portion B-1	1	01-Oct-20	01-Oct-20	01-Oct-20	01-Oct-20	0
AS001800	Portion B-2 (within 615 to 705 days from starting date)	705	23-Oct-19	26-Sep-21	23-Oct-19	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	23-Oct-19	23-Oct-19	23-Oct-19	0
AS001910	Planned Access Date for Works Area WA1-B	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	0
AS001920	Works Area WA3 (starting date)	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	0
AS001930	Planned Access Date for Works Area WA3	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	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	05-May-20	23-Oct-19	05-May-20	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	04-Jun-20	23-Oct-19	04-Jun-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	25-Jan-21	23-Oct-19	25-Jan-21	0
AS002050	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	01-Oct-20	15-Nov-23	01-Oct-20	15-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	08-Aug-20	23-Oct-19	08-Aug-20	0
AS003110	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20		08-Aug-20	0
Time Risk Allowance and Planned Completion							
AS003105	Time Risk Allowance for Section 1	1	08-Aug-20	08-Aug-20	08-Aug-20	08-Aug-20	0
AS003130	Planned Completion for Section 1	0		08-Aug-20		08-Aug-20	0
Section 2 - Complete All Designs (exclude Sec. 1 & 3)							
AS003200	Contract Duration of Section 2	601	23-Oct-19	14-Jun-21	23-Oct-19	14-Jun-21	0
AS003210	Completion date - Section 2 (600 days after starting date)	0		14-Jun-21		14-Jun-21	0
Time Risk Allowance and Planned Completion							
AS003220	Time Risk Allowance for Section 2	7	30-May-21	05-Jun-21	08-Jun-21	14-Jun-21	9
AS003230	Planned Completion for Section 2	0		14-Jun-21		14-Jun-21	0
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities							
AS003300	Contract Duration of Section 3	1626	23-Oct-19	04-Apr-24	23-Oct-19	04-Apr-24	0
AS003310	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24		04-Apr-24	0
Time Risk Allowance and Planned Completion							
AS003320	Time Risk Allowance for Section 3	26	10-Mar-24	04-Apr-24	10-Mar-24	04-Apr-24	0
AS003330	Planned Completion for Section 3	0		04-Apr-24		04-Apr-24	0
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1							
AS003400	Contract Duration of Section 4	886	23-Oct-19	26-Mar-22	23-Oct-19	26-Mar-22	0
AS003410	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22		26-Mar-22	0
Time Risk Allowance and Planned Completion							



File Name: DE/2018/03 R2-2
Layout: DE1803 (R2) - WBS
TASK filter: All Activities

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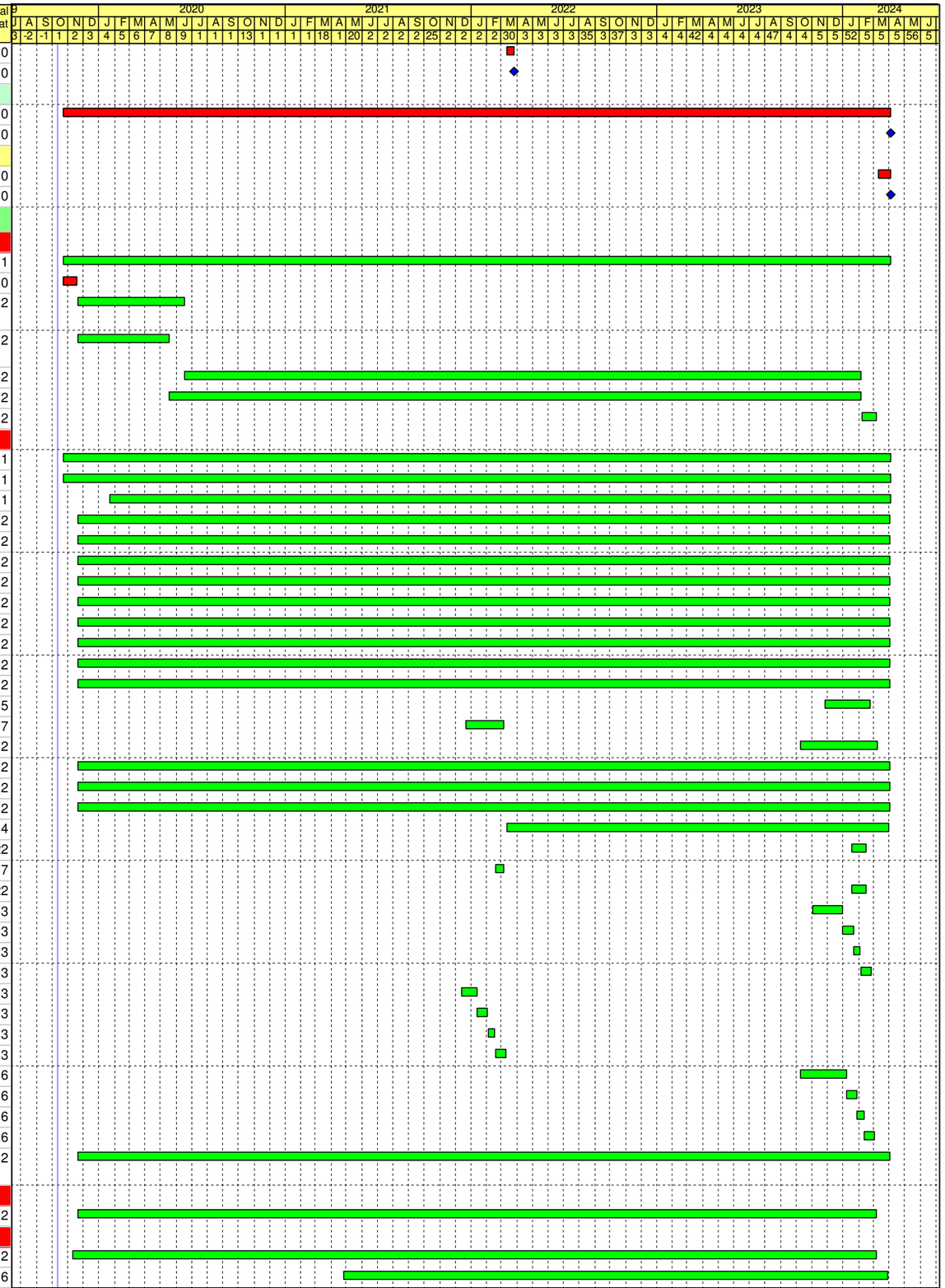
Remaining Work
Critical Activity
Milestone
Actual Progress

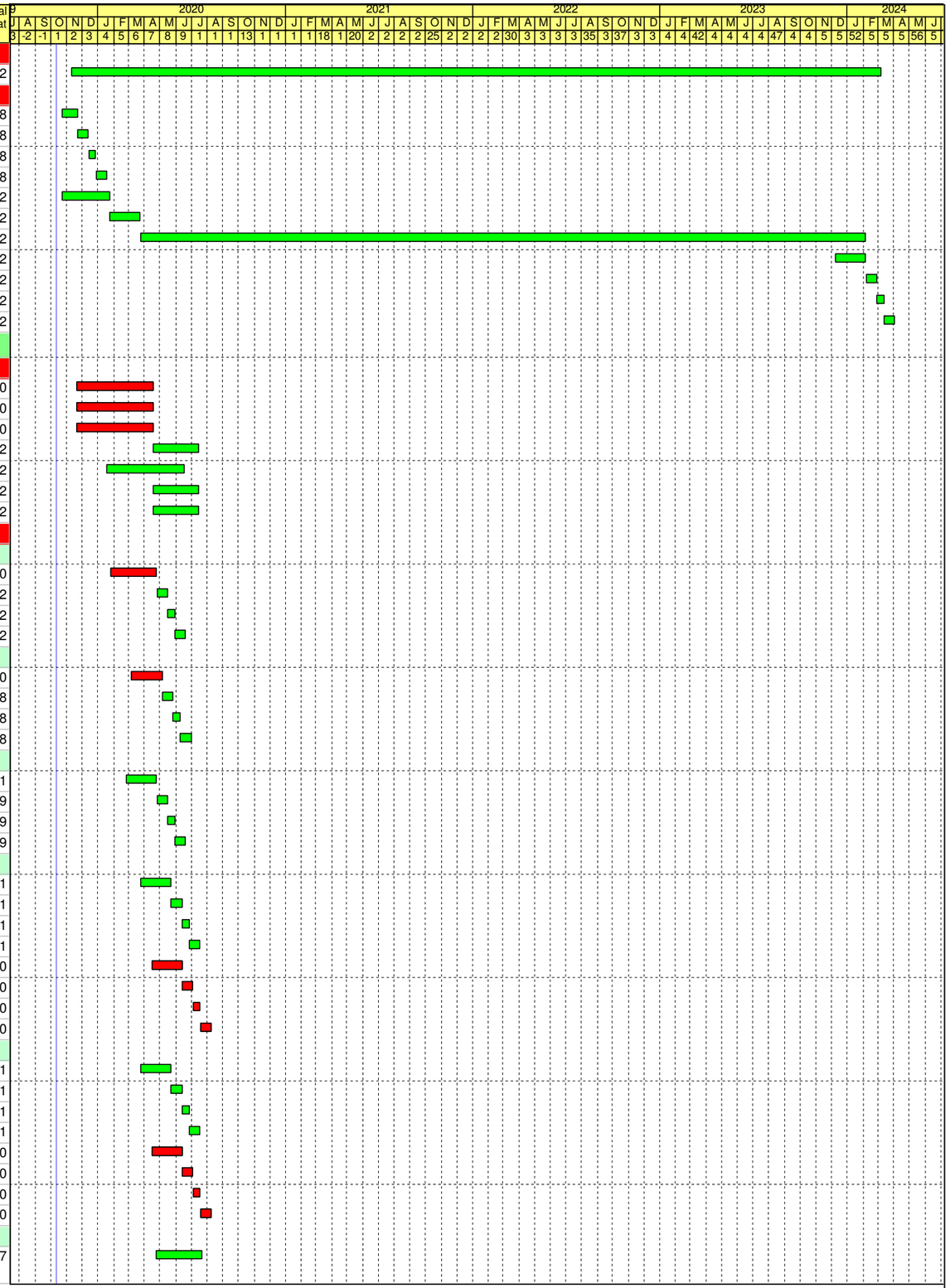
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis
Master Programme

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM
21-Apr-20	Rev. 2	AI	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS003420	Time Risk Allowance for Section 4	14	13-Mar-22	26-Mar-22	13-Mar-22	26-Mar-22	0
AS003430	Planned Completion for Section 4	0		26-Mar-22		26-Mar-22	0
Section 5 - Complete all remaining Works (incl. T&C)							
AS003500	Contract Duration of Section 5	1626	23-Oct-19	04-Apr-24	23-Oct-19	04-Apr-24	0
AS003510	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24		04-Apr-24	0
Time Risk Allowance and Planned Completion							
AS003520	Time Risk Allowance for Section 5	26	10-Mar-24	04-Apr-24	10-Mar-24	04-Apr-24	0
AS003530	Planned Completion for Section 5	0		04-Apr-24		04-Apr-24	0
Preliminaries							
Mobilisation							
AS010100	Provison of Equipment / Facilities for the PM's Office	1625	23-Oct-19	03-Apr-24	24-Oct-19	04-Apr-24	1
AS010200	Mobilisation	28	23-Oct-19	19-Nov-19	23-Oct-19	19-Nov-19	0
AS010205a	Design, Procurement & PO & Construction of Contractor's Site Office (Works Area WA1 -B)	210	20-Nov-19	16-Jun-20	22-Nov-19	18-Jun-20	2
AS010210	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	180	20-Nov-19	17-May-20	22-Nov-19	19-May-20	2
AS010220	Maintain Contractor's Site Office	1330	17-Jun-20	06-Feb-24	19-Jun-20	08-Feb-24	2
AS010230a	Maintain Contractor's Storage Area	1360	18-May-20	06-Feb-24	20-May-20	08-Feb-24	2
AS010240	Removal of Site Office, Storage & Relevant Facilities	30	07-Feb-24	07-Mar-24	09-Feb-24	09-Mar-24	2
Site Preliminaries							
AS010300	Provision of Insurance, Third Party Insurances & PII	1625	23-Oct-19	03-Apr-24	24-Oct-19	04-Apr-24	1
AS010400	Provision of 2 Contract Car for the Use of the PM & Supervisor	1625	23-Oct-19	03-Apr-24	24-Oct-19	04-Apr-24	1
AS010420a	Provision of 1 Electric Car for the Use of the PM & Supervisor	1534	22-Jan-20	03-Apr-24	23-Jan-20	04-Apr-24	1
AS010600	Provision of Photographs	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS010700	Provision of Environmental Mitigation Measures	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS010800	Provision of Air Pollution Abatment	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS010900	Provision of Noise Pollution Abatment	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011000	Provision of Wastewater Pollution Abatement	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011100	Provision of Wastement Management	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011200	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011300	Provision of Environmental Management	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011400	Provision of Site Management Plan for Trip Ticket System	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011500	Provision of As-constructed Drawings for Section 3	90	26-Nov-23	23-Feb-24	11-Dec-23	09-Mar-24	15
AS011520a	Provision of As-constructed Drawings for Section 4	75	21-Dec-21	06-Mar-22	28-Dec-21	12-Mar-22	7
AS011540a	Provision of As-constructed Drawings for Section 5	150	10-Oct-23	08-Mar-24	12-Oct-23	09-Mar-24	2
AS011600	Provision of Systematic Risk Management	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011700	Provision of Site Liaison Group & Community Liaison Group	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS011800	Provision of 24-Hour Telephone Line	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
AS012000	Provision of Upkeeping and Protection of Completed Works	750	13-Mar-22	31-Mar-24	17-Mar-22	04-Apr-24	4
AS012100	Provision of Training for Employer's Staff for Section 3	30	18-Jan-24	16-Feb-24	09-Feb-24	09-Mar-24	22
AS012120a	Provision of Training for Employer's Staff for Section 4	15	19-Feb-22	06-Mar-22	26-Feb-22	12-Mar-22	7
AS012140a	Provision of Training for Employer's Staff for Section 5	30	18-Jan-24	16-Feb-24	09-Feb-24	09-Mar-24	22
AS012300	Prepare & Submit O&M Manual for Section 3	60	02-Nov-23	31-Dec-23	15-Nov-23	13-Jan-24	13
AS012302a	PM Reivew & Comment O&M Manual for Section 3	21	01-Jan-24	21-Jan-24	14-Jan-24	03-Feb-24	13
AS012304a	Revise & Re-submit O&M Manual for Section 3	14	22-Jan-24	04-Feb-24	04-Feb-24	17-Feb-24	13
AS012306a	PM Reivew & Approval of O&M Manual for Section 3	21	05-Feb-24	25-Feb-24	18-Feb-24	09-Mar-24	13
AS012320a	Prepare & Submit O&M Manual for Section 4	30	14-Dec-21	13-Jan-22	17-Dec-21	15-Jan-22	3
AS012322a	PM Reivew & Comment O&M Manual for Section 4	21	13-Jan-22	02-Feb-22	16-Jan-22	05-Feb-22	3
AS012324a	Revise & Re-submit O&M Manual for Section 4	14	03-Feb-22	16-Feb-22	06-Feb-22	19-Feb-22	3
AS012326a	PM Reivew & Approval of O&M Manual for Section 4	21	17-Feb-22	09-Mar-22	20-Feb-22	12-Mar-22	3
AS012340a	Prepare & Submit O&M Manual for Section 5	90	10-Oct-23	07-Jan-24	16-Oct-23	13-Jan-24	6
AS012342a	PM Reivew & Comment O&M Manual for Section 5	21	08-Jan-24	28-Jan-24	14-Jan-24	03-Feb-24	6
AS012344a	Revise & Re-submit O&M Manual for Section 5	14	29-Jan-24	11-Feb-24	04-Feb-24	17-Feb-24	6
AS012346a	PM Reivew & Approval of O&M Manual for Section 5	21	12-Feb-24	03-Mar-24	18-Feb-24	09-Mar-24	6
AS012400	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	1596	20-Nov-19	02-Apr-24	22-Nov-19	04-Apr-24	2
Site Upkeeping							
AS013100	General Site Upkeeping of the Site	1570	20-Nov-19	07-Mar-24	22-Nov-19	09-Mar-24	2
Safety and Environmental Management							
AS013200	Construction Health and Safety Plan	1580	10-Nov-19	07-Mar-24	12-Nov-19	09-Mar-24	2
AS013300	Site Traffic Safety Management Plan	1070	25-Apr-21	29-Mar-24	01-May-21	04-Apr-24	6



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
Compliance with BEAM Requirements							
AS013400	BEAM Plus	1580	10-Nov-19	07-Mar-24	12-Nov-19	09-Mar-24	2
BIM							
AS011820a	Prepare & Submit Construction Stage BIM Execution Plan	30	24-Oct-19	22-Nov-19	01-Nov-19	30-Nov-19	8
AS011830a	PM Reivew & Comment Construction Stage BIM Execution Plan	21	23-Nov-19	13-Dec-19	01-Dec-19	21-Dec-19	8
AS011840a	Revise & Re-submit Construction Stage BIM Execution Plan	14	14-Dec-19	27-Dec-19	22-Dec-19	04-Jan-20	8
AS011850a	PM Reivew & Approval of Construction Stage BIM Execution Plan	21	28-Dec-19	17-Jan-20	05-Jan-20	25-Jan-20	8
AS011880b	Contractor Review & Study Design Stage BIM	92	24-Oct-19	23-Jan-20	26-Oct-19	25-Jan-20	2
AS011900	Contractor Develop 1st Construction Stage BIM	60	24-Jan-20	23-Mar-20	26-Jan-20	25-Mar-20	2
AS011920a	Review & Update BIM Execution Plan & BIM Model	1415	24-Mar-20	06-Feb-24	26-Mar-20	08-Feb-24	2
AS011960	Prepare & Submit the Fully Coordinated BIM	60	09-Dec-23	06-Feb-24	11-Dec-23	08-Feb-24	2
AS011961	PM Reivew & Comment Fully Coordinated BIM	21	07-Feb-24	27-Feb-24	09-Feb-24	29-Feb-24	2
AS011962	Revise & Re-submit Fully Coordinated BIM	14	28-Feb-24	12-Mar-24	01-Mar-24	14-Mar-24	2
AS011963	PM Reivew & Approval of Fully Coordinated BIM	21	13-Mar-24	02-Apr-24	15-Mar-24	04-Apr-24	2
Section 1 - Design for UV System No. 1 & Effluent Pumping Station No.1							
Major Plant & Materials Procurement							
AS103100	Procurement & PO for UV Disinfection System (S10)	150	20-Nov-19	17-Apr-20	20-Nov-19	17-Apr-20	0
AS103120	Procurement & PO for Lift-up Pumps (S11)	150	20-Nov-19	17-Apr-20	20-Nov-19	17-Apr-20	0
AS103140	Procurement & PO for Transfer Pumps (S13)	150	20-Nov-19	17-Apr-20	20-Nov-19	17-Apr-20	0
AS103160	Procurement & PO for FRP Cover (S11)	90	18-Apr-20	16-Jul-20	10-May-20	07-Aug-20	22
AS103180	Procurement & PO for EOT Cranes (2T & 5T) (S19)	150	19-Jan-20	16-Jun-20	11-Mar-20	07-Aug-20	52
AS103200	Procurement & PO for Stoplogs (S21)	90	18-Apr-20	16-Jul-20	10-May-20	07-Aug-20	22
AS103220	Procurement & PO for Penstocks (S21)	90	18-Apr-20	16-Jul-20	10-May-20	07-Aug-20	22
Design & Submission							
General Arrangement Drawings							
AS101100	Prepare & Submit General Arrangement Drawings	90	26-Jan-20	24-Apr-20	26-Jan-20	24-Apr-20	0
AS101110	Review & Comment on General Arrangement Drawings by PM	21	25-Apr-20	15-May-20	06-Jun-20	26-Jun-20	42
AS101120	Revise & Re-submit General Arrangement Drawings	14	16-May-20	29-May-20	27-Jun-20	10-Jul-20	42
AS101130	Review & Accept of General Arrangement Drawings by PM	21	30-May-20	19-Jun-20	11-Jul-20	31-Jul-20	42
Civil & Dimensional / Tolerance Requirement Drawings							
AS102100	Prepare & Submit Civil Requirement Drawings	60	07-Mar-20	05-May-20	07-Mar-20	05-May-20	0
AS102110	Review & Comment on Civil Requirement Drawings by PM	21	06-May-20	26-May-20	13-Jun-20	03-Jul-20	38
AS102120	Revise & Re-submit Civil Requirement Drawings	14	27-May-20	09-Jun-20	04-Jul-20	17-Jul-20	38
AS102130	Review & Accept of Civil Requirement Drawings by PM	21	10-Jun-20	30-Jun-20	18-Jul-20	07-Aug-20	38
Electrical Schematic Drawings							
AS102150	Prepare & Submit Elec. Schematic Drawings	60	25-Feb-20	24-Apr-20	26-Feb-20	25-Apr-20	1
AS102160	Review & Comment on Elec. Schematic Drawings by PM	21	25-Apr-20	15-May-20	13-Jun-20	03-Jul-20	49
AS102170	Revise & Re-submit Elec. Schematic Drawings	14	16-May-20	29-May-20	04-Jul-20	17-Jul-20	49
AS102180	Review & Accept of Elec. Schematic Drawings by PM	21	30-May-20	19-Jun-20	18-Jul-20	07-Aug-20	49
UV System No. 1							
AS102200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20	22-May-20	25-Mar-20	23-May-20	1
AS102210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	23-May-20	12-Jun-20	24-May-20	13-Jun-20	1
AS102220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	13-Jun-20	26-Jun-20	14-Jun-20	27-Jun-20	1
AS102230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	27-Jun-20	17-Jul-20	28-Jun-20	18-Jul-20	1
AS102300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20	13-Jun-20	15-Apr-20	13-Jun-20	0
AS102310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Jun-20	04-Jul-20	14-Jun-20	04-Jul-20	0
AS102320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	05-Jul-20	18-Jul-20	05-Jul-20	18-Jul-20	0
AS102330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	19-Jul-20	08-Aug-20	19-Jul-20	08-Aug-20	0
Effluent Pumping Station No. 1							
AS112200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20	22-May-20	25-Mar-20	23-May-20	1
AS112210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	23-May-20	12-Jun-20	24-May-20	13-Jun-20	1
AS112220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	13-Jun-20	26-Jun-20	14-Jun-20	27-Jun-20	1
AS112230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	27-Jun-20	17-Jul-20	28-Jun-20	18-Jul-20	1
AS112300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20	13-Jun-20	15-Apr-20	13-Jun-20	0
AS112310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Jun-20	04-Jul-20	14-Jun-20	04-Jul-20	0
AS112320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	05-Jul-20	18-Jul-20	05-Jul-20	18-Jul-20	0
AS112330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	19-Jul-20	08-Aug-20	19-Jul-20	08-Aug-20	0
Building Services							
AS113100	Prepare & Submit BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	90	23-Apr-20	21-Jul-20	10-May-20	07-Aug-20	17

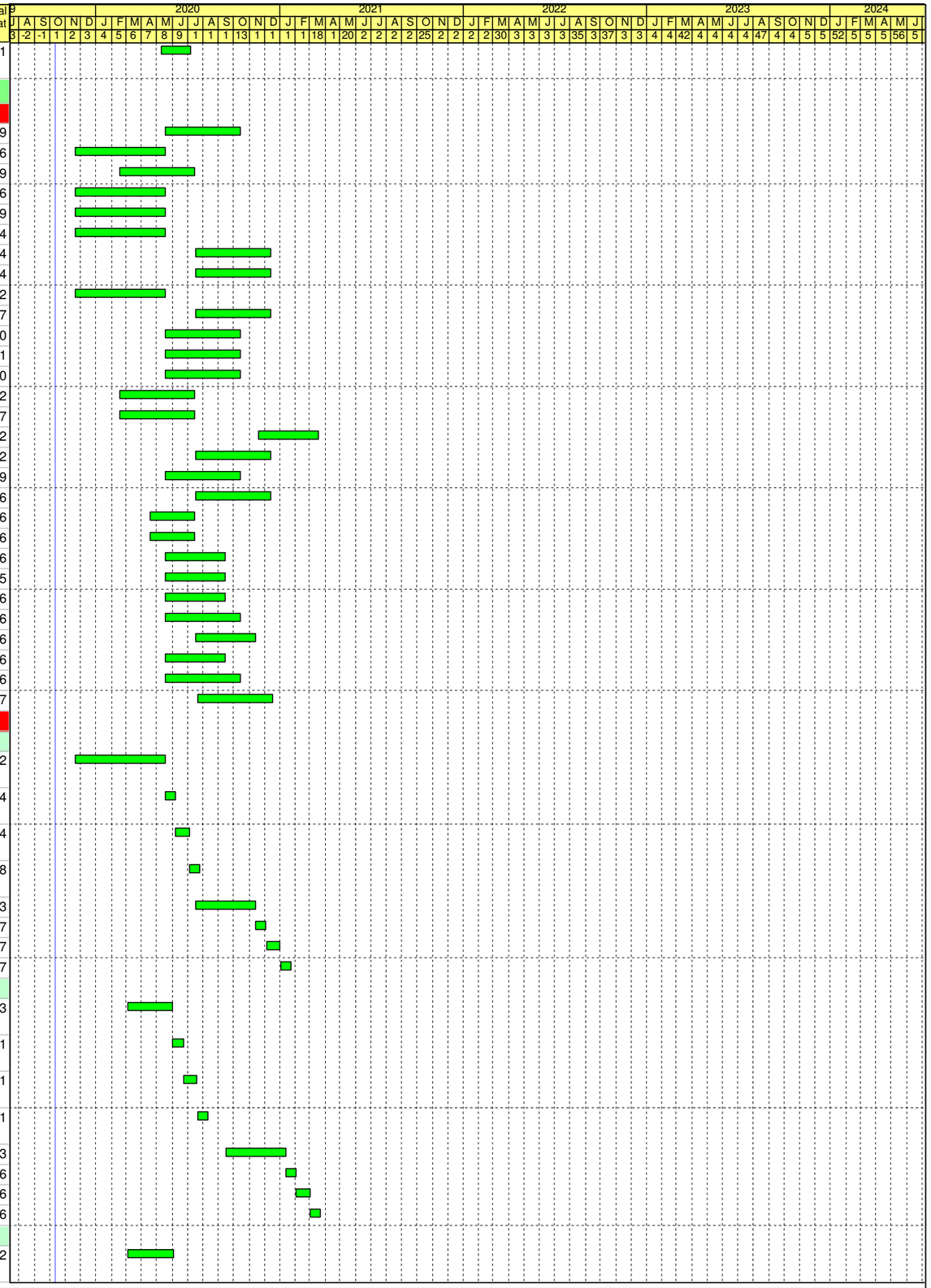


Remaining Work
Critical Activity
Milestone
Actual Progress

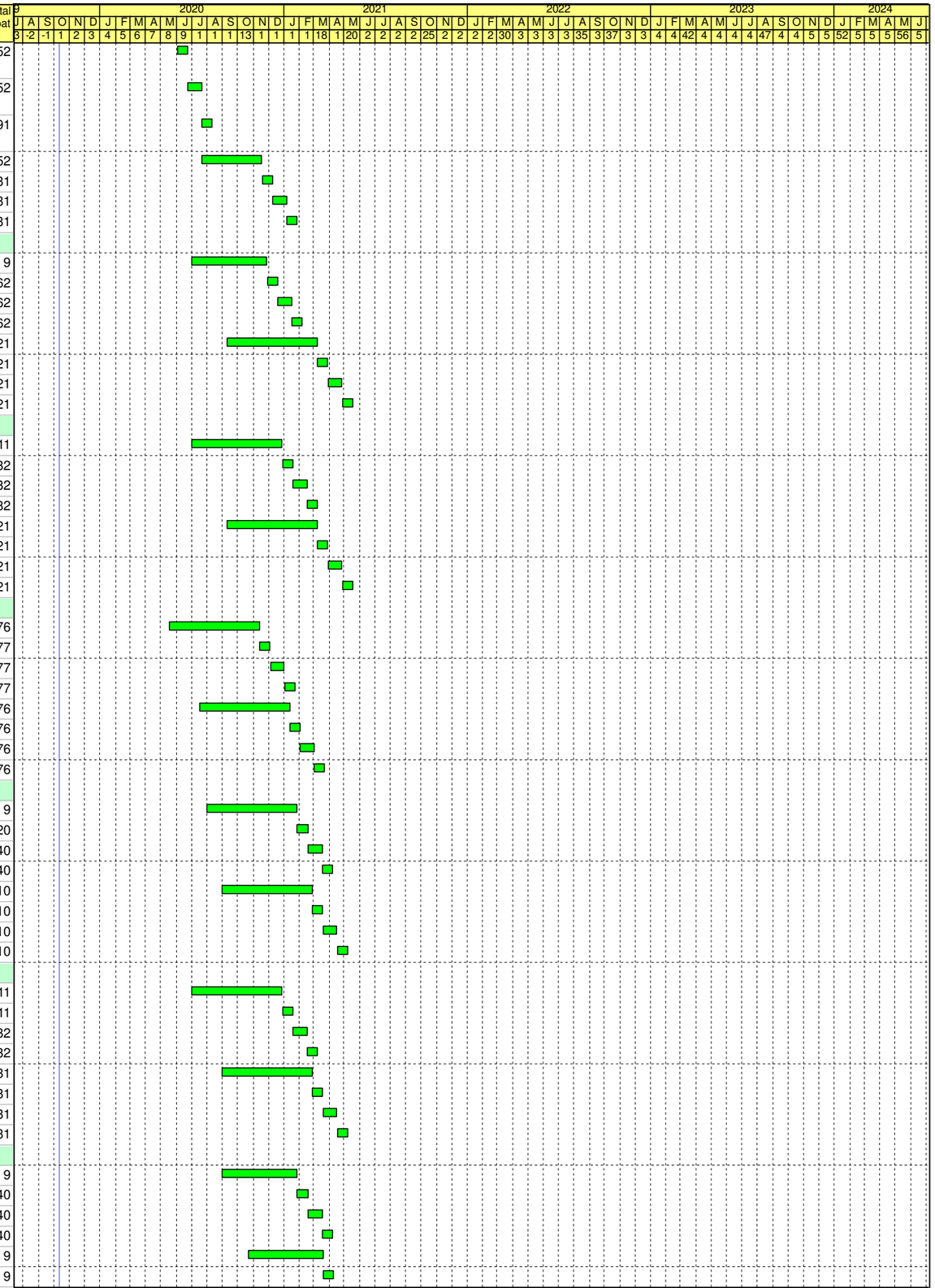
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis
Master Programme

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM
21-Apr-20	Rev. 2	AI	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS113200	Prepare & Submit FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	60	10-May-20	08-Jul-20	11-May-20	09-Jul-20	1
Section 2 - Complete All Designs (exclude Sec. 1 & 3)							
Major Plant & Materials Procurement							
AS023100	Procurement & PO for Sludge Screening System (S2)	150	18-May-20	14-Oct-20	27-May-20	23-Oct-20	9
AS023120	Procurement & PO for Sludge Thickening System (S3)	180	20-Nov-19	17-May-20	14-Apr-20	10-Oct-20	146
AS023140	Procurement & PO for Sludge Digestion System (S5)	150	18-Feb-20	16-Jul-20	27-Feb-20	25-Jul-20	9
AS023160	Procurement & PO for Sludge Dewatering System (S6)	180	20-Nov-19	17-May-20	14-Apr-20	10-Oct-20	146
AS023180	Procurement & PO for THP System (S4)	180	20-Nov-19	17-May-20	29-Nov-19	26-May-20	9
AS023190a	Procurement & PO for Biogas Holding Tanks(S7)	180	20-Nov-19	17-May-20	13-Mar-20	08-Sep-20	114
AS023200	Procurement & PO for Biogas Booster and Transfer Pumps (S7)	150	17-Jul-20	13-Dec-20	10-Aug-20	06-Jan-21	24
AS023210	Procurement & PO for H2S Removal System (S7)	150	17-Jul-20	13-Dec-20	10-Aug-20	06-Jan-21	24
AS023220	Procurement & PO for CHP System (S8)	180	20-Nov-19	17-May-20	22-Nov-19	19-May-20	2
AS023240	Procurement & PO for Waste Gas Burning System (S9)	150	17-Jul-20	13-Dec-20	03-Aug-20	30-Dec-20	17
AS023260	Procurement & PO for Plant Service Water System (S12)	150	18-May-20	14-Oct-20	28-May-20	24-Oct-20	10
AS023270	Procurement & PO for Reclaimed Water Utilisation (S13)	150	18-May-20	14-Oct-20	18-Jun-20	14-Nov-20	31
AS023280	Procurement & PO for SAS Pumping System (S14)	150	18-May-20	14-Oct-20	28-May-20	24-Oct-20	10
AS023300	Procurement & PO for Transfomers (S17)	150	18-Feb-20	16-Jul-20	20-Feb-20	18-Jul-20	2
AS023320	Procurement & PO for 11 kV Switchboard (S17)	150	18-Feb-20	16-Jul-20	13-Aug-20	09-Jan-21	177
AS023340	Procurement & PO for 380V Switchboard (S17)	120	19-Nov-20	18-Mar-21	10-Jan-21	09-May-21	52
AS023380	Procurement & PO for Control & Monitoring System (S18)	150	17-Jul-20	13-Dec-20	19-Jul-20	15-Dec-20	2
AS023400	Procurement & PO for Lifting Appliances (S19)	150	18-May-20	14-Oct-20	26-Jun-20	22-Nov-20	39
AS023420	Procurement & PO for DO System (S21)	150	17-Jul-20	13-Dec-20	09-Jan-21	07-Jun-21	176
AS023440	Procurement & PO for Stoplog (S21)	90	18-Apr-20	16-Jul-20	10-Mar-21	07-Jun-21	326
AS023460	Procurement & PO for Penstock (S21)	90	18-Apr-20	16-Jul-20	10-Mar-21	07-Jun-21	326
AS023480	Procurement & PO for Sewage Pump (S21)	120	18-May-20	14-Sep-20	08-Feb-21	07-Jun-21	266
AS023500	Procurement & PO for Process Water Pump (S21)	120	18-May-20	14-Sep-20	09-Nov-20	08-Mar-21	175
AS023520	Procurement & PO for External Sludge Transfer Pump (S21)	120	18-May-20	14-Sep-20	08-Feb-21	07-Jun-21	266
AS023540	Procurement & PO for THP Cooling Pump (S21)	150	18-May-20	14-Oct-20	09-Jan-21	07-Jun-21	236
AS023560	Procurement & PO for Ferric Chloride Storage Tank (S21)	120	17-Jul-20	13-Nov-20	08-Feb-21	07-Jun-21	206
AS023580	Procurement & PO for Ferric Chloride Dosing Pump (S21)	120	18-May-20	14-Sep-20	08-Feb-21	07-Jun-21	266
AS023600	Procurement & PO for Temporary Primary Sludge Pump (S21)	150	18-May-20	14-Oct-20	09-Jan-21	07-Jun-21	236
AS023620b	Procurement & PO for Genset	150	22-Jul-20	18-Dec-20	14-Jun-21	10-Nov-21	327
Design & Submission							
General Arrangement Drawings							
AS020100	Prepare & Submit General Arrangement Drawings (from formation level up to +8mPD)	180	20-Nov-19	17-May-20	22-Nov-19	19-May-20	2
AS020110	Review & Comment on General Arrangement Drawings by PM (from formation level up to +8mPD)	21	18-May-20	07-Jun-20	11-Jun-20	01-Jul-20	24
AS020120	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	28	08-Jun-20	05-Jul-20	02-Jul-20	29-Jul-20	24
AS020130	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	21	06-Jul-20	26-Jul-20	01-Dec-20	21-Dec-20	148
AS020140a	Prepare & Submit General Arrangement Drawings (remaining)	120	17-Jul-20	13-Nov-20	30-Jul-20	26-Nov-20	13
AS020150a	Review & Comment on General Arrangement Drawings by PM (remaining)	21	14-Nov-20	04-Dec-20	01-Dec-20	21-Dec-20	17
AS020160a	Revise & Re-submit General Arrangement Drawings (remaining)	28	05-Dec-20	01-Jan-21	22-Dec-20	18-Jan-21	17
AS020170a	Review & Accept of General Arrangement Drawings by PM (remaining)	21	02-Jan-21	22-Jan-21	19-Jan-21	08-Feb-21	17
Civil & Dimensional / Tolerance Requirement Drawings							
AS020200	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	90	04-Mar-20	01-Jun-20	07-Mar-20	04-Jun-20	3
AS020210	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	02-Jun-20	22-Jun-20	20-Nov-20	10-Dec-20	171
AS020220	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	28	23-Jun-20	20-Jul-20	11-Dec-20	07-Jan-21	171
AS020230	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	21-Jul-20	10-Aug-20	08-Jan-21	28-Jan-21	171
AS020300	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	120	15-Sep-20	12-Jan-21	28-Sep-20	25-Jan-21	13
AS020310	Review & Comment on Civil Requirement Drawings by PM (remaining)	21	13-Jan-21	02-Feb-21	30-Mar-21	19-Apr-21	76
AS020320	Revise & Re-submit Civil Requirement Drawings (remaining)	28	03-Feb-21	02-Mar-21	20-Apr-21	17-May-21	76
AS020330	Review & Accept of Civil Requirement Drawings by PM (remaining)	21	03-Mar-21	23-Mar-21	18-May-21	07-Jun-21	76
Electrical Schematic Drawings							
AS021200	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	90	05-Mar-20	02-Jun-20	07-Mar-20	04-Jun-20	2

