



CONTRACT NO. SPW 12/2021
SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORKS
UNDER FURTHER ENVIRONMENTAL PERMIT NO. FEP-
02/474/2013
MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT
FEBRUARY 2022

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Contract No. SPW 12/2021

Shek Wu Hui Effluent Polishing Plant – Main Work

Monthly Environmental Monitoring & Audit Report

February 2022

(March 2022)

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EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – **February 2022** of Shek Wu Hui Effluent Polishing Plant – Main Work under Further Environmental Permit no. FEP-02/474/2013 (Hereafter as “the Project”). This is the **6th** EM&A report prepared by Environmental Team under Contract No. SPW 12/2021, presenting the environmental monitoring findings and information recorded during the period of **01 February 2022 to 28 February 2022**. The cut-off date of reporting is at the end of each reporting month.

- ii. In the reporting month, the principal work activities of individual contracts are conducted as follows:

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

- RC works
- Excavation works
- Sewerage and drainage works
- ELS works
- Backfilling
- ABWF works

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

- ELS works
- R.C. Structure works
- Pre-bored H piles
- Demolition works
- Excavation
- E&M installation and T&C works

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- ELS (Sidestream Treatment Facilities)
- Penstock and Stoplog Installation
- Effluent Pump Installation
- UV System Installation
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
- SAT Procedure of Penstock and Stoplog
- Manhole and Connecting Pipes Strengthening Works (Sidestream)

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

- [Testing and Commission of Temporary Filtrate Equalisation Tank.](#)
- [Testing and Commission of Temporary Primary Sludge Thickener and its accessories](#)

Air Quality Monitoring

- iii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring was conducted at two monitoring station. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 day in the reporting month.
- iv. [No action or limit level exceedance was recorded in this reporting period.](#)

Noise Monitoring

- v. Noise monitoring was conducted at one noise monitoring station once per week in the reporting month.
- vi. [No action or limit level exceedance was recorded in this reporting period.](#)

Ecological Monitoring

- vii. Ecological monitoring conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station). The magnitude of how much above or below 1.5m was subject to tidal conditions of that week as it varied throughout different times of the year. Nonetheless, the high and low tide relative to that week's tidal condition were taken into consideration.
- viii. [No action or limit level exceedance was recorded in this reporting period](#)

Site Inspections and Audit

- ix. The [Environmental Team \(ET\) conducted weekly site inspections on 8, 10, 15 and 22 February 2022 and biweekly landscape inspection on 8 \(DE/2018/03 & DE/2018/04\), 10 \(DC/2018/06 & DC/2018/07\) and 22 February 2022.](#) IEC attended the joint site inspection on [22 February 2022](#). No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

Complaints, Notifications of Summons and Successful Prosecutions

- x. [No environmental complaint, notification of summons and successful prosecution regarding the construction works was recorded in the reporting period.](#)

Reporting Changes

- xi. There are no particular reporting changes.

Future Key Issues

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

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

- RC works
- Excavation works
- Sewerage and drainage works
- ELS works
- Backfilling
- ABWF works

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

- ELS works
- R.C. Structure works
- Pre-bored H piles
- Demolition works
- Excavation
- E&M installation and T&C works

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- ELS (Sidestream Treatment Facilities)
- Penstock and Stoplog Installation
- Effluent Pump Installation
- UV System Installation
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
- Delivery and Installation of Temporary Container LV Switch Room for UV and Effluent Pumping Station
- SAT Procedure of Penstock and Stoplog
- HR and FH System Installation at Workshop No.2
- SPR System Installation at Workshop No.2
- Electrical Installation for Transformer Room at Workshop No.2



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

- Testing and Commission of Temporary Filtrate Equalisation Tank.
- Testing and Commission of Temporary Primary Sludge Thickener and its accessories

1 Introduction

1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) No. FEP-02/474/2013 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for North East New Territories New Development Areas (Register No.: AEIAR-175/2013).
- 1.1.2. In accordance with Clause 3.4 stated in FEP-02/474/2013, 3 hard copies and 2 electronic copies of Monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month throughout the entire construction period.
- 1.1.3. According to Section 9.4.1.1 of the Project EM&A Manual, the Monthly EM&A Report should be submitted within 10 working days at the end of each reporting month, with the first report due in the month after construction commences.

1.2 Structure of the Report

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

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

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

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

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

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

Section 7 **Environmental Site Audit** – summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any



relevant follow-up actions within the reporting period.

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

Section 9 ***Conclusion***

2 Project Background

2.1 Background

2.1.1. The existing Shek Wu Hui Sewage Treatment Works (SWHSTW) has been operating and maintaining for 30 years by the Drainage Services Department (DSD). It provides secondary level treatment to sewage collected from Sheung Shui, Fanling and adjacent areas. SWHSTW was completed in two stages and expanded progressively in the past years. In 1984, Stage I of SWHSTW was commissioned with design capacity of 60,000 cubic meters per day (m^3 /day) at Average Dry Weather Flow (ADWF). In 2001, Stage II of SWHSTW was completed with design capacity enhanced to 80,000 m^3 /day at ADWF. In 2009, the expansion of SWHSTW was completed and its design capacity was increased to 93,000 m^3 /day at ADWF.

2.1.2. Further expansion of SWHSTW has been planned to be carried out in order to cope with the forecast increase in flow from Fanling North and Kwu Tong North New Development Area (NDA) and other NDAs and developments in three phases, namely Phase 1A, 1B and 2, which are later revised to Main Works Stage 1, Stage 2 and Stage 3 respectively. The EIA study report (Register No.: AEIAR-175/2013) for the NENT NDAs Study covered the assessment for the Further Expansion of SWHSTW, which is a designated project under item F.1 and F.2 of Part 1, Schedule 2 of the EIA Ordinance. The location of the project site is shown in [Figure 2.1](#).

A Further EP was applied on 18 January 2018 to assume the responsibility for constructing and operating the SWHEPP Project up to a capacity of 190,000 m^3 /day. The Further EP No. FEP-02/474/2013 was issued to DSD as permit holder on 15 February 2018. Due to overlapping of scope with the Further EP currently in force, the Further EP No. FEP-01/474/2013 was subsequently surrendered on 15 August 2018.

2.2 Project Organization and Contact Personnel

2.2.1 Drainage Service Department (DSD) is the overall project controllers for the Project. For the construction phase of the Project, Engineer's Representative, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.

2.2.2 The project organization and lines of communication with respect to environmental protection works are shown in [Figure 2.2](#). Key personnel and contact particulars are summarized in [Table 2.1](#).

Table 2.1 Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.
Drainage Services Department (DSD)	Permit Holder	Engineer	Ms. Konica Cheung	2594 7463
AECOM	Supervisor Representative	Senior Resident Engineer	Mr. Eddie Lam	3907 1131
Kwan Lee - Chun Wo Joint Venture	Contractor (DC/2018/06)	Environmental Engineer	Ms. Ruby Hui	6218 6408
		Assistant Environmental Engineer	Mr. Eric Chan	6432 2581
	Contractor (DC/2018/07)	Environmental Engineer	Ms. Tiffany Choi	9789 1027
JEC	Contractor (DE/2018/03)	Environmental Officer	Ms. Juliet Ting	6826 7319
Bestwise	Contractor (DE/2018/04)	Environmental Officer	Mr. Albus Cheung	9731 0831
Meinhardt Infrastructure and Environment Ltd.	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. W.K. Chiu	2859 5881
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939

2.3 Construction Activities

2.3.1 In the reporting month, the principal work activities conducted of individual contracts are as follow. The layout plans showing the locations of reported construction activities and key PME used for the works contracts are provided in [Appendix 2.1](#).

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

- RC works
- Excavation works
- Sewerage and drainage works
- ELS works
- Backfilling

- ABWF works

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

- ELS works
- R.C. Structure works
- Pre-bored H piles
- Demolition works
- Excavation
- E&M installation and T&C works

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 –
Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- ELS (Sidestream Treatment Facilities)
- Penstock and Stoplog Installation
- Effluent Pump Installation
- UV System Installation
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
- SAT Procedure of Penstock and Stoplog
- Manhole and Connecting Pipes Strengthening Works (Sidestream)

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

- Testing and Commission of Temporary Filtrate Equalisation Tank.
- Testing and Commission of Temporary Primary Sludge Thickener and its accessories

2.3.2 The number of key PME and their working locations are shown in **Table 2.2**.

Table 2.2 Summary of key PME and working locations of works contracts

Works Contract	Key PME	Number	Working locations
DC/2018/06	Excavator	5	CHP, Effluent Discharge Chamber, EVA U Channel, UV1, Cable Draw Pit, Cross Road Trench, San Wan Road
	Mobile crane	2	SDB, SD
	Tower Crane	2	Near Workshop No.2 & Gate 2
	Mobile generator	1	Near Workshop No.2
DC/2018/07	Drilling rig	2	PST and Inlet
	Excavator	15	MFB, BR2, Inlet and SAS
	Generator	5	BR2 and MFB
	Air compressor	4	PST & Inlet
	Mobile Crane	2	PST & Inlet
	Drilling machine	1	MFB
DE/2018/03	Generator	1	UV No.1
	Excavator	3	Sidestream
	Drilling machine	1	Sidestream
DE/2018/04	-	-	-

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

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

- RC works
- Excavation works
- Sewerage and drainage works
- ELS works

- Backfilling
- ABWF works

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

- ELS works
- R.C. Structure works
- Pre-bored H piles
- Sheetpile Installation
- Demolition works
- Excavation
- E&M installation and T&C works
- ABWF works & BS works

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 –
Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- ELS (Sidestream Treatment Facilities)
- Penstock and Stoplog Installation
- Effluent Pump Installation
- UV System Installation
- Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
- Delivery and Installation of Temporary Container LV Switch Room for UV and Effluent Pumping Station
- SAT Procedure of Penstock and Stoplog
- HR and FH System Installation at Workshop No.2
- SPR System Installation at Workshop No.2
- Electrical Installation for Transformer Room at Workshop No.2

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

- Testing and Commission of Temporary Filtrate Equalisation Tank.
- Testing and Commission of Temporary Primary Sludge Thickener and its accessories

3 Status of Regulatory Compliance

3.1 Status of Environmental Licensing and Permitting under the Project

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

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210 (Portion A & C)	23 Sep 2019	N/A	Valid
	449211 (WM1)	23 Sep 2019	N/A	Valid
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Water Pollution Ordinance Licence	WT00035431-2019 (Portion C)	27 Jul 2020	31 Jan 2025	Valid
	WT00035718-2020 (Portion A)	02 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035390	11 Oct 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-01	14 Nov 2019	N/A	Valid
Construction Noise Permit	GW-RN0610-21	01 Sep 2021	28 Feb 2022	Valid
	GW-RN0734-21	05 Oct 2021	31 Mar 2022	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210	23 Sep 2019	N/A	Valid
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Water Pollution Ordinance Licence	WT00035727-2020	01 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035985	9 Dec 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-02	6 Jan 2020	N/A	Valid
Construction Noise Permit	GW-RN0610-21	01 Sep 2021	28 Feb 2022	Valid

Table 3.3 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DE/2018/03

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	455843 (WA3)	6 May 2020	N/A	Valid
	457212 (WA1-B)	15 Jun 2020	N/A	Valid
	460065 (Sidestream)	16 Sep 2020	N/A	Valid
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Water Pollution Ordinance Licence	WT00037220-2020	16 Mar 2021	31 Jan 2026	Valid
Billing Account for Disposal of Construction Waste	7035700	6 Nov 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-T3861-01	14 Apr 2020	N/A	Valid
Construction Noise Permit	GW-RN1008-21	28 Jan 2022	29 Jun 2022	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	460181	17/09/2020	N/A	Valid
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Billing Account for Disposal of Construction Waste	703621912	02 Jan 2020	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-B2592-01	07 Jul 2020	N/A	Valid

3.1.2. Implementation status of the recommended mitigation measures during this report month is presented in [Appendix 3.1](#).

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

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

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

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

4 Monitoring Requirements

4.1 Noise Monitoring

NOISE MONITORING STATIONS

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

Table 4.1 Noise Monitoring Station

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

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

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

Table 4.2 Noise Monitoring Parameters, Frequency and Duration

Monitoring Period	Duration	Sampling Parameter	Sampling Period ⁽¹⁾	Frequency
Impact Monitoring	Throughout the construction phase	1 set of Leq (30 min)	between 0700-1900 hours on normal weekdays;	on a per week basis when noise generating activities are underway

Remark (1): Additional weekly impact monitoring shall be carried out during evening and night-time works if construction works are extended to include works during the hours of 1900-0700

MONITORING EQUIPMENT

4.1.3. Noise monitoring was performed using sound level meter at the designated monitoring locations. The sound level meters shall comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator shall be deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in **Table 4.3**.

Table 4.3 Noise Monitoring Equipment

Equipment	Brand and Model	Series Number
Integrated Sound Level Meter	LxT1	0004797
Acoustic Calibrator	LD CAL200	13098

4.1.4. The calibration certificates of the noise monitoring equipment are attached in [Appendix 4.2](#).

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

4.1.5. Monitoring Procedure

- (a) Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s
- (b) The monitoring station shall normally be at a point 1 m from the exterior of the sensitive receiver building facade and be at a position 1.2 m above the ground. If there is problem with access to the normal monitoring position, an alternative position may be chosen, and a correction to the measurements shall be made. For reference, a correction of +3 dB(A) shall be made to the free field measurements.
- (c) The battery condition was checked to ensure the correct functioning of the meter.
- (d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting: A
 - Time weighting: Fast
 - Time measurement: Leq (30min) for noise monitoring
- (e) Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
- (f) The wind speed was checked with the portable wind meter before noise monitoring.
- (g) At the end of the monitoring period, the Leq, L90 and L10 were recorded. In addition, site conditions and noise sources were recorded on a record sheet.

4.1.6. Maintenance and Calibration

- (a) The microphone head of the sound level and calibrator would be cleaned with soft cloth regularly.
- (B) The noise monitoring equipment shall be calibrated annually.

CONSTRUCTION NOISE LEVEL

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

EVENT AND ACTION PLAN

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

Table 4.4 Action and Limit Level for Noise Monitoring

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

4.2 Air Monitoring

AIR QUALITY MONITORING STATIONS

4.2.1. The air monitoring stations for the Project are listed and shown in **Table 4.5** and [Figure 4.2](#).

Table 4.5 Air Monitoring Station

Monitoring Station ID	Location	Measurement
AMS1	House No. 15, Wai Loi Tsuen	1-hour TSP
AMS2	Fu Tei Au	1-hour TSP
AM1a	Site boundary of the Shek Wu Hui STW (East)	24-hour TSP
AM2a	Site boundary of the Shek Wu Hui STW (North)	24-hour TSP

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.2.2. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 days when the highest dust impact takes place.
- 4.2.3. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.4. 24-hour TSP Measuring Installation (HVS)
- (a) 0.6 – 1.7 m³ per minute adjustable flow range
 - (b) Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
 - (c) Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
 - (d) Capable of providing a minimum exposed area of 406 cm²;
 - (e) Flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
 - (f) Equipped with a shelter to protect the filter and sampler;
 - (g) Incorporated with an electronic mass flow rate controller or other equivalent devices;
 - (h) Equipped with a flow recorder for continuous monitoring;
 - (i) Provided with a peaked roof inlet;
 - (j) Incorporated with a manometer;
 - (k) Able to hold and seal the filter paper to the sampler housing at horizontal position;
 - (l) Easily changeable filter; and

(m) Capable of operating continuously for a 24-hour period

Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. All the data should be converted into standard temperature and pressure condition.

24-hour Measuring Procedures

- (a) Check the power supply to ensure the sampler works properly.
- (b) Remove the filter hold down by loosening the four nuts and carefully centre a new filter, with stamped number upward, on a supporting screen.
- (c) Properly align the filter on the screen so that the gasket will form an airtight seal on the outer edges of the filter.
- (d) Fasten the filter hold down frame to the filter holder with swing bolts. The pressure applied should be sufficient to avoid air leakage at the edges.
- (e) Close shelter lid and secure catch with the aluminum strip.
- (f) Record the flow indicator reading and determine the sampler flow rate. If it is outside the acceptable range, adjust the sampler flow rate.
- (g) Set the programmable timer and record the starting sampling time, weather condition and the filter identification number.
- (h) At the end of sampling, the filter was transferred from the filter holder of the HVS to a filter bag and sent to the accredited laboratory for weighing. The elapsed time was also recorded

4.2.5. 1-hour Measuring Procedures

Portable dust meter will be proposed and sufficient information will be submitted to IC (E) to prove that the instrument is capable of achieving a comparable result as that of the HVS and used for 1-hour sampling

- (a) Slide the power switch to turn the power on
- (b) Select the period of measurement to 60mins
- (c) Check and set the correct time
- (d) Select the appropriate unit display for the equipment
- (e) Collected the sampled data for analysis

The portable dust meter is calibrated at 2-years interval and checked with HVS yearly to determine the accuracy and validity of the results measured. The checking of portable dust meter will be carried out in order to determine the conversion factor between the portable dust meter and the standard equipment, HVS.

The calibration check is to be considered valid if the calculated correlation coefficient is >0.90.

4.2.6. Maintenance and Calibration

- (a) The direct reading dust meter was calibrated at 2-years interval and checked with High Volume Sampler (HVS) yearly to determine the accuracy and validity of the results measured.
- (b) Checking of direct reading dust meter will be carried out in order to determine the conversion factor between the direct reading dust meter and the standard equipment, HVS. The comparison check is to be considered valid based on correlation coefficient checked by HOKLAS laboratory

4.2.7. Laboratory measurement / analysis

- (a) A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.
- (b) Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24 hours and be pre-weighed before use for the sampling.
- (c) After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity-controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.

4.2.8. High Volume Sampler (HVS – Model TE-5025A) completed with the appropriate sampling inlets were installed for the 24-hour TSP sampling. 1-hour TSP air quality monitoring was performed by using portable direct reading dust meters at each designated monitoring station. The brand and model of the equipment are given in **Table 4.6**.

Table 4.6 Air Quality Monitoring Equipment

Equipment	Brand and model	Series Number
Portable direct reading dust meter	Met One BT- 645 / Met One 831	B19128 B19129 Y23153 R14332
High Volume Sampler	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler TE-5025A	HVS001 (Serial number: 0401-1105) HVS003 (Serial number: 1096-2305)
Wind Anemometer	YiGu	YGY-FSXY1

4.2.9. The calibration certificates of the air quality monitoring equipment are attached in [Appendix 4.2](#).

WIND DATA

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

EVENT AND ACTION PLAN

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

Table 4.7 Action and Limit Level for Air Quality Monitoring

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

4.3. Ecological Monitoring

- 4.3.8. According to the Updated EM&A Manual, weekly transect at both high and low tides shall be undertaken to identify and enumerate all bird species utilising the river channels and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period. [Appendix 4.1](#) shows the established Action/Limit Levels for ecological monitoring works.
- 4.3.9. The monitoring should be conducted by the ET and supervised by a qualified ecologist who will be a member of the ET.

MONITORING LOCATIONS

- 4.3.10. Transect and point count surveys were proposed within the 500m boundary of Ng Tung River, Sheung Yue River and Shek Sheung River of the assessment area. Three transects and seven-point count locations during high and low tides were applied. These locations are shown in [Figure 4.3](#) and summarized in [Table 4.8](#) The photo of each transect is provided in [Appendix 5.6](#).

Table 4.8 Ecological Monitoring Stations

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

Point Count Location P6	At Shek Sheung River	Yes
Point Count Location P7	At Intersection between Sheung Yue River and Shek Sheung River	Yes

MONITORING PARAMETERS, FREQUENCY AND DURATION

4.3.11. Monitoring surveys were conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station). The magnitude of how much above or below 1.5m was subject to tidal conditions of that week as it varied throughout different times of the year. Nonetheless, the high and low tide relative to that week’s tidal condition were taken into consideration. The ecological monitoring schedule is shown in [Appendix 5.1](#).

MONITORING METHODOLOGY

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

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

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

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

ANALYTICAL METHODOLOGY

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

Table 4.9 Representative Waterbirds

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

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

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

5 Monitoring Results

- 5.0.1 The environmental monitoring will be implemented based on the division of works areas of each designed projects. Overall layout showing work areas and monitoring stations is shown in [Figure 2.1](#) and [Figure 4.1 – 4.3](#) respectively.
- 5.0.2 The environment monitoring schedules for reporting month and coming month are presented in [Appendix 5.1](#).
- 5.0.3 Construction works are not expected during the Chinese New Year holiday week (From 31 Jan 2022 to 5 Feb 2022), so the impact monitoring activities for air and noise were temporarily suspended.

5.1 Noise Monitoring Results

- 5.1.1 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in [Appendix 5.2](#).
- 5.1.2 No action or limit level exceedance was recorded in this reporting month.

5.2 Air Monitoring Results

- 5.2.1 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in [Appendix 5.3](#).
- 5.2.2 No action or limit level exceedance was recorded in this reporting month.

5.3 Ecology Monitoring Results

- 5.3.1 Details of ecological Monitoring results in the reporting month are provided in [Appendix 5.4](#).
- 5.3.2 No Action Level and Limit Level was triggered for ecological monitoring in the reporting month.
- 5.3.3 Nesting and breeding behaviours were observed during the monitoring in reporting month. There was at least one nest (Eurasian Magpie). Its location is far from the project site. There was no significant impact on the nest in the month reported.

5.4 Waste Management

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

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

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000m ³)	0	0	0
Reused in this Contract (Inert) (in '000m ³)	0	0	0
Reused in other Projects (Inert) (in '000m ³)	0	0	0
Disposal as Public Fill (Inert) (in '000m ³)	1.104	0.549	1.652
Metals (in '000kg)	0	0	0
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0	0	0
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m ³)	0.202	0.068	0.270

Table 5.2 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/07

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000m ³)	0	0	0
Reused in this Contract (Inert) (in '000m ³)	0	0	0

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Reused in other Projects (Inert) (in '000m ³)	0.813	0.048	0.861
Disposal as Public Fill (Inert) (in '000m ³)	4.167	2.761	6.928
Metals (in '000kg)	8.3	0	8.3
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0.004	0	0.004
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000m ³)	0.012	0.01	0.021

Table 5.3 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/03

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0	0	0
Reused in this Contract (Inert) (in '000kg)	0	0	0
Reused in other Projects (Inert) (in '000kg)	0	0	0
Disposal as Public Fill (Inert) (in '000kg)	176.71	83.58	260.29
Metals (in '000kg)	0	0	0
Paper / Cardboard Packing (in '000kg)	0.177	0.132	0.309

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Plastics (in '000kg)	0.008	0.003	0.011
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	2.7	0	2.7

Table 5.4 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/04

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0	0	0
Reused in this Contract (Inert) (in '000kg)	0	0	0
Reused in other Projects (Inert) (in '000m ³)	0	0	0
Disposal as Public Fill (Inert) (in '000m ³)	0	0	0
Metals (in '000kg)	0	0	0
Paper / Cardboard Packing (in '000kg)	0	0	0
Plastics (in '000kg)	0	0	0
Chemical Wastes (in '000kg)	0	0	0
General Refuses (in '000kg)	0	0	0

6 Compliance Audit

6.1.1 The Event Action Plan for construction noise, air quality and ecological monitoring are presented in [Appendix 6.1](#).

6.1.2 The summary of exceedance is presented in [Appendix 6.2](#).

6.2 Noise Monitoring

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

6.3 Air Quality Monitoring

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

6.4 Ecological Monitoring

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

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

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

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

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

7 Environmental Site Audit

- 7.0.1. Within this reporting month, weekly environmental site audits were conducted on 8, 10, 15 and 22 February 2022. Biweekly landscape site audits were conducted on 8 (DE/2018/03 & DE/2018/04), 10 (DC/2018/06 & DC/2018/07) and 22 February 2022. IEC attended the joint site inspection on 22 February 2022.
- 7.0.2. No non-compliance was found during the environmental site inspection while reminders on environmental measures were recommended. Results and findings of these inspections in this reporting month are listed below in **Table 7.1 to 7.4**.

Table 7.1 Summary of Environmental Inspections of Contract No. DC/2018/06

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20211206_1	6 Dec 2021	The Contractor was requested to provide and extend the solid dull green barrier fences with 2m next to Ng Tung River under EP condition 2.7.	The barrier fences were completed on 22 Feb 2022	Rectified
20220210_1	10 Feb 2022	The Contractor was reminded to clear the oil spillage at Portion C.	As observed on 15 Feb 2022, oil spillage was cleared.	Rectified
20220215_1	15 Feb 2022	The Contractor was reminded to enhance dust mitigation measures for the uncovered stockpiles at UV No.1	As observed on 18 Feb 2022, water spraying method was adopted.	Rectified
20220222_1	22 Feb 2022	The Contractor was reminded to provide drip tray for the oil containers at UV No.1	As observed on 1 Mar 2022, the oil containers were properly stored.	Rectified

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20220210_3	10 Feb 2022	The Contractor was reminded to display the NRMM label for the excavator.	As observed on 15 Feb 2022, NRMM label was displayed.	Rectified

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

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

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

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

7.0.3. With reference to the EP condition 2.7, erection of 2m solid dull green site barrier fences around active work sites is needed to minimize ecological impacts. The updated details and conditions of site barrier are presented in [Appendix 7.1](#).

7.0.4. Dust and noise mitigation measures for construction activities is shown in [Appendix 7.2](#).

8. Complaints, Notification of Summons and Prosecution

- 8.0.1. No environmental complaint, notification of summons and successful prosecution regarding construction works was recorded in the reporting period.
- 8.0.2. The details environmental complaints for the Project are summarized by complaint log in [Appendix 8.1](#).
- 8.0.3. Cumulative statistics on complaints and successful prosecutions are summarized in **Table 8.1** and **Table 8.2** respectively.

Table 8.1 Cumulative Statistics on Complaints in the Reporting Month

Reporting Period	No. of Complaints
Commencement works (Feb 2018) to last reporting month	3
February 2022	0
Total	3

Table 8.2 Cumulative Statistics on Successful Prosecutions

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

9. Conclusion

- 9.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 9.0.2. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.
- 9.0.3. The scheduled construction activities and the recommended mitigation measures for the coming 3 months are listed in **Table 9.1**. The construction programmes of individual activities are provided in [Appendix 9.1](#).

Table 9.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting 3 Months

Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	<ul style="list-style-type: none"> • RC works • Excavation works • Sewerage and drainage works • ELS works • Backfilling • ABWF works 	<ul style="list-style-type: none"> • Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal
DC/2018/07	<ul style="list-style-type: none"> • ELS works 	<ul style="list-style-type: none"> • Implement proper dust mitigation measures

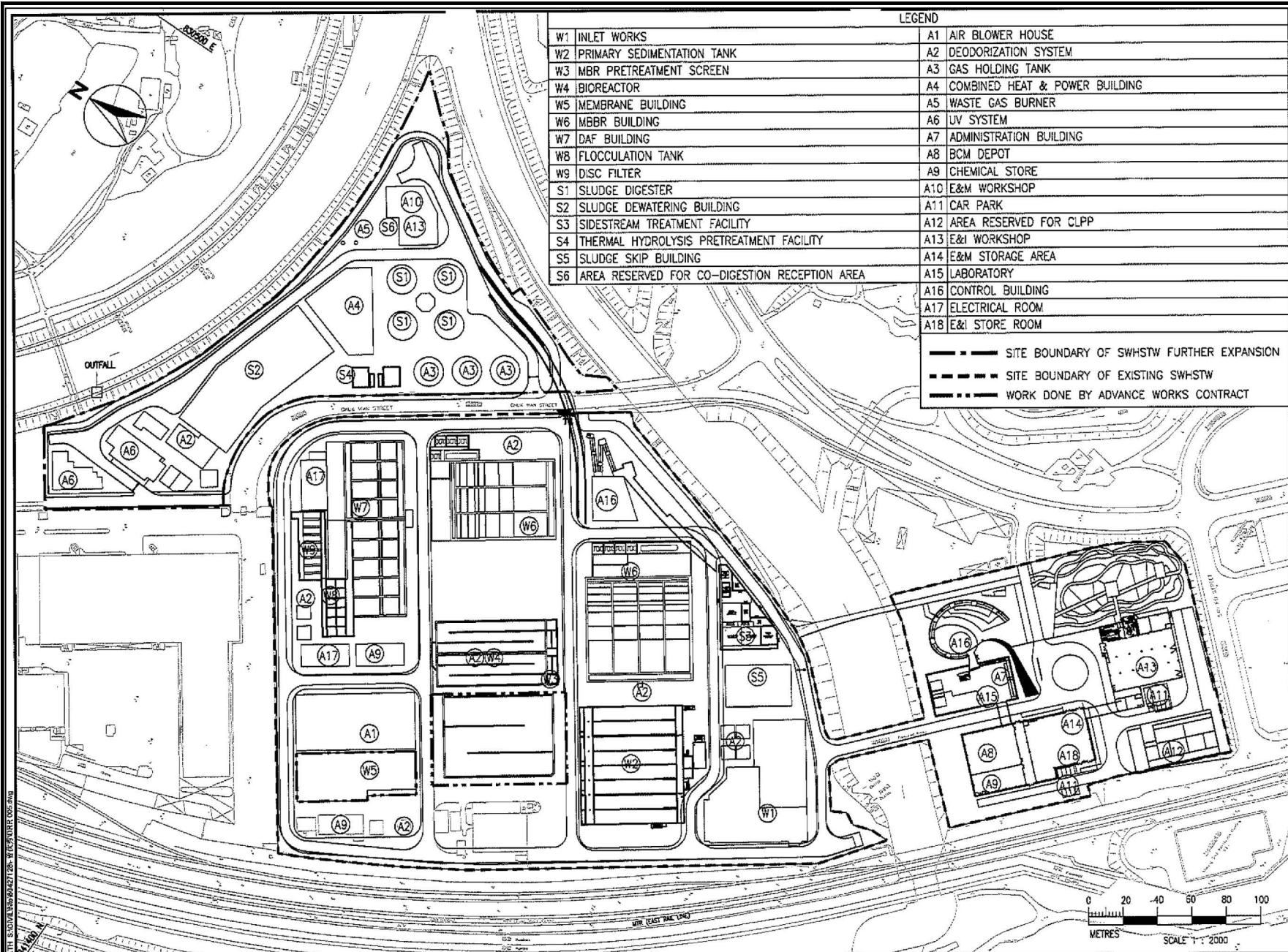
Contract No.	Key Construction Works	Recommended Mitigation Measures
	<ul style="list-style-type: none"> • R.C. Structure works • Pre-bored H piles • Demolition works • Excavation • E&M installation and T&C works 	<p>on dusty surface and stockpiles</p> <ul style="list-style-type: none"> • Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal
DE/2018/03	<ul style="list-style-type: none"> • ELS (Sidestream Treatment Facilities) • Penstock and Stoplog Installation • Effluent Pump Installation • UV System Installation • Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS • Delivery and Installation of Temporary Container LV Switch Room for UV and Effluent Pumping Station • SAT Procedure of Penstock and Stoplog • HR and FH System 	<ul style="list-style-type: none"> • Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal

Contract No.	Key Construction Works	Recommended Mitigation Measures
	<p>Installation at Workshop No.2</p> <ul style="list-style-type: none"> • SPR System Installation at Workshop No.2 • Electrical Installation for Transformer Room at Workshop No.2 • SAT Procedure of Penstock and Stoplog 	
DE/2018/04	<ul style="list-style-type: none"> • Testing and Commission of Temporary Filtrate Equalisation Tank. • Testing and Commission of Temporary Primary Sludge Thickener and its accessories 	<ul style="list-style-type: none"> • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.



Figure 2.1

Project Layout



LEGEND			
W1	INLET WORKS	A1	AIR BLOWER HOUSE
W2	PRIMARY SEDIMENTATION TANK	A2	DEODORIZATION SYSTEM
W3	MBR PRETREATMENT SCREEN	A3	GAS HOLDING TANK
W4	BIOREACTOR	A4	COMBINED HEAT & POWER BUILDING
W5	MEMBRANE BUILDING	A5	WASTE GAS BURNER
W6	MBBR BUILDING	A6	UV SYSTEM
W7	DAF BUILDING	A7	ADMINISTRATION BUILDING
W8	FLOCCULATION TANK	A8	BCM DEPOT
W9	DISC FILTER	A9	CHEMICAL STORE
S1	SLUDGE DIGESTER	A10	E&M WORKSHOP
S2	SLUDGE DEWATERING BUILDING	A11	CAR PARK
S3	SIDESTREAM TREATMENT FACILITY	A12	AREA RESERVED FOR CLPP
S4	THERMAL HYDROLYSIS PRETREATMENT FACILITY	A13	E&I WORKSHOP
S5	SLUDGE SKIP BUILDING	A14	E&M STORAGE AREA
S6	AREA RESERVED FOR CO-DIGESTION RECEPTION AREA	A15	LABORATORY
		A16	CONTROL BUILDING
		A17	ELECTRICAL ROOM
		A18	E&I STORE ROOM
		--- SITE BOUNDARY OF SWHSTW FURTHER EXPANSION - - - SITE BOUNDARY OF EXISTING SWHSTW - · - · - WORK DONE BY ADVANCE WORKS CONTRACT	

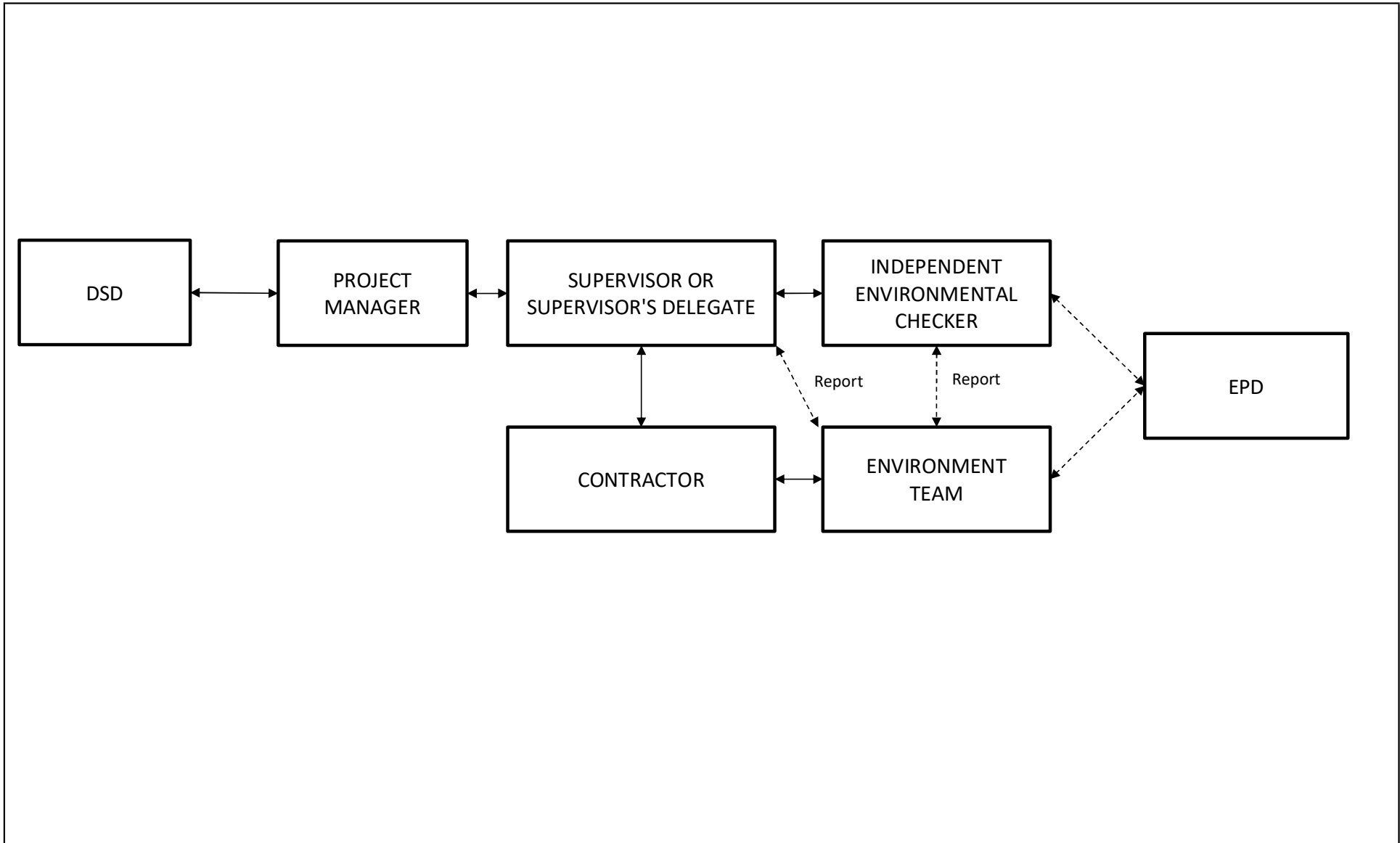
Shek Wu Hui Effluent Polishing Plant
 General Site Layout of SWHEPP

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



Figure 2.2

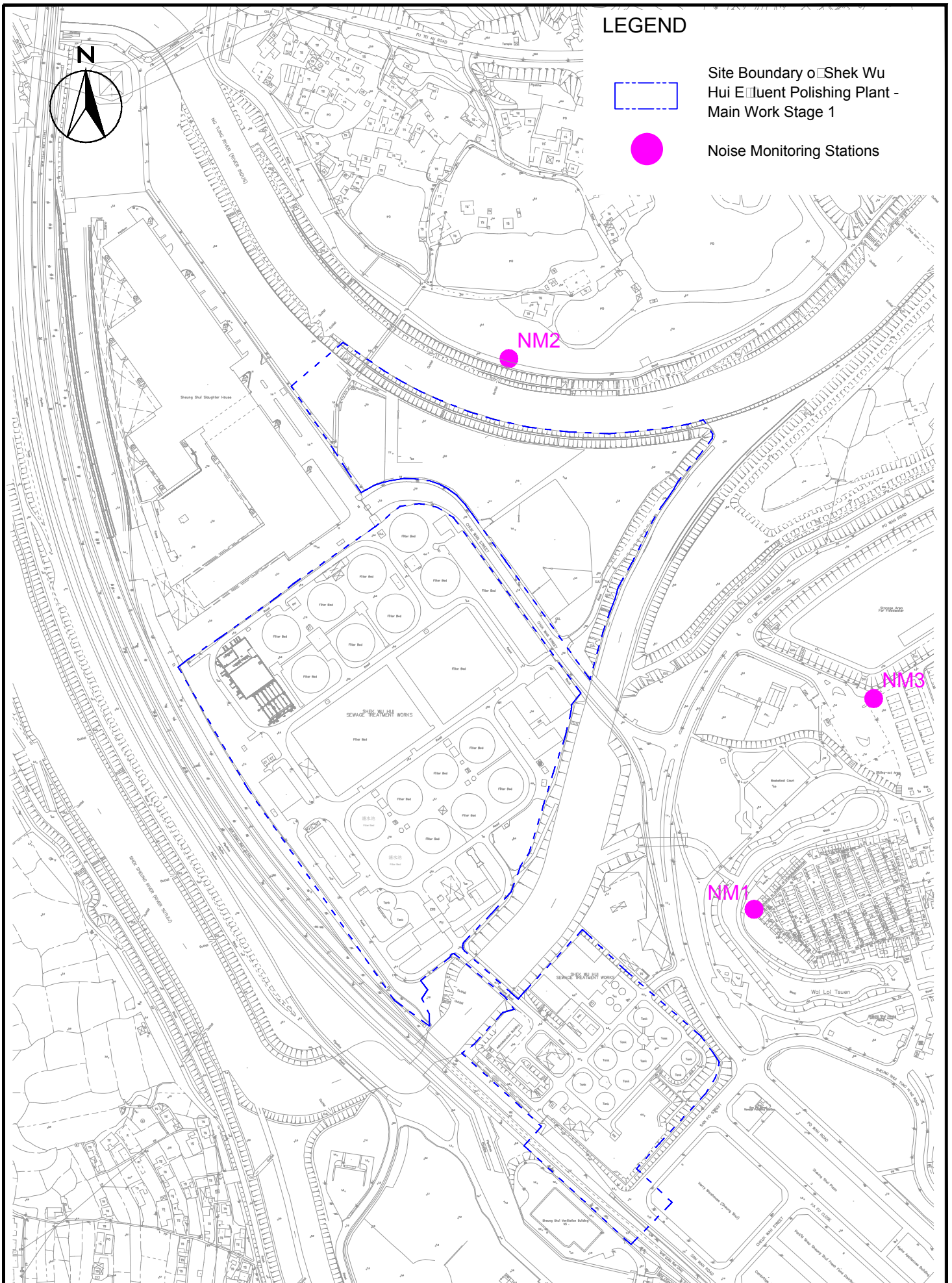
Project Organization Chart



Shek Wu Hui Effluent Polishing Plant - Project Organisation For Environmental Monitoring and Audit	SCALE	N.T.S.	DATE	Sep 2019
	CHECK	JW	DRAWN	SY
	JOB NO.		FIGURE NO.	1.2

Figure 4.1

Locations of Noise Monitoring Stations



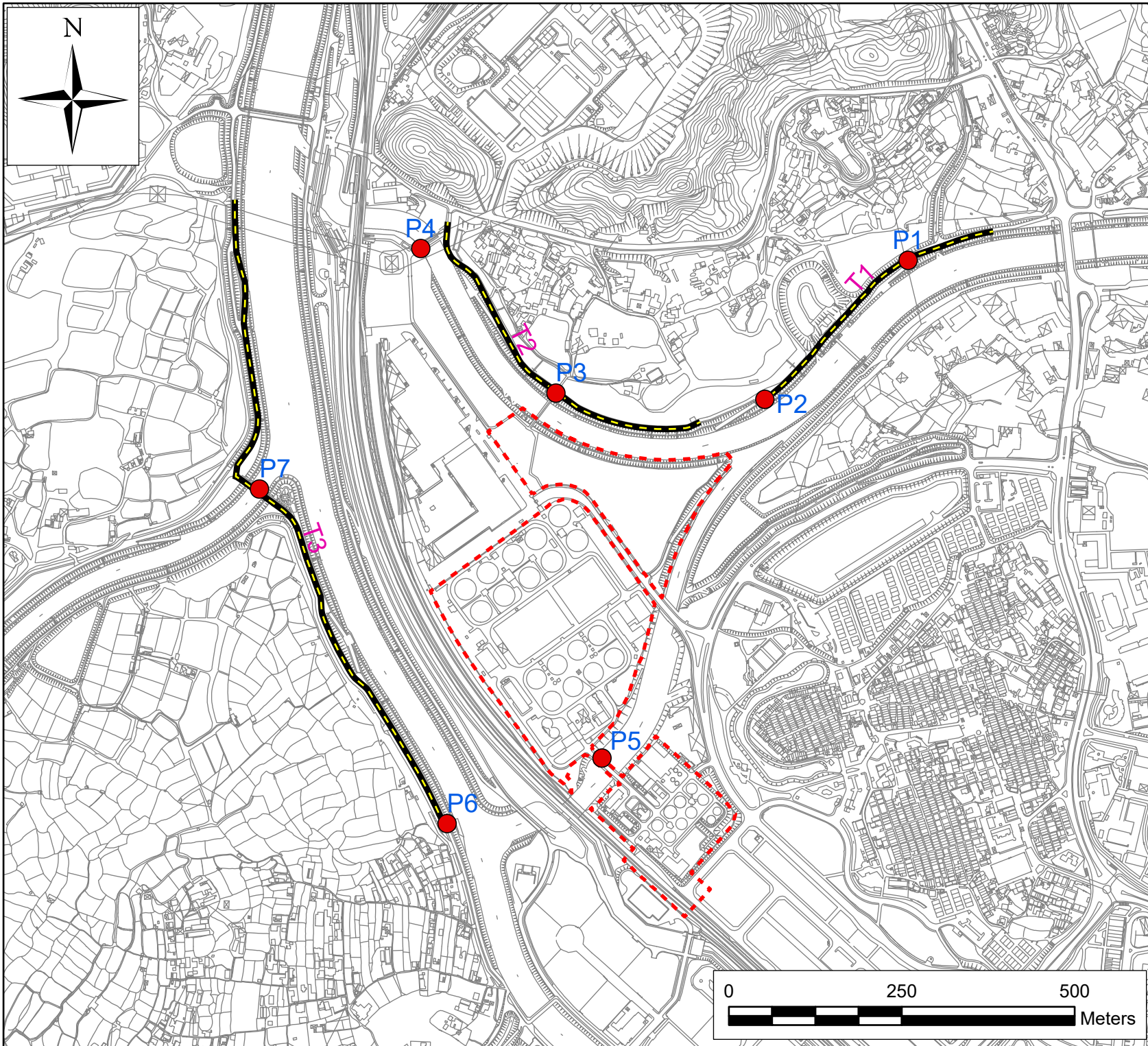
Shek Wu Hui Effluent Polishing Plant Location of Noise Monitoring Stations	SCALE	1:4000 A4	DATE	SEP 2019	
	CHECK	JM	DRAWN	SY	
	JOB No.	MA19019	FIGURE NO.	3	REVISION

Figure 4.2

Locations of Air Quality Monitoring Stations

Figure 4.3

Locations of Ecological Monitoring Stations



- Legend**
- - - Project Site Boundary
 - - - Walk Transects
 - Point Count Locations

PREPARED BY
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 19/F Remex Centre
 42 Wong Chuk Hang Road,
 Hong Kong
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 Facsimile: (852) 2882-3331
 E-mail: info@lamenviro.com
 Website: <http://www.lamenviro.com>