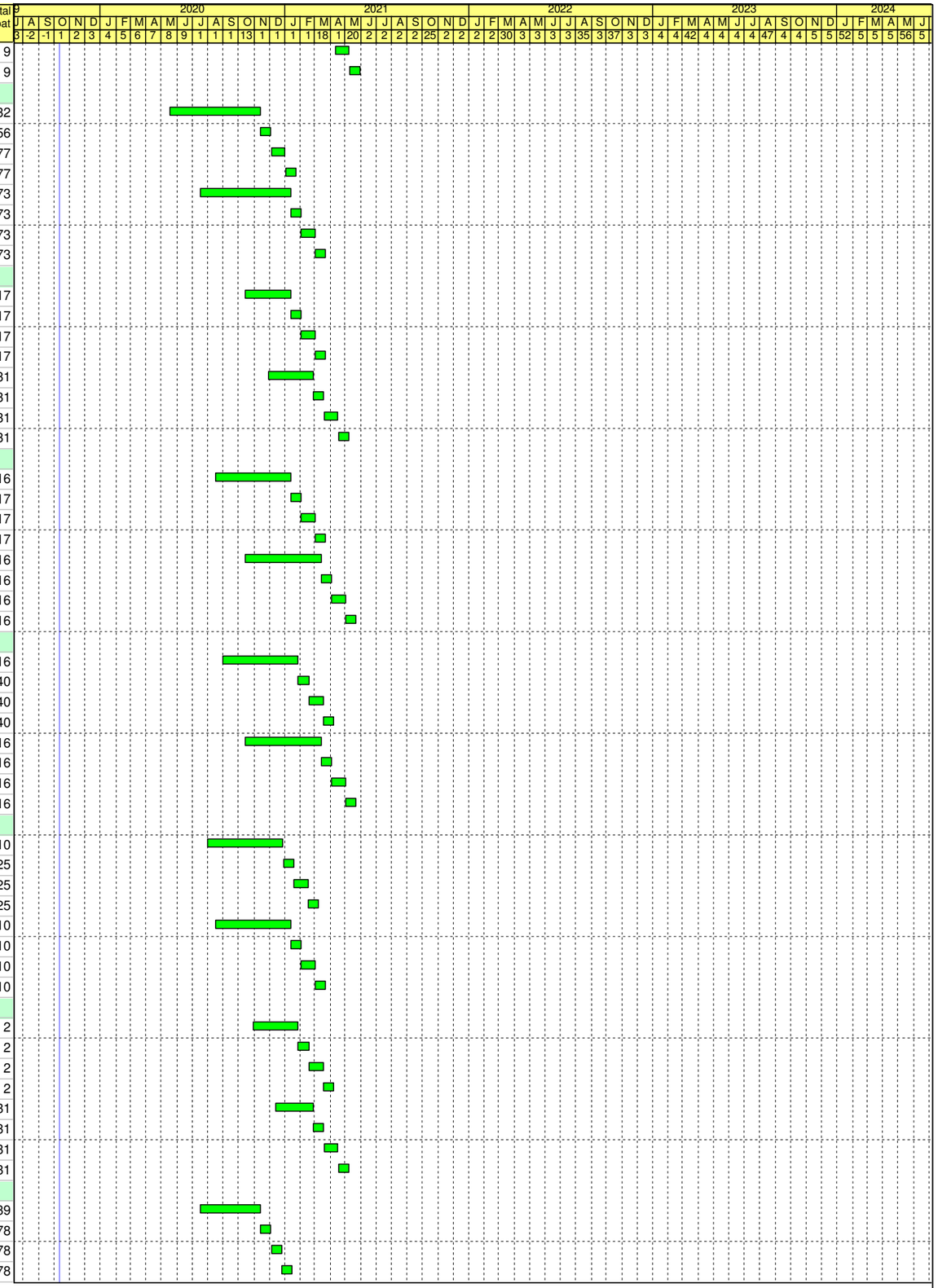


Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS021210	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	03-Jun-20	23-Jun-20	25-Jul-20	14-Aug-20	52
AS021220	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	28	24-Jun-20	21-Jul-20	15-Aug-20	11-Sep-20	52
AS021230	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	22-Jul-20	11-Aug-20	21-Oct-20	10-Nov-20	91
AS021300	Prepare & Submit Elec. Schematic Drawings (remaining) -KD2B	120	22-Jul-20	18-Nov-20	12-Sep-20	09-Jan-21	52
AS021310	Review & Comment on Elec. Schematic Drawings by PM (remaining)	21	19-Nov-20	09-Dec-20	30-Mar-21	19-Apr-21	131
AS021320	Revise & Re-submit Elec. Schematic Drawings (remaining)	28	10-Dec-20	06-Jan-21	20-Apr-21	17-May-21	131
AS021330	Review & Accept of Elec. Schematic Drawings by PM (remaining)	21	07-Jan-21	27-Jan-21	18-May-21	07-Jun-21	131
Sludge Screening (SSc)							
AS022200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	150	02-Jul-20	28-Nov-20	11-Jul-20	07-Dec-20	9
AS022210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	29-Nov-20	19-Dec-20	30-Jan-21	19-Feb-21	62
AS022220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	20-Dec-20	16-Jan-21	20-Feb-21	19-Mar-21	62
AS022230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	17-Jan-21	06-Feb-21	20-Mar-21	09-Apr-21	62
AS022300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	10-Sep-20	08-Mar-21	01-Oct-20	29-Mar-21	21
AS022310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	09-Mar-21	29-Mar-21	30-Mar-21	19-Apr-21	21
AS022320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	30-Mar-21	26-Apr-21	20-Apr-21	17-May-21	21
AS022330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Apr-21	17-May-21	18-May-21	07-Jun-21	21
Sludge Thickening (STh)							
AS032200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	180	02-Jul-20	28-Dec-20	13-Jul-20	08-Jan-21	11
AS032210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	29-Dec-20	18-Jan-21	30-Jan-21	19-Feb-21	32
AS032220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	19-Jan-21	15-Feb-21	20-Feb-21	19-Mar-21	32
AS032230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	16-Feb-21	08-Mar-21	20-Mar-21	09-Apr-21	32
AS032300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	10-Sep-20	08-Mar-21	01-Oct-20	29-Mar-21	21
AS032310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	09-Mar-21	29-Mar-21	30-Mar-21	19-Apr-21	21
AS032320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	30-Mar-21	26-Apr-21	20-Apr-21	17-May-21	21
AS032330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Apr-21	17-May-21	18-May-21	07-Jun-21	21
Thermal Hydrolysis Process (THP)							
AS042200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	180	18-May-20	13-Nov-20	02-Aug-20	28-Jan-21	76
AS042210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	14-Nov-20	04-Dec-20	30-Jan-21	19-Feb-21	77
AS042220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	05-Dec-20	01-Jan-21	20-Feb-21	19-Mar-21	77
AS042230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	02-Jan-21	22-Jan-21	20-Mar-21	09-Apr-21	77
AS042300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	17-Jul-20	12-Jan-21	01-Oct-20	29-Mar-21	76
AS042310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	13-Jan-21	02-Feb-21	30-Mar-21	19-Apr-21	76
AS042320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	03-Feb-21	02-Mar-21	20-Apr-21	17-May-21	76
AS042330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	03-Mar-21	23-Mar-21	18-May-21	07-Jun-21	76
Sludge Digestion (SDi)							
AS052200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	180	01-Aug-20	27-Jan-21	10-Aug-20	05-Feb-21	9
AS052210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	17-Feb-21	09-Mar-21	20
AS052220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	30-Mar-21	26-Apr-21	40
AS052230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	27-Apr-21	17-May-21	40
AS052300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	31-Aug-20	26-Feb-21	10-Sep-20	08-Mar-21	10
AS052310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Feb-21	19-Mar-21	09-Mar-21	29-Mar-21	10
AS052320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	20-Mar-21	16-Apr-21	30-Mar-21	26-Apr-21	10
AS052330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Apr-21	07-May-21	27-Apr-21	17-May-21	10
Sludge Dewatering (SDe)							
AS062200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	180	02-Jul-20	28-Dec-20	13-Jul-20	08-Jan-21	11
AS062210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	29-Dec-20	18-Jan-21	09-Jan-21	29-Jan-21	11
AS062220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	19-Jan-21	15-Feb-21	20-Feb-21	19-Mar-21	32
AS062230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	16-Feb-21	08-Mar-21	20-Mar-21	09-Apr-21	32
AS062300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	31-Aug-20	26-Feb-21	01-Oct-20	29-Mar-21	31
AS062310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Feb-21	19-Mar-21	30-Mar-21	19-Apr-21	31
AS062320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	20-Mar-21	16-Apr-21	20-Apr-21	17-May-21	31
AS062330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Apr-21	07-May-21	18-May-21	07-Jun-21	31
Biogas Storage & Pre-Treatment (BSPT)							
AS072200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	150	31-Aug-20	27-Jan-21	09-Sep-20	05-Feb-21	9
AS072210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	09-Mar-21	29-Mar-21	40
AS072220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	30-Mar-21	26-Apr-21	40
AS072230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	27-Apr-21	17-May-21	40
AS072300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	150	22-Oct-20	20-Mar-21	31-Oct-20	29-Mar-21	9
AS072310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	21-Mar-21	10-Apr-21	30-Mar-21	19-Apr-21	9

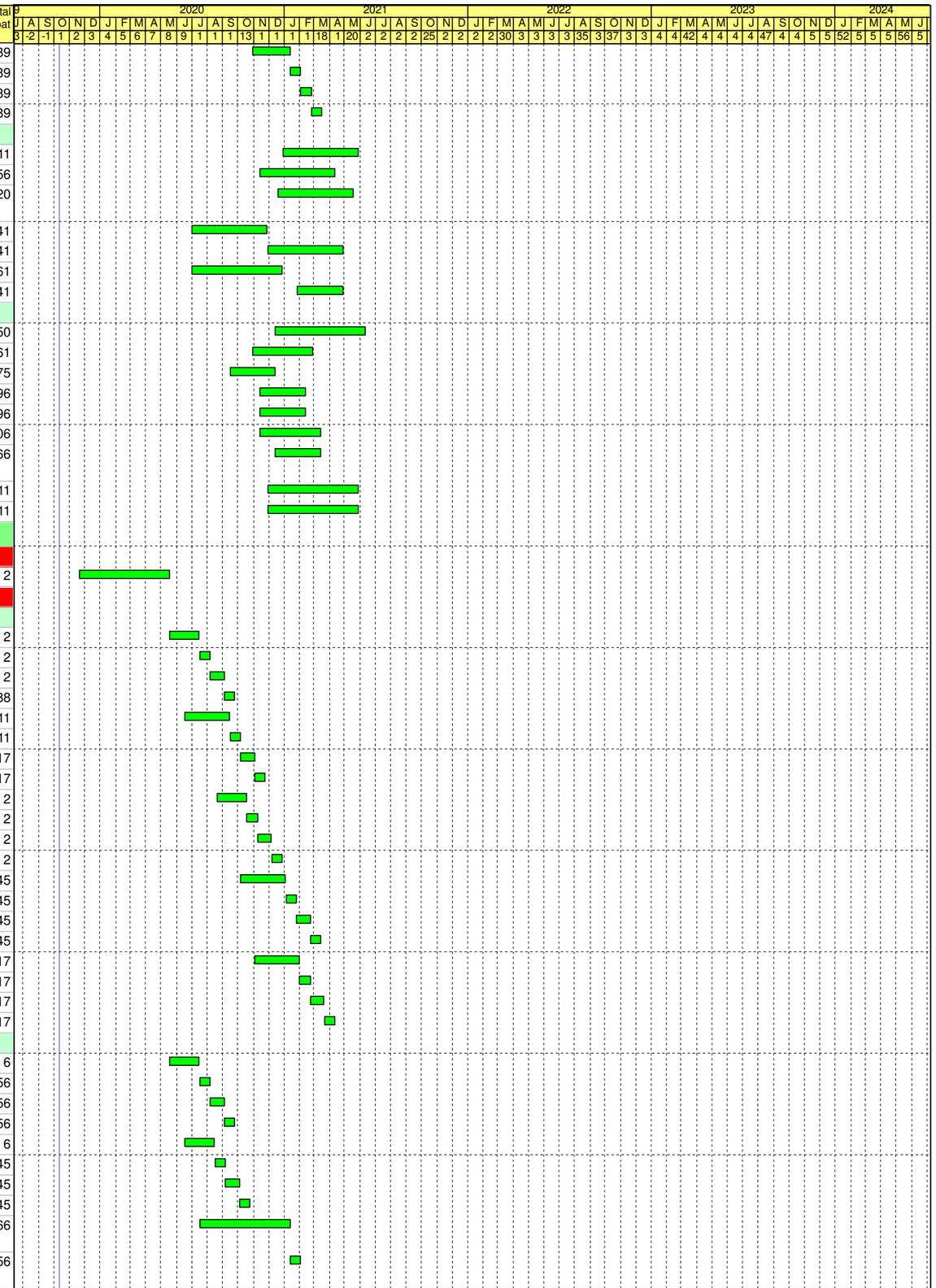


Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM
21-Apr-20	Rev. 2	AI	KM

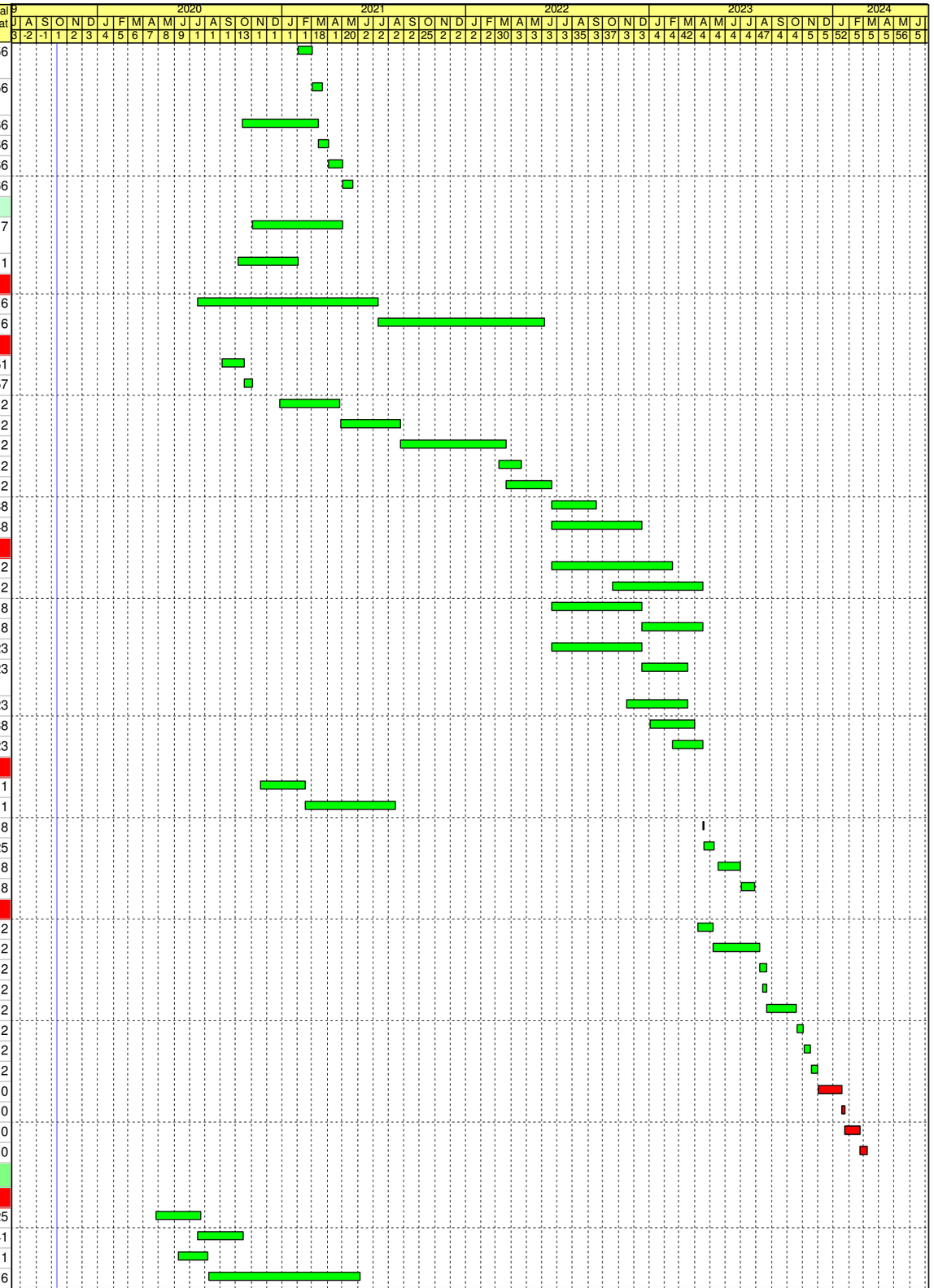
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS072320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	11-Apr-21	08-May-21	20-Apr-21	17-May-21	9
AS072330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	09-May-21	29-May-21	18-May-21	07-Jun-21	9
Combined Heat & Power Generation (CHP)							
AS082200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	180	18-May-20	13-Nov-20	19-Jun-20	15-Dec-20	32
AS082210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	14-Nov-20	04-Dec-20	09-Jan-21	29-Jan-21	56
AS082220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	05-Dec-20	01-Jan-21	20-Feb-21	19-Mar-21	77
AS082230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	02-Jan-21	22-Jan-21	20-Mar-21	09-Apr-21	77
AS082300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	17-Jul-20	12-Jan-21	28-Sep-20	26-Mar-21	73
AS082310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	13-Jan-21	02-Feb-21	27-Mar-21	16-Apr-21	73
AS082320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	03-Feb-21	02-Mar-21	17-Apr-21	14-May-21	73
AS082330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	03-Mar-21	23-Mar-21	15-May-21	04-Jun-21	73
Waste Gas Burning System (WGB)							
AS092200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	90	15-Oct-20	12-Jan-21	01-Nov-20	29-Jan-21	17
AS092210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	13-Jan-21	02-Feb-21	30-Jan-21	19-Feb-21	17
AS092220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	03-Feb-21	02-Mar-21	20-Feb-21	19-Mar-21	17
AS092230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	03-Mar-21	23-Mar-21	20-Mar-21	09-Apr-21	17
AS092300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	90	29-Nov-20	26-Feb-21	30-Dec-20	29-Mar-21	31
AS092310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Feb-21	19-Mar-21	30-Mar-21	19-Apr-21	31
AS092320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	20-Mar-21	16-Apr-21	20-Apr-21	17-May-21	31
AS092330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Apr-21	07-May-21	18-May-21	07-Jun-21	31
Plant Service Water System (PSW)							
AS122200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	150	16-Aug-20	12-Jan-21	01-Sep-20	28-Jan-21	16
AS122210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	13-Jan-21	02-Feb-21	30-Jan-21	19-Feb-21	17
AS122220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	03-Feb-21	02-Mar-21	20-Feb-21	19-Mar-21	17
AS122230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	03-Mar-21	23-Mar-21	20-Mar-21	09-Apr-21	17
AS122300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	150	15-Oct-20	13-Mar-21	31-Oct-20	29-Mar-21	16
AS122310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Mar-21	03-Apr-21	30-Mar-21	19-Apr-21	16
AS122320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	04-Apr-21	01-May-21	20-Apr-21	17-May-21	16
AS122330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	02-May-21	22-May-21	18-May-21	07-Jun-21	16
Reclaimed Water Facility (RWF)							
AS132200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	150	31-Aug-20	27-Jan-21	16-Sep-20	12-Feb-21	16
AS132210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	09-Mar-21	29-Mar-21	40
AS132220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	30-Mar-21	26-Apr-21	40
AS132230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	27-Apr-21	17-May-21	40
AS132300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	150	15-Oct-20	13-Mar-21	31-Oct-20	29-Mar-21	16
AS132310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Mar-21	03-Apr-21	30-Mar-21	19-Apr-21	16
AS132320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	04-Apr-21	01-May-21	20-Apr-21	17-May-21	16
AS132330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	02-May-21	22-May-21	18-May-21	07-Jun-21	16
Surplus Activated Sludge Pumping Station (SAS)							
AS142200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	150	01-Aug-20	28-Dec-20	11-Aug-20	07-Jan-21	10
AS142210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	29-Dec-20	18-Jan-21	23-Jan-21	12-Feb-21	25
AS142220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	19-Jan-21	15-Feb-21	13-Feb-21	12-Mar-21	25
AS142230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	16-Feb-21	08-Mar-21	13-Mar-21	02-Apr-21	25
AS142300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	150	16-Aug-20	12-Jan-21	26-Aug-20	22-Jan-21	10
AS142310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	13-Jan-21	02-Feb-21	23-Jan-21	12-Feb-21	10
AS142320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	03-Feb-21	02-Mar-21	13-Feb-21	12-Mar-21	10
AS142330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	03-Mar-21	23-Mar-21	13-Mar-21	02-Apr-21	10
Control and Monitoring System							
AS182200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	90	30-Oct-20	27-Jan-21	01-Nov-20	29-Jan-21	2
AS182210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	30-Jan-21	19-Feb-21	2
AS182220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	20-Feb-21	19-Mar-21	2
AS182230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	20-Mar-21	09-Apr-21	2
AS182300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	75	14-Dec-20	26-Feb-21	14-Jan-21	29-Mar-21	31
AS182310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Feb-21	19-Mar-21	30-Mar-21	19-Apr-21	31
AS182320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	20-Mar-21	16-Apr-21	20-Apr-21	17-May-21	31
AS182330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Apr-21	07-May-21	18-May-21	07-Jun-21	31
Lifting Appliances							
AS192200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	120	17-Jul-20	13-Nov-20	25-Aug-20	22-Dec-20	39
AS192210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	14-Nov-20	04-Dec-20	31-Jan-21	20-Feb-21	78
AS192220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	21	05-Dec-20	25-Dec-20	21-Feb-21	13-Mar-21	78
AS192230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	26-Dec-20	15-Jan-21	14-Mar-21	03-Apr-21	78



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS192300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	75	30-Oct-20	12-Jan-21	08-Dec-20	20-Feb-21	39
AS192310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	13-Jan-21	02-Feb-21	21-Feb-21	13-Mar-21	39
AS192320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	21	03-Feb-21	23-Feb-21	14-Mar-21	03-Apr-21	39
AS192330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	24-Feb-21	16-Mar-21	04-Apr-21	24-Apr-21	39
Building Services							
AS201100	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	150	29-Dec-20	27-May-21	09-Jan-21	07-Jun-21	11
AS201200	Submit & Accept BS Works Design & Dwgs for CHP Building	150	14-Nov-20	12-Apr-21	09-Jan-21	07-Jun-21	56
AS201300	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	150	20-Dec-20	18-May-21	09-Jan-21	07-Jun-21	20
AS201500	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	150	02-Jul-20	28-Nov-20	12-Aug-20	08-Jan-21	41
AS201700	Submit & Accept BS Works Design & Dwgs for Other Facilities	150	29-Nov-20	27-Apr-21	09-Jan-21	07-Jun-21	41
AS201800	Submit & Accept BS Works Design & Dwgs for FS Installation	180	02-Jul-20	28-Dec-20	10-Dec-20	07-Jun-21	161
AS201900	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	90	28-Jan-21	27-Apr-21	10-Mar-21	07-Jun-21	41
Miscellaneous							
AS211100	Submit & Accept Design & Dwgs for DO System	180	14-Dec-20	11-Jun-21	21-Aug-21	16-Feb-22	250
AS211200	Submit & Accept Design & Dwgs for Sewage Pumping Station	120	30-Oct-20	26-Feb-21	18-Jul-21	14-Nov-21	261
AS211300	Submit & Accept Design & Dwgs for Process Water Pumping System	90	15-Sep-20	13-Dec-20	09-Mar-21	06-Jun-21	175
AS211400	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	90	14-Nov-20	11-Feb-21	15-Dec-21	14-Mar-22	396
AS211500	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	90	14-Nov-20	11-Feb-21	15-Dec-21	14-Mar-22	396
AS211600	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	120	14-Nov-20	13-Mar-21	16-Sep-21	13-Jan-22	306
AS211700	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	90	14-Dec-20	13-Mar-21	15-Dec-21	14-Mar-22	366
AS211800	Submit & Accept Design & Dwgs for Gas Detection System	180	29-Nov-20	27-May-21	10-Dec-20	07-Jun-21	11
AS211900	Submit & Accept Design & Dwgs for CCTV System	180	29-Nov-20	27-May-21	10-Dec-20	07-Jun-21	11
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities							
Major Subcontractor / Supplier Procurement							
AS160020	Procurement & PO for Deammonification Sidestream Treatment Facilities	180	20-Nov-19	17-May-20	22-Nov-19	19-May-20	2
Design & Submission							
Civil Works Design							
AS160100	Prepare & Submit General Layout Plan	60	18-May-20	16-Jul-20	20-May-20	18-Jul-20	2
AS160110	Review & Comment on General Layout Plan by PM	21	17-Jul-20	06-Aug-20	19-Jul-20	08-Aug-20	2
AS160120	Revise & Re-submit General Layout Plan	28	07-Aug-20	03-Sep-20	09-Aug-20	05-Sep-20	2
AS160130	Review & Accept of General Layout Plan by PM	21	04-Sep-20	24-Sep-20	15-Mar-24	04-Apr-24	1288
AS160200	Prepare & Submit Architectural Design / Drawings	90	17-Jun-20	14-Sep-20	28-Jun-20	25-Sep-20	11
AS160210	Review & Comment on Architectural Design / Drawings by PM	21	15-Sep-20	05-Oct-20	26-Sep-20	16-Oct-20	11
AS160220	Revise & Re-submit Architectural Design / Drawings	28	06-Oct-20	02-Nov-20	23-Oct-20	19-Nov-20	17
AS160230	Review & Accept of Architectural Design / Drawings by PM	21	03-Nov-20	23-Nov-20	20-Nov-20	10-Dec-20	17
AS160300	Prepare & Submit Foundation Design / Drawings	60	20-Aug-20	18-Oct-20	22-Aug-20	20-Oct-20	2
AS160310	Review & Comment on Foundation Design / Drawings by PM	21	19-Oct-20	08-Nov-20	21-Oct-20	10-Nov-20	2
AS160320	Revise & Re-submit Foundation Design / Drawings	28	09-Nov-20	06-Dec-20	11-Nov-20	08-Dec-20	2
AS160330	Review & Accept of Foundation Design / Drawings by PM	21	07-Dec-20	27-Dec-20	09-Dec-20	29-Dec-20	2
AS160400	Prepare & Submit Structural & Civil Design / Drawings	90	06-Oct-20	03-Jan-21	20-Nov-20	17-Feb-21	45
AS160410	Review & Comment on Structural & Civil Design / Drawingsby PM	21	04-Jan-21	24-Jan-21	18-Feb-21	10-Mar-21	45
AS160420	Revise & Re-submit Structural & Civil Design / Drawings	28	25-Jan-21	21-Feb-21	11-Mar-21	07-Apr-21	45
AS160430	Review & Accept of Structural & Civil Design / Drawings by PM	21	22-Feb-21	14-Mar-21	08-Apr-21	28-Apr-21	45
AS160500	Prepare & Submit Builder's Works Drawings	90	03-Nov-20	31-Jan-21	20-Nov-20	17-Feb-21	17
AS160510	Review & Comment on Builder's Works Drawings by PM	21	01-Feb-21	21-Feb-21	18-Feb-21	10-Mar-21	17
AS160520	Revise & Re-submit Builder's Works Drawings	28	22-Feb-21	21-Mar-21	11-Mar-21	07-Apr-21	17
AS160530	Review & Accept of Builder's Works Drawings by PM	21	22-Mar-21	11-Apr-21	08-Apr-21	28-Apr-21	17
E&M Design							
AS151100	Prepare & Submit General Arrangement Drawings	60	18-May-20	16-Jul-20	24-May-20	22-Jul-20	6
AS151110	Review & Comment on General Arrangement Drawings by PM	21	17-Jul-20	06-Aug-20	11-Sep-20	01-Oct-20	56
AS151120	Revise & Re-submit General Arrangement Drawings	28	07-Aug-20	03-Sep-20	02-Oct-20	29-Oct-20	56
AS151130	Review & Accept of General Arrangement Drawings by PM	21	04-Sep-20	24-Sep-20	30-Oct-20	19-Nov-20	56
AS152100	Prepare & Submit Civil Requirement Drawings	60	17-Jun-20	15-Aug-20	23-Jun-20	21-Aug-20	6
AS152110	Review & Comment on Civil Requirement Drawings by PM	21	16-Aug-20	05-Sep-20	30-Sep-20	20-Oct-20	45
AS152120	Revise & Re-submit Civil Requirement Drawings	28	06-Sep-20	03-Oct-20	21-Oct-20	17-Nov-20	45
AS152130	Review & Accept of Civil Requirement Drawings by PM	21	04-Oct-20	24-Oct-20	18-Nov-20	08-Dec-20	45
AS152200	Prepare & Submit Ele. Schematic Dwgs, Wiring Dwgs, Cable Schedule & Design Cal.	180	17-Jul-20	12-Jan-21	21-Sep-20	19-Mar-21	66
AS152210	Review & Comment on Ele. Schematic Dwgs, Wiring Dwgs, Cable Schedule & Design Cal.	21	13-Jan-21	02-Feb-21	14-Apr-22	04-May-22	456



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS152220	Revise & Re-submit Ele. Schematic Dwgs, Wiring Dwgs, Cable Schedule & Design Cal.	28	03-Feb-21	02-Mar-21	05-May-22	01-Jun-22	456
AS152230	Review & Accept of Ele. Schematic Dwgs, Wiring Dwgs, Cable Schedule & Design Cal.	21	03-Mar-21	23-Mar-21	02-Jun-22	22-Jun-22	456
AS152300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	150	15-Oct-20	13-Mar-21	20-Dec-20	18-May-21	66
AS152310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Mar-21	03-Apr-21	19-May-21	08-Jun-21	66
AS152320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	04-Apr-21	01-May-21	09-Jun-21	06-Jul-21	66
AS152330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	02-May-21	22-May-21	07-Jul-21	27-Jul-21	66
Building Services							
AS201400	Prepare & Submit BS Works Design & Dwgs for Sidestream Treatment Facilities	180	03-Nov-20	01-May-21	28-Feb-21	26-Aug-21	117
AS201420	Prepare & Submit FS Works Design & Dwgs for Sidestream Treatment Facilities	120	06-Oct-20	02-Feb-21	17-Oct-20	13-Feb-21	11
Major Plant & Materials Procurement							
AS153100	Procurement & PO for Deammonification Sidestream Treatment Facilities	360	17-Jul-20	11-Jul-21	02-Aug-20	27-Jul-21	16
AS153120	Fabrication & Delivery of Deammonification Sidestream Treatment Facilities	330	12-Jul-21	06-Jun-22	28-Jul-21	22-Jun-22	16
Civil Works Construction							
AS161100	Ground Investigation	45	04-Sep-20	18-Oct-20	25-Oct-20	08-Dec-20	51
AS161120	Site Clearance	15	19-Oct-20	02-Nov-20	15-Dec-20	29-Dec-20	57
AS161140	Foundation / Pilings	120	28-Dec-20	26-Apr-21	30-Dec-20	28-Apr-21	2
AS161160	ELS / Substructure	120	27-Apr-21	24-Aug-21	29-Apr-21	26-Aug-21	2
AS161180	Superstructure	210	25-Aug-21	22-Mar-22	27-Aug-21	24-Mar-22	2
AS161200	Waterproofing	45	08-Mar-22	21-Apr-22	10-Mar-22	23-Apr-22	2
AS161220	External & Internal Finishes - 1st Fix	90	23-Mar-22	20-Jun-22	25-Mar-22	22-Jun-22	2
AS161240	External & Internal Finishes - 2nd Fix	90	21-Jun-22	18-Sep-22	11-Dec-23	09-Mar-24	538
AS161260	Landscaping & Establishment Works	180	21-Jun-22	17-Dec-22	12-Sep-23	09-Mar-24	448
E&M Installation							
AS154100	E&M Installation of Deammonification Sidestream Treatment Facilities	240	21-Jun-22	15-Feb-23	23-Jun-22	17-Feb-23	2
AS154120	Installation of Electrical Supply Systems	180	19-Oct-22	16-Apr-23	21-Oct-22	18-Apr-23	2
AS154160	FS Installation - Conduits, Trunking, & Pipeworks	180	21-Jun-22	17-Dec-22	09-Jul-22	04-Jan-23	18
AS154180	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	18-Dec-22	16-Apr-23	05-Jan-23	04-May-23	18
AS154200	BS Fitting Installation - Conduits, Trunking, & Ductworks	180	21-Jun-22	17-Dec-22	14-Jul-22	09-Jan-23	23
AS154220	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	18-Dec-22	17-Mar-23	10-Jan-23	09-Apr-23	23
AS154240	Installation of Control & Monitoring System	120	18-Nov-22	17-Mar-23	11-Dec-22	09-Apr-23	23
AS154260	Installation of CCTV System	90	02-Jan-23	01-Apr-23	09-Feb-23	09-May-23	38
AS154280	Installation of Gas Detection System	60	16-Feb-23	16-Apr-23	11-Mar-23	09-May-23	23
Statutory Submission / Inspection (FSD)							
AS201440	Prepare & Submit GBP for FSD approval	90	19-Nov-20	16-Feb-21	30-Nov-20	27-Feb-21	11
AS201460	FSD Review & Approval of GBP	180	17-Feb-21	15-Aug-21	28-Feb-21	26-Aug-21	11
AS201510a	Prepare & Submit FSI/314 & FSI/501	3	17-Apr-23	19-Apr-23	05-May-23	07-May-23	18
AS201520a	FSD Review & Approval of FSI/314 & FSI/501	21	20-Apr-23	10-May-23	15-May-23	04-Jun-23	25
AS201540a	F.S. Inspection, Defects Rectification & Re-inspection	45	18-May-23	01-Jul-23	05-Jun-23	19-Jul-23	18
AS201560a	Issuance of Acceptance Letter	28	02-Jul-23	29-Jul-23	20-Jul-23	16-Aug-23	18
Testing & Commissioning							
AS155100	SAT for Deammonification Sidestream Treatment Facilities	30	08-Apr-23	07-May-23	10-Apr-23	09-May-23	2
AS155120a	Process Start Up	92	08-May-23	07-Aug-23	10-May-23	09-Aug-23	2
AS155140a	Submission & Acceptance of Process Start Up Report	14	08-Aug-23	21-Aug-23	10-Aug-23	23-Aug-23	2
AS155160a	Notice for Commencement of Phase 1 Commissioning Tests	7	15-Aug-23	21-Aug-23	17-Aug-23	23-Aug-23	2
AS155200	Phase 1 Commissioning Tests	60	22-Aug-23	20-Oct-23	24-Aug-23	22-Oct-23	2
AS155220a	Submission & Acceptance of Phase 1 Commissioning Tests Report	14	21-Oct-23	03-Nov-23	23-Oct-23	05-Nov-23	2
AS155240a	Phase 1 Post Commissioning	14	04-Nov-23	17-Nov-23	06-Nov-23	19-Nov-23	2
AS155260a	Submission & Acceptance of Phase 1 Post Commissioning Report	14	18-Nov-23	01-Dec-23	20-Nov-23	03-Dec-23	2
AS155300	Phase 2 Commissioning Tests	45	04-Dec-23	17-Jan-24	04-Dec-23	17-Jan-24	0
AS155320a	Acceptance of Phase 2 Commissioning Tests Results	7	18-Jan-24	24-Jan-24	18-Jan-24	24-Jan-24	0
AS155340a	Phase 3 Commissioning Tests	30	25-Jan-24	23-Feb-24	25-Jan-24	23-Feb-24	0
AS155360a	Submission & Acceptance of Phase 3 Commissioning Report	15	24-Feb-24	09-Mar-24	24-Feb-24	09-Mar-24	0
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1							
Major Plant & Materials Fabrication & Delivery							
AS103300	Procurement & PO for Pipeworks & Associated Valves	90	25-Apr-20	23-Jul-20	28-Aug-20	25-Nov-20	125
AS103320	Procurement & PO for Elec. Materials	90	18-Jul-20	15-Oct-20	28-Aug-20	25-Nov-20	41
AS103400	Procurement & PO for FS System (S20)	60	09-Jun-20	07-Aug-20	10-Jun-20	08-Aug-20	1
AS104100	Fabrication & Delivery of UV Disinfection System (S10)	300	09-Aug-20	04-Jun-21	03-Dec-20	28-Sep-21	116



Remaining Work
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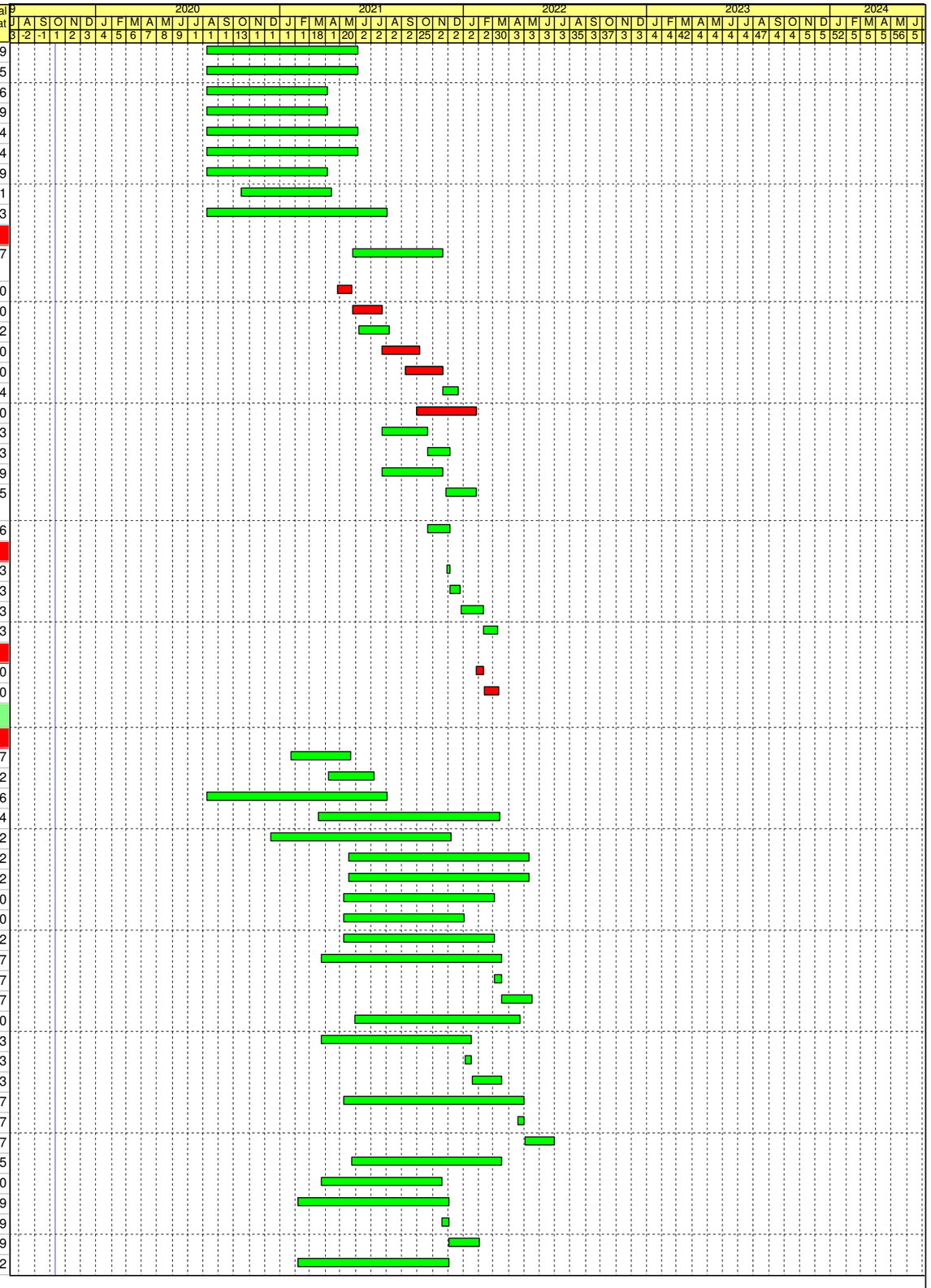
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis
Master Programme

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM
21-Apr-20	Rev. 2	AI	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS104120	Fabrication & Delivery of Lift-up Pumps (S11)	300	09-Aug-20	04-Jun-21	27-Sep-20	23-Jul-21	49
AS104140	Fabrication & Delivery of Transfer Pumps (S13)	300	09-Aug-20	04-Jun-21	12-Nov-20	07-Sep-21	95
AS104160	Fabrication & Delivery of FRP Cover (S11)	240	09-Aug-20	05-Apr-21	01-Feb-21	28-Sep-21	176
AS104180	Fabrication & Delivery of EOT Cranes (2T & 5T) (S19)	240	09-Aug-20	05-Apr-21	27-Sep-20	24-May-21	49
AS104200	Fabrication & Delivery of Stoplogs (S21)	300	09-Aug-20	04-Jun-21	01-Mar-21	25-Dec-21	204
AS104220	Fabrication & Delivery of Penstocks (S21)	300	09-Aug-20	04-Jun-21	01-Mar-21	25-Dec-21	204
AS104300	Fabrication & Delivery of Pipeworks & Associated Valves	240	09-Aug-20	05-Apr-21	26-Nov-20	23-Jul-21	109
AS104320	Fabrication & Delivery of Elec. Materials	180	16-Oct-20	13-Apr-21	26-Nov-20	24-May-21	41
AS104400	Fabrication & Delivery of FS System (S20)	360	08-Aug-20	02-Aug-21	30-Oct-20	24-Oct-21	83
E&M Installation							
AS105100	Provision of Temporary Power for UV System No.1 & Effluent Transfer Pumping Station	180	25-May-21	20-Nov-21	31-Jul-21	26-Jan-22	67
AS106100	Mobilisation	30	25-Apr-21	24-May-21	25-Apr-21	24-May-21	0
AS106120	E&M Installation of EOT Cranes (5T)	60	25-May-21	23-Jul-21	25-May-21	23-Jul-21	0
AS106140	E&M Installation of EOT Cranes (2T)	60	08-Jun-21	06-Aug-21	10-Jul-21	07-Sep-21	32
AS106160	E&M Installation of Lift-up Pumps & Associated Pipeworks / Valves	75	24-Jul-21	06-Oct-21	24-Jul-21	06-Oct-21	0
AS106180	E&M Installation of Transfer Pumps & Associated Pipeworks / Valves	75	08-Sep-21	21-Nov-21	08-Sep-21	21-Nov-21	0
AS106200	E&M Installation of Penstocks & Stoplogs	30	22-Nov-21	21-Dec-21	26-Dec-21	24-Jan-22	34
AS106210	E&M Installation of UV System	120	29-Sep-21	26-Jan-22	29-Sep-21	26-Jan-22	0
AS106220	FS Installation - Conduits, Trunking, & Pipeworks	90	24-Jul-21	21-Oct-21	27-Jul-21	24-Oct-21	3
AS106240	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	45	22-Oct-21	05-Dec-21	25-Oct-21	08-Dec-21	3
AS106260	BS Fitting Installation - Conduits, Trunking, & Ductworks	120	24-Jul-21	20-Nov-21	21-Sep-21	18-Jan-22	59
AS106280	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	60	28-Nov-21	26-Jan-22	12-Jan-22	12-Mar-22	45
AS106320	Installation of CCTV System	45	23-Oct-21	06-Dec-21	28-Dec-21	10-Feb-22	66
Statutory Submission / Inspection (FSD)							
AS107100	Prepare & Submit FSI/314 & FSI/501	7	29-Nov-21	05-Dec-21	02-Dec-21	08-Dec-21	3
AS107110a	FSD Review & Approval of FSI/314 & FSI/501	21	06-Dec-21	26-Dec-21	09-Dec-21	29-Dec-21	3
AS107200	F.S. Inspection, Defects Rectification & Re-inspection	45	27-Dec-21	09-Feb-22	30-Dec-21	12-Feb-22	3
AS107300	Issuance of Acceptance Letter	28	10-Feb-22	09-Mar-22	13-Feb-22	12-Mar-22	3
Testing & Commissioning							
AS107400	SAT for UV System No. 1 & Effluent Transfer Pumping Station No. 1	15	27-Jan-22	10-Feb-22	27-Jan-22	10-Feb-22	0
AS107500	System Commissioning Tests	30	11-Feb-22	12-Mar-22	11-Feb-22	12-Mar-22	0
Section 5 - Complete all remaining Works (incl. T&C)							
Fabrication, FAT & Delivery of Major Plant & Materials							
AS023290	Procurement & PO for Pipeworks & Associated Valves	120	23-Jan-21	22-May-21	09-Feb-21	08-Jun-21	17
AS023620	Procurement & PO for Elec. Materials	90	08-Apr-21	06-Jul-21	10-Apr-21	08-Jul-21	2
AS104240	Fabrication & Delivery of Transfomers -UV (Tx 07 & 08) (S17)	360	09-Aug-20	03-Aug-21	08-Nov-21	02-Nov-22	456
AS104260	Fabrication & Delivery of LVSB -UV (S17)	360	19-Mar-21	13-Mar-22	07-Jan-22	01-Jan-23	294
AS104280	Fabrication & Delivery of Control & Monitoring System -UV (S18)	360	14-Dec-20	08-Dec-21	10-Apr-22	04-Apr-23	482
AS501100	Fabrication & Delivery of Sludge Screening System (S2)	360	18-May-21	12-May-22	26-Nov-21	20-Nov-22	192
AS501120	Fabrication & Delivery of Sludge Thickening System (S3)	360	18-May-21	12-May-22	29-Jun-21	23-Jun-22	42
AS501140	Fabrication & Delivery of Sludge Digestion System (S5)	300	08-May-21	03-Mar-22	17-Jul-21	12-May-22	70
AS501150a	Fabrication & Delivery of FRP Walkway / Cover (S5)	240	08-May-21	02-Jan-22	18-May-21	12-Jan-22	10
AS501160	Fabrication & Delivery of Sludge Dewatering System (S6)	300	08-May-21	03-Mar-22	09-Jun-21	04-Apr-22	32
AS501180	Fabrication of THP System (S4)	360	24-Mar-21	18-Mar-22	28-Aug-21	22-Aug-22	157
AS501200	FAT for THP System (S4)	14	05-Mar-22	18-Mar-22	09-Aug-22	22-Aug-22	157
AS501220	Delivery of THP System (S4)	60	19-Mar-22	17-May-22	23-Aug-22	21-Oct-22	157
AS501240	Fabrication & Delivery of Biogas Storage & Pre-Treatment (S7)	330	30-May-21	24-Apr-22	29-Jun-21	24-May-22	30
AS501260	Fabrication of CHP System (S8)	300	24-Mar-21	17-Jan-22	05-Jun-21	31-Mar-22	73
AS501280	FAT for CHP Generators (S8)	14	04-Jan-22	17-Jan-22	18-Mar-22	31-Mar-22	73
AS501300	Delivery of CHP Generators (S8)	60	18-Jan-22	18-Mar-22	01-Apr-22	30-May-22	73
AS501320	Fabrication of Waste Gas Burning System (S9)	360	08-May-21	02-May-22	11-Nov-21	05-Nov-22	187
AS501340	FAT for Waste Gas Steam Generation Boiler (S9)	14	19-Apr-22	02-May-22	23-Oct-22	05-Nov-22	187
AS501360	Delivery of Waste Gas Burning System (S9)	60	03-May-22	01-Jul-22	06-Nov-22	04-Jan-23	187
AS501380	Fabrication & Delivery of Plant Service Water System (S12)	300	23-May-21	18-Mar-22	06-Aug-21	01-Jun-22	75
AS501400	Fabrication & Delivery of SAS Pumping System (S14)	240	24-Mar-21	18-Nov-21	03-Apr-21	28-Nov-21	10
AS501420	Fabrication of 11kV Transfomers (S17)	300	07-Feb-21	03-Dec-21	23-Dec-21	18-Oct-22	319
AS501440	FAT for 11kV Transfomers (S17)	14	20-Nov-21	03-Dec-21	05-Oct-22	18-Oct-22	319
AS501460	Delivery of 11kV Transfomers (S17)	60	04-Dec-21	01-Feb-22	19-Oct-22	17-Dec-22	319
AS501480	Fabrication of 380V Transfomers (S17)	300	07-Feb-21	03-Dec-21	06-Dec-21	01-Oct-22	302



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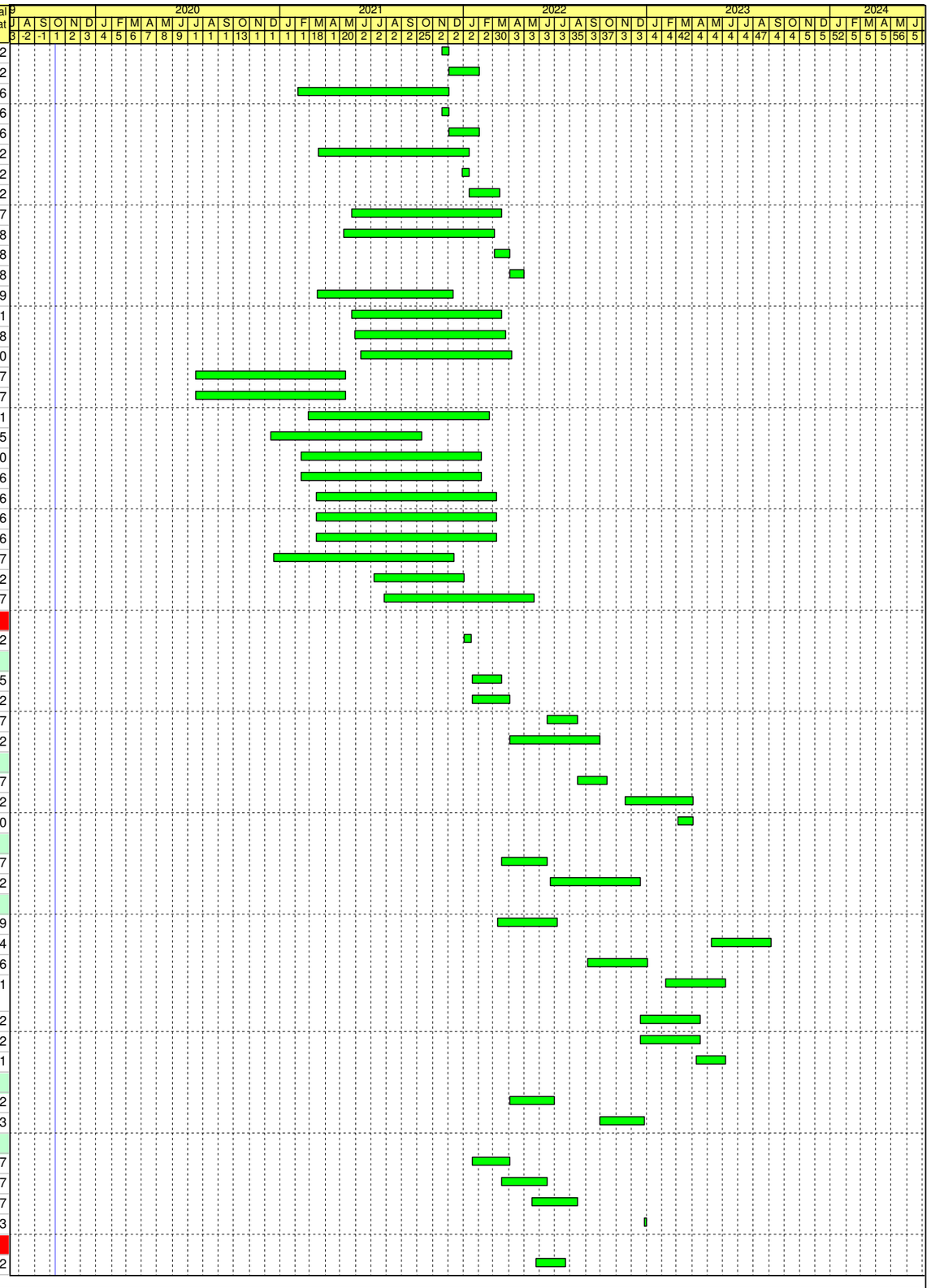
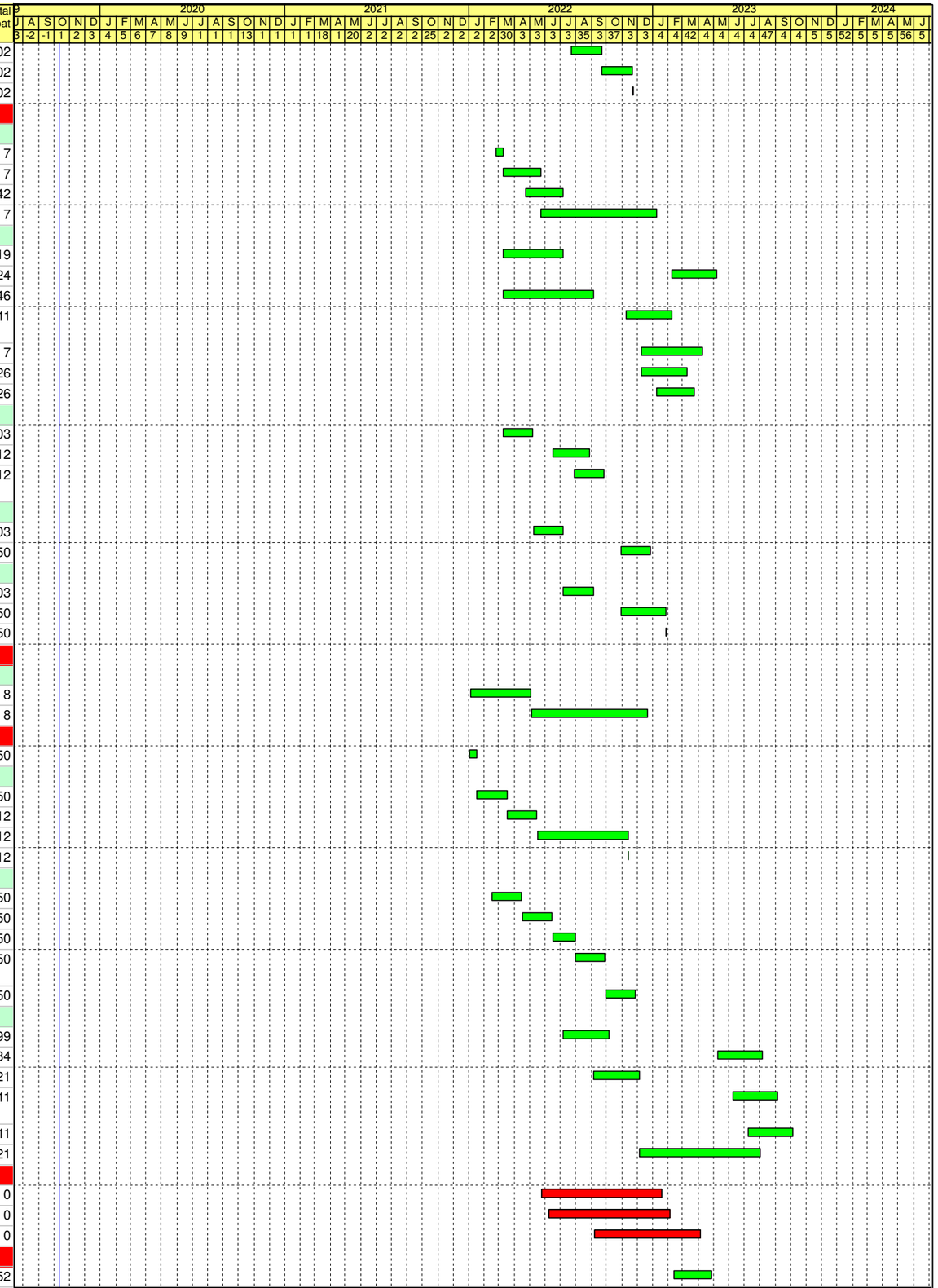
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS501500	FAT for 380V Transfomers (S17)	14	20-Nov-21	03-Dec-21	18-Sep-22	01-Oct-22	302
AS501520	Delivery of 380V Transfomers (S17)	60	04-Dec-21	01-Feb-22	02-Oct-22	30-Nov-22	302
AS501540	Fabrication of 11 kV Switchboard (S17)	300	07-Feb-21	03-Dec-21	11-Oct-21	06-Aug-22	246
AS501560	FAT for 11 kV Switchboard (S17)	14	20-Nov-21	03-Dec-21	24-Jul-22	06-Aug-22	246
AS501580	Delivery of 11 kV Switchboard (S17)	60	04-Dec-21	01-Feb-22	07-Aug-22	05-Oct-22	246
AS501600	Fabrication of 380V Switchboard (S17)	300	19-Mar-21	12-Jan-22	09-Jul-21	04-May-22	112
AS501620	FAT for 380V Switchboard (S17)	14	30-Dec-21	12-Jan-22	21-Apr-22	04-May-22	112
AS501640	Delivery of 380V Switchboard (S17)	60	13-Jan-22	13-Mar-22	05-May-22	03-Jul-22	112
AS501660b	Fabrication & Delivery of Pipeworks & Associated Valves	300	23-May-21	18-Mar-22	09-Jun-21	04-Apr-22	17
AS501680	Fabrication of Control & Monitoring System (S18)	300	08-May-21	03-Mar-22	22-Dec-21	17-Oct-22	228
AS501700	FAT for SCADA System (S18)	30	04-Mar-22	02-Apr-22	18-Oct-22	16-Nov-22	228
AS501720	Delivery of SCADA System (S18)	30	03-Apr-22	02-May-22	17-Nov-22	16-Dec-22	228
AS501740	Fabrication & Delivery of Lifting Appliances (S19)	270	17-Mar-21	11-Dec-21	25-Apr-21	19-Jan-22	39
AS501760	Fabrication & Delivery of Reclaimed Water Utilisation (S13)	300	23-May-21	18-Mar-22	31-Oct-21	26-Aug-22	161
AS501780	Fabrication & Delivery of H2S Removal System (S7)	300	30-May-21	25-Mar-22	14-Dec-21	09-Oct-22	198
AS501800	Fabrication & Delivery of DO System (S21)	300	12-Jun-21	07-Apr-22	17-Feb-22	13-Dec-22	250
AS501820	Fabrication & Delivery of Stoplog (S21)	300	17-Jul-20	12-May-21	09-Jun-21	04-Apr-22	327
AS501840	Fabrication & Delivery of Penstock (S21)	300	17-Jul-20	12-May-21	09-Jun-21	04-Apr-22	327
AS501860	Fabrication & Delivery of Sewage Pump (S21)	360	27-Feb-21	21-Feb-22	15-Nov-21	09-Nov-22	261
AS501880	Fabrication & Delivery of Process Water Pump (S21)	300	14-Dec-20	09-Oct-21	07-Jun-21	02-Apr-22	175
AS501900	Fabrication & Delivery of External Sludge Transfer Pump (S21)	360	12-Feb-21	06-Feb-22	19-Mar-22	13-Mar-23	400
AS501920	Fabrication & Delivery of THP Cooling Pump (S21)	360	12-Feb-21	06-Feb-22	15-Mar-22	09-Mar-23	396
AS501940	Fabrication & Delivery of Ferric Chloride Storage Tank (S21)	360	14-Mar-21	08-Mar-22	14-Jan-22	08-Jan-23	306
AS501960	Fabrication & Delivery of Ferric Chloride Dosing Pump (S21)	360	14-Mar-21	08-Mar-22	13-Feb-22	07-Feb-23	336
AS501980	Fabrication & Delivery of Temporary Primary Sludge Pump (S21)	360	14-Mar-21	08-Mar-22	15-Mar-22	09-Mar-23	366
AS501990b	Fabrication & Delivery of Genset	360	19-Dec-20	13-Dec-21	11-Nov-21	05-Nov-22	327
AS510060	Fabrication & Delivery of Elec. Materials	180	07-Jul-21	02-Jan-22	09-Jul-21	04-Jan-22	2
AS510080	Fabrication & Delivery of Gas Detection System	300	27-Jul-21	22-May-22	10-Apr-22	03-Feb-23	257
Sludge Dewatering Building							
AS502100	Mobilisation	15	03-Jan-22	17-Jan-22	05-Jan-22	19-Jan-22	2
Sludge Dewatering (SDe)							
AS502120	E&M Installation of Process Water Pump (S21)	60	18-Jan-22	18-Mar-22	03-Apr-22	01-Jun-22	75
AS502140	E&M Installation of EOT Crane LA-01-02	75	18-Jan-22	02-Apr-22	20-Jan-22	04-Apr-22	2
AS502150	E&M Installation of Monorail LA-01-04	60	17-Jun-22	15-Aug-22	24-Jul-22	21-Sep-22	37
AS502160	E&M Installation of Sludge Dewatering System (S6)	180	03-Apr-22	29-Sep-22	05-Apr-22	01-Oct-22	2
Sludge Screening (SSc)							
AS502180	E&M Installation of Monorail LA-01-01	60	16-Aug-22	14-Oct-22	22-Sep-22	20-Nov-22	37
AS502200	E&M Installation of Sludge Screening System (S2)	135	19-Nov-22	02-Apr-23	21-Nov-22	04-Apr-23	2
AS502220	E&M Installation of External Sludge Transfer Pump (S21)	30	04-Mar-23	02-Apr-23	14-Mar-23	12-Apr-23	10
Sludge Thickening (STh)							
AS502260	E&M Installation of EOT Crane LA-01-03	90	19-Mar-22	16-Jun-22	26-Mar-22	23-Jun-22	7
AS502280	E&M Installation of Sludge Thickening System (S3)	180	22-Jun-22	18-Dec-22	24-Jun-22	20-Dec-22	2
Building Services							
AS502300	FS Installation - Conduits, Trunking, & Pipeworks	120	10-Mar-22	07-Jul-22	02-Feb-23	01-Jun-23	329
AS502320	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	09-May-23	05-Sep-23	02-Jun-23	29-Sep-23	24
AS502340	BS Fitting Installation - Conduits, Trunking, & Ductworks	120	06-Sep-22	03-Jan-23	22-Oct-22	18-Feb-23	46
AS502360	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	08-Feb-23	07-Jun-23	19-Feb-23	18-Jun-23	11
AS502380	Installation of Control & Monitoring System	120	19-Dec-22	17-Apr-23	21-Dec-22	19-Apr-23	2
AS502400	Installation of CCTV System	120	19-Dec-22	17-Apr-23	21-Dec-22	19-Apr-23	2
AS502410	Installation of Gas Detection System	60	09-Apr-23	07-Jun-23	20-Apr-23	18-Jun-23	11
Tx Rm							
AS502420	BS Fitting Intallation	90	03-Apr-22	01-Jul-22	02-Sep-22	30-Nov-22	152
AS502440	E&M Installation of 380V Transformers (S17)	90	29-Sep-22	27-Dec-22	01-Dec-22	28-Feb-23	63
LV Switchroom							
AS502460	BS Fitting Intallation	75	18-Jan-22	02-Apr-22	05-May-22	18-Jul-22	107
AS502480	E&M Installation of LVSB at G/F (S17)	90	19-Mar-22	16-Jun-22	04-Jul-22	01-Oct-22	107
AS502500	E&M Installation of LVSB at 1/F (S17)	90	18-May-22	15-Aug-22	02-Sep-22	30-Nov-22	107
AS502520	Ready for Energisation	5	28-Dec-22	01-Jan-23	01-Mar-23	05-Mar-23	63
Tx Rm & LV Switchroom (for UV)							
AS105120	BS Fitting Intallation (at Tx Rm & LV Switchroom)	60	25-May-22	23-Jul-22	04-Sep-22	02-Nov-22	102



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS105140	E&M Installation of Transfomers in Tx Rm	60	24-Jul-22	21-Sep-22	03-Nov-22	01-Jan-23	102
AS105160	E&M Installation of LVSB	60	22-Sep-22	20-Nov-22	02-Jan-23	02-Mar-23	102
AS105180	Ready for Permanet Power Energisation	3	21-Nov-22	23-Nov-22	03-Mar-23	05-Mar-23	102
Combined Heat & Power Building							
Combined Heat & Power Generation (CHP)							
AS503100	Mobilisation	14	24-Feb-22	09-Mar-22	03-Mar-22	16-Mar-22	7
AS503120	E&M Installation of EOT Crane No. 1	75	10-Mar-22	23-May-22	17-Mar-22	30-May-22	7
AS503140	E&M Installation of EOT Crane No. 2	75	24-Apr-22	07-Jul-22	05-Jun-22	18-Aug-22	42
AS503160	E&M Installation of CHP System (S8)	230	24-May-22	08-Jan-23	31-May-22	15-Jan-23	7
Building Services							
AS503180	FS Installation - Conduits, Trunking, & Pipeworks	120	10-Mar-22	07-Jul-22	07-Jul-22	03-Nov-22	119
AS503200	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	08-Feb-23	08-May-23	04-Mar-23	01-Jun-23	24
AS503220	BS Fitting Installation - Conduits, Trunking, & Ductworks	180	10-Mar-22	05-Sep-22	25-Apr-22	21-Oct-22	46
AS503240	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	10-Nov-22	07-Feb-23	21-Nov-22	18-Feb-23	11
AS503260	Installation of Control & Monitoring System	120	10-Dec-22	08-Apr-23	17-Dec-22	15-Apr-23	7
AS503280	Installation of CCTV System	90	10-Dec-22	09-Mar-23	05-Jan-23	04-Apr-23	26
AS503290	Installation of Gas Detection System	75	09-Jan-23	24-Mar-23	04-Feb-23	19-Apr-23	26
11kV Switchroom							
AS503300	BS Fitting Installation	60	10-Mar-22	08-May-22	21-Jun-22	19-Aug-22	103
AS503320	E&M Installation of 11kV Switchboard (S17)	75	16-Jun-22	29-Aug-22	06-Oct-22	19-Dec-22	112
AS503340	Main Cables Laying between 11kV SwitchRoom of CHP Bldg to Tx Rm of Workshop No.2	60	29-Jul-22	26-Sep-22	18-Nov-22	16-Jan-23	112
Tx Rm							
AS503360	BS Fitting Installation	60	09-May-22	07-Jul-22	20-Aug-22	18-Oct-22	103
AS503380	E&M Installation of 11kV Transfomers (S17)	60	29-Oct-22	27-Dec-22	18-Dec-22	15-Feb-23	50
LV Switchroom							
AS503400	BS Fitting Intallation	60	08-Jul-22	05-Sep-22	19-Oct-22	17-Dec-22	103
AS503420	E&M Installation of LVSB at 1/F (S17)	90	29-Oct-22	26-Jan-23	18-Dec-22	17-Mar-23	50
AS503440	Ready for Energisation	3	27-Jan-23	29-Jan-23	18-Mar-23	20-Mar-23	50
Sludge Digesters & Distribution Chamber							
Sludge Digestion (SDi)							
AS503500	FRP Walkway / Cover Installation	120	05-Jan-22	04-May-22	13-Jan-22	12-May-22	8
AS503600	E&M Installation of Sludge Digestion System (S5)	230	05-May-22	20-Dec-22	13-May-22	28-Dec-22	8
Workshop No. 2							
AS504000	Mobilisation	14	03-Jan-22	16-Jan-22	22-Feb-22	07-Mar-22	50
CLP Substation							
AS504100	BS Fitting Intallation (at CLP Sub-station in Workshop No.2)	60	17-Jan-22	17-Mar-22	08-Mar-22	06-May-22	50
AS509940a	Inspections, Rectification & H/O to CLP	60	18-Mar-22	16-May-22	08-Jul-22	05-Sep-22	112
AS509960	E&M Installation of HV Transformer (By CLP)	180	17-May-22	12-Nov-22	06-Sep-22	04-Mar-23	112
AS509980	Energisation (By CLP)	1	13-Nov-22	13-Nov-22	05-Mar-23	05-Mar-23	112
11kV HV Switchroom							
AS504200	BS Fitting Intallation	60	16-Feb-22	16-Apr-22	07-Apr-22	05-Jun-22	50
AS504240	E&M Installation of 11kV HVSB (at Workshop No.2)	60	17-Apr-22	15-Jun-22	06-Jun-22	04-Aug-22	50
AS504260	Main Cables Laying between Workshop No.2 & Tx Rm for UV System No.1	45	16-Jun-22	30-Jul-22	05-Aug-22	18-Sep-22	50
AS504280	Main Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg	60	31-Jul-22	28-Sep-22	19-Sep-22	17-Nov-22	50
AS504300	Main Cables Laying between Workshop No.2 & Tx Rm for CHP Bldg	60	29-Sep-22	27-Nov-22	18-Nov-22	16-Jan-23	50
Building Services							
AS504400a	FS Installation - Conduits, Trunking, & Pipeworks	90	08-Jul-22	05-Oct-22	03-May-23	31-Jul-23	299
AS504410a	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	09-May-23	06-Aug-23	01-Aug-23	29-Oct-23	84
AS504420a	BS Fitting Installation - Conduits, Trunking, & Ductworks	90	06-Sep-22	04-Dec-22	15-Apr-23	13-Jul-23	221
AS504430a	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	08-Jun-23	05-Sep-23	27-Sep-23	25-Dec-23	111
AS504450	Installation of CCTV System	90	08-Jul-23	05-Oct-23	27-Oct-23	24-Jan-24	111
AS504460	Installation of Lift	240	05-Dec-22	01-Aug-23	14-Jul-23	09-Mar-24	221
Biogas Storage & Pre-Treatment (BSPT)							
AS504500	E&M Installation of Biogas Storage Tank 1	240	25-May-22	19-Jan-23	25-May-22	19-Jan-23	0
AS504520	E&M Installation of Biogas Storage Tank 2	240	09-Jun-22	03-Feb-23	09-Jun-22	03-Feb-23	0
AS504540	E&M Installation of Biogas Storage Tank 3	210	07-Sep-22	04-Apr-23	07-Sep-22	04-Apr-23	0
Miscellaneous							
AS106300	Installation of Control & Monitoring System - UV	75	12-Feb-23	27-Apr-23	05-Apr-23	18-Jun-23	52



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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis
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24-Oct-19	Rev. 0	AI	KM
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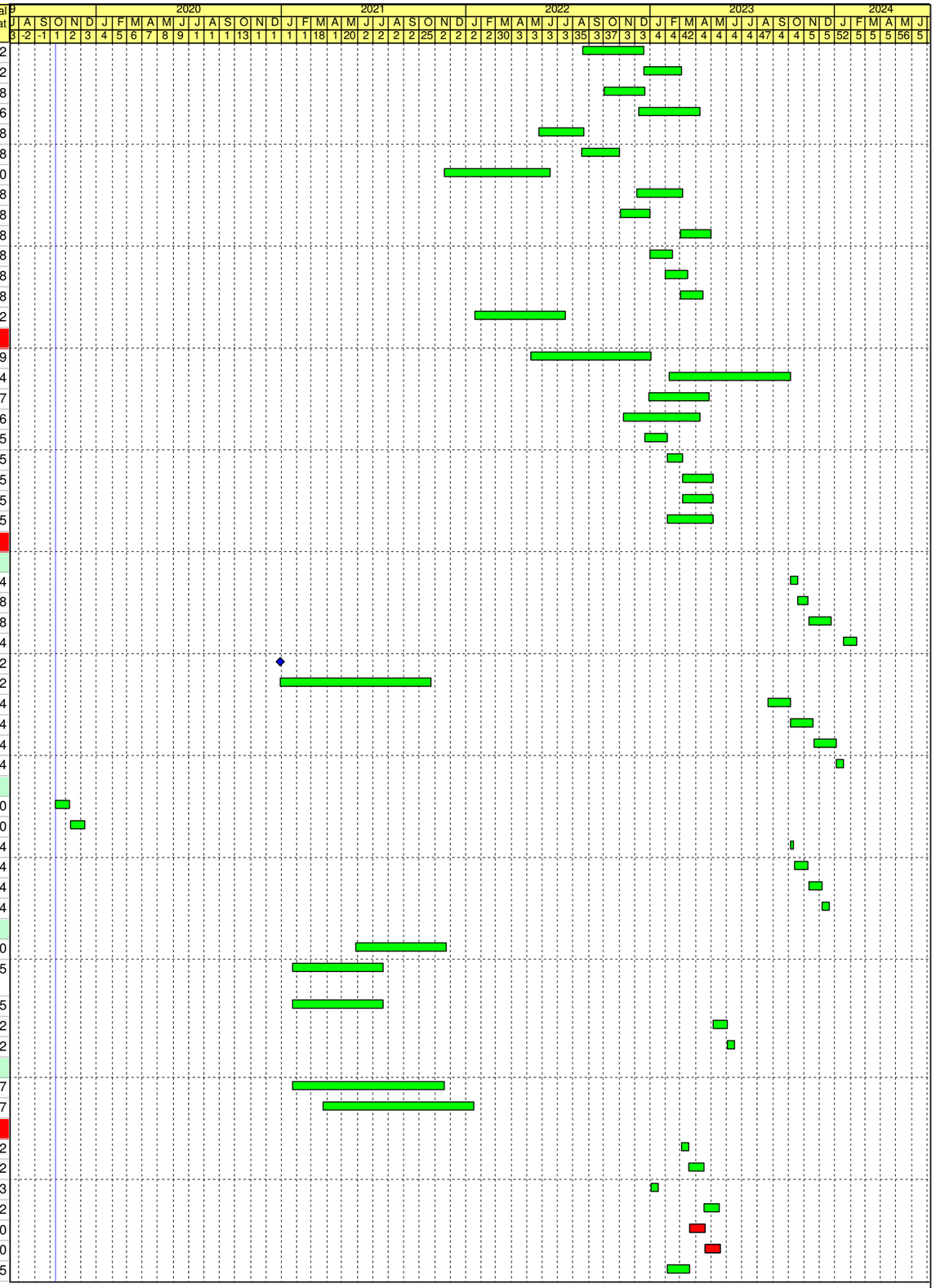
21-Apr-20	Rev. 2	AI	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS505000	E&M Installation of THP System (S4)	120	21-Aug-22	18-Dec-22	22-Oct-22	18-Feb-23	62
AS505100	E&M Installation of Thickened Sludge Feed Pipe to THP System	75	19-Dec-22	03-Mar-23	20-Jan-23	04-Apr-23	32
AS505200	E&M Installation of H2S Removal System (S7)	80	02-Oct-22	20-Dec-22	10-Oct-22	28-Dec-22	8
AS505300	E&M Installation of Waste Gas Burning System (S9)	120	10-Dec-22	08-Apr-23	05-Jan-23	04-May-23	26
AS505400	E&M Installation of Plant Service Water System (S12)	90	25-May-22	22-Aug-22	02-Jun-22	30-Aug-22	8
AS505500	E&M Installation of Reclaimed Water Utilisation (S13)	75	19-Aug-22	01-Nov-22	27-Aug-22	09-Nov-22	8
AS505600	E&M Installation of SAS Pumping System (S14)	210	19-Nov-21	16-Jun-22	29-Nov-21	26-Jun-22	10
AS505700	E&M Installation of DO System (S21)	90	06-Dec-22	05-Mar-23	14-Dec-22	13-Mar-23	8
AS506000	E&M Installation of Sewage Pump (S21)	60	02-Nov-22	31-Dec-22	10-Nov-22	08-Jan-23	8
AS506100	E&M Installation of THP Cooling Pump (S21)	60	02-Mar-23	30-Apr-23	10-Mar-23	08-May-23	8
AS506200	E&M Installation of Ferric Chloride Storage Tank (S21)	45	01-Jan-23	14-Feb-23	09-Jan-23	22-Feb-23	8
AS506300	E&M Installation of Ferric Chloride Dosing Pump (S21)	45	31-Jan-23	16-Mar-23	08-Feb-23	24-Mar-23	8
AS506400	E&M Installation of Temporary Primary Sludge Pump (S21)	45	02-Mar-23	15-Apr-23	10-Mar-23	23-Apr-23	8
AS506500b	E&M Installation of Genset	180	18-Jan-22	16-Jul-22	06-Nov-22	04-May-23	292
Building Services							
AS507000	FS Installation - Conduits, Trunking, & Pipeworks	240	09-May-22	03-Jan-23	05-Sep-22	02-May-23	119
AS507100	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	240	08-Feb-23	05-Oct-23	04-Mar-23	29-Oct-23	24
AS507200	Installation of Control & Monitoring System	120	29-Dec-22	27-Apr-23	05-Jan-23	04-May-23	7
AS507300	Installation of CCTV System	150	10-Nov-22	08-Apr-23	06-Dec-22	04-May-23	26
AS507700	BS Installation for Sludge Digester	45	21-Dec-22	03-Feb-23	04-Feb-23	20-Mar-23	45
AS507800	BS Installation for THP Facilities	30	04-Feb-23	05-Mar-23	20-Apr-23	19-May-23	75
AS507900	BS Installation for Biogas Holding Tanks	60	06-Mar-23	04-May-23	21-Mar-23	19-May-23	15
AS508000	BS Installation for Sewage Pumping Station	60	06-Mar-23	04-May-23	21-Mar-23	19-May-23	15
AS508100	BS Installation for Other Facilities	90	04-Feb-23	04-May-23	19-Feb-23	19-May-23	15
Statutory Submission / Inspection							
FSD Submission / Inspection							
AS509120	Prepare & Submit FSI/314 & FSI/501	14	06-Oct-23	19-Oct-23	09-Nov-23	22-Nov-23	34
AS509120a	FSD Review & Approval of FSI/314 & FSI/501	21	20-Oct-23	09-Nov-23	07-Dec-23	27-Dec-23	48
AS509140a	F.S. Inspection, Defects Rectification & Re-inspection	45	10-Nov-23	24-Dec-23	28-Dec-23	10-Feb-24	48
AS509200	Issuance of Acceptance Letter	28	18-Jan-24	14-Feb-24	11-Feb-24	09-Mar-24	24
AS509220	Application of D.G. Licence	0	29-Dec-20		29-Jul-21		212
AS509240	Processing of D.G. Licence Application	300	29-Dec-20	24-Oct-21	29-Jul-21	24-May-22	212
AS509250b	Apply for D.G. Inspection	45	22-Aug-23	05-Oct-23	15-Sep-23	29-Oct-23	24
AS509260	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	45	06-Oct-23	19-Nov-23	30-Oct-23	13-Dec-23	24
AS509280b	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	45	20-Nov-23	03-Jan-24	14-Dec-23	27-Jan-24	24
AS509300b	Issue D.G. Licence	14	04-Jan-24	17-Jan-24	28-Jan-24	10-Feb-24	24
WSD Submission / Inspection							
AS509300	Submit WWO46 Pt. I & II to WSD (FS)	30	11-Oct-19	09-Nov-19	12-Jul-21	10-Aug-21	640
AS509320	Approval of WWO46 Pt. I & II by WSD (FS)	30	10-Nov-19	09-Dec-19	11-Aug-21	09-Sep-21	640
AS509340	Submit WWO46 Pt. IV to WSD (FS)	7	06-Oct-23	12-Oct-23	09-Nov-23	15-Nov-23	34
AS509360	WSD Inspection (FS)	28	13-Oct-23	09-Nov-23	16-Nov-23	13-Dec-23	34
AS509362b	Taking of Water Samples and Meter Installation & Tesing	28	10-Nov-23	07-Dec-23	14-Dec-23	10-Jan-24	34
AS509364b	Issue of WWO46 Pt. V	14	08-Dec-23	21-Dec-23	11-Jan-24	24-Jan-24	34
EMSD Submission / Inspection							
AS509370b	Application & Approval of the BEC Submission	180	28-May-21	23-Nov-21	09-Nov-22	07-May-23	530
AS509380b	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	180	23-Jan-21	21-Jul-21	09-Nov-22	07-May-23	655
AS509400a	Application for Construction Approval of Notifiable Gas Installation (Form 104)	180	23-Jan-21	21-Jul-21	09-Nov-22	07-May-23	655
AS509420a	Application for Approval of Use of Notifiable Gas Installation (Form 105)	28	06-May-23	02-Jun-23	08-May-23	04-Jun-23	2
AS509440a	EMSD Inspection - Gas Holding Tanks	14	03-Jun-23	16-Jun-23	05-Jun-23	18-Jun-23	2
EPD Submission / Inspection							
AS509500a	EPD Submission & Approval for Air Pollution Control - Genset	300	23-Jan-21	18-Nov-21	31-Mar-23	24-Jan-24	797
AS509520a	EPD Submission & Approval for Air Pollution Control - CHP, CAPC, Flare	300	24-Mar-21	17-Jan-22	31-Mar-23	24-Jan-24	737
Testing & Commissioning							
AS510100	SAT of THP System	15	04-Mar-23	18-Mar-23	05-Apr-23	19-Apr-23	32
AS510200a	System Commissioning Tests for THP System	30	19-Mar-23	17-Apr-23	20-Apr-23	19-May-23	32
AS510300	SAT for Sludge Dewatering System	15	02-Jan-23	16-Jan-23	06-Mar-23	20-Mar-23	63
AS510400	System Commissioning Tests for Sludge Dewatering System	30	18-Apr-23	17-May-23	20-Apr-23	19-May-23	2
AS510500	SAT for Biogas Storage System	30	21-Mar-23	19-Apr-23	21-Mar-23	19-Apr-23	0
AS510600	System Commissioning Tests for Biogas Storage System	30	20-Apr-23	19-May-23	20-Apr-23	19-May-23	0
AS510700	SAT for Sludge Digestion System	45	04-Feb-23	20-Mar-23	21-Mar-23	04-May-23	45