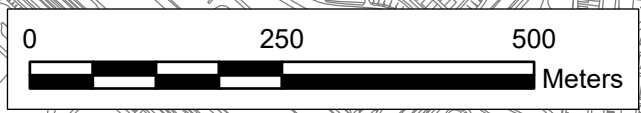
CONTRACT NO.
SPW 12/2021

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

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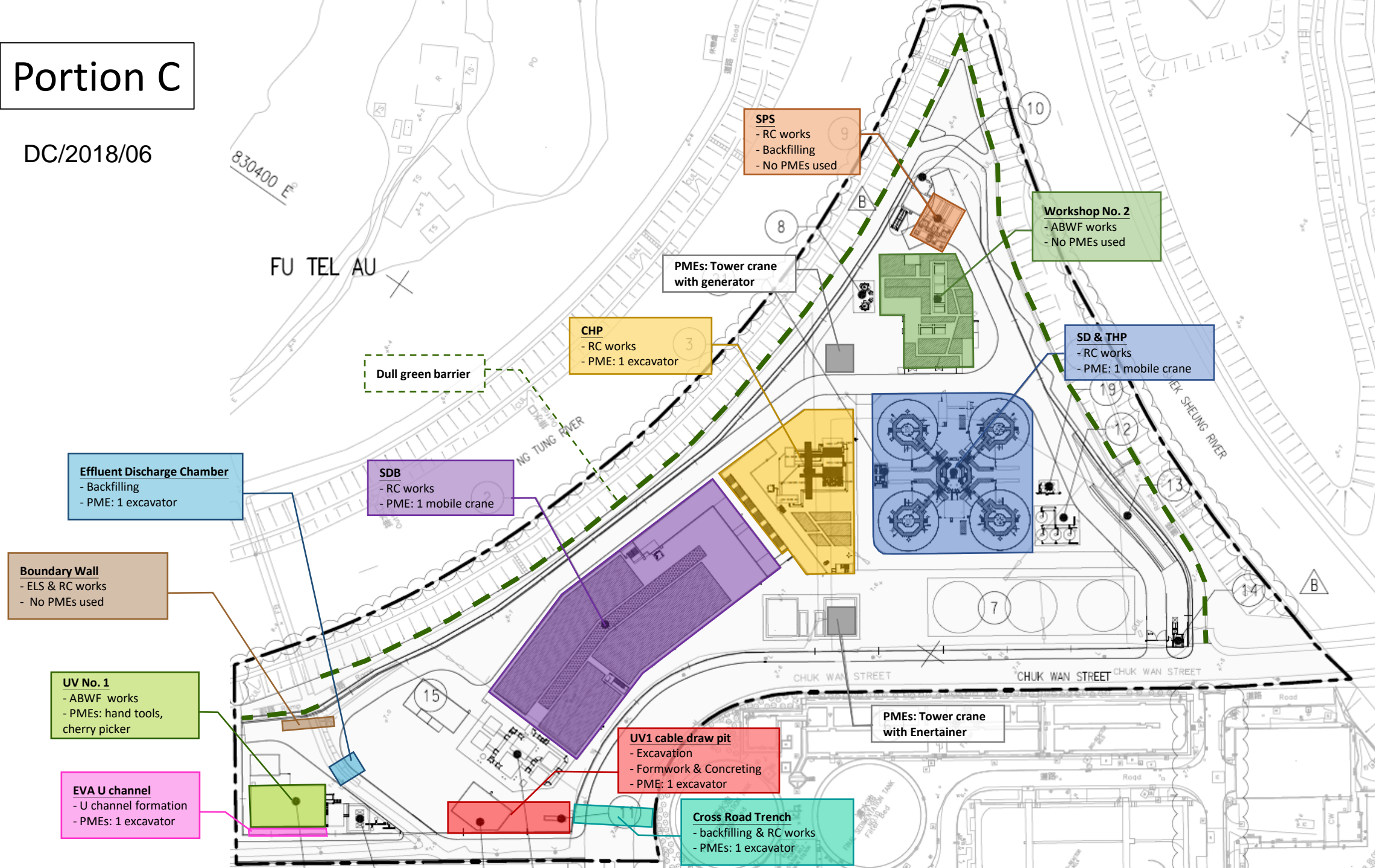


Appendix 2.1

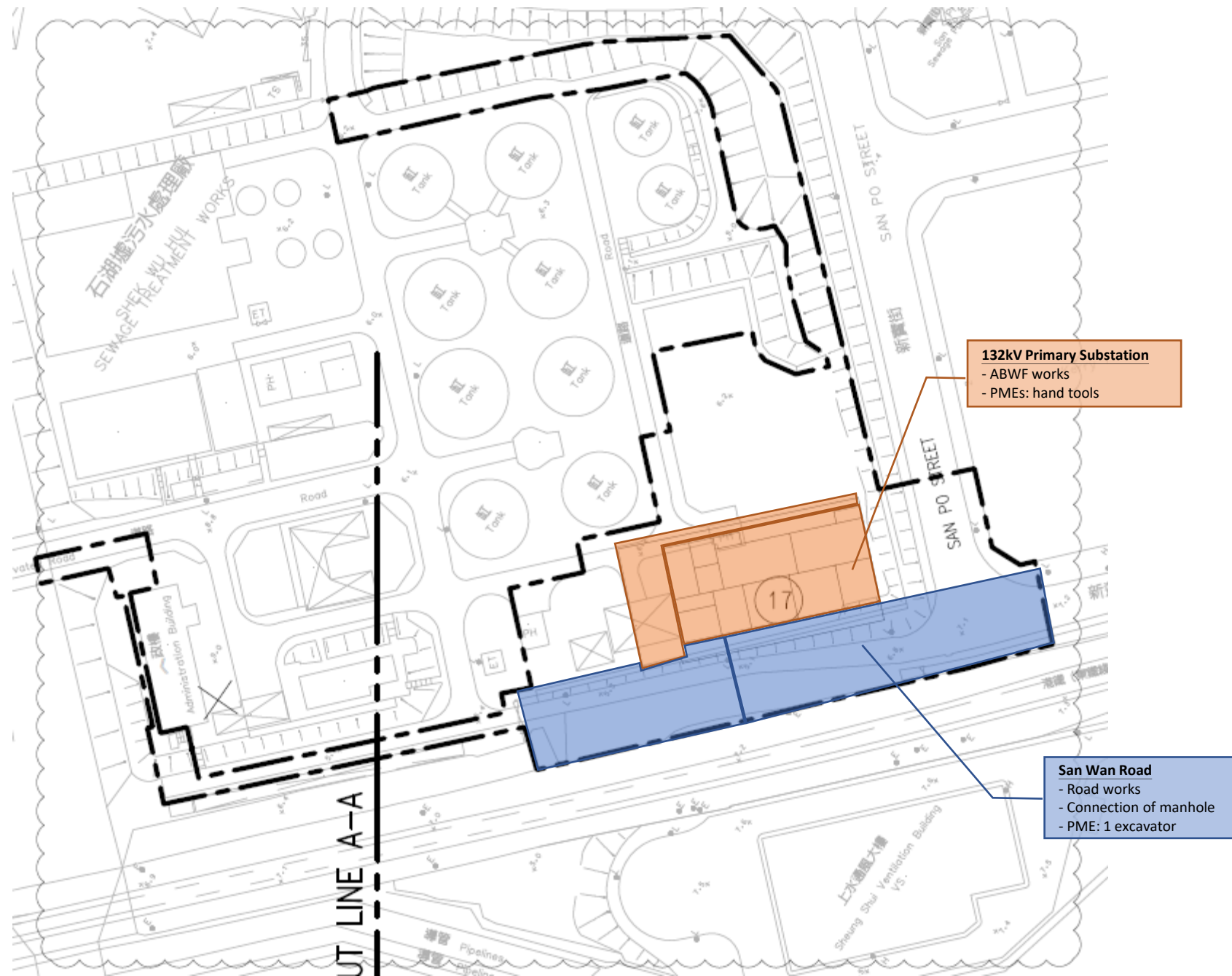
Layout plan of construction activities

Portion C

DC/2018/06

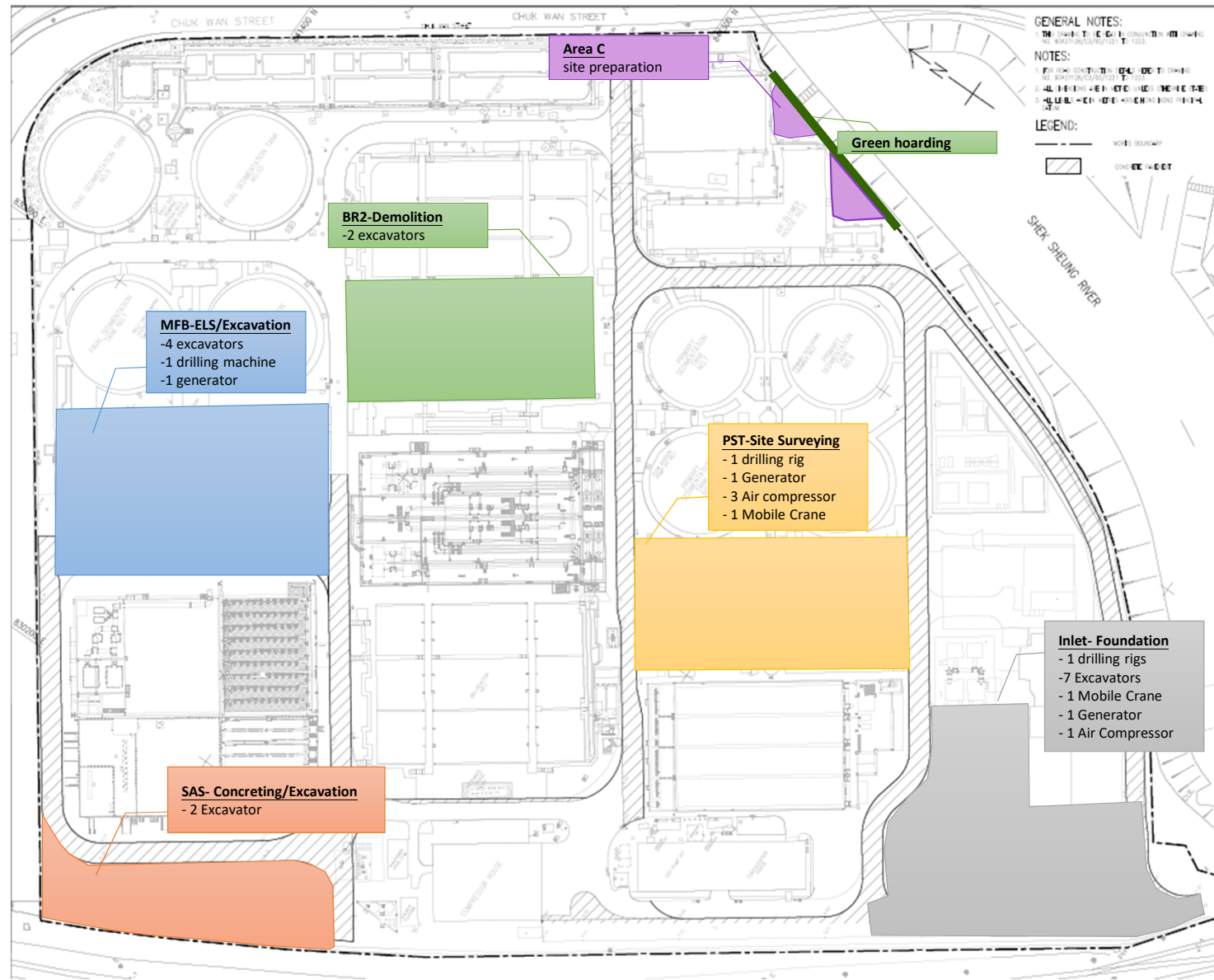


Portion A

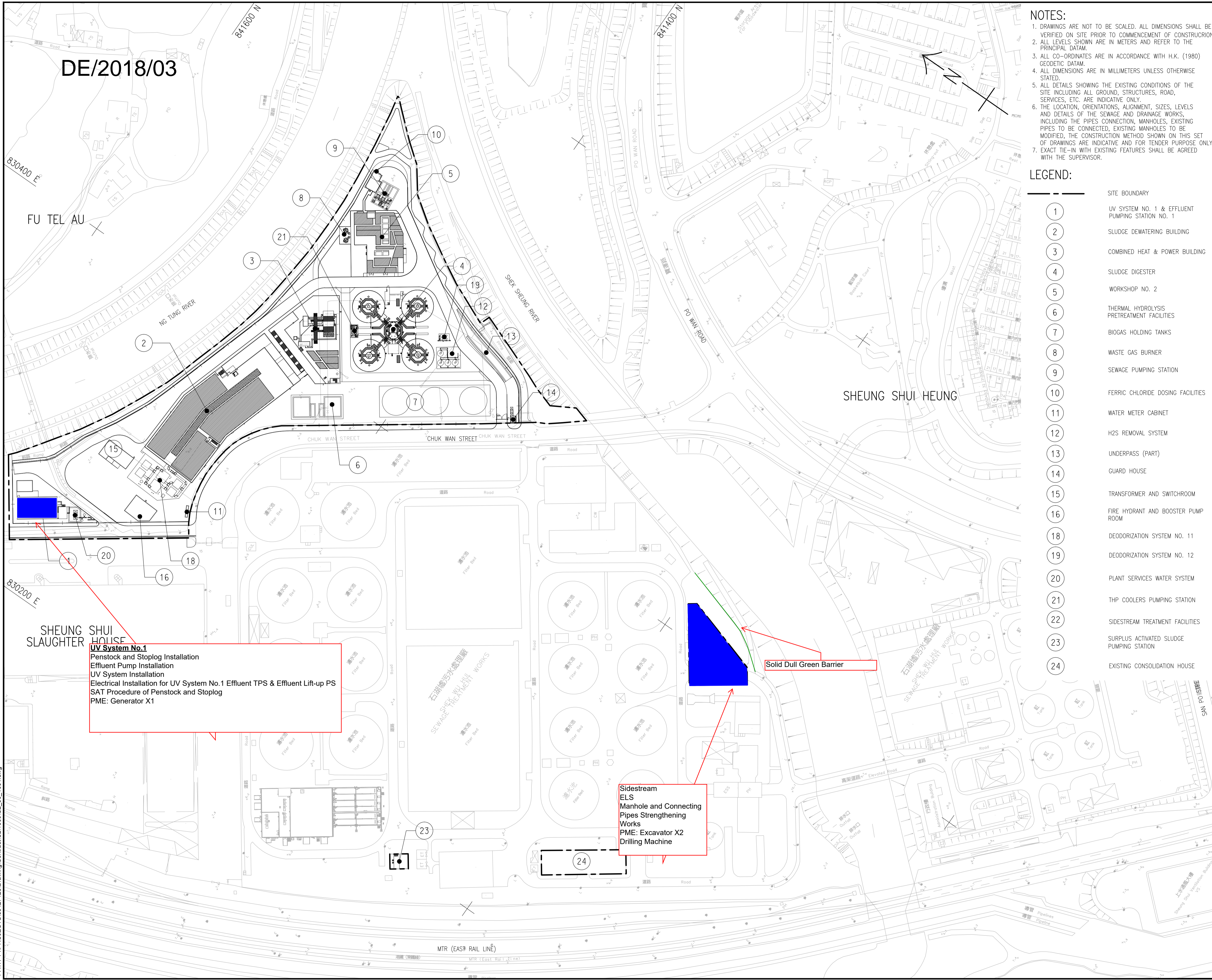


Portion B

DC/2018/07



Plot File by: GuoX 26/03/2019
 PATH: P:\PROJECTS\0427128\Drawing\Contract\C21000\C2_00_1001.dwg
 Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM
 ISO A1 594mm x 841mm



NOTES:

1. DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL LEVELS SHOWN ARE IN METERS AND REFER TO THE PRINCIPAL DATUM.
3. ALL CO-ORDINATES ARE IN ACCORDANCE WITH H.K. (1980) GEODETIC DATUM.
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6. THE LOCATION, ORIENTATIONS, ALIGNMENT, SIZES, LEVELS AND DETAILS OF THE SEWAGE AND DRAINAGE WORKS, INCLUDING THE PIPES CONNECTION, MANHOLES, EXISTING PIPES TO BE CONNECTED, EXISTING MANHOLES TO BE MODIFIED, THE CONSTRUCTION METHOD SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE AND FOR TENDER PURPOSE ONLY.
7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

LEGEND:

---	SITE BOUNDARY
①	UV SYSTEM NO. 1 & EFFLUENT PUMPING STATION NO. 1
②	SLUDGE DEWATERING BUILDING
③	COMBINED HEAT & POWER BUILDING
④	SLUDGE DIGESTER
⑤	WORKSHOP NO. 2
⑥	THERMAL HYDROLYSIS PRETREATMENT FACILITIES
⑦	BIOGAS HOLDING TANKS
⑧	WASTE GAS BURNER
⑨	SEWAGE PUMPING STATION
⑩	FERRIC CHLORIDE DOSING FACILITIES
⑪	WATER METER CABINET
⑫	H2S REMOVAL SYSTEM
⑬	UNDERPASS (PART)
⑭	GUARD HOUSE
⑮	TRANSFORMER AND SWITCHROOM
⑯	FIRE HYDRANT AND BOOSTER PUMP ROOM
⑰	DEODORIZATION SYSTEM NO. 11
⑱	DEODORIZATION SYSTEM NO. 12
⑳	PLANT SERVICES WATER SYSTEM
㉑	THP COOLERS PUMPING STATION
㉒	SIDESTREAM TREATMENT FACILITIES
㉓	SURPLUS ACTIVATED SLUDGE PUMPING STATION
㉔	EXISTING CONSOLIDATION HOUSE

UV System No.1
 Penstock and Stoplog Installation
 Effluent Pump Installation
 UV System Installation
 Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
 SAT Procedure for Penstock and Stoplog
 PME: Generator X1

Sidestream ELS Manhole and Connecting Pipes Strengthening Works
 PME: Excavator X2
 Drilling Machine

Solid Dull Green Barrier



PROJECT
 SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT
 渠務署
 Drainage Services Department

CONSULTANT
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SUB-CONSULTANTS
 分判工程師/顧問公司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
-	MAR. 19	TENDER DRAWING	TLST
1/R	DATE	DESCRIPTION	CHK.

STATUS
 預備

SCALE
 A1 1:1000

DIMENSION UNIT
 METRES

KEY PLAN
 索引圖

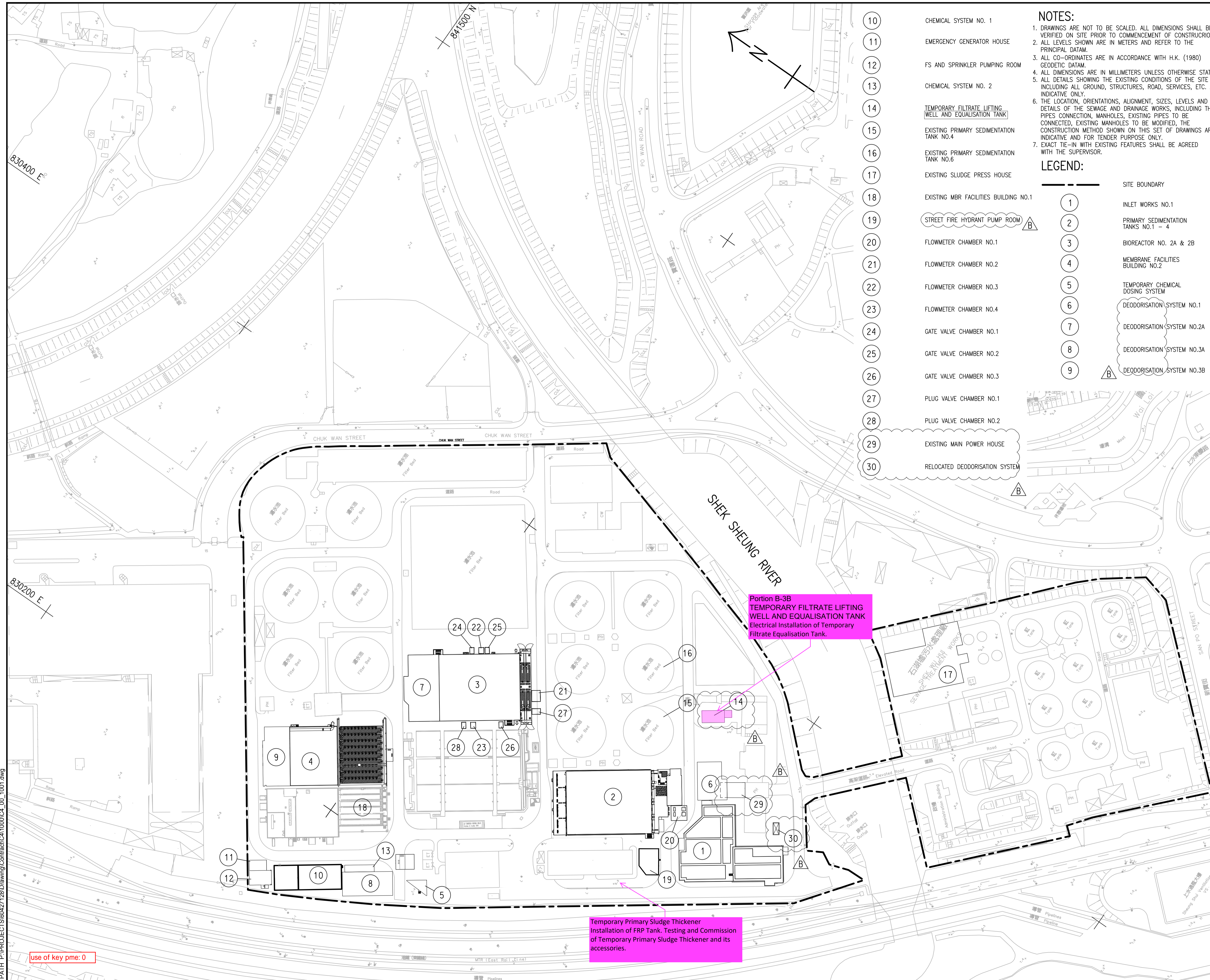
PROJECT NO.
 項目編號
 60427128

CONTRACT NO.
 合約編號
 DE/2018/03

SHEET TITLE
 圖紙名稱
 SHEK WU HUI EFFLUENT POLISHING PLANT GENERAL LAYOUT PLAN

SHEET NUMBER
 圖紙編號
 60427128/C2/00/1001

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

NOTES:

1. DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
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7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

- LEGEND:**
- 1 SITE BOUNDARY
 - 2 INLET WORKS NO.1
 - 3 PRIMARY SEDIMENTATION TANKS NO.1 - 4
 - 4 BIOREACTOR NO. 2A & 2B
 - 5 MEMBRANE FACILITIES BUILDING NO.2
 - 6 TEMPORARY CHEMICAL DOSING SYSTEM
 - 7 DEODORISATION SYSTEM NO.1
 - 8 DEODORISATION SYSTEM NO.2A
 - 9 DEODORISATION SYSTEM NO.3A
 - 10 DEODORISATION SYSTEM NO.3B

Portion B-3B
TEMPORARY FILTRATE LIFTING WELL AND EQUALISATION TANK
Electrical Installation of Temporary Filtrate Equalisation Tank.

Temporary Primary Sludge Thickener
Installation of FRP Tank. Testing and Commission of Temporary Primary Sludge Thickener and its accessories.

Use of key pme: 0

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AECOM

PROJECT
項目
SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT
業主
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Drainage Services Department

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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

IR	DATE	DESCRIPTION	CHK.
B	AUG. 19	TENDER ADDENDUM NO. 3	TLST
A	JUL. 19	TENDER ADDENDUM NO. 2	TLST
-	APR. 19	TENDER DRAWING	TLST

STATUS
階段

SCALE
比例
A1 1 : 1000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60427128

CONTRACT NO.
合約編號
DE/2018/04

SHEET TITLE
圖紙名稱
GENERAL LAYOUT PLAN

SHEET NUMBER
圖紙編號
60427128/C4/00/1001B



Appendix 3.1

Environmental Mitigation Implementation Schedule

Appendix 3.1 Environmental Mitigation Implementation Schedule

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Air Quality Monitoring							
S2.4.1.3	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:						
	<ul style="list-style-type: none"> Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; 	To minimize the dust impact	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Air Pollution Control Ordinance (APCO) and Air Pollution Control (Construction Dust)	^
	<ul style="list-style-type: none"> Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; 						^
	<ul style="list-style-type: none"> A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones; 						^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; 						

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> 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. 						^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> Any skip hoist for material transport should be totally enclosed by impervious sheeting; 						^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> 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; 						^

	<ul style="list-style-type: none"> • 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 						^
	<ul style="list-style-type: none"> • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies 						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Noise Impact							
S3.4.1.1	Use of movable barrier, enclosure, acoustic mat and quiet plant. Use of wooden frames barrier with a small-cantilevered upper portion of superficial density not less than 14kg/m ² on a skid footing with 25mm thick internal sound absorptive lining.	To minimize construction noise impact arising from the Project at the affected noise sensitive receivers (NSRs)	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, Noise Control Ordinance (NCO)	^
S3.4.1.2	<p>Good Site Practice:</p> <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. 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. 	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	^ * ^ ^ ^ ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Ecological Impact							
S4.2.1.1	Solid dull green noise/visual barriers of at least 2m high shall be erected and maintained between active works area and all areas of ecological importance.	Minimize noise and human disturbances during construction phase.	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.2	Avoid unnecessary lighting.	Minimize mortality impacts on birds.	Design / Contractor/ Plant Operator	Work Sites	Construction and operation phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.3	Good construction site practice to minimise dust generation should be followed on all construction sites. Measures to avoid, minimise and mitigate impacts on air quality are detailed in this schedule.	Minimize dust generation from construction sites.	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.4	The following measures to avoid, minimise and mitigate impact on water quality during construction phase shall be implemented						
	<ul style="list-style-type: none"> 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	^
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> To prevent muddy water entering nearby water bodies, work sites close to nearby water bodies should be isolated, using such items as sandbags or silt curtains with lead edge at bottom and properly supported props. Other protective measures should also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the work sites; 						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> 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; 						^
	<ul style="list-style-type: none"> Speed control for the trucks carrying contaminated materials should be enforced; 						^
	<ul style="list-style-type: none"> Vehicle wheel washing facilities at construction sites' exit points should be established and used, where necessary; and 						^
	<ul style="list-style-type: none"> Other measures as detailed in this schedule. 						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Water Quality Impact							
S5.2.2.1	Construction Site Runoff Practices and measures provided in the Practice Note for Professional Persons on Construction Site Drainage, (PROPECC PN1/94) should be followed where applicable.	Control construction runoff	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^
S5.2.2.2 – S5.2.2.3	Sewage from Workforce <ul style="list-style-type: none"> • 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; • 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 	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Waste Management							
S6.2.2.1	<p>Good Site Practices and Waste Reduction Measures</p> <ul style="list-style-type: none"> 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; 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. 	Minimize waste generation during construction	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal Ordinance (WDO)	* ^ ^ ^ ^ ^
S6.2.3.1	<p>Waste Reduction Measures</p> <ul style="list-style-type: none"> Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; 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. 	Reduce waste generation	Contractors	Work Sites	Prior to the commencement of construction of Main Works Stage 1, Stage 2 and Stage 3	WDO	^ ^ ^ ^ ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S6.2.4.1	Storage, Collection and Transportation of Waste Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include:	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	<ul style="list-style-type: none"> Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; 						^
	<ul style="list-style-type: none"> Stockpiling area should be provided with covers and water spraying system to prevent materials from windblown or being washed away; and 						^
	<ul style="list-style-type: none"> Different locations should be designated to stockpile each material to enhance reuse. 						^
S6.2.4.2	Storage, Collection and Transportation of Waste (con't)	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	<ul style="list-style-type: none"> Remove waste in timely manner; 						^
	<ul style="list-style-type: none"> Employ the trucks with cover or enclosed containers for waste transportation; 						^
	<ul style="list-style-type: none"> Obtain relevant waste disposal permits from the appropriate authorities; and 						^
S6.2.5.2	C&D Materials from Site Formation	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^
	<ul style="list-style-type: none"> Maintain temporary stockpiles and reuse excavated fill material for backfilling; 						^
	<ul style="list-style-type: none"> Carry out on-site sorting; 						^
	<ul style="list-style-type: none"> Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; 						^
	<ul style="list-style-type: none"> 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 						^
S6.2.5.3	C&D Material from Buildings Demolition and New Building Construction						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> 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. The use of wooden hoardings shall not be allowed. An alternative material, such as metal, aluminium or alloy etc, could be used. Government has developed a charging policy for the disposal of waste to landfill at present. It will provide additional incentive to reduce the volume of generated waste and ensure proper segregation to allow reuse of the inert material on site when implemented. In order to minimize the impacts of the demolition works, the generated wastes must be cleared as quickly as possible after demolition. Therefore, the demolition and clearance works should be undertaken simultaneously. To facilitate proper segregation of inert and non-inert C&D material arising from demolition works, selective demolition method should be adopted. 	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^
							^
							^
							^
S6.2.5.4	<p>Chemical Waste</p> <ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. 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. 	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	^
							*
S6.2.5.5	General Refuse						

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> • General refuse should be stored in enclosed bins separately from construction and chemical wastes. • 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. 	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	^ ^ ^ ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Landscape and Visual							
S7.3.1.1	<p>Good Site Practices Measures</p> <ul style="list-style-type: none"> 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. 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. 	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction phase		N/A
							N/A
S7.3.2.1	<p>MM4 - Tree Protection & Preservation</p> <ul style="list-style-type: none"> Existing trees to be retained within the Project Site should be carefully protected during construction. In particular Old and Valuable Trees (OVTs) will be preserved according to ETWB TC (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained. 	Protect and Preserve Trees	Designer / Contractor	Work Sites	Prior to construction and construction phase	ETWB TCW No. 29/2004 and DEVB TC(W) No.7/2015	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S7.3.2.1	<p>MM5 - Tree Transplantation</p> <ul style="list-style-type: none"> 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	<p>MM6 - Slope Landscaping</p> <ul style="list-style-type: none"> Site formation should be reduced as far as possible. Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping 	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure manmade slopes are as visually amenable as possible.	Designer / Contractor	Work Sites	Prior to construction, construction phase and operation phase	GEO Publication (1999) - Use of Vegetation as Surface Protection on Slope; GEO Publication No. 1/2011- Technical Guidelines on Landscape Treatment for Slopes	N/A
S7.3.2.1	MM7 - Compensatory Planting						

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> 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. 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. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested. 	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
							N/A
							N/A
S7.3.2.1	MM9 - Vertical Greening <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable. 	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to visually sensitive receivers (VSRs) at high levels. Provide greening	Designer / Contractor	On appropriate buildings	Prior to construction, construction phase and operation phase	CIBSE HK Branch, Technical Guidelines for Green Roof Systems in Hong Kong (2011); ArchSD/Urbis Study on Green Roof Application in HK (2007)	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S7.3.2.1	MM11 - Screen Planting <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment. [Chapter 13 of the EIA Report of NENT NDAs (Register No. AEIAR-175- 2013)] 	To screen undesirable views of the works site.	Designer	Work Sites	Construction phase		N/A
S7.3.2.1	MM17 - Light Control <ul style="list-style-type: none"> Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase. 	To minimize glare impact to adjacent VSRs.	Designer / Contractor	Work Sites and/or the Plant	Construction phase and operation phase		N/A

Remarks:

- ^ Implemented
- * To be followed-up by Contractor
- # Not Implemented
- N/A Not Applicable



Appendix 4.1

Action and Limit Level

Action and Limit Levels

Air Quality Monitoring

Monitoring Station	1-hour TSP Level in $\mu\text{g}/\text{m}^3$		24-hour TSP Level in $\mu\text{g}/\text{m}^3$	
	Action Level	Limit Level	Action Level	Limit Level
AM1	320	500	189	260
AM2	322	500	187	260

Noise Monitoring

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

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

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

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

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

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



Appendix 4.2

Copies of Calibration Certificates



Certificate of Calibration

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

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3610	3.2	2.00
2	3	4	1	0.9540	6.4	4.00
3	5	6	1	0.8460	7.9	5.00
4	7	8	1	0.8070	8.7	5.50
5	9	10	1	0.6630	12.7	8.00

Data Tabulation					
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9930	0.7296	1.4123	0.9957	0.7316	0.8868
0.9888	1.0365	1.9973	0.9915	1.0393	1.2541
0.9868	1.1664	2.2330	0.9895	1.1696	1.4021
0.9857	1.2215	2.3420	0.9884	1.2248	1.4705
0.9804	1.4788	2.8246	0.9831	1.4828	1.7735
QSTD	m=	1.88375	QA	m=	1.17957
	b=	0.03970		b=	0.02493
	r=	0.99998		r=	0.99998

Calculations	
Vstd= $\Delta Vol \left(\frac{Pa - \Delta P}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)$	Va= $\Delta Vol \left(\frac{Pa - \Delta P}{Pa} \right)$
Qstd= $Vstd / \Delta Time$	Qa= $Va / \Delta Time$
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= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

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



Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : AM1a Calibration Date : 30-Dec-21
 Equipment no. : HVS001 Calibration Due Date : 1-Mar-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	291	Kelvin	Pressure, P _a
			1024 mmHg

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	1.5	1.5	3.0	0.9143	25	25.4321
2	2.6	2.6	5.2	1.2104	36	36.6223
3	3.6	3.6	7.2	1.4280	45	45.7778
4	4.7	4.7	9.4	1.6346	55	55.9507
5	5.9	5.9	11.8	1.8340	61	62.0544

By Linear Regression of Y on X

Slope, m = 40.8593 Intercept, b = -12.2094
 Correlation Coefficient* = 0.9983
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : Serial No.:0401-1105

Calibrated by : Alan Ng Checked by : Kelly Cheung
 Date : 30-Dec-21 Date : 30-Dec-21



Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location : AM2a Calibration Date : 30-Dec-21
 Equipment no. : HVS003 Calibration Due Date : 1-Mar-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T _a	291	Kelvin	Pressure, P _a
			1024 mmHg

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

Calibration of TSP						
Calibration Point	Manometer Reading			Q _{std} (m ³ / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P _a /1013.3x298/T _a) ^{1/2} /35.31) Y-axis
	(up)	(down)	(difference)			
1	1.6	1.6	3.2	0.9450	21	21.3630
2	2.5	2.5	5.0	1.1865	33	33.5704
3	3.4	3.4	6.8	1.3872	44	44.7605
4	4.5	4.5	9.0	1.5990	53	53.9161
5	5.5	5.5	11.0	1.7700	60	61.0371

By Linear Regression of Y on X

Slope, m = 48.4411 Intercept, b = -23.7993
 Correlation Coefficient* = 0.9984
 Calibration Accepted = Yes/No**

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

** Delete as appropriate.

Remarks : Serial No.: 1096-2305

Calibrated by : Alan Ng Checked by : Kelly Cheung
 Date : 30-Dec-21 Date : 30-Dec-21



Portable Dust Meter Performance Check Record

Portable Dust Meter

Type : Particulate Monitor
Manufacturer : MET ONE INSTRUMENTS
Model Number : AEROCET831
Serial Number : B19129
Performance Check Date : 22-Nov-21, 3-Nov-21

Standard Equipment

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

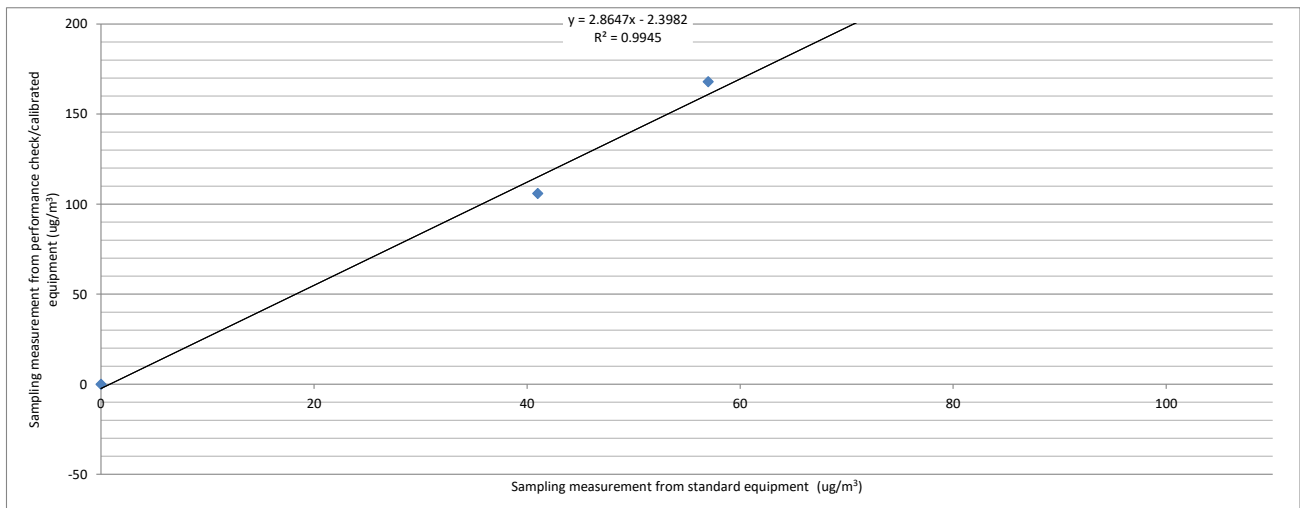
Portable Dust Meter Performance Check Results

Table with 6 columns: Trial no. in 1-hr period, Time, Mean Pressure (hPa), Mean Temp (°C), Concentration in ug/m³ (Standard equipment), Concentration in ug/m³ (Performance Check / Calibrated equipment). Rows include Zero Check and trials 1, 2, 3.

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor) : 0.4000
Correlation Coefficient : 0.9973
Validity of Performance Check / Calibration Record : 12/11/2022



Operator: Garry Yu

Date: 12-Nov-21

Checked by: Derek Lo

Date: 12-Nov-21



Portable Dust Meter Performance Check Record

Portable Dust Meter

Type : Particulate Monitor
 Manufacturer : MET ONE INSTRUMENTS
 Model Number : AEROCET831
 Serial Number : B19129
 Performance Check Date : 22-Nov-21, 3-Nov-21

Standard Equipment

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

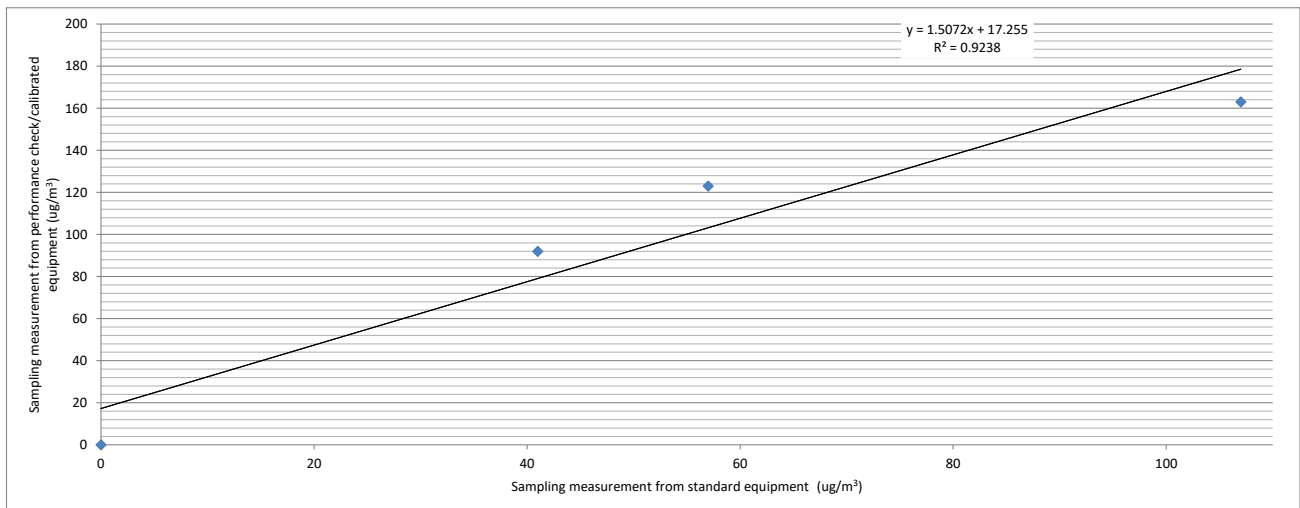
Portable Dust Meter Performance Check Results

Trial no. in 1-hr period	Time	Mean Pressure (hPa)	Mean Temp (°C)	Concentration in ug/m ³ (Standard equipment) (X - Axis)	Concentration in ug/m ³ (Performance Check / Calibrated equipment) (Y - Axis)
Zero Check	2/11/2021	1015	27	0	0
1	2/11/21 08:33	1016	24	41	92
2	2/11/21 10:37	1016	24	57	123
3	3/11/21 09:31	1018	22	107	163

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor) : 0.7000
 Correlation Coefficient : 0.9612
 Validity of Performance Check / Calibration Record : 12/11/2022



Operator: Garry Yu

Date: 12-Nov-21

Checked by: Derek Lo

Date: 12-Nov-21



Portable Dust Meter Performance Check Record

Portable Dust Meter

Type : Particulate Monitor
Manufacturer : Metone AEROCET 831
Model Number : 831
Serial Number : R14332
Performance Check Date : 22-Mar-21

Standard Equipment

Type : High Volume Sampler
Manufacturer : TISCH
Model Number : TE-5170
Equipment Number : HVS018
Last Calibration Date : 08-Mar-21

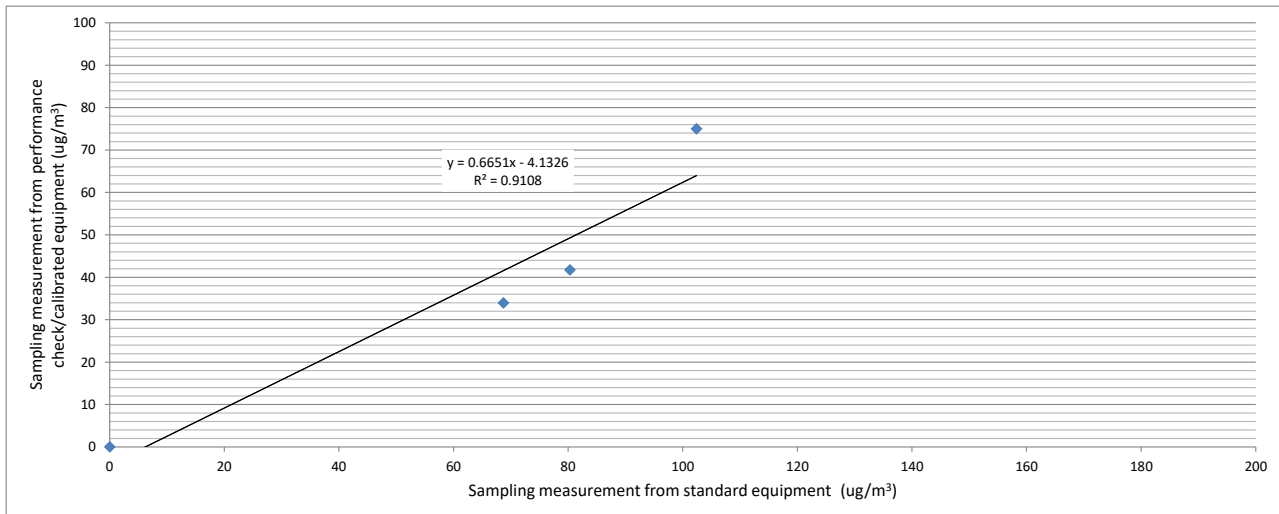
Portable Dust Meter Performance Check Results

Table with 6 columns: Trial no. in 1-hr period, Time, Mean Pressure (hPa), Mean Temp (°C), Concentration in ug/m³ (Standard equipment) (X - Axis), Concentration in ug/m³ (Performance Check / Calibrated equipment) (Y - Axis). Rows include Zero Check and trials 1, 2, 3.

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor) : 1.4000
Correlation Coefficient : 0.9544
Validity of Performance Check / Calibration Record : 22/3/2022



Operator: Alan Ng

Date: 22-Mar-21

Checked by: James Chu

Date: 23-Mar-21



Portable Dust Meter Performance Check Record

Portable Dust Meter

Type : Particulare Monitor
 Manufacturer : Metone AEROCET 831
 Model Number : 831
 Serial Number : Y23153
 Performance Check Date : 30-Sep-21

Standard Equipment

Type : High Volume Sampler
 Manufacturer : TISCH
 Model Number : TE-5170
 Equipment Number : HVS018
 Last Calibration Date : 6-Sep-21

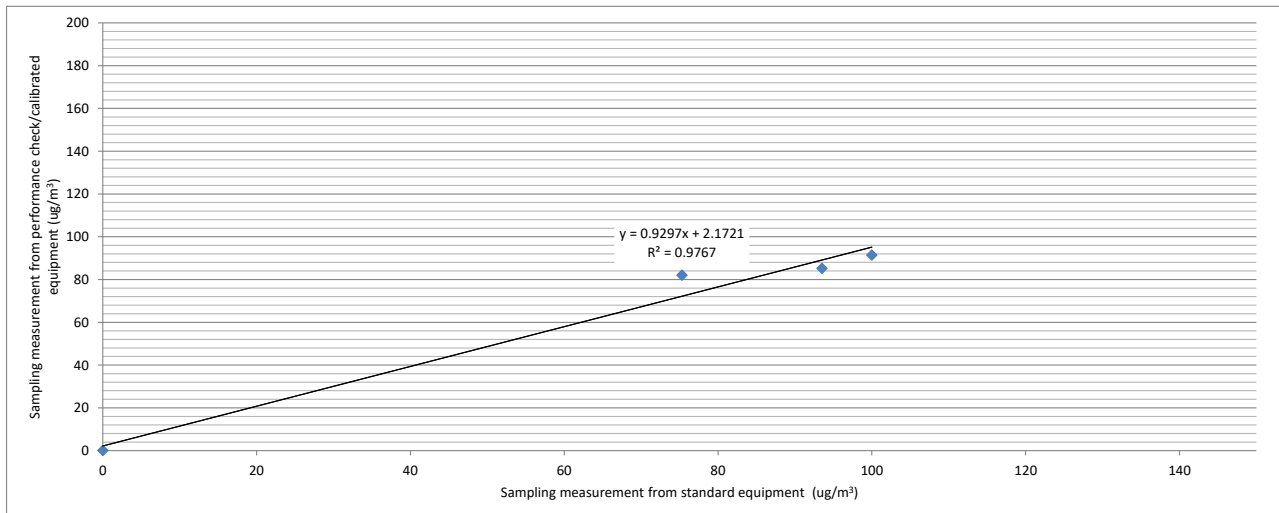
Portable Dust Meter Performance Check Results

Trial no. in 1-hr period	Time	Mean Pressure (hPa)	Mean Temp (°C)	Concentration in ug/m ³ (Standard equipment) (X - Axis)	Concentration in ug/m ³ (Performance Check / Calibrated equipment) (Y - Axis)
Zero Check	29/9/2021 08:00	1008	30	0	0
1	30/9/2021 09:26	1008	30	94	85
2	30/9/2021 10:27	1008	30	100	91
3	30/9/2021 11:28	1008	30	75	82

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor) : 1.1000
 Correlation Coefficient : 0.9883
 Validity of Performance Check / Calibration Record : 30/9/2022



Operator: Henry Lau

Date: 30-Sep-21

Checked by: James Chu

Date: 1-Oct-21

出厂检验报告

产品名称：在线式风速风向仪

产品型号：YGY-FSXY1

被检产品 SN 号：YG 21071630T0924

武汉辰云科技有限公司

2021 年 8 月 9 日

1. 检验类别

一、在线式风速风向仪

检验项目	检测要求	检测结果
外观检查	1. 要求成品外观无破损，各部件完整，无掉漆，无凹陷变形； 2. 采集仪内部无日视可见灰尘杂物油污，布局整洁美观； 3. 芯线，航插完整，保护皮无破损，无油污；	
结构检查	1. 内部电路板固定牢固可靠，无挤压，无晃动； 2. 检查防尘防水措施是否到位，密封是否严密，端子与外壳缝隙不宜过大，以不透光为原则；	

二、风速风向传感器示值校准结果

实际风速 (m/s)	指示风速 (m/s)
0.5	启动
1	0.8
5	4.8
10	9.9
15	14.8
20	20.2
25	25.2
30	29.7

实际风向 (°)	指示风向 (°)
45	44
90	89
135	136
200	202
235	234
275	275
315	313
359	0

2. 备注 NOTE

数据采集仪数据显示风速、风向值正常，通过 RJ45 通讯与电脑连接，
仪器软件数据显示正常。

3. 检验结论：

各项检测和实验结果表明：

_____在线式风速风向仪_____仪器全部测试通过，系统硬件测试符合工厂
(武汉易谷科技有限公司检验标准) 测试标准。符合技术文件的要求，检
验合格，准予出厂。

4. 校准的环境条件：

环境条件： 温度：27.5，相对湿度：61.0%RH，大气压力：1013.3hpa

测试员： 李元华

检验员： 吴肖

测试日期：2021年8月9日





CERTIFICATE OF CALIBRATION

Certificate No.: 21CA0526 02-01 Page 1 of 2

Item tested

Description:	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer:	Larson Davis	PCB	PCB
Type/Model No.:	LxT1	377B02	PRMLxT1L
Serial/Equipment No.:	0004797	163704	042622
Adaptors used:	-	-	-

Item submitted by

Customer Name: Lam Environmental Services Limited.
Address of Customer: -
Request No.: -
Date of receipt: 26-May-2021

Date of test: 27-May-2021

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

Test results

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

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

Actual Measurement data are documented on worksheets.