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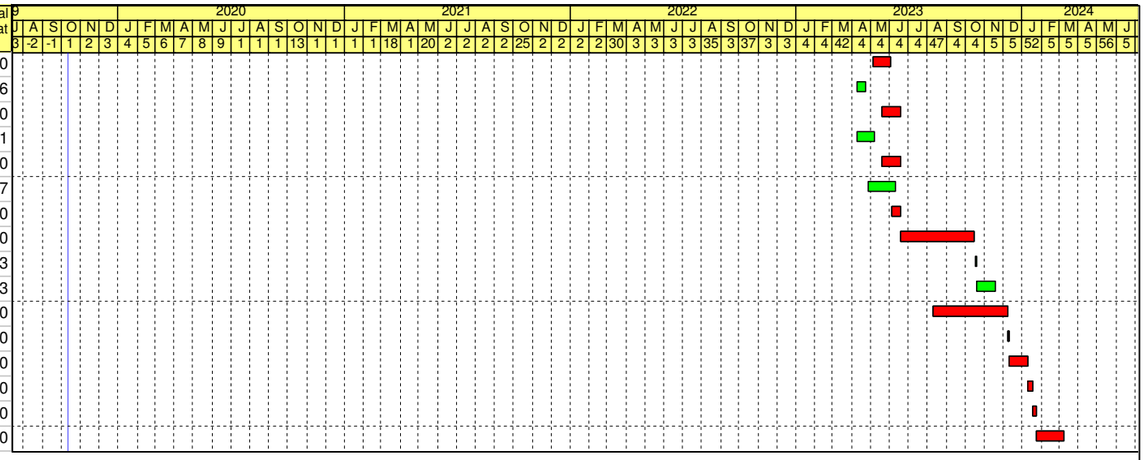
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float
AS510800	System Commissioning Tests for Sludge Digestion System	30	05-May-23	03-Jun-23	05-May-23	03-Jun-23	0
AS510900	SAT for Gas Burning System	15	09-Apr-23	23-Apr-23	05-May-23	19-May-23	26
AS511000	System Commissioning Tests for Gas Burning System	30	20-May-23	18-Jun-23	20-May-23	18-Jun-23	0
AS511100	SAT for CHP System	30	09-Apr-23	08-May-23	20-Apr-23	19-May-23	11
AS511200	System Commissioning Tests for CHP System	30	20-May-23	18-Jun-23	20-May-23	18-Jun-23	0
AS511300b	SAT & System Commissioning Tests for Other Facilities	45	28-Apr-23	11-Jun-23	05-May-23	18-Jun-23	7
AS512100	Seeding	14	05-Jun-23	18-Jun-23	05-Jun-23	18-Jun-23	0
AS512200a	Process Start Up - Digester 1	120	19-Jun-23	16-Oct-23	19-Jun-23	16-Oct-23	0
AS512300a	Notice to Commence Phase 1 System Commissioning - Digester 1	3	17-Oct-23	19-Oct-23	09-Dec-23	11-Dec-23	53
AS512400a	Phase 1 System Commissioning - Digester 1	30	20-Oct-23	18-Nov-23	12-Dec-23	10-Jan-24	53
AS512500a	Process Start Up - Digester 2	120	11-Aug-23	08-Dec-23	11-Aug-23	08-Dec-23	0
AS512600a	Notice to Commence Phase 1 System Commissioning - Digester 2	3	09-Dec-23	11-Dec-23	09-Dec-23	11-Dec-23	0
AS512700a	Phase 1 System Commissioning - Digester 2	30	12-Dec-23	10-Jan-24	12-Dec-23	10-Jan-24	0
AS512800a	Phase 2 System Commissioning - Digester 1 & 2	7	11-Jan-24	17-Jan-24	11-Jan-24	17-Jan-24	0
AS512900a	Notice to Commence Plant Commissioning	7	18-Jan-24	24-Jan-24	18-Jan-24	24-Jan-24	0
AS513000a	Plant Commissioning Tests	45	25-Jan-24	09-Mar-24	25-Jan-24	09-Mar-24	0



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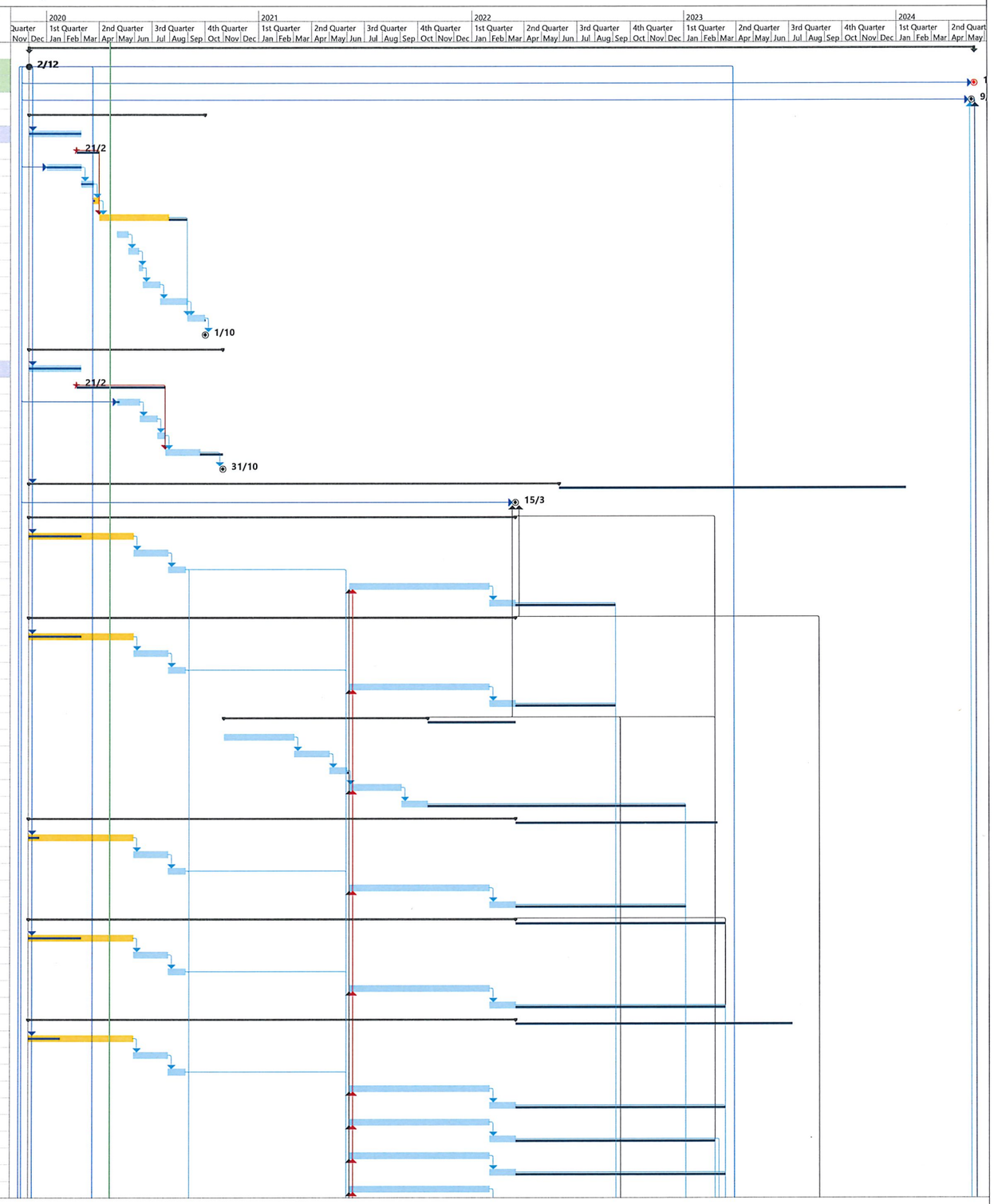
21-Apr-20	Rev. 2	AI	KM

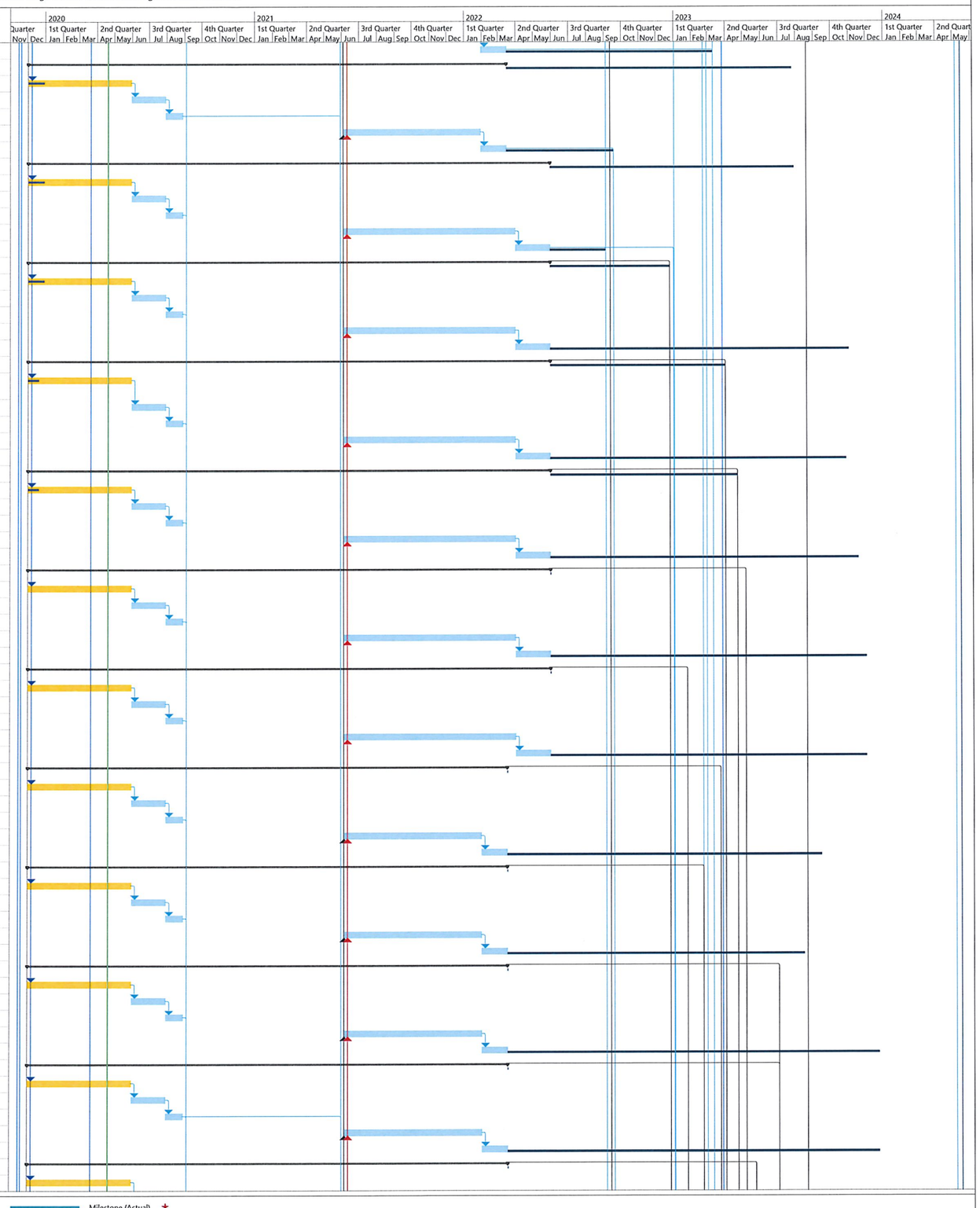
ID	ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
1	1	1	**DE/2018/04 - Master Programme**	**1625 days**	**Mon 2/12/19**	**Tue 14/5/24**	**Mon 2/12/...**	**Tue 14/5/24**	**1 day**			
2	2	1.1	*Starting Date*	0 days	Mon 2/12/19	Mon 2/12/19	Mon 2/12/...	Mon 2/12/...	0 days	3SS+1625		
3	3	1.2	*Completion Date*	0 days	Tue 14/5/24	Tue 14/5/24	Tue 14/5/24	Tue 14/5/24	0 days	2SS+1625 eda		
4	4	1.3	Planned Completion Date	0 days	Thu 9/5/24	Thu 9/5/24	Thu 9/5/24	Thu 9/5/24	0 days	2SS+1620 eda	874	
5	5	1.4	**Works Area WA1-C**	**304 days**	**Mon 2/12/19**	**Thu 1/10/20**	**Mon 2/12/...**	**Thu 1/10/20**	**0 days**			
6	6	1.4.1	**Access date for Works Area WA1-C**	**89 edays**	**Mon 2/12/19**	**Sat 29/2/20**	**Mon 2/12/...**	**Sat 29/2/20**	**0 edays**	2		
7	7	1.4.2	Actual Access / Handover Date	1 day	Fri 21/2/20	Fri 21/2/20	Fri 21/2/20	Fri 21/2/20	39 days	11		
8	8	1.4.3	Submission for acceptance of subcontract works package (Site Office)	60 days	Wed 1/1/20	Sat 29/2/20	Wed 1/1/20	Sat 29/2/20	0 days	2SS+30 edays	9	
9	9	1.4.4	Invitation of quotations for subcontract works (Site Office)	21 days	Sun 1/3/20	Sat 21/3/20	Sun 1/3/20	Sat 21/3/20	0 days	8	10	
10	10	1.4.5	Acceptance of conforming quotation (Site Office)	10 days	Sun 22/3/20	Tue 31/3/20	Sun 22/3/20	Tue 31/3/20	0 days	9	11	
11	11	1.4.6	Design and Fabrication of the Contractor's Site Accomodations	120 days	Wed 1/4/20	Wed 29/7/20	Wed 1/4/20	Wed 29/7/...	32 days	10,7	17	
12	12	1.4.7	Submission for acceptance of subcontract works pacakge (Site Office Foundation)	20 days	Fri 1/5/20	Wed 20/5/20	Fri 1/5/20	Wed 20/5/...	0 days		13	
13	13	1.4.8	Invitation of quotations for subcontract works (Site Office Foundation)	18 days	Thu 21/5/20	Sun 7/6/20	Thu 21/5/20	Sun 7/6/20	0 days	12	14	
14	14	1.4.9	Acceptance of conforming quotation (Site founcation)	7 days	Mon 8/6/20	Sun 14/6/20	Mon 8/6/20	Sun 14/6/20	0 days	13	15	
15	15	1.4.10	Design and Construction of the Contractor's Site Office foundation	30 days	Mon 15/6/20	Tue 14/7/20	Mon 15/6/...	Tue 14/7/20	0 days	14	16	
16	16	1.4.11	Construction of Contractor's Site Office foundation	47 days	Wed 15/7/20	Sun 30/8/20	Wed 15/7/...	Sun 30/8/20	0 days	15	17	
17	17	1.4.12	Site Installation of the Contractor's Site Accomodations (MiC)	30 days	Mon 31/8/20	Tue 29/9/20	Mon 31/8/...	Tue 29/9/20	1 day	11,16	18	
18	18	1.4.13	Anticipated date of working at site	0 days	Thu 1/10/20	Thu 1/10/20	Thu 1/10/20	Thu 1/10/20	0 days	17		
19	19	1.5	**Works Area WA2-C**	**334 days**	**Mon 2/12/19**	**Sat 31/10/20**	**Mon 2/12/...**	**Sat 31/10/...**	**0 days**			
20	20	1.5.1	**Access date for Works Area WA2-C**	**89 edays**	**Mon 2/12/19**	**Sat 29/2/20**	**Mon 2/12/...**	**Sat 29/2/20**	**0 edays**	2		
21	21	1.5.2	Actual Access / Handover Date	1 day	Fri 21/2/20	Fri 21/2/20	Fri 21/2/20	Fri 21/2/20	153 days		25	
22	22	1.5.3	Submission for acceptance of subcontract works package	40 edays	Fri 1/5/20	Wed 10/6/20	Fri 1/5/20	Wed 10/6/...	0 edays	2SS+30 edays	23	
23	23	1.5.4	Invitation of quotations for subcontract works	30 edays	Wed 10/6/20	Fri 10/7/20	Wed 10/6/...	Fri 10/7/20	0 edays	22	24	
24	24	1.5.5	Acceptance of conforming quotation	14 edays	Fri 10/7/20	Fri 24/7/20	Fri 10/7/20	Fri 24/7/20	0 edays	23	25	
25	25	1.5.6	Erection of Contractor's Storage Area	60 edays	Fri 24/7/20	Tue 22/9/20	Fri 24/7/20	Tue 22/9/20	39 edays	24,21	26	
26	26	1.5.7	Anticipated date of Storage Area available	0 days	Sat 31/10/20	Sat 31/10/20	Sat 31/10/20	Sat 31/10/20	0 days	25		
27	27	1.6	**Procurement of major plant and materials**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**595 days**	2		
28	28	1.6.1	Planned Completion Date for Procurement of major plant and materials	0 days	Tue 15/3/22	Tue 15/3/22	Tue 15/3/22	Tue 15/3/22	0 days	2SS+620 days		
29	29	1.6.2	**General - stoplogs and penstocks**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**0 days**		**28,510**	
30	30	1.6.2.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	31	
31	31	1.6.2.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	30	32	
32	32	1.6.2.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	31	423,427	
33	33	1.6.2.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	34	
34	34	1.6.2.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	172 days	33	463	
35	35	1.6.3	**General - Instrumentations except use at BR**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**0 days**		**28,519**	
36	36	1.6.3.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	37	
37	37	1.6.3.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	36	38	
38	38	1.6.3.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	37	423,427	
39	39	1.6.3.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	40	
40	40	1.6.3.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	172 days	39	463	
41	41	1.6.4	**General - pipework and valves**	**349 days**	**Mon 2/11/20**	**Sat 16/10/21**	**Mon 2/11/...**	**Sat 16/10/...**	**150 days**		**28,511,59**	
42	42	1.6.4.1	Submission for acceptance of purchasing package	120 days	Mon 2/11/20	Mon 1/3/21	Mon 2/11/...	Mon 1/3/21	0 days		43	
43	43	1.6.4.2	Invitation of quotations for purchasing package	60 days	Tue 2/3/21	Fri 30/4/21	Tue 2/3/21	Fri 30/4/21	0 days	42	44	
44	44	1.6.4.3	Acceptance of conforming quotation	30 days	Sat 1/5/21	Sun 30/5/21	Sat 1/5/21	Sun 30/5/21	4 days	43	45	
45	45	1.6.4.4	Manufacturing and Factory Acceptance Test of Plant	90 days	Fri 4/6/21	Wed 1/9/21	Fri 4/6/21	Wed 1/9/21	0 days	423,427,44	46	
46	46	1.6.4.5	Shipping and Delivery of Plant to site	45 days	Thu 2/9/21	Sat 16/10/21	Thu 2/9/21	Sat 16/10/21	442 days	45	554	
47	47	1.6.5	**General - electric actuators**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**346 days**			
48	48	1.6.5.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	49	
49	49	1.6.5.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	48	50	
50	50	1.6.5.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	49	423,427	
51	51	1.6.5.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	52	
52	52	1.6.5.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	292 days	51	554	
53	53	1.6.6	**General - HV Switchboards**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**360 days**		**626**	
54	54	1.6.6.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	55	
55	55	1.6.6.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	54	56	
56	56	1.6.6.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	55	423,427	
57	57	1.6.6.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	58	
58	58	1.6.6.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	360 days	57	626	
59	59	1.6.7	**General - LV Switchboards**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**475 days**			
60	60	1.6.7.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	61	
61	61	1.6.7.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	60	62	
62	62	1.6.7.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	61	423,427	
63	63	1.6.7.4	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by PM)	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	64	
64	64	1.6.7.5	IW - Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	360 days	63	624	
65	65	1.6.7.6	PST - Manufacturing and Factory Acceptance Test of Plant (to be witnessed by	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	66	
66	66	1.6.7.7	PST - Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	342 days	65	522,523	
67	67	1.6.7.8	BR - Manufacturing and Factory Acceptance Test of Plant (to be witnessed by F	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	68	
68	68	1.6.7.9	BR - Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	360 days	67	622	
69	69	1.6.7.10	MFS - Manufacturing and Factory Acceptance Test of Plant (to be witnessed by	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	70	



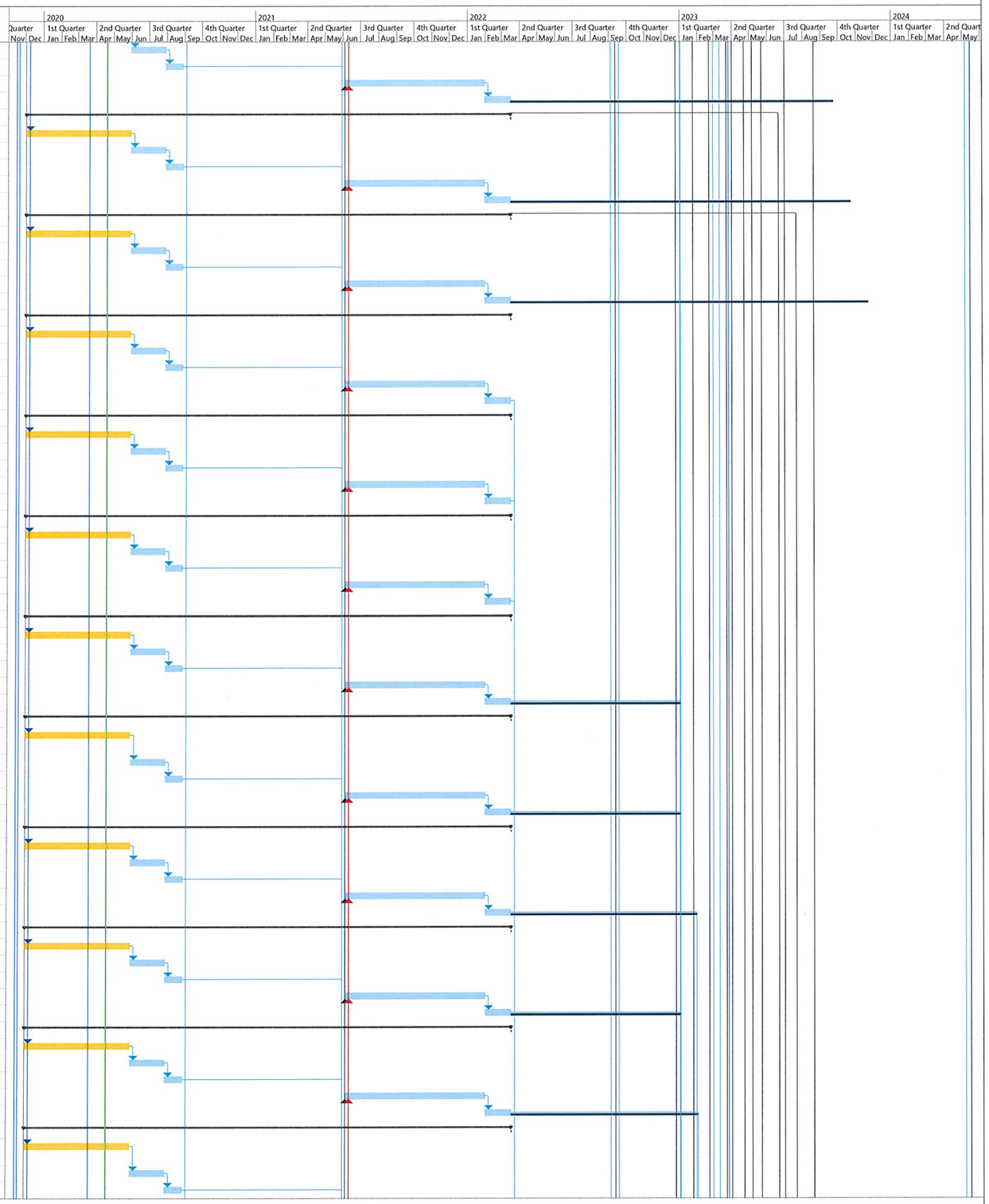
Bestwise
Project: DE/2018/04
Date: Mon 20/4/20

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

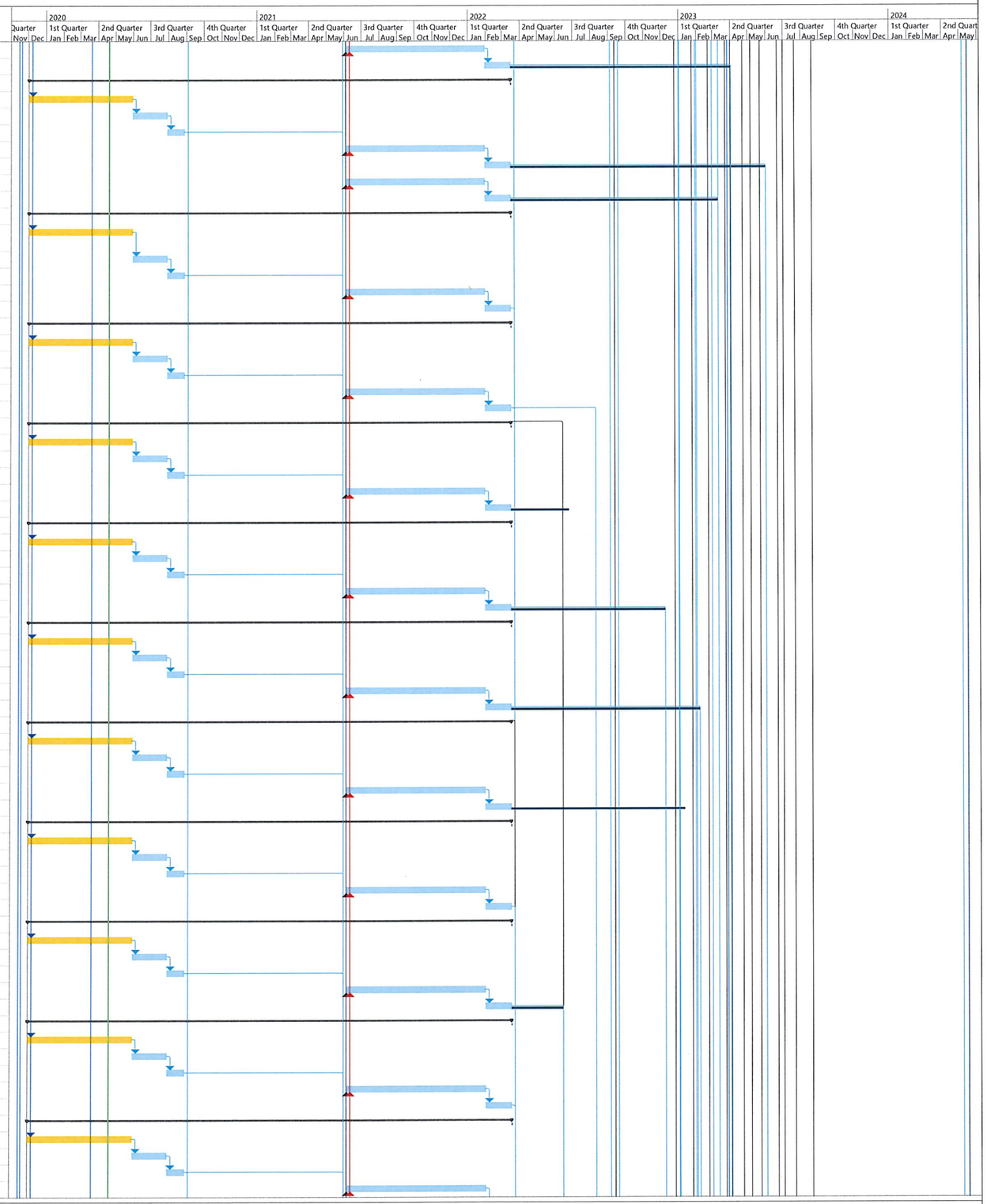
ID	ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
70	70	1.6.7.11	MFS - Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	360 days	69	623	
71	**71**	**1.6.8**	**General - 11kV/380V Stepdown Power Transformers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**496 days**			
72	72	1.6.8.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	73	
73	73	1.6.8.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	72	74	
74	74	1.6.8.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	73	423,427	
75	75	1.6.8.4	IW - Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	76	
76	76	1.6.8.5	IW - Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	186 days	75	477	
77	**77**	**1.6.9**	**Inlet Works - mechanical raked bar screens**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**425 days**			
78	78	1.6.9.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	79	
79	79	1.6.9.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	78	80	
80	80	1.6.9.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	79	425,426,4	
81	81	1.6.9.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	427	82	
82	82	1.6.9.5	Shipping and Delivery of Plant to site	60 days	Thu 31/3/22	Sun 29/5/22	Thu 31/3/22	Sun 29/5/22	97 days	81	465,468	
83	**83**	**1.6.10**	**Inlet Works - screening conveyors**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**209 days**		**466**	
84	84	1.6.10.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	85	
85	85	1.6.10.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	84	86	
86	86	1.6.10.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	85	425,426,4	
87	87	1.6.10.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	427	88	
88	88	1.6.10.5	Shipping and Delivery of Plant to site	60 days	Thu 31/3/22	Sun 29/5/22	Thu 31/3/22	Sun 29/5/22	520 days	87		
89	**89**	**1.6.11**	**Inlet Works - inlet Pumps (Marking Scheme Approach)**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**306 days**		**467**	
90	90	1.6.11.1	Submission for acceptance of purchasing package including proposed marking scheme	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/19	Fri 29/5/20	0 days	2	91	
91	91	1.6.11.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	90	92	
92	92	1.6.11.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	91	425,426,4	
93	93	1.6.11.4	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by PM)	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	427	94	
94	94	1.6.11.5	Shipping and Delivery of Plant to site	60 days	Thu 31/3/22	Sun 29/5/22	Thu 31/3/22	Sun 29/5/22	515 days	93		
95	**95**	**1.6.12**	**Inlet Works - grit removal system**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**327 days**		**469**	
96	96	1.6.12.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	97	
97	97	1.6.12.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	96	98	
98	98	1.6.12.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	97	425,426,4	
99	99	1.6.12.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	427	100	
100	100	1.6.12.5	Shipping and Delivery of Plant to site	60 days	Thu 31/3/22	Sun 29/5/22	Thu 31/3/22	Sun 29/5/22	536 days	99		
101	**101**	**1.6.13**	**Inlet Works - grit classifiers**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**1 day**		**470**	
102	102	1.6.13.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	103	
103	103	1.6.13.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	102	104	
104	104	1.6.13.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	103	425,426,4	
105	105	1.6.13.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	427	106	
106	106	1.6.13.5	Shipping and Delivery of Plant to site	60 days	Thu 31/3/22	Sun 29/5/22	Thu 31/3/22	Sun 29/5/22	550 days	105		
107	**107**	**1.6.14**	**Inlet Works - compactors**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**1 day**		**471**	
108	108	1.6.14.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	109	
109	109	1.6.14.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	108	110	
110	110	1.6.14.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	109	425,426,4	
111	111	1.6.14.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	427	112	
112	112	1.6.14.5	Shipping and Delivery of Plant to site	60 days	Thu 31/3/22	Sun 29/5/22	Thu 31/3/22	Sun 29/5/22	550 days	111		
113	**113**	**1.6.15**	**PST - lamella plate settlers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**512**	
114	114	1.6.15.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	115	
115	115	1.6.15.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	114	116	
116	116	1.6.15.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	115	425,426,4	
117	117	1.6.15.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	118	
118	118	1.6.15.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	546 days	117		
119	**119**	**1.6.16**	**PST - reciprocating type bottom scrapers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**513**	
120	120	1.6.16.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	121	
121	121	1.6.16.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	120	122	
122	122	1.6.16.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	121	425,426,4	
123	123	1.6.16.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	124	
124	124	1.6.16.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	516 days	123		
125	**125**	**1.6.17**	**PST - surface scum skimmers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**514**	
126	126	1.6.17.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	127	
127	127	1.6.17.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	126	128	
128	128	1.6.17.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	127	425,426,4	
129	129	1.6.17.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	130	
130	130	1.6.17.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	646 days	129		
131	**131**	**1.6.18**	**PST - scum collector pipes**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**515**	
132	132	1.6.18.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	133	
133	133	1.6.18.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	132	134	
134	134	1.6.18.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	133	423,427	
135	135	1.6.18.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	136	
136	136	1.6.18.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	646 days	135		
137	**137**	**1.6.19**	**PST - piston type primary sludge pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**516**	
138	138	1.6.19.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	139	



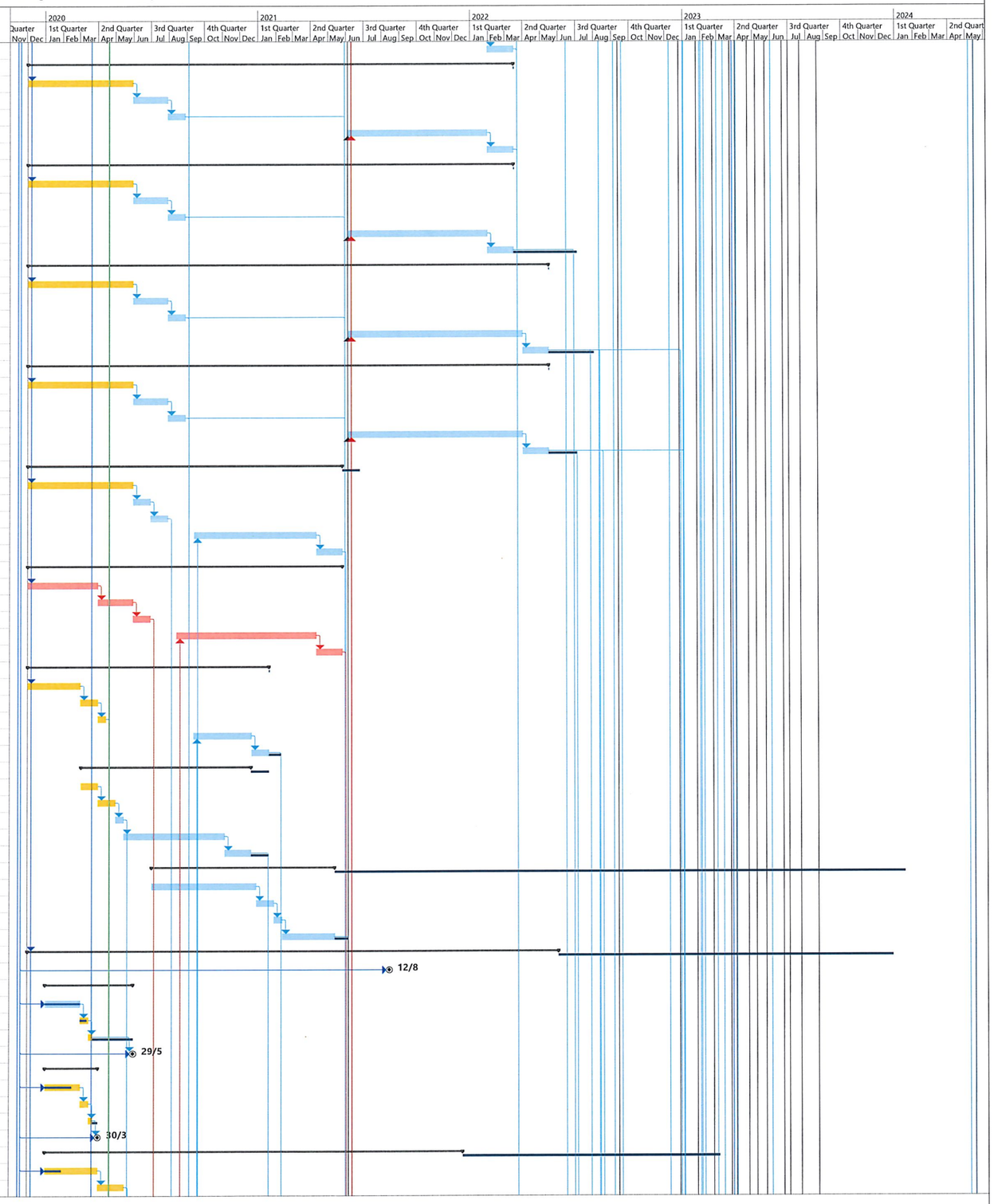
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
139	139	1.6.19.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	138	140	
140	140	1.6.19.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	139	423,427	
141	141	1.6.19.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	142	
142	142	1.6.19.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	556 days	141		
143	**143**	**1.6.20**	**PST - drain pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**517**	
144	144	1.6.20.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	145	
145	145	1.6.20.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	144	146	
146	146	1.6.20.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	145	423,427	
147	147	1.6.20.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	148	
148	148	1.6.20.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	586 days	147		
149	**149**	**1.6.21**	**PST - air blowers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**518**	
150	150	1.6.21.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	151	
151	151	1.6.21.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	150	152	
152	152	1.6.21.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	151	423,427	
153	153	1.6.21.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	154	
154	154	1.6.21.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	616 days	153		
155	**155**	**1.6.22**	**Chemical Storage and Dosing - chemical storage tanks**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
156	156	1.6.22.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	157	
157	157	1.6.22.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	156	158	
158	158	1.6.22.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	157	423,427	
159	159	1.6.22.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	160	
160	160	1.6.22.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	159	650,662,6	
161	**161**	**1.6.23**	**Chemical Storage and Dosing - chemical dosing pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
162	162	1.6.23.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	163	
163	163	1.6.23.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	162	164	
164	164	1.6.23.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	163	423,427	
165	165	1.6.23.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	166	
166	166	1.6.23.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	165	650,662,6	
167	**167**	**1.6.24**	**Chemical Storage and Dosing - transfer pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
168	168	1.6.24.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	169	
169	169	1.6.24.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	168	170	
170	170	1.6.24.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	169	423,427	
171	171	1.6.24.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	172	
172	172	1.6.24.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	171	650,662,6	
173	**173**	**1.6.25**	**BR - pre-treatment fine screens**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
174	174	1.6.25.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	175	
175	175	1.6.25.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	174	176	
176	176	1.6.25.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	175	423,427	
177	177	1.6.25.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	178	
178	178	1.6.25.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	292 days	177	555	
179	**179**	**1.6.26**	**BR - air diffusion system (Marking Scheme Approach)**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
180	180	1.6.26.1	Submission for acceptance of purchasing package including proposed marking scheme	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/19	Fri 29/5/20	0 days	2	181	
181	181	1.6.26.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	180	182	
182	182	1.6.26.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	181	423,427	
183	183	1.6.26.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	184	
184	184	1.6.26.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	292 days	183	556	
185	**185**	**1.6.27**	**BR - submersible mixers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
186	186	1.6.27.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	187	
187	187	1.6.27.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	186	188	
188	188	1.6.27.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	187	423,427	
189	189	1.6.27.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	190	
190	190	1.6.27.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	320 days	189	557	
191	**191**	**1.6.28**	**BR - mixed liquor return pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
192	192	1.6.28.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	193	
193	193	1.6.28.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	192	194	
194	194	1.6.28.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	193	423,427	
195	195	1.6.28.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	196	
196	196	1.6.28.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	292 days	195	558	
197	**197**	**1.6.29**	**BR - scum removal systems**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
198	198	1.6.29.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	199	
199	199	1.6.29.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	198	200	
200	200	1.6.29.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	199	423,427	
201	201	1.6.29.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	202	
202	202	1.6.29.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	322 days	201	559	
203	**203**	**1.6.30**	**BR - aeration blowers (Marking Scheme Approach)**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
204	204	1.6.30.1	Submission for acceptance of purchasing package including proposed marking scheme	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/19	Fri 29/5/20	0 days	2	205	
205	205	1.6.30.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	204	206	
206	206	1.6.30.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	205	423,427	



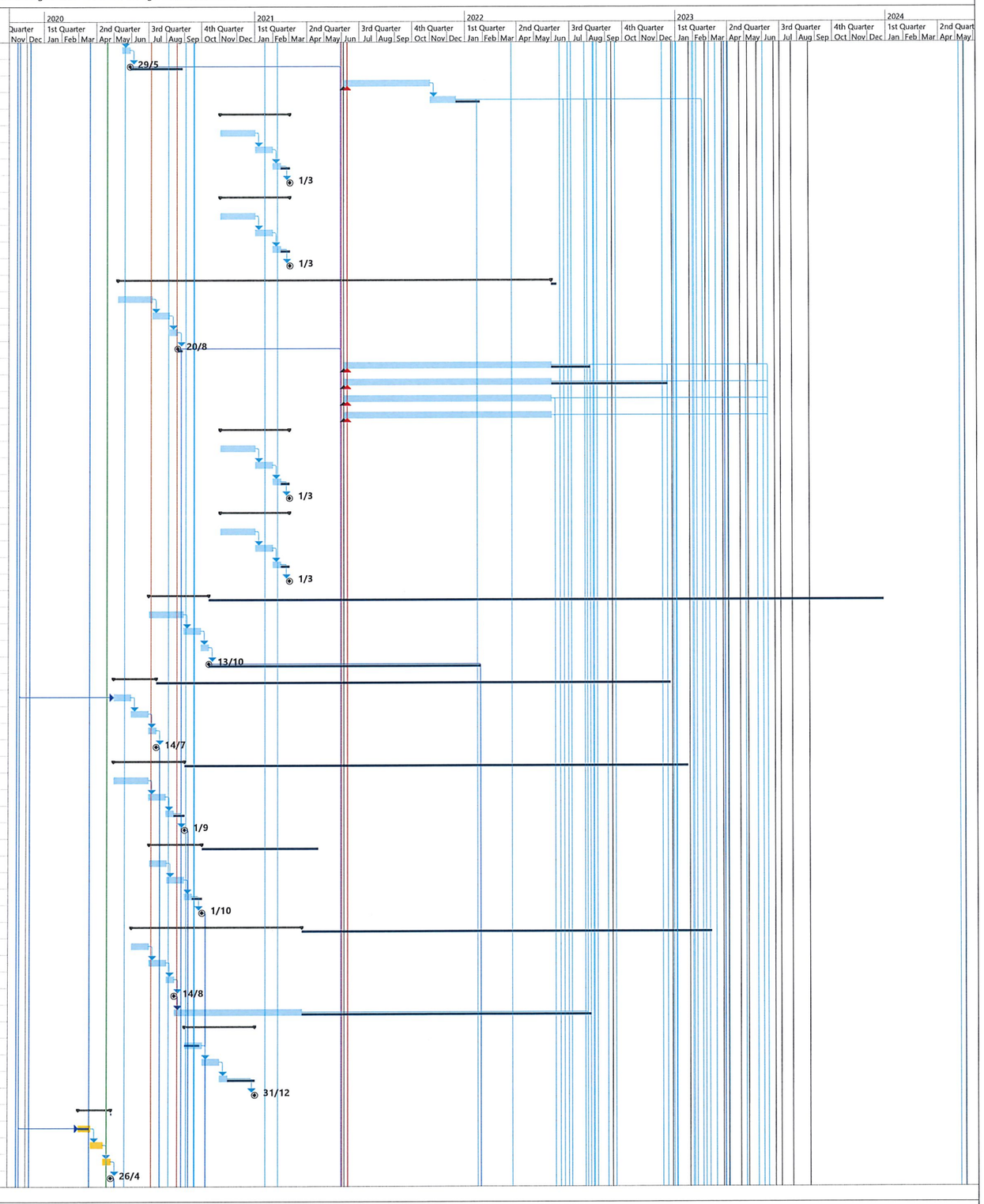
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
207	207	1.6.30.4	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by PM)	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	208	
208	208	1.6.30.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	382 days	207	560	
209	**209**	**1.6.31**	**BR - instrumentations**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
210	210	1.6.31.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	211	
211	211	1.6.31.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	210	212	
212	212	1.6.31.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	211	423,427	
213	213	1.6.31.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	214	
214	214	1.6.31.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	442 days	213	561	
215	215	1.6.31.6	MFS - Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	216	
216	216	1.6.31.7	MFS - Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	360 days	215	627	
217	**217**	**1.6.32**	**MFS - hollow fibre membrane modules (Marking Scheme Approach)**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
218	218	1.6.32.1	Submission for acceptance of purchasing package including proposed marking scheme	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/19	Fri 29/5/20	0 days	2	219	
219	219	1.6.32.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	218	220	
220	220	1.6.32.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	219	423,427	
221	221	1.6.32.4	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by PM)	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	222	
222	222	1.6.32.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	221	593	
223	**223**	**1.6.33**	**MFS - air scour blowers**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
224	224	1.6.33.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	225	
225	225	1.6.33.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	224	226	
226	226	1.6.33.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	225	423,427	
227	227	1.6.33.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	228	
228	228	1.6.33.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	227	594,618	
229	**229**	**1.6.34**	**MFS - permeate pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**		**595**	
230	230	1.6.34.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	231	
231	231	1.6.34.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	230	232	
232	232	1.6.34.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	231	423,427	
233	233	1.6.34.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	234	
234	234	1.6.34.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	100 days	233		
235	**235**	**1.6.35**	**MFS - compressed air system**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
236	236	1.6.35.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	237	
237	237	1.6.35.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	236	238	
238	238	1.6.35.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	237	423,427	
239	239	1.6.35.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	240	
240	240	1.6.35.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	267 days	239	619	
241	**241**	**1.6.36**	**MFS - instrumentation**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
242	242	1.6.36.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	243	
243	243	1.6.36.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	242	244	
244	244	1.6.36.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	243	423,427	
245	245	1.6.36.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	246	
246	246	1.6.36.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	327 days	245	620	
247	**247**	**1.6.37**	**MFS - chemical storage tanks**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**0 days**		**599**	
248	248	1.6.37.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	249	
249	249	1.6.37.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	248	250	
250	250	1.6.37.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	249	423,427	
251	251	1.6.37.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	252	
252	252	1.6.37.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	300 days	251		
253	**253**	**1.6.38**	**MFS - chemical dosing pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
254	254	1.6.38.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	255	
255	255	1.6.38.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	254	256	
256	256	1.6.38.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	255	423,427	
257	257	1.6.38.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	258	
258	258	1.6.38.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	257	600	
259	**259**	**1.6.39**	**MFS - return activated sludge pumps (Marking Scheme Approach)**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
260	260	1.6.39.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	261	
261	261	1.6.39.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	260	262	
262	262	1.6.39.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	261	423,427	
263	263	1.6.39.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	264	
264	264	1.6.39.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	90 days	263	596	
265	**265**	**1.6.40**	**MFS - membrane tank drain pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
266	266	1.6.40.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	267	
267	267	1.6.40.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	266	268	
268	268	1.6.40.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	267	423,427	
269	269	1.6.40.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	270	
270	270	1.6.40.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	269	597	
271	**271**	**1.6.41**	**Plant Service Water System - booster pumps**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
272	272	1.6.41.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	273	
273	273	1.6.41.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	272	274	
274	274	1.6.41.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	273	423,427	
275	275	1.6.41.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	276	



ID	ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
276	276	1.6.41.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	275	601	
277	**277**	**1.6.42**	**Plant Service Water System - hydro-pneumatic pressure tanks**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
278	278	1.6.42.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	279	
279	279	1.6.42.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	278	280	
280	280	1.6.42.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	279	423,427	
281	281	1.6.42.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	282	
282	282	1.6.42.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	0 days	281	601	
283	**283**	**1.6.43**	**DOU - biotrickling filter (DOU No. 1)**	**835 days**	**Mon 2/12/19**	**Tue 15/3/22**	**Mon 2/12/...**	**Tue 15/3/22**	**1 day**			
284	284	1.6.43.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	285	
285	285	1.6.43.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	284	286	
286	286	1.6.43.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	285	423,427	
287	287	1.6.43.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 4/6/21	Sat 29/1/22	Fri 4/6/21	Sat 29/1/22	0 days	423,427	288	
288	288	1.6.43.5	Shipping and Delivery of Plant to site	45 days	Sun 30/1/22	Tue 15/3/22	Sun 30/1/22	Tue 15/3/22	109 days	287	695	
289	**289**	**1.6.44**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B)**	**895 days**	**Mon 2/12/19**	**Sat 14/5/22**	**Mon 2/12/...**	**Sat 14/5/22**	**1 day**			
290	290	1.6.44.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	291	
291	291	1.6.44.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	290	292	
292	292	1.6.44.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	291	423,427	
293	293	1.6.44.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	423,427	294	
294	294	1.6.44.5	Shipping and Delivery of Plant to site	45 days	Thu 31/3/22	Sat 14/5/22	Thu 31/3/22	Sat 14/5/22	78 days	293	701,706,7	
295	**295**	**1.6.45**	**DOU - FRP air ductwork**	**895 days**	**Mon 2/12/19**	**Sat 14/5/22**	**Mon 2/12/...**	**Sat 14/5/22**	**1 day**			
296	296	1.6.45.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	297	
297	297	1.6.45.2	Invitation of quotations for purchasing package	60 days	Sat 30/5/20	Tue 28/7/20	Sat 30/5/20	Tue 28/7/20	0 days	296	298	
298	298	1.6.45.3	Acceptance of conforming quotation	30 days	Wed 29/7/20	Thu 27/8/20	Wed 29/7/...	Thu 27/8/20	0 days	297	423,427	
299	299	1.6.45.4	Manufacturing and Factory Acceptance Test of Plant	300 days	Fri 4/6/21	Wed 30/3/22	Fri 4/6/21	Wed 30/3/...	0 days	423,427	300	
300	300	1.6.45.5	Shipping and Delivery of Plant to site	45 days	Thu 31/3/22	Sat 14/5/22	Thu 31/3/22	Sat 14/5/22	49 days	299	697,702,7	
301	**301**	**1.6.46**	**Mis - new replacement filter plates and provision of filter cloths**	**540 days**	**Mon 2/12/19**	**Mon 24/5/21**	**Mon 2/12/...**	**Mon 24/5/...**	**30 days**			
302	302	1.6.46.1	Submission for acceptance of purchasing package	180 days	Mon 2/12/19	Fri 29/5/20	Mon 2/12/...	Fri 29/5/20	0 days	2	303	
303	303	1.6.46.2	Invitation of quotations for purchasing package	30 days	Sat 30/5/20	Sun 28/6/20	Sat 30/5/20	Sun 28/6/20	0 days	302	304	
304	304	1.6.46.3	Acceptance of conforming quotation	30 days	Mon 29/6/20	Tue 28/7/20	Mon 29/6/...	Tue 28/7/20	0 days	303	435	
305	305	1.6.46.4	Manufacturing and Factory Acceptance Test of Plant	210 days	Sat 12/9/20	Fri 9/4/21	Sat 12/9/20	Fri 9/4/21	0 days	435	306	
306	306	1.6.46.5	Shipping and Delivery of Plant to site	45 days	Sat 10/4/21	Mon 24/5/21	Sat 10/4/21	Mon 24/5/...	0 days	305	830	
307	**307**	**1.6.47**	**Mis - membrane filter press system**	**540 days**	**Mon 2/12/19**	**Mon 24/5/21**	**Mon 2/12/...**	**Mon 24/5/...**	**0 days**			
308	308	1.6.47.1	Submission for acceptance of purchasing package	120 days	Mon 2/12/19	Mon 30/3/20	Mon 2/12/...	Mon 30/3/...	0 days	2	309	
309	309	1.6.47.2	Invitation of quotations for purchasing package	60 days	Tue 31/3/20	Fri 29/5/20	Tue 31/3/20	Fri 29/5/20	0 days	308	310	
310	310	1.6.47.3	Acceptance of conforming quotation	30 days	Sat 30/5/20	Sun 28/6/20	Sat 30/5/20	Sun 28/6/20	0 days	309	434	
311	311	1.6.47.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Thu 13/8/20	Fri 9/4/21	Thu 13/8/20	Fri 9/4/21	0 days	434	312	
312	312	1.6.47.5	Shipping and Delivery of Plant to site	45 days	Sat 10/4/21	Mon 24/5/21	Sat 10/4/21	Mon 24/5/...	0 days	311	814	
313	**313**	**1.6.48**	**Mis - replacement of PST no. 4 and no. 6**	**414 days**	**Mon 2/12/19**	**Mon 18/1/21**	**Mon 2/12/...**	**Mon 18/1/...**	**1.5 days**			
314	314	1.6.48.1	Submission for acceptance of purchasing package	90 days	Mon 2/12/19	Sat 29/2/20	Mon 2/12/...	Sat 29/2/20	0 days	2	315	
315	315	1.6.48.2	Invitation of quotations for purchasing package	30 days	Sun 1/3/20	Mon 30/3/20	Sun 1/3/20	Mon 30/3/...	0 days	314	316	
316	316	1.6.48.3	Acceptance of conforming quotation	14 days	Tue 31/3/20	Mon 13/4/20	Tue 31/3/20	Mon 13/4/...	0 days	315	432	
317	317	1.6.48.4	Manufacturing and Factory Acceptance Test of Plant	100 days	Fri 11/9/20	Sat 19/12/20	Fri 11/9/20	Sat 19/12/20	0 days	432	318	
318	318	1.6.48.5	Shipping and Delivery of Plant to site	30 days	Sun 20/12/20	Mon 18/1/21	Sun 20/12/...	Mon 18/1/...	21 days	317	787	
319	**319**	**1.6.49**	**Mis - filtrate lift pumps and filtrate transfer pumps**	**292 days**	**Mon 2/3/20**	**Fri 18/12/20**	**Mon 2/3/20**	**Fri 18/12/20**	**31 days**			
320	320	1.6.49.1	Submission for acceptance of purchasing package	29 days	Mon 2/3/20	Mon 30/3/20	Mon 2/3/20	Mon 30/3/...	0 days		321	
321	321	1.6.49.2	Invitation of quotations for purchasing package	30 days	Tue 31/3/20	Wed 29/4/20	Tue 31/3/20	Wed 29/4/...	0 days	320	322	
322	322	1.6.49.3	Acceptance of conforming quotation and acceptance for Manufacture	14 days	Thu 30/4/20	Wed 13/5/20	Thu 30/4/20	Wed 13/5/...	0 days	321	436,323	
323	323	1.6.49.4	Manufacturing and Factory Acceptance Test of Plant	174 days	Thu 14/5/20	Tue 3/11/20	Thu 14/5/20	Tue 3/11/20	0 days	322	324	
324	324	1.6.49.5	Shipping and Delivery of Plant to site	45 days	Wed 4/11/20	Fri 18/12/20	Wed 4/11/...	Fri 18/12/20	30 days	323	775	
325	**325**	**1.6.50**	**Mis - pv system**	**314 days**	**Wed 1/7/20**	**Mon 10/5/21**	**Wed 1/7/20**	**Mon 10/5/...**	**979 days**			
326	326	1.6.50.1	Submission for acceptance of purchasing package	180 days	Wed 1/7/20	Sun 27/12/20	Wed 1/7/20	Sun 27/12/...	0 days		327	
327	327	1.6.50.2	Invitation of quotations for purchasing package	30 days	Mon 28/12/20	Tue 26/1/21	Mon 28/12...	Tue 26/1/21	0 days	326	328	
328	328	1.6.50.3	Acceptance of conforming quotation	14 days	Wed 27/1/21	Tue 9/2/21	Wed 27/1/...	Tue 9/2/21	0 days	327	329	
329	329	1.6.50.4	Commencement of Design Work	90 days	Wed 10/2/21	Mon 10/5/21	Wed 10/2/...	Mon 10/5/...	24 days	328	577	
330	**330**	**1.7**	**Subletting of major sub-contract works**	**910 days**	**Mon 2/12/19**	**Sun 29/5/22**	**Mon 2/12/...**	**Sun 29/5/22**	**574 days**	2		
331	331	1.7.1	Planned Completion Date for Procurement of major plant and materials	0 days	Thu 12/8/21	Thu 12/8/21	Thu 12/8/21	Thu 12/8/21	0 days	2SS+620 days		
332	**332**	**1.7.2**	**General - Independent BEAM Plus Consultant**	**150 days**	**Wed 1/1/20**	**Fri 29/5/20**	**Wed 1/1/20**	**Fri 29/5/20**	**0 days**			
333	333	1.7.2.1	Submission for acceptance of proposed Independent BEAM Plus Consultant	60 edays	Wed 1/1/20	Sun 1/3/20	Wed 1/1/20	Sun 1/3/20	0 edays	2SS+30 edays	334	
334	334	1.7.2.2	Acceptance of proposed Independent BEAM Plus Consultant	14 edays	Sun 1/3/20	Sun 15/3/20	Sun 1/3/20	Sun 15/3/20	0 edays	333	335	
335	335	1.7.2.3	Engagement with an Independent BEAM Plus Consultant	7 days	Sun 15/3/20	Sat 21/3/20	Sun 15/3/20	Sat 21/3/20	69 days	334	336	
336	336	1.7.2.4	Latest Date for engagement with an independent BEAM Plus Consultant	0 days	Fri 29/5/20	Fri 29/5/20	Fri 29/5/20	Fri 29/5/20	0 days	2SS+180 days		
337	**337**	**1.7.3**	**General - Independent Checking Engineer**	**90 days**	**Wed 1/1/20**	**Mon 30/3/20**	**Wed 1/1/20**	**Mon 30/3/...**	**0 days**			
338	338	1.7.3.1	Submission for acceptance of proposed Independent Checking Engineer	60 edays	Wed 1/1/20	Sun 1/3/20	Wed 1/1/20	Sun 1/3/20	0 edays	2SS+30 edays	339	
339	339	1.7.3.2	Acceptance of proposed Independent Checking Engineer	14 edays	Sun 1/3/20	Sun 15/3/20	Sun 1/3/20	Sun 15/3/20	0 edays	338	340	
340	340	1.7.3.3	Engagement with an Independent Checking Engineer	7 days	Sun 15/3/20	Sat 21/3/20	Sun 15/3/20	Sat 21/3/20	9 days	339	341	
341	341	1.7.3.4	Latest Date for engagement with an ICE	0 days	Mon 30/3/20	Mon 30/3/20	Mon 30/3/...	Mon 30/3/...	0 days	2SS+120 days		
342	**342**	**1.7.4**	**General - Lifting Appliances**	**715 days**	**Wed 1/1/20**	**Wed 15/12/21**	**Wed 1/1/20**	**Wed 15/12...**	**441 days**			
343	343	1.7.4.1	Submission for acceptance of subcontract works package	90 edays	Wed 1/1/20	Tue 31/3/20	Wed 1/1/20	Tue 31/3/20	0 edays	2SS+30 edays	344	
344	344	1.7.4.2	Invitation of tender for subcontract works	45 edays	Tue 31/3/20	Fri 15/5/20	Tue 31/3/20	Fri 15/5/20	0 edays	343	345	



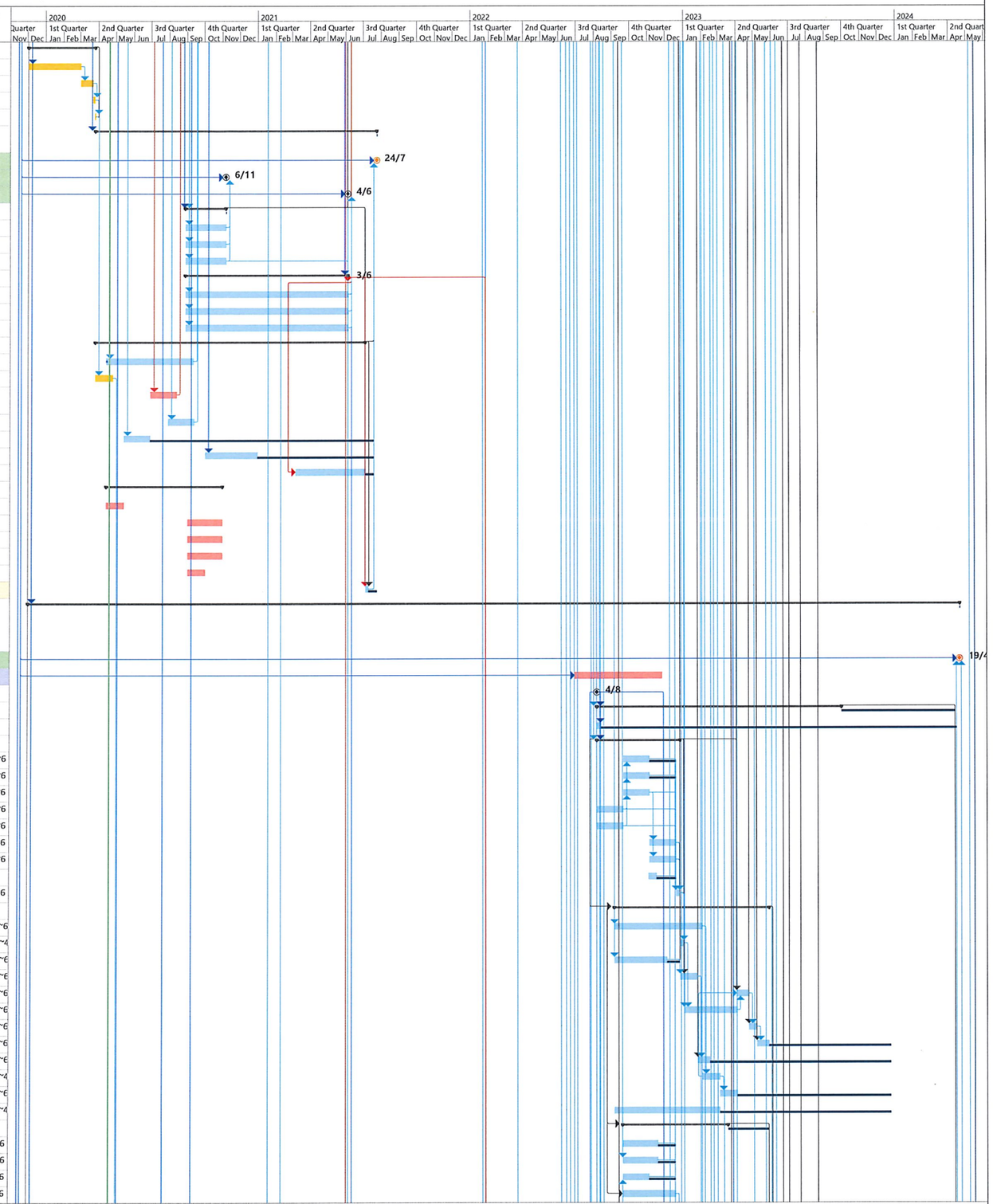
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
345	345	1.7.4.3	Acceptance of conforming tender	14 edays	Fri 15/5/20	Fri 29/5/20	Fri 15/5/20	Fri 29/5/20	0 edays	344	346	
346	346	1.7.4.4	Sub-contract work commencement date	0 days	Fri 29/5/20	Fri 29/5/20	Fri 29/5/20	Fri 29/5/20	91 days	345	427	
347	347	1.7.4.5	Manufacturing and Factory Acceptance Test of Plant	150 days	Fri 4/6/21	Sun 31/10/21	Fri 4/6/21	Sun 31/10/...	0 days	423,427	348	
348	348	1.7.4.6	Shipping and Delivery of Plant to site	45 days	Mon 1/11/21	Wed 15/12/21	Mon 1/11/...	Wed 15/12...	42 days	347	452,501,5	
349	**349**	**1.7.5**	**General - Mechanical Installations**	**120 days**	**Mon 2/11/20**	**Mon 1/3/21**	**Mon 2/11/...**	**Mon 1/3/21**	**0 days**			
350	350	1.7.5.1	Submission for acceptance of subcontract works package	60 days	Mon 2/11/20	Thu 31/12/20	Mon 2/11/...	Thu 31/12/...	0 days		351	
351	351	1.7.5.2	Invitation of tender for subcontract works	30 days	Fri 1/1/21	Sat 30/1/21	Fri 1/1/21	Sat 30/1/21	0 days	350	352	
352	352	1.7.5.3	Acceptance of conforming tender	14 days	Sun 31/1/21	Sat 13/2/21	Sun 31/1/21	Sat 13/2/21	16 days	351	353	
353	353	1.7.5.4	Sub-contract work commencement date	0 days	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	0 days	352		
354	**354**	**1.7.6**	**General - Electrical Installations**	**120 days**	**Mon 2/11/20**	**Mon 1/3/21**	**Mon 2/11/...**	**Mon 1/3/21**	**0 days**			
355	355	1.7.6.1	Submission for acceptance of subcontract works package	60 edays	Mon 2/11/20	Fri 1/1/21	Mon 2/11/...	Fri 1/1/21	0 edays		356	
356	356	1.7.6.2	Invitation of tender for subcontract works	30 edays	Fri 1/1/21	Sun 31/1/21	Fri 1/1/21	Sun 31/1/21	0 edays	355	357	
357	357	1.7.6.3	Acceptance of conforming tender	14 edays	Sun 31/1/21	Sun 14/2/21	Sun 31/1/21	Sun 14/2/21	15.38 edays	356	358	
358	358	1.7.6.4	Sub-contract work commencement date	0 days	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	0 days	357		
359	**359**	**1.7.7**	**General - Facility Computerised Systems (SCADA, CMMS, PMS, IDMS)**	**752 days**	**Fri 8/5/20**	**Sun 29/5/22**	**Fri 8/5/20**	**Sun 29/5/22**	**9 days**			
360	360	1.7.7.1	Submission for acceptance of subcontract works package	60 edays	Fri 8/5/20	Tue 7/7/20	Fri 8/5/20	Tue 7/7/20	0 edays		361	
361	361	1.7.7.2	Invitation of tender for subcontract works	30 edays	Tue 7/7/20	Thu 6/8/20	Tue 7/7/20	Thu 6/8/20	0 edays	360	362	
362	362	1.7.7.3	Acceptance of conforming tender	14 edays	Thu 6/8/20	Thu 20/8/20	Thu 6/8/20	Thu 20/8/20	0 edays	361	363	
363	363	1.7.7.4	Sub-contract work commencement date	0 days	Thu 20/8/20	Thu 20/8/20	Thu 20/8/20	Thu 20/8/20	8 days	362	423,427	
364	364	1.7.7.5	Manufacturing and Factory Acceptance Test of Plant, PLC for IW	360 days	Fri 4/6/21	Sun 29/5/22	Fri 4/6/21	Sun 29/5/22	67 days	423,427	480,525,5	
365	365	1.7.7.6	Manufacturing and Factory Acceptance Test of Plant, PLC for PST	360 days	Fri 4/6/21	Sun 29/5/22	Fri 4/6/21	Sun 29/5/22	201 days	423,427	480,525,5	
366	366	1.7.7.7	Manufacturing and Factory Acceptance Test of Plant, PLC for BR2A &B	360 days	Fri 4/6/21	Sun 29/5/22	Fri 4/6/21	Sun 29/5/22	0 days	423,427	480,525,5	
367	367	1.7.7.8	Manufacturing and Factory Acceptance Test of Plant, PLC for MFB2	360 days	Fri 4/6/21	Sun 29/5/22	Fri 4/6/21	Sun 29/5/22	0 days	423,427	480,525,5	
368	**368**	**1.7.8**	**General - Building Services Installations**	**119 days**	**Mon 2/11/20**	**Mon 1/3/21**	**Mon 2/11/...**	**Mon 1/3/21**	**0 days**			
369	369	1.7.8.1	Submission for acceptance of subcontract works package	60 edays	Mon 2/11/20	Fri 1/1/21	Mon 2/11/...	Fri 1/1/21	0 edays		370	
370	370	1.7.8.2	Invitation of tender for subcontract works	30 edays	Fri 1/1/21	Sun 31/1/21	Fri 1/1/21	Sun 31/1/21	0 edays	369	371	
371	371	1.7.8.3	Acceptance of conforming tender	14 edays	Sun 31/1/21	Sun 14/2/21	Sun 31/1/21	Sun 14/2/21	15 edays	370	372	
372	372	1.7.8.4	Sub-contract work commencement date	0 days	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	0 days	371		
373	**373**	**1.7.9**	**General - Mechanical Ventilation and Air Conditioning Installation**	**119 days**	**Mon 2/11/20**	**Mon 1/3/21**	**Mon 2/11/...**	**Mon 1/3/21**	**0 days**			
374	374	1.7.9.1	Submission for acceptance of subcontract works package	60 days	Mon 2/11/20	Thu 31/12/20	Mon 2/11/...	Thu 31/12/...	0 days		375	
375	375	1.7.9.2	Invitation of tender for subcontract works	30 edays	Thu 31/12/20	Sat 30/1/21	Thu 31/12/...	Sat 30/1/21	0.63 edays	374	376	
376	376	1.7.9.3	Acceptance of conforming tender	14 days	Sun 31/1/21	Sat 13/2/21	Sun 31/1/21	Sat 13/2/21	15 days	375	377	
377	377	1.7.9.4	Sub-contract work commencement date	0 days	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	0 days	376		
378	**378**	**1.7.10**	**General - Emergency Power Generator Set**	**104 days**	**Wed 1/7/20**	**Tue 13/10/20**	**Wed 1/7/20**	**Tue 13/10...**	**1168 days**			
379	379	1.7.10.1	Submission for acceptance of subcontract works package	60 edays	Wed 1/7/20	Sun 30/8/20	Wed 1/7/20	Sun 30/8/20	0 edays		380	
380	380	1.7.10.2	Invitation of tender for subcontract works	30 edays	Sun 30/8/20	Tue 29/9/20	Sun 30/8/20	Tue 29/9/20	0 edays	379	381	
381	381	1.7.10.3	Acceptance of conforming tender	14 edays	Tue 29/9/20	Tue 13/10/20	Tue 29/9/20	Tue 13/10/...	0 edays	380	382	
382	382	1.7.10.4	Sub-contract work commencement date	0 days	Tue 13/10/20	Tue 13/10/20	Tue 13/10/...	Tue 13/10/...	471 days	381	721	
383	**383**	**1.7.11**	**General - Plumbing Installation**	**74 days**	**Fri 1/5/20**	**Tue 14/7/20**	**Fri 1/5/20**	**Tue 14/7/20**	**890 days**			
384	384	1.7.11.1	Submission for acceptance of subcontract works package	30 edays	Fri 1/5/20	Sun 31/5/20	Fri 1/5/20	Sun 31/5/20	0 edays	2SS+30 edays	385	
385	385	1.7.11.2	Invitation of tender for subcontract works	30 edays	Sun 31/5/20	Tue 30/6/20	Sun 31/5/20	Tue 30/6/20	0 edays	384	386	
386	386	1.7.11.3	Acceptance of conforming tender	14 edays	Tue 30/6/20	Tue 14/7/20	Tue 30/6/20	Tue 14/7/20	0 edays	385	387	
387	387	1.7.11.4	Sub-contract work commencement date	0 days	Tue 14/7/20	Tue 14/7/20	Tue 14/7/20	Tue 14/7/20	0 days	386	753	
388	**388**	**1.7.12**	**General - Fire Services Installation**	**123 days**	**Fri 1/5/20**	**Tue 1/9/20**	**Fri 1/5/20**	**Tue 1/9/20**	**871 days**			
389	389	1.7.12.1	Submission for acceptance of subcontract works package	60 days	Fri 1/5/20	Mon 29/6/20	Fri 1/5/20	Mon 29/6/...	0 days		390	
390	390	1.7.12.2	Invitation of tender for subcontract works	30 days	Tue 30/6/20	Wed 29/7/20	Tue 30/6/20	Wed 29/7/...	0 days	389	391	
391	391	1.7.12.3	Acceptance of conforming tender	14 days	Thu 30/7/20	Wed 12/8/20	Thu 30/7/20	Wed 12/8/...	19 days	390	392	
392	392	1.7.12.4	Sub-contract work commencement date	0 days	Tue 1/9/20	Tue 1/9/20	Tue 1/9/20	Tue 1/9/20	0 days	391	736	
393	**393**	**1.7.13**	**General - Earthing and Lightning Protection System**	**91 days**	**Thu 2/7/20**	**Thu 1/10/20**	**Thu 2/7/20**	**Thu 1/10/20**	**201 days**			
394	394	1.7.13.1	Submission for acceptance of subcontract works package	30 edays	Thu 2/7/20	Sat 1/8/20	Thu 2/7/20	Sat 1/8/20	0 edays		395	
395	395	1.7.13.2	Invitation of tender for subcontract works	30 edays	Sat 1/8/20	Mon 31/8/20	Sat 1/8/20	Mon 31/8/...	0 edays	394	396	
396	396	1.7.13.3	Acceptance of conforming tender	14 edays	Mon 31/8/20	Mon 14/9/20	Mon 31/8/...	Mon 14/9/...	17 edays	395	397	
397	397	1.7.13.4	Sub-contract work commencement date	0 days	Thu 1/10/20	Thu 1/10/20	Thu 1/10/20	Thu 1/10/20	0 days	396	437	
398	**398**	**1.7.14**	**General - CCTV Installation**	**294 days**	**Mon 1/6/20**	**Sun 21/3/21**	**Mon 1/6/20**	**Sun 21/3/21**	**710 days**			
399	399	1.7.14.1	Submission for acceptance of subcontract works package	30 edays	Mon 1/6/20	Wed 1/7/20	Mon 1/6/20	Wed 1/7/20	0 edays		400	
400	400	1.7.14.2	Invitation of tender for subcontract works	30 edays	Wed 1/7/20	Fri 31/7/20	Wed 1/7/20	Fri 31/7/20	0 edays	399	401	
401	401	1.7.14.3	Acceptance of conforming tender	14 edays	Fri 31/7/20	Fri 14/8/20	Fri 31/7/20	Fri 14/8/20	0 edays	400	402	
402	402	1.7.14.4	Sub-contract work commencement date	0 days	Fri 14/8/20	Fri 14/8/20	Fri 14/8/20	Fri 14/8/20	0 days	401	403	
403	403	1.7.14.5	Design, Procurements and Delivery to Site	220 days	Fri 14/8/20	Sun 21/3/21	Fri 14/8/20	Sun 21/3/21	501 days	402	450	
404	**404**	**1.7.15**	**General - Civil Construction Work for underground pipework**	**121 days**	**Tue 1/9/20**	**Thu 31/12/20**	**Tue 1/9/20**	**Thu 31/12...**	**0 days**			
405	405	1.7.15.1	Submission for acceptance of subcontract works package	30 days	Tue 1/9/20	Wed 30/9/20	Tue 1/9/20	Wed 30/9/...	0 days		406	
406	406	1.7.15.2	Invitation of tender for subcontract works	30 days	Thu 1/10/20	Fri 30/10/20	Thu 1/10/20	Fri 30/10/20	0 days	405	407	
407	407	1.7.15.3	Acceptance of conforming tender	14 days	Sat 31/10/20	Fri 13/11/20	Sat 31/10/20	Fri 13/11/20	47 days	406	408	
408	408	1.7.15.4	Sub-contract work commencement date	0 days	Thu 31/12/20	Thu 31/12/20	Thu 31/12/...	Thu 31/12/...	0 days	407		
409	**409**	**1.7.16**	**General - Civil Construction Work for Temp. Filtrate Eq. System**	**56 days**	**Mon 2/3/20**	**Sun 26/4/20**	**Mon 2/3/20**	**Sun 26/4/20**	**1 day**			
410	410	1.7.16.1	Submission for acceptance of subcontract works package	21 days	Mon 2/3/20	Sun 22/3/20	Mon 2/3/20	Sun 22/3/20	0 days	2SS+30 edays	411	
411	411	1.7.16.2	Invitation of tender for subcontract works	21 days	Mon 23/3/20	Sun 12/4/20	Mon 23/3/...	Sun 12/4/20	0 days	410	412	
412	412	1.7.16.3	Acceptance of conforming tender	14 days	Mon 13/4/20	Sun 26/4/20	Mon 13/4/...	Sun 26/4/20	0 days	411	413	
413	413	1.7.16.4	Sub-contract work commencement date	0 days	Sun 26/4/20	Sun 26/4/20	Sun 26/4/20	Sun 26/4/20	0 days	412	766	