Approved Signatory:

Feng Junqi

Date: 28-May-2021

Company Chop:



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



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 21CA0526 02-01 Page 2 of 2

1, Electrical Tests

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

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	2.1
	C	Pass	0.8	
	Lin	Pass	1.6	
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	2.2
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	A	Pass	0.3	
	C	Pass	0.3	
Frequency weightings	Lin	Pass	0.3	
	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 ³ at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 ⁴ at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Fung Chi Yip

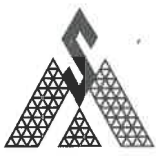
Date: 27-May-2021

Checked by:

Chan Yuk Yiu

Date: 28-May-2021

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



Test Data for Sound Level Meter

Sound level meter type:	LxT1	Serial No.	0004797	Date	27-May-2021
Microphone type:	377B02	Serial No.	163704		
Preamp type:	PRMLxT1L	Serial No.	042622	Report:	21CA0526 02-01

SELF GENERATED NOISE TEST

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

Noise level in A weighting	10.6	dB
Noise level in C weighting	14.8	dB
Noise level in Lin	22.3	dB

LINEARITY TEST

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

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	73.9	73.9	0.7	-0.1	-0.1
69.0	68.9	68.9	0.7	-0.1	-0.1
64.0	63.9	63.9	0.7	-0.1	-0.1
59.0	58.9	58.9	0.7	-0.1	-0.1
54.0	53.9	53.9	0.7	-0.1	-0.1
49.0	48.9	48.9	0.7	-0.1	-0.1
44.0	43.9	43.9	0.7	-0.1	-0.1
39.0	38.9	38.9	0.7	-0.1	-0.1
34.0	33.9	33.9	0.7	-0.1	-0.1
33.0	32.9	32.9	0.7	-0.1	-0.1



Test Data for Sound Level Meter

Page 2 of 5

Sound level meter type: LxT1 Serial No. 0004797 Date 27-May-2021
Microphone type: 377B02 Serial No. 163704
Preamp type: PRMLxT1L Serial No. 042622 Report: 21CA0526 02-01

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

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

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

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

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

FREQUENCY WEIGHTING TEST

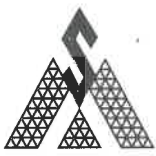
The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
				+	-	
Hz	dB	dB	dB			dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.5	1.5	1.5	-0.1
63.1	94.0	67.8	67.8	1.5	1.5	0.0
125.9	94.0	77.9	77.9	1.0	1.0	0.0
251.2	94.0	85.4	85.3	1.0	1.0	-0.1
501.2	94.0	90.8	90.7	1.0	1.0	-0.1
1995.0	94.0	95.2	95.2	1.0	1.0	0.0
3981.0	94.0	95.0	95.0	1.0	1.0	0.0
7943.0	94.0	92.9	92.9	1.5	3.0	0.0
12590.0	94.0	89.7	89.7	3.0	6.0	0.0

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
				+	-	
Hz	dB	dB	dB			dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	91.0	1.5	1.5	0.0
63.1	94.0	93.2	93.1	1.5	1.5	-0.1
125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0



Test Data for Sound Level Meter

Page 3 of 5

Sound level meter type: LxT1 Serial No. 0004797 Date 27-May-2021
Microphone type: 377B02 Serial No. 163704
Preamp type: PRMLxT1L Serial No. 042622 Report: 21CA0526 02-01

1995.0	94.0	93.8	93.8	1.0	1.0	0.0
3981.0	94.0	93.2	93.2	1.0	1.0	0.0
7943.0	94.0	91.0	91.0	1.5	3.0	0.0
12590.0	94.0	87.8	87.7	3.0	6.0	-0.1

Frequency weighting Lin:

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

TIME WEIGHTING FAST TEST

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

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

TIME WEIGHTING SLOW TEST

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

Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
			+	-	
116.0	111.9	111.8	1.0	1.0	-0.1

PEAK RESPONSE TEST

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

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

Ref. level dB	Response to 10 ms dB	Response to 100 us dB	Tolerance	Deviation dB
			+/- dB	
119.0	119.0	118.7	2.0	-0.3



Test Data for Sound Level Meter

Page 4 of 5

Sound level meter type: LxT1 Serial No. 0004797 Date 27-May-2021
Microphone type: 377B02 Serial No. 163704
Preamp type: PRMLxT1L Serial No. 042622 Report: 21CA0526 02-01

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	118.7	2.0	-0.3

RMS ACCURACY TEST

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

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

Time weighting	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
	dB	dB	indication(dB)	+/- dB	dB
Slow	114.0+6.6	114.0	113.9	0.5	-0.1

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)

Test frequency: 2000 Hz
Amplitude: The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

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

Repeated at 100 Hz

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

TIME AVERAGING TEST

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

Frequency of tone burst: 4000 Hz

Duration of tone burst: 1 ms

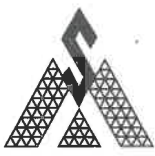
Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	90.0	90.0	89.9	1.0	-0.1	60s integ.
10000	80.0	80.0	79.9	1.0	-0.1	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

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

Test frequency: 4000 Hz

Integration time: 10 sec



Test Data for Sound Level Meter

Page 5 of 5

Sound level meter type: LxT1 Serial No. 0004797 Date 27-May-2021
Microphone type: 377B02 Serial No. 163704
Preamp type: PRMLxT1L Serial No. 042622 Report: 21CA0526 02-01

The integrating sound level meter set to Leq:

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

The integrating sound level meter set to SEL:

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

OVERLOAD INDICATION TEST

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

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

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
113.4	112.4	109.4	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following:
The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range
Test frequency: 4000 Hz
Integration time: 10 sec
Single burst duration: 1 msec

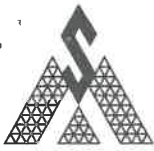
Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
120.2	119.2	79.2	79.2	2.2	0.0

ACOUSTIC TEST

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

Frequency	Expected level	Actual level	Tolerance (dB)		Deviation
			+	-	
Hz	dB	Measured (dB)			dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	78.1	1.0	1.0	0.2
8000	92.9	91.2	1.5	3.0	-1.7

-----END-----



CERTIFICATE OF CALIBRATION

Certificate No.: 21CA1222 02-01

Page: 1 of 2

Item tested

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

Item submitted by

Customer: Lam Environmental Services Ltd.
Address of Customer: -
Request No.: -
Date of receipt: 22-Dec-2021

Date of test: 29-Dec-2021

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

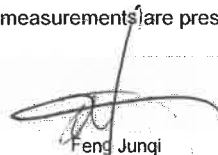
- The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

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

Approved Signatory:


Feng Junqi

Date: 03-Jan-2022

Company Chop:



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



Appendix 4.3

Wind Data



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
1-Feb-22	00:00	2.3	21(NNE)
	01:00	1.5	144(SE)
	02:00	1.5	155(SSE)
	03:00	2.1	121(ESE)
	04:00	1.3	83(E)
	05:00	0.0	69(ENE)
	06:00	1.3	111(ESE)
	07:00	0.9	168(SSE)
	08:00	2.7	160(SSE)
	09:00	1.5	107(ESE)
	10:00	2.3	150(SSE)
	11:00	2.9	128(SE)
	12:00	1.9	53(NE)
	13:00	0.5	236(SW)
	14:00	3.3	112(ESE)
	15:00	1.3	235(SW)
	16:00	2.9	135(SE)
	17:00	2.9	118(ESE)
	18:00	1.9	150(SSE)
	19:00	1.7	117(ESE)
	20:00	0.9	135(SE)
	21:00	1.5	185(S)
	22:00	1.5	145(SE)
23:00	1.3	216(SW)	
2-Feb-22	00:00	1.7	168(SSE)
	01:00	1.3	196(SSW)
	02:00	1.1	165(SSE)
	03:00	1.3	121(ESE)
	04:00	1.1	110(ESE)
	05:00	0.9	167(SSE)
	06:00	0.7	232(SW)
	07:00	1.3	54(NE)
	08:00	0.9	260(W)
	09:00	1.3	196(SSW)
	10:00	2.7	106(ESE)
	11:00	0.9	124(SE)
	12:00	1.1	129(SE)
	13:00	1.5	102(ESE)
	14:00	1.1	131(SE)
	15:00	1.7	114(ESE)
	16:00	1.1	139(SE)
	17:00	0.7	182(S)
	18:00	1.7	181(S)
	19:00	1.1	116(ESE)
	20:00	1.9	67(ENE)
	21:00	1.7	100(E)
	22:00	2.1	129(SE)
23:00	1.3	187(S)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
3-Feb-22	00:00	0.9	28(NNE)
	01:00	4.5	20(NNE)
	02:00	0.9	111(ESE)
	03:00	1.7	95(E)
	04:00	2.7	159(SSE)
	05:00	1.1	120(ESE)
	06:00	2.7	8(N)
	07:00	0.9	202(SSW)
	08:00	0.5	83(E)
	09:00	1.5	64(ENE)
	10:00	2.1	156(SSE)
	11:00	1.7	162(SSE)
	12:00	3.5	118(ESE)
	13:00	2.5	98(E)
	14:00	1.1	147(SSE)
	15:00	1.7	100(E)
	16:00	1.7	38(NE)
	17:00	1.5	177(S)
	18:00	3.1	158(SSE)
	19:00	2.5	107(ESE)
	20:00	1.5	146(SE)
	21:00	0.7	265(W)
	22:00	2.3	99(E)
23:00	2.7	139(SE)	
4-Feb-22	00:00	1.3	141(SE)
	01:00	2.1	145(SE)
	02:00	2.3	121(ESE)
	03:00	2.5	133(SE)
	04:00	4.3	73(ENE)
	05:00	1.7	234(SW)
	06:00	3.9	142(SE)
	07:00	2.5	121(ESE)
	08:00	2.5	178(S)
	09:00	3.3	112(ESE)
	10:00	1.1	245(WSW)
	11:00	2.7	161(SSE)
	12:00	2.5	150(SSE)
	13:00	1.7	148(SSE)
	14:00	3.3	96(E)
	15:00	1.7	99(E)
	16:00	2.1	128(SE)
	17:00	2.7	106(ESE)
	18:00	2.7	133(SE)
	19:00	2.1	171(S)
	20:00	2.7	188(S)
	21:00	1.9	153(SSE)
	22:00	2.3	103(ESE)
23:00	3.7	183(S)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
5-Feb-22	00:00	4.9	143(SE)
	01:00	2.1	142(SE)
	02:00	2.1	121(ESE)
	03:00	2.7	166(SSE)
	04:00	1.7	112(ESE)
	05:00	3.7	157(SSE)
	06:00	1.7	147(SSE)
	07:00	2.1	136(SE)
	08:00	2.1	182(S)
	09:00	1.1	144(SE)
	10:00	3.1	78(ENE)
	11:00	1.1	140(SE)
	12:00	1.3	98(E)
	13:00	1.5	147(SSE)
	14:00	2.9	84(E)
	15:00	1.7	146(SE)
	16:00	1.9	140(SE)
	17:00	3.1	160(SSE)
	18:00	1.3	137(SE)
	19:00	1.1	188(S)
	20:00	1.3	143(SE)
	21:00	2.1	138(SE)
	22:00	0.9	185(S)
23:00	1.7	207(SSW)	
6-Feb-22	00:00	1.7	195(SSW)
	01:00	1.1	222(SW)
	02:00	1.1	218(SW)
	03:00	1.3	120(ESE)
	04:00	1.3	194(SSW)
	05:00	1.9	110(ESE)
	06:00	2.7	164(SSE)
	07:00	1.1	160(SSE)
	08:00	1.1	41(NE)
	09:00	1.9	175(S)
	10:00	0.7	105(ESE)
	11:00	1.1	272(W)
	12:00	1.5	188(S)
	13:00	1.3	118(ESE)
	14:00	1.1	212(SSW)
	15:00	2.1	234(SW)
	16:00	1.9	286(WNW)
	17:00	1.9	207(SSW)
	18:00	1.7	161(SSE)
	19:00	1.3	240(WSW)
	20:00	1.3	126(SE)
	21:00	1.1	258(WSW)
	22:00	1.5	207(SSW)
23:00	3.9	203(SSW)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
7-Feb-22	00:00	1.1	271(W)
	01:00	2.5	214(SW)
	02:00	0.9	271(W)
	03:00	3.3	216(SW)
	04:00	2.3	293(WNW)
	05:00	1.7	169(S)
	06:00	3.3	202(SSW)
	07:00	2.3	220(SW)
	08:00	2.3	254(WSW)
	09:00	2.9	198(SSW)
	10:00	3.5	253(WSW)
	11:00	2.1	176(S)
	12:00	2.5	179(S)
	13:00	2.1	152(SSE)
	14:00	1.3	251(WSW)
	15:00	1.1	175(S)
	16:00	1.5	108(ESE)
	17:00	1.3	75(ENE)
	18:00	1.1	121(ESE)
	19:00	1.3	148(SSE)
	20:00	1.9	144(SE)
	21:00	0.9	166(SSE)
	22:00	1.1	168(SSE)
23:00	2.7	175(S)	
8-Feb-22	00:00	2.5	121(ESE)
	01:00	0.9	195(SSW)
	02:00	3.5	123(ESE)
	03:00	2.1	152(SSE)
	04:00	1.3	58(ENE)
	05:00	1.9	153(SSE)
	06:00	1.5	124(SE)
	07:00	3.9	127(SE)
	08:00	2.3	174(S)
	09:00	2.3	162(SSE)
	10:00	2.9	131(SE)
	11:00	1.9	139(SE)
	12:00	2.3	129(SE)
	13:00	3.1	89(E)
	14:00	1.5	178(S)
	15:00	1.7	132(SE)
	16:00	1.7	125(SE)
	17:00	1.3	133(SE)
	18:00	1.7	133(SE)
	19:00	1.3	175(S)
	20:00	1.1	339(NNW)
	21:00	0.9	109(ESE)
	22:00	1.7	128(SE)
23:00	2.9	71(ENE)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
9-Feb-22	00:00	3.3	152(SSE)
	01:00	2.1	190(S)
	02:00	1.3	175(S)
	03:00	0.7	98(E)
	04:00	1.1	152(SSE)
	05:00	2.1	151(SSE)
	06:00	2.9	156(SSE)
	07:00	1.3	185(S)
	08:00	1.5	197(SSW)
	09:00	0.9	129(SE)
	10:00	1.5	87(E)
	11:00	0.7	110(ESE)
	12:00	1.1	113(ESE)
	13:00	1.3	71(ENE)
	14:00	1.7	108(ESE)
	15:00	1.7	72(ENE)
	16:00	0.9	121(ESE)
	17:00	2.5	102(ESE)
	18:00	0.5	72(ENE)
	19:00	3.3	121(ESE)
20:00	1.5	92(E)	
21:00	0.5	46(NE)	
22:00	3.1	79(E)	
23:00	1.9	135(SE)	

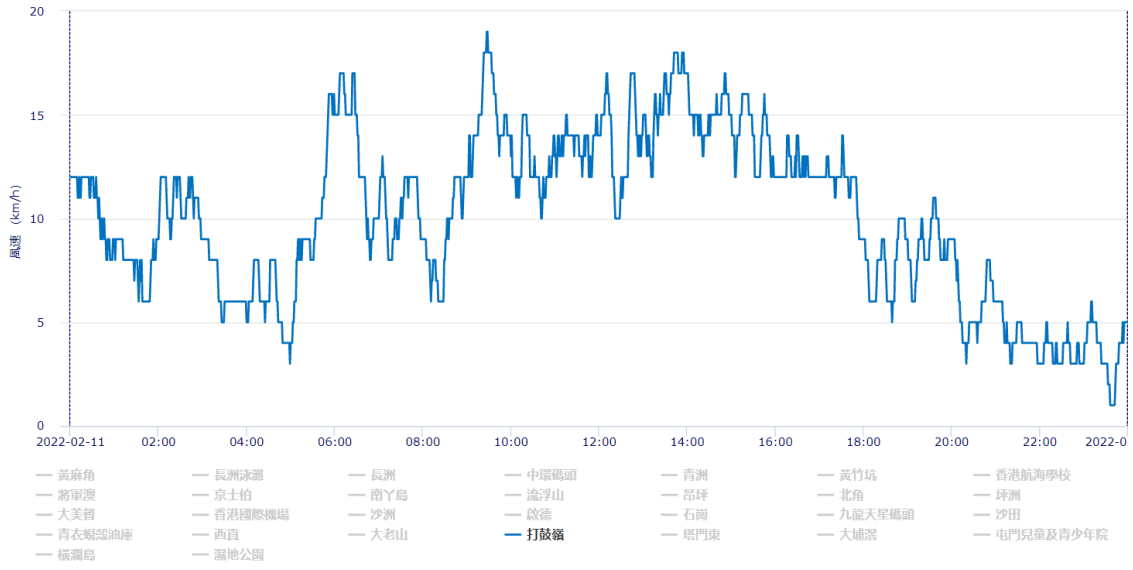
Remarks

1. Data unavailable from 10 Feb 2022 to 28 Feb 2022 since the wind anemometer (Serial no. YGY-FSXY1) is under calibration check. The wind data during this period were reference to the wind data obtained from Hong Kong Observatory, i.e. Ta Kwu Ling Weather Station.

Wind data extraction from the Hong Kong Observatory (HKO)

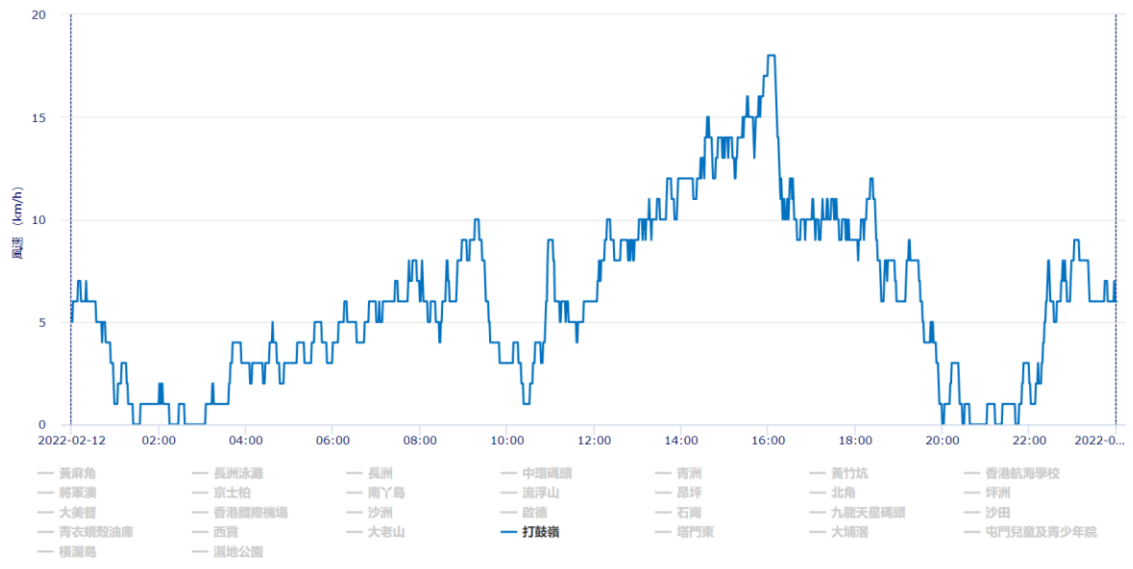
1. Wind Speed extracted from the HKO, Ta Kwu Ling Weather Station

香港所有氣象站 2022年02月11日 十分鐘平均風速變化圖



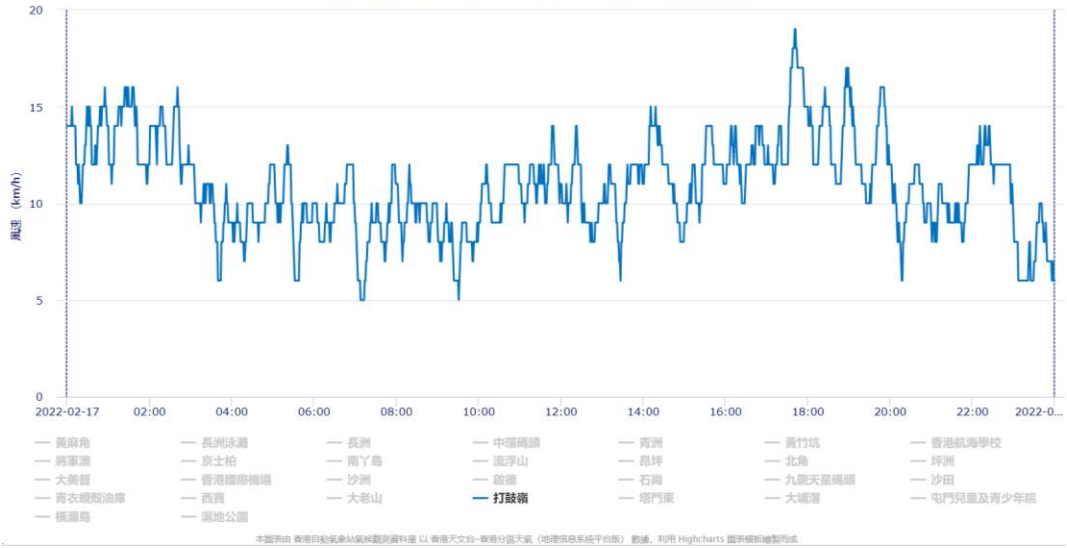
本圖表由 香港自動氣象站網絡數據資料庫 以 香港天文台-香港分區天氣 (地理信息系統平台版) 數據, 利用 Highcharts 圖表模板繪製而成

香港所有氣象站 2022年02月12日 十分鐘平均風速變化圖

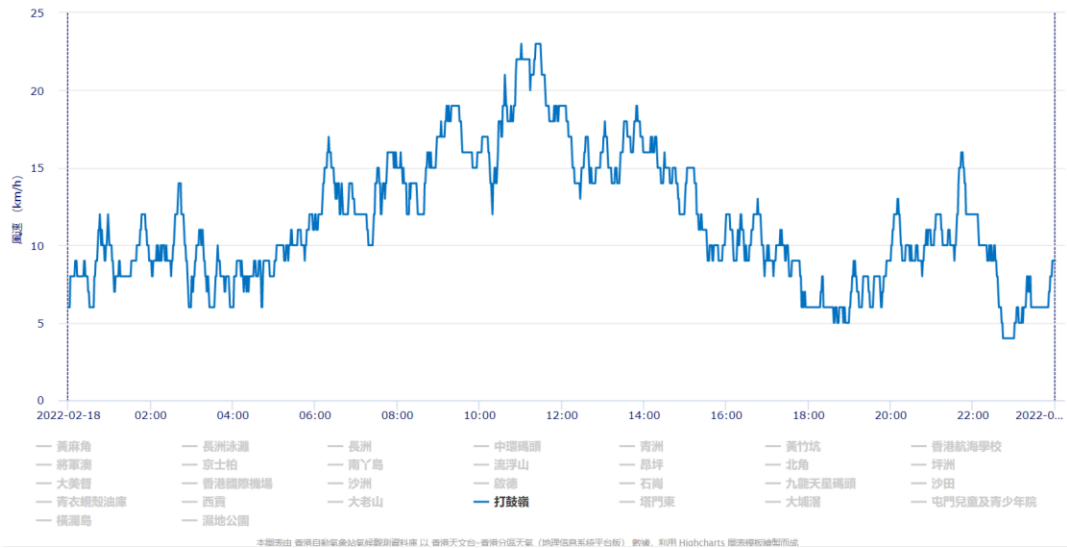


本圖表由 香港自動氣象站網絡數據資料庫 以 香港天文台-香港分區天氣 (地理信息系統平台版) 數據, 利用 Highcharts 圖表模板繪製而成

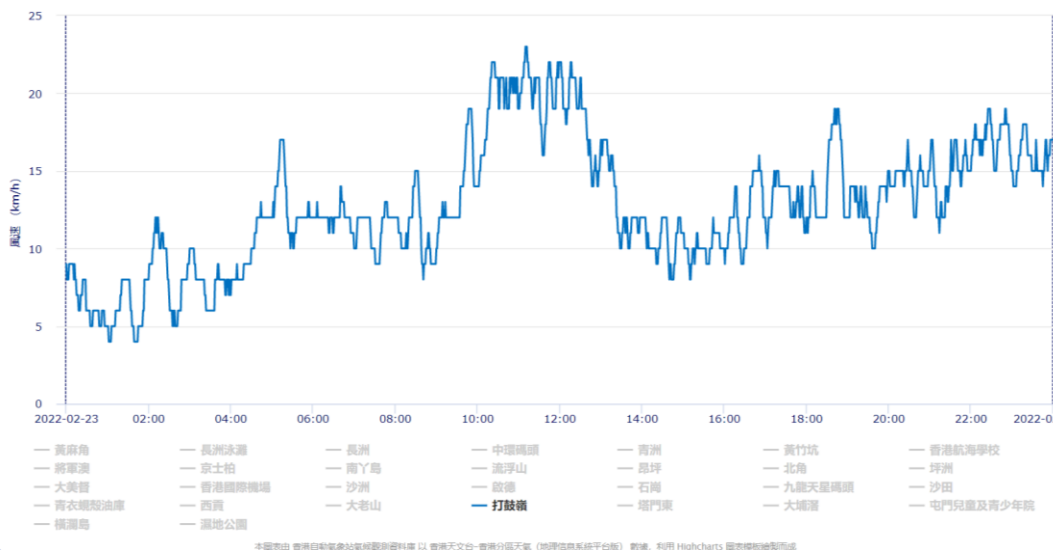
香港所有氣象站 2022年02月17日 十分鐘平均風速變化圖



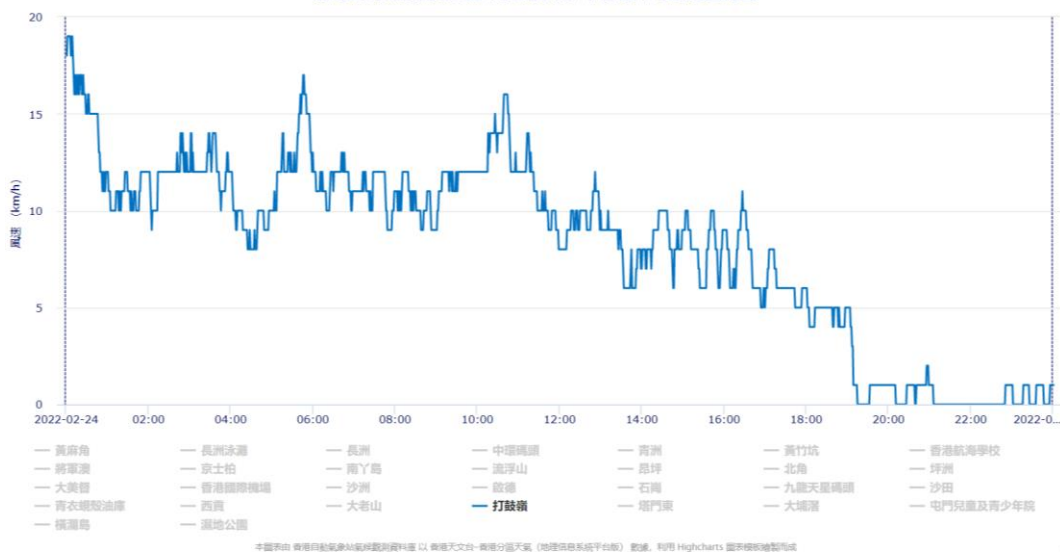
香港所有氣象站 2022年02月18日 十分鐘平均風速變化圖



香港所有氣象站 2022年02月23日 十分鐘平均風速變化圖



香港所有氣象站 2022年02月24日 十分鐘平均風速變化圖



Remarks

1. Data unavailable from 10 Feb 2022 to 28 Feb 2022 since the wind anemometer (Serial no. YGY-FSXY1) is under calibration check.
2. The wind data during this period were reference to the wind data obtained from Hong Kong Observatory, i.e. Ta Kwu Ling weather station.



Appendix 5.1

Monitoring Schedule for Reporting Month and Next Reporting Month



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

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

Remark:

1. Construction works are not expected during the Chinese New Year Holiday week (From 31 Jan 2022 to 5 Feb 2022). Impact monitoring activities (air quality monitoring and construction noise monitoring) will be resumed on 7 Feb 2022

- AQM: Air Quality Monitoring

- NM: Noise Monitoring, the monitoring dates are tentative and subject to change

- Ecological Monitoring dates are tentative and subject to change based on real-time tide.



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

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

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



Appendix 5.2

Noise Monitoring Results and Graphical Presentations



Noise Monitoring Result

Day Time (0700 - 1900hrs on weekday)

Location: NM1 - G/F, Wai Loi Tsuen

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)									
07/02/2022	11:00	Cloudy	0.0	60.6	57.9	52.8	63.4	61	75
18/02/2022	13:55	Fine	0.0	54.0	55.7	50.2	63.4	54	75
24/02/2022	9:21	Cloudy	0.0	56.7	59.0	53.5	63.4	57	75

Location: NM2 - G/F, Fu Tei Au

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)									
07/02/2022	12:00	Cloudy	0.0	59.2	60.4	57.5	58.0	53	75
18/02/2022	11:01	Fine	0.0	63.8	65.0	61.5	58.0	62	75
24/02/2022	11:28	Cloudy	0:00	57.0	58.6	54.3	58.0	57	75

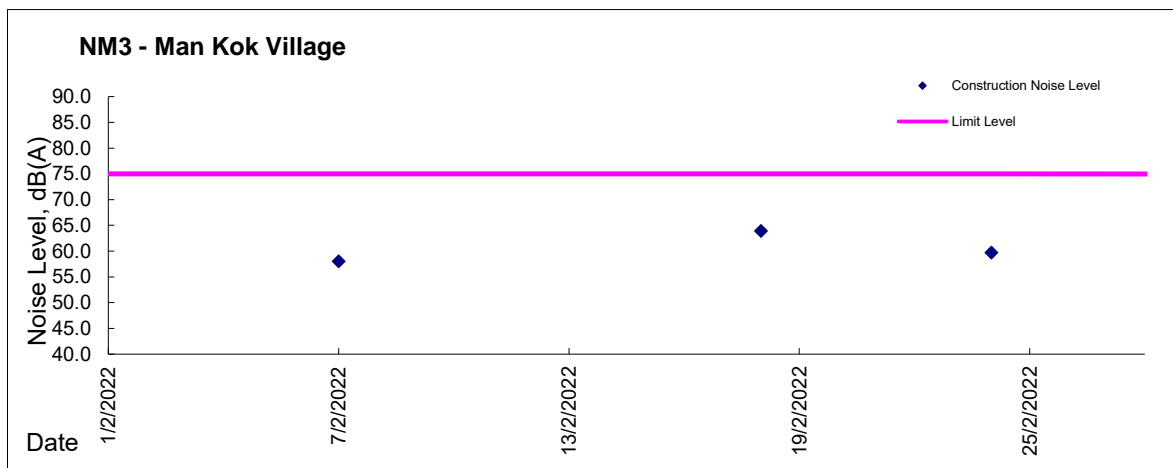
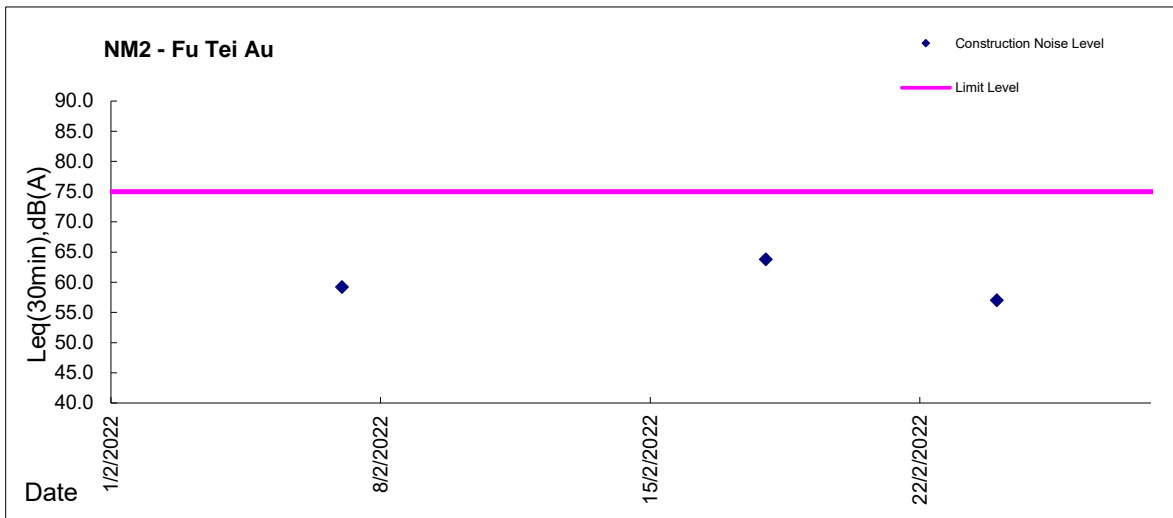
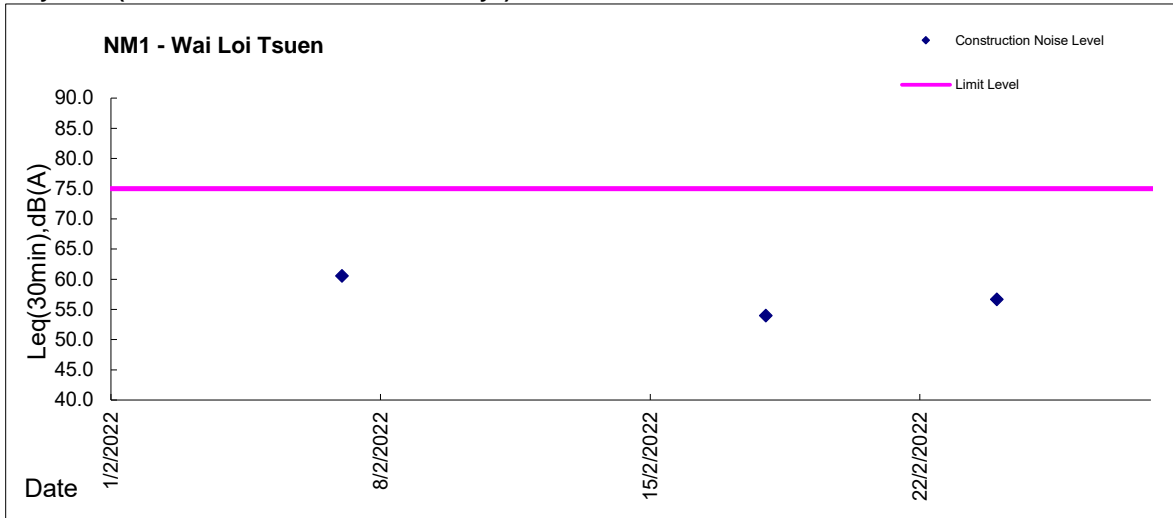
Location: NM3 - G/F, Man kok Village

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)									
07/02/2022	14:00	Cloudy	0.0	58.0	60.7	50.4	63.4	58	75
18/02/2022	10:14	Fine	0.0	63.9	67.4	56.5	63.4	54	75
24/02/2022	10:10	Cloudy	0:00	59.7	61.8	51.2	63.4	60	75

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



Graphic Presentation of Noise Monitoring Result
Day Time (0700 - 1900hrs on normal weekdays)





Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations



Report on 1-hour TSP monitoring at AM1 - Wai Loi Tsuen
Action Level ($\mu\text{g}/\text{m}^3$) - 320
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)	Model No.	Serial No.	
7-Feb-22	Cloudy	9:21	25	AEROCET831	B19128	
7-Feb-22	Cloudy	10:22	22			
7-Feb-22	Cloudy	11:23	27			
12-Feb-22	Fine	9:01	36			
12-Feb-22	Fine	10:02	28			
12-Feb-22	Fine	11:03	21			
18-Feb-22	Fine	10:04	18			
18-Feb-22	Fine	11:05	16			
18-Feb-22	Fine	12:06	18			
24-Feb-22	Cloudy	9:15	55			
24-Feb-22	Cloudy	10:16	57			
24-Feb-22	Cloudy	11:17	53			
						Y23153



Report on 1-hour TSP monitoring at AM2 - Fu Tei Au
Action Level ($\mu\text{g}/\text{m}^3$) - 322
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)	Model No.	Serial No.	
7-Feb-22	Cloudy	9:18	14	AEROCET831	B19129	
7-Feb-22	Cloudy	10:19	15			
7-Feb-22	Cloudy	11:20	15			
12-Feb-22	Fine	8:30	61			
12-Feb-22	Fine	9:31	52			
12-Feb-22	Fine	10:32	38			
18-Feb-22	Fine	9:23	9			
18-Feb-22	Fine	10:24	10			
18-Feb-22	Fine	11:25	11			
24-Feb-22	Cloudy	8:36	3			
24-Feb-22	Cloudy	9:37	4			
24-Feb-22	Cloudy	10:38	4			
						R14332



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

Date	Sampling Time	Weather Condition	Pressure, hPa		Temp., °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m ³ /min			Total Volume, m ³	TSP Level, ug/m ³	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial, Qsi	Final, Qsf		Average						
07-Feb-22	8:00	Cloudy	1016.8	1018.6	16.4	17.1	AM1a 24hr 009804	2.7445	2.7955	17653.93	17677.93	24.00	1.26	1.26	1.26	1809	28	G3101	0401-1105
11-Feb-22	8:00	Fine	1017.1	1016	18.6	18.7	AM1a 24hr 008794	2.8057	2.8544	17677.93	17701.93	24.00	1.25	1.28	1.27	1823	27		
17-Feb-22	8:00	Fine	1014.9	1015.4	15.6	15.9	AM1a 24hr 008795	2.8105	2.8736	17701.93	17725.93	24.00	1.20	1.23	1.22	1753	36		
23-Feb-22	8:00	Cloudy	1024.3	1026.2	12.1	12.6	AM1a 24hr 008799	2.7973	2.8465	17725.93	17749.93	24.00	1.27	1.27	1.27	1826	27		

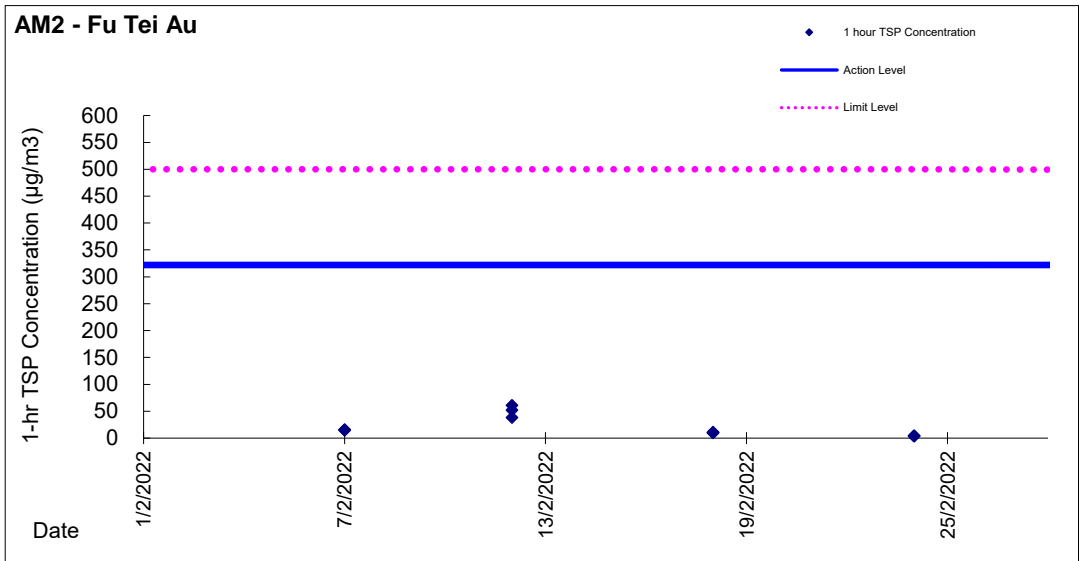
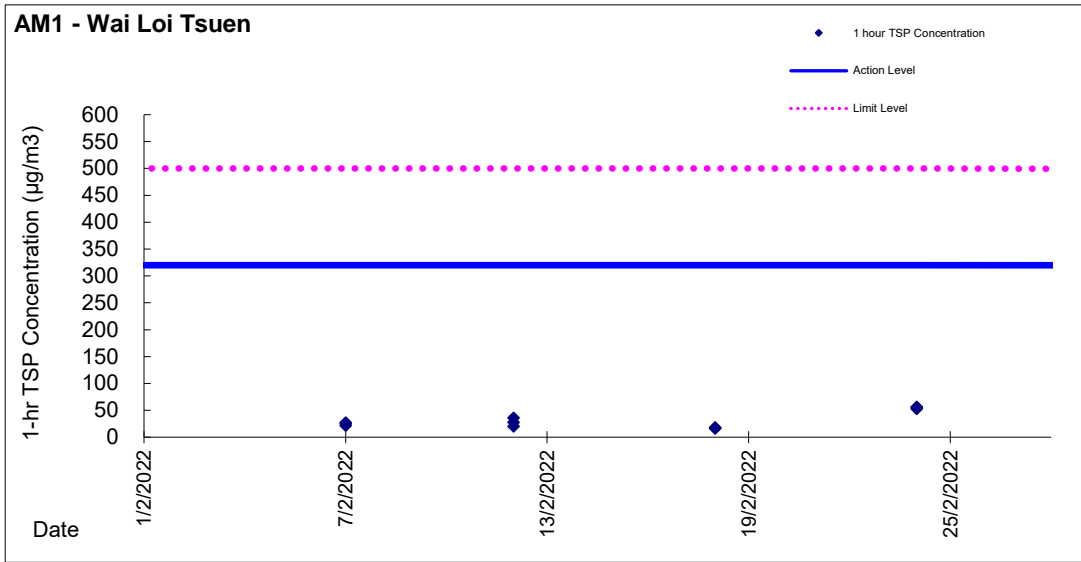


Location: AM2a - Site Boundary of the Shek Wu Hui STW (North)
 Impact Monitoring Result on 24-hour TSP monitoring

Date	Sampling Time	Weather Condition	Pressure, hPa		Temp., °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m ³ /min			Total Volume, m ³	TSP Level, ug/m ³	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial, Qsi	Final, Qsf		Average						
07-Feb-22	8:00	Cloudy	1016.8	1018.6	16.4	17.1	AM2a 24hr 010177	2.6698	2.7694	17653.93	17677.93	24.00	1.28	1.31	1.29	1864	53	G3101	1096-2305
11-Feb-22	8:00	Fine	1017.1	1016	18.6	18.7	AM2a 24hr 008768	2.8146	2.8925	17677.93	17701.93	24.00	1.25	1.25	1.25	1799	43		
17-Feb-22	8:00	Fine	1014.9	1015.4	15.6	15.9	AM2a 24hr 008796	2.8061	2.8860	17701.93	17725.93	24.00	1.20	1.20	1.20	1726	46		
23-Feb-22	8:00	Cloudy	1024.3	1026.2	12.1	12.6	AM2a 24hr 008798	2.8118	2.8974	17725.93	17749.93	24.00	1.21	1.21	1.21	1742	49		

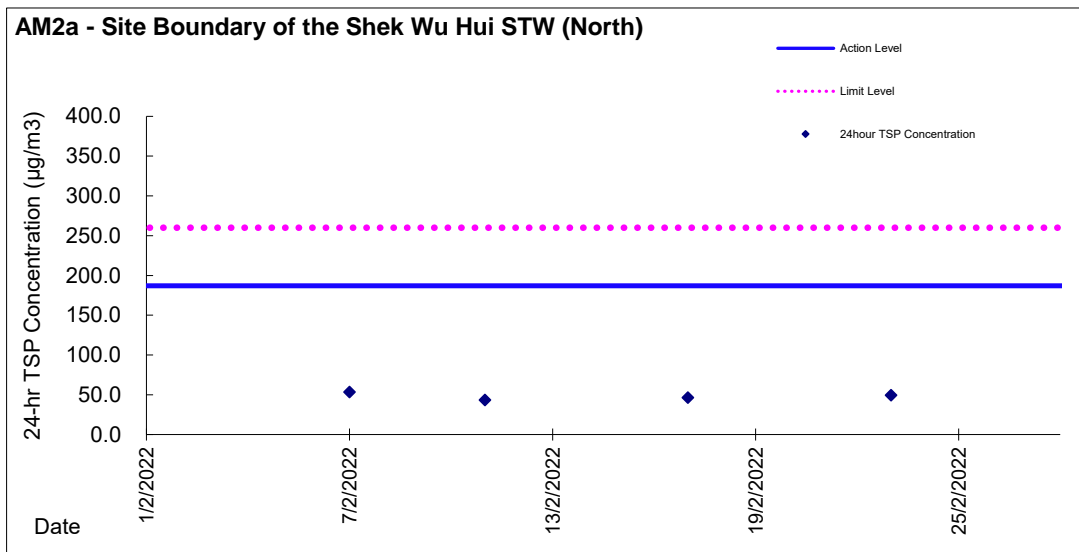
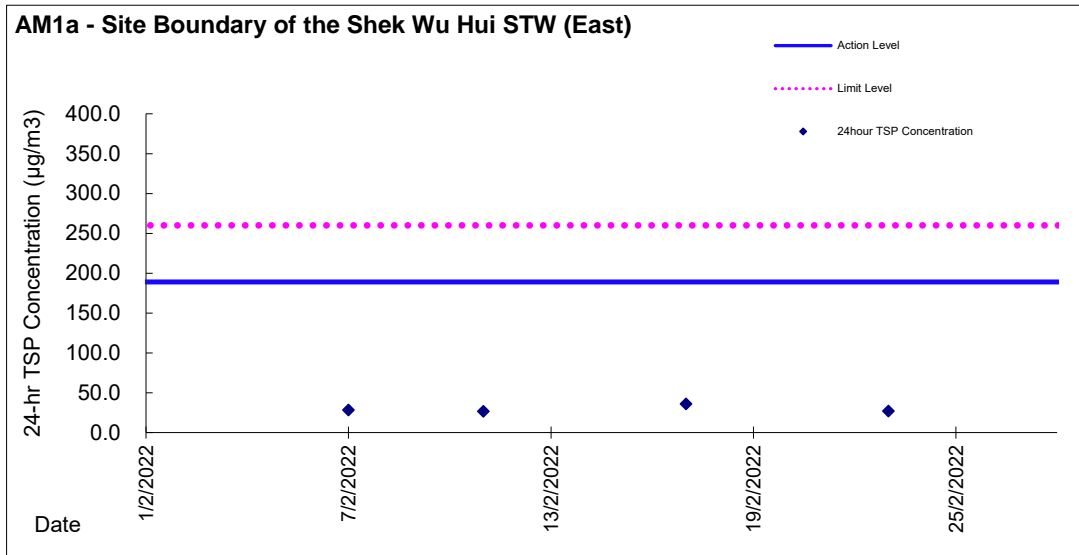


Graphic Presentation of TSP Result





Graphic Presentation of TSP Result





Appendix 5.4

Details of Ecological Monitoring Results in the Reporting Month

5.4. ECOLOGICAL MONITORING RESULTS

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

Table 1 Total Bird Species and Abundance in the Reporting Month

	Number of Species	Abundance
All Avifauna	49	1204
Waterbirds	17	304

Table 2 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
<i>Egretta garzetta</i>	Little Egret	小白鷺	63
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	47
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	20
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	39
<i>Ardea alba</i>	Great Egret	大白鷺	39
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	38
		Total	246

Analysis

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

Table 3 T-test Result for All Waterbirds in the Reporting Month

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
Abundance	Monthly	5.788	✓	✓
	Seasonal	3.136	✓	✓

Remarks:

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

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

Table 4 T-test Result for Representative Waterbirds in the Reporting Month

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value	Confidence Level (Critical Value)		Overall
	Monthly	95% (-2.353)	99% (-4.541)	Seasonal	95% (-2.353)	99% (-4.541)	
Little Egret	1.724	✓	✓	0.345	✓	✓	✓
Grey Heron	-1.482	✓	✓	-0.465	✓	✓	✓
Chinese Pond Heron	-2.121	✓	✓	-2.828	✘	✓	✓
Great Cormorant	0.309	✓	✓	1.133	✓	✓	✓
Great Egret	1.656	✓	✓	1.656	✓	✓	✓
Eastern Cattle Egret	3.326	✓	✓	2.439	✓	✓	✓

Remarks:

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

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

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

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

5.4.4. Site observation in the reporting month shows that construction activities are similar to previous months.

5.4.5. Nesting and breeding behaviours were observed during the monitoring in reporting month. There was at least one nest (Eurasian Magpie). Its location is far from the project site. There was no significant impact on the nest in the month reported.

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

Observations

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

- Flying
- Foraging
- Soaring
- Resting
- Breeding

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

Table 5 Observations during Ecological Monitoring in the Reporting Month

Location(s)	Observations	
	Project Related	Non-project Related
T1 (PC1, PC2)	N/A	Human Activities such as Fishing Construction activities
T2 (PC3, PC4)	Construction activities such as Sheet-piling, generator & welding works Scaffolding,	Human Activities such as Fishing, Landscape Planting

Location(s)	Observations	
	Project Related	Non-project Related
	sedimentation Tank, Excavation and crane	Construction activities such as Sheet-piling, generator & welding works Scaffolding, sedimentation Tank, Excavation and crane
PC5	Construction activities Excavation and crane	N/A
T3 (PC6, PC7)	Construction activities such as Sheet-piling	Human Activities such as Fishing Construction activities such as Excavation Sheet-piling, generator & welding works Scaffolding



Appendix 5.5

Ecological Monitoring Results and Analysis

Summary data of the Ecological Monitoring

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	X	20	++
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	X	38	+++++
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	X	47	+++
<i>Ardea alba</i>	Great Egret	大白鷺	X	39	+++++
<i>Egretta garzetta</i>	Little Egret	小白鷺	X	63	++++
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	X	39	++++
<i>Spilornis cheela</i>	Crested Serpent Eagle	蛇鷲		0	+
<i>Milvus migrans</i>	Black Kite	黑鳶	X	7	+
<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	白胸苦惡鳥	X	1	N/A
<i>Himantopus himantopus</i>	Black-winged Stilt	黑翅長腳鷺	X	9	+
<i>Tringa stagnatilis</i>	Marsh Sandpiper	澤鷺	X	0	+
<i>Tringa nebularia</i>	Common Greenshank	青腳鷺	X	2	+
<i>Actitis hypoleucos</i>	Common Sandpiper	磯鷺	X	14	++
<i>Spilopelia chinensis</i>	Spotted Dove	珠頸斑鳩		57	+++++
<i>Centropus sinensis</i>	Greater Coucal	褐翅鴉鷂	X	3	+
<i>Eudynamis scolopaceus</i>	Asian Koel	噪鷓		8	+
<i>Apus pacificus</i>	Pacific Swift	白腰雨燕		52	+++++
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	白胸翡翠	X	6	+
<i>Alcedo atthis</i>	Common Kingfisher	普通翠鳥	X	4	+
<i>Ceryle rudis</i>	Pied Kingfisher	斑魚狗	X	9	++
<i>Dicrurus macrocercus</i>	Black Drongo	黑卷尾		2	+
<i>Urocissa erythroryncha</i>	Red-billed Blue Magpie	紅嘴藍鵲		0	+
<i>Pica pica</i>	Eurasian Magpie	喜鵲		43	++++
<i>Corvus torquatus</i>	Collared Crow	白頸鴉	X	3	+
<i>Corvus macrorhynchos</i>	Large-billed Crow	大嘴烏鴉		0	+
<i>Parus cinereus</i>	Cinereous Tit	蒼背山雀		25	+++
<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	紅耳鶉		95	+++++
<i>Pycnonotus sinensis</i>	Chinese Bulbul	白頭鶉		85	+++++
<i>Hirundo rustica</i>	Barn Swallow	家燕		12	+++

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
<i>Phylloscopus fuscatus</i>	Dusky Warbler	褐柳鶯		6	++
<i>Phylloscopus proregulus</i>	Pallas's Leaf Warbler	黃腰柳鶯		1	+
<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	黃眉柳鶯		41	++++
<i>Prinia flaviventris</i>	Yellow-bellied Prinia	黃腹鷓鴣		4	+
<i>Prinia inornata</i>	Plain Prinia	純色鷓鴣		22	+++
<i>Orthotomus sutorius</i>	Common Tailorbird	長尾縫葉鶯		54	+++++
<i>Garrulax perspicillatus</i>	Masked Laughingthrush	黑臉噪鵲		6	++
<i>Zosterops japonicus</i>	Japanese White-eye	暗綠繡眼鳥		97	+++++
<i>Acridotheres cristatellus</i>	Crested Myna	八哥		119	+++++
<i>Gracupica nigricollis</i>	Black-collared Starling	黑領椋鳥		68	+++++
<i>Copsychus saularis</i>	Oriental Magpie Robin	鶻鴂		3	+
<i>Myophonus caeruleus</i>	Blue Whistling Thrush	紫嘯鶇		0	+
<i>Phoenicurus aureus</i>	Daurian Redstart	北紅尾鶇		1	+
<i>Saxicola stejnegeri</i>	Stejneger's Stonechat	黑喉石(即鳥)		3	+
<i>Passer montanus</i>	Eurasian Tree Sparrow	樹麻雀		26	++
<i>Motacilla tschutschensis</i>	Eastern Yellow Wagtail	東黃鶺鴒		1	N/A
<i>Motacilla cinerea</i>	Grey Wagtail	灰鶺鴒		0	+
<i>Motacilla alba</i>	White Wagtail	白鶺鴒		58	+++++
<i>Anthus godlewskii</i>	Olive-backed Pipit	樹鶺鴒		11	++
<i>Eophona migratoria</i>	Chinese Grosbeak	黑尾蠟嘴雀		0	+

Remarks:

X: Waterbird ;

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

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

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

Waterbird Ecological Monitoring Result

Total Bird Abundance from Point Count						
Survey Information				Total Bird Abundance from Point Count		
No.	Date	Time	Tide Level	Individuals Recorded	Total	Species Recorded
1	4/2/2022	14:00	H	122	239	27
		9:00	L	117		28
2	11/2/2022	14:00	H	153	333	25
		9:00	L	180		27
3	18/2/2022	11:00	H	129	289	24
		15:00	L	160		26
4	25/2/2022	14:30	H	149	343	26
		9:00	L	194		27

Remarks: H: High Tide; L: Low Tide

Total Waterbird Abundance from Point Count					
Survey Information				Total Waterbird Abundance from Point Count	
No.	Date	Time	Tide Level	Individuals Recorded	Total
1	4/2/2022	14:00	H	36	65
		9:00	L	29	
2	11/2/2022	14:00	H	41	74
		9:00	L	33	
3	18/2/2022	11:00	H	34	79
		15:00	L	45	
4	25/2/2022	14:30	H	40	86
		9:00	L	46	
				Overall Total	304
				Average	76

Remarks: H: High Tide; L: Low Tide

T-Test Analysis for All Waterbirds

Baseline Data

Monthly Average Abundance (Feb)	50.44
Seasonal Average Abundance (Winter season)	62.15

T-Test

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

H₀: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H₁: The data collected does not falls within the normal distribution when compared to the baseline monitoring data.

If t-test value is **smaller** than the critical value, then rejects H₀.

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

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

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

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
Abundance	Monthly	5.788	✓	✓
	Seasonal	3.136	✓	✓

Remarks:

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

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

Abundance of Representative Waterbirds from Point Count										
Representative Species			Recorded Abundance					Baseline Data		
Species Name	Common Name	Chinese Name	4/2/2022	11/2/2022	18/2/2022	25/2/2022	Total	Average	Average (Jan)	Avg (Winter)
<i>Egretta garzetta</i>	Little Egret	小白鷺	14	15	12	22	63	16	12	15
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	11	6	11	19	47	12	16	13
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	5	9	3	3	20	5	8	9
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	7	8	17	7	39	10	9	7
<i>Ardea alba</i>	Great Egret	大白鷺	2	9	13	15	39	10	5	5
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	6	9	16	7	38	10	2	4

T-test Analysis for Representative Waterbirds from Point Count

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

H₀: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H₁: The data collected does not falls within the normal distribution when compared to the baseline monitoring data.

If t-test value is **smaller** than the critical value, then rejects H₀.

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

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

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

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value	Confidence Level (Critical Value)		Overall
	Monthly	95%	99%	Seasonal	95%	99%	
Little Egret	1.724	✓	✓	0.345	✓	✓	✓
Grey Heron	-1.482	✓	✓	-0.465	✓	✓	✓
Chinese Pond Heron	-2.121	✓	✓	-2.828	✗	✓	✓
Great Cormorant	0.309	✓	✓	1.133	✓	✓	✓
Great Egret	1.656	✓	✓	1.656	✓	✓	✓
Eastern Cattle Egret	3.326	✓	✓	2.439	✓	✓	✓

Remarks:

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

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

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



Appendix 5.6

Photo Record of Ecological Monitoring

Conditions of Rivers



Sheung Yue River – Survey Point 6 (Taken on 4 Feb 2022)



Sheung Yue River (Taken on 11 Feb 2022)



Shek Sheung River (Taken on 18 Feb 2022)



Shek Sheung River (Taken on 28 Feb 2022)

Human Activities & Site Conditions

		
<p>Construction Activities (Ng Tung River) (Project-related, taken on 4 Feb 2022)</p>	<p>Construction Activities (Shek Sheung River) (Project-related, taken on 25 Feb 2022)</p>	<p>Construction Activities (Shek Sheung River) (Project-related, taken on 11 Feb 2022)</p>
		
<p>Construction Activities (Sheung Yue River) (Project-related, taken on 25 Feb 2022)</p>	<p>Human Activities (Ng Tung River) (Non-project-related, taken on 4 Feb 2022)</p>	<p>Human Activities (Ng Tung River) (Non-project-related, taken on 11 Feb 2022)</p>



Construction Activities (Ng Tung River)
(Non-Project-related, taken on 7 Feb 2022)



Construction Activities (Sheung Yue River)
(Non-project-related, taken on 11 Feb 2022)



Human Activities (Sheung Yue River)
(Non-project-related, taken on 18 Feb 2022)



Construction Activities (Sheung Yue River)
(Non-project-related, taken on 25 Feb 2022)



Construction Activities (Sheung Yue River)
(Non-project-related, taken on 11 Feb 2022)



Human Activities (Sheung Yue River)
(Non-project-related, taken on 18 Feb 2022)



Construction Activities (Ng Tung River)

(Non-project-related, taken on 25 Feb 2022)

Waterbird Species



Great Cormorant



Grey Heron



Great Egret & Great Cormorant



Pied Kingfisher



Black-winged Stilt



Appendix 5.7

Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table for 2022

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	1.104	0.000	0.000	0.000	1.104	0.094	0.000	0.000	0.000	0.000	0.202
Feb	0.549	0.000	0.000	0.000	0.549	0.134	0.000	0.000	0.000	0.000	0.068
Mar											
Apr											
May											
Jun											
Sub-total	1.652	0.000	0.000	0.000	1.652	0.229	0.000	0.000	0.000	0.000	0.270
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	1.652	0.000	0.000	0.000	1.652	0.229	0.000	0.000	0.000	0.000	0.270

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

Monthly Summary Waste Flow Table for 2022

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	4.980	0.000	0.000	0.813	4.167	0.000	8.30	0.000	0.004	0.000	0.012
Feb	2.809	0.000	0.000	0.048	2.761	0.000	0.00	0.000	0.000	0.000	0.010
Mar											
Apr											
May											
Jun											
Sub-total	7.789	0.000	0.000	0.861	6.928	0.000	8.30	0.000	0.004	0.000	0.021
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	7.789	0.000	0.000	0.861	6.928	0.000	8.30	0.000	0.004	0.000	0.021

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

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

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

Contract No.: DE/2018/03

Monthly Summary Waste Flow Table for 2022 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	176.71 T	0	0	0	176.71 T	0	0	0.177	0.008	0	2.7T
Feb	83.58T	0	0	0	83.58T	0	0	0.132	0.003	0	0
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	260.29 T	0	0	0	260.29 T	0	0	0.309	0.011	0	2.7T



Appendix 6.1

Event and Action Plans



Event and Action Plan

Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level exceeded	<ol style="list-style-type: none"> 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; 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level exceeded	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Event and Action Plan for Construction Dust Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level				
Action level being exceeded by one sampling	<ol style="list-style-type: none"> Identify source, investigate the causes of complaint and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method. 	<ol style="list-style-type: none"> Notify the Contractor. 	<ol style="list-style-type: none"> Rectify any unacceptable practices. Amend working methods agreed with the ER as appropriate.
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> Identify sources. Inform the IEC and ER. Advise the ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings. Increase monitoring frequency to daily. Discuss with the IEC, ER and Contractor on remedial action required. If exceedance continues, arrange meeting with the IEC, Contractor and ER. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> Submit proposals for remedial actions to IEC within three working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
Limit Level				
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> Identify source, investigate the causes of exceedance and propose remedial measures; Inform Contractor, IEC, ER, and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and 	<ol style="list-style-type: none"> Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within three working days of notification; Implement the agreed proposals; Amend proposal if appropriate.



Event	Action			
	ET	IEC	ER	Contractor
	ER informed of the results.			
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> 1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Appendix 6.2

Summary of Notification of Exceedance



Summary for Notification of Exceedance

Reporting Month: February 2022

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

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

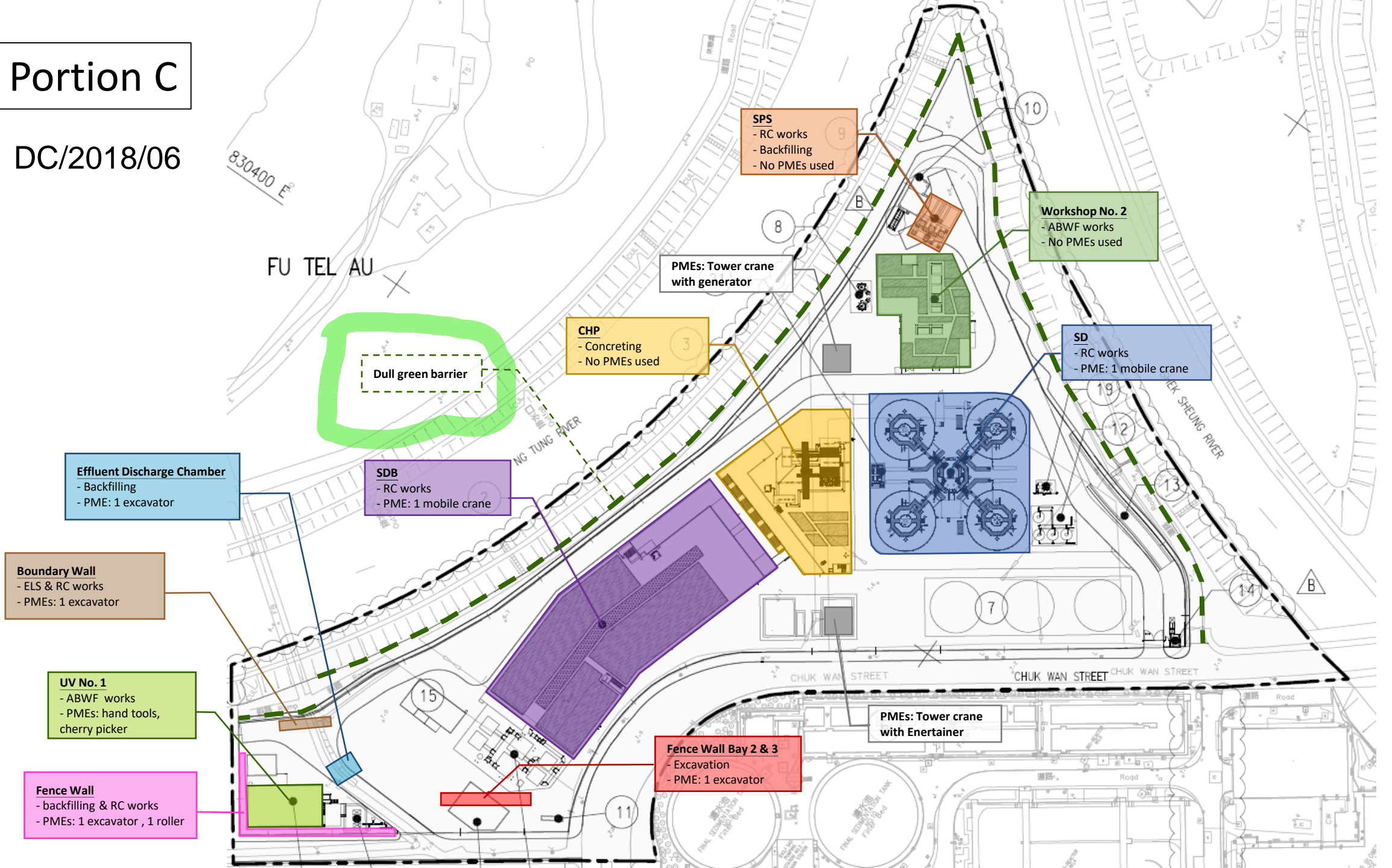


Appendix 7.1

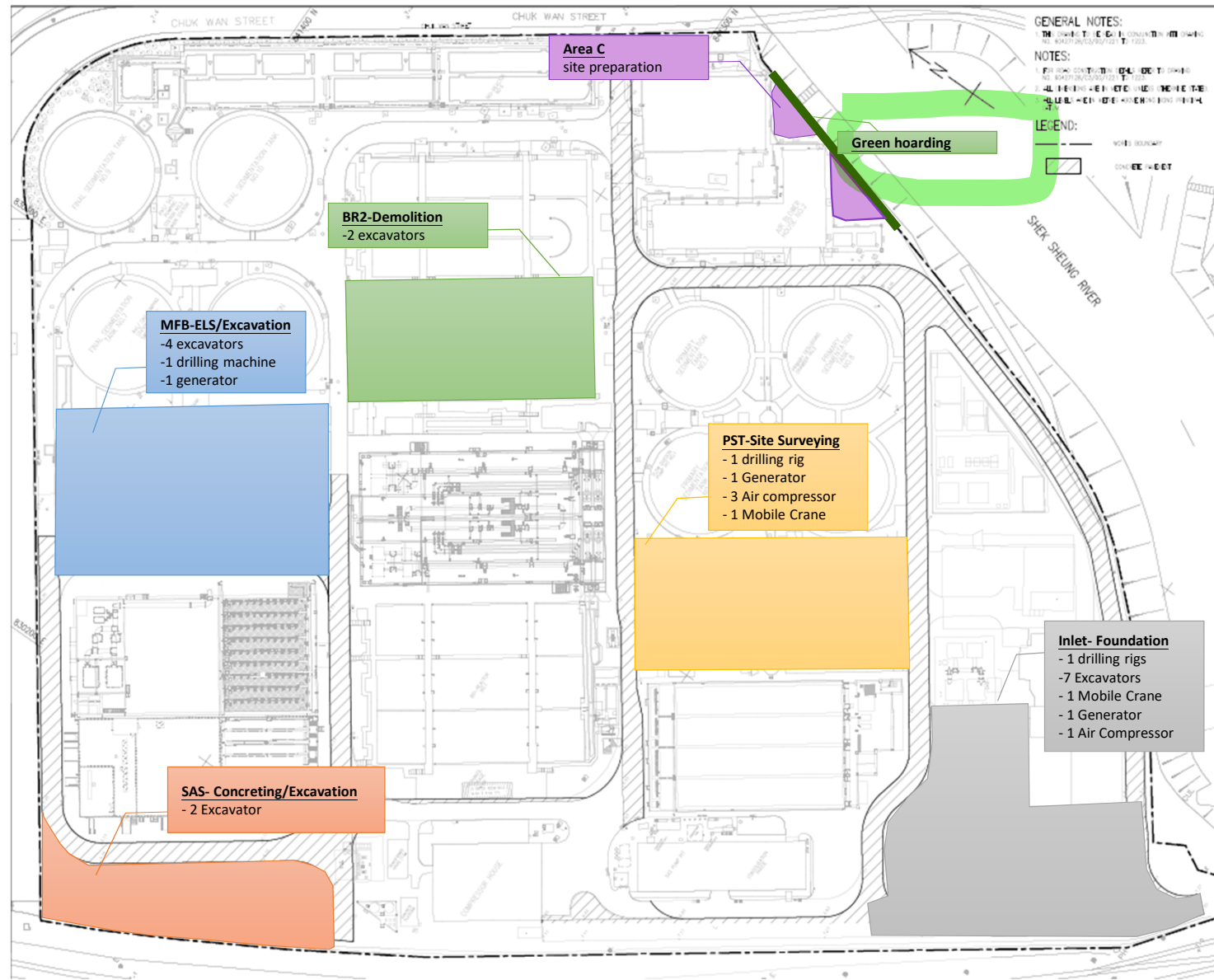
Details and Conditions of Site Barrier

Portion C

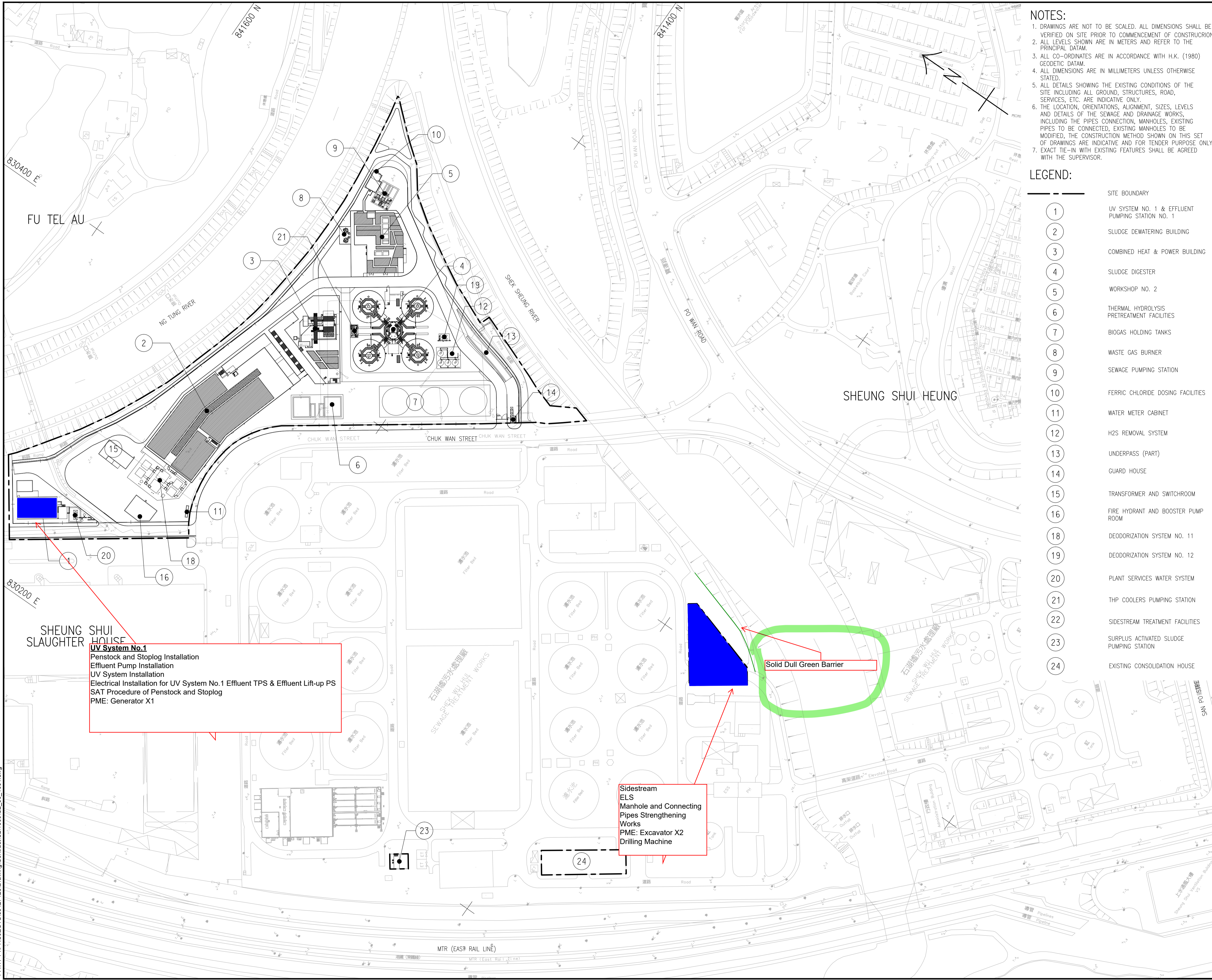
DC/2018/06



Portion B



Plot File by: GuoX 26/03/2019
 PATH: P:\PROJECTS\0427128\Drawing\Contract\C21000\C2_00_1001.dwg
 Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM
 ISO A1 594mm x 841mm



UV System No.1
 Penstock and Stoplog Installation
 Effluent Pump Installation
 UV System Installation
 Electrical Installation for UV System No.1 Effluent TPS & Effluent Lift-up PS
 SAT Procedure for Penstock and Stoplog
 PME: Generator X1

Sidestream
 ELS
 Manhole and Connecting
 Pipes Strengthening
 Works
 PME: Excavator X2
 Drilling Machine

Solid Dull Green Barrier

NOTES:

1. DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL LEVELS SHOWN ARE IN METERS AND REFER TO THE PRINCIPAL DATUM.
3. ALL CO-ORDINATES ARE IN ACCORDANCE WITH H.K. (1980) GEODETIC DATUM.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
5. ALL DETAILS SHOWING THE EXISTING CONDITIONS OF THE SITE INCLUDING ALL GROUND, STRUCTURES, ROAD, SERVICES, ETC. ARE INDICATIVE ONLY.
6. THE LOCATION, ORIENTATIONS, ALIGNMENT, SIZES, LEVELS AND DETAILS OF THE SEWAGE AND DRAINAGE WORKS, INCLUDING THE PIPES CONNECTION, MANHOLES, EXISTING PIPES TO BE CONNECTED, EXISTING MANHOLES TO BE MODIFIED, THE CONSTRUCTION METHOD SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE AND FOR TENDER PURPOSE ONLY.
7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

LEGEND:

- ① SITE BOUNDARY
- ② UV SYSTEM NO. 1 & EFFLUENT PUMPING STATION NO. 1
- ③ SLUDGE DEWATERING BUILDING
- ④ COMBINED HEAT & POWER BUILDING
- ⑤ SLUDGE DIGESTER
- ⑥ WORKSHOP NO. 2
- ⑦ THERMAL HYDROLYSIS PRETREATMENT FACILITIES
- ⑧ BIOGAS HOLDING TANKS
- ⑨ WASTE GAS BURNER
- ⑩ SEWAGE PUMPING STATION
- ⑪ FERRIC CHLORIDE DOSING FACILITIES
- ⑫ WATER METER CABINET
- ⑬ H2S REMOVAL SYSTEM
- ⑭ UNDERPASS (PART)
- ⑮ GUARD HOUSE
- ⑯ TRANSFORMER AND SWITCHROOM
- ⑰ FIRE HYDRANT AND BOOSTER PUMP ROOM
- ⑱ DEODORIZATION SYSTEM NO. 11
- ⑲ DEODORIZATION SYSTEM NO. 12
- ⑳ PLANT SERVICES WATER SYSTEM
- ㉑ THP COOLERS PUMPING STATION
- ㉒ SIDESTREAM TREATMENT FACILITIES
- ㉓ SURPLUS ACTIVATED SLUDGE PUMPING STATION
- ㉔ EXISTING CONSOLIDATION HOUSE



PROJECT
 SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT

 渠務署
 Drainage Services Department

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程師有限公司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	MAR. 19	TENDER DRAWING	TLST

SCALE
 A1 1:1000
DIMENSION UNIT
 METRES

KEY PLAN
 索引圖

PROJECT NO.
 60427128
CONTRACT NO.
 DE/2018/03

SHEET TITLE
 SHEK WU HUI EFFLUENT POLISHING PLANT GENERAL LAYOUT PLAN

SHEET NUMBER
 60427128/C2/00/1001

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Details & conditions of site barrier

DC/2018/06



The site barrier fence next to Ng Tung River is completed.



DC/2018/07



The site barrier fence next to Shek Sheung River (Area C) is completed



DE/2018/03



The site barrier fence next to Shek Sheung River (Sidestream) is completed



Appendix 7.2

Dust and Noise Mitigation Measures

Implementation of dust and noise mitigation measures

Dust suppression measures

1. Water spraying method is adopted for minimizing dust generation.



Noise mitigation measures

1. The breaking tips are wrapped with acoustic canvas



2. Acoustic canvas was also adopted for construction activities and machines.



3. The metal chains of piling rigs are wrapped to minimize the construction noise generated from piling activities.





Appendix 8.1

Complaint Log



Appendix 8.1 Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
1	18 March 2020	EPD	Expansion Site of SWHSTP (Portion C)	Water contamination	<p>Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby</p> <p>The investigation and mitigation measures included</p> <ul style="list-style-type: none">- Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River- Arranged to repair the wastewater treatment system- Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity- Clean the slurry sediment released from the outlet regularly by suction trucks- Avoid damage of underground drains and pipes caused by existing construction works- Avoid illegal discharge from the Site into foul drains and manholes	Closed
2	19 February 2021	EPD	SWHEPP	Odour nuisance	<p>Significant odour nuisance was suspected to be emitted from the construction activities of SWHEPP</p> <p>The investigation and mitigation measures included</p> <ul style="list-style-type: none">- Ensured only PMEs with valid NRMM label were used on-site- Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart- Used ULSD for diesel-powered equipment- Provided water spraying and water sprinklers system for haul road access and demolition works- Used battery powered solution to provide power to the tower crane- Provided cover for all rubbish bins on-site- Separated general refuse from construction waste	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
3	9 August 2021	EPD	SWHEPP	Air Quality	<p>Air nuisance was suspected to be originated from the construction activities of SWHEPP</p> <p>The investigation and mitigation measures included</p> <ul style="list-style-type: none">- Ensured only PMEs with valid NRMM label were used on-site- Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart- Used ULSD for diesel-powered equipment- Used battery powered solution to provide power to the tower crane- Carried out plant maintenance in a timely manner	Closed



Appendix 9.1

Construction Programme of Individual Contracts

ID	Activity ID	Key Date	Task Name	Incliment Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
1	CD-1000		Contract Dates			1585 days	Mon 18/11/19	Thu 27/3/25	1651.5 days	Mon 18/11/19	Fri 13/6/25	Mon 18/11/19	NA			88.5 days		0%
2	CD-1010		Starting Date			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		8,9,13FS+290 days,14FS+311 days	0 days		100%
3	CAD-1000		Access Dates (cal. day)			310 days	Mon 18/11/19	Wed 23/9/20	289 days	Mon 18/11/19	Wed 2/9/20	Mon 18/11/19	Wed 2/9/20			0 days		100%
4	CAD-1010		Portion B-1 (Access Road AR3)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20		201	0 days		100%
5	CAD-1020		Portion B-1A (Area for the works for Sidestream Treatment Facilities by Others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20			0 days		100%
6	CAD-1030		Portion B-2 (Inlet Works No.1)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20		295,306	0 days		100%
7	CAD-1040		Portion B-2A (Area for the pipe-jacking works by others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20			0 days		100%
8	CAD-1050		Portion B-3 (Primary Sedimentation Tanks No. 1-4)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		335	0 days		100%
9	CAD-1060		Portion B-4 (Bioreactor No. 2A & 2B)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		353	0 days		100%
10	CAD-1070		Portion B-5 (Membrane Facilities Building No.2)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Tue 17/3/20	Tue 17/3/20	Tue 17/3/20	Tue 17/3/20		402,419,425	0 days		100%
11	CAD-1080		Portion B-6 (SAS Pumping Station)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		434	0 days		100%
12	CAD-1090		Portion B-7 (Ancillary structures)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		461	0 days		100%
13	CAD-1100		Portion B-7A (Alteration works for existing Power House)			0 days	Wed 2/9/20	Wed 2/9/20	0 days	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20		539FS-1 day,29FS+179 days	0 days		100%
14	CAD-1110		Portion B-8 (Alteration for existing Membrane Facilities Building No.1)			0 days	Wed 2/9/20	Wed 2/9/20	0 days	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20		541FS-1 day	0 days		100%
15	CAD-1020		Portion B-8A (Alteration of air supply main for existing Air Blower House No.2)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		532	0 days		100%
16	CAD-1130		Portion B-9 (remainder works in Zone B)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		542,556	0 days		100%
17	CAD-1140		Portion B-9A (Area for the pipe-jacking works by others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19			0 days		100%
18	CAD-1150		Portion B-9B (Area for underground pipework modification and connection works by others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19			0 days		100%
19	CAD-1160		Portion B-9C (Area for the works for pipeworks)			0 days	Wed 22/7/20	Wed 22/7/20	0 days	Fri 24/7/20	Fri 24/7/20	Fri 24/7/20	Fri 24/7/20		2F5+151 days	0 days		100%
20	CKD-1000		Key Dates (cal. day)			1440 days	Tue 19/11/19	Sat 28/10/23	1144 days	Fri 27/11/20	Mon 15/1/24	Fri 27/11/20	NA			618 days		99%
21	CKD-1010		KD1A completion of AR3 in Portion B-1 (375 days after starting date)			300 days	Tue 19/11/19	Sun 13/9/20	0 days	Fri 27/11/20	Fri 27/11/20	Fri 27/11/20	Fri 27/11/20		2F5+376 days	0 days		100%
22	CKD-1020		KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (438.5 days after starting date)			360 days	Tue 19/11/19	Thu 12/11/20	1 day	Sat 30/1/21	Sat 30/1/21	Sat 30/1/21	Sat 30/1/21		2F5+439.5 days	0 days		100%
23	CKD-1030		KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (1068.5 days after starting date)			990 days	Tue 19/11/19	Thu 4/8/22	0 days	Sat 22/10/22	Sat 22/10/22	NA	NA	2F5+1069.5 days	67	1056.5 days		0%
24	CKD-1040		KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3 (1190days after starting date)			1190 days	Tue 19/11/19	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	2F5+1191 days	70	947 days		0%
25	CKD-1050		KD1E completion of civil and structural works of Bioreactor in Portion B-4 (1140days after starting date)			1140 days	Tue 19/11/19	Sun 1/1/23	0 days	Sun 1/1/23	Sun 1/1/23	NA	NA	2F5+1141 days		997 days		0%
26	CKD-1060		KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (855.5 days after starting date)			800 days	Tue 19/11/19	Wed 26/1/22	0 days	Wed 23/3/22	Wed 23/3/22	NA	NA	2F5+856.5 days	74	1273.5 days		0%
27	CKD-1070		KD1G completion of civil and structural works of MFB in Portion B-5 (1002.5 days after starting date)			950 days	Tue 19/11/19	Sat 25/6/22	0 days	Wed 17/8/22	Wed 17/8/22	NA	NA	2F5+1003.5 days	78	1126.5 days		0%
28	CKD-1080		KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6 (703.5 days after starting date)			630 days	Tue 19/11/19	Mon 9/8/21	0 days	Fri 22/10/21	Fri 22/10/21	NA	NA	2F5+704.5 days	82	1425.5 days		0%
29	CKD-1090		KD1I completion alteration works for existing Power House in Portion B-7A (179days after access date of B-7A)			150 days	Fri 4/9/20	Sun 31/1/21	1 day	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	13FS+179 days		0 days		100%
30	CKD-1100		KD1J completion of auxiliary facilities in Portion B-7 (811.5 days after starting date)			800 days	Tue 19/11/19	Wed 26/1/22	0 days	Mon 7/2/22	Mon 7/2/22	NA	NA	2F5+812.5 days	86	1317.5 days		0%
31	CKD-1110		KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9 (577.5 days after starting date)			495 days	Tue 19/11/19	Sat 27/3/21	0 days	Fri 18/6/21	Fri 18/6/21	Fri 18/6/21	Fri 18/6/21	2F5+578.5 days	93	0 days		100%
32	CKD-1120		KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (494 days after starting date)			420 days	Tue 19/11/19	Mon 11/1/21	0 days	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	2F5+495 days		0 days		100%
33	CKD-1130		KD3A completion of all utilities and road works (1519 days after starting date)			1440 days	Tue 19/11/19	Sat 28/10/23	0 days	Mon 15/1/24	Mon 15/1/24	NA	NA	2F5+1520 days	99	606 days		0%
34	CCD-1000		Completion Date (cal. Day)			1956 days	Tue 19/11/19	Thu 27/3/25	1056 days	Sat 23/7/22	Fri 13/6/25	Sat 23/7/22	NA			50.5 days		0%
35	CCD-1010		Section 1 of the Works (1,543.5 after starting date)			1460 days	Fri 17/11/23	Fri 9/2/24	0 days	Fri 9/2/24	Fri 9/2/24	NA	NA	2F5+1544.5 days	105	0 days		0%
36	CCD-1020		Section 2 of the Works (977.5 after starting date)			900 days	Tue 19/11/19	Fri 6/5/22	0 days	Sat 23/7/22	Sat 23/7/22	NA	NA	2F5+978.5 days	111	0 days		0%
37	CCD-1030		Section 3 of the Works (1,687.5 after starting date)			1590 days	Tue 19/11/19	Wed 12/6/24	0 days	Wed 12/6/24	Wed 12/6/24	Wed 12/6/24	Wed 12/6/24	39FS+1 day,117,38FS+1 day		-77.5 days		99%
38	CCD-1040		Defects Liability Period			365 days	Wed 27/3/24	Thu 27/3/25	365 days	Thu 13/6/24	Fri 13/6/25	NA	NA	37FS+1 day		0 days		0%
39	CCD-1050		Landscape Establishment Works			365 days	Wed 27/3/24	Thu 27/3/25	365 days	Thu 13/6/24	Fri 13/6/25	NA	NA	37FS+1 day		103.5 days		0%
40	PD-1000		Planned Completion			1686 days	Fri 14/8/20	Thu 27/3/25	1820 days	Wed 30/9/20	Wed 24/9/25	Wed 30/9/20	NA			0 days		3%
41	PCD-1000		Planned Completion - Key Dates (cal. day)			1170 days	Fri 14/8/20	Sat 28/10/23	1321 days	Wed 30/9/20	Mon 13/5/24	Wed 30/9/20	NA			-119 days		99%
42	PKD-1010	KD1A	KD1A completion of AR3 in Portion B-1 (300days after starting date)			0 days	Sat 12/9/20	Sat 12/9/20	0 days	Wed 30/9/20	Wed 30/9/20	Wed 30/9/20	Wed 30/9/20	210FF		0 days		100%
43	PCD-1020	KD1B	KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (360days after starting date)			0 days	Fri 14/8/20	Fri 14/8/20	0 days	Fri 22/1/21	Fri 22/1/21	Fri 22/1/21	Fri 22/1/21	286FF,291FF,273FF		0 days		100%
44	PCD-1030	KD1C	KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (990days after starting date)			0 days	Thu 4/8/22	Thu 4/8/22	0 days	Thu 1/12/22	Thu 1/12/22	NA	NA	330FF,322FF,248FF,294FF,212FF,250FF		-40 days		0%
45	PCD-1040	KD1D	KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3 (1190days after starting date)			0 days	Mon 20/2/23	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	349FF,348FF,351FF,333FF		0 days		0%
46	PCD-1050	KD1E	KD1E completion of civil and structural works of Bioreactor in Portion B-4 (1,140days after starting date)			0 days	Sat 31/12/22	Sat 31/12/22	0 days	Sat 22/4/23	Sat 22/4/23	NA	NA	391FF,397FF,393FF,396FF,392FF		-111 days		0%
47	PCD-1060	KD1F	KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (800days after starting date)			0 days	Tue 25/1/22	Tue 25/1/22	0 days	Thu 4/8/22	Thu 4/8/22	NA	NA	430FF		-135 days		0%
48	PCD-1070	KD1G	KD1G completion of civil and structural works of MFB in Portion B-5 (950days after starting date)			0 days	Sat 25/6/22	Sat 25/6/22	0 days	Wed 28/12/22	Wed 28/12/22	NA	NA	431FF		-133 days		0%
49	PCD-1080	KD1H	KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6 (630days after starting date)			0 days	Mon 9/8/21	Mon 9/8/21	0 days	Sat 19/3/22	Sat 19/3/22	NA	NA	459FF,458FF		-148 days		0%
50	PCD-1090	KD1I	KD1I completion alteration works for existing Power House in Portion B-7A (150days after access date of B-7A)			0 days	Sat 30/1/21	Sat 30/1/21	1 day	Fri 29/1/21	Fri 29/1/21	Fri 29/1/21	Fri 29/1/21	539FF		0 days		100%
51	PCD-1100	KD1J	KD1J completion of auxiliary facilities in Portion B-7 (800days after starting date)			0 days	Wed 26/1/22	Wed 26/1/22	0 days	Mon 13/6/22	Mon 13/6/22	NA	NA	496FF,495FF,521FF,520FF,513FF,512FF		-126 days		0%
52	PCD-1110	KD2A	KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9 (495days after starting date)			0 days	Sat 27/3/21	Sat 27/3/21	0 days	Wed 4/8/21	Wed 4/8/21	NA	NA	545FF,543FF		-47 days		0%
53	PCD-1120	KD2B	KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (420days after starting date)			0 days	Thu 3/9/20	Thu 3/9/20	1 day	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	532FF,536FF,537FF,538FF		0 days		100%
54	PCD-1130	KD3A	KD3A completion of all utilities and road works (1440days after starting date)			0 days	Sat 28/10/23	Sat 28/10/23	0 days	Mon 13/5/24	Mon 13/5/24	NA	NA	555FF,557FF		-119 days		0%
55	PCD-1000		Planned Completion Date (cal. Day)			1056 days	Fri 6/5/22	Thu 27/3/25	1054 days	Sat 5/11/22	Wed 24/9/25	NA	NA			-106 days		0%
56	PCD-1010	SW1	Section 1 of the Works (1,460 after starting date)															