Bestwise
Project: DE/2018/04
Date: Mon 20/4/20

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

ID	ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
414	**414**	**1.7.17**	**Mis - Modification of existing power house**	**115 days**	**Mon 2/12/19**	**Wed 25/3/20**	**Mon 2/12/...**	**Wed 25/3/...**	**0 days**		**433**	
415	415	1.7.17.1	Submission for acceptance of subcontract works package	90 days	Mon 2/12/19	Sat 29/2/20	Mon 2/12/...	Sat 29/2/20	0 days	2	416	
416	416	1.7.17.2	Invitation of tender for subcontract works	21 days	Sun 1/3/20	Sat 21/3/20	Sun 1/3/20	Sat 21/3/20	0 days	415	417	
417	417	1.7.17.3	Acceptance of conforming tender	3 days	Sun 22/3/20	Tue 24/3/20	Sun 22/3/20	Tue 24/3/20	0 days	416	418	
418	418	1.7.17.4	Sub-contract work commencement date	1 day	Wed 25/3/20	Wed 25/3/20	Wed 25/3/...	Wed 25/3/...	0 days	417	433	
419	**419**	**1.8**	**Section 1 - Completion of the design of E&M Works for all works as defined in WI_GP Cl. 10.1(a)**	**485 days**	**Thu 26/3/20**	**Sat 24/7/21**	**Thu 26/3/20**	**Sat 24/7/21**	**1 day**	**2**		
420	420	1.8.1	Section 1 - Latest Completion Date	0 days	Sat 24/7/21	Sat 24/7/21	Sat 24/7/21	Sat 24/7/21	0 days	2SS+600 eda		
421	421	1.8.2	Key Date KD1A, document submissions Part 1	0 days	Fri 6/11/20	Fri 6/11/20	Fri 6/11/20	Fri 6/11/20	1 day	2SS+340 eda		
422	422	1.8.3	Key Date KD1B, document submissions Part 2	0 days	Fri 4/6/21	Fri 4/6/21	Fri 4/6/21	Fri 4/6/21	0 days	2SS+550 eda	577	
423	**423**	**1.8.4**	**Document Submissions for design work from formation level up to +8.0 mPD**	**70 days**	**Fri 28/8/20**	**Thu 5/11/20**	**Fri 28/8/20**	**Thu 5/11/20**	**1 day**	**32,38,50,56,6**	**117,177,1**	
424	424	1.8.4.1	Drawing submissions for acceptance	70 days	Fri 28/8/20	Thu 5/11/20	Fri 28/8/20	Thu 5/11/20	0 days	80,86,92,98,1	421	
425	425	1.8.4.2	Plant and Material submissions for acceptance	70 days	Fri 28/8/20	Thu 5/11/20	Fri 28/8/20	Thu 5/11/20	0 days	80,86,92,98,1	421	
426	426	1.8.4.3	Design Calculations for acceptance	70 days	Fri 28/8/20	Thu 5/11/20	Fri 28/8/20	Thu 5/11/20	0 days	80,86,92,98,1	421,577	
427	**427**	**1.8.5**	**Document Submissions for design work above level +8.0 mPD**	**280 days**	**Thu 27/8/20**	**Thu 3/6/21**	**Thu 27/8/20**	**Thu 3/6/21**	**0 days**	**346,32,38,50,**	**81,87,93,**	
428	428	1.8.5.1	Drawing submissions for acceptance	280 edays	Thu 27/8/20	Thu 3/6/21	Thu 27/8/20	Thu 3/6/21	0.63 edays	80,86,92,98,1	422	
429	429	1.8.5.2	Plant and Material submissions for acceptance	280 edays	Thu 27/8/20	Thu 3/6/21	Thu 27/8/20	Thu 3/6/21	0.63 edays	80,86,92,98,1	422	
430	430	1.8.5.3	Design Calculations for acceptance	280 edays	Thu 27/8/20	Thu 3/6/21	Thu 27/8/20	Thu 3/6/21	0.63 edays	80,86,92,98,1	422	
431	**431**	**1.8.6**	**Document Submissions for remaining work**	**465 days**	**Thu 26/3/20**	**Sat 3/7/21**	**Thu 26/3/20**	**Sat 3/7/21**	**0 days**		**420,445**	
432	432	1.8.6.1	Design submissions for retrofitting the existing PST No. 4 and No. 6	150 days	Tue 14/4/20	Thu 10/9/20	Tue 14/4/20	Thu 10/9/20	0 days	316	317	
433	433	1.8.6.2	Design submissions for E&M installation works of existing power house	30 days	Thu 26/3/20	Fri 24/4/20	Thu 26/3/20	Fri 24/4/20	0 days	414,418	806	
434	434	1.8.6.3	Design submissions for E&M installation works of existing sludge thickening building	45 days	Mon 29/6/20	Wed 12/8/20	Mon 29/6/20	Wed 12/8/20	0 days	310	311	
435	435	1.8.6.4	Design submission for replacement of filer plates	45 edays	Tue 28/7/20	Fri 11/9/20	Tue 28/7/20	Fri 11/9/20	0.63 edays	304	305	
436	436	1.8.6.5	Design submission for E&M Installation works for temp. filtrate eq. system	45 days	Thu 14/5/20	Sat 27/6/20	Thu 14/5/20	Sat 27/6/20	386 days	322		
437	437	1.8.6.6	Design Submission for Earthing and Lightning Protecion System	90 days	Thu 1/10/20	Tue 29/12/20	Thu 1/10/20	Tue 29/12/...	201 days	397		
438	438	1.8.6.7	DG Stores Submissions to FSD for approval	120 days	Sat 6/3/21	Sat 3/7/21	Sat 6/3/21	Sat 3/7/21	15 days	427FS-90 day		
439	**439**	**1.8.7**	**Three-Month Rolling Contractor's Design Submissions**	**200 days**	**Tue 14/4/20**	**Fri 30/10/20**	**Tue 14/4...**	**Fri 30/10...**	**0 days**			
440	440	1.8.7.1	CDS01 - General Design Parameters	30 days	Tue 14/4/20	Wed 13/5/20	Tue 14/4/20	Wed 13/5/...	0 days			
441	441	1.8.7.2	CDS80 - Civil Work Requirements for Inlet Works upto +8.0 mPD	60 days	Tue 1/9/20	Fri 30/10/20	Tue 1/9/20	Fri 30/10/20	0 days			
442	442	1.8.7.3	CDS81 - Civil Work Requirements for PST upto +8.0 mPD	60 days	Tue 1/9/20	Fri 30/10/20	Tue 1/9/20	Fri 30/10/20	0 days			
443	443	1.8.7.4	CDS82 - Civil Work Requirements for BR 2A&2B upto +8.0 mPD	60 days	Tue 1/9/20	Fri 30/10/20	Tue 1/9/20	Fri 30/10/20	0 days			
444	444	1.8.7.5	CDS83 - Civil Work Requirements for MFB no. 2 upto +8.0 mPD	30 days	Tue 1/9/20	Wed 30/9/20	Tue 1/9/20	Wed 30/9/...	0 days			
445	445	1.8.8	Risk Allowance for completion of Section 1	5 days	Sun 4/7/21	Thu 8/7/21	Sun 4/7/21	Thu 8/7/21	15 days	431,423,427	420	
446	**446**	**1.9**	**Section 2 - Completion of all works for Inlet Works, PST No. 1~4, BR No. 2A & 2B, MFB No. 2, temporary chemical dosing system, deodorisation systems, chemical system no. 1 and no. 2, FS and sprinkler pump room, ...etc as defined in WI_GP 10.1(b)**	**1600 days**	**Mon 2/12/19**	**Fri 19/4/24**	**Mon 2/12/19**	**Fri 19/4/24**	**1 day**	**2**		
447	447	1.9.1	Section 2 - Latest Completion Date	0 days	Fri 19/4/24	Fri 19/4/24	Fri 19/4/24	Fri 19/4/24	0 days	2SS+1600 eda		
448	**448**	**1.9.2**	**Access Date for Portion B-2, Inlet Works No. 1**	**150 edays**	**Tue 28/6/22**	**Fri 25/11/22**	**Tue 28/6/22**	**Fri 25/11/22**	**0 edays**	**2SS+939 eda**		
449	449	1.9.3	Tentative Civil Handover Date, Portion B-2, Inlet Works No. 1	1 day	Thu 4/8/22	Thu 4/8/22	Thu 4/8/22	Thu 4/8/22	0 days		452,450,4	
450	450	1.9.4	Commencement of E&M Installation at Inlet Works No. 1	420 days	Fri 5/8/22	Thu 28/9/23	Fri 5/8/22	Thu 28/9/23	195 days	403,449	759	
451	451	1.9.4.1	Provision of Temporary Water Supply, Electricity Supply, Lighting etc., IW	7 days	Fri 5/8/22	Thu 11/8/22	Fri 5/8/22	Thu 11/8/22	611 days	449		
452	**452**	**1.9.4.2**	**Installation of Lifting Appliances at Inlet Works No. 1**	**142 days**	**Fri 5/8/22**	**Sat 24/12/22**	**Fri 5/8/22**	**Sat 24/12/...**	**0 days**	**348,449**	**462SS+30**	
453	453	1.9.4.2.1	1/F EOT Crane LA-01-01 SWL 5t	45 days	Mon 19/9/22	Wed 2/11/22	Mon 19/9/...	Wed 2/11/...	45 days	456,457	461	LA - A x 4~6
454	454	1.9.4.2.2	1/F EOT Crane LA-01-02 SWL 5t	45 days	Mon 19/9/22	Wed 2/11/22	Mon 19/9/...	Wed 2/11/...	45 days	456,457	461	LA - B x 4~6
455	455	1.9.4.2.3	1/F EOT Crane LA-01-03 SWL 5t	45 days	Mon 19/9/22	Wed 2/11/22	Mon 19/9/...	Wed 2/11/...	0 days	456,457	458,459,4	LA - C x 4~6
456	456	1.9.4.2.4	UG EOT Crane LA-01-04 SWL 10t	45 days	Fri 5/8/22	Sun 18/9/22	Fri 5/8/22	Sun 18/9/22	0 days		453,454,4	LA - A x 4~6
457	457	1.9.4.2.5	UG EOT Crane LA-01-05 SWL 10t	45 days	Fri 5/8/22	Sun 18/9/22	Fri 5/8/22	Sun 18/9/22	0 days		453,454,4	LA - B x 4~6
458	458	1.9.4.2.6	1/F Retractable Crane LA-01-06 SWL 10t	45 days	Thu 3/11/22	Sat 17/12/22	Thu 3/11/22	Sat 17/12/22	0 days	455	461	LA - C x 4~6
459	459	1.9.4.2.7	1/F Mobile A-frame LA-01-07 SWL 2t	45 days	Thu 3/11/22	Sat 17/12/22	Thu 3/11/22	Sat 17/12/22	0 days	455	461	LA - A x 4~6
460	460	1.9.4.2.8	Submission of T&C Plan and Procedures of LA for acceptance	14 days	Tue 1/11/22	Mon 14/11/22	Tue 1/11/22	Mon 14/11...	33 days		461	
461	461	1.9.4.2.9	T&C, Loading Test for Lifting Appliances	7 days	Sun 18/12/22	Sat 24/12/22	Sun 18/12/...	Sat 24/12/22	0 days	453,454,455,4	464	LA - B x 4~6
462	**462**	**1.9.4.3**	**Mechanical Installations for Inlet Works No. 1**	**265 days**	**Sun 4/9/22**	**Fri 26/5/23**	**Sun 4/9/22**	**Fri 26/5/23**	**0 days**	**452SS+30 da**	**475SS+14**	
463	463	1.9.4.3.1	Installation of penstocks and stoplogs (Penstock 35nos, Stoplogs 37 nos)	150 days	Sun 4/9/22	Tue 31/1/23	Sun 4/9/22	Tue 31/1/23	0 days	34,40	472	ME - E x 4~6
464	464	1.9.4.3.2	Installation of fixed bar screen (x1)	7 days	Sun 25/12/22	Sat 31/12/22	Sun 25/12/...	Sat 31/12/22	0 days	461	468	ME - D x 2~4
465	465	1.9.4.3.3	Installation of mechanical raked coarse bar screens (x4)	90 days	Sun 4/9/22	Fri 2/12/22	Sun 4/9/22	Fri 2/12/22	22 days	82	466	ME - A x 4~6
466	466	1.9.4.3.4	Installation of screening conveyors (x6)	30 days	Sun 25/12/22	Mon 23/1/23	Sun 25/12/...	Mon 23/1/...	0 days	452,83,465	471	ME - A x 4~6
467	467	1.9.4.3.5	Installation of inlet pumps (x5)	21 days	Sat 1/4/23	Fri 21/4/23	Sat 1/4/23	Fri 21/4/23	0 days	452,472SS+1	469	ME - B x 4~6
468	468	1.9.4.3.6	Installation of mechanical raked fine bar screens (x4)	90 days	Sun 1/1/23	Fri 31/3/23	Sun 1/1/23	Fri 31/3/23	0 days	82,464	467	ME - B x 4~6
469	469	1.9.4.3.7	Installation of grit removal system (x3)	14 days	Sat 22/4/23	Fri 5/5/23	Sat 22/4/23	Fri 5/5/23	0 days	467,95	470	ME - B x 4~6
470	470	1.9.4.3.8	Installation of grit classifiers (x2)	21 days	Sat 6/5/23	Fri 26/5/23	Sat 6/5/23	Fri 26/5/23	209 days	469,101		ME - B x 4~6
471	471	1.9.4.3.9	Installation of compactors (x2)	21 days	Tue 24/1/23	Mon 13/2/23	Tue 24/1/23	Mon 13/2/...	311 days	466,107		ME - A x 4~6
472	472	1.9.4.3.10	Installation of pipework and valves	30 days	Wed 1/2/23	Thu 2/3/23	Wed 1/2/23	Thu 2/3/23	0 days	463	467SS+14	ME - D x 2~4
473	473	1.9.4.3.11	Installation of instrumentations	30 days	Fri 3/3/23	Sat 1/4/23	Fri 3/3/23	Sat 1/4/23	264 days	472		ME - A x 4~6
474	474	1.9.4.3.12	Installation of Platforms, Covers etc	180 days	Sun 4/9/22	Thu 2/3/23	Sun 4/9/22	Thu 2/3/23	294 days			ME - D x 2~4
475	**475**	**1.9.4.4**	**Electrical Installations for Inlet Works No. 1**	**180 days**	**Sun 18/9/22**	**Thu 16/3/23**	**Sun 18/9/22**	**Thu 16/3/23**	**71 days**	**462SS+14 da**	**487**	
476	476	1.9.4.4.1	Installation of LV Switchboards, IW	60 days	Sun 18/9/22	Wed 16/11/22	Sun 18/9/22	Wed 16/11...	30 days		480	LV - A x 4~6
477	477	1.9.4.4.2	Installation of Transformer, IW	60 days	Sun 18/9/22	Wed 16/11/22	Sun 18/9/22	Wed 16/11...	30 days	76	480	EE - A x 4~6
478	478	1.9.4.4.3	Installation of PLC Panels, IW	45 days	Sun 18/9/22	Tue 1/11/22	Sun 18/9/22	Tue 1/11/22	45 days	484	480	EE - B x 4~6
479	479	1.9.4.4.4	Installation of cable trays and cable containments	90 days	Sun 18/9/22	Fri 16/12/22	Sun 18/9/22	Fri 16/12/22	0 days	462SS	480	EE - C x 4~6

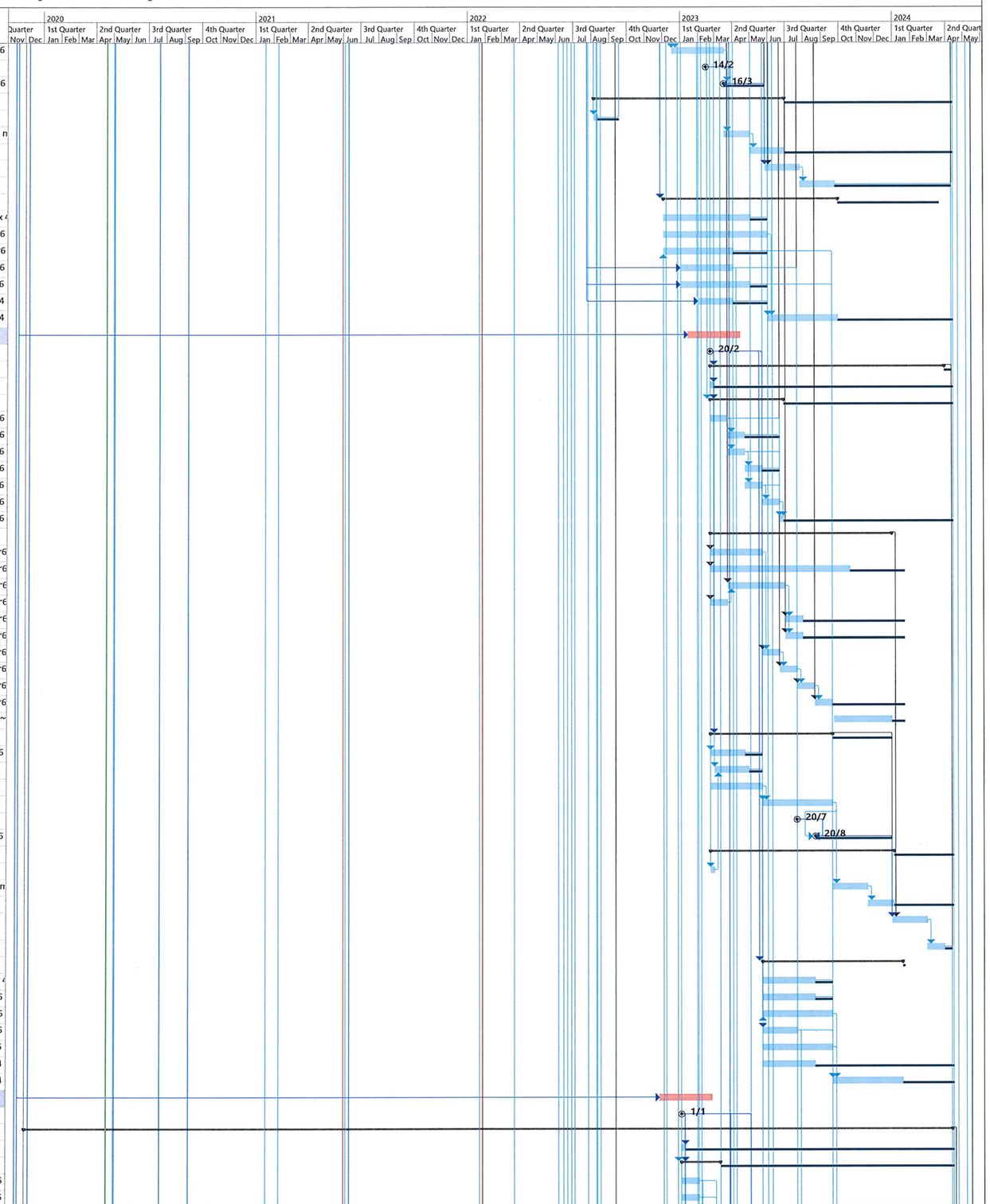


Bestwise
Project: DE/2018/04
Date: Mon 20/4/20

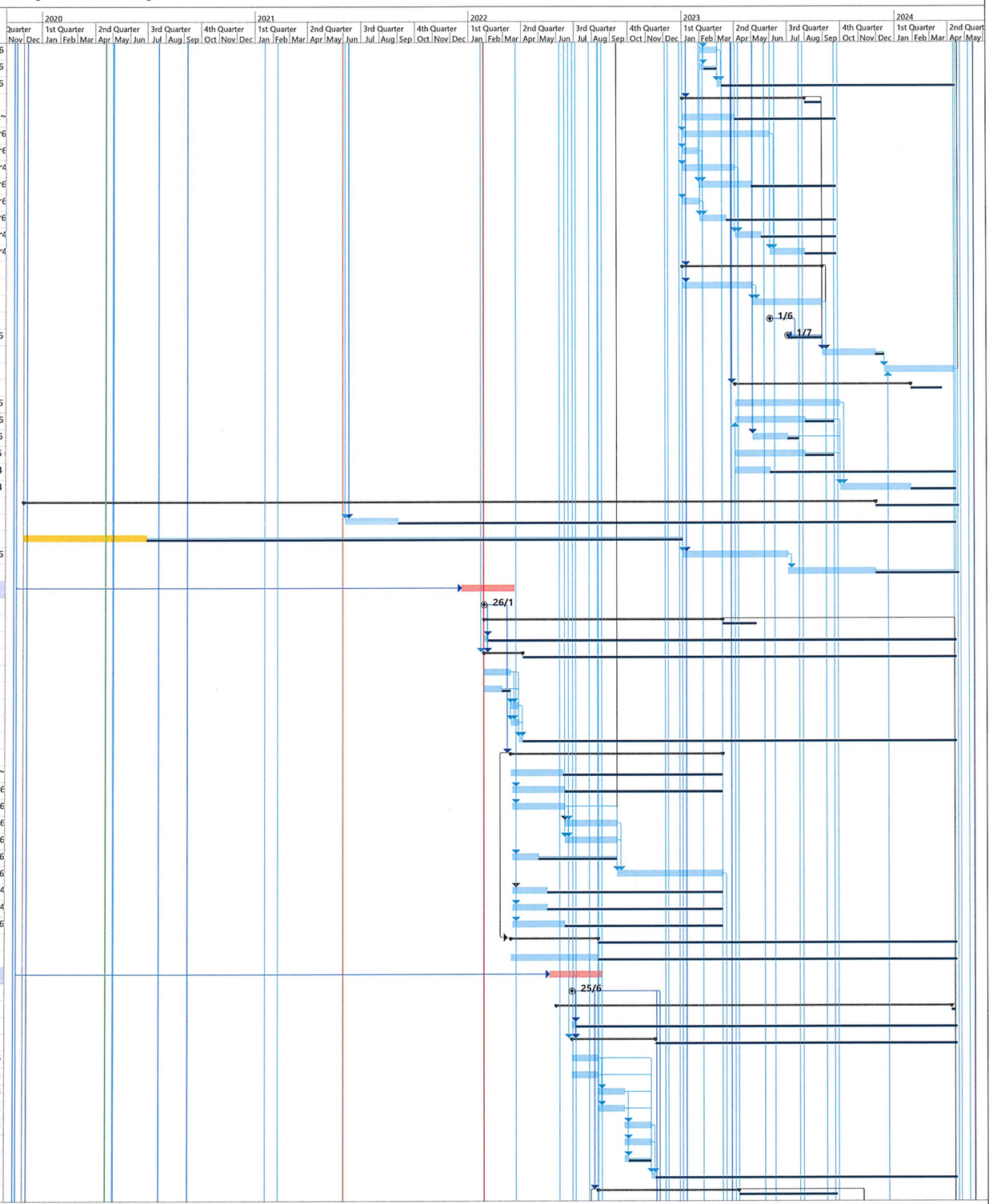
Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

Status Date Tue 14/4/20

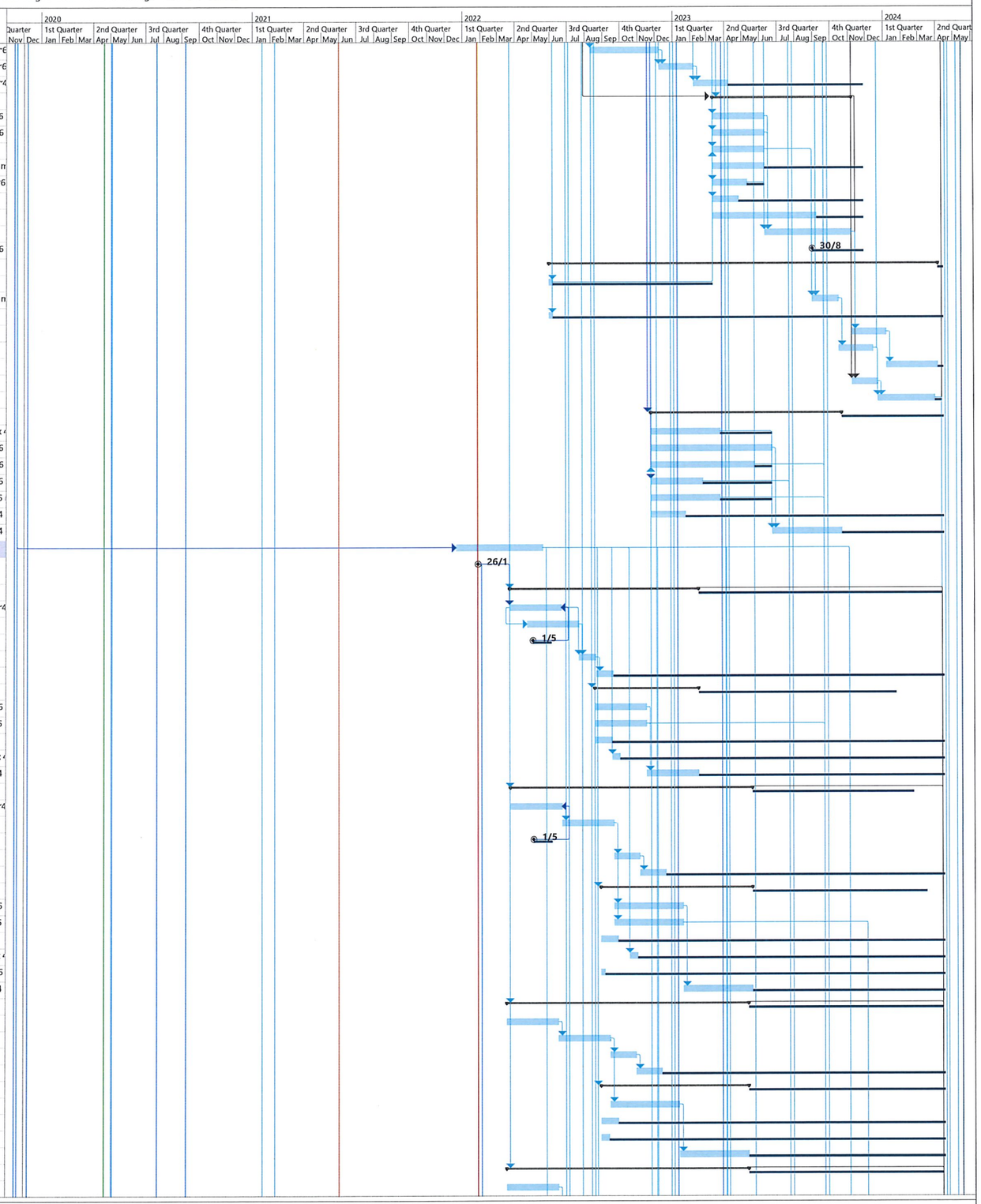
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
480	480	1.9.4.4.5	Cables laying and terminations	90 days	Sat 17/12/22	Thu 16/3/23	Sat 17/12/22	Thu 16/3/23	0 days	479,364,366,4	482,485	EE - C x 4~6
481	481	1.9.4.4.6	Tentative Civil Handover Date, HV cables draw pits from MFB2 to IW	0 days	Tue 14/2/23	Tue 14/2/23	Tue 14/2/23	Tue 14/2/23	1 day		482	FF+30
482	482	1.9.4.4.7	Energisation of LV Switchboards, IW	0 days	Thu 16/3/23	Thu 16/3/23	Thu 16/3/23	Thu 16/3/23	71 days	480,481	FF+3(	487 LV - A x 4~6
483	**483**	**1.9.4.5**	**SCADA Systems, Inlet Works**	**329 days**	**Fri 5/8/22**	**Thu 29/6/23**	**Fri 5/8/22**	**Thu 29/6/23**	**289 days**			
484	484	1.9.4.5.1	Delivery of PLC Panel to LV Switch Room, IW	7 days	Fri 5/8/22	Thu 11/8/22	Fri 5/8/22	Thu 11/8/...	37 days	364	478	
485	485	1.9.4.5.2	Configuration of PLC System, IW	45 days	Fri 17/3/23	Sun 30/4/23	Fri 17/3/23	Sun 30/4/23	0 days	480	486	PLC - A x 1 n
486	486	1.9.4.5.3	Site Acceptance Test for PLC System at Inlet Works No. 1	60 days	Mon 1/5/23	Thu 29/6/23	Mon 1/5/23	Thu 29/6/23	289 days	485		
487	487	1.9.4.6	Site Acceptance Test for E&M Equip & Instrumentations calibration, IW	60 days	Sat 27/5/23	Tue 25/7/23	Sat 27/5/23	Tue 25/7/23	0 days	462,475,482	488	
488	488	1.9.4.7	System Commissioning for E&M Equip at Inlet Works No. 1	60 edays	Tue 25/7/23	Sat 23/9/23	Tue 25/7/23	Sat 23/9/23	200.63 edays	487	837	
489	**489**	**1.9.4.8**	**Building Services Installations for Inlet Works No. 1**	**300 days**	**Sat 3/12/22**	**Thu 28/9/23**	**Sat 3/12/22**	**Thu 28/9/23**	**174 days**	**449**	FS+120 d	
490	490	1.9.4.8.1	Mechanical Ventilation and Air Conditioning System, IW	150 days	Sat 3/12/22	Mon 1/5/23	Sat 3/12/22	Mon 1/5/23	30 days		496	MVAC - B x 4
491	491	1.9.4.8.2	Lighting and Power Distribution System, IW	180 days	Sat 3/12/22	Wed 31/5/23	Sat 3/12/22	Wed 31/5/...	0 days		496	BS - A x 4~6
492	492	1.9.4.8.3	Plumbing Installation, IW	120 days	Sat 3/12/22	Sat 1/4/23	Sat 3/12/22	Sat 1/4/23	60 days	754	756,496	Pb - A x 4~6
493	493	1.9.4.8.4	CCTV Installation (5 indoor +5 outdoor Cameras), IW	90 days	Sun 1/1/23	Fri 31/3/23	Sun 1/1/23	Fri 31/3/23	0 days	449	SS+150 d	836,496,8 BS - B x 4~6
494	494	1.9.4.8.5	Fire Services Installation, IW	120 days	Sun 1/1/23	Sun 30/4/23	Sun 1/1/23	Sun 30/4/23	31 days	449	SS+150 d	738,750,7 FS - A x 4~6
495	495	1.9.4.8.6	Earthing and Lightning Protection System, IW	60 days	Tue 31/1/23	Fri 31/3/23	Tue 31/1/23	Fri 31/3/23	61 days	449	SS+180 d	496 BS - C x 2~4
496	496	1.9.4.8.7	Testing and Commissioning of Building Services Installations, IW	120 days	Thu 1/6/23	Thu 28/9/23	Thu 1/6/23	Thu 28/9/23	198 days	490,491,492,		BS - C x 2~4
497	**497**	**1.9.5**	**Access Date for Portion B-3, PST No. 1~4**	**90 edays**	**Sat 14/1/23**	**Fri 14/4/23**	**Sat 14/1/23**	**Fri 14/4/23**	**0 edays**	**2**	SS+1139 ed	
498	498	1.9.6	Tentative Civil Handover Date, Portion B-3, PST No. 1~4	1 day	Mon 20/2/23	Mon 20/2/23	Mon 20/2/...	Mon 20/2/...	0 days		501,534	FS
499	499	1.9.7	**Commencement of E&M Installation at PST No. 1~4**	402 days	Tue 21/2/23	Thu 28/3/24	Tue 21/2/23	Thu 28/3/24	13 days	498	759	
500	500	1.9.7.1	Provision of Temporary Water Supply, Electricity Supply, Lighting etc., PST	7 days	Tue 21/2/23	Mon 27/2/23	Tue 21/2/23	Mon 27/2/...	411 days	498		
501	**501**	**1.9.7.2**	**Installation of Lifting Appliances at PST No. 1~4**	**127 days**	**Tue 21/2/23**	**Tue 27/6/23**	**Tue 21/2/23**	**Tue 27/6/23**	**291 days**	**348,498**		
502	502	1.9.7.2.1	Basement EOT Crane LA-02-01 SWL 10t	30 days	Tue 21/2/23	Wed 22/3/23	Tue 21/2/23	Wed 22/3/...	0 days		503,504,5	LA - A x 4~6
503	503	1.9.7.2.2	Coping Level EOT Crane LA-02-02 SWL 5t	30 days	Thu 23/3/23	Fri 21/4/23	Thu 23/3/23	Fri 21/4/23	60 days	502	508	LA - A x 4~6
504	504	1.9.7.2.3	Coping Level EOT Crane LA-02-03 SWL 5t	30 days	Thu 23/3/23	Fri 21/4/23	Thu 23/3/23	Fri 21/4/23	0 days	502	505,506,5	LA - B x 4~6
505	505	1.9.7.2.4	Coping Level EOT Crane LA-02-04 SWL 5t	30 days	Sat 22/4/23	Sun 21/5/23	Sat 22/4/23	Sun 21/5/23	30 days	504	508	LA - A x 4~6
506	506	1.9.7.2.5	Coping Level EOT Crane LA-02-05 SWL 5t	30 days	Sat 22/4/23	Sun 21/5/23	Sat 22/4/23	Sun 21/5/23	0 days	504	507,508	LA - B x 4~6
507	507	1.9.7.2.6	Coping Level EOT Crane LA-02-06 SWL 2t	30 days	Mon 22/5/23	Tue 20/6/23	Mon 22/5/...	Tue 20/6/23	0 days	506	508	LA - A x 4~6
508	508	1.9.7.2.7	T&C, Loading Test for Lifting Appliances at PST No. 1~4	7 days	Wed 21/6/23	Tue 27/6/23	Wed 21/6/...	Tue 27/6/23	291 days	502,503,504,		LA - A x 4~6
509	**509**	**1.9.7.3**	**Mechanical Installations at PST No. 1~4**	**312 days**	**Tue 21/2/23**	**Fri 29/12/23**	**Tue 21/2/23**	**Fri 29/12/23**	**0 days**		**532**	
510	510	1.9.7.3.1	Installation of penstocks and stoplogs (Penstock 18nos, Stoplogs 14 nos)	90 days	Tue 21/2/23	Sun 21/5/23	Tue 21/2/23	Sun 21/5/23	0 days	29	516	ME - E x 4~6
511	511	1.9.7.3.2	Installation of pipework and valves	240 days	Tue 21/2/23	Wed 18/10/23	Tue 21/2/23	Wed 18/10...	94 days	41		ME - B x 4~6
512	512	1.9.7.3.3	Installation of lamella plate settlers (x4)	100 days	Thu 23/3/23	Fri 30/6/23	Thu 23/3/23	Fri 30/6/23	0 days	513,113	514,515	ME - A x 4~6
513	513	1.9.7.3.4	Installation of reciprocating type bottom scrapers (x4)	30 days	Tue 21/2/23	Wed 22/3/23	Tue 21/2/23	Wed 22/3/...	0 days	119	512	ME - A x 4~6
514	514	1.9.7.3.5	Installation of surface scum skimmers (x1)	30 days	Sat 1/7/23	Sun 30/7/23	Sat 1/7/23	Sun 30/7/23	174 days	512,125		ME - A x 4~6
515	515	1.9.7.3.6	Installation of scum collector pipes (x1)	30 days	Sat 1/7/23	Sun 30/7/23	Sat 1/7/23	Sun 30/7/23	174 days	512,131		ME - B x 4~6
516	516	1.9.7.3.7	Installation of piston type primary sludge pumps (x3)	30 days	Mon 22/5/23	Tue 20/6/23	Mon 22/5/...	Tue 20/6/23	0 days	137,510	517	ME - C x 4~6
517	517	1.9.7.3.8	Installation of drain pumps (x1)	30 days	Wed 21/6/23	Thu 20/7/23	Wed 21/6/...	Thu 20/7/23	0 days	143,516	518	ME - C x 4~6
518	518	1.9.7.3.9	Installation of air blowers (x2)	30 days	Fri 21/7/23	Sat 19/8/23	Fri 21/7/23	Sat 19/8/23	0 days	149,517	519	ME - C x 4~6
519	519	1.9.7.3.10	Installation of instrumentations	30 days	Sun 20/8/23	Mon 18/9/23	Sun 20/8/23	Mon 18/9/...	124 days	35,518		ME - C x 4~6
520	520	1.9.7.3.11	Installation of Platforms, Covers etc., PST	100 days	Thu 21/9/23	Fri 29/12/23	Thu 21/9/...	Fri 29/12/...	22 days			ME - F x 4~
521	**521**	**1.9.7.4**	**Electrical Installations for PST No. 1~4**	**210 days**	**Tue 21/2/23**	**Mon 18/9/23**	**Tue 21/2/23**	**Mon 18/9/...**	**102 days**	**498**	**532**	
522	522	1.9.7.4.1	Installation of LV Switchboards, PST	60 days	Tue 21/2/23	Fri 21/4/23	Tue 21/2/23	Fri 21/4/23	30 days	66	525	LV - A x 4~6
523	523	1.9.7.4.2	Installation of PLC Panel, PST	60 days	Tue 28/2/23	Fri 28/4/23	Tue 28/2/23	Fri 28/4/23	23 days	66,529	525	
524	524	1.9.7.4.3	Installation of cable trays and cable containments, PST	90 days	Tue 21/2/23	Sun 21/5/23	Tue 21/2/23	Sun 21/5/23	0 days		525	
525	525	1.9.7.4.4	Cables laying and terminations, PST	120 days	Mon 22/5/23	Mon 18/9/23	Mon 22/5/...	Mon 18/9/...	0 days	522,524,364,	527	FS-30
526	526	1.9.7.4.5	Tentative Civil Handover Date, LV cables draw pits from IW to PST	0 days	Thu 20/7/23	Thu 20/7/23	Thu 20/7/23	Thu 20/7/23	2 days		527	FF+30
527	527	1.9.7.4.6	Energisation of LV Switchboards, PST	1 day	Sun 20/8/23	Sun 20/8/23	Sun 20/8/23	Sun 20/8/23	131 days	525	FS-30 day	532 LV - A x 4~6
528	**528**	**1.9.7.5**	**SCADA Systems, PST No. 1~4**	**315 days**	**Tue 21/2/23**	**Mon 1/1/24**	**Tue 21/2/23**	**Mon 1/1/24**	**103 days**			
529	529	1.9.7.5.1	Delivery of PLC Panel to LV Switch Room, PST No. 1~4	7 days	Tue 21/2/23	Mon 27/2/23	Tue 21/2/...	Mon 27/2...	0 days	365	523	
530	530	1.9.7.5.2	Configuration of PLC System	60 days	Tue 19/9/23	Fri 17/11/23	Tue 19/9/23	Fri 17/11/23	0 days	525	531	PLC - B x 1 n
531	531	1.9.7.5.3	Site Acceptance Test for PLC System at PST No. 1~4	45 days	Sat 18/11/23	Mon 1/1/24	Sat 18/11/23	Mon 1/1/24	103 days	530		
532	532	1.9.7.6	Site Acceptance Test for E&M Equip and Instrumentations calibrations at PST No. 1~4	60 edays	Fri 29/12/23	Tue 27/2/24	Fri 29/12/23	Tue 27/2/24	0.63 edays	509,521,527	533	
533	533	1.9.7.7	System Commissioning for E&M Equip at PST No, 1~4	30 days	Wed 28/2/24	Thu 28/3/24	Wed 28/2/...	Thu 28/3/24	13 days	532	837	
534	**534**	**1.9.7.8**	**Building Services Installations for for PST No. 1~4**	**240 days**	**Mon 22/5/23**	**Tue 16/1/24**	**Mon 22/5/...**	**Tue 16/1/24**	**4 days**	**498**	FS+90 da	
535	535	1.9.7.8.1	Mechanical Ventilation and Air Conditioning System, PST	90 days	Mon 22/5/23	Sat 19/8/23	Mon 22/5/...	Sat 19/8/23	30 days		541	MVAC - B x 4
536	536	1.9.7.8.2	Lighting and Power Distribution System, PST	90 days	Mon 22/5/23	Sat 19/8/23	Mon 22/5/...	Sat 19/8/23	30 days		541	BS - A x 4~6
537	537	1.9.7.8.3	Plumbing Installation, PST	120 days	Mon 22/5/23	Mon 18/9/23	Mon 22/5/...	Mon 18/9/...	0 days	754	756,541	Pb - B x 4~6
538	538	1.9.7.8.4	CCTV Installation (9 indoor + 2 outdoor Cameras), PST	60 days	Mon 22/5/23	Thu 20/7/23	Mon 22/5/...	Thu 20/7/23	0 days	498	FS+60 da	836,541 BS - B x 4~6
539	539	1.9.7.8.5	Fire Services Installation, PST	120 days	Mon 22/5/23	Mon 18/9/23	Mon 22/5/...	Mon 18/9/...	0 days		738,750,7	FS - A x 4~6
540	540	1.9.7.8.6	Earthing and Lightning Protection System, PST	90 days	Mon 22/5/23	Sat 19/8/23	Mon 22/5/...	Sat 19/8/23	238 days			BS - C x 2~4
541	541	1.9.7.8.7	Testing and Commissioning of Building Services Installations, PST	120 days	Tue 19/9/23	Tue 16/1/24	Tue 19/9/23	Tue 16/1/24	88 days	535,536,537,		BS - C x 2~4
542	**542**	**1.9.8**	**Access Date for Portion B-4, BR 2A & 2B**	**90 edays**	**Fri 25/11/22**	**Thu 23/2/23**	**Fri 25/11/22**	**Thu 23/2/23**	**0 edays**	**2**	SS+1089 ed	
543	543	1.9.9	Tentative Civil Handover Date, Portion B-4, BR2A & 2B	1 day	Sun 1/1/23	Sun 1/1/23	Sun 1/1/23	Sun 1/1/23	0 days		546,552,5	
544	**544**	**1.9.10**	**Commencement of E&M Installation at Bioreactor No. 2A & 2B**	**1592 days**	**Mon 2/12/19**	**Wed 10/4/24**	**Mon 2/12/...**	**Wed 10/4/...**	**0 days**		**759**	
545	545	1.9.10.1	Provision of Temporary Water Supply, Electricity Supply, Lighting etc., BR 2A&	7 days	Mon 2/1/23	Sun 8/1/23	Mon 2/1/23	Sun 8/1/23	461 days	543		
546	**546**	**1.9.10.2**	**Installation of Lifting Appliances**	**67 days**	**Mon 2/1/23**	**Thu 9/3/23**	**Mon 2/1/23**	**Thu 9/3/23**	**401 days**	**348,543**		
547	547	1.9.10.2.1	Coping Level EOT Crane LA-03-01 SWL 5t	30 days	Mon 2/1/23	Tue 31/1/23	Mon 2/1/23	Tue 31/1/23	0 days		549,550,5	LA - A x 4~6
548	548	1.9.10.2.2	Coping Level EOT Crane LA-03-02 SWL 5t	30 days	Mon 2/1/23	Tue 31/1/23	Mon 2/1/23	Tue 31/1/23	0 days		549,550,5	LA - B x 4~6