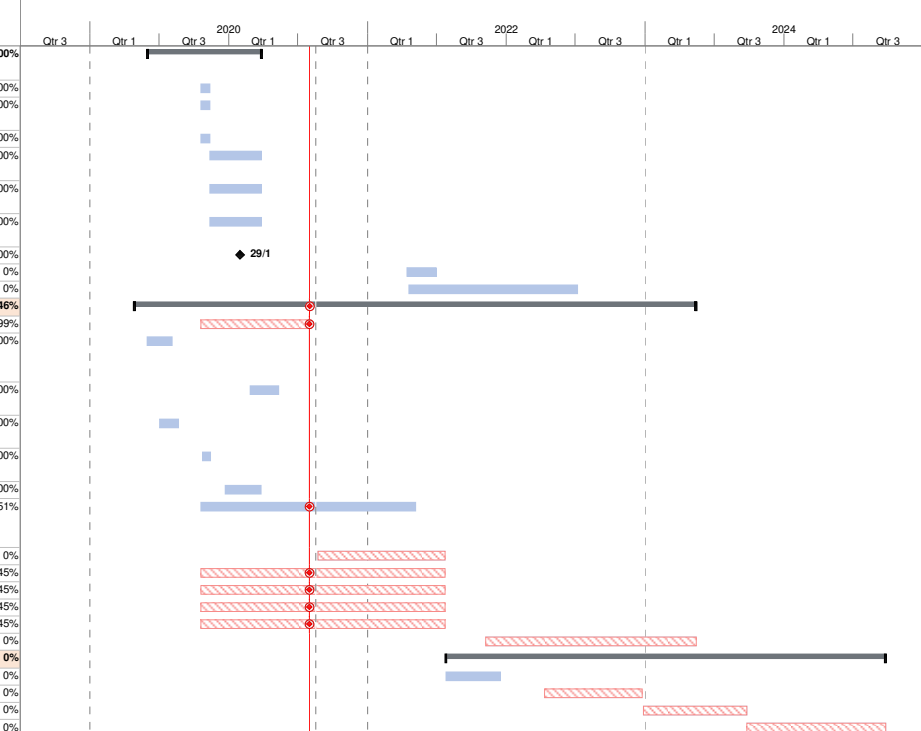
ID	Activity ID	Key Date	Task Name	Incliment Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
170	SUBA-1130b		Prepare and submit Dewatering proposal for basement construction for Primary Sedimentation tanks No.1-4			0 days	NA	NA	24 days	Fri 1/7/22	Mon 25/7/22	NA	NA	NA346SF		1158 days		0%
171	SUBA-1130c		Prepare and submit Dewatering proposal for basement construction for Bioreactor No. 2A&2B			0 days	NA	NA	24 days	Sun 15/5/22	Wed 8/6/22	NA	NA	NA389SF		1205 days		0%
172	SUBA-1140		Prepare and submit Pre-construction condition survey of existing structures/ services			24 days	Wed 5/2/20	Fri 28/2/20	0 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20	198		0 days		100%
173	SUBA-1150		Prepare and submit Settlement and movement monitoring proposal of existing structures/ services			24 days	Wed 5/2/20	Fri 28/2/20	110 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20	198FS+120 days		0 days		100%
174	SUBA-1160		Prepare and submit design of structure elements of the temporary activated carbon deodorization unit			60 days	Fri 17/1/20	Mon 16/3/20	60 days	Mon 18/11/19	Mon 16/3/20	Mon 18/11/19	Mon 16/3/20	2FS+60 days		0 days		100%
175	SUBA-1170		Prepare of RSE and structural design for alternation and additional (A&A) works at Membrane Facilities Building No.1			180 days	Mon 18/10/21	Fri 15/4/22	180 days	Mon 18/10/21	Fri 15/4/22	NA	NA		541	332 days		0%
176	SUBA-1180		Prepare of RSE and structural design for alternation and additional (A&A) works at Main Power House			44 days	Wed 15/7/20	Thu 3/9/20	60 days	Mon 6/7/20	Thu 3/9/20	Mon 6/7/20	Thu 3/9/20		539	0 days		100%
177	SUBE-1000		Environmental Aspect Submissions			45 days	Mon 18/11/19	Wed 1/1/20	81 days	Mon 18/11/19	Thu 6/2/20	Mon 18/11/19	Thu 6/2/20			0 days		100%
178	SUBE-1010		Prepare, submit & approve Site Management Plan for Trip Tricket System			45 days	Mon 18/11/19	Wed 1/1/20	66 days	Mon 18/11/19	Wed 22/1/20	Mon 18/11/19	Wed 22/1/20			0 days		100%
179	SUBE-1020		Prepare, submit & approve Waste Management Plan			45 days	Mon 18/11/19	Wed 1/1/20	81 days	Mon 18/11/19	Thu 6/2/20	Mon 18/11/19	Thu 6/2/20			0 days		100%
180	SUBE-1030		Prepare, submit & approve Environmental Management Plan			45 days	Mon 18/11/19	Wed 1/1/20	66 days	Mon 18/11/19	Wed 22/1/20	Mon 18/11/19	Wed 22/1/20			0 days		100%
181	SUBP-1000		Procurement			731 days	Mon 18/11/19	Wed 17/11/21	648 days	Mon 18/11/19	Thu 26/8/21	Mon 18/11/19	NA			278 days		94%
182	SUBP-1010		Prepare and submit the Procurement Procedure			12 days	Mon 18/11/19	Fri 29/11/19	2 days	Mon 18/11/19	Tue 19/11/19	Mon 18/11/19	Tue 19/11/19	183		0 days		100%
183	SUBP-1020		PM Review & Accept Procurement Procedure			12 days	Sat 30/11/19	Wed 11/12/19	21 days	Tue 19/11/19	Tue 10/12/19	Tue 19/11/19	Tue 10/12/19	182	184,185,186,187,188,189,190,191	0 days		100%
184	SUBP-1030		Prepare, submit and approve the pipe works material			25 days	Thu 12/12/19	Sun 5/1/20	34 days	Thu 6/2/20	Tue 10/3/20	Thu 6/2/20	Tue 10/3/20	183	212,532,551,552,554,553,549,557,0	0 days		100%
185	SUBP-1040		Prepare, submit and approve the water proofing material			25 days	Thu 12/12/19	Sun 5/1/20	25 days	Thu 26/8/21	NA	NA	183		329,325	278 days		0%
186	SUBP-1050		Prepare, submit and approve the concrete mix material			48 days	Thu 12/12/19	Tue 28/1/20	90 days	Mon 3/2/20	Sat 2/5/20	Mon 3/2/20	Sat 2/5/20	183	391,426	0 days		100%
187	SUBP-1060		Prepare, submit and approve the rebar material			48 days	Thu 12/12/19	Tue 28/1/20	49 days	Thu 10/7/20	Sat 23/5/20	Fri 10/7/20	Sat 23/5/20	183	391,426	0 days		100%
188	SUBP-1070		Prepare, submit and approve the metal works material			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Tue 1/9/20	Sun 18/10/20	Tue 1/9/20	Sun 18/10/20	183	391,426	0 days		100%
189	SUBP-1080		Prepare, submit and approve the ABWF works material			48 days	Sat 12/12/20	Tue 28/1/20	48 days	Mon 1/3/21	Sat 17/4/21	Sat 17/4/21	Sat 17/4/21	183	332,350,398,460,488,504,514,522,0	0 days		100%
190	SUBP-1090		Prepare, submit and approve the protective lining to concrete			0 days	NA	NA	48 days	Tue 1/9/20	Sun 18/10/20	Tue 1/9/20	Sun 18/10/20	183	391,426	0 days		100%
191	SUBP-1100		Prepare, submit and approve the multi-part covers			0 days	NA	NA	21 days	Tue 5/5/20	Mon 25/5/20	Tue 5/5/20	Mon 25/5/20	183		0 days		100%
192	SUBB-1000		BIM			1205 days	Thu 6/2/20	Wed 28/2/24	1562 days	Mon 18/11/19	Fri 28/2/25	Mon 18/11/19	NA			178 days		27%
193	SUBB-1010		Prepare, submit and approve the proposal of details of Common data environment (CDE)			48 days	Thu 6/2/20	Wed 1/4/20	37 days	Mon 18/11/19	Wed 1/4/20	Mon 18/11/19	Wed 1/4/20	129,130	194	0 days		100%
194			Prepare and submit BIM submission			1484 days	Thu 6/2/20	Wed 28/2/24	1451 days	Thu 2/4/20	Fri 28/2/25	Thu 2/4/20	NA	193		178 days		25%
195	C-1000		Construction Works (Working day)			1957 days	Mon 18/11/19	Thu 27/3/25	2138 days	Mon 18/11/19	Wed 24/9/25	Mon 18/11/19	NA			0 days		51%
196	CPW-1000		Preliminary Works			109 days	Mon 18/11/19	Thu 5/3/20	121 days	Mon 18/11/19	Tue 17/3/20	Mon 18/11/19	Tue 17/3/20			0 days		100%
197	CPW-1000		Initial Survey			24 days	Mon 18/11/19	Sat 14/12/19	10 days	Mon 18/11/19	Thu 28/11/19	Mon 18/11/19	Thu 28/11/19	198		0 days		100%
198	CPW-2000		Condition Survey			30 days	Fri 27/12/19	Tue 4/2/20	89 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20	125,197	199,172,173FS+120 days,200	0 days		100%
199	CPW-3000		Installation of Monitoring Markers			26 days	Wed 5/2/20	Thu 5/3/20	78 days	Fri 29/11/19	Thu 5/3/20	Fri 29/11/19	Thu 5/3/20	198		0 days		100%
200	CPW-4000		Tree Felling Works		22, 235	0 days	NA	NA	9 days	Sat 7/3/20	Sat 7/3/20	Tue 17/3/20	Tue 17/3/20	198		0 days		100%
201	CAR-0000		Access Road (AR3), B-1			193 days	Mon 20/1/20	Sat 12/9/20	238 days	Thu 12/12/19	Wed 30/9/20	Thu 12/12/19	Wed 30/9/20	4156		0 days		100%
202	CAR-1000		Site setup and clearance works		05	28 days	Mon 20/1/20	Mon 24/2/20	38 days	Mon 20/1/20	Fri 6/3/20	Mon 20/1/20	Fri 6/3/20	203		0 days		100%
203	CAR-1001		Awaiting for AECOM instruction for alignment confirmation for road works		055	0 days	NA	NA	5 days	Mon 17/2/20	Thu 12/3/20	Mon 17/2/20	Thu 12/3/20	202		0 days		100%
204	CAR-1002		Additional Works in Access Road AR3 to Settle Left-in Material by Contract DC/2016/07		215-1	0 days	NA	NA	4 days	Thu 21/5/20	Mon 25/5/20	Thu 21/5/20	Mon 25/5/20	203		0 days		100%
205	CAR-2000		Drainage and Utilities Works			76 days	Fri 6/3/20	Tue 9/6/20	75 days	Sat 7/3/20	Tue 9/6/20	Sat 7/3/20	Tue 9/6/20	204		0 days		100%
206	CAR-2000a		Trimming of Existing Sheet Piles in Access Road AR3		215-2	0 days	NA	NA	20 days	Tue 14/7/20	Wed 5/8/20	Tue 14/7/20	Wed 5/8/20	205		0 days		100%
207	CAR-2000b		Installation of Multi-part Cover and Manhole Cover of Chamber RP6 and Associated Concreting Works in Portion B-1		215	0 days	NA	NA	7 days	Fri 28/8/20	Fri 4/9/20	Fri 28/8/20	Fri 4/9/20	206		0 days		100%
208	CAR-2001		Diversion of Existing Underground Cables in Portion B-1A		036	0 days	NA	NA	172 days	Thu 5/3/20	Wed 30/9/20	Thu 5/3/20	Wed 30/9/20	207		0 days		100%
209	CAR-2002		Additional U-channel, beam barrier and footway concrete pavement		055	0 days	NA	NA	60 days	Thu 12/12/19	Wed 26/2/20	Thu 12/12/19	Wed 26/2/20	210		0 days		100%
210	CAR-3000	KD1A	Roadworks		055	80 days	Wed 10/6/20	Sat 12/9/20	133 days	Fri 24/4/20	Wed 30/9/20	Fri 24/4/20	Wed 30/9/20	126,209,208	42FF	0 days		100%
211	CIW-0000		Inlet Works No.1, B-2			854 days	Mon 6/1/20	Mon 21/11/22	594 days	Tue 26/11/19	Thu 25/11/21	Tue 26/11/19	NA			0 days		88%
212	CIW-1000		Diversion Works (1. Inlet Trunk Sewer, Leachate Rising Mains, Sludge Pipes, Tank Drains and Pipelines near Primary Sludge Thickeners)			180 days	Mon 6/1/20	Fri 14/8/20	459 days	Tue 26/11/19	Wed 16/6/21	Tue 26/11/19	NA	184,123	44FF	111 days		88%
213	CIW-1100		Utilities scanning to identify existing UU arrangement			12 days	Mon 6/1/20	Sat 18/1/20	0 days	Fri 13/12/19	Sat 18/1/20	Fri 13/12/19	Sat 18/1/20	158	214SS,216	0 days		100%
214	CIW-1200		Trial pits to locate the collection points			24 days	Mon 6/1/20	Wed 5/2/20	0 days	Mon 6/1/20	Tue 10/3/20	Mon 6/1/20	Tue 10/3/20	158,213SS,124	232,251	0 days		100%
215	CIW-1300		Installation and Commissioning of Temporary Activated Carbon Deodorization Unit for the Existing Inlet Works			0 days	NA	NA	98 days	Wed 11/3/20	Sat 11/7/20	Wed 11/3/20	Sat 11/7/20			0 days		100%
216	CIW-1310		Construction of concrete plinth			0 days	NA	NA	24 days	Wed 11/3/20	Wed 8/4/20	Wed 11/3/20	Wed 8/4/20	213	217	0 days		100%
217	CIW-1320		Installation of Deodorizer			0 days	NA	NA	40 days	Thu 9/4/20	Sat 30/5/20	Thu 9/4/20	Sat 30/5/20	216	218	0 days		100%
218	CIW-1330		Testing & commissioning			0 days	NA	NA	15 days	Mon 1/6/20	Wed 17/6/20	Mon 1/6/20	Wed 17/6/20	217	219FS-1 day	0 days		100%
219	CIW-1340		Demolishment of the existing carbon deodorization unit			0 days	NA	NA	20 days	Wed 17/6/20	Sat 11/7/20	Wed 17/6/20	Sat 11/7/20	218FS-1 day		0 days		100%
220	CIW-1400		Diversion of Inlet Trunk Sewer (approx. 40m 1800mm dia concrete pipe, 4 deep manholes and Inlet Reception Chamber)			146 days	Thu 6/2/20	Mon 3/8/20	451 days	Mon 9/3/20	Mon 13/9/21	Mon 9/3/20	NA			0 days		97%
221	CIW-1405		Joint Initial Survey arrangement with MTRCL			0 days	NA	NA	24 days	Thu 19/11/20	Wed 16/12/20	Thu 19/11/20	Wed 16/12/20		222	0 days		100%
222	CIW-1410		Remedial Works for uncharted sludge Pipe leakage		41	0 days	NA	NA	8 days	Mon 9/3/20	Tue 17/3/20	Mon 9/3/20	Tue 17/3/20	221		0 days		100%
223	CIW-1420		Diversion of uncharted DN250 sludge pipe		41	0 days	NA	NA	27 days	Tue 31/3/20	Thu 7/5/20	Thu 31/3/20	Thu 7/5/20	222	230,224,225	0 days		100%
224	CIW-1421		Diversion of uncharted 2' water pipe		24	0 days	NA	NA	9 days	Wed 15/4/20	Fri 24/4/20	Wed 15/4/20	Fri 24/4/20	223	230	0 days		100%
225	CIW-1422		Additional Underground Utility Scanning for existing sludge pipe			32	0 days	NA	1 day	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	223		0 days		100%
226	CIW-1423		HV Cable Diversion for Inlet Works		84	0 days	NA	NA	135 days	Sat 10/10/20	Wed 24/3/21	Sat 10/10/20	Wed 24/3/21			0 days		100%
227	CIW-1423a		Exposing, Removal and Diversion of Existing Cables near Inlet Works No. 1		236	0 days	NA	NA	268 days	Mon 4/5/20	Wed 24/3/21	Mon 4/5/20	Wed 24/3/21</					

ID	Activity ID	Key Date	Task Name	Inherent Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
252	CIW-1500b		Joint Initial Survey arrangement with MTRCL			0 days	NA	NA	158 days	Tue 26/11/19	Wed 10/6/20	Tue 26/11/19	Wed 10/6/20			0 days		100%
253	CIW-1500c		Site Clearance & inspection pit excavation under conforming alignments			0 days	NA	NA	36 days	Fri 12/6/20	Sat 25/7/20	Fri 12/6/20	Sat 25/7/20			0 days		100%
254	CIW-1511		Tank Drain Diversion near MTRCL track			0 days	NA	NA	246 days	Thu 11/6/20	Mon 12/4/21	Thu 11/6/20	Sat 10/4/21			0 days		100%
255	CIW-1511a		Excavation of trial pit near MHD9.5 (TP45 & 47)		040	0 days	NA	NA	12 days	Mon 27/7/20	Sat 8/8/20	Mon 27/7/20	Sat 8/8/20		256,260	0 days		100%
256	CIW-1511b		Uncharted cables found near MTRCL track and identification			0 days	NA	NA	1 day	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20			0 days		100%
257	CIW-1511c		Excavation of trial pit near MHD9.5			0 days	NA	NA	5 days	Fri 19/6/20	Wed 24/6/20	Fri 19/6/20	Wed 24/6/20		258	0 days		100%
258	CIW-1511d		Lower the ground surface, opening and additional trial pit (TP38)		(046)	0 days	NA	NA	60 days	Thu 11/6/20	Fri 21/8/20	Thu 11/6/20	Fri 21/8/20		259	0 days		100%
259	CIW-1511e		Excavation of Trial Pits near Manhole MHA04 and MHD9		040	0 days	NA	NA	60 days	Fri 11/6/20	Fri 21/8/20	Thu 11/6/20	Fri 21/8/20			0 days		100%
260	CIW-1511f		Additional Trial Pit between MHD9.5 and MHA04		040	0 days	NA	NA	25 days	Fri 21/8/20	Fri 18/9/20	Fri 21/8/20	Fri 18/9/20			0 days		100%
261	CIW-1511g		Sheetpile installation for MHD9.5			0 days	NA	NA	38 days	Fri 1/9/20	Fri 16/10/20	Fri 16/10/20	Fri 16/10/20			0 days		100%
262	CIW-1511h		Sheetpile installation between MHD9.5 & MHA04			0 days	NA	NA	25 days	Tue 8/9/20	Thu 8/10/20	Tue 8/9/20	Thu 8/10/20			0 days		100%
263	CIW-1511i		LUU supporting & ELS works& excavatub between MHD9.5 & MHA04			0 days	NA	NA	73 days	Wed 7/10/20	Mon 4/1/21	Wed 7/10/20	Mon 4/1/21			0 days		100%
264	CIW-1511j		Unsuit excavated material from MHD9.5 to MHA04		261	0 days	NA	NA	4 days	Fri 20/11/20	Tue 24/11/20	Fri 20/11/20	Tue 24/11/20			0 days		100%
265	CIW-1511k		Revise design of manhole MHD9.5		(167)	0 days	NA	NA	20 days	Thu 7/1/21	Fri 29/1/21	Thu 7/1/21	Fri 29/1/21			0 days		100%
266	CIW-1511l		Break up opening and plugging existing concrete pipe at MHD9.5			0 days	NA	NA	6 days	Mon 18/1/21	Sat 23/1/21	Mon 18/1/21	Sat 23/1/21			0 days		100%
267	CIW-1511m		Trimming existing concrete pipe at MHD9.5			0 days	NA	NA	13 days	Fri 22/1/21	Fri 5/2/21	Fri 22/1/21	Fri 5/2/21			0 days		100%
268	CIW-1511n		Construction of manhole MHD9.5			0 days	NA	NA	49 days	Sat 6/2/21	Sat 10/4/21	Sat 6/2/21	Sat 10/4/21			0 days		100%
269	CIW-1511o		Additional work to prevent backflow from MHI1 to MHD9.5		(176)	0 days	NA	NA	9 days	Mon 18/1/21	Wed 27/1/21	Mon 18/1/21	Wed 27/1/21			0 days		100%
270	CIW-1511p		Sewage overflow incident of MHD11		(180)	0 days	NA	NA	9 days	Sat 13/2/21	Thu 25/2/21	Sat 13/2/21	Thu 25/2/21			0 days		100%
271	CIW-1512		Additional Special manhole for tank drain (NCE)			0 days	NA	NA	35 days	Mon 24/8/20	Mon 5/10/20	Mon 24/8/20	Mon 5/10/20		272,273	0 days		100%
272	CIW-1513		Breaking of concrete surround of cables (0.8m x 0.8m x 70m) (NCE)			0 days	NA	NA	24 days	Tue 8/9/20	Wed 7/10/20	Tue 8/9/20	Wed 7/10/20			0 days		100%
273	CIW-1514	KD1B	Construction of tank drain along revised alignment w/ concrete surround		051	0 days	NA	NA	10 days	Tue 5/1/21	Fri 15/1/21	Tue 5/1/21	Fri 15/1/21		271	0 days		100%
274	CIW-1516		Backfilling trench between MHD9.5 & MHA04			0 days	NA	NA	20 days	Sat 16/1/21	Mon 8/2/21	Sat 16/1/21	Mon 8/2/21			0 days		100%
275	CIW-1520		Diversion of Sludge Pipes			75 days	Tue 21/4/20	Tue 21/7/20	364 days	Mon 11/5/20	Thu 29/7/21	Mon 11/5/20	NA			0 days		96%
276	CIW-1520a		Excavation of trial pit and identification of connection point		351	0 days	NA	NA	103 days	Mon 11/5/20	Wed 9/9/20	Mon 11/5/20	Wed 9/9/20		277	0 days		100%
277	CIW-1520b		Trench excavation for twin DN250 sludge pipe, on hold due to encounter of uncharted sludge pipe		351	75 days	Tue 21/4/20	Tue 21/7/20	4 days	Wed 15/7/20	Sat 18/7/20	Wed 15/7/20	Sat 18/7/20		276	0 days		100%
278	CIW-1520c		Additional hole drilling works and identification of connection point			0 days	NA	NA	53 days	Mon 20/7/20	Mon 20/7/20	Mon 20/7/20	Mon 20/7/20		277	0 days		100%
279	CIW-1520d		Temporary diversion of substandard DI 250 Leachate raising main		202	0 days	NA	NA	127 days	Tue 20/10/20	Wed 24/3/21	Tue 20/10/20	Wed 24/3/21		228	0 days		100%
280	CIW-1520e		Protection work for substandard DI 500 tank drain Pipe (near MHD 9.5)		302	0 days	NA	NA	93 days	Wed 18/11/20	Fri 12/3/21	Wed 18/11/20	Fri 12/3/21		228	0 days		100%
281	CIW-1520f		Encounter of uncharted concrete pipe within sheetpile cofferdam at MHA04			0 days	NA	NA	2 days	Tue 10/11/20	Wed 11/11/20	Tue 10/11/20	Wed 11/11/20		282	0 days		100%
282	CIW-1520g		Resumption and construction of sludge pipe construction			0 days	NA	NA	253 days	Sat 19/9/20	Thu 29/7/21	Sat 19/9/20	NA	281	307,44FF	-36 days		91%
283	CIW-1530		Diversion of Leachate Raising Main			60 days	Tue 21/4/20	Fri 3/7/20	60 days	Tue 14/9/21	Thu 25/11/21	NA	NA	241		-135 days		0%
284	CIW-1600		Diversion of pipelines near Primary Sludge Thickeners (approx. 180m long 150mm to 375mm concrete pipes)			156 days	Thu 6/2/20	Fri 14/8/20	570 days	Tue 26/11/19	Thu 28/10/21	Tue 26/11/19	NA			0 days		55%
285	CIW-1610		Trench Excavation from MHI MHD1E to MHD6 (approx. 90m long with MHS MHD1A, 1B, 1C, 1D & 1E) - resigned		87	60 days	Thu 6/2/20	Mon 20/4/20	0 days	Tue 26/11/19	Tue 26/11/19	Tue 26/11/19	Tue 26/11/19			0 days		100%
286	CIW-1620		Manholes construction and Pipe laying - omitted		87	60 days	Mon 30/3/20	Sat 13/6/20	0 days	Tue 2/6/20	Tue 2/6/20	Tue 2/6/20	Tue 2/6/20		285	0 days		100%
287	CIW-1621		Temporary Diversion of Existing DN200 Filtrate Raising Main		034	0 days	NA	NA	20 days	Sat 1/8/20	Mon 24/8/20	Sat 1/8/20	Mon 24/8/20		288	0 days		100%
288	CIW-1623		Pipeline Diversion Works near Primary Sludge Thickening Tank		(114)	0 days	NA	NA	30 days	Fri 16/4/21	Sat 22/5/21	Fri 16/4/21	Sat 22/5/21		287	0 days		100%
289	CIW-1625		Uncharted underground utilities near Proposed MHD5B		0260	0 days	NA	NA	26 days	Mon 24/5/21	Wed 23/6/21	Mon 24/5/21	Wed 23/6/21		288,289	0 days		100%
290	CIW-1630		Trench Excavation from MHI (approx. 90m long with MHS M1A to M3B)			60 days	Tue 21/4/20	Fri 3/7/20	32 days	Thu 19/3/20	Thu 19/3/20	Thu 19/3/20	Wed 29/4/20		291,292	0 days		100%
291	CIW-1640		Manholes construction (M1A, M1B, M2B, M3B) and Pipe laying			25 days	Mon 15/6/20	Wed 15/7/20	12 days	Mon 4/5/20	Sat 16/5/20	Mon 4/5/20	Sat 16/5/20		286,288	0 days		100%
292	CIW-1650		Trench Excavation from MHD5 to MHD9.5 (approx. 90m long with MHS MHD5A & 5B)		(114)	50 days	Thu 16/7/20	Fri 11/9/20	60 days	Wed 2/9/20	Wed 30/12/20	Wed 2/9/20	Wed 30/12/20		290,296,301,303,305	0 days		100%
293	CIW-1660		Provision of Pumping System from Screen to Flume Channel		87	0 days	NA	NA	287 days	Tue 10/11/20	Thu 28/10/21	Tue 10/11/20	NA	289	294	-111 days		75%
294	CIW-1670		Manholes construction (MHD5A, MHD5B, MHD5C) and Pipe laying			45 days	Sat 23/5/20	Thu 16/7/20	293 days	Thu 3/11/20	Thu 28/10/21	Thu 3/11/20	NA	293	44FF	-111 days		8%
295	CIW-2000		Decommission and Demolition of Existing Facilities and Structures			240 days	Mon 2/3/20	Fri 18/12/20	222 days	Thu 19/3/20	Tue 15/12/20	Thu 19/3/20	Tue 15/12/20		6,122,160	0 days		100%
296	CIW-2100		Primary Sludge Thickening Tank No.1 and No.2			80 days	Mon 2/3/20	Thu 9/6/20	222 days	Thu 19/3/20	Tue 15/12/20	Thu 19/3/20	Tue 15/12/20		292	0 days		100%
297	CIW-2101		Additional Works for Temporary Diversion of Bypass Pipe near Primary Sludge Thickeners			0 days	NA	NA	45 days	Thu 19/3/20	Thu 19/3/20	Thu 19/3/20	Sun 17/5/20			0 days		100%
298	CIW-2110		Removal of E&M equipment of primary sludge thickening tank			0 days	NA	NA	1 day	Thu 4/6/20	Thu 4/6/20	Thu 4/6/20	Thu 4/6/20		299	0 days		100%
299	CIW-2120		Decommission and Demolition the tank			80 days	Mon 2/3/20	Tue 9/6/20	150 days	Thu 18/6/20	Tue 15/12/20	Thu 18/6/20	Tue 15/12/20		298	0 days		100%
300	CIW-2130		Demolition of structure no.2			0 days	NA	NA	24 days	Mon 18/5/20	Mon 22/6/20	Mon 18/5/20	Mon 22/6/20			0 days		100%
301	CIW-2200		Primary Sludge Pump Pit			60 days	Wed 10/6/20	Thu 20/8/20	18 days	Wed 22/7/20	Tue 11/8/20	Wed 22/7/20	Tue 11/8/20		299,300,302,304	0 days		100%
302	CIW-2300		Septic Tank			50 days	Fri 21/8/20	Tue 20/10/20	18 days	Wed 12/8/20	Tue 1/9/20	Wed 12/8/20	Tue 1/9/20		301	0 days		100%
303	CIW-2400		Diesel Tank			50 days	Wed 21/10/20	Fri 18/12/20	53 days	Thu 2/7/20	Tue 1/9/20	Thu 2/7/20	Tue 1/9/20		292	0 days		100%
304	CIW-2410		Transfers of Remaining Diesel Fuel of Existing Diesel Tank			0 days	NA	NA	15 days	Thu 2/7/20	Thu 2/7/20	Thu 2/7/20	Tue 21/7/20		305	0 days		100%
305	CIW-2420		Demolition of diesel tank			50 days	Wed 21/10/20	Fri 18/12/20	18 days	Wed 12/8/20	Tue 1/9/20	Wed 12/8/20	Tue 1/9/20		304	0 days		100%
306	CIW-3000		Inlet Works No.1 Building (1)			569 days	Sat 19/12/20	Mon 21/11/22	747 days	Wed 15/9/20	Thu 23/3/23	Tue 15/9/20	NA			748 days		18%
307	CIW-3100		Predrilling (10hrs, 1trigs, 2.5days/drillhole/riq) - stage 1			40 days	Mon 4/1/21	Mon 22/2/21	28 days	Tue 15/9/20	Mon 19/10/20	Tue 15/9/20	Mon 19/10/20		248,250,273,228,282	0 days	1	100%
308	CIW-3100a		Predrilling (22hrs, 1trigs, 2.5days/drillhole/riq) - stage 2			0 days	NA	NA	60 days	Tue 8/12/20	Mon 22/2/21	Tue 8/12/20	Mon 22/2/21			0 days		100%
309	CIW-3200		Pre-bored H piles (188nos, 1.8trigs, 2days/riq/pile)			133 days	Tue 23/2/21	Wed 4/8/21	210 days	Fri 19/2/21	Tue 2/11/21	Fri 19/2/21	NA	228,132	310SS+150 days,311	-34 days	5	63%
310	CIW-3400a		Pile Load Test at stage 1			26 days	Thu 5/8/21	Fri 3/9/21	21 days	Sat 21/8/21	Tue 14/9/21	NA	NA	309SS+150 days	312	83 days		0%

ID	Activity ID	Key Date	Task Name	Incliment Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
342	CPS-3000		Predrilling (63mrs, 3rigs, 3days/drillhole/ri)			38 days	Thu 10/2/22	Fri 25/3/22	38 days	Fri 15/10/21	Sat 27/11/21	NA	NA	127,452,339,340	343	-62 days	1	0%
343	CPS-4000		Pre-bored H piles (205nos, 2.5rigs, 2days/pile/ri)			102 days	Sat 26/3/22	Mon 18/8/22	164 days	Mon 29/11/21	Wed 22/6/22	NA	NA	132,453,341,342	344	-62 days	5	0%
344	CPS-5000		Sheetpile Installation (FSP-II, 3360sq.m, 3rigs, 50sqm/ri/day)			85 days	Wed 25/5/22	Fri 2/9/22	42 days	Thu 5/5/22	Fri 24/6/22	NA	NA	343,345,346,347	345	-62 days	0	0%
345	CPS-6000		Pile Load Test			26 days	Tue 28/2/22	Wed 31/8/22	26 days	Thu 23/6/22	Sat 23/7/22	NA	NA	343	346	0 days	0	0%
346	CPS-7000		ELS works (20000cu.m soil with 2 layers walling / strutting)			45 days	Sat 3/9/22	Fri 28/10/22	60 days	Mon 25/7/22	Wed 6/10/22	NA	NA	343,135,345,344	347	0 days	3	0%
347	CPS-7900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Thu 7/7/22	Thu 7/7/22	NA	NA	347,348,349,350,351,352	348	186 days	0	0%
348	CPS-8000	KD1D	R.C. Structure works (including ELS demolition works)			92 days	Sat 29/10/22	Mon 20/2/23	112 days	Thu 6/10/22	Mon 20/2/23	NA	NA	137,346,347,348,349	349	0 days	3	0%
349	CPS-9000	KD1D	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 20/2/23	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	348	45FF	0 days	0	0%
350	CPS-10000	SW1	ABWF works + BS works			150 days	Tue 21/2/23	Wed 23/8/23	150 days	Tue 21/2/23	Wed 23/8/23	NA	NA	348,189,141	56FF	139 days	0	0%
351	CPS-11000	KD1D	Flowmeter Chamber no.1			60 days	Tue 21/2/23	Sat 6/5/23	60 days	Tue 6/12/22	Mon 20/2/23	NA	NA	348,349	45FF,333FF	0 days	0	0%
352	CPS-12000	SW2	Process Pipe CHG chainage 0-50, CHH chainage 0-80, CHI chainage 0-95 & CHJ chainage 0-40 and surrounding utilities			0 days	NA	NA	100 days	Wed 8/6/22	Thu 6/10/22	NA	NA	344,345,347 days	57FF,555	-62 days	0	0%
353	CBR-0000		Bioreactors No.2A & 2B, B-4 (3)			1106 days	Mon 18/11/19	Sat 12/8/23	1194 days	Mon 18/11/19	Mon 27/11/23	Mon 18/11/19	NA 9			546 days		38%
354	CBR-1000		Operation of 2no. Existing 800mm air mains over bioreactor no.2			360 days	Mon 18/11/19	Wed 11/11/20	292 days	Mon 18/11/19	Wed 11/11/20	Mon 18/11/19	Wed 11/11/20	NA	NA	0 days	0	100%
355	CBR-2000		Construction of Removable Steel Shutter in the Common Channel of BR2 and 3		67	0 days	NA	NA	86 days	Thu 1/10/20	Fri 15/1/21	Thu 1/10/20	Fri 15/1/21	144	365	0 days	0	100%
356	CBR-4100		Take Down E&M Equipment & cables in Bioreactor BR2 and Return to DSD		95	0 days	NA	NA	90 days	Thu 15/10/20	Mon 1/2/21	Thu 15/10/20	Mon 1/2/21	366	366	0 days	0	100%
357	CBR-4200		Installation of monitoring points before demolition of BR2		219	0 days	NA	NA	5 days	Wed 27/1/21	Mon 1/2/21	Wed 27/1/21	Mon 1/2/21	363	358	0 days	0	100%
358	CBR-4300		Condition Survey for BR2			0 days	NA	NA	1 day	Fri 30/10/20	Fri 30/10/20	Fri 30/10/20	Fri 30/10/20	357	366	0 days	0	100%
359	CBR-5000		Demolition of existing bioreactor no.2			60 days	Wed 3/2/21	Tue 20/4/21	98 days	Tue 10/11/20	Wed 10/3/21	Tue 10/11/20	Wed 10/3/21	122,162		0 days		100%
360	CBR-5100		Identification and removal of existing cables on air main pipe bridge		210	0 days	NA	NA	35 days	Tue 10/11/20	Sat 19/12/20	Tue 10/11/20	Sat 19/12/20	361	365	0 days	0	100%
361	CBR-5300		Plugging and demolition of existing DN800 air main			0 days	NA	NA	5 days	Mon 28/12/20	Sat 2/1/21	Mon 28/12/20	Sat 2/1/21	360	366	0 days	0	100%
362	CBR-5200		Division of existing lighting cable and Earthing ducts, stage 1		264	0 days	NA	NA	43 days	Fri 4/12/20	Fri 4/12/20	Tue 26/1/21	Fri 4/12/20	363	366	0 days	0	100%
363	CBR-5400		Overflow incident from BR1 to BR2 works area no.1 (Dec 2020)		285	0 days	NA	NA	33 days	Fri 18/12/20	Thu 28/1/21	Fri 18/12/20	Thu 28/1/21	364	357,362	0 days	0	100%
364	CBR-5410		Overflow incident from BR1 to BR2 works area (Feb 2021)		340	0 days	NA	NA	8 days	Tue 16/2/21	Wed 24/2/21	Tue 16/2/21	Wed 24/2/21	365	366,363	0 days	0	100%
365	CBR-3000		Construction of isolation wall & stoplog in common channel of BR2 & BR3		277	0 days	NA	NA	43 days	Sat 16/1/21	Wed 10/3/21	Sat 16/1/21	Wed 10/3/21	355,360	364	0 days	0	100%
366	CBR-5500		Demolition of existing pipe bridge, partition wall and base slab (Stage 1)			30 days	Wed 3/2/21	Fri 12/3/21	26 days	Tue 2/2/21	Sat 6/3/21	Tue 2/2/21	Sat 6/3/21	362,358,364,356	367,355,368	0 days	0	100%
367	CBR-5520		Removal of additional concrete fill within the partition walls		(174)	0 days	NA	NA	26 days	Tue 2/2/21	Sat 6/3/21	Tue 2/2/21	Sat 6/3/21	366,355	368	0 days	0	100%
368	CBR-5900		Construction of precautionary measures (i.e. isolation wall)		322	0 days	NA	NA	2 days	Tue 9/3/21	Wed 10/3/21	Tue 9/3/21	Wed 10/3/21	366,367	369,371	0 days	0	100%
369	CBR-5905		Construction of precautionary measures (i.e. bund wall)		305	0 days	NA	NA	3 days	Thu 15/4/21	Sat 17/4/21	Thu 15/4/21	Sat 17/4/21	368	368	0 days	0	100%
370	CBR-5910		Removal of abandoned DN250 air pipe		209	0 days	NA	NA	6 days	Tue 20/4/21	Mon 26/4/21	Tue 20/4/21	Mon 26/4/21	368	368	0 days	0	100%
371	CBR-6000		Predrilling (33mrs, 3rigs, 2days/drillhole/ri), stage 1			44 days	Wed 21/4/21	Sat 12/6/21	44 days	Mon 1/3/21	Wed 5/5/21	Mon 1/3/21	Wed 5/5/21	368	372	0 days	1	100%
372	CBR-7000		Pre-bored H piles (113nos, 2rigs, 2days/pile/ri), stage 1			113 days	Thu 15/6/21	Thu 18/11/21	113 days	Thu 6/5/21	Fri 17/9/21	Thu 6/5/21	NA	371	382,355+30 days,377,355+45 days,381	5	41%	
373	CBR-7100		External works between BR2 and MFB2			0 days	NA	NA	217 days	Wed 30/6/21	Mon 21/3/22	Wed 30/6/21	NA			1046 days		9%
374	CBR-7110		DN700 (CHER)RAS diversion			0 days	NA	NA	45 days	Wed 30/6/21	Sat 21/8/21	Wed 30/6/21	Sat 21/8/21	375	375	1212 days	2%	0%
375	CBR-7120		Temporary vehicle diversion for RAS operation			0 days	NA	NA	6 days	Mon 23/8/21	Sat 28/8/21	Mon 23/8/21	NA	374	374	1212 days	0%	0%
376	CBR-7130		DN600 Temporary Sewage diversion			0 days	NA	NA	120 days	Wed 30/6/21	Sat 10/11/21	Wed 30/6/21	NA			-45 days		18%
377	CBR-7131		2nos. Manhole Construction (MHTD1 and MHTD2)		204, 353	0 days	NA	NA	75 days	Wed 30/6/21	Mon 27/9/21	Wed 30/6/21	NA	375,355+45 days	378,375-30 days	-88 days	0	36%
378	CBR-7132		Existing DN600 tank drain diversion		204, 353	45 days	NA	NA	75 days	Mon 23/8/21	Sat 20/11/21	NA	NA	377,375-30 days	379	-88 days	0	0%
379	CBR-7140		Demolition of abandoned DN600 pipe and existing surrounded wall & channel of BR2		353, 336	30 days	NA	NA	45 days	Mon 22/11/21	Sat 15/1/22	NA	NA	378	380	-88 days	0	0%
380	CBR-7150		Pre-drilling(3nr.) & Pre-bored H piles (20mrs, 1rig, 2days/drillhole/ri), stage 2A			26 days	NA	NA	26 days	Mon 17/1/22	Fri 18/2/22	NA	NA	379	381	-88 days	0	0%
381	CBR-7160		Pile load test			26 days	NA	NA	26 days	Sat 19/2/22	Mon 21/3/22	NA	NA	380,386	389,388	-88 days	0	0%
382	CBR-7200		External works between BR2 and PST			0 days	NA	NA	141 days	Wed 30/6/21	Wed 15/12/21	Wed 30/6/21	NA	375,355+30 days		-38 days		19%
383	CBR-7210		Demolition of existing DN1200, DN900 and DN500 pipe (w/ ELS works)		91	0 days	NA	NA	75 days	Wed 30/6/21	Mon 27/9/21	Wed 30/6/21	NA	375,355+45 days	384	-38 days	0	36%
384	CBR-7220		Division of existing lighting cable and Earthing ducts (w/ ELS)		264	0 days	NA	NA	30 days	Tue 28/9/21	Wed 3/11/21	NA	NA	383	385	-38 days	0	0%
385	CBR-7230		Demolition of existing side wall		336	0 days	NA	NA	12 days	Thu 4/11/21	Wed 17/11/21	NA	NA	384	386	-38 days	0	0%
386	CBR-7240		Pre-bored H piles (24mrs, 2rig, 2days/drillhole/ri), stage 2B			24 days	NA	NA	24 days	Thu 18/11/21	Wed 15/12/21	NA	NA	385	381	-38 days	0	0%
387	CBR-7340		Demolition of existing side wall between BR2 & BR3 and base slab			0 days	NA	NA	60 days	Sat 18/9/21	Tue 30/11/21	NA	NA	372	388	1 day	0	0%
388	CBR-8000		Sheetpile Installation (3000sq.m, 1rigs, 50sqm/ri/day)			60 days	Wed 9/9/21	Fri 19/11/21	60 days	Wed 22/3/22	Tue 7/6/22	NA	NA	381,387	389	-88 days	0	0%
389	CBR-10000		ELS works (18100cu.m soil with 4 layers walling / strutting)			125 days	Mon 20/12/21	Sat 27/5/22	80 days	Wed 8/6/22	Fri 9/9/22	NA	NA	135,381,388	391,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,			