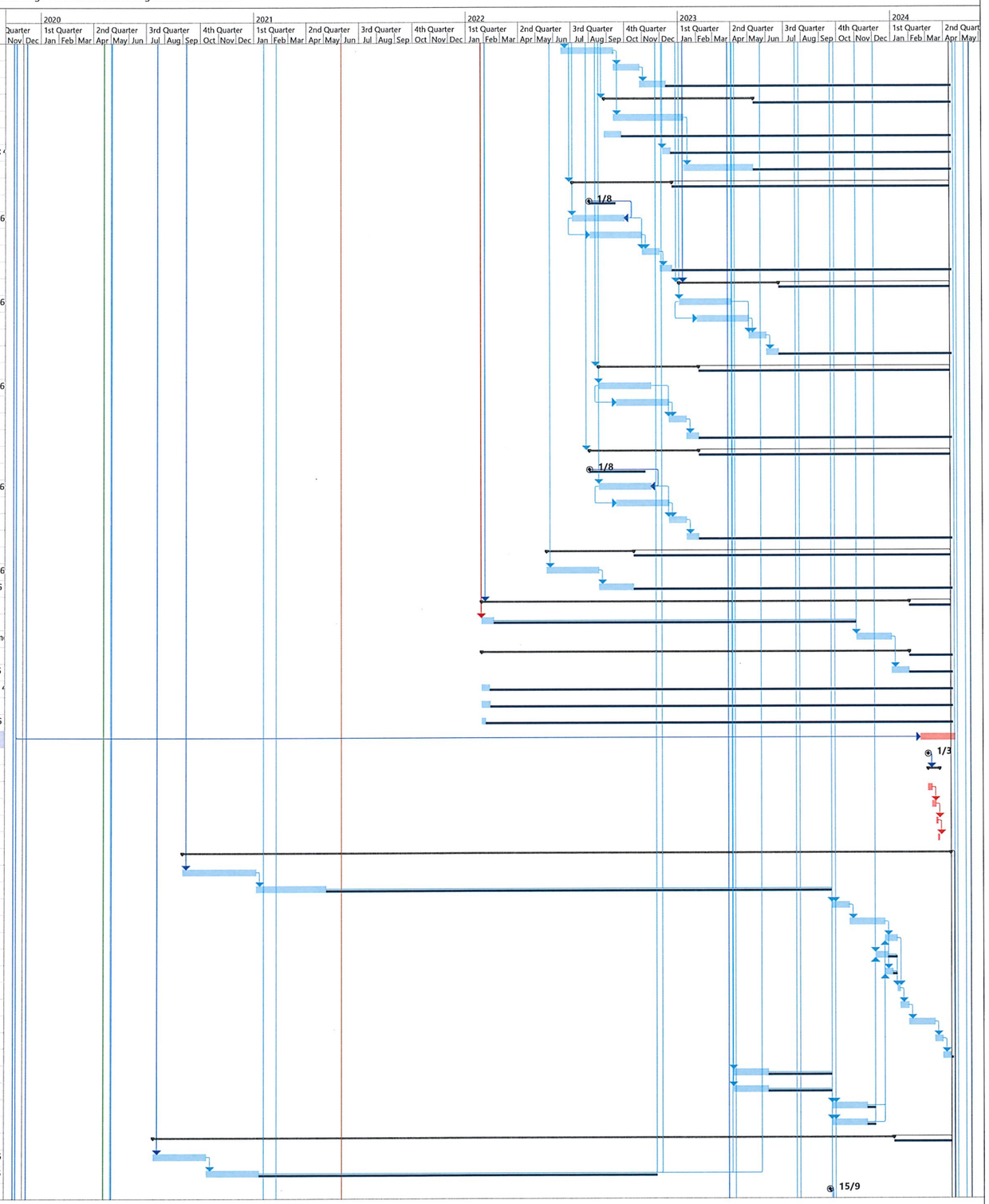
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
549	549	1.9.10.2.3	Coping Level EOT Crane LA-03-03 SWL 5t	30 days	Wed 1/2/23	Thu 2/3/23	Wed 1/2/23	Thu 2/3/23	0 days	547,548	551	LA - A x 4~6
550	550	1.9.10.2.4	Coping Level Mobile A-frame LA-03-04 SWL 4t	7 days	Wed 1/2/23	Tue 7/2/23	Wed 1/2/23	Tue 7/2/23	23 days	547,548	551	LA - B x 4~6
551	551	1.9.10.2.5	T&C, Loading Test for Lifting Appliances at Bioreactor No. 2A & 2B	7 days	Fri 3/3/23	Thu 9/3/23	Fri 3/3/23	Thu 9/3/23	401 days	547,548,549,!		LA - B x 4~6
552	**552**	**1.9.10.3**	**Mechanical Installations for E&M Equip at BR 2A & 2B**	**210 days**	**Mon 2/1/23**	**Sun 30/7/23**	**Mon 2/1/23**	**Sun 30/7/23**	**30 days**	**543**	**567**	
553	553	1.9.10.3.1	Installation of penstocks and stoplogs (Penstocks 8nos, Stoplogs 8no	90 days	Mon 2/1/23	Sat 1/4/23	Mon 2/1/...	Sat 1/4/23	174 days			ME - E x 4~
554	554	1.9.10.3.2	Installation of pipework and valves	150 days	Mon 2/1/23	Wed 31/5/23	Mon 2/1/23	Wed 31/5/...	0 days	52,46	561	ME - C x 4~6
555	555	1.9.10.3.3	Installation of pre-treatment fine screens (x4)	28 days	Mon 2/1/23	Sun 29/1/23	Mon 2/1/23	Sun 29/1/23	0 days	178	557	ME - A x 4~6
556	556	1.9.10.3.4	Installation of air diffusion system (x2)	90 days	Mon 2/1/23	Sat 1/4/23	Mon 2/1/23	Sat 1/4/23	0 days	184	560	ME - D x 2~4
557	557	1.9.10.3.5	Installation of submersible mixers (x16)	90 days	Mon 30/1/23	Sat 29/4/23	Mon 30/1/...	Sat 29/4/23	146 days	555,190		ME - B x 4~6
558	558	1.9.10.3.6	Installation of mixed liquor return pumps (x6)	30 days	Mon 2/1/23	Tue 31/1/23	Mon 2/1/23	Tue 31/1/23	0 days	196	559	ME - A x 4~6
559	559	1.9.10.3.7	Installation of scum removal systems (x2)	45 days	Wed 1/2/23	Fri 17/3/23	Wed 1/2/23	Fri 17/3/23	189 days	558,202		ME - B x 4~6
560	560	1.9.10.3.8	Installation of aeration blowers (x4)	45 days	Sun 2/4/23	Tue 16/5/23	Sun 2/4/23	Tue 16/5/23	129 days	556,208		ME - D x 2~4
561	561	1.9.10.3.9	Installation of instrumentations	60 days	Thu 1/6/23	Sun 30/7/23	Thu 1/6/23	Sun 30/7/23	54 days	554,214		ME - D x 2~4
562	562	1.9.10.4	Electrical Installations for E&M Equip at BR 2A & 2B	240 days	Mon 2/1/23	Tue 29/8/23	Mon 2/1/23	Tue 29/8/23	0 days	543	567	
563	563	1.9.10.4.1	Installation of cable trays and cable containments	120 days	Mon 2/1/23	Mon 1/5/23	Mon 2/1/23	Mon 1/5/23	0 days	543	564	
564	564	1.9.10.4.2	Cables laying and terminations	120 days	Tue 2/5/23	Tue 29/8/23	Tue 2/5/23	Tue 29/8/23	0 days	563,364,366,!	633	
565	565	1.9.10.4.3	Tentative Civil Handover Date, LV cables draw pits from MFB2 to BR2	0 days	Thu 1/6/23	Thu 1/6/23	Thu 1/6/23	Thu 1/6/23	1 day		566FF+30	
566	566	1.9.10.4.4	Energisation of LV Switchboards, BR2	1 day	Sat 1/7/23	Sat 1/7/23	Sat 1/7/23	Sat 1/7/23	59 days	565FF+30 da	567	LV - A x 4~6
567	567	1.9.10.5	Site Acceptance Test for E&M Equip at BR 2A & 2B	90 edays	Tue 29/8/23	Mon 27/11/23	Tue 29/8/23	Mon 27/11...	15.63 edays	552,562,566	568	
568	568	1.9.10.6	System Commissioning for E&M Equip at BR 2A & 2B	120 days	Wed 13/12/23	Wed 10/4/24	Wed 13/12...	Wed 10/4/...	0 days	567,636	837	
569	569	1.9.10.7	Building Services Installations for BR 2A & 2B	300 days	Sun 2/4/23	Fri 26/1/24	Sun 2/4/23	Fri 26/1/24	54 days	543FS+90 eda		
570	570	1.9.10.7.1	Lighting and Power Distribution System, BR2	180 days	Sun 2/4/23	Thu 28/9/23	Sun 2/4/23	Thu 28/9/23	0 days		575	BS - A x 4~6
571	571	1.9.10.7.2	Plumbing Installation, BR2	120 days	Sun 2/4/23	Sun 30/7/23	Sun 2/4/23	Sun 30/7/23	50 days	754	756,575	Pb - A x 4~6
572	572	1.9.10.7.3	CCTV Installation (7 indoor + 2 outdoor Cameras), BR2	60 days	Tue 2/5/23	Fri 30/6/23	Tue 2/5/23	Fri 30/6/23	20 days	543FS+120 da	836,575	BS - B x 4~6
573	573	1.9.10.7.4	Fire Services Installation, BR2	120 days	Sun 2/4/23	Sun 30/7/23	Sun 2/4/23	Sun 30/7/23	50 days		738,750,7	FS - B x 4~6
574	574	1.9.10.7.5	Lightning Protection System, BR2	60 days	Sun 2/4/23	Wed 31/5/23	Sun 2/4/23	Wed 31/5/...	318 days			BS - C x 2~4
575	575	1.9.10.7.6	Testing and Commissioning of Building Services Installations, BR2	120 days	Fri 29/9/23	Fri 26/1/24	Fri 29/9/23	Fri 26/1/24	78 days	570,571,572,!		BS - C x 2~4
576	**576**	**1.9.10.8**	**PV System**	**1457 days**	**Mon 2/12/19**	**Mon 27/11/23**	**Mon 2/12/...**	**Mon 27/1...**	**143 days**			
577	577	1.9.10.8.1	Complete the CLP's Electronic Application Form and Upload Required Docur	90 days	Fri 4/6/21	Wed 1/9/21	Fri 4/6/21	Wed 1/9/21	955 days	422,426,329		
578	578	1.9.10.8.2	Material ordering and delivery to site	210 days	Mon 2/12/19	Sun 28/6/20	Mon 2/12/...	Sun 28/6/20	917 days		579	
579	579	1.9.10.8.3	Technical Assessment, System Test and Installation	180 days	Mon 2/1/23	Fri 30/6/23	Mon 2/1/23	Fri 30/6/23	0 days	578,543	580	PV - A x 4~6
580	580	1.9.10.8.4	CLP's smart meter installation and Final on-grid test with CLP	150 days	Sat 1/7/23	Mon 27/11/23	Sat 1/7/23	Mon 27/11...	143 days	579	447	
581	**581**	**1.9.11**	**Access Date for Portion B-5A, MFB No. 2 below 1st floor level**	**90 edays**	**Mon 20/12/21**	**Sun 20/3/22**	**Mon 20/1...**	**Sun 20/3/22**	**0 edays**	**2SS+749 eda**		
582	582	1.9.12	Tentative Civil Handover Date, Portion B-5A, MFB No. 2 below 1st floor level	1 day	Wed 26/1/22	Wed 26/1/22	Wed 26/1/...	Wed 26/1/...	0 days		585,591F!	
583	**583**	**1.9.13**	**Commencement of E&M Installation at MFB No. 2 Lower Part**	**408 days**	**Thu 27/1/22**	**Fri 10/3/23**	**Thu 27/1/22**	**Fri 10/3/23**	**58 days**		**759**	
584	584	1.9.13.1	Provision of Temporary Water Supply, Electricity Supply, Lighting etc., MFB2	7 days	Thu 27/1/22	Wed 2/2/22	Thu 27/1/22	Wed 2/2/22	801 days	582		
585	585	1.9.13.2	Installation of Lifting Appliances	66 days	Thu 27/1/22	Sat 2/4/22	Thu 27/1/22	Sat 2/4/22	742 days	348,582		
586	586	1.9.13.2.1	B2 EOT Crane LA-04-01 SWL 5t	45 days	Thu 27/1/22	Sat 12/3/22	Thu 27/1/22	Sat 12/3/22	0 days		588,589,5	
587	587	1.9.13.2.2	B2 EOT Crane LA-04-02 SWL 5t	30 days	Thu 27/1/22	Fri 25/2/22	Thu 27/1/22	Fri 25/2/22	15 days		588,589,5	
588	588	1.9.13.2.3	B2 MR LA-04-03 SWL 5t	14 days	Sun 13/3/22	Sat 26/3/22	Sun 13/3/22	Sat 26/3/22	0 days	586,587	590	
589	589	1.9.13.2.4	B1 MR LA-04-04 SWL 3t	14 days	Sun 13/3/22	Sat 26/3/22	Sun 13/3/22	Sat 26/3/22	0 days	586,587	590	
590	590	1.9.13.2.5	T&C, Loading Test for Lifting Appliances	7 days	Sun 27/3/22	Sat 2/4/22	Sun 27/3/22	Sat 2/4/22	742 days	586,587,588,!		
591	591	1.9.13.3	Mechanical Installations for E&M Equip. at MFB No. 2 Lower Part	363 days	Sun 13/3/22	Fri 10/3/23	Sun 13/3/22	Fri 10/3/23	0 days	582FS+45 eda	602SS	
592	592	1.9.13.3.1	Installation of penstocks and stoplogs (Penstocks 18nos, Stoplogs 11	90 days	Sun 13/3/22	Fri 10/6/22	Sun 13/3/...	Fri 10/6/22	273 days			ME - E x 4~
593	593	1.9.13.3.2	Installation of hollow fibre membrane modules (x9)	90 days	Wed 16/3/22	Mon 13/6/22	Wed 16/3/...	Mon 13/6/...	270 days	222		ME - A x 4~6
594	594	1.9.13.3.3	Installation of air scour blowers (x3)	90 days	Wed 16/3/22	Mon 13/6/22	Wed 16/3/...	Mon 13/6/...	0 days	228	598,595,5	ME - B x 4~6
595	595	1.9.13.3.4	Installation of permeate pumps (x10)	90 days	Tue 14/6/22	Sun 11/9/22	Tue 14/6/22	Sun 11/9/22	0 days	229,594	598	ME - A x 4~6
596	596	1.9.13.3.5	Installation of return activated sludge pumps (x5)	90 days	Tue 14/6/22	Sun 11/9/22	Tue 14/6/22	Sun 11/9/22	0 days	264,594	598	ME - B x 4~6
597	597	1.9.13.3.6	Installation of membrane tank drain pumps (x2)	45 days	Wed 16/3/22	Fri 29/4/22	Wed 16/3/...	Fri 29/4/22	135 days	270	598	ME - C x 4~6
598	598	1.9.13.3.7	Installation of pipework and valves	180 days	Mon 12/9/22	Fri 10/3/23	Mon 12/9/...	Fri 10/3/23	0 days	41,594,595,5	621	ME - C x 4~6
599	599	1.9.13.3.8	Installation of chemical storage tank	60 days	Wed 16/3/22	Sat 14/5/22	Wed 16/3/...	Sat 14/5/22	300 days	247		ME - D x 2~4
600	600	1.9.13.3.9	Installation of chemical dosing pumps	60 days	Wed 16/3/22	Sat 14/5/22	Wed 16/3/...	Sat 14/5/22	300 days	258		ME - D x 2~4
601	601	1.9.13.3.10	Installation of plant service water system	90 days	Wed 16/3/22	Mon 13/6/22	Wed 16/3/...	Mon 13/6/...	270 days	276,282		ME - C x 4~6
602	602	1.9.13.4	Electrical Installations for E&M Equip. at MFB No. 2 Lower Part	150 days	Sun 13/3/22	Tue 9/8/22	Sun 13/3/22	Tue 9/8/22	613 days	591SS		
603	603	1.9.13.4.1	Installation of cable trays and cable containments	150 days	Sun 13/3/22	Tue 9/8/22	Sun 13/3/22	Tue 9/8/22	613 days			
604	**604**	**1.9.14**	**Access Date for Portion B-5B, MFB No. 2 remaining portion**	**90 edays**	**Thu 19/5/22**	**Wed 17/8/22**	**Thu 19/5/22**	**Wed 17/8/...**	**0 edays**	**2SS+899 eda**		
605	605	1.9.15	Tentative Civil Handover Date, Portion B-5B, MFB No. 2 remaining portion	1 day	Sat 25/6/22	Sat 25/6/22	Sat 25/6/22	Sat 25/6/22	0 days		608,617F!	
606	**606**	**1.9.16**	**Commencement of E&M Installation at MFB No. 2 Upper Part**	**675 days**	**Mon 30/5/22**	**Wed 3/4/24**	**Mon 30/5/...**	**Wed 3/4/24**	**7 days**		**759**	
607	607	1.9.16.1	Provision of Temporary Water Supply, Electricity Supply, Lighting etc., MFB2	7 days	Sun 26/6/22	Sat 2/7/22	Sun 26/6/22	Sat 2/7/22	651 days	605		
608	608	1.9.16.2	Installation of Lifting Appliances	142 days	Sun 26/6/22	Mon 14/11/22	Sun 26/6/22	Mon 14/11...	516 days	348,605		
609	609	1.9.16.2.1	GF EOT Crane LA-04-05 SWL 5t	45 days	Sun 26/6/22	Tue 9/8/22	Sun 26/6/22	Tue 9/8/22	0 days		611,612,6	LA - A x 4~6
610	610	1.9.16.2.2	GF Gantry Crane LA-04-06 SWL 6t	45 days	Sun 26/6/22	Tue 9/8/22	Sun 26/6/22	Tue 9/8/22	0 days		611,612,6	LA - B x 4~6
611	611	1.9.16.2.3	1F EOT Crane LA-04-07 SWL 15t	45 days	Wed 10/8/22	Fri 23/9/22	Wed 10/8/...	Fri 23/9/22	0 days	609,610	613,614,6	LA - A x 4~6
612	612	1.9.16.2.4	1F EOT Crane LA-04-08 SWL 15t	45 days	Wed 10/8/22	Fri 23/9/22	Wed 10/8/...	Fri 23/9/22	0 days	609,610	613,614,6	LA - B x 4~6
613	613	1.9.16.2.5	RF EOT Crane LA-04-09 SWL 2t	45 days	Sat 24/9/22	Mon 7/11/22	Sat 24/9/22	Mon 7/11/...	0 days	611,612	616	LA - A x 4~6
614	614	1.9.16.2.6	RF Retractable MR LA-04-10 SWL 2t	45 days	Sat 24/9/22	Mon 7/11/22	Sat 24/9/22	Mon 7/11/...	0 days	611,612	616	LA - B x 4~6
615	615	1.9.16.2.7	Mobile A-frame LA-04-11 SWL 2t	7 days	Sat 24/9/22	Fri 30/9/22	Sat 24/9/22	Fri 30/9/22	38 days	611,612	616	LA - C x 4~6
616	616	1.9.16.2.8	T&C, Loading Test for Lifting Appliances	7 days	Tue 8/11/22	Mon 14/11/22	Tue 8/11/22	Mon 14/11...	516 days	609,610,611,!		LA - A x 4~6
617	**617**	**1.9.16.3**	**Mechanical Installations for E&M Equip. at MFB No. 2 Upper Part**	**240 days**	**Wed 10/8/22**	**Thu 6/4/23**	**Wed 10/8/...**	**Thu 6/4/23**	**168 days**	**605FS+45 ed**	**621SS+45**	



ID	ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
618	618	1.9.16.3.1	Installation of air scour blowers (x3)	120 days	Wed 10/8/22	Wed 7/12/22	Wed 10/8/...	Wed 7/12/...	0 days	228	619	ME - A x 4~6
619	619	1.9.16.3.2	Installation of compressed air system (x1)	60 days	Thu 8/12/22	Sun 5/2/23	Thu 8/12/22	Sun 5/2/23	0 days	240,618	620	ME - B x 4~6
620	620	1.9.16.3.3	Installation of instrumentations	60 days	Mon 6/2/23	Thu 6/4/23	Mon 6/2/23	Thu 6/4/23	234 days	619,246		ME - D x 2~4
621	**621**	**1.9.16.4**	**Electrical Installations for E&M Equip. at MFB No. 2 Upper Part**	**240 days**	**Sat 11/3/23**	**Sun 5/11/23**	**Sat 11/3/23**	**Sun 5/11/23**	**0 days**	**617SS+45 eda**	**638**	
622	622	1.9.16.4.1	Installation of LV Switchboards, BR2	90 days	Sat 11/3/23	Thu 8/6/23	Sat 11/3/23	Thu 8/6/23	0 days	68	629	LV - B x 4~6
623	623	1.9.16.4.2	Installation of LV Switchboards, MFB No. 2	90 days	Sat 11/3/23	Thu 8/6/23	Sat 11/3/23	Thu 8/6/23	0 days	70	629	LV - A x 4~6
624	624	1.9.16.4.3	Installation of PLC Panels, BR2	90 days	Sat 11/3/23	Thu 8/6/23	Sat 11/3/23	Thu 8/6/23	0 days	64,632	629,633	
625	625	1.9.16.4.4	Installation of PLC Panels, MFB No. 2	90 days	Sat 11/3/23	Thu 8/6/23	Sat 11/3/23	Thu 8/6/23	171 days			PLC - B x 1 n
626	626	1.9.16.4.5	Installation of HV Switchboards, MFB No. 2	60 days	Sat 11/3/23	Tue 9/5/23	Sat 11/3/23	Tue 9/5/23	30 days	53,58	629	HV - A x 4~6
627	627	1.9.16.4.6	Installation of transformer, MFB No. 2	45 days	Sat 11/3/23	Mon 24/4/23	Sat 11/3/23	Mon 24/4/...	216 days	216		
628	628	1.9.16.4.7	Installation of cable trays and cable containments	180 days	Sat 11/3/23	Wed 6/9/23	Sat 11/3/23	Wed 6/9/23	81 days			
629	629	1.9.16.4.8	Cables laying and terminations	150 days	Fri 9/6/23	Sun 5/11/23	Fri 9/6/23	Sun 5/11/23	0 days	364,622,626,(	635	
630	630	1.9.16.4.9	Energisation of LV Switchboards, MFB	1 day	Wed 30/8/23	Wed 30/8/23	Wed 30/8/...	Wed 30/8/...	88 days			LA - A x 4~6
631	**631**	**1.9.16.5**	**SCADA Systems, BR No. 1 & No 2, MFB No. 2**	**675 days**	**Mon 30/5/22**	**Wed 3/4/24**	**Mon 30/5/...**	**Wed 3/4/24**	**10 days**			
632	632	1.9.16.5.1	Delivery of PLC System, BR2	7 days	Mon 30/5/22	Sun 5/6/22	Mon 30/5...	Sun 5/6/22	278 days	366	624	
633	633	1.9.16.5.2	Configuration of PLC System for BR No. 1 & No. 2	45 days	Wed 30/8/23	Fri 13/10/23	Wed 30/8/...	Fri 13/10/23	0 days	564,624	636	PLC - A x 1 n
634	634	1.9.16.5.3	Delivery of PLC System, MFB No. 2	7 days	Mon 30/5/22	Sun 5/6/22	Mon 30/5...	Sun 5/6/22	678 days	367		
635	635	1.9.16.5.4	Configuration of PLC System for MFB No. 2	60 days	Mon 6/11/23	Thu 4/1/24	Mon 6/11/...	Thu 4/1/24	0 days	629	637	
636	636	1.9.16.5.5	Site Acceptance Test for PLC System at BR No. 1 and No. 2	60 days	Sat 14/10/23	Tue 12/12/23	Sat 14/10/23	Tue 12/12/...	0 days	633	568,639	
637	637	1.9.16.5.6	Site Acceptance Test for PLC System at MFB No. 2	90 days	Fri 5/1/24	Wed 3/4/24	Fri 5/1/24	Wed 3/4/24	10 days	635		
638	638	1.9.16.6	Site Acceptance Test for E&M Equip at MFB No. 2	45 edays	Sun 5/11/23	Wed 20/12/23	Sun 5/11/23	Wed 20/12...	0.63 edays	617,621	639	
639	639	1.9.16.7	System Commissioning for E&M Equip at MFB No. 2	100 days	Thu 21/12/23	Fri 29/3/24	Thu 21/12/...	Fri 29/3/24	12 days	638,636	837	
640	**640**	**1.9.16.8**	**Building Services Installations for MFB No. 2**	**330 days**	**Wed 23/11/22**	**Wed 18/10/23**	**Wed 23/11...**	**Wed 18/10...**	**178 days**	**605FS+150 ed**		
641	641	1.9.16.8.1	Mechanical Ventilation and Air Conditioning System, MFB No. 2	120 days	Wed 23/11/22	Wed 22/3/23	Wed 23/11...	Wed 22/3/...	90 days		647	MVAC - A x 4
642	642	1.9.16.8.2	Lighting and Power Distribution System, MFB No. 2	210 days	Wed 23/11/22	Tue 20/6/23	Wed 23/11...	Tue 20/6/23	0 days		647	BS - A x 4~6
643	643	1.9.16.8.3	Plumbing Installation, MFB No. 2	180 days	Wed 23/11/22	Sun 21/5/23	Wed 23/11...	Sun 21/5/23	30 days	754	756,647	Pb - B x 4~6
644	644	1.9.16.8.4	CCTV Installation (10 indoor + 3 outdoor Cameras), MFB No. 2	90 days	Wed 23/11/22	Mon 20/2/23	Wed 23/11...	Mon 20/2/...	120 days	605FS+120 da	836,647	BS - B x 4~6
645	645	1.9.16.8.5	Fire Services Installation, MFB No. 2	120 days	Wed 23/11/22	Wed 22/3/23	Wed 23/11...	Wed 22/3/...	90 days		738,750,7	FS - B x 4~6
646	646	1.9.16.8.6	Earthing and Lightning Protection System, MFB No. 2	60 days	Wed 23/11/22	Sat 21/1/23	Wed 23/11...	Sat 21/1/23	448 days			BS - C x 2~4
647	647	1.9.16.8.7	Testing and Commissioning of Building Services Installations, MFB No. 2	120 days	Wed 21/6/23	Wed 18/10/23	Wed 21/6/...	Wed 18/10...	178 days	641,642,643,(		BS - C x 2~4
648	**648**	**1.9.17**	**Access Date for Portion B-7 & 7B, Chemical Dosing, Concrete Plinth for DOs, Che**	**150 edays**	**Mon 20/12/21**	**Thu 19/5/22**	**Mon 20/1...**	**Thu 19/5/22**	**0 edays**	**25S+749 eda**	**656**	**FS+90**
649	649	1.9.18	Tentative Civil Handover Date, Portion B-7 & B-7B, temporary chemical dosing system, concrete plinth for deodorisation system	1 day	Wed 26/1/22	Wed 26/1/22	Wed 26/1/22	Wed 26/1/22	0 days		651,720	
650	**650**	**1.9.19**	**Commencement of E&M Installation at Temporary Chemical Dosing System**	**328 days**	**Mon 21/3/22**	**Sun 12/2/23**	**Mon 21/3/...**	**Sun 12/2/23**	**423 days**	**160,166,172**	**759**	
651	651	1.9.19.1	Mechanical Installations for E&M Equip. for Chemical Dosing System	90 edays	Mon 21/3/22	Sun 19/6/22	Mon 21/3/...	Sun 19/6/22	0 edays	649,653FF+5(	652SS+30	ME - D x 2~4
652	652	1.9.19.2	Electrical Installations for E&M Equip. for Chemical Dosing System	90 edays	Wed 20/4/22	Tue 19/7/22	Wed 20/4/...	Tue 19/7/22	0 edays	651SS+30 eda	654	
653	653	1.9.19.3	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	0 days	Sun 1/5/22	Sun 1/5/22	Sun 1/5/22	Sun 1/5/22	33 days		651FF+50	
654	654	1.9.19.4	Site Acceptance Test for E&M Equip for Chemical Dosing System	30 edays	Tue 19/7/22	Thu 18/8/22	Tue 19/7/22	Thu 18/8/22	0 edays	651,652	655	
655	655	1.9.19.5	System Commissioning for E&M Equip for Chemical Dosing System	30 edays	Thu 18/8/22	Sat 17/9/22	Thu 18/8/22	Sat 17/9/22	574.63 edays	654		
656	656	1.9.19.6	Building Services Installations at Temp. Chemical Dosing System areas	180 days	Wed 17/8/22	Sun 12/2/23	Wed 17/8/...	Sun 12/2/23	342 days	648FS+90 eda		
657	657	1.9.19.6.1	Lighting and Power Distribution System, Temp. Chem	90 days	Wed 17/8/22	Mon 14/11/22	Wed 17/8/...	Mon 14/11...	0 days		661	BS - A x 4~6
658	658	1.9.19.6.2	Fire Services Installation, DG Stores, Temp. Chem	90 days	Wed 17/8/22	Mon 14/11/22	Wed 17/8/...	Mon 14/11...	0 days		750,751,6	FS - A x 4~6
659	659	1.9.19.6.3	Lightning Protection System, Temp. Chem	30 days	Wed 17/8/22	Thu 15/9/22	Wed 17/8/...	Thu 15/9/22	576 days			
660	660	1.9.19.6.4	Mechanical Ventilation System, Temp. Chem	14 days	Fri 16/9/22	Thu 29/9/22	Fri 16/9/22	Thu 29/9/22	562 days	648FS+120 ec		MVAC - A x 4
661	661	1.9.19.6.5	Testing and Commissioning of Building Services Installations, Temp. Chem	90 days	Tue 15/11/22	Sun 12/2/23	Tue 15/11/...	Sun 12/2/23	426 days	657,658		BS - C x 2~4
662	**662**	**1.9.20**	**Commencement of E&M Installation at Chemical Dosing System 1 and System 2**	**420 days**	**Tue 22/3/22**	**Tue 16/5/23**	**Tue 22/3/22**	**Tue 16/5/23**	**279 days**	**172,166,160**	**759**	
663	663	1.9.20.1	Mechanical Installations for E&M Equip. for Chemical Dosing System	90 edays	Tue 22/3/22	Mon 20/6/22	Tue 22/3/22	Mon 20/6/...	0 edays	665FF+50 da	664	ME - D x 2~4
664	664	1.9.20.2	Electrical Installations for E&M Equip. for Chemical Dosing System	90 edays	Mon 20/6/22	Sun 18/9/22	Mon 20/6/...	Sun 18/9/22	0.63 edays	663	666,669,6	
665	665	1.9.20.3	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	0 days	Sun 1/5/22	Sun 1/5/22	Sun 1/5/22	Sun 1/5/22	33 days		663FF+50	
666	666	1.9.20.4	Site Acceptance Test for E&M Equip for Chemical Dosing System	45 days	Mon 19/9/22	Wed 2/11/22	Mon 19/9/...	Wed 2/11/...	0 days	664	667	
667	667	1.9.20.5	System Commissioning for E&M Equip for Chemical Dosing System	45 days	Thu 3/11/22	Sat 17/12/22	Thu 3/11/22	Sat 17/12/22	483 days	666		
668	**668**	**1.9.20.6**	**Building Services Installations at Chemical Dosing System areas**	**263 days**	**Sat 27/8/22**	**Tue 16/5/23**	**Sat 27/8/22**	**Tue 16/5/23**	**302 days**	**648FS+100 da**		
669	669	1.9.20.6.1	Lighting and Power Distribution System, Chem 1&2	120 days	Mon 19/9/22	Mon 16/1/23	Mon 19/9/...	Mon 16/1/...	0 days	664	674	BS - B x 4~6
670	670	1.9.20.6.2	Fire Services Installation, DG Stores	120 days	Mon 19/9/22	Mon 16/1/23	Mon 19/9/...	Mon 16/1/...	0 days	664	750,751,7	FS - A x 4~6
671	671	1.9.20.6.3	Lightning Protection System, Chem 1&2	30 days	Sat 27/8/22	Sun 25/9/22	Sat 27/8/22	Sun 25/9/22	566 days			
672	672	1.9.20.6.4	Mechanical Ventilation System, Chem 2	14 days	Sun 16/10/22	Sat 29/10/22	Sun 16/10/...	Sat 29/10/22	532 days	648FS+150 da		MVAC - A x 4
673	673	1.9.20.6.5	Plumbing Installation, Chem 1	7 days	Sat 27/8/22	Fri 2/9/22	Sat 27/8/22	Fri 2/9/22	589 days			Pb - A x 4~6
674	674	1.9.20.6.6	Testing and Commissioning of Building Services Installations, Chem 1&2	120 days	Tue 17/1/23	Tue 16/5/23	Tue 17/1/23	Tue 16/5/23	333 days	669,670		BS - C x 2~4
675	**675**	**1.9.21**	**Commencement of E&M Installation at FS & Sprinkler Pump Room**	**420 days**	**Tue 15/3/22**	**Tue 9/5/23**	**Tue 15/3/22**	**Tue 9/5/23**	**337 days**	**172,166,160**	**759**	
676	676	1.9.21.1	Mechanical Installations for FS & Sprinkler Pumps	90 edays	Tue 15/3/22	Mon 13/6/22	Tue 15/3/22	Mon 13/6/...	0 edays		677	
677	677	1.9.21.2	Electrical Installations for FS & Sprinkler Pumps	90 edays	Mon 13/6/22	Sun 11/9/22	Mon 13/6/...	Sun 11/9/22	0.63 edays	676	678,681	
678	678	1.9.21.3	Site Acceptance Test for FS & Sprinkler Pumps	45 days	Mon 12/9/22	Wed 26/10/22	Mon 12/9/...	Wed 26/10...	0 days	677	679	
679	679	1.9.21.4	System Commissioning for FS & Sprinkler Pumps	45 days	Thu 27/10/22	Sat 10/12/22	Thu 27/10/...	Sat 10/12/22	490 days	678		
680	**680**	**1.9.21.5**	**Building Services Installations at FS & Sprinkler Pump Room**	**256 days**	**Sat 27/8/22**	**Tue 9/5/23**	**Sat 27/8/22**	**Tue 9/5/23**	**340 days**	**648FS+100 da**		
681	681	1.9.21.5.1	Lighting and Power Distribution System, Chem 1&2	120 days	Mon 12/9/22	Mon 9/1/23	Mon 12/9/...	Mon 9/1/23	0 days	677	684	
682	682	1.9.21.5.2	Lightning Protection System, FS & Sprinkler Pump Room	30 days	Sat 27/8/22	Sun 25/9/22	Sat 27/8/22	Sun 25/9/22	566 days			
683	683	1.9.21.5.3	Mechanical Ventilation System, FS & Sprinkler PR	14 days	Sat 27/8/22	Fri 9/9/22	Sat 27/8/22	Fri 9/9/22	582 days			
684	684	1.9.21.5.4	Testing and Commissioning of Building Services Installations, FS & Sprinkler	120 days	Tue 10/1/23	Tue 9/5/23	Tue 10/1/23	Tue 9/5/23	340 days	681		
685	**685**	**1.9.22**	**Commencement of E&M Installation at Street FH Pump Room**	**420 days**	**Tue 15/3/22**	**Tue 9/5/23**	**Tue 15/3/22**	**Tue 9/5/23**	**337 days**	**172,166,160**	**759**	
686	686	1.9.22.1	Mechanical Installations for Street FH Pumps	90 edays	Tue 15/3/22	Mon 13/6/22	Tue 15/3/22	Mon 13/6/...	0 edays		687	



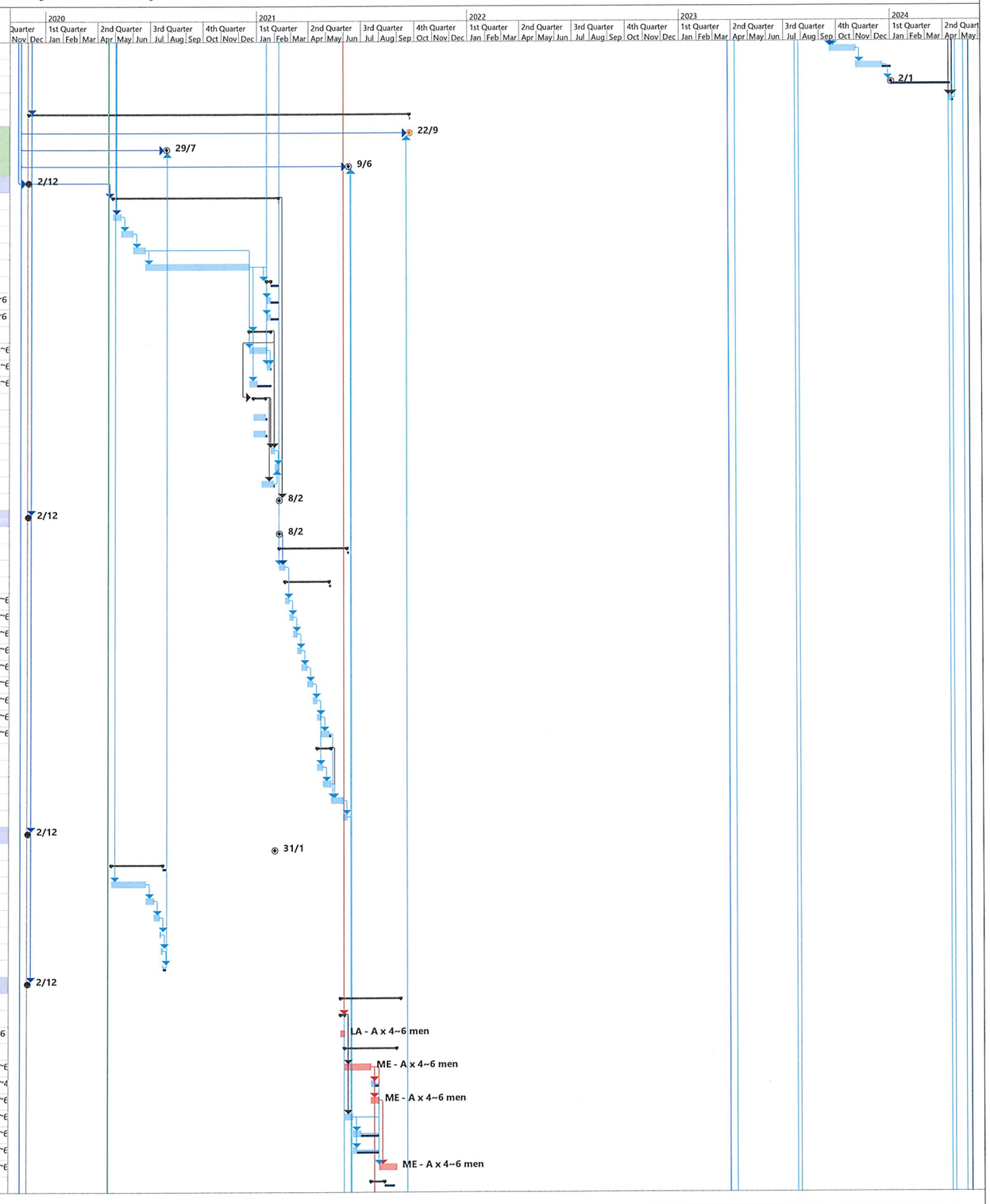
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
687	687	1.9.22.2	Electrical Installations for Street FH Pump	90 edays	Mon 13/6/22	Sun 11/9/22	Mon 13/6/...	Sun 11/9/22	0.63 edays	686	688,691	
688	688	1.9.22.3	Site Acceptance Test for Street FH Pump	45 days	Mon 12/9/22	Wed 26/10/22	Mon 12/9/...	Wed 26/10...	0 days	687	689	
689	689	1.9.22.4	System Commissioning for Street FH Pumps	45 days	Thu 27/10/22	Sat 10/12/22	Thu 27/10/...	Sat 10/12/22	490 days	688		
690	**690**	**1.9.22.5**	**Building Services Installations at Street FH Pump Room**	**256 days**	**Sat 27/8/22**	**Tue 9/5/23**	**Sat 27/8/22**	**Tue 9/5/23**	**340 days**	**648FS+100 da**		
691	691	1.9.22.5.1	Lighting and Power Distribution System, Street FH PR	120 days	Mon 12/9/22	Mon 9/1/23	Mon 12/9/...	Mon 9/1/23	0 days	687	694	
692	692	1.9.22.5.2	Lightning Protection System, Street FH PR	30 days	Sat 27/8/22	Sun 25/9/22	Sat 27/8/22	Sun 25/9/22	566 days			
693	693	1.9.22.5.3	Mechanical Ventilation System, Street FH PR	14 days	Mon 5/12/22	Sun 18/12/22	Mon 5/12/...	Sun 18/12/...	482 days	648FS+200 da		MVAC - A x 4
694	694	1.9.22.5.4	Testing and Commissioning of Building Services Installations, FH PR	120 days	Tue 10/1/23	Tue 9/5/23	Tue 10/1/23	Tue 9/5/23	340 days	691		
695	**695**	**1.9.23**	**Commencement of E&M Installation at DOU 1**	**171 days**	**Sat 2/7/22**	**Tue 20/12/22**	**Sat 2/7/22**	**Tue 20/12...**	**477 days**	**288**	**759**	
696	696	1.9.23.1	Tentative Civil Handover Date, underground air pipework (by others)	0 days	Mon 1/8/22	Mon 1/8/22	Mon 1/8/22	Mon 1/8/22	46 days		697	FF+45
697	697	1.9.23.2	Mechanical Installations for DOU 1	90 edays	Sat 2/7/22	Fri 30/9/22	Sat 2/7/22	Fri 30/9/22	0 edays	648FS+45 da	698	SS+30 ME - F x 4~6
698	698	1.9.23.3	Electrical Installations for DOU 1	90 edays	Mon 1/8/22	Sun 30/10/22	Mon 1/8/22	Sun 30/10/...	0 edays	697SS+30 eda	699	
699	699	1.9.23.4	Site Acceptance Test for DOU1	30 edays	Sun 30/10/22	Tue 29/11/22	Sun 30/10/...	Tue 29/11/...	0 edays	697,698	700	
700	700	1.9.23.5	System Commissioning for DOU 1	21 edays	Tue 29/11/22	Tue 20/12/22	Tue 29/11/...	Tue 20/12/...	480.63 edays	699		
701	**701**	**1.9.24**	**Commencement of E&M Installation at DOU 2A**	**171 days**	**Sun 1/1/23**	**Wed 21/6/23**	**Sun 1/1/23**	**Wed 21/6/...**	**294 days**	**294,543**	**759**	
702	702	1.9.24.1	Mechanical Installations for DOU 2A	90 edays	Sun 1/1/23	Sat 1/4/23	Sun 1/1/23	Sat 1/4/23	0 edays	648FS+45 da	703	SS+30 ME - F x 4~6
703	703	1.9.24.2	Electrical Installations for DOU 2A	90 edays	Tue 31/1/23	Mon 1/5/23	Tue 31/1/23	Mon 1/5/23	0 edays	702SS+30 eda	704	
704	704	1.9.24.3	Site Acceptance Test for E&M Equip for DOU 2A	30 edays	Mon 1/5/23	Wed 31/5/23	Mon 1/5/23	Wed 31/5/...	0 edays	702,703	705	
705	705	1.9.24.4	System Commissioning Test for DOU 2A	21 edays	Wed 31/5/23	Wed 21/6/23	Wed 31/5/...	Wed 21/6/...	297.63 edays	704		
706	**706**	**1.9.25**	**Commencement of E&M Installation at DOU 3A**	**171 days**	**Tue 16/8/22**	**Fri 3/2/23**	**Tue 16/8/22**	**Fri 3/2/23**	**432 days**	**294**	**759**	
707	707	1.9.25.1	Mechanical Installations for DOU 3A	90 edays	Tue 16/8/22	Mon 14/11/22	Tue 16/8/22	Mon 14/11...	0 edays	648FS+90 da	708	SS+30 ME - F x 4~6
708	708	1.9.25.2	Electrical Installations for DOU 3A	90 edays	Thu 15/9/22	Wed 14/12/22	Thu 15/9/22	Wed 14/12...	0 edays	707SS+30 eda	709	
709	709	1.9.25.3	Site Acceptance Test for E&M Equip for DOU 3A	30 edays	Wed 14/12/22	Fri 13/1/23	Wed 14/12...	Fri 13/1/23	0 edays	707,708	710	
710	710	1.9.25.4	System Commissioning Test for DOU 3A	21 edays	Fri 13/1/23	Fri 3/2/23	Fri 13/1/23	Fri 3/2/23	435.63 edays	709		
711	**711**	**1.9.26**	**Commencement of E&M Installation at DOU 3B**	**187 days**	**Mon 1/8/22**	**Fri 3/2/23**	**Mon 1/8/22**	**Fri 3/2/23**	**432 days**	**294**	**759**	
712	712	1.9.26.1	Tentative Civil Handover Date underground air pipework (by others)	0 days	Mon 1/8/22	Mon 1/8/22	Mon 1/8/22	Mon 1/8/22	96 days		713	FF+30
713	713	1.9.26.2	Mechanical Installations for DOU 3B	90 edays	Tue 16/8/22	Mon 14/11/22	Tue 16/8/22	Mon 14/11...	0 edays	648FS+90 da	714	SS+30 ME - F x 4~6
714	714	1.9.26.3	Electrical Installations for DOU 3B	90 edays	Thu 15/9/22	Wed 14/12/22	Thu 15/9/22	Wed 14/12...	0 edays	713SS+30 eda	715	
715	715	1.9.26.4	Site Acceptance Test for E&M Equip for DOU 3B	30 edays	Wed 14/12/22	Fri 13/1/23	Wed 14/12...	Fri 13/1/23	0 edays	713,714	716	
716	716	1.9.26.5	System Commissioning Test for DOU 3B	21 edays	Fri 13/1/23	Fri 3/2/23	Fri 13/1/23	Fri 3/2/23	435.63 edays	715		
717	**717**	**1.9.27**	**Commencement of Valves and Flowmeters Installation at Chambers**	**150 days**	**Thu 19/5/22**	**Sat 15/10/22**	**Thu 19/5/22**	**Sat 15/10/...**	**543 days**		**759**	
718	718	1.9.27.1	Installation of valves and flowmeters	90 days	Thu 19/5/22	Tue 16/8/22	Thu 19/5/22	Tue 16/8/22	0 days	648	719	ME - C x 4~6
719	719	1.9.27.2	cables laying and terminations	60 days	Wed 17/8/22	Sat 15/10/22	Wed 17/8/...	Sat 15/10/22	546 days	718		EE - A x 4~6
720	**720**	**1.9.28**	**Commencement of E&M Installation at Emergency Generator House**	**733 days**	**Thu 27/1/22**	**Mon 29/1/24**	**Thu 27/1/22**	**Mon 29/1/...**	**72 days**	**649**	**759**	
721	721	1.9.28.1	Application for EPD's Approval for Installation of Diesel Engine Generator	21 days	Thu 27/1/22	Wed 16/2/22	Thu 27/1/22	Wed 16/2/...	622 days	382,427	722	
722	722	1.9.28.2	Installation of Emergency Power Generator and associated work, GH	60 days	Wed 1/11/23	Sat 30/12/23	Wed 1/11/...	Sat 30/12/23	0 days	721,648	724	GS - A x 4 m
723	**723**	**1.9.28.3**	**Building Services Installation at Emergency Generator House**	**733 days**	**Thu 27/1/22**	**Mon 29/1/24**	**Thu 27/1/22**	**Mon 29/1/...**	**75 days**			
724	724	1.9.28.3.1	Fire Services Installation, GH	30 days	Sun 31/12/23	Mon 29/1/24	Sun 31/12/...	Mon 29/1/...	75 days	722		FS - A x 4~6
725	725	1.9.28.3.2	Mechanical Ventilation System, GH	14 days	Thu 27/1/22	Wed 9/2/22	Thu 27/1/22	Wed 9/2/22	794 days			MVAC - A x 4
726	726	1.9.28.3.3	Lightning Protection System, GH	15 days	Thu 27/1/22	Thu 10/2/22	Thu 27/1/22	Thu 10/2/22	793 days			
727	727	1.9.28.3.4	Testing and Commissioining of Building Services Installation, GH	7 days	Thu 27/1/22	Wed 2/2/22	Thu 27/1/22	Wed 2/2/22	801 days			BS - A x 4~6
728	**728**	**1.9.29**	**Access Date for Portion B-9B, underground pipework**	**60 edays**	**Sun 18/2/24**	**Thu 18/4/24**	**Sun 18/2/24**	**Thu 18/4/24**	**0 edays**	**25S+1539 eda**		
729	729	1.9.30	Tentative Civil Handover Date for Portion B-9B (by others)	1 day	Fri 1/3/24	Fri 1/3/24	Fri 1/3/24	Fri 1/3/24	0 days		730	
730	**730**	**1.9.31**	**Commencement of underground pipework modification and connection works**	**20 days**	**Sat 2/3/24**	**Thu 21/3/24**	**Sat 2/3/24**	**Thu 21/3/24**	**0 days**	**729**		
731	731	1.9.31.1	Road Excavation	7 days	Sat 2/3/24	Fri 8/3/24	Sat 2/3/24	Fri 8/3/24	0 days		732	
732	732	1.9.31.2	Pipe Laying and connection works	7 days	Sat 9/3/24	Fri 15/3/24	Sat 9/3/24	Fri 15/3/24	0 days	731	733	
733	733	1.9.31.3	Pressure Tests	3 days	Sat 16/3/24	Mon 18/3/24	Sat 16/3/24	Mon 18/3/...	0 days	732	734	
734	734	1.9.31.4	Make Good	3 days	Tue 19/3/24	Thu 21/3/24	Tue 19/3/24	Thu 21/3/24	0 days	733		
735	**735**	**1.9.32**	**Commencement of Fire Services Installation**	**1317 days**	**Tue 1/9/20**	**Tue 9/4/24**	**Tue 1/9/20**	**Tue 9/4/24**	**1 day**		**759**	
736	736	1.9.32.1	Design Review of Approved General Building Plan	126 days	Tue 1/9/20	Mon 4/1/21	Tue 1/9/20	Mon 4/1/21	0 days	392	737	
737	737	1.9.32.2	Submission of WWO542 for WSD's approval	120 days	Tue 5/1/21	Tue 4/5/21	Tue 5/1/21	Tue 4/5/21	867 days	736	738	
738	738	1.9.32.3	Submission of WWO46 for WSD's Inspection	30 days	Tue 19/9/23	Wed 18/10/23	Tue 19/9/23	Wed 18/10...	0 days	494,539,573,7	739	
739	739	1.9.32.4	Obtain WWO46 Part V	60 days	Thu 19/10/23	Sun 17/12/23	Thu 19/10/...	Sun 17/12/...	0 days	738	742,740	
740	740	1.9.32.5	FSD Inspection and Approval for MVAC	21 days	Mon 18/12/23	Sun 7/1/24	Mon 18/12...	Sun 7/1/24	0 days	750,751,739	743	
741	741	1.9.32.6	FSD Inspection and Approval for DG Stores	21 days	Sat 2/12/23	Fri 22/12/23	Sat 2/12/23	Fri 22/12/23	16 days	750,751,670	743	
742	742	1.9.32.7	Submission of (FSI/314 & FSI/501) to FSD	14 days	Mon 18/12/23	Sun 31/12/23	Mon 18/12...	Sun 31/12/...	7 days	750,751,739	743	
743	743	1.9.32.8	Pre-inspection meeting with FSD	5 days	Mon 8/1/24	Fri 12/1/24	Mon 8/1/24	Fri 12/1/24	0 days	742,740,741	744	
744	744	1.9.32.9	Initial Inspection with FSD	15 days	Sat 13/1/24	Sat 27/1/24	Sat 13/1/24	Sat 27/1/24	0 days	743	745	
745	745	1.9.32.10	Document Checking	45 days	Sun 28/1/24	Tue 12/3/24	Sun 28/1/24	Tue 12/3/24	0 days	744	746	
746	746	1.9.32.11	Re-inspections with FSD	14 days	Wed 13/3/24	Tue 26/3/24	Wed 13/3/...	Tue 26/3/24	0 days	745	747	
747	747	1.9.32.12	Issue of acceptance memo by FSD	14 days	Wed 27/3/24	Tue 9/4/24	Wed 27/3/...	Tue 9/4/24	4 days	746		
748	748	1.9.32.13	Installation of FS Pumps and Sprinkler Pumps	60 days	Mon 3/4/23	Thu 1/6/23	Mon 3/4/23	Thu 1/6/23	109 days	648	751	FS - A x 4~6
749	749	1.9.32.14	Installation of Fire Hydrant and Booster Pumps	60 days	Mon 3/4/23	Thu 1/6/23	Mon 3/4/23	Thu 1/6/23	109 days	648	751	FS - A x 4~6
750	750	1.9.32.15	SAT for Manual and automatic fire detection and alarm system	60 days	Tue 19/9/23	Fri 17/11/23	Tue 19/9/23	Fri 17/11/23	14 days	494,539,573,7	742,740,7	
751	751	1.9.32.16	SAT for Fire hydrants, hose reels and street fire hydrant system	60 days	Tue 19/9/23	Fri 17/11/23	Tue 19/9/23	Fri 17/11/23	14 days	494,539,573,7	742,740,7	
752	**752**	**1.9.33**	**Commencement of Plumbing Installation**	**1267 days**	**Tue 14/7/20**	**Tue 2/1/24**	**Tue 14/7/20**	**Tue 2/1/24**	**100 days**		**759**	
753	753	1.9.33.1	Submission of detail design for acceptance	90 days	Tue 14/7/20	Sun 11/10/20	Tue 14/7/20	Sun 11/10/...	0 days	387	754	Pb - A x 4~6
754	754	1.9.33.2	Submission of WWO542 for WSD's approval	90 days	Mon 12/10/20	Sat 9/1/21	Mon 12/10...	Sat 9/1/21	682 days	753	492,537,5	Pb - B x 4~6
755	755	1.9.33.3	Connection of External Pumping System (By others)	0 days	Fri 15/9/23	Fri 15/9/23	Fri 15/9/23	Fri 15/9/23	4 days		756	



Bestwise
Project: DE/2018/04
Date: Mon 20/4/20

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

ID	ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successors	Resource Names
756	756	1.9.33.4	Submission of WWO46 for WSD's Inspection	45 days	Tue 19/9/23	Thu 2/11/23	Tue 19/9/23	Thu 2/11/23	0 days	492,537,571,1	757	
757	757	1.9.33.5	Obtain WWO46 Part V	45 days	Fri 3/11/23	Sun 17/12/23	Fri 3/11/23	Sun 17/12/...	15 days	756	758	
758	758	1.9.33.6	Tentative Date for connection of external water pipework (by others)	0 days	Tue 2/1/24	Tue 2/1/24	Tue 2/1/24	Tue 2/1/24	103 days	757		
759	759	1.9.34	Risk Allowance for completion of Section 2	5 days	Thu 11/4/24	Mon 15/4/24	Thu 11/4/24	Mon 15/4/...	3 days	450,499,544,1	447	
760	**760**	**1.10**	**Section 3 - Completion of all works for retrofitting of the existing PST...etc**	**659 days**	**Mon 2/12/19**	**Wed 22/9/21**	**Mon 2/12/...**	**Wed 22/9/...**	**1 day**	**2**		
761	761	1.10.1	Section 3 - Latest Completion Date	0 days	Wed 22/9/21	Wed 22/9/21	Wed 22/9/...	Wed 22/9/...	0 days	2SS+660 eda		
762	762	1.10.2	Key Date KD3A, E&M Installation works of existing power house	0 days	Wed 29/7/20	Wed 29/7/20	Wed 29/7/...	Wed 29/7/...	1 day	2SS+240 eda		
763	763	1.10.3	Key Date KD3B, E&M work for provision of the existing PSTs	0 days	Wed 9/6/21	Wed 9/6/21	Wed 9/6/21	Wed 9/6/21	1 day	2SS+555 eda		
764	**764**	**1.10.4**	**Access Date for Portion B-3B, Temporary Filtrate Lifting Well and Eq. Tank**	**0 edays**	**Mon 2/12/19**	**Mon 2/12/19**	**Mon 2/12/...**	**Mon 2/12/...**	**0 edays**	**2SS**	**765**	
765	**765**	**1.10.5**	**Commencement of E&M Installation at Temp. Filtrate Lifting Well and Eq. Tank**	**287 days**	**Mon 27/4/20**	**Sun 7/2/21**	**Mon 27/4/...**	**Sun 7/2/21**	**1 day**	**764**	**783**	
766	766	1.10.5.1	Civil on-site survey and report submission for acceptance	14 days	Mon 27/4/20	Sun 10/5/20	Mon 27/4/...	Sun 10/5/20	0 days	413	767	
767	767	1.10.5.2	Civil structural design and drawing submission for acceptance	21 days	Mon 11/5/20	Sun 31/5/20	Mon 11/5/...	Sun 31/5/20	0 days	766	768	
768	768	1.10.5.3	Civil formation and underground work	21 days	Mon 1/6/20	Sun 21/6/20	Mon 1/6/20	Sun 21/6/20	0 days	767	774,769	
769	769	1.10.5.4	RC structure works including cast-in items	180 days	Mon 22/6/20	Fri 18/12/20	Mon 22/6/...	Fri 18/12/20	0 days	768	770,773,7	
770	**770**	**1.10.5.5**	**Installation of Lifting Appliances**	**7 days**	**Mon 18/1/21**	**Sun 24/1/21**	**Mon 18/1/...**	**Sun 24/1/21**	**15 days**	**769**		
771	771	1.10.5.5.1	GF MR LA-09-01 SWL 1t	7 days	Mon 18/1/21	Sun 24/1/21	Mon 18/1/...	Sun 24/1/21	15 days	769		LA - A x 4~6
772	772	1.10.5.5.2	GF MR LA-09-02 SWL 1t	7 days	Mon 18/1/21	Sun 24/1/21	Mon 18/1/...	Sun 24/1/21	15 days	769		LA - B x 4~6
773	**773**	**1.10.5.6**	**Mechanical Installations for Temp. Filtrate Lifting Well and Eq. Tank**	**37 days**	**Sat 19/12/20**	**Sun 24/1/21**	**Sat 19/12/...**	**Sun 24/1/21**	**0 days**	**769**	**777FS-30**	
774	774	1.10.5.6.1	Installation of pipework and valves	30 days	Sat 19/12/20	Sun 17/1/21	Sat 19/12/20	Sun 17/1/21	0 days	768	775	ME - A x 4~6
775	775	1.10.5.6.2	Installation of pumps	7 days	Mon 18/1/21	Sun 24/1/21	Mon 18/1/...	Sun 24/1/21	1 day	774,324		ME - A x 4~6
776	776	1.10.5.6.3	Installation of instrumentations	14 days	Sat 19/12/20	Fri 1/1/21	Sat 19/12/20	Fri 1/1/21	24 days	769		ME - A x 4~6
777	**777**	**1.10.5.7**	**Electrical Installations for Temp. Filtrate Lifting Well and Eq. Tank**	**21 days**	**Sat 26/12/20**	**Fri 15/1/21**	**Sat 26/12/...**	**Fri 15/1/21**	**0 days**	**773FS-30 day**	**780,782FS**	
778	778	1.10.5.7.1	Installation of cable trays and cable containments	21 days	Sat 26/12/20	Fri 15/1/21	Sat 26/12/20	Fri 15/1/21	3 days			
779	779	1.10.5.7.2	Cables laying and terminations	21 days	Sat 26/12/20	Fri 15/1/21	Sat 26/12/20	Fri 15/1/21	3 days			
780	780	1.10.5.8	Site Acceptance Test for E&M Equip at Filtrate Lifting Well and Eq. Tank	7 days	Mon 25/1/21	Sun 31/1/21	Mon 25/1/...	Sun 31/1/21	0 days	773,777	781	
781	781	1.10.5.9	System Commissioning for E&M Equip at Temp. Filtrate Lifting Well and Eq. Ta	7 days	Mon 1/2/21	Sun 7/2/21	Mon 1/2/21	Sun 7/2/21	1 day	780,782		
782	782	1.10.5.10	Building Services Installations for Filtrate Lifting Well and Eq. Tank	21 days	Sat 9/1/21	Fri 29/1/21	Sat 9/1/21	Fri 29/1/21	2 days	777FS-7 days	781	
783	783	1.10.6	Work completion for Temp. Filtrate Lifting Well and Eq. Tank	0 days	Mon 8/2/21	Mon 8/2/21	Mon 8/2/21	Mon 8/2/21	0 days	765		
784	**784**	**1.10.7**	**Access Date for Portion B-3A, Existing PST No. 4 and No. 6**	**0 edays**	**Mon 2/12/19**	**Mon 2/12/19**	**Mon 2/12/...**	**Mon 2/12/...**	**0 edays**	**2**		
785	785	1.10.8	Tentative Commencement Date	1 day	Mon 8/2/21	Mon 8/2/21	Mon 8/2/21	Mon 8/2/21	0 days		787	
786	**786**	**1.10.9**	**Commencement of retrofitting the existing PST No. 4 and No. 6**	**117 days**	**Tue 9/2/21**	**Sat 5/6/21**	**Tue 9/2/21**	**Sat 5/6/21**	**3 days**			
787	787	1.10.9.1	Site Clearance	10 days	Tue 9/2/21	Thu 18/2/21	Tue 9/2/21	Thu 18/2/21	0 days	318,785	789	
788	**788**	**1.10.9.2**	**Mechanical Installations of existing PSTs**	**76 days**	**Fri 19/2/21**	**Wed 5/5/21**	**Fri 19/2/21**	**Wed 5/5/21**	**3 days**			
789	789	1.10.9.2.1	Installation of PST influent feed pipe	7 days	Fri 19/2/21	Thu 25/2/21	Fri 19/2/21	Thu 25/2/21	0 days	787	790	ME - A x 4~6
790	790	1.10.9.2.2	Installation of circular baffle diffuser box	7 days	Fri 26/2/21	Thu 4/3/21	Fri 26/2/21	Thu 4/3/21	0 days	789	791	ME - A x 4~6
791	791	1.10.9.2.3	Installation of scum baffle plates	7 days	Fri 5/3/21	Thu 11/3/21	Fri 5/3/21	Thu 11/3/21	0 days	790	792	ME - A x 4~6
792	792	1.10.9.2.4	Installation of scum box with collection valve and pipework	7 days	Fri 12/3/21	Thu 18/3/21	Fri 12/3/21	Thu 18/3/21	0 days	791	793	ME - A x 4~6
793	793	1.10.9.2.5	Installation of v-notched weir plate	10 days	Fri 19/3/21	Sun 28/3/21	Fri 19/3/21	Sun 28/3/21	0 days	792	794	ME - A x 4~6
794	794	1.10.9.2.6	Installation of center bearing and slip ring assembly for rotating bridge	10 days	Mon 29/3/21	Wed 7/4/21	Mon 29/3/...	Wed 7/4/21	0 days	793	795	ME - A x 4~6
795	795	1.10.9.2.7	Installation of motor and gearbox assembly for rotating bridge	7 days	Thu 8/4/21	Wed 14/4/21	Thu 8/4/21	Wed 14/4/...	0 days	794	796,799	ME - A x 4~6
796	796	1.10.9.2.8	Installation of rotating bridge sludge and scum scraper assembly	7 days	Thu 15/4/21	Wed 21/4/21	Thu 15/4/21	Wed 21/4/...	0 days	795	797	ME - A x 4~6
797	797	1.10.9.2.9	installation of removable FRP covers for effluent channel	14 days	Thu 22/4/21	Wed 5/5/21	Thu 22/4/21	Wed 5/5/21	3 days	796	801	ME - A x 4~6
798	**798**	**1.10.9.3**	**Electrical Installations of existing PSTs**	**24 days**	**Thu 15/4/21**	**Sat 8/5/21**	**Thu 15/4/21**	**Sat 8/5/21**	**0 days**		**801**	
799	799	1.10.9.3.1	Installation of local control panels	10 days	Thu 15/4/21	Sat 24/4/21	Thu 15/4/21	Sat 24/4/21	0 days	795	800	
800	800	1.10.9.3.2	cable laying and terminatons	14 days	Sun 25/4/21	Sat 8/5/21	Sun 25/4/21	Sat 8/5/21	0 days	799	801	
801	801	1.10.9.4	Site Acceptance Test for E&M Equip at existing PST No. 4 and No. 6	21 days	Sun 9/5/21	Sat 29/5/21	Sun 9/5/21	Sat 29/5/21	0 days	798,797,800	802	
802	802	1.10.9.5	System Commissioning for E&M Equip at existing PST No. 4 and No. 6	7 days	Sun 30/5/21	Sat 5/6/21	Sun 30/5/21	Sat 5/6/21	0 days	801	763,831	
803	**803**	**1.10.10**	**Access Date for Portion B-7A & 7B, area for modification of existing emergency**	**0 edays**	**Mon 2/12/19**	**Mon 2/12/19**	**Mon 2/12/...**	**Mon 2/12/...**	**0 edays**	**2**		
804	804	1.10.11	Tentative Civil Handover Date, Portion B-7A & 7B area for modification of existing	1 day	Sun 31/1/21	Sun 31/1/21	Sun 31/1/21	Sun 31/1/21	0 days			
805	**805**	**1.10.12**	**Commencement of Modification of existing emergency generator Electrical Wo**	**89 days**	**Sat 25/4/20**	**Wed 22/7/20**	**Sat 25/4/20**	**Wed 22/7/...**	**6 days**			
806	806	1.10.12.1	Fabrication and delivery of material to site	60 days	Sat 25/4/20	Tue 23/6/20	Sat 25/4/20	Tue 23/6/20	0 days	433	807	
807	807	1.10.12.2	Modification of existing emergency generator electrical works	14 days	Wed 24/6/20	Tue 7/7/20	Wed 24/6/...	Tue 7/7/20	0 days	806	808	
808	808	1.10.12.3	Test the new switchboar for on-site mobile generator	10 days	Wed 8/7/20	Fri 17/7/20	Wed 8/7/20	Fri 17/7/20	0 days	807	809	
809	809	1.10.12.4	Dismantling and removal the existing power & control cables	2 days	Sat 18/7/20	Sun 19/7/20	Sat 18/7/20	Sun 19/7/20	0 days	808	810	
810	810	1.10.12.5	Take down existing generator to DSD	3 days	Mon 20/7/20	Wed 22/7/20	Mon 20/7/...	Wed 22/7/...	0 days	809	811	
811	811	1.10.13	Risk Allowance for meeting Key Date KD3A	1 day	Thu 23/7/20	Thu 23/7/20	Thu 23/7/20	Thu 23/7/20	5 days	810	762	
812	**812**	**1.10.14**	**Access Date for B-10, existing sludge thickening building**	**0 edays**	**Mon 2/12/19**	**Mon 2/12/19**	**Mon 2/12/...**	**Mon 2/12/...**	**0 edays**	**2**		
813	**813**	**1.10.15**	**Commencement of E&M Installation at Existing Filter Press**	**103 days**	**Tue 25/5/21**	**Sat 4/9/21**	**Tue 25/5/21**	**Sat 4/9/21**	**0 days**			
814	814	1.10.15.1	Installation of Lifting Appliances	7 days	Tue 25/5/21	Mon 31/5/21	Tue 25/5/21	Mon 31/5/...	0 days	312	817,820	
815	815	1.10.15.1.1	GF MR LA-09-03 SWL 1t	7 days	Tue 25/5/21	Mon 31/5/21	Tue 25/5/21	Mon 31/5/...	0 days			LA - A x 4~6
816	816	1.10.15.2	Mechanical Installations for E&M Equip. at Existing Filter Press House	89 days	Tue 1/6/21	Sat 28/8/21	Tue 1/6/21	Sat 28/8/21	0 days			
817	817	1.10.15.2.1	Installation of membrane filter press	45 days	Tue 1/6/21	Thu 15/7/21	Tue 1/6/21	Thu 15/7/21	0 days	814	818,819,8	ME - A x 4~6
818	818	1.10.15.2.2	Installation of sluge feed pumps	7 days	Fri 16/7/21	Thu 22/7/21	Fri 16/7/21	Thu 22/7/21	7 days	817	823	ME - D x 2~4
819	819	1.10.15.2.3	Installation of polymer dosing pumps	14 days	Fri 16/7/21	Thu 29/7/21	Fri 16/7/21	Thu 29/7/21	0 days	817	823	ME - A x 4~6
820	820	1.10.15.2.4	Installation of air compressors	14 days	Tue 1/6/21	Mon 14/6/21	Tue 1/6/21	Mon 14/6/...	0 days	814	821,822,8	ME - A x 4~6
821	821	1.10.15.2.5	Installation of air receivers	14 days	Tue 15/6/21	Mon 28/6/21	Tue 15/6/21	Mon 28/6/...	31 days	820	823	ME - A x 4~6
822	822	1.10.15.2.6	Installation of high pressure water pump	7 days	Tue 15/6/21	Mon 21/6/21	Tue 15/6/21	Mon 21/6/...	38 days	820	823	ME - A x 4~6
823	823	1.10.15.2.7	Connection of pipework	30 days	Fri 30/7/21	Sat 28/8/21	Fri 30/7/21	Sat 28/8/21	0 days	817,818,819,8		ME - A x 4~6
824	**824**	**1.10.15.3**	**Electrical Installation for E&M Equip. at Existing Filter Press House**	**23 days**	**Fri 16/7/21**	**Sat 7/8/21**	**Fri 16/7/21**	**Sat 7/8/21**	**17 days**			



ID	ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Free Slack	Predecessors	Successor	Resource Names
825	825	1.10.15.3.1	Installation of local control panels	14 days	Fri 16/7/21	Thu 29/7/21	Fri 16/7/21	Thu 29/7/21	0 days	817	826	
826	826	1.10.15.3.2	cable laying and terminations	9 days	Fri 30/7/21	Sat 7/8/21	Fri 30/7/21	Sat 7/8/21	0 days	825	827	
827	827	1.10.15.4	Site Acceptance Test for E&M Equip. at Existing Filter Press House	21 days	Sun 8/8/21	Sat 28/8/21	Sun 8/8/21	Sat 28/8/21	0 days	826	828	
828	828	1.10.15.5	System Commissioning Test for E&M Equip. at Existing Filter Press House	7 days	Sun 29/8/21	Sat 4/9/21	Sun 29/8/21	Sat 4/9/21	17 days	827	761	
829	**829**	**1.10.16**	**Commencement of replacement of filter plates**	**90 days**	**Tue 25/5/21**	**Sun 22/8/21**	**Tue 25/5/21**	**Sun 22/8/21**	**30 days**			
830	830	1.10.16.1	Replacement of filter plates	90 days	Tue 25/5/21	Sun 22/8/21	Tue 25/5/21	Sun 22/8/21	30 days	306	761	
831	831	1.10.17	Risk Allowance for meeting Key Date KD3B	1 day	Sun 6/6/21	Sun 6/6/21	Sun 6/6/21	Sun 6/6/21	2 days	802	763	
832	**832**	**1.11**	**Section 4 - Completion of Work for remainder of the works**	**409 days**	**Sat 1/4/23**	**Tue 14/5/24**	**Sat 1/4/23**	**Tue 14/5/24**	**1 day**	**2**		
833	833	1.11.1	Section 4 - Latest Completion Date	0 days	Tue 14/5/24	Tue 14/5/24	Tue 14/5/24	Tue 14/5/24	0 days	2SS+1625 eda		
834	834	1.11.2	Latest date for connection of optical filbres	1 day	Sat 1/4/23	Sat 1/4/23	Sat 1/4/23	Sat 1/4/23	110 days	493	836	
835	835	1.11.3	Document Submission and Resubmission for T&C procedures	90 days	Fri 1/12/23	Wed 28/2/24	Fri 1/12/23	Wed 28/2/...	42 days		837,838	
836	836	1.11.4	Overall commissioning of CCTV system	30 days	Fri 21/7/23	Sat 19/8/23	Fri 21/7/23	Sat 19/8/23	235 days	493,538,572,6	839,838,8	
837	837	1.11.5	Overall commissioning of Facility Computerised Systems (SCADA, CMMS, PMS, ID	7 days	Thu 11/4/24	Wed 17/4/24	Thu 11/4/24	Wed 17/4/...	0 days	488,533,568,6	839,838	
838	838	1.11.6	Overall Plant Commissioning and DSD pre-handover inspections	10 days	Thu 18/4/24	Sat 27/4/24	Thu 18/4/24	Sat 27/4/24	0 days	836,837,835	839	
839	839	1.11.7	Risk Allowance for completion of Section 4	2 days	Sun 28/4/24	Mon 29/4/24	Sun 28/4/24	Mon 29/4/...	9 days	836,837,838	4	
840	**840**	**1.12**	**Beam Plus Submissions**	**1450 days**	**Fri 1/5/20**	**Fri 19/4/24**	**Fri 1/5/20**	**Fri 19/4/24**	**0 days**			
841	841	1.12.1	SA10 - Environmental Management Plan	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
842	842	1.12.2	SA11 - Air Pollution During Construction	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
843	843	1.12.3	SA12 - Noise During Construction	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
844	844	1.12.4	SA14 - Noise from Building Equipment	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
845	845	1.12.5	SA15 - Light Pollution	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
846	846	1.12.6	MAP1 - Timber used for Temporary Works	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
847	847	1.12.7	MAP2 - Use of Non-CFC Based Refregerants	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
848	848	1.12.8	MAP3 - Waste Management Plan	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
849	849	1.12.9	MA2 - Modular and Standardized Design	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
850	850	1.12.10	MA8 - Ozone Depleting Substances	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
851	851	1.12.11	MA11 - Construction Waste Reduction	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
852	852	1.12.12	EUP1 - Minimum Energy Performance	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
853	853	1.12.13	EU1 - Reduction of CO2 Emissions	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
854	854	1.12.14	EU2 - Peak Electricity Demand Reduction	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
855	855	1.12.15	EU6 - Renewable Energy Systems	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
856	856	1.12.16	EU9 - Energy Efficient Appliances	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
857	857	1.12.17	EU10 - Testing and Commissioning	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
858	858	1.12.18	EU11 - Operation and Maintenance	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
859	859	1.12.19	EU12 - Meter and Monitoring	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
860	860	1.12.20	WUP1 - Water Quality Survey	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
861	861	1.12.21	WUP2 - Minimum Water Saving Performance	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
862	862	1.12.22	WU1 / WU6 - Annual Water Use / Effluent Discharge to Foul Sewers	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
863	863	1.12.23	IEQP1 - Minimum Ventilation Performance	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
864	864	1.12.24	IEQ1 - Security	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
865	865	1.12.25	IEQ2 - Plumbing and Drainage	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
866	866	1.12.26	IEQ3 - Biological Contamination	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
867	867	1.12.27	IEQ5 - Construction IAQ Management	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
868	868	1.12.28	IEQ6 / IEQ7 - IAQ	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
869	869	1.12.29	IEQ9 - Increased Ventilation	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
870	870	1.12.30	IEQ11 - Localised Ventilation	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
871	871	1.12.31	IEQ12 - Ventilation in Common Areas	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
872	872	1.12.32	IEQ13 - Thermal Comfort in Air - Conditioned Premises	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
873	873	1.12.33	IEQ16 / IEQ17 - Interior Lighting in Normally Occupied Area / Interior Lighting in Areas not Normally Occupied	1450 days	Fri 1/5/20	Fri 19/4/24	Fri 1/5/20	Fri 19/4/24	19 days		4	
874	*874*	*2*	*Defect Date with respect to planned completion date*	*365 days*	*Thu 9/5/24*	*Thu 8/5/25*	*Thu 9/5/24*	*Thu 8/5/25*	*0 days*	*4*