ID	Activity ID	Key Date	Task Name	Incliment Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete	
435	CSA-1000		Additional Preliminary Works			0 days	NA	NA	330 days	Tue 9/6/20	Mon 19/7/21	Tue 9/6/20	NA			1247 days		98%	
436	CSA-1020		Expose and abandon existing electric cable & trial pits		78	0 days	NA	NA	39 days	Mon 17/8/20	Wed 30/9/20	Mon 17/8/20	Wed 30/9/20			0 days		100%	
437	CSA-1030		Installation of standpipes		71	0 days	NA	NA	13 days	Mon 14/9/20	Mon 28/9/20	Mon 14/9/20	Mon 28/9/20			0 days		100%	
438	CSA-1100		Diversion of Existing SAS Rising Main near SAS Pumping Station		68, 75, 76, 69	0 days	NA	NA	170 days	Tue 9/6/20	Thu 31/12/20	Tue 9/6/20	Thu 31/12/20			0 days		100%	
439	CSA-1200		Decommission of existing power and signal systems in leachate pump station switch room		312, 309, 310	0 days	NA	NA	58 days	Mon 21/9/20	Mon 30/11/20	Mon 21/9/20	Mon 30/11/20	146	453	0 days		100%	
440	CSA-1300		Construction of Cable Trough for CLP 11kv Cable Diversion		75, 76, 77, 161	0 days	NA	NA	54 days	Mon 19/10/20	Mon 21/12/20	Mon 19/10/20	Mon 21/12/20		453	0 days		100%	
441	CSA-1400		Demolition of Existing Pillar box and its concrete plinth		144, 212, 3/30	0 days	NA	NA	53 days	Wed 12/8/20	Sat 14/11/20	Wed 12/8/20	Sat 14/11/20	149	453	0 days		100%	
442	CSA-1500		Excavation to locate existing underground cable near SAS Pump Station		78	0 days	NA	NA	59 days	Wed 17/6/20	Sat 21/11/20	Wed 17/6/20	Sat 21/11/20		453	0 days		100%	
443	CSA-1600		Diversion of Existing DN80 Permeate Rising Main near SAS Pumping station		89	0 days	NA	NA	72 days	Tue 6/10/20	Thu 31/12/20	Tue 6/10/20	Thu 31/12/20		453	0 days		100%	
444	CSA-1800		Trench Excavation near SAS for CLP diversion of 11kv cable		309, 310	0 days	NA	NA	53 days	Mon 12/10/20	Sat 12/12/20	Mon 12/10/20	Sat 12/12/20		453	0 days		100%	
445	CSA-1700		Relocation of Oil Interceptor Near Existing Compressor House		144, 212, 3/70	0 days	NA	NA	50 days	Mon 9/11/20	Fri 8/1/21	Mon 9/11/20	Fri 8/1/21		453	0 days		100%	
446	CSA-1900		Diversion of existing system sewerage		212, 309, 3183	0 days	NA	NA	36 days	Wed 13/1/21	Fri 26/2/21	Wed 13/1/21	Fri 26/2/21	151	455,453,447	0 days		100%	
447	CSA-1910		Diversion of existing copper pipe near proposed SAS pumping station		309, 310	225	0 days	NA	NA	61 days	Mon 19/10/20	Thu 31/12/20	Mon 19/10/20	Thu 31/12/20	446	453	0 days		100%
448	CSA-1920		Pipeline of proposed SAS Pumping Station - 13 nos. of puddles		221	0 days	NA	NA	180 days	Mon 7/12/20	Mon 19/7/21	Mon 7/12/20	Mon 19/7/21			1247 days		92%	
449	CSA-1930		Additional DN150 Rising main for SAS		220/69	0 days	NA	NA	15 days	Wed 21/2/20	Fri 18/12/20	Wed 21/2/20	Fri 18/12/20			0 days		100%	
450	CSA-1940		Additional DN90 PE pipe diversion		89	0 days	NA	NA	7 days	Fri 11/12/20	Fri 18/12/20	Fri 11/12/20	Fri 18/12/20			0 days		100%	
451	CSA-1970		Additional diversion of existing sludge rising main and sewerage system		81	0 days	NA	NA	15 days	Thu 21/1/21	Sat 6/2/21	Thu 21/1/21	Sat 6/2/21			0 days		100%	
452	CSA-2000		Predrilling (4hrs, 1rig, 4days/drillhole/rig)		68	16 days	Wed 20/5/20	Sat 6/6/20	7 days	Sat 18/4/20	Sat 25/4/20	Sat 18/4/20	Sat 25/4/20	127	342,453	0 days		100%	
453	CSA-3000		Pre-bored H piles (12nos, 1rigs, 4days/pile/rig)			60 days	Mon 8/6/20	Tue 18/8/20	19 days	Mon 4/1/21	Mon 25/1/21	Mon 4/1/21	Mon 25/1/21	132,452,148,438,439,441,442,443,445,444,343,454		2	0 days	100%	
454	CSA-4000		Pile Load Test			21 days	Wed 19/8/20	Tue 17/9/20	22 days	Fri 19/3/21	Tue 23/2/21	Fri 19/3/21	Tue 23/2/21	453	456,455	0 days		100%	
455	CSA-5000		Sheetpile Installation (FSP-II, 690sq.m, 40sqm/day)			28 days	Wed 19/8/20	Sat 19/9/20	28 days	Thu 30/3/21	Wed 5/5/21	Tue 30/3/21	Wed 5/5/21	133,454,446	456	0 days		100%	
456	CSA-6000		ELS works (1300cu.m soil with 2 layers walling / strutting)			75 days	Mon 21/9/20	Wed 19/2/20	75 days	Thu 6/5/21	Wed 4/8/21	Thu 6/5/21	Wed 4/8/21	NA,455,135,454	458,457FF-3 emons	-121 days	2	96%	
457	CSA-6900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Thu 6/5/21	Thu 6/5/21	Thu 6/5/21	Thu 6/5/21	456FF-3 emons	458SS-3 emons	0 days		100%	
458	CSA-7000	KD1H	R.C. Structure works (including ELS demolition works)			186 days	Mon 21/12/20	Mon 9/8/21	186 days	Thu 5/8/21	Sat 19/3/22	Thu 5/8/21	Sat 19/3/22	NA,456,457SS-3 emons	459,460,49FF	-121 days	5	0%	
459	CSA-8000	KD1H	Allow access to Contractor DE/2018/03 for E&M installation and T&C works			0 days	Mon 9/8/21	Mon 9/8/21	0 days	Sat 19/3/22	Sat 19/3/22	NA	NA	458	49FF	-121 days		0%	
460	CSA-9000	SW1	ABWF works + BS works			90 days	Tue 10/8/21	Thu 25/11/21	90 days	Thu 14/6/22	Wed 28/9/22	Thu 14/6/22	Wed 28/9/22	NA	458,189,141,522SS	56FF	405 days	0%	
461	CAS-0000		Ancillary Structures, B-7			503 days	Mon 7/9/20	Sat 21/5/22	420 days	Mon 3/5/21	Wed 28/9/22	Mon 3/5/21	NA	12		891 days		7%	
462	CAS-1000		Demolition of Existing Faciliates and Structures (leachate pump pit & pumping station)			120 days	Mon 7/9/20	Sat 30/1/21	120 days	Mon 3/5/21	Thu 23/9/21	Mon 3/5/21	NA	122,160,162	497	48 days		41%	
463	CFS-1000		Fire Services Sprinkler Pumping Room & Emergency Generator House (9)(10)**		301	220 days	Sat 10/4/21	Sun 3/1/21	419 days	Tue 4/5/21	Wed 28/9/22	Tue 4/5/21	NA	NA		405 days		14%	
464	CFS-1000		Water Sampling and Testing for existing effluent pump pit		384	0 days	NA	NA	12 days	Tue 4/5/21	Mon 17/5/21	Tue 4/5/21	Mon 17/5/21		465	0 days		100%	
465	CFS-1150		Identification, decommission and demolition of the existing kloak		86	0 days	NA	NA	26 days	Tue 18/5/21	Fri 18/6/21	Tue 18/5/21	Fri 18/6/21	464	466,479	0 days		100%	
466	CFS-1100		Provision of Flowmeter chamber, gate valve chamber and associated sewerage		85	0 days	NA	NA	90 days	Sat 19/6/21	Tue 5/10/21	Sat 19/6/21	NA	465	467,469FF	-101 days		40%	
467	CFS-1200		Decommission and demolition of the existing pump pit and associated sewerage manholes and pipes		86	0 days	NA	NA	40 days	Wed 6/10/21	Mon 22/11/21	NA	NA	466	470	-101 days		0%	
468	CFS-1250		Diversion of Leachate Rising Main near SSSH		241	0 days	NA	NA	18 days	Wed 28/7/21	Wed 18/8/21	NA	NA	469SF	480	18 days		0%	
469	CFS-1300		E&M provision of flowmeter chamber and associated sewerage for effluent and sewage from SSSH		256	0 days	NA	NA	40 days	Wed 18/8/21	Tue 5/10/21	NA	NA	466FF	470,468SF	-61 days		0%	
470	CFS-2000		Excavation for Raft Footing (800cu.m)			65 days	NA	NA	44 days	Tue 23/11/21	Sat 15/1/22	NA	NA	469,467	471	-101 days		0%	
471	CFS-2800		Plate load test at bottom level of compacted general fill(2no.)			12 days	NA	NA	7 days	Mon 17/1/22	Mon 24/1/22	NA	NA	470	472	-101 days		0%	
472	CFS-2900		Soil Replacement (14 layers SRT)			0 days	NA	NA	42 edays	Mon 24/1/22	Mon 7/3/22	NA	NA	471	473	-124.42 edays		0%	
473	CFS-3000		Plate load test at bottom level of base slab (3no.)			28 days	Fri 4/6/21	Mon 21/6/21	7 days	Tue 8/3/22	Tue 15/3/22	NA	NA	472	474FF-3 emons,475	-101 days		0%	
474	CFS-3900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Tue 23/11/21	Tue 23/11/21	NA	NA	473FF-3 emons	475SS-3 emons	59 days		0%	
475	CFS-4000	KD1J	R.C. structure works			120 days	NA	NA	70 days	Wed 16/3/22	Mon 13/6/22	NA	NA	473,474SS-3 emons	477,476,51FF,521FF,520FF	-101 days	2	0%	
476	CFS-5000	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 13/9/21	Mon 13/9/21	0 days	Mon 13/6/22	Mon 13/6/22	NA	NA	475	51FF	-101 days		0%	
477	CFS-6000	SW1	ABWF works + BS works			90 days	Tue 14/9/21	Mon 3/1/22	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	475	56FF	405 days		0%	
478	CCS-1000		Chemical System No.1 (8)*			168 days	Mon 1/2/21	Thu 26/8/21	386 days	Sat 12/6/21	Wed 28/9/22	Sat 12/6/21	NA	NA		891 days		4%	
479	CCS-1310		Demolition of SSSH Pump Pit and Associated Sewerage System		086	0 days	NA	NA	26 days	Sat 19/6/21	Tue 20/7/21	Sat 19/6/21	NA	465	481	54 days		38%	
480	CCS-1110		Removal of existing Leachate Rising Main near SSSH		241	0 days	NA	NA	12 days	Wed 18/8/21	Tue 31/8/21	NA	NA	468	481	18 days		0%	
481	CCS-1100		Excavation for Raft Footing (200cu.m)			10 days	Mon 1/2/21	Thu 11/2/21	10 days	Mon 1/9/21	Sat 11/9/21	NA	NA	480,479	485FF-3 emons,486,482	18 days		0%	
482	CCS-1080		Plate load test at bottom level of compacted general fill(2no.)			9 days	NA	NA	9 days	Mon 13/9/21	Thu 23/9/21	NA	NA	481	483	18 days		0%	
483	CCS-1090		Soil Replacement (10 layers SRT)			0 days	NA	NA	30 edays	Thu 23/9/21	Sat 23/10/21	NA	NA	482	484	23.58 edays		0%	
484	CCS-1200		Plate load test at bottom level of base slab (1no.)			5 days	Tue 16/2/21	Wed 3/3/21	5 days	Mon 25/10/21	Fri 29/10/21	NA	NA	483	486,493	19 days		0%	
485	CCS-1190		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Sat 12/6/21	Sat 12/6/21	Sat 12/6/21	Sat 12/6/21	481FF-3 emons	486SS-3 emons	0 days		100%	
486	CCS-1300	KD1J	R.C. structure works			45 days	Mon 15/3/21	Mon 10/5/21	60 days	Sat 30/10/21	Tue 11/1/22	NA	NA	481,485SS-3 emons,484	51FF,488,487	20 days	2	0%	
487	CCS-1400	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 10/5/21	Mon 10/5/21	0 days	Tue 11/1/22	Tue 11/1/22	NA	NA	486	51FF	20 days		0%	
488	CCS-1500	SW1	ABWF works + BS works			90 days	Tue 11/5/21	Thu 28/8/21	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	189,141,486,522SS	56FF	405 days		0%	
489	CDS-0000		Deodorization System No.3A (7)*			149 days	Tue 16/11/21	Sat 21/5/22	105 days	Thu 5/8/21	Wed 8/12/21	NA	NA	NA	NA	90 days		0%	
490	CDS-2000		Excavation for Raft Footing (400cu.m)			20 days	Tue 16/11/21	Wed 8/12/21	20 days	Sat 14/8/21	Tue 7/9/21	NA	NA	491SF		1205 days		0%	
491	CDS-2008		Plate load test at bottom level of compacted general fill(2no.)			10 days	NA	NA	10 days	Tue 7/9/21	Sat 18/9/21	NA	NA	492SF	490SF	1195 days		0%	
492	CDS-2100		Soil Replacement (14 layers SRT)			0 days	NA	NA	42 edays	Sat 18/9/21	Sat 30/10/21	NA	NA	493SF	491SF	1425.42 edays		0%	
493	CDS-3000		Plate load test at bottom level of base slab (1no.)			4 days	Thu 9/12/21	Fri 24/12/21	4 days	Sat 30/10/21	Wed 3/11/21	NA	NA	484	494FF-3 emons,495,492SF,500FS	19 days		0%	
494	CDS-3900		Receiving of Civil Requirements from PM			0													

ID	Activity ID	Key Date	Task Name	Incliment Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
532	CAA-1000	KD2B	B-8A Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)			180 days	Wed 29/1/20	Thu 3/9/20	246 days	Mon 1/6/20	Fri 26/3/21	Mon 1/6/20	Fri 26/3/21	15,142,184	53FF	0 days		100%
533	CAA-1100		Change of pipe bridge design		(057)	0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20	Mon 1/6/20	Tue 10/11/20		536,537,538	0 days		100%
534	CAA-1200		Additional inspection pit to verify the connection point to existing (CE xxx)			0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20	Mon 1/6/20	Tue 10/11/20		536,537,538	0 days		100%
535	CAA-1300		Additional MBV installation (CE xxx)			0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20	Mon 1/6/20	Tue 10/11/20		536,537,538	0 days		100%
536	CAA-1400		Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)			180 days	Wed 29/1/20	Thu 3/9/20	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21	533,534,535	53FF	0 days		100%
537	CAA-1500	KD2B	Re-alignmnet of DN800 Temporary Air Main (CHTA) and Provision of FRP Staircases		064	0 days	NA	NA	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21	533,534,535	53FF	0 days		100%
538	CAA-1600	KD2B	Elevated Section of DN800 Temporary Air Main (CHTA) across existing Bioreactor's Distribution Chamber No. 2		062	0 days	NA	NA	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21	533,534,535	53FF,539	0 days		100%
539	CAA-2000	KD11	B7-A Alternation works for existing Power House			122 days	Fri 4/9/20	Sat 30/1/21	0 days	Wed 11/11/20	Fri 29/1/21	Wed 11/11/20	Fri 29/1/21	13FS-1 day,122,160,162,176,538	50FF,540FS+356 days	0 days		100%
540	CAA-2100	SW3	Additional works for Power House		224	0 days	NA	NA	60 days	Thu 14/4/22	Wed 29/6/22	NA	NA	539FS-356 days	58FF	570 days		0%
541	CAA-3000	SW3	Alternation works for existing Membrane Facilities Building No.1			360 days	Mon 1/2/21	Fri 22/4/22	360 days	Tue 19/4/22	Thu 6/7/23	NA	NA	14FS-1 day,175	58FF	269 days		0%
542	CUU-0000	*	External Underground Service, Utilities, Road/Drain			1091 days	Mon 24/2/20	Sat 28/10/23	1192 days	Mon 27/4/20	Mon 13/5/24	Mon 27/4/20	NA	16		-88 days		46%
543	CUU-1000	KD2A	Process Pipes CHR and CHS (approx. 93m twin DN900 D.I.)		33, 222, 255	325 days	Mon 24/2/20	Sat 27/3/21	379 days	Mon 27/4/20	Wed 4/8/21	Mon 27/4/20	NA	184,142	54SS+48 days,552SS+48 days,55	39 days		99%
544	CUU-1000a		Special Treatment for Removing the Existing Abandoned DN1800 By-pass Pipe and the Concrete Mass in Conflict with the Proposed Sheetpile wall for trenching work of Process Pipeline CHR and CHS		33	0 days	NA	NA	54 days	Sat 30/5/20	Mon 3/8/20	Sat 30/5/20	Mon 3/8/20			0 days		100%
545	CUU-1000b		Trenchless work for Process Pipes CHR and CHS (approx. 7m twin DN900 D.I.)		255	0 days	NA	NA	60 days	Thu 25/2/21	Mon 10/5/21	Thu 25/2/21	Mon 10/5/21		52FF	0 days		100%
546	CUU-1001		Removal of Abandoned DN1800 Concrete Pipe and Concrete Mass near Existing UV Disinfection Channel at CHR & CHS Process Pipe Works Area		033	0 days	NA	NA	43 days	Thu 2/7/20	Thu 20/8/20	Thu 2/7/20	Thu 20/8/20			0 days		100%
547	CUU-1002		Grouting for Sheung Shui Slaughter House Boundary Walls along CHR & CHS Pipes Works Area		222	0 days	NA	NA	20 days	Fri 23/10/20	Mon 16/11/20	Fri 23/10/20	Mon 16/11/20			0 days		100%
548	CUU-1004		Delay Delivery of DI pipes due to COVID-19		(076)	0 days	NA	NA	75 days	Tue 22/12/20	Thu 25/3/21	Tue 22/12/20	Thu 25/3/21		549FF	0 days		100%
549	CUU-2000	SW2	Process Pipes, including CHT, CHX, CHY, CHPS1&2, CHS S1&2, CHDO 1&2, CHPSW 1-8, CHTPS, CHPT1&2, CHTFT 1&2, CHTE, CHTD, Foam Collection & Surplus activated sludge rising main pipe			550 days	Mon 29/6/20	Fri 6/5/22	457 days	Mon 19/10/20	Fri 6/5/22	Mon 19/10/20	NA	184,142,548FF,543SS+48 days	57FF,555,550SS+250 days	63 days		51%
550	CUU-2100	SW2	Remaining Process Pipes			0 days	NA	NA	270 days	Mon 23/8/21	Fri 22/7/22	NA	NA	549SS+250 days	57FF	0 days		0%
551	CUU-3000	SW2	Remaining Drainage			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142	555,57FF	0 days	5	45%
552	CUU-4000	SW2	Remaining Sewerage			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142,543SS+48 days	555,57FF	0 days	5	45%
553	CUU-5000	SW2	Remaining Waterworks			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142,543SS+48 days	557FS+2 days,57FF	0 days	5	45%
554	CUU-6000	SW2	Remaining Cable Ducts			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142,543SS+48 days	555,57FF	0 days	5	45%
555	CUU-7000	KD3A	Roadworks			540 days	Fri 31/12/21	Sat 28/10/23	440 days	Mon 7/11/22	Mon 13/5/24	NA	NA	554,551,552,549,352,399,334,433	54FF,558SS+123 days	-88 days	5	0%
556	CLW-0000	*	Landscaping Works			854 days	Wed 11/5/22	Thu 27/3/25	946 days	Tue 26/7/22	Wed 24/9/25	NA	NA	16		0 days		0%
557	CLW-1000	KD3A	Irrigation System			120 days	Wed 11/5/22	Fri 30/9/22	120 days	Tue 26/7/22	Thu 15/12/22	NA	NA	553FS+2 days,184	558,54FF	1 day		0%
558	CLW-2000	SW3	Hard Landscaping Works			220 days	Mon 3/10/22	Mon 3/7/23	214 days	Tue 11/4/23	Sat 23/12/23	NA	NA	557,555SS+123 days	559,58FF	-88 days	5	0%
559	CLW-3000	SW3	Soft Landscaping Works			220 days	Tue 26/3/24	Tue 4/7/23	214 days	Wed 27/12/23	Tue 24/9/24	NA	NA	558,143	560,58FF	-88 days	5	0%
560	CLW-4000	DLP	Establishment Works (365 days)			294 days	Wed 27/3/24	Thu 27/3/25	365 days	Wed 25/9/24	Wed 24/9/25	NA	NA	559,143	59FF,60FF	0 days	5	0%



Activity ID	Activity Name	Remaining Duration	BL Start (DE/2018/03 R3)	BL Finish (DE/2018/03 R3)	Start	Finish	Total Float	Activity % Complete	2020				2021					
									Jan 16	Feb 17	Mar 18	Apr 19	Jan 16	Feb 17	Mar 18	Apr 19		
SWH - Main Works Stage 1 Sidestream Treatment Facilities & E&M Wo																		
Contract Data																		
Starting Date & Completion Date																		
AS000110	Whole Contract Period (1626 days from starting date)	1170	23-Oct-19	04-Apr-24	23-Oct-19 A	04-Apr-24	0	28.04%										
Access Date																		
AS001100	Portion C-1A (within 480 to 550 days from starting date)	94	23-Oct-19	24-Apr-21	23-Oct-19 A	24-Apr-21	0	82.91%										
AS001200	Portion C-2A (within 705 to 795 days from starting date)	339	23-Oct-19	25-Dec-21	23-Oct-19 A	25-Dec-21	0	57.36%										
AS001300	Portion C-2B (within 765 to 855 days from starting date)	399	23-Oct-19	23-Feb-22	23-Oct-19 A	23-Feb-22	0	53.33%										
AS001400	Portion C-2C (within 715 to 805 days from starting date)	349	23-Oct-19	04-Jan-22	23-Oct-19 A	04-Jan-22	0	56.65%										
AS001500	Portion C-2D (within 825 to 945 days from starting date)	489	23-Oct-19	24-May-22	23-Oct-19 A	24-May-22	0	48.25%										
AS001600	Portion C-3 (within 615 to 705 days from starting date)	249	23-Oct-19	26-Sep-21	23-Oct-19 A	26-Sep-21	0	64.68%										
AS001800	Portion B-2 (within 615 to 705 days from starting date) (SS by NCE-NCE-219)	249	23-Oct-19	26-Sep-21	23-Oct-19 A	26-Sep-21	0	64.68%										
Key Dates																		
AS002040	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	5	23-Oct-19	25-Jan-21	23-Oct-19 A	25-Jan-21*	0	98.92%										
AS002050	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1028	30-Sep-20	14-Nov-23	30-Sep-20 A	14-Nov-23*	0	9.9%										
Completion Date																		
Section 2 - Complete All Designs (exclude Sec. 1 & 3)																		
AS003200	Contract Duration of Section 2	145	23-Oct-19	14-Jun-21	23-Oct-19 A	14-Jun-21	0	75.87%										
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities																		
AS003300	Contract Duration of Section 3	1170	23-Oct-19	04-Apr-24	23-Oct-19 A	04-Apr-24	0	28.04%										
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1																		
AS003400	Contract Duration of Section 4	430	23-Oct-19	26-Mar-22	23-Oct-19 A	26-Mar-22	0	51.47%										
Section 5 - Complete all remaining Works (incl. T&C)																		
AS003500	Contract Duration of Section 5	1170	23-Oct-19	04-Apr-24	23-Oct-19 A	04-Apr-24	0	28.04%										
Preliminaries																		
Mobilisation																		
AS010100	Provision of Equipment / Facilities for the PM's Office	1169	23-Oct-19	03-Apr-24	23-Oct-19 A	03-Apr-24	1	28.06%										
AS010210	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	75	20-Nov-19	05-Apr-21	20-Nov-19 A	05-Apr-21	2	85.09%										
AS010220	Maintain Contractor's Site Office	1112	28-Nov-20	06-Feb-24	28-Nov-20 A	06-Feb-24	2	4.63%										
AS010230a	Maintain Contractor's Storage Area	1037	06-Apr-21	06-Feb-24	06-Apr-21	06-Feb-24	2	0%										
Site Preliminaries																		
AS010300	Provision of Insurance, Third Party Insurances & PII	1169	23-Oct-19	03-Apr-24	23-Oct-19 A	03-Apr-24	1	28.06%										
AS010400	Provision of 2 Contract Car for the Use of the PM & Supervisor	1169	23-Oct-19	03-Apr-24	23-Oct-19 A	03-Apr-24	1	28.06%										
AS010420a	Provision of 1 Electric Car for the Use of the PM & Supervisor	1169	22-Jan-20	03-Apr-24	22-Jan-20 A	03-Apr-24	1	23.79%										
AS010600	Provision of Photographs	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%										
AS010700	Provision of Environmental Mitigation Measures	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%										
AS010800	Provision of Air Pollution Abatement	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%										



File Name: DE/2018/03 3M 210120
 Layout: DE1803 (Progress -3M)
 TASK filters: 3 Months Rolling (1803 SWH), CE.

- Remaining Work
- Critical Activity
- ◆ Milestone
- ▬ Actual Progress
- ▬ Project Baseline Bar
- ◆ Baseline Milestone
- ◆ Actual Milestone

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
3 Months Rolling Programme (Based on RP Rev.5) as at 20 Jan 2021

Based on DE/2018/03 R3			
Date	Revision	Checked	Approved
20-Jan-21	Rev.0	LT	KM

Activity ID	Activity Name	Remaining Duration	BL Start (DE/2018/03 R3)	BL Finish (DE/2018/03 R3)	Start	Finish	Total Float	Activity % Complete	2021				
									2020	Jan 16	Feb 17	Mar 18	Apr 19
AS010900	Provision of Noise Pollution Abatment	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011000	Provision of Wastewater Pollution Abatement	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011100	Provision of Wastement Management	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011200	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011300	Provision of Environmental Management	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011400	Provision of Site Management Plan for Trip Ticket System	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011600	Provision of Systematic Risk Management	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011700	Provision of Site Liaison Group & Community Liaison Group	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS011800	Provision of 24-Hour Telephone Line	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
AS012400	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	1168	20-Nov-19	02-Apr-24	20-Nov-19 A	02-Apr-24	2	26.82%					
Site Upkeeping		1142	20-Nov-19	07-Mar-24	20-Nov-19 A	07-Mar-24	2						
AS013100	General Site Upkeeping of the Site	1142	20-Nov-19	07-Mar-24	20-Nov-19 A	07-Mar-24	2	27.26%					
Safety and Environmental Management		1142	10-Nov-19	07-Mar-24	10-Nov-19 A	07-Mar-24	2						
AS013200	Construction Health and Safety Plan	1142	10-Nov-19	07-Mar-24	10-Nov-19 A	07-Mar-24	2	27.72%					
Compliance with BEAM Requirements		1142	10-Nov-19	07-Mar-24	10-Nov-19 A	07-Mar-24	2						
AS013400	BEAM Plus	1142	10-Nov-19	07-Mar-24	10-Nov-19 A	07-Mar-24	2	27.72%					
CHP Building		30	06-Apr-21	06-May-21	26-Mar-21	25-Apr-21	221						
AS013450f	Material Submission & Design Calculation Approved	0		06-Apr-21	26-Mar-21	26-Mar-21	80	0%					
AS013460f	Issued approved submission & Calculation to Cinotech	30	07-Apr-21	06-May-21	27-Mar-21	25-Apr-21	221	0%					
BIM		1112	24-Mar-20	06-Feb-24	24-Mar-20 A	06-Feb-24	2						
AS011920a	Review & Update BIM Execution Plan & BIM Model	1112	24-Mar-20	06-Feb-24	24-Mar-20 A	06-Feb-24	2	21.41%					
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		127	18-May-20	27-May-21	25-Mar-20 A	27-May-21	12						
Major Plant & Materials Procurement		59	18-May-20	20-Mar-21	18-May-20 A	20-Mar-21	80						
AS023200	Procurement & PO for Biogas Booster and Transfer Pumps (S7)	26	17-Jul-20	15-Jan-21	17-Jul-20 A	15-Feb-21	22	85.79%					
AS023210	Procurement & PO for H2S Removal System (S7)	26	17-Jul-20	15-Jan-21	17-Jul-20 A	15-Feb-21	22	85.79%					
AS023240	Procurement & PO for Waste Gas Burning System (S9)	23	17-Jul-20	12-Jan-21	17-Jul-20 A	12-Feb-21	116	84.67%					
AS023340	Procurement & PO for 380V Switchboard (S17)	59	21-Nov-20	20-Mar-21	21-Nov-20 A	20-Mar-21	65	50.83%					
AS023380	Procurement & PO for Control & Monitoring System (S18)	26	17-Jul-20	15-Jan-21	17-Jul-20 A	15-Feb-21	113	85.79%					
AS023400	Procurement & PO for Lifting Appliances (S19)	14	18-May-20	03-Jan-21	18-May-20 A	03-Feb-21	47	93.94%					
AS023520	Procurement & PO for External Sludge Transfer Pump (S21)	10	18-May-20	30-Dec-20	18-May-20 A	30-Jan-21	129	95.59%					
AS023560	Procurement & PO for Ferric Chloride Storage Tank (S21)	24	17-Jul-20	13-Jan-21	17-Jul-20 A	13-Feb-21	115	86.74%					
AS023580	Procurement & PO for Ferric Chloride Dosing Pump (S21)	20	18-May-20	09-Jan-21	18-May-20 A	09-Feb-21	119	91.56%					
AS023600	Procurement & PO for Temporary Primary Sludge Pump (S21)	14	18-May-20	03-Jan-21	18-May-20 A	03-Feb-21	125	93.94%					
AS023620b	Procurement & PO for Genset	28	03-Jun-20	17-Jan-21	22-Jul-20 A	17-Feb-21	111	84.44%					
Design & Submission		127	18-May-20	27-May-21	25-Mar-20 A	27-May-21	12						
General Arrangement Drawings		59	18-May-20	20-Mar-21	26-May-20 A	20-Mar-21	80						



File Name: DE/2018/03 3M 210120
Layout: DE1803 (Progress -3M)
TASK filters: 3 Months Rolling (1803 SWH), CE.

- Remaining Work
- Critical Activity
- Milestone
- Actual Progress
- Project Baseline Bar
- Baseline Milestone
- Actual Milestone

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 Facilitieis
3 Months Rolling Programme (Based on RP Rev.5) as at 20 Jan 2021

Based on DE/2018/03 R3			
Date	Revision	Checked	Approved
20-Jan-21	Rev.0	LT	KM

Activity ID	Activity Name	Remaining Duration	BL Start (DE/2018/03 R3)	BL Finish (DE/2018/03 R3)	Start	Finish	Total Float	Activity % Complete	2021				
									2020	Jan 16	Feb 17	Mar 18	Apr 19
AS020120	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	14	08-Jun-20	03-Jan-21	26-May-20 A	03-Feb-21	104	93.72%					
AS020130	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	21	04-Jan-21	24-Jan-21	04-Feb-21	24-Feb-21	104	0%					
AS020140a	Prepare & Submit General Arrangement Drawings (remaining)	0	18-May-20	09-Jan-21	17-Jul-20 A	15-Jan-21 A		100%					
AS020150a	Review & Comment on General Arrangement Drawings by PM (remaining)	10	10-Jan-21	30-Jan-21	05-Sep-20 A	30-Jan-21	10	52.38%					
AS020160a	Revise & Re-submit General Arrangement Drawings (remaining)	28	31-Jan-21	27-Feb-21	31-Jan-21	27-Feb-21	10	0%					
AS020170a	Review & Accept of General Arrangement Drawings by PM (remaining)	21	28-Feb-21	20-Mar-21	28-Feb-21	20-Mar-21	10	0%					
Civil & Dimensional / Tolerance Requirement Drawings		62	23-Jun-20	23-Mar-21	26-May-20 A	23-Mar-21	77						
AS020220	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	21	23-Jun-20	10-Jan-21	26-May-20 A	10-Feb-21	97	90.87%					
AS020230	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	11-Jan-21	31-Jan-21	11-Feb-21	03-Mar-21	97	0%					
AS020300	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	0	15-Sep-20	12-Jan-21	15-Sep-20 A	15-Jan-21 A		100%					
AS020310	Review & Comment on Civil Requirement Drawings by PM (remaining)	13	13-Jan-21	02-Feb-21	28-Sep-20 A	02-Feb-21	77	38.1%					
AS020320	Revise & Re-submit Civil Requirement Drawings (remaining)	28	03-Feb-21	02-Mar-21	03-Feb-21	02-Mar-21	77	0%					
AS020330	Review & Accept of Civil Requirement Drawings by PM (remaining)	21	03-Mar-21	23-Mar-21	03-Mar-21	23-Mar-21	77	0%					
Electrical Schematic Drawings		46	24-Jul-20	04-Feb-21	25-Mar-20 A	07-Mar-21	93						
AS021240	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	25	12-Aug-20	14-Jan-21	09-May-20 A	14-Feb-21	93	90.04%					
AS021250	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	15-Jan-21	04-Feb-21	15-Feb-21	07-Mar-21	93	0%					
AS021320	Revise & Re-submit Elec. Schematic Drawings (remaining)	25	24-Jul-20	14-Jan-21	25-Mar-20 A	14-Feb-21	93	91.55%					
AS021330	Review & Accept of Elec. Schematic Drawings by PM (remaining)	21	15-Jan-21	04-Feb-21	15-Feb-21	07-Mar-21	93	0%					
Sludge Screening (SSc)		96	02-Jul-20	26-Apr-21	02-Jul-20 A	26-Apr-21	22						
AS022200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	11	02-Jul-20	31-Dec-20	02-Jul-20 A	31-Jan-21	13	92.67%					
AS022210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	01-Jan-21	21-Jan-21	01-Feb-21	21-Feb-21	13	0%					
AS022220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	22-Jan-21	18-Feb-21	22-Feb-21	21-Mar-21	13	0%					
AS022230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	19-Feb-21	11-Mar-21	22-Mar-21	11-Apr-21	13	0%					
AS022300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	47	10-Sep-20	08-Mar-21	10-Sep-20 A	08-Mar-21	22	73.89%					
AS022310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	09-Mar-21	29-Mar-21	09-Mar-21	29-Mar-21	22	0%					
AS022320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	30-Mar-21	26-Apr-21	30-Mar-21	26-Apr-21	22	0%					
Sludge Thickening (STh)		96	02-Jul-20	26-Apr-21	02-Jul-20 A	26-Apr-21	22						
AS032200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	11	02-Jul-20	31-Dec-20	02-Jul-20 A	31-Jan-21	13	93.89%					
AS032210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	01-Jan-21	21-Jan-21	01-Feb-21	21-Feb-21	13	0%					
AS032220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	22-Jan-21	18-Feb-21	22-Feb-21	21-Mar-21	13	0%					
AS032230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	19-Feb-21	11-Mar-21	22-Mar-21	11-Apr-21	13	0%					
AS032300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	47	10-Sep-20	08-Mar-21	10-Sep-20 A	08-Mar-21	22	73.89%					
AS032310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	09-Mar-21	29-Mar-21	09-Mar-21	29-Mar-21	22	0%					
AS032320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	30-Mar-21	26-Apr-21	30-Mar-21	26-Apr-21	22	0%					
Thermal Hydrolysis Process (THP)		65	18-May-20	14-Apr-21	18-May-20 A	26-Mar-21	74						
AS042200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	18-May-20	13-Jan-21	18-May-20 A	15-Jan-21 A		100%					
AS042210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	16	14-Jan-21	03-Feb-21	16-Jan-21 A	05-Feb-21	29	23.81%					
AS042220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	04-Feb-21	03-Mar-21	06-Feb-21	05-Mar-21	29	0%					
AS042230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	04-Mar-21	24-Mar-21	06-Mar-21	26-Mar-21	29	0%					



File Name: DE/2018/03 3M 210120
 Layout: DE1803 (Progress -3M)
 TASK filters: 3 Months Rolling (1803 SWH), CE.

- Remaining Work
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- ◆ Baseline Milestone
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Activity ID	Activity Name	Remaining Duration	BL Start (DE/2018/03 R3)	BL Finish (DE/2018/03 R3)	Start	Finish	Total Float	Activity % Complete	2021				
									2020	Jan 16	Feb 17	Mar 18	Apr 19
AS042310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	13-Jan-21	02-Feb-21	08-Dec-20 A	11-Jan-21 A		100%					
AS042320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	19	03-Feb-21	02-Mar-21	12-Jan-21 A	08-Feb-21		99	32.14%				
AS042330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	25-Mar-21	14-Apr-21	09-Feb-21	01-Mar-21		99	0%				
Sludge Digestion (SDI)		107	01-Aug-20	07-May-21	01-Aug-20 A	07-May-21	10						
AS052200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	27	01-Aug-20	27-Jan-21	01-Aug-20 A	16-Feb-21		20	85%				
AS052210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	17-Feb-21	09-Mar-21		20	0%				
AS052220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	10-Mar-21	06-Apr-21		20	0%				
AS052230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	07-Apr-21	27-Apr-21		20	0%				
AS052300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	37	31-Aug-20	26-Feb-21	31-Aug-20 A	26-Feb-21		10	79.44%				
AS052310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Feb-21	19-Mar-21	27-Feb-21	19-Mar-21		10	0%				
AS052320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	20-Mar-21	16-Apr-21	20-Mar-21	16-Apr-21		10	0%				
AS052330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Apr-21	07-May-21	17-Apr-21	07-May-21		10	0%				
Sludge Dewatering (SDe)		89	02-Jul-20	19-Apr-21	02-Jul-20 A	19-Apr-21	29						
AS062200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	11	02-Jul-20	31-Dec-20	02-Jul-20 A	31-Jan-21		13	93.89%				
AS062210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	01-Jan-21	21-Jan-21	01-Feb-21	21-Feb-21		13	0%				
AS062220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	22-Jan-21	18-Feb-21	22-Feb-21	21-Mar-21		13	0%				
AS062230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	19-Feb-21	11-Mar-21	22-Mar-21	11-Apr-21		13	0%				
AS062300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	40	03-Sep-20	01-Mar-21	31-Aug-20 A	01-Mar-21		29	77.78%				
AS062310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	02-Mar-21	22-Mar-21	02-Mar-21	22-Mar-21		29	0%				
AS062320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	23-Mar-21	19-Apr-21	23-Mar-21	19-Apr-21		29	0%				
Biogas Storage & Pre-Treatment (BSPT)		108	31-Aug-20	08-May-21	31-Aug-20 A	08-May-21	10						
AS072200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	27	31-Aug-20	27-Jan-21	31-Aug-20 A	16-Feb-21		21	82%				
AS072210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	17-Feb-21	09-Mar-21		21	0%				
AS072220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	10-Mar-21	06-Apr-21		21	0%				
AS072230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	07-Apr-21	27-Apr-21		21	0%				
AS072300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	59	22-Oct-20	20-Mar-21	22-Oct-20 A	20-Mar-21		10	60.67%				
AS072310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	21-Mar-21	10-Apr-21	21-Mar-21	10-Apr-21		10	0%				
AS072320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	11-Apr-21	08-May-21	11-Apr-21	08-May-21		10	0%				
Combined Heat & Power Generation (CHP)		75	18-May-20	06-Apr-21	18-May-20 A	05-Apr-21	60						
AS082200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	5	18-May-20	05-Jan-21	18-May-20 A	25-Jan-21		19	97.85%				
AS082210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	06-Jan-21	26-Jan-21	26-Jan-21	15-Feb-21		19	0%				
AS082220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	27-Jan-21	23-Feb-21	16-Feb-21	15-Mar-21		19	0%				
AS082230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	24-Feb-21	16-Mar-21	16-Mar-21	05-Apr-21		19	0%				
AS082300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	12	17-Jul-20	12-Jan-21	17-Jul-20 A	01-Feb-21		70	93.33%				
AS082310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	9	13-Jan-21	02-Feb-21	03-Aug-20 A	10-Feb-21		70	57.14%				
AS082320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	23	03-Feb-21	02-Mar-21	12-Aug-20 A	05-Mar-21		70	17.86%				
AS082330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Mar-21	06-Apr-21	22-Dec-20 A	26-Mar-21		70	0%				
Waste Gas Burning System (WGB)		106	04-Nov-20	06-May-21	15-Oct-20 A	06-May-21	12						
AS092200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	12	04-Nov-20	01-Feb-21	15-Oct-20 A	01-Feb-21		12	86.67%				



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 Layout: DE1803 (Progress -3M)
 TASK filters: 3 Months Rolling (1803 SWH), CE.

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									2020	Jan 16	Feb 17	Mar 18	Apr 19
AS092210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	02-Feb-21	22-Feb-21	02-Feb-21	22-Feb-21	12	0%					
AS092220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	23-Feb-21	22-Mar-21	23-Feb-21	22-Mar-21	12	0%					
AS092230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	23-Mar-21	12-Apr-21	23-Mar-21	12-Apr-21	12	0%					
AS092300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	57	19-Dec-20	18-Mar-21	29-Nov-20 A	18-Mar-21	12	36.67%					
AS092310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	19-Mar-21	08-Apr-21	19-Mar-21	08-Apr-21	12	0%					
AS092320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	09-Apr-21	06-May-21	09-Apr-21	06-May-21	12	0%					
Plant Service Water System (PSW)		101	16-Aug-20	01-May-21	16-Aug-20 A	01-May-21	17						
AS122200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	12	16-Aug-20	12-Jan-21	16-Aug-20 A	01-Feb-21	12	92%					
AS122210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	13-Jan-21	02-Feb-21	02-Feb-21	22-Feb-21	12	0%					
AS122220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	03-Feb-21	02-Mar-21	23-Feb-21	22-Mar-21	12	0%					
AS122230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	03-Mar-21	23-Mar-21	23-Mar-21	12-Apr-21	12	0%					
AS122300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	52	15-Oct-20	13-Mar-21	15-Oct-20 A	13-Mar-21	17	65.33%					
AS122310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Mar-21	03-Apr-21	14-Mar-21	03-Apr-21	17	0%					
AS122320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	04-Apr-21	01-May-21	04-Apr-21	01-May-21	17	0%					
Surplus Activated Sludge Pumping Station (SAS)		99	01-Aug-20	25-Apr-21	01-Aug-20 A	29-Apr-21	40						
AS142200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	29	01-Aug-20	30-Jan-21	01-Aug-20 A	18-Feb-21	40	85.64%					
AS142210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	31-Jan-21	20-Feb-21	19-Feb-21	11-Mar-21	40	0%					
AS142220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	21-Feb-21	20-Mar-21	12-Mar-21	08-Apr-21	40	0%					
AS142230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	21-Mar-21	10-Apr-21	09-Apr-21	29-Apr-21	40	0%					
AS142300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	25	16-Aug-20	14-Feb-21	16-Aug-20 A	14-Feb-21	44	86.34%					
AS142310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	15-Feb-21	07-Mar-21	15-Feb-21	07-Mar-21	44	0%					
AS142320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	08-Mar-21	04-Apr-21	08-Mar-21	04-Apr-21	44	0%					
AS142330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	05-Apr-21	25-Apr-21	05-Apr-21	25-Apr-21	44	0%					
Control and Monitoring System		107	30-Oct-20	07-May-21	30-Oct-20 A	07-May-21	32						
AS182200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	27	30-Oct-20	27-Jan-21	30-Oct-20 A	16-Feb-21	42	70%					
AS182210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	28-Jan-21	17-Feb-21	17-Feb-21	09-Mar-21	42	0%					
AS182220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	18-Feb-21	17-Mar-21	10-Mar-21	06-Apr-21	42	0%					
AS182230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Mar-21	07-Apr-21	07-Apr-21	27-Apr-21	42	0%					
AS182300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	37	14-Dec-20	26-Feb-21	14-Dec-20 A	26-Feb-21	32	50.67%					
AS182310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	27-Feb-21	19-Mar-21	27-Feb-21	19-Mar-21	32	0%					
AS182320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	20-Mar-21	16-Apr-21	20-Mar-21	16-Apr-21	32	0%					
AS182330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	17-Apr-21	07-May-21	17-Apr-21	07-May-21	32	0%					
Lifting Appliances		92	17-Jul-20	24-Apr-21	17-Jul-20 A	22-Apr-21	32						
AS192200	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	29	17-Jul-20	30-Jan-21	17-Jul-20 A	18-Feb-21	32	85.35%					
AS192210	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	31-Jan-21	20-Feb-21	19-Feb-21	11-Mar-21	32	0%					
AS192220	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	21	21-Feb-21	13-Mar-21	12-Mar-21	01-Apr-21	32	0%					
AS192230	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	14-Mar-21	03-Apr-21	02-Apr-21	22-Apr-21	32	0%					
AS192300	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	10	30-Oct-20	30-Jan-21	30-Oct-20 A	30-Jan-21	42	89.25%					
AS192310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	31-Jan-21	20-Feb-21	31-Jan-21	20-Feb-21	42	0%					



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AS192320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	21	21-Feb-21	13-Mar-21	21-Feb-21	13-Mar-21	42	0%				
AS192330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	04-Apr-21	24-Apr-21	23-Mar-21	12-Apr-21	42	0%				
Building Services		97	03-Oct-20	27-Apr-21	02-Jul-20 A	27-Apr-21	42					
AS201100	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	89	21-Nov-20	19-Apr-21	21-Nov-20 A	19-Apr-21	50	40.67%				
AS201200	Submit & Accept BS Works Design & Dwgs for CHP Building	82	14-Nov-20	12-Apr-21	14-Nov-20 A	12-Apr-21	57	45.33%				
AS201300	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	89	21-Nov-20	19-Apr-21	21-Nov-20 A	19-Apr-21	50	40.67%				
AS201500	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	87	19-Nov-20	17-Apr-21	02-Jul-20 A	17-Apr-21	52	42%				
AS201700	Submit & Accept BS Works Design & Dwgs for Other Facilities	97	29-Nov-20	27-Apr-21	29-Nov-20 A	27-Apr-21	42	35.33%				
AS201800	Submit & Accept BS Works Design & Dwgs for FS Installation	70	03-Oct-20	31-Mar-21	02-Jul-20 A	31-Mar-21	69	61.11%				
AS201900	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	90	28-Jan-21	27-Apr-21	28-Jan-21	27-Apr-21	42	0%				
Miscellaneous		127	05-Oct-20	27-May-21	05-Oct-20 A	27-May-21	12					
AS211100	Submit & Accept Design & Dwgs for DO System	112	14-Dec-20	12-May-21	14-Dec-20 A	12-May-21	27	25.33%				
AS211200	Submit & Accept Design & Dwgs for Sewage Pumping Station	100	30-Oct-20	30-Apr-21	30-Oct-20 A	30-Apr-21	39	45.36%				
AS211300	Submit & Accept Design & Dwgs for Process Water Pumping System	70	05-Oct-20	31-Mar-21	05-Oct-20 A	31-Mar-21	69	60.67%				
AS211400	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	22	14-Nov-20	11-Feb-21	14-Nov-20 A	11-Feb-21	117	75.56%				
AS211500	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	22	14-Nov-20	11-Feb-21	14-Nov-20 A	11-Feb-21	117	75.56%				
AS211600	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	52	14-Nov-20	13-Mar-21	14-Nov-20 A	13-Mar-21	87	56.67%				
AS211700	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	73	04-Jan-21	03-Apr-21	04-Jan-21 A	03-Apr-21	66	18.89%				
AS211800	Submit & Accept Design & Dwgs for Gas Detection System	127	29-Nov-20	27-May-21	29-Nov-20 A	27-May-21	12	29.44%				
AS211900	Submit & Accept Design & Dwgs for CCTV System	127	29-Nov-20	27-May-21	29-Nov-20 A	27-May-21	12	29.44%				
Section 3 - Complete Design, Construction & T&C for Sidestream Fac		1144	06-Jun-20	09-Mar-24	07-Jun-20 A	09-Mar-24	0					
Major Subcontractor / Supplier Procurement		106	26-Oct-20	22-Mar-21	26-Oct-20 A	06-May-21	0					
Civil & Building Contractor		106	26-Oct-20	22-Mar-21	26-Oct-20 A	06-May-21	0					
For Pre-drilling & Post-drilling		53	26-Oct-20	22-Mar-21	26-Oct-20 A	14-Mar-21	39					
AS512430e	Submit Tender proposal of Civil Contractor (Pre-drilling & Post-drilling)	0	26-Oct-20	31-Dec-20	26-Oct-20 A	06-Jan-21 A		100%				
AS512440e	Review & Accept the Tender proposal of Civil Contractor (Pre-drilling & Post-drilling)	7	01-Jan-21	21-Jan-21	07-Jan-21 A	27-Jan-21	39	66.67%				
AS512450e	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	14	22-Jan-21	11-Feb-21	28-Jan-21	10-Feb-21	39	0%				
AS512460e	Submission of Tender Report	4	12-Feb-21	18-Feb-21	11-Feb-21	14-Feb-21	39	0%				
AS512470e	Review & Accept the Tender Report by PM	21	19-Feb-21	11-Mar-21	15-Feb-21	07-Mar-21	39	0%				
AS512480e	Contract Preparation	3	12-Mar-21	14-Mar-21	08-Mar-21	10-Mar-21	39	0%				
AS512490e	Civil Contractor (Pre-drilling & Post-drilling) Award	1	15-Mar-21	15-Mar-21	11-Mar-21	11-Mar-21	39	0%				
AS512500e	Mobilisation	3	16-Mar-21	22-Mar-21	12-Mar-21	14-Mar-21	39	0%				
For Piling		89			04-Jan-21 A	19-Apr-21	0					
AS512510f	Submit Tender proposal of Civil Contractor (Piling)	22			04-Jan-21 A	11-Feb-21	0	43.59%				
AS512520f	Review & Accept the Tender proposal of Civil Contractor (Pre-drilling & Post-drilling)	25			12-Feb-21	08-Mar-21	0	0%				
AS512530f	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	14			09-Mar-21	22-Mar-21	0	0%				
AS512540f	Submission of Tender Report	7			23-Mar-21	29-Mar-21	0	0%				
AS512550f	Review & Accept the Tender Report by PM	21			30-Mar-21	19-Apr-21	0	0%				
For Main Civil Works		51			17-Mar-21	06-May-21	0					



File Name: DE/2018/03 3M 210120
 Layout: DE1803 (Progress -3M)
 TASK filters: 3 Months Rolling (1803 SWH), CE.

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- ▬ Actual Progress
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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
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3 Months Rolling Programme (Based on RP Rev.5) as at 20 Jan 2021

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Activity ID	Activity Name	Remaining Duration	BL Start (DE/2018/03 R3)	BL Finish (DE/2018/03 R3)	Start	Finish	Total Float	Activity % Complete	2021				
									2020	Jan 16	Feb 17	Mar 18	Apr 19
AS512590f	Submit Tender proposal of Civil Contractor (Piling)	30			17-Mar-21*	15-Apr-21	0	0%					
AS512600f	Review & Accept the Tender proposal of Civil Contractor (Pre-drilling & Post-drilling)	21			16-Apr-21	06-May-21	0	0%					
Design & Submission		386	06-Jun-20	14-Jan-22	07-Jun-20 A	10-Feb-22	243						
Architectural		386	03-Nov-20	14-Jan-22	03-Nov-20 A	10-Feb-22	243						
AS160120	Revise & Re-submit Building Layout Plan	0	28-Nov-20	25-Dec-20	28-Nov-20 A	24-Dec-20 A		100%					
AS160130	Review & Accept of Building Layout Plan by PM	15	26-Dec-20	15-Jan-21	25-Dec-20 A	04-Feb-21	77	28.57%					
AS160190e	Cooordination Meeting with DSD (Employer) for the Architectural Drawing	0		18-Feb-21		17-Mar-21	243	0%					
AS160220	Revise & Re-submit Architectural Design / Drawings	0	28-Nov-20	25-Dec-20	28-Nov-20 A	24-Dec-20 A		100%					
AS160230	Review & Accept of Architectural Design / Drawings by PM	15	26-Dec-20	15-Jan-21	25-Dec-20 A	04-Feb-21	284	28.57%					
AS160240	Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD	330	19-Feb-21	14-Jan-22	18-Mar-21	10-Feb-22	243	0%					
AS160500	Prepare & Submit ABWF Works Drawings	0	03-Nov-20	10-Dec-20	03-Nov-20 A	24-Dec-20 A		100%					
AS160510	Review & Comment on ABWF Works Drawings by PM	7	11-Dec-20	31-Dec-20	25-Dec-20 A	27-Jan-21	243	66.67%					
AS160520	Revise & Re-submit ABWF Works Drawings	28	01-Jan-21	28-Jan-21	28-Jan-21	24-Feb-21	243	0%					
AS160530	Review & Accept of ABWF Works Drawings by PM	21	29-Jan-21	18-Feb-21	25-Feb-21	17-Mar-21	243	0%					
Civil / Structural		112	24-Oct-20	12-Mar-21	24-Oct-20 A	12-May-21	190						
AS160260e	Revise & Re-submit Loading Plan to ICE	7	24-Oct-20	27-Nov-20	24-Oct-20 A	27-Jan-21	11	89.23%					
AS160270e	Review & Accept of Loading Plan by ICE	7	28-Nov-20	04-Dec-20	28-Jan-21	03-Feb-21	11	0%					
AS160280e	Prepare & Submit Loading Plan to PM	7	05-Dec-20	11-Dec-20	04-Feb-21	10-Feb-21	11	0%					
AS160290e	Review & Accept of Loading Plan by PM & DSD (incl. BCM)	60	12-Dec-20	09-Feb-21	11-Feb-21	11-Apr-21	11	0%					
AS160320	Revise & Re-submit Foundation Design / Drawings to ICE & PM	4	28-Nov-20	11-Dec-20	28-Nov-20 A	24-Jan-21	0	71.43%					
AS160330	Review & Accept of Foundation Design / Drawings by ICE & PM	21	12-Dec-20	01-Jan-21	25-Jan-21	14-Feb-21	0	0%					
AS160340e	Prepare & Submit Foundation Design / Drawings to DSD (incl. BCM)	7	02-Jan-21	08-Jan-21	15-Feb-21	21-Feb-21	0	0%					
AS160350e	Review & Accept of Foundation Design / Drawings by DSD (incl. BCM)	60	09-Jan-21	09-Mar-21	22-Feb-21	22-Apr-21	0	0%					
AS160410	Review & Comment on Substructure / Superstructure Design / Drawings by ICE & PM	10	06-Nov-20	30-Nov-20	06-Nov-20 A	30-Jan-21	72	81.82%					
AS160420	Revise & Re-submit Substructure / Superstructure Design / Drawings to ICE & PM	14	01-Dec-20	14-Dec-20	31-Jan-21	13-Feb-21	190	0%					
AS160430	Review & Accept of Substructure / Superstructure Design / Drawings by ICE & PM	21	15-Dec-20	04-Jan-21	14-Feb-21	06-Mar-21	190	0%					
AS160440e	Prepare & Submit Substructure / Superstructure Design / Drawings to DSD (incl. BCM)	7	05-Jan-21	11-Jan-21	07-Mar-21	13-Mar-21	190	0%					
AS160450e	Review & Accept of Substructure / Superstructure Design / Drawings by DSD (incl. BCM)	60	12-Jan-21	12-Mar-21	14-Mar-21	12-May-21	190	0%					
Process Design		35	11-Jan-21	14-Feb-21	09-Dec-20 A	24-Feb-21	413						
AS512240e	Revise & Re-submit E&M Works (Process) Design Drawings	14	11-Jan-21	24-Jan-21	09-Dec-20 A	03-Feb-21	413	0%					
AS512250e	Review & Accept of E&M Works (Process) Design Drawings by PM	21	25-Jan-21	14-Feb-21	04-Feb-21	24-Feb-21	413	0%					
E&M Design		85	06-Jun-20	28-Feb-21	07-Jun-20 A	15-Apr-21	217						
AS151100	Prepare & Submit General Arrangement Drawings	15	06-Jun-20	20-Dec-20	07-Jun-20 A	04-Feb-21	212	93.39%					
AS151110	Review & Comment on General Arrangement Drawings by PM	21	21-Dec-20	10-Jan-21	05-Feb-21	25-Feb-21	217	0%					
AS151120	Revise & Re-submit General Arrangement Drawings	28	11-Jan-21	07-Feb-21	26-Feb-21	25-Mar-21	217	0%					
AS151130	Review & Accept of General Arrangement Drawings by PM	21	08-Feb-21	28-Feb-21	26-Mar-21	15-Apr-21	217	0%					
BS		46	01-Feb-21	18-May-21	11-Dec-20 A	07-Mar-21	467						
AS201405e	Review & Comment on BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	11	24-Mar-21	13-Apr-21	11-Dec-20 A	31-Jan-21	467	47.62%					
AS201410e	Revise & Re-submit BS Works Design & Dwgs for Sidestream Treatment Facilities	14	14-Apr-21	27-Apr-21	01-Feb-21	14-Feb-21	467	0%					



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Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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Activity ID	Activity Name	Remaining Duration	BL Start (DE/2018/03 R3)	BL Finish (DE/2018/03 R3)	Start	Finish	Total Float	Activity % Complete	2021				
									2020	Jan 16	Feb 17	Mar 18	Apr 19
AS201415e	Review & Accept of BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	28-Apr-21	18-May-21	15-Feb-21	07-Mar-21	467	0%					
AS201430e	Review & Comment on FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	0	01-Feb-21	21-Feb-21	11-Dec-20 A	19-Jan-21 A		100%					
AS201440e	Revise & Re-submit FS Works Design & Dwgs for Sidestream Treatment Facilities	14	22-Feb-21	07-Mar-21	20-Jan-21 A	03-Feb-21	73	0%					
AS201450e	Review & Accept of FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	08-Mar-21	28-Mar-21	04-Feb-21	24-Feb-21	73	0%					
Major Plant & Materials Procurement		387	23-Mar-21	13-Apr-22	23-Mar-21	13-Apr-22	0						
Civil & Structure		45	23-Mar-21	06-May-21	23-Mar-21	06-May-21	0						
AS153130e	Procurement, Manufacture & Delivery of Piling	45	23-Mar-21	06-May-21	23-Mar-21	06-May-21	0	0%					
E&M Process		360	19-Apr-21	13-Apr-22	19-Apr-21	13-Apr-22	0						
AS153100	Procurement, Manufacture & Delivery of Deammonification Sidestream Treatment Facilities	360	19-Apr-21	13-Apr-22	19-Apr-21	13-Apr-22	0	0%					
Ground Settlement, Tilting & Utility Monitoring		1144	12-Dec-20	09-Mar-24	12-Dec-20 A	09-Mar-24	0						
AS153200f	Ground Settlement, Tilting & Utility Monitoring	1144	12-Dec-20	09-Mar-24	12-Dec-20 A	09-Mar-24	0	3.38%					
Civil Works Construction		25	12-Dec-20	14-Feb-21	12-Dec-20 A	14-Feb-21	67						
AS161120	Ground Investigation	25	12-Dec-20	14-Feb-21	12-Dec-20 A	14-Feb-21	67	61.54%					
Statutory Submission / Inspection (FSD)		90	12-Jan-21	11-Apr-21	21-Jan-21	20-Apr-21	32						
AS201440	Prepare & Submit GBP for FSD approval	90	12-Jan-21	11-Apr-21	21-Jan-21*	20-Apr-21	32	0%					
Section 4 - Complete Construction & T&C for UV System No.1 & EP S		271	18-Apr-20	07-Nov-21	18-Apr-20 A	18-Oct-21	100						
Major Plant & Materials Fabrication & Delivery		271	18-Apr-20	07-Nov-21	18-Apr-20 A	18-Oct-21	100						
AS103160	Procurement & PO for FRP Cover (S11)	31	18-Apr-20	31-Jan-21	18-Apr-20 A	20-Feb-21	100	89.24%					
AS103320	Procurement & PO for Elec. Materials	31	18-Jul-20	31-Jan-21	18-Jul-20 A	20-Feb-21	168	84.34%					
AS104100	Fabrication of UV Disinfection System (S10)	138	18-Jan-21	16-Jul-21	10-Dec-20 A	07-Jun-21	53	23.33%					
AS104120	Fabrication & Delivery of Lift-up Pumps (S11)	142	11-Jan-21	09-Jul-21	14-Dec-20 A	11-Jun-21	42	21.11%					
AS104140	Fabrication & Delivery of Transfer Pumps (S13)	149	26-Feb-21	24-Aug-21	21-Dec-20 A	18-Jun-21	81	17.22%					
AS104160	Fabrication & Delivery of FRP Cover (S11)	240	01-Feb-21	30-Jul-21	21-Feb-21*	18-Oct-21	100	0%					
AS104180	Fabrication & Delivery of EOT Cranes (2T & 5T) (S19)	120	12-Dec-20	10-May-21	21-Jan-21*	20-May-21	4	0%					
AS104200	Fabrication & Delivery of Stoplogs (S21)	234	11-Feb-21	07-Nov-21	16-Dec-20 A	11-Sep-21	91	13.33%					
AS104220	Fabrication & Delivery of Penstocks (S21)	267	11-Feb-21	07-Nov-21	18-Jan-21 A	14-Oct-21	58	1.11%					
AS104300	Fabrication & Delivery of Pipeworks & Associated Valves	180	11-Jan-21	09-Jul-21	21-Jan-21*	19-Jul-21	4	0%					
AS104400	Fabrication & Delivery of FS System (S20)	180	18-Apr-21	14-Oct-21	18-Apr-21*	14-Oct-21	10	0%					
Section 5 - Complete all remaining Works (incl. T&C)		386	18-Jan-21	19-Mar-22	30-Jan-21	19-Feb-22	704						
Fabrication, FAT & Delivery of Major Plant & Materials		386	18-Jan-21	19-Mar-22	30-Jan-21	19-Feb-22	383						
AS023290	Procurement & PO for Pipeworks & Associated Valves	120	29-Jan-21	28-May-21	30-Jan-21	29-May-21	10	0%					
AS023620	Procurement & PO for Elec. Materials	90	13-Apr-21	11-Jul-21	13-Apr-21	11-Jul-21	12	0%					
AS501880	Fabrication & Delivery of Process Water Pump (S21)	300	01-Apr-21	25-Jan-22	01-Apr-21	25-Jan-22	300	0%					
AS501920	Fabrication & Delivery of THP Cooling Pump (S21)	360	25-Mar-21	19-Mar-22	25-Feb-21	19-Feb-22	383	0%					
AS501990b	Fabrication & Delivery of Genset	360	18-Jan-21	12-Jan-22	18-Feb-21	12-Feb-22	252	0%					
Statutory Submission / Inspection		306	21-Mar-21	31-Jan-22	21-Mar-21	20-Jan-22	734						
EPD Submission / Inspection		300	07-Apr-21	31-Jan-22	27-Mar-21	20-Jan-22	734						
AS509520a	EPD Submission & Approval for Air Pollution Control - CHP, CAPC, Flare	300	07-Apr-21	31-Jan-22	27-Mar-21	20-Jan-22	734	0%					
EMSD Submission / Inspection		180	21-Mar-21	16-Sep-21	21-Mar-21	16-Sep-21	598						
AS509370b	BEE0 Stage one: Submit EE1 & EE-SU to EMSD	60	18-Apr-21	16-Jun-21	18-Apr-21	16-Jun-21	250	0%					
AS509380b	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	180	21-Mar-21	16-Sep-21	21-Mar-21	16-Sep-21	598	0%					
AS509400a	Application for Construction Approval of Notifiable Gas Installation (Form 104)	180	21-Mar-21	16-Sep-21	21-Mar-21	16-Sep-21	598	0%					



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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
3 Months Rolling Programme (Based on RP Rev.5) as at 20 Jan 2021

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Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names	2019	2020	2021	2022	2023	2024	
1	1.1	DE/2018/04 - Contract Master Programme	1990 days	Mon 12/2/19	Tue 5/13/25	Mon 12/2/19	Tue 5/13/25	Mon 12/2/19	Tue 5/13/25	0 days										
2	2.1.1	Starting Date	0 days	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	0 days		355+1625 ed.								
3	3.1.2	Completion Date	0 days	Tue 5/14/24	Tue 5/14/24	Tue 5/14/24	Tue 5/14/24	Tue 5/14/24	Tue 5/14/24	0 days		255+1625 edays,39 4								
4	4.1.3	Defect Dates with respect to Completion Date	365 days	Tue 5/14/24	Tue 5/13/25	Tue 5/14/24	Tue 5/13/25	Tue 5/14/24	Tue 5/13/25	0 days										
5	5.2	Access Dates	1599 days	Mon 12/2/19	Thu 4/18/24	Mon 12/2/19	Thu 4/18/24	Mon 12/2/19	Thu 4/18/24	0 days										
6	6.2.1	Access Date for Works Area WA1-C	90 days	Mon 12/2/19	Sat 2/29/20	Mon 12/2/19	Sat 2/29/20	Mon 12/2/19	Sat 2/29/20	0 days										
7	7.2.2	Access Date for Works Area WA2-C	90 days	Mon 12/2/19	Sat 2/29/20	Mon 12/2/19	Sat 2/29/20	Mon 12/2/19	Sat 2/29/20	0 days										
8	8.2.3	Access Date for Portion B-2, Inlet Works No. 1	150 edays	Tue 6/28/22	Fri 11/25/22	Tue 6/28/22	Fri 11/25/22	Tue 6/28/22	Fri 11/25/22	0 edays										
9	9.2.4	Access Date for Portion B-3, PST No. 1~4	90 edays	Sat 1/14/23	Fri 4/14/23	Sat 1/14/23	Fri 4/14/23	Sat 1/14/23	Fri 4/14/23	0 edays										
10	10.2.5	Access Date for Portion B-3A, Existing PST No. 4 and No. 6	0 days	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	0 days										
11	11.2.6	Access Date for Portion B-3B, Temporary Filtrate Lifting Wel	0 days	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	0 days										
12	12.2.7	Access Date for Portion B-4, BR 2A & 2B	90 edays	Fri 11/25/22	Thu 2/23/23	Fri 11/25/22	Thu 2/23/23	Fri 11/25/22	Thu 2/23/23	0 edays										
13	13.2.8	Access Date for Portion B-5A, MFB No. 2 below 1st floor lev	90 edays	Mon 12/20/22	Sun 3/20/22	Mon 12/20/21	Sun 3/20/22	Mon 12/20/21	Sun 3/20/22	0 edays										
14	14.2.9	Access Date for Portion B-5B, MFB No. 2 remaining portion	90 edays	Thu 5/19/22	Wed 8/17/22	Thu 5/19/22	Wed 8/17/22	Thu 5/19/22	Wed 8/17/22	0 edays										
15	15.2.10	Access Date for Portion B-7 & 7B, Chemical Dosing, Concrete	150 edays	Mon 12/20/22	Thu 5/19/22	Mon 12/20/21	Thu 5/19/22	Mon 12/20/21	Thu 5/19/22	0 edays										
16	16.2.11	Access Date for Portion B-7A & 7B, area for modification of	0 edays	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	0 edays										
17	17.2.12	Access Date for Portion B-9B, underground pipework	60 edays	Sun 2/18/24	Thu 4/18/24	Sun 2/18/24	Thu 4/18/24	Sun 2/18/24	Thu 4/18/24	0 edays										
18	18.2.13	Access Date for B-10, existing sludge thickening building	0 edays	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	0 edays										
19	19.3	Key Dates	555 days	Mon 12/2/19	Wed 6/9/21	Mon 12/2/19	Wed 6/9/21	Mon 12/2/19	Wed 6/9/21	0 days										
20	20.3.1	KD1A - Submission of civil and dimensional requirement dra	340 edays	Mon 12/2/19	Fri 11/6/20	Mon 12/2/19	Fri 11/6/20	Mon 12/2/19	Fri 11/6/20	0 edays										
21	21.3.2	KD1B - Submission of remaining civil and dimensional requir	550 edays	Mon 12/2/19	Fri 6/4/21	Mon 12/2/19	Fri 6/4/21	Mon 12/2/19	Fri 6/4/21	0 edays										
22	22.3.3	KD3A - Completion of E&M Installation works of existing pos	240 edays	Mon 12/2/19	Wed 7/29/20	Mon 12/2/19	Wed 7/29/20	Mon 12/2/19	Wed 7/29/20	0 edays										
23	23.3.4	KD3B - Completion of all work for re-provision of the existing	555 edays	Mon 12/2/19	Wed 6/9/21	Mon 12/2/19	Wed 6/9/21	Mon 12/2/19	Wed 6/9/21	0 edays										
24	24.4	Sectional Completion Dates	1625 days	Mon 12/2/19	Tue 5/14/24	Mon 12/2/19	Tue 5/14/24	Mon 12/2/19	Tue 5/14/24	0 days										
25	25.4.1	Section 1 - Completion of the design of E&M Works for all v	600 edays	Mon 12/2/19	Sat 7/24/21	Mon 12/2/19	Sat 7/24/21	Mon 12/2/19	Sat 7/24/21	0 edays										
26	26.4.2	Section 2 - Completion of all works for Inlet Works, PST No. 1	1600 edays	Mon 12/2/19	Fri 4/19/24	Mon 12/2/19	Fri 4/19/24	Mon 12/2/19	Fri 4/19/24	0 edays										
27	27.4.3	Section 3 - Completion of all works for retrofitting of the exi	660 edays	Mon 12/2/19	Wed 9/22/21	Mon 12/2/19	Wed 9/22/21	Mon 12/2/19	Wed 9/22/21	0 edays										
28	28.4.4	Section 4 - Completion of Work for remainder of the works (1625 edays	Mon 12/2/19	Tue 5/14/24	Mon 12/2/19	Tue 5/14/24	Mon 12/2/19	Tue 5/14/24	0 edays										
29	29.5	DE/2018/04 - the Contractor's Programme (w/ Defects Date c	1977 days	Mon 12/2/19	Wed 4/30/25	Mon 12/2/19	Wed 4/30/25	Mon 12/2/19	Wed 4/30/25	0 days										
30	30.5.1	Starting Date	0 days	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	Mon 12/2/19	0 days		653,20655+3								
31	31.5.2	Planned Key Date Completion Date - KD1A	0 days	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 11/6/20	Fri 11/6/20	7 days		20FF								
32	32.5.3	Planned Key Date Completion Date - KD1B	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Fri 6/4/21	Fri 6/4/21	3 days		21FF								
33	33.5.4	Planned Key Date Completion Date - KD3A	0 days	Wed 7/22/20	Wed 7/22/20	Wed 7/22/20	Wed 7/22/20	Wed 7/29/20	Wed 7/29/20	7 days		22FF								
34	34.5.5	Planned Key Date Completion Date - KD3B	0 days	Mon 6/7/21	Mon 6/7/21	Mon 6/7/21	Mon 6/7/21	Wed 6/9/21	Wed 6/9/21	2 days		23FF								
35	35.5.6	Planned Sectional Completion Date - Section 1	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Sat 7/24/21	Sat 7/24/21	11 days		25FF								
36	36.5.7	Planned Sectional Completion Date - Section 2	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Fri 4/19/24	Fri 4/19/24	18 days		26FF								
37	37.5.8	Planned Sectional Completion Date - Section 3	0 days	Wed 9/1/21	Wed 9/1/21	Wed 9/1/21	Wed 9/1/21	Wed 9/22/21	Wed 9/22/21	21 days		27FF								
38	38.5.9	Planned Sectional Completion Date - Section 4	0 days	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Tue 5/14/24	Tue 5/14/24	13 days		28FF								
39	39.5.10	Planned Completion Date	0 days	Wed 5/8/24	Wed 5/8/24	Wed 5/8/24	Wed 5/8/24	Tue 5/14/24	Tue 5/14/24	5 days		1294,1295,1296,1213								
40	40.5.11	Defect Dates with respect to planned completion date	365 days	Wed 5/1/24	Wed 4/30/25	Wed 5/1/24	Wed 4/30/25	Wed 5/1/24	Wed 4/30/25	0 days										
41	41.5.12	Part A: Procurement and Delivery of Major Plant and Mate	758 days	Wed 7/1/20	Thu 7/28/22	Wed 7/1/20	Thu 7/28/22	Wed 7/1/20	Sat 9/23/23	422 days										
42	42.5.12.1	Planned Completion Date for Procurement of major plant	0 days	Thu 6/3/21	Thu 6/3/21	Thu 6/3/21	Thu 6/3/21	Thu 6/3/21	Thu 6/3/21	0 days		3055+550 days								
43	43.5.12.2	General - stoplogs and penstocks, C11, EQT013	120 days	Wed 7/1/20	Wed 10/28/20	Wed 7/1/20	Wed 10/28/20	Wed 7/1/20	Wed 10/28/20	0 days										
44	44.5.12.2.1	Submission for acceptance of purchasing package	60 days	Wed 7/1/20	Sat 8/29/20	Wed 7/1/20	Sat 8/29/20	Wed 7/1/20	Sat 8/29/20	0 days		45								
45	45.5.12.2.2	Invitation of quotations for purchasing package	30 days	Sun 8/30/20	Mon 9/28/20	Sun 8/30/20	Mon 9/28/20	Sun 8/30/20	Mon 9/28/20	0 days		46								
46	46.5.12.2.3	Acceptance of conforming quotation (Completed)	30 days	Tue 9/29/20	Wed 10/28/20	Tue 9/29/20	Wed 10/28/20	Tue 9/29/20	Wed 10/28/20	0 days		45	257							
47	47.5.12.3	General - Instrumentations except use at BR, C11, EQT03	401 days	Sat 1/2/21	Sun 2/6/22	Sat 1/2/21	Sun 2/6/22	Sat 1/2/21	Sat 9/23/23	594 days										
48	48.5.12.3.1	Submission for acceptance of purchasing package	60 days	Sat 1/2/21	Tue 3/2/21	Sat 1/2/21	Tue 3/2/21	Sat 1/2/21	Tue 3/2/21	0 days										
49	49.5.12.3.2	Invitation of quotations for purchasing package (Rev. 1)	30 days	Fri 6/11/21	Sat 7/10/21	Fri 6/11/21	Sat 7/10/21	Fri 6/11/21	Sat 7/10/21	0 days		50								
50	50.5.12.3.3	Acceptance of conforming quotation (Rev. 10)	30 days	Sun 7/11/21	Mon 8/9/21	Sun 7/11/21	Mon 8/9/21	Sun 7/11/21	Sun 3/26/23	0 days		49	51							
51	51.5.12.3.4	Manufacturing and Factory Acceptance Test of Plant (R	121 days	Tue 8/10/21	Wed 12/8/21	Tue 8/10/21	Wed 12/8/21	Mon 3/27/23	Tue 7/25/23	0 days		50	52							
52	52.5.12.3.5	Shipping and Delivery of Plant (Rev. 10)	60 days	Thu 12/9/21	Sun 2/6/22	Thu 12/9/21	Sun 2/6/22	Wed 7/26/23	Sat 9/23/23	237 days		51	339,470,772							
53	53.5.12.4	General - pipework and valves, C11, ref. EQT036 (Rev. 1)	422 days	Mon 11/2/20	Tue 12/28/21	Mon 11/2/20	Tue 12/28/21	Mon 11/2/20	Sat 7/30/22	214 days										
54	54.5.12.4.1	Submission for acceptance of purchasing package (Rev. 1)	255 days	Mon 11/2/20	Wed 7/14/21	Mon 11/2/20	Wed 7/14/21	Mon 11/2/20	Sat 7/17/21	0 days		55								
55	55.5.12.4.2	Invitation of quotations for purchasing package (Rev. 1)	40 days	Fri 1/1/21	Sun 8/8/21	Fri 1/1/21	Sun 8/8/21	Fri 1/1/21	Sun 8/8/21	0 days		54	56							
56	56.5.12.4.3	Acceptance of conforming quotation (Rev. 11)	50 days	Sun 1/31/21	Sun 9/12/21	Sun 1/31/21	Sun 9/12/21	Sun 1/31/21	Sat 7/30/22	0 days		55	283,289,434,							
57	57.5.12.4.4	Submission for acceptance of purchasing package for re	30 days	Mon 11/1/21	Tue 11/30/21	Mon 11/1/21	Tue 11/30/21	Mon 11/1/21	Tue 11/30/21	0 days		58								
58	58.5.12.4.5	Invitation of quotations for purchasing package (Rev. 1)	14 days	Wed 12/1/21	Tue 12/14/21	Wed 12/1/21	Tue 12/14/21	Wed 12/1/21	Tue 12/14/21	0 days		57	59							
59	59.5.12.4.6	Acceptance of conforming quotation (Rev. 13)	14 days	Wed 12/15/21	Tue 12/28/21	Wed 12/15/21														

ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
87	87.5.12.11	Submission for acceptance of purchasing package	14 days	Wed 12/14/21	Tue 12/14/21	Wed 12/15/21	Tue 12/14/21	Wed 12/15/21	Tue 12/14/21	0 days		88	
88	88.5.12.11	Invitation of quotations for purchasing package	21 days	Wed 12/15/21	Tue 1/4/22	Wed 12/15/21	Tue 1/4/22	Sun 1/9/22	Sat 1/29/22	0 days	87	89	
89	89.5.12.11	Acceptance of conforming quotation	30 days	Wed 1/5/22	Thu 2/3/22	Wed 1/5/22	Thu 2/3/22	Sun 1/30/22	Mon 2/28/22	0 days	88	258,677	
90	90.5.12.12	General - LV Cables, C11, EQT042 (Rev. 13)	65 days	Wed 12/1/21	Thu 2/3/22	Wed 12/1/21	Thu 2/3/22	Wed 12/1/21	Mon 2/28/22	25 days		92	
91	91.5.12.12	Submission for acceptance of purchasing package	14 days	Wed 12/1/21	Tue 12/14/21	Wed 12/1/21	Tue 12/14/21	Wed 12/1/21	Tue 12/14/21	0 days		92	
92	92.5.12.12	Invitation of quotations for purchasing package	21 days	Wed 12/15/21	Tue 1/4/22	Wed 12/15/21	Tue 1/4/22	Sun 1/9/22	Sat 1/29/22	0 days	91	93	
93	93.5.12.12	Acceptance of conforming quotation	30 days	Wed 1/5/22	Thu 2/3/22	Wed 1/5/22	Thu 2/3/22	Sun 1/30/22	Mon 2/28/22	0 days	92	258,405,534	
94	94.5.12.13	General - Gas Detection System, C11, EQT051 (Rev. 16)	65 days	Wed 12/1/21	Thu 2/3/22	Wed 12/1/21	Thu 2/3/22	Wed 12/1/21	Thu 2/3/22	0 days		96	
95	95.5.12.13	Submission for acceptance of purchasing package	14 days	Wed 12/1/21	Tue 12/14/21	Wed 12/1/21	Tue 12/14/21	Wed 12/1/21	Tue 12/14/21	0 days		96	
96	96.5.12.13	Invitation of quotations for purchasing package	21 days	Wed 12/15/21	Tue 1/4/22	Wed 12/15/21	Tue 1/4/22	Sun 1/9/22	Sat 1/29/22	0 days	95	97	
97	97.5.12.13	Acceptance of conforming quotation (Completed)	30 days	Wed 1/5/22	Thu 2/3/22	Wed 1/5/22	Thu 2/3/22	Sun 1/30/22	Mon 2/28/22	0 days	96	258,405,534	
98	98.5.13	Part B: Subletting of major sub-contract works	761 days	Wed 1/1/20	Sun 1/30/22	Wed 1/1/20	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	0 days	2,30		
99	99.5.13.1	Planned Completion Date for major sub-contract works	0 days	Thu 8/12/21	Thu 8/12/21	Thu 8/12/21	Thu 8/12/21	Thu 8/12/21	Thu 8/12/21	0 days	255x620 days,3055x		
100	100.5.13.2	General - Independent BEAM Plus Consultant [04SC007]	150 days	Wed 1/1/20	Fri 5/29/20	Wed 1/1/20	Fri 5/29/20	Wed 1/1/20	Fri 5/29/20	0 days			
101	101.5.13.2.1	Submission for acceptance of proposed Independent BI	60 edays	Wed 1/1/20	Sun 3/1/20	Wed 1/1/20	Sun 3/1/20	Sun 3/1/20	Sun 3/1/20	0 edays		102	
102	102.5.13.2.2	Acceptance of proposed Independent BEAM Plus Const	14 edays	Sun 3/1/20	Sun 3/15/20	Sun 3/1/20	Sun 3/15/20	Sun 3/1/20	Sun 3/15/20	0 edays	101	103	
103	103.5.13.2.3	Engagement with an Independent BEAM Plus Consultant	7 days	Sun 3/15/20	Sat 3/21/20	Sun 3/15/20	Sat 3/21/20	Sun 3/15/20	Sat 3/21/20	0 days	102		
104	104.5.13.2.4	Actual Date for engagement with an Independent BEAM	0 days	Fri 5/29/20	Fri 5/29/20	Fri 5/29/20	Fri 5/29/20	Fri 5/29/20	Fri 5/29/20	0 days			
105	105.5.13.3	General - Conduction of Pump sump physical model test	575 days	Fri 5/15/20	Fri 12/10/21	Fri 5/15/20	Fri 12/10/21	Fri 5/15/20	Fri 12/10/21	0 days			
106	106.5.13.3.1	Submission for acceptance of proposed hydraulic labor.	7 edays	Fri 5/15/20	Fri 5/22/20	Fri 5/15/20	Fri 5/22/20	Fri 5/15/20	Fri 5/22/20	0 edays	105	107	
107	107.5.13.3.2	Invitation to quotations for provision of service	7 edays	Fri 5/22/20	Fri 5/29/20	Fri 5/22/20	Fri 5/29/20	Fri 5/22/20	Fri 5/29/20	0 edays	106	108	
108	108.5.13.3.3	Acceptance of proposed hydraulic laboratory	6 days	Fri 5/29/20	Wed 6/3/20	Fri 5/29/20	Wed 6/3/20	Fri 5/29/20	Wed 6/3/20	0 days	107	109	
109	109.5.13.3.4	Commencement of detailed proposal and conduction o	480 days	Thu 6/4/20	Sun 9/26/21	Thu 6/4/20	Sun 9/26/21	Thu 6/4/20	Sun 9/26/21	0 days	108	110	
110	110.5.13.3.5	Acceptance of hydraulic Report (Rev 16)	75 days	Mon 9/27/21	Fri 12/10/21	Mon 9/27/21	Fri 12/10/21	Mon 9/27/21	Fri 12/10/21	0 days	109		
111	111.5.13.4	General - Independent Checking Engineer [04SC004]	127 days	Wed 3/11/20	Wed 7/15/20	Wed 3/11/20	Wed 7/15/20	Wed 3/11/20	Wed 7/15/20	0 days			
112	112.5.13.4.1	Submission for acceptance of proposed Independent CI	90 edays	Wed 3/11/20	Tue 6/9/20	Wed 3/11/20	Tue 6/9/20	Wed 3/11/20	Tue 6/9/20	0 edays		113	
113	113.5.13.4.2	Acceptance of proposed Independent Checking Engineer	1 eday	Wed 6/24/20	Thu 6/25/20	Wed 6/24/20	Thu 6/25/20	Wed 6/24/20	Thu 6/25/20	0 edays	112	114	
114	114.5.13.4.2	Engagement with an Independent Checking Engineer	21 days	Thu 6/25/20	Wed 7/15/20	Thu 6/25/20	Wed 7/15/20	Thu 6/25/20	Wed 7/15/20	0 days	113	115	
115	115.5.13.4.4	Actual Date for engagement with an ICE (Completed)	0 days	Wed 7/15/20	Wed 7/15/20	Wed 7/15/20	Wed 7/15/20	Wed 7/15/20	Wed 7/15/20	0 days			
116	116.5.13.5	General - Lifting Appliances [04SC008]	81 days	Fri 5/1/20	Tue 7/21/20	Fri 5/1/20	Tue 7/21/20	Fri 5/1/20	Tue 7/21/20	0 days			
117	117.5.13.5.1	Submission for acceptance of subcontract works packag	30 edays	Fri 5/1/20	Sun 5/31/20	Fri 5/1/20	Sun 5/31/20	Fri 5/1/20	Sun 5/31/20	0 edays		118	
118	118.5.13.5.2	Invitation of tender for subcontract works	21 edays	Sun 5/31/20	Sun 6/21/20	Sun 5/31/20	Sun 6/21/20	Sun 5/31/20	Sun 6/21/20	0 edays	117	119	
119	119.5.13.5.3	Acceptance of conforming tender	30 edays	Sun 6/21/20	Tue 7/21/20	Sun 6/21/20	Tue 7/21/20	Sun 6/21/20	Tue 7/21/20	0 edays	118	120	
120	120.5.13.5.4	Sub-contract work commencement date (Completed)	0 days	Tue 7/21/20	Tue 7/21/20	Tue 7/21/20	Tue 7/21/20	Tue 7/21/20	Tue 7/21/20	0 days	119	262,408,537	
121	121.5.13.6	General - Mechanical Installations	244 days	Tue 6/1/21	Sun 1/30/22	Tue 6/1/21	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	0 days			
122	122.5.13.6.1	Submission for acceptance of subcontract works packag	120 days	Tue 6/1/21	Tue 9/28/21	Tue 6/1/21	Tue 9/28/21	Sun 6/20/21	Sun 10/17/21	0 days		123	
123	123.5.13.6.2	Invitation of tender for subcontract works	75 days	Wed 9/29/21	Sun 12/12/21	Wed 9/29/21	Sun 12/12/21	Mon 10/18/21	Fri 12/31/21	0 days	122	124	
124	124.5.13.6.3	Acceptance of conforming tender	30 days	Mon 12/13/21	Tue 1/11/22	Mon 12/13/21	Tue 1/11/22	Sat 1/1/22	Sun 1/30/22	19 days	123	125FF	
125	125.5.13.6.4	Sub-contract work commencement date	1 day	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	0 days	124FF		
126	126.5.13.7	General - Electrical Installations	244 days	Tue 6/1/21	Sun 1/30/22	Tue 6/1/21	Sun 1/30/22	Sat 6/19/21	Sun 1/30/22	0 days			
127	127.5.13.7.1	Submission for acceptance of subcontract works packag	120 edays	Tue 6/1/21	Wed 9/29/21	Tue 6/1/21	Wed 9/29/21	Sat 6/19/21	Sun 10/17/21	0 edays		128	
128	128.5.13.7.2	Invitation of tender for subcontract works	75 edays	Wed 9/29/21	Mon 12/13/21	Wed 9/29/21	Mon 12/13/21	Sun 10/17/21	Fri 12/31/21	0 edays	127	129	
129	129.5.13.7.3	Acceptance of conforming tender	30 edays	Mon 12/13/21	Wed 1/12/22	Mon 12/13/21	Wed 1/12/22	Fri 12/31/21	Sun 1/30/22	18.38 edays	128	130FF	
130	130.5.13.7.4	Sub-contract work commencement date	1 day	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	Sun 1/30/22	0 days	129FF		
131	131.5.13.8	General - Facility Computerized Systems [SCADA, CMMS,	384 days	Tue 9/1/20	Mon 9/20/21	Tue 9/1/20	Mon 9/20/21	Tue 9/1/20	Mon 9/20/21	0 days			
132	132.5.13.8.1	Submission for acceptance of subcontract works packag	60 edays	Tue 9/1/20	Sat 10/31/20	Tue 9/1/20	Sat 10/31/20	Tue 9/1/20	Sat 10/31/20	0 edays		133	
133	133.5.13.8.2	Invitation of tender for subcontract works	310 edays	Sat 10/31/20	Mon 9/6/21	Sat 10/31/20	Mon 9/6/21	Sat 10/31/20	Mon 9/6/21	0 edays	132	134	
134	134.5.13.8.3	Acceptance of conforming tender (Completed)	14 edays	Mon 9/6/21	Mon 9/20/21	Mon 9/6/21	Mon 9/20/21	Mon 9/6/21	Mon 9/20/21	0 edays	133	135	
135	135.5.13.8.4	Sub-contract work commencement date	0 days	Mon 9/20/21	Mon 9/20/21	Mon 9/20/21	Mon 9/20/21	Mon 9/20/21	Mon 9/20/21	0 days	134	136	
136	136.5.13.9	General - Building Services Installations	130 days	Mon 11/2/21	Fri 3/12/21	Mon 11/2/20	Fri 3/12/21	Mon 11/2/20	Wed 4/21/21	41 days			
137	137.5.13.9.1	Submission for acceptance of subcontract works packag	60 edays	Mon 11/2/21	Fri 1/1/21	Mon 11/2/20	Fri 1/1/21	Mon 11/2/20	Sat 2/20/21	0 edays		138	
138	138.5.13.9.2	Invitation of tender for subcontract works	30 edays	Fri 1/1/21	Sun 1/31/21	Fri 1/1/21	Sun 1/31/21	Sat 2/20/21	Mon 3/22/21	0 edays	137	139	
139	139.5.13.9.3	Acceptance of conforming tender	30 edays	Sun 1/31/21	Tue 3/2/21	Sun 1/31/21	Tue 3/2/21	Mon 3/22/21	Wed 4/21/21	10 edays	138	140FF	
140	140.5.13.9.4	Sub-contract work commencement date	0 days	Fri 3/12/21	Fri 3/12/21	Fri 3/12/21	Fri 3/12/21	Wed 4/21/21	Wed 4/21/21	0 days	139FF	259,406,535	
141	141.5.13.10	General - Mechanical Ventilation and Air Conditioning In	413 days	Mon 11/2/21	Sun 12/19/21	Mon 11/2/20	Sun 12/19/21	Mon 11/2/20	Sun 12/19/21	0 days			
142	142.5.13.10.1	Submission for acceptance of subcontract works packag	60 days	Mon 11/2/21	Thu 12/31/20	Mon 11/2/20	Thu 12/31/20	Mon 11/2/20	Thu 12/31/20	0 days		143	
143	143.5.13.10.2	Invitation of tender for subcontract works	30 edays	Thu 12/31/20	Sat 1/30/21	Thu 12/31/20	Sat 1/30/21	Thu 12/31/20	Sat 1/30/21	0 edays	142	144	
144	144.5.13.10.3	Submission for acceptance of revised subcontract work	60 days	Wed 9/1/21	Sat 10/30/21	Wed 9/1/21	Sat 10/30/21	Wed 9/1/21	Sat 10/30/21	0 days			
145	145.5.13.10.4	Invitation of tender for subcontract works (Rev. 15)	14 days	Mon 11/15/21	Sun 11/28/21	Mon 11/15/21	Sun 11/28/21	Mon 11/15/21	Sun 11/28/21	0 days		146	
146	146.5.13.10.5	Acceptance of conforming tender (Rev. 13)	21 days	Mon 11/29/21	Sun 12/19/21	Mon 11/29/21	Sun 12/19/21	Mon 11/29/21	Sun 12/19/21	0 days	145	147FF	
147	147.5.13.10.6	Sub-contract work commencement date	0 days	Sun 12/19/21	Sun 12/19/21	Sun 12/19/21	Sun 12/19/21	Sun 12/19/21	Sun 12/19/21	0 days	146FF		
148	148.5.13.11	General - Emergency Power Generator Set [04SC006]	146 days	Wed 7/1/20	Mon 11/23/21	Mon 11/23/20	Wed 7/1/20	Mon 11/23/20	Mon 11/23/20	0 days			
149	149.5.13.11.1	Submission for acceptance of subcontract works packag	60 edays	Wed 7/1/20	Sun 8/30/20	Wed 7/1/20	Sun 8/30/20	Wed 7/1/20	Sun 8/30/20	0 edays		150	
150	150.5.13.11.2	Invitation of tender for subcontract works	30 edays	Sun 8/30/20	Tue 9/29/20	Sun 8/30/20	Tue 9/29/20	Sun 8/30/20	Tue 9/29/20	0 edays	149	151	
151	151.5.13.11.3	Acceptance of conforming tender	30 edays	Tue 9/29/20	Thu 10/29/20	Tue 9/29/20	Thu 10/29/20	Tue 9/29/20	Thu 10/29/20	0 edays	150	152FF	
152	152.5.13.11.4	Sub-contract work commencement date (Completed)	24 days	Sat 10/31/20	Mon 11/23/21	Sat 10/31/20	Mon 11/23/21	Sat 10/31/20	Mon 11/23/20	0 days	151FF		
153	153.5.13.12	General - Plumbing Installation (Rev. 5) [04SC021]	231 days	Wed 7/1/20	Tue 2/16/21	Wed 7/1/20	Tue 2/16/21	Wed 7/1/20	Thu 6/17/21	120 days			
154	154.5.13.12.1	Submission for acceptance of subcontract works packag	30 edays	Wed 7/1/20	Fri 7/31/20	Wed 7/1/20	Fri 7/31/20	Wed 7/1/20	Fri 7/31/20	0 edays		155	
155	155.5.13.12.2	Invitation of tender for subcontract works	75 edays	Fri 7/31/20	Wed 10/14/21	Fri 7/31/20	Wed 10/14/21	Fri 7/31/20	Wed 10/14/20				

Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
173	173.5.13.15	Sub-contract work commencement date	0 days	Fri 12/31/21	Fri 12/31/21	Fri 12/31/21	Fri 12/31/21	Fri 12/31/21	Fri 12/31/21	0 days	172FF		
174	174.5.13.16	General - Civil Construction Work for underground pipav	40 days	Wed 7/1/20	Mon 8/10/20	Wed 7/1/20	Mon 8/10/20	Wed 7/1/20	Mon 8/10/20	0 days		176	
175	175.5.13.16	Submission for acceptance of subcontract works packag	14 days	Wed 7/1/20	Tue 7/14/20	Wed 7/1/20	Tue 7/14/20	Wed 7/1/20	Tue 7/14/20	0 days		177	
176	176.5.13.16	Invitation of tender for subcontract works	14 days	Wed 7/15/20	Tue 7/28/20	Wed 7/15/20	Tue 7/28/20	Wed 7/15/20	Tue 7/28/20	0 days		177	
177	177.5.13.16	Acceptance of conforming tender	7 days	Wed 7/29/20	Tue 8/4/20	Wed 7/29/20	Tue 8/4/20	Wed 7/29/20	Tue 8/4/20	0 days		178FF	
178	178.5.13.16	Sub-contract work commencement date (Completed)	0 days	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	0 days	177FF		
179	179.5.13.17	General - Civil Construction Work for Temp. Filtrate Eq. 5	40 days	Wed 7/1/20	Mon 8/10/20	Wed 7/1/20	Mon 8/10/20	Wed 7/1/20	Mon 8/10/20	0 days		181	
180	180.5.13.17	Submission for acceptance of subcontract works packag	14 days	Wed 7/1/20	Tue 7/14/20	Wed 7/1/20	Tue 7/14/20	Wed 7/1/20	Tue 7/14/20	0 days		182	
181	181.5.13.17	Invitation of tender for subcontract works	14 days	Wed 7/15/20	Tue 7/28/20	Wed 7/15/20	Tue 7/28/20	Wed 7/15/20	Tue 7/28/20	0 days		182	
182	182.5.13.17	Acceptance of conforming tender	7 days	Wed 7/29/20	Tue 8/4/20	Wed 7/29/20	Tue 8/4/20	Wed 7/29/20	Tue 8/4/20	0 days		183FF	
183	183.5.13.17	Sub-contract work commencement date (Completed)	0 days	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	Mon 8/10/20	0 days	182FF		
184	184.5.13.18	Mis - Modification of existing power house (045C010)	109 days	Mon 2/24/20	Fri 6/12/20	Mon 2/24/20	Fri 6/12/20	Mon 2/24/20	Fri 6/12/20	0 days		186	
185	185.5.13.18	Submission for acceptance of subcontract works packag	90 days	Mon 2/24/20	Sat 5/23/20	Mon 2/24/20	Sat 5/23/20	Mon 2/24/20	Sat 5/23/20	0 days		187	
186	186.5.13.18	Invitation of tender for subcontract works	14 days	Sun 5/24/20	Sat 6/6/20	Sun 5/24/20	Sat 6/6/20	Sun 5/24/20	Sat 6/6/20	0 days		187	
187	187.5.13.18	Acceptance of conforming tender	1 day	Sun 6/7/20	Sun 6/7/20	Sun 6/7/20	Sun 6/7/20	Sun 6/7/20	Sun 6/7/20	0 days		188FF	
188	188.5.13.18	Sub-contract work commencement date (Completed)	0 days	Fri 6/12/20	Fri 6/12/20	Fri 6/12/20	Fri 6/12/20	Fri 6/12/20	Fri 6/12/20	0 days	187FF		
189	189.5.14	Part C: General Design Submissions	788 days	Mon 12/1/21	Thu 1/27/22	Mon 12/1/21	Thu 1/27/22	Mon 12/1/21	Thu 1/27/22	0 days		189	
190	190.5.14.1	Planned Sectional Completion Date - Section 1	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	191FF,192FF,193FF		
191	191.5.14.2	CD0001 - General Design Parameters (Rev. 11)	400 edays	Fri 6/5/20	Sat 7/10/21	Fri 6/5/20	Sat 7/10/21	Fri 6/5/20	Sat 7/10/21	0 edays		190FF	
192	192.5.14.3	CD0020 - Electrical Installation Typical Details	355 edays	Mon 7/20/20	Mon 7/20/21	Mon 7/20/20	Mon 7/20/21	Mon 7/20/20	Mon 7/20/21	0 edays		190FF	
193	193.5.14.4	CD0009 - Detailed Design for Plant Service Water System	125 edays	Mon 3/1/21	Sun 7/4/21	Mon 3/1/21	Sun 7/4/21	Mon 3/1/21	Sun 7/4/21	0 edays		190FF	
194	194.5.14.5	CD0012 - Detailed Design for SCADA System	383.4 edays	Sat 1/9/21	Thu 1/27/22	Sat 1/9/21	Thu 1/27/22	Sat 1/9/21	Thu 1/27/22	0 edays	135	190FF,258FF	
195	195.5.14.6	CD0013 - Detailed Design for CCTV System	90 edays	Thu 4/1/21	Wed 6/30/21	Thu 4/1/21	Wed 6/30/21	Thu 4/1/21	Mon 7/12/21	12.38 edays		190FF	
196	196.5.14.7	CD0013-2 - Detailed Design for Gas Detection and Monitori	90 edays	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Mon 7/12/21	43.38 edays		190FF	
197	197.5.14.8	CD0014-1 - Detailed Design for Power monitoring system (I	90 edays	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Mon 7/12/21	43.38 edays		190FF	
198	198.5.14.9	CD0014-2 - Detailed Design for Computerized maintenance	90 edays	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Mon 7/12/21	43.38 edays		190FF	
199	199.5.14.10	CD0014-3 - Detailed Design for Information and document	90 edays	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Mon 7/12/21	43.38 edays		190FF	
200	200.5.14.11	CD0031 - Detailed Design for MVAC System	90 edays	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Mon 7/12/21	43.38 edays		190FF	
201	201.5.14.12	CD0042 - Detailed Design for Lightning Protection System	120 edays	Mon 1/11/21	Tue 5/11/21	Mon 1/11/21	Tue 5/11/21	Mon 1/11/21	Mon 7/12/21	62.38 edays		190FF	
202	202.5.14.13	Design submissions for E&M installation works of existing	300 edays	Mon 12/2/19	Sun 9/27/20	Mon 12/2/19	Sun 9/27/20	Mon 12/2/19	Sun 9/27/20	0 edays		190FF	
203	203.5.14.14	Design Submission for Earthing and Lightning (Rev. 8)	147.38 edays	Mon 1/4/21	Mon 5/31/21	Mon 1/4/21	Mon 5/31/21	Mon 1/4/21	Mon 7/12/21	42 edays		190FF	
204	204.5.15	Works Area WA1-C	374 days	Wed 1/1/20	Fri 1/8/21	Wed 1/1/20	Fri 1/8/21	Wed 1/1/20	Fri 1/8/21	0 days		209	
205	205.5.15.1	Actual Access / Handover Date	1 day	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	0 days		209	
206	206.5.15.2	Submission for acceptance of subcontract works package	60 days	Wed 1/1/20	Sat 2/29/20	Wed 1/1/20	Sat 2/29/20	Wed 1/1/20	Sat 2/29/20	0 days	255+30 edays,305S	207	
207	207.5.15.3	Invitation of quotations for subcontract works (Site Office	21 days	Sun 3/1/20	Sat 3/21/20	Sun 3/1/20	Sat 3/21/20	Sun 3/1/20	Sat 3/21/20	0 days		208	
208	208.5.15.4	Acceptance of conforming quotation (Site Office)	10 days	Sun 3/22/20	Tue 3/31/20	Sun 3/22/20	Tue 3/31/20	Sun 3/22/20	Tue 3/31/20	0 days		209	
209	209.5.15.5	Design and Fabrication of the Contractor's Site Accommod	120 days	Wed 4/1/20	Wed 7/29/20	Wed 4/1/20	Wed 7/29/20	Wed 4/1/20	Wed 7/29/20	0 days	205,208	215	
210	210.5.15.6	Submission for acceptance of subcontract works package	20 days	Fri 5/1/20	Wed 5/20/20	Fri 5/1/20	Wed 5/20/20	Fri 5/1/20	Wed 5/20/20	0 days		211	
211	211.5.15.7	Invitation of quotations for subcontract works (Site Office	18 days	Thu 5/21/20	Sun 6/7/20	Thu 5/21/20	Sun 6/7/20	Thu 5/21/20	Sun 6/7/20	0 days		210	
212	212.5.15.8	Acceptance of conforming quotation (Site foundation)	7 days	Mon 6/8/20	Sun 6/14/20	Mon 6/8/20	Sun 6/14/20	Mon 6/8/20	Sun 6/14/20	0 days		211	
213	213.5.15.9	Design and Construction of the Contractor's Site Office for	30 days	Mon 6/15/20	Tue 7/14/20	Mon 6/15/20	Tue 7/14/20	Mon 6/15/20	Tue 7/14/20	0 days		212	
214	214.5.15.10	Construction of Contractor's Site Office foundation (Comp	47 days	Wed 7/15/20	Sun 8/30/20	Wed 7/15/20	Sun 8/30/20	Wed 7/15/20	Sun 8/30/20	0 days		213	
215	215.5.15.11	Site Installation of the Contractor's Site Accommodations	120 days	Mon 8/31/20	Mon 12/28/20	Mon 8/31/20	Mon 12/28/20	Mon 8/31/20	Mon 12/28/20	0 days	209,214	216	
216	216.5.15.12	Anticipated date of working at site (Rev. 5) (Completed)	4 days	Tue 1/5/21	Fri 1/8/21	Tue 1/5/21	Fri 1/8/21	Tue 1/5/21	Fri 1/8/21	0 days		215	
217	217.5.16	Works Area WA2-C	1 day	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	0 days		215	
218	218.5.16.1	Actual Access / Handover Date	1 day	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	Fri 2/21/20	0 days		215	
219	219.5.17	Inlet Works No. 1, Portion B-2 (PS 6B.2.1)	1400 days	Mon 6/1/20	Mon 4/1/24	Mon 6/1/20	Mon 4/1/24	Mon 6/1/20	Mon 4/1/24	0 days		215	
220	220.5.17.1	Planned Key Date Completion Date - KD1A, IW	0 days	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	0 days	254FF,255FF		
221	221.5.17.2	Planned Key Date Completion Date - KD1B, IW	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	256FF		
222	222.5.17.3	Planned Sectional Completion Date - Section 1, IW	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	257FF,258FF,259FF		
223	223.5.17.4	Planned Sectional Completion Date - Section 2, IW	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days		215	
224	224.5.17.5	Selection of Suppliers for major plant and materials for li	335 days	Mon 6/1/20	Sat 5/1/21	Mon 6/1/20	Sat 5/1/21	Mon 6/1/20	Sat 5/1/21	0 days		215	
225	225.5.17.5.1	Inlet Works - Inlet Pumps (Marking Scheme Approach), C11, ref. EQ	120 days	Mon 6/1/20	Mon 6/1/20	Mon 6/1/20	Mon 6/1/20	Mon 6/1/20	Mon 6/1/20	0 days		227	
226	226.5.17.5.1.1	Submission for acceptance of purchasing package including prop	60 days	Mon 6/1/20	Thu 7/30/20	Mon 6/1/20	Thu 7/30/20	Mon 6/1/20	Thu 7/30/20	0 days		227	
227	227.5.17.5.1.1	Invitation of quotations for purchasing package	30 days	Fri 7/31/20	Sat 8/29/20	Fri 7/31/20	Sat 8/29/20	Fri 7/31/20	Sat 8/29/20	0 days		226	
228	228.5.17.5.1.1	Acceptance of conforming quotation (Completed)	30 days	Sun 8/30/20	Sun 8/30/20	Sun 8/30/20	Sun 8/30/20	Sun 8/30/20	Sun 8/30/20	0 days		227	
229	229.5.17.5.2	Inlet Works - mechanical raked bar screens, C11, ref. EQ052	58 days	Fri 6/16/20	Sat 8/22/20	Fri 6/16/20	Sat 8/22/20	Fri 6/16/20	Sat 8/22/20	0 days		231	
230	230.5.17.5.2.1	Submission for acceptance of purchasing package	14 days	Fri 6/26/20	Thu 7/9/20	Fri 6/26/20	Thu 7/9/20	Fri 6/26/20	Thu 7/9/20	0 days		231	
231	231.5.17.5.2.1	Invitation of quotations for purchasing package	14 days	Fri 7/10/20	Thu 7/23/20	Fri 7/10/20	Thu 7/23/20	Fri 7/10/20	Thu 7/23/20	0 days		230	
232	232.5.17.5.2.1	Acceptance of conforming quotation (Completed)	30 days	Fri 7/24/20	Sat 8/22/20	Fri 7/24/20	Sat 8/22/20	Fri 7/24/20	Sat 8/22/20	0 days		231	
233	233.5.17.5.3	Inlet Works - screening conveyors and Diverters, C11, ref. EQ053	74 days	Wed 7/1/20	Sat 9/12/20	Wed 7/1/20	Sat 9/12/20	Wed 7/1/20	Sat 9/12/20	0 days		235	
234	234.5.17.5.3.1	Submission for acceptance of purchasing package	30 days	Wed 7/1/20	Thu 7/30/20	Wed 7/1/20	Thu 7/30/20	Wed 7/1/20	Thu 7/30/20	0 days		235	
235	235.5.17.5.3.1	Invitation of quotations for purchasing package	14 days	Fri 7/31/20	Fri 8/13/20	Fri 7/31/20	Fri 8/13/20	Fri 7/31/20	Thu 8/13/20	0 days		234	
236	236.5.17.5.3.1	Acceptance of conforming quotation (Completed)	30 days	Fri 8/14/20	Sat 9/12/20	Fri 8/14/20	Sat 9/12/20	Fri 8/14/20	Sat 9/12/20	0 days		235	
237	237.5.17.5.4	Inlet Works - screening screw type compactors, C11, ref. EQ003	105 days	Wed 7/1/20	Tue 10/13/20	Wed 7/1/20	Tue 10/13/20	Wed 7/1/20	Tue 10/13/20	0 days		239	
238	238.5.17.5.4.1	Submission for acceptance of purchasing package	45 days	Wed 7/1/20	Fri 8/14/20	Wed 7/1/20	Fri 8/14/20	Wed 7/1/20	Fri 8/14/20	0 days		239	
239	239.5.17.5.4.1	Invitation of quotations for purchasing package	30 days	Sat 8/15/20	Sun 9/13/20	Sat 8/15/20	Sun 9/13/20	Sat 8/15/20	Sun 9/13/20	0 days		238	
240	240.5.17.5.4.1	Acceptance of conforming quotation (Completed)	30 days	Mon 9/14/20	Tue 10/13/20	Mon 9/14/20	Tue 10/13/20	Mon 9/14/20	Tue 10/13/20	0 days		239	
241	241.5.17.5.5	Inlet Works - grits removal system, C11, ref. EQ004	90 days	Wed 7/1/20	Mon 9/28/20	Wed 7/1/20	Mon 9/28/20	Wed 7/1/20	Mon 9/28/20	0 days			

Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
259	259.5.17.6.E	CD5034-1 - Detailed Design for Electrical Installations B	120 edays	Fri 3/12/21	Sat 7/10/21	Fri 3/12/21	Sat 7/10/21	Fri 3/12/21	Sat 7/10/21	0 edays	140	358,222FF	
260	260.5.17.6.E	CD5025-1 - Detailed Design for LV Switchboards for Inlet	60 edays	Mon 5/3/21	Fri 7/2/21	Mon 5/3/21	Fri 7/2/21	Mon 5/3/21	Mon 5/3/21	10 edays	71	296,222FF	
261	261.5.17.6.E	CD5026-1 - Detailed Design for HV Switchboards for Inlet	60 edays	Sun 4/18/21	Thu 6/17/21	Sun 4/18/21	Thu 6/17/21	Sun 4/18/21	Mon 7/12/21	0.63 edays	67	300,222FF	
262	262.5.17.6.E	CD5050-1 - Detailed Design for Lifting Appliances - Inlet	210 edays	Tue 9/1/20	Tue 3/30/21	Tue 9/1/20	Tue 3/30/21	Tue 9/1/20	Tue 3/30/21	0 edays	120	293,222FF	
263	263.5.17.7	Manufacturing and Delivery of Plant & Materials	696 days	Tue 3/30/21	Thu 2/23/23	Tue 3/30/21	Thu 2/23/23	Tue 3/30/21	Sat 12/16/23	215 days			
264	264.5.17.7.1	Inlet Pumps, EQT006	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Thu 11/24/22	Sat 11/11/23	352 days			
265	265.5.17.7.1	Manufacturing of Inlet Pumps, EQT006	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Thu 11/17/22	Fri 7/14/23	0 days	257	266	
266	266.5.17.7.1	Factory Acceptance Test of Plant (to be witnessed by)	60 days	Mon 3/21/22	Thu 5/19/22	Mon 3/21/22	Thu 5/19/22	Sat 7/15/23	Tue 9/12/23	129 days	265	267	
267	267.5.17.7.1	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Wed 9/13/23	Sat 11/11/23	225 days	266,31455-60 edays	332	
268	268.5.17.7.1	Mechanical Raked Bar Screen, EQT052	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Sun 10/23/22	Fri 8/18/23	31 days		328	
269	269.5.17.7.2	Manufacturing and Factory Acceptance Test of Plant	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Sun 10/23/22	Mon 6/19/23	189 days	257	270	
270	270.5.17.7.2	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Tue 6/20/23	Fri 8/18/23	31 days	269,31455-60 edays	330,333	
271	271.5.17.7.2	Screening Conveyors and Diverters, EQT053	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Sat 1/21/23	Thu 11/16/23	357 days			
272	272.5.17.7.3	Manufacturing and Factory Acceptance Test of Plant	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Sat 1/21/23	Sun 9/17/23	189 days	257	273	
273	273.5.17.7.3	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Mon 9/18/23	Thu 11/16/23	143 days	272,31455-60 edays	331	
274	274.5.17.7.4	Screening Screw Type Compactors, EQT003	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Mon 2/20/23	Sat 12/16/23	31 days		328	
275	275.5.17.7.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Mon 2/20/23	Tue 10/17/23	189 days	257	276	
276	276.5.17.7.4	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Wed 10/18/23	Sat 12/16/23	173 days	275,31455-60 edays	336	
277	277.5.17.7.5	Grit Removal System, EQT004	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Mon 2/6/23	Sat 12/2/23	373 days			
278	278.5.17.7.5	Manufacturing and Factory Acceptance Test of Plant	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Mon 2/6/23	Tue 10/3/23	189 days	257	279	
279	279.5.17.7.5	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Wed 10/4/23	Sat 12/2/23	246 days	278,31455-60 edays	334	
280	280.5.17.7.6	Grit Classifiers, EQT005	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Mon 2/20/23	Sat 12/16/23	387 days			
281	281.5.17.7.6	Manufacturing and Factory Acceptance Test of Plant	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Mon 2/20/23	Tue 10/17/23	189 days	257	282	
282	282.5.17.7.6	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Wed 10/18/23	Sat 12/16/23	260 days	281,31455-60 edays	335	
283	283.5.17.7.7	Pipework, EQT036 (Rev. 11)	438 days	Mon 9/13/21	Thu 11/24/22	Mon 9/13/21	Thu 11/24/22	Sun 11/13/22	Fri 9/8/23	288 days	56		
284	284.5.17.7.7	Manufacturing and Factory Acceptance Test of Plant	240 days	Mon 9/13/21	Tue 5/10/22	Mon 9/13/21	Tue 5/10/22	Sun 11/13/22	Mon 7/10/23	138 days	257	285	
285	285.5.17.7.7	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Tue 7/11/23	Fri 9/8/23	151 days	284,31455-60 edays	337	
286	286.5.17.7.7	Stoplogs and Penstocks, EQT013	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Tue 5/17/22	Thu 5/11/23	168 days			
287	287.5.17.7.8	Manufacturing and Factory Acceptance Test of Plant	300 days	Sat 7/24/21	Thu 5/19/22	Sat 7/24/21	Thu 5/19/22	Tue 5/17/22	Sun 3/12/23	129 days	257	288	
288	288.5.17.7.8	Shipping and Delivery of Plant to site	60 days	Mon 9/26/22	Thu 11/24/22	Mon 9/26/22	Thu 11/24/22	Mon 3/13/23	Thu 5/11/23	31 days	287,31455-60 edays	328	
289	289.5.17.7.8	Valves and Actuators, EQT036, EQT042 (Rev. 11)	300 days	Mon 2/14/22	Sat 12/10/22	Mon 2/14/22	Sat 12/10/22	Sun 11/13/22	Fri 9/8/23	272 days	56,63		
290	290.5.17.7.5	Manufacturing and Factory Acceptance Test of Plant	240 days	Mon 2/14/22	Tue 10/11/22	Mon 2/14/22	Tue 10/11/22	Sun 11/13/22	Mon 7/10/23	0 days	257	291	
291	291.5.17.7.5	Shipping and Delivery of Plant to site	60 days	Wed 10/12/22	Sat 12/10/22	Wed 10/12/22	Sat 12/10/22	Tue 7/11/23	Fri 9/8/23	135 days	290,31455-60 edays	337	
292	292.5.17.7.1	Lifting Appliances	590 days	Tue 3/30/21	Wed 11/9/22	Tue 3/30/21	Wed 11/9/22	Wed 11/9/22	Tue 6/21/22	Sat 4/1/23	143 days		
293	293.5.17.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Tue 3/30/21	Wed 11/24/22	Tue 3/30/21	Wed 11/24/22	Tue 6/21/22	Wed 2/15/23	305 days	262	294	
294	294.5.17.7.1	Shipping and Delivery of Plant to site	45 days	Mon 9/26/22	Wed 11/9/22	Mon 9/26/22	Wed 11/9/22	Thu 2/16/23	Sat 4/1/23	16 days	293,31455-60 edays	318	
295	295.5.17.7.1	LV Switchboards	345 days	Wed 3/16/22	Thu 2/23/23	Wed 3/16/22	Thu 2/23/23	Mon 5/2/22	Tue 4/11/23	47 days			
296	296.5.17.7.1	IW - Manufacturing of Plant	240 days	Wed 3/16/22	Thu 11/10/22	Wed 3/16/22	Thu 11/10/22	Mon 5/2/22	Tue 12/27/22	0 days	258,260,7755-90 edays	297	
297	297.5.17.7.1	IW - Factory Acceptance Test of Plant (to be witnessed)	60 days	Fri 11/11/22	Mon 1/9/23	Fri 11/11/22	Mon 1/9/23	Wed 12/28/22	Sat 2/25/23	0 days	296	298	
298	298.5.17.7.1	IW - Shipping and Delivery of Plant to site	45 days	Tue 1/10/23	Thu 2/23/23	Tue 1/10/23	Thu 2/23/23	Sun 2/26/23	Tue 4/11/23	0 days	31455-60 edays	297,343	
299	299.5.17.7.1	HV Switchboards, EQT031	510 days	Fri 6/18/21	Wed 11/9/22	Fri 6/18/21	Wed 11/9/22	Sun 10/31/21	Wed 11/9/22	0 days			
300	300.5.17.7.1	IW - Manufacturing of Plant	240 days	Fri 6/18/21	Sat 2/12/22	Fri 6/18/21	Sat 2/12/22	Sun 10/31/21	Mon 6/27/22	0 days	261	301	
301	301.5.17.7.1	IW - Factory Acceptance Test of Plant (to be witnessed)	90 days	Sun 2/13/22	Fri 5/13/22	Sun 2/13/22	Fri 5/13/22	Tue 6/28/22	Sun 9/25/22	135 days	300	302	
302	302.5.17.7.1	IW - Shipping and Delivery of Plant to site	45 days	Mon 9/26/22	Wed 11/9/22	Mon 9/26/22	Wed 11/9/22	Mon 9/26/22	Wed 11/9/22	0 days	301,31455-60 edays		
303	303.5.17.7.1	11kV/380V Stepdown Power Transformers, EQT032	369 days	Sat 11/6/21	Wed 11/9/22	Sat 11/6/21	Wed 11/9/22	Fri 7/1/22	Tue 4/11/23	153 days			
304	304.5.17.7.1	IW - Manufacturing and Factory Acceptance Test of f	240 days	Sat 11/6/21	Sun 7/3/22	Sat 11/6/21	Sun 7/3/22	Fri 7/1/22	Sat 2/25/23	84 days	258	305	
305	305.5.17.7.1	IW - Shipping and Delivery of Plant to site	45 days	Mon 9/26/22	Wed 11/9/22	Mon 9/26/22	Wed 11/9/22	Sun 2/26/23	Tue 4/11/23	60 days	304,31455-60 edays	345	
306	306.5.17.7.1	PLC System	420 days	Sat 11/6/21	Fri 12/30/22	Sat 11/6/21	Fri 12/30/22	Thu 3/3/22	Wed 4/26/23	117 days			
307	307.5.17.7.1	Manufacturing of Plant, PLC for IW	300 days	Sat 11/6/21	Thu 9/1/22	Sat 11/6/21	Thu 9/1/22	Thu 3/3/22	Tue 12/27/22	0 days	258	308	
308	308.5.17.7.1	Factory Acceptance Test of Plant, PLC for IW (To be v	60 days	Fri 9/2/22	Mon 10/31/22	Fri 9/2/22	Mon 10/31/22	Wed 12/28/22	Sat 2/25/23	0 days	307	309	
309	309.5.17.7.1	Shipping and Delivery of Plant to site	60 days	Tue 11/1/22	Fri 12/30/22	Tue 11/1/22	Fri 12/30/22	Sun 2/26/23	Wed 4/26/23	9 days	31455-60 edays	308,346	
310	310.5.17.7.1	Fixed Bar Screen, EQT046	489 days	Sat 7/24/21	Thu 11/24/22	Sat 7/24/21	Thu 11/24/22	Mon 8/21/23	270 days				
311	311.5.17.7.1	IW - Manufacturing and Factory Acceptance Test of f	240 days	Sat 7/24/21	Sun 3/20/22	Sat 7/24/21	Sun 3/20/22	Thu 11/10/22	Fri 7/7/23	204 days	257	312	
312	312.5.17.7.1	IW - Shipping and Delivery of Plant to site	45 days	Tue 10/11/22	Thu 11/24/22	Tue 10/11/22	Thu 11/24/22	Sat 7/8/23	Mon 8/21/23	143 days	311,31455-45 edays	329	
313	313.5.17.8	Site Installation Work	440 days	Fri 11/25/22	Wed 2/7/24	Fri 11/25/22	Wed 2/7/24	Fri 11/25/22	Tue 2/13/24	5 days			
314	314.5.17.8.1	Tentative Civil Handover Date, Portion B-2, Inlet Works	1 day	Fri 11/25/22	Fri 11/25/22	Fri 11/25/22	Fri 11/25/22	Fri 11/25/22	Fri 11/25/22	0 days		318,316,358f	
315	315.5.17.8.2	Tentative Civil Handover Date, HV cables draw pits from	1 day	Tue 2/14/23	Tue 2/14/23	Tue 2/14/23	Tue 2/14/23	Thu 12/7/23	Thu 12/7/23	129 days		350FF+30 da	
316	316.5.17.8.3	Commencement of E&M Installation at Inlet Works No	439 days	Sat 11/26/22	Wed 2/7/24	Sat 11/26/22	Wed 2/7/24	Sat 11/26/22	Tue 2/13/24	5 days	314		
317	317.5.17.8.3	Provision of Temporary Water Supply, Electricity Sup	30 days	Sat 11/26/22	Sun 12/25/22	Sat 11/26/22	Sun 12/25/22	Sun 12/25/22	Sun 12/25/22	0 days	314		
318	318.5.17.8.3	Installation of Lifting Appliances at Inlet Works No.	142 days	Sat 11/26/22	Sun 4/16/23	Sat 11/26/22	Sun 4/16/23	Mon 8/21/23	Mon 8/21/23	0 days	314,294	32755+30 da	
319	319.5.17.8.3	1/F EOT Crane LA-01-01 SWL 5t	45 days	Tue 1/10/23	Thu 2/23/23	Tue 1/10/23	Thu 2/23/23	Mon 8/14/23	Mon 8/14/23	45 days	322,323	326	LA - A x 4~6 men
320	320.5.17.8.3	1/F EOT Crane LA-01-02 SWL 5t	45 days	Tue 1/10/23	Thu 2/23/23	Tue 1/10/23	Thu 2/23/23	Sat 7/1/23	Mon 8/14/23	45 days	322,323	326	LA - B x 4~6 men
321	321.5.17.8.3	1/F EOT Crane LA-01-03 SWL 5t	45 days	Tue 1/10/23	Thu 2/23/23	Tue 1/10/23	Thu 2/23/23	Wed 5/17/23	Fri 6/30/23	0 days	322,323	324,326	LA - C x 4~6 men
322	322.5.17.8.3	UG EOT Crane LA-01-04 SWL 10t	45 days	Sat 11/26/22	Mon 1/9/23	Sat 11/26/22	Mon 1/9/23	Sun 4/2/23	Tue 5/16/23	0 days		319,320,321	LA - A x 4~6 men
323	323.5.17.8.3	UG EOT Crane LA-01-05 SWL 10t	45 days	Sat 11/26/22	Mon 1/9/23	Sat 11/26/22	Mon 1/9/23	Sun 4/2/23	Tue 5/16/23	0 days		319,320,321	LA - B x 4~6 men
324	324.5.17.8.3	1/F Retractable Crane LA											

Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
345	345.5.17.8.1	Installation of Transformer, IW, EQTO32	60 days	Mon 1/9/23	Thu 3/9/23	Mon 1/9/23	Thu 3/9/23	Wed 4/12/23	Sat 6/10/23	0 days	305	348,349FS+3	EE - A x 4-6 men
346	346.5.17.8.1	Installation of PLC Panels, IW	45 days	Mon 1/9/23	Wed 2/2/23	Mon 1/9/23	Wed 2/2/23	Thu 4/27/23	Sat 6/10/23	61 days	309	348	EE - B x 4-6 men
347	347.5.17.8.1	Installation of cable trays and cable containments	90 days	Mon 1/9/23	Sat 4/8/23	Mon 1/9/23	Sat 4/8/23	Mon 3/13/23	Sat 6/10/23	16 days	32755	348	EE - C x 4-6 men
348	348.5.17.8.1	Cables laying and terminations	90 days	Tue 4/25/23	Sun 7/23/23	Tue 4/25/23	Sun 7/23/23	Sun 6/11/23	Fri 9/8/23	0 days	343,345,346,347	350,353,351	EE - C x 4-6 men
349	349.5.17.8.1	Energisation of Transformer, IW	14 days	Sun 4/9/23	Sat 4/22/23	Sun 4/9/23	Sat 4/22/23	Sun 12/24/23	Sat 1/6/24	259 days	345FS+30 days	355	LV - A x 4-6 men
350	350.5.17.8.1	Energisation of LV Switchboards, IW	0 days	Sun 7/23/23	Sun 7/23/23	Sun 7/23/23	Sun 7/23/23	Sun 1/7/24	Sun 1/7/24	162 days	348,315FF+30 days	355	LV - A x 4-6 men
351	351.5.17.8.1	Site Acceptance Tests - Electrical aspects including	120 days	Mon 7/24/23	Mon 11/20/23	Mon 7/24/23	Mon 11/20/23	Sat 9/9/23	Sat 1/6/24	47 days	348		LV - A x 4-6 men
352	352.5.17.8.1	SCADA Systems, Inlet Works	105 days	Mon 7/24/23	Sun 11/5/23	Mon 7/24/23	Sun 11/5/23	Sun 9/24/23	Sat 1/6/24	62 days		354	PLC - A x 1 man
353	353.5.17.8.1	Configuration of PLC System, IW	45 days	Mon 7/24/23	Wed 9/6/23	Mon 7/24/23	Wed 9/6/23	Sun 9/24/23	Tue 11/7/23	0 days	348	355,1284	
354	354.5.17.8.1	Site Acceptance Test for PLC System at Inlet Work	60 days	Thu 9/7/23	Sun 11/5/23	Thu 9/7/23	Sun 11/5/23	Wed 11/8/23	Sat 1/6/24	35 days	353		
355	355.5.17.8.1	Site Acceptance Test for E&M Equip & Instrumentation	15 days	Tue 1/2/24	Tue 1/16/24	Tue 1/2/24	Tue 1/16/24	Sun 1/7/24	Sun 1/21/24	0 days	327,342,350,460,59356		
356	356.5.17.8.1	System Commissioning for E&M Equip at Inlet Work	15 edays	Tue 1/16/24	Wed 1/31/24	Tue 1/16/24	Wed 1/31/24	Mon 1/22/24	Tue 2/6/24	0 edays	355	357	
357	357.5.17.8.1	Risk Allowances for completion of Processing Plant a	7 edays	Wed 1/31/24	Wed 2/7/24	Wed 1/31/24	Wed 2/7/24	Tue 2/6/24	Tue 2/13/24	0.63 edays	356,365	1280	
358	358.5.17.8.1	Building Services Installations for Inlet Works No. 1	300 days	Sun 3/26/23	Fri 1/19/24	Sun 3/26/23	Fri 1/19/24	Wed 4/12/23	Mon 2/5/24	17 days	314FS+120 days,25		
359	359.5.17.8.1	Mechanical Ventilation and Air Conditioning System	150 days	Sun 3/26/23	Tue 8/22/23	Sun 3/26/23	Tue 8/22/23	Fri 5/12/23	Sun 10/8/23	30 days		365	MVAC - B x 4-6 men
360	360.5.17.8.1	Lighting and Power Distribution System, IW	180 days	Sun 3/26/23	Thu 9/21/23	Sun 3/26/23	Thu 9/21/23	Wed 4/12/23	Sun 10/8/23	0 days		365	BS - A x 4-6 men
361	361.5.17.8.1	Plumbing Installation, IW	120 days	Sun 3/26/23	Sun 7/23/23	Sun 3/26/23	Sun 7/23/23	Tue 6/6/23	Tue 10/3/23	60 days	1271	1273,365	Pb - A x 4-6 men
362	362.5.17.8.1	CCTV Installation (5 Indoor +5 outdoor Cameras), I	90 days	Mon 4/24/23	Sat 7/22/23	Mon 4/24/23	Sat 7/22/23	Tue 7/11/23	Sun 10/8/23	51 days	31455+150 days	365,1283	BS - B x 4-6 men
363	363.5.17.8.1	Fire Services Installation, IW	120 days	Mon 4/24/23	Mon 8/21/23	Mon 4/24/23	Mon 8/21/23	Sun 6/11/23	Sun 10/8/23	31 days	31455+150 days	1224,1236,1FS	A x 4-6 men
364	364.5.17.8.1	Earthing and Lightning Protection System, IW	60 days	Wed 5/24/23	Sat 7/22/23	Thu 8/10/23	Sat 7/22/23	Sun 10/8/23	Sun 10/8/23	61 days	31455+180 days	365	BS - C x 2-4 men
365	365.5.17.8.1	Testing and Commissioning of Building Services In	120 days	Fri 9/22/23	Fri 1/19/24	Fri 9/22/23	Fri 1/19/24	Mon 10/9/23	Mon 2/5/24	12 days	359,360,361,362,36357		BS - C x 2-4 men
366	366.5.18	Primary Sedimentation Tanks No. 1 ~ 4, Porillon B-3 (PS 6B)	1371 days	Wed 7/1/20	Mon 4/1/24	Wed 7/1/20	Mon 4/1/24	Wed 7/1/20	Mon 4/1/24	0 days			
367	367.5.18.1	Planned Key Date Completion Date - KD1A, PST No. 1~4	0 days	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	0 days	401FF,402FF		
368	368.5.18.2	Planned Key Date Completion Date - KD1B, PST No. 1~4	1 day	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	403FF		
369	369.5.18.3	Planned Sectional Completion Date - Section 1, PST No. 1~4	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	406FF,405FF,404FF		
370	370.5.18.4	Planned Sectional Completion Date - Section 2, PST No. 1~4	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days	494FF		
371	371.5.18.5	Selection of Suppliers for major plant and materials for P	230 days	Wed 7/1/20	Mon 2/15/21	Wed 7/1/20	Mon 2/15/21	Wed 7/1/20	Mon 2/15/21	0 days			
372	372.5.18.5.1	PST - lamella plate settlers, C13, ref. EQTO14	90 days	Wed 7/1/20	Mon 9/28/20	Wed 7/1/20	Mon 9/28/20	Wed 7/1/20	Mon 9/28/20	0 days			
373	373.5.18.5.1.1	Submission for acceptance of purchasing package	30 days	Wed 7/1/20	Thu 7/30/20	Wed 7/1/20	Thu 7/30/20	Wed 7/1/20	Thu 7/30/20	0 days		374	
374	374.5.18.5.1.1	Invitation of quotations for purchasing package	30 days	Fri 7/31/20	Sat 8/29/20	Fri 7/31/20	Sat 8/29/20	Fri 7/31/20	Sat 8/29/20	0 days		375	
375	375.5.18.5.1.1	Acceptance of conforming quotation (Completed)	30 days	Sun 8/30/20	Mon 9/28/20	Sun 8/30/20	Mon 9/28/20	Sun 8/30/20	Mon 9/28/20	0 days		374	
376	376.5.18.5.2	PST - recirculating type bottom scrapers, C13, ref. EQTO14	135 days	Wed 7/1/20	Thu 11/12/20	Wed 7/1/20	Thu 11/12/20	Wed 7/1/20	Thu 11/12/20	0 days			
377	377.5.18.5.2.1	Submission for acceptance of purchasing package	45 days	Wed 7/1/20	Fri 8/14/20	Wed 7/1/20	Fri 8/14/20	Wed 7/1/20	Fri 8/14/20	0 days		378	
378	378.5.18.5.2.1	Invitation of quotations for purchasing package	60 days	Sat 8/15/20	Tue 10/13/20	Sat 8/15/20	Tue 10/13/20	Sat 8/15/20	Tue 10/13/20	0 days		377	
379	379.5.18.5.2.1	Acceptance of conforming quotation (Completed)	30 days	Wed 10/14/20	Thu 11/12/20	Wed 10/14/20	Thu 11/12/20	Wed 10/14/20	Thu 11/12/20	0 days		378	
380	380.5.18.5.3	PST - surface scum skimmers, C13, ref. EQTO15	90 days	Tue 7/7/20	Sun 10/4/20	Tue 7/7/20	Sun 10/4/20	Tue 7/7/20	Sun 10/4/20	0 days			
381	381.5.18.5.3.1	Submission for acceptance of purchasing package	30 days	Tue 7/7/20	Wed 8/5/20	Tue 7/7/20	Wed 8/5/20	Tue 7/7/20	Wed 8/5/20	0 days		382	
382	382.5.18.5.3.1	Invitation of quotations for purchasing package	30 days	Thu 8/6/20	Fri 9/4/20	Thu 8/6/20	Fri 9/4/20	Thu 8/6/20	Fri 9/4/20	0 days		381	
383	383.5.18.5.3.1	Acceptance of conforming quotation	30 days	Sat 9/5/20	Sun 10/4/20	Sat 9/5/20	Sun 10/4/20	Sat 9/5/20	Sun 10/4/20	0 days		382	
384	384.5.18.5.4	PST - scum collector pipes, C13, ref. EQTO15	210 days	Wed 7/1/20	Tue 1/28/21	Wed 7/1/20	Tue 1/28/21	Wed 7/1/20	Tue 1/28/21	0 days			
385	385.5.18.5.4.1	Submission for acceptance of purchasing package	120 days	Wed 7/1/20	Wed 10/28/20	Wed 7/1/20	Wed 10/28/20	Wed 7/1/20	Wed 10/28/20	0 days		386	
386	386.5.18.5.4.2	Invitation of quotations for purchasing package	60 days	Thu 10/29/20	Sun 12/27/20	Thu 10/29/20	Sun 12/27/20	Thu 10/29/20	Sun 12/27/20	0 days		385	
387	387.5.18.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Mon 12/28/20	Tue 1/16/21	Mon 12/28/20	Tue 1/16/21	Mon 12/28/20	Tue 1/16/21	0 days		386	
388	388.5.18.5.5	PST - piston type primary sludge pumps, C13, ref. EQTO16	210 days	Wed 7/1/20	Tue 1/16/21	Wed 7/1/20	Tue 1/16/21	Wed 7/1/20	Tue 1/16/21	0 days			
389	389.5.18.5.5.1	Submission for acceptance of purchasing package	120 days	Wed 7/1/20	Wed 10/28/20	Wed 7/1/20	Wed 10/28/20	Wed 7/1/20	Wed 10/28/20	0 days		390	
390	390.5.18.5.5.2	Invitation of quotations for purchasing package	60 days	Thu 10/29/20	Sun 12/27/20	Thu 10/29/20	Sun 12/27/20	Thu 10/29/20	Sun 12/27/20	0 days		389	
391	391.5.18.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Mon 12/28/20	Tue 1/16/21	Mon 12/28/20	Tue 1/16/21	Mon 12/28/20	Tue 1/16/21	0 days		390	
392	392.5.18.5.6	PST - drain pumps, C13, ref. EQTO07	210 days	Tue 7/14/20	Mon 2/8/21	Tue 7/14/20	Mon 2/8/21	Tue 7/14/20	Mon 2/8/21	0 days			
393	393.5.18.5.6.1	Submission for acceptance of purchasing package	120 days	Tue 7/14/20	Tue 11/10/20	Tue 7/14/20	Tue 11/10/20	Tue 7/14/20	Tue 11/10/20	0 days		394	
394	394.5.18.5.6.2	Invitation of quotations for purchasing package	60 days	Wed 11/11/20	Sat 1/9/21	Wed 11/11/20	Sat 1/9/21	Wed 11/11/20	Sat 1/9/21	0 days		393	
395	395.5.18.5.6.3	Acceptance of conforming quotation (Completed)	30 days	Sun 1/10/21	Mon 2/8/21	Sun 1/10/21	Mon 2/8/21	Sun 1/10/21	Mon 2/8/21	0 days		394	
396	396.5.18.5.7	PST - air blowers, C13, ref. EQTO18	210 days	Tue 7/1/20	Mon 3/15/21	Tue 7/1/20	Mon 3/15/21	Tue 7/1/20	Mon 3/15/21	0 days			
397	397.5.18.5.7.1	Submission for acceptance of purchasing package	120 days	Tue 7/1/20	Tue 11/17/20	Tue 7/1/20	Tue 11/17/20	Tue 7/1/20	Tue 11/17/20	0 days		398	
398	398.5.18.5.7.2	Invitation of quotations for purchasing package	60 days	Wed 11/18/20	Sat 1/16/21	Wed 11/18/20	Sat 1/16/21	Wed 11/18/20	Sat 1/16/21	0 days		397	
399	399.5.18.5.7.3	Acceptance of conforming quotation	30 days	Mon 1/17/21	Mon 2/15/21	Mon 1/17/21	Mon 2/15/21	Mon 1/17/21	Mon 2/15/21	0 days		398	
400	400.5.18.6	Design Submissions for PST No. 1~4	587 days	Sat 8/1/20	Fri 3/11/22	Sat 8/1/20	Fri 3/11/22	Sat 8/1/20	Fri 3/11/22	0 days			
401	401.5.18.6.1	Electrical schematic drawings for PST No. 1~4	60 days	Sat 8/1/20	Tue 9/29/20	Sat 8/1/20	Tue 9/29/20	Sat 8/1/20	Tue 9/29/20	0 days		367FF	
402	402.5.18.6.2	CDS000-2 - Civil and dimensional requirements drawings for PST No	50 days	Tue 9/1/20	Tue 10/20/20	Tue 9/1/20	Tue 10/20/20	Tue 9/1/20	Tue 10/20/20	0 days		367FF	
403	403.5.18.6.3	CDS001-2 - Civil and dimensional requirements drawing	150 days	Tue 9/1/20	Thu 1/28/21	Tue 9/1/20	Thu 1/28/21	Tue 9/1/20	Thu 1/28/21	0 days		368FF	
404	404.5.18.6.4	CDS003 - Detailed Design for Primary Sedimentation Ta	104 edays	Mon 2/15/21	Sun 5/30/21	Mon 2/15/21	Sun 5/30/21	Mon 2/15/21	Mon 2/15/21	0.63 edays	375,379,383,387,39411,414,417,		
405	405.5.18.6.5	CDS022 - Detailed Design for Electrical Installations for	154.88 edays	Thu 10/7/21	Fri 3/11/22	Thu 10/7/21	Fri 3/11/22	Thu 10/7/21	Fri 3/11/22	0 edays	75,85,93,194FF,97	76,445,369FF	
406	406.5.18.6.6	CDS034-2 - Detailed Design for Electrical Installations B	90 edays	Fri 3/12/21	Thu 6/10/21	Fri 3/12/21	Thu 6/10/21	Fri 3/12/21	Mon 7/12/21	32.38 edays	140	487,369FF	
407	407.5.18.6.7	CDS025-2 - Detailed Design for LV Switchboards for PST	60 edays	Mon 5/3/21	Fri 7/2/21	Mon 5/3/21	Fri 7/2/21	Mon 5/3/21	Mon 7/12/21	0.63 edays	71	441,369FF	
408	408.5.18.6.8	CDS050-2 - Detailed Design for Lifting Appliances - PST	150 edays	Tue 9/1/20	Fri 1/29/21	Tue 9/1/20	Fri 1/29/21	Tue 9/1/20	Fri 1/29/21	0 edays	120	438,369FF	
409	409.5.18.7	Manufacturing and Delivery of Plant & Materials	811 days	Fri 1/29/21	Wed 4/19/23	Fri 1/29/21	Wed 4/19/23	Wed 4/19/23	Sun 3/13/22	232 days			
410	410.5.18.7.1	Lamella Plate Settlers, EQTO14	668 days	Mon 5/31/21	Wed 3/29/23	Mon 5/31/21	Wed 3/29/23	Wed 3/29/23	Sat 10/29/22	193 days			
411	411.5.18.7.1.1	Manufacturing and Factory Acceptance Test of Plant											

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

ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
431	431.5.18.7.4	Stoplogs and Panstocks, EQT013	668 days	Mon 5/31/21	Wed 3/29/23	Mon 5/31/21	Wed 3/29/23	Sun 7/31/22	Thu 5/11/23	43 days		433	
432	432.5.18.7.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Mon 5/31/21	Tue 1/25/22	Mon 5/31/21	Tue 1/25/22	Sun 7/31/22	Mon 2/27/23	383 days	404	433	
433	433.5.18.7.4	Shipping and Delivery of Plant to site	45 days	Mon 2/13/23	Wed 3/29/23	Mon 2/13/23	Wed 3/29/23	Tue 3/28/23	Thu 5/11/23	16 days	449,55-60 edays,432,461	433	
434	434.5.18.7.4	Pipework, Valves and Electric Actuators, EQT036, EQT	409 days	Mon 2/14/22	Wed 3/29/23	Mon 2/14/22	Wed 3/29/23	Sun 7/31/22	Thu 5/11/23	43 days	56,63	436	
435	435.5.18.7.4	Manufacturing and Factory Acceptance Test of Plant	240 days	Mon 2/14/22	Tue 10/11/22	Mon 2/14/22	Tue 10/11/22	Sun 7/31/22	Mon 3/27/23	124 days	404	436	
436	436.5.18.7.4	Shipping and Delivery of Plant to site	45 days	Mon 2/13/23	Wed 3/29/23	Mon 2/13/23	Wed 3/29/23	Tue 3/28/23	Thu 5/11/23	16 days	435,449,55-60 edays,462	436	
437	437.5.18.7.4	Lifting Appliances	790 days	Fri 1/29/21	Wed 3/29/23	Fri 1/29/21	Wed 3/29/23	Thu 9/22/22	Sat 6/3/23	66 days		439	
438	438.5.18.7.4	Manufacturing and Factory Acceptance Test of Plant	210 days	Fri 1/29/21	Thu 8/26/21	Fri 1/29/21	Thu 8/26/21	Thu 9/22/22	Wed 4/19/23	535 days	408	439	
439	439.5.18.7.4	Shipping and Delivery of Plant to site	45 days	Mon 2/13/23	Wed 3/29/23	Mon 2/13/23	Wed 3/29/23	Thu 4/20/23	Sat 6/3/23	16 days	438,449,55-60 edays,452	439	
440	440.5.18.7.4	LV Switchboards	635 days	Sat 7/3/21	Wed 3/29/23	Sat 7/3/21	Wed 3/29/23	Sun 3/13/22	Sun 5/21/23	53 days		442	
441	441.5.18.7.4	PST - Manufacturing of Plant	300 days	Sat 7/3/21	Thu 4/28/22	Sat 7/3/21	Thu 4/28/22	Sun 3/13/22	Fri 1/6/23	0 days	407	442	
442	442.5.18.7.4	PST - Factory Acceptance Test of Plant (to be witness)	90 days	Fri 4/29/22	Wed 7/27/22	Fri 4/29/22	Wed 7/27/22	Sat 1/7/23	Thu 4/6/23	200 days	441	443	
443	443.5.18.7.4	PST - Shipping and Delivery of Plant to site	45 days	Mon 2/13/23	Wed 3/29/23	Mon 2/13/23	Wed 3/29/23	Fri 4/7/23	Sun 5/21/23	16 days	442,449,55-60 edays,474	443	
444	444.5.18.7.4	PLC System	405 days	Fri 3/11/22	Wed 4/19/23	Fri 3/11/22	Wed 4/19/23	Tue 4/12/22	Sun 5/21/23	32 days		446	
445	445.5.18.7.4	Manufacturing of Plant, PLC for PST	300 days	Fri 3/11/22	Wed 1/4/23	Fri 3/11/22	Wed 1/4/23	Wed 4/12/22	Sun 2/5/23	0 days	405	446	
446	446.5.18.7.4	Factory Acceptance Test of Plant, PLC for PST (To be witness)	60 days	Thu 1/5/23	Sun 3/5/23	Thu 1/5/23	Sun 3/5/23	Mon 2/6/23	Thu 4/6/23	0 days	445	447	
447	447.5.18.7.4	Shipping and Delivery of Plant to site	45 days	Mon 2/13/23	Wed 4/19/23	Mon 2/13/23	Wed 4/19/23	Fri 4/7/23	Sun 5/21/23	0 days	446,449,55-60 edays,475	447	
448	448.5.18.8	Site Installation Work	298 days	Fri 4/14/23	Mon 2/5/24	Fri 4/14/23	Mon 2/5/24	Fri 4/14/23	Mon 4/1/24	0 days		452,487,FS+9	
449	449.5.18.8.1	Tentative Civil Handover Date, Portion B-3, PST No. 1~4	1 day	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	0 days		403	
450	450.5.18.8.1	Commencement of E&M Installation at PST No. 1~4	297 days	Sat 4/15/23	Mon 2/5/24	Sat 4/15/23	Mon 2/5/24	Sat 4/15/23	Mon 4/1/24	0 days	449	452,487,FS+9	
451	451.5.18.8.2	Provision of Temporary Water Supply, Electricity Sup	30 days	Sat 4/15/23	Sun 5/14/23	Sat 4/15/23	Sun 5/14/23	Sat 4/15/23	Sun 5/14/23	0 days	449	452,487,FS+9	
452	452.5.18.8.1	Installation of Lifting Appliances at PST No. 1~4	127 days	Sat 4/15/23	Sat 8/19/23	Sat 4/15/23	Sat 8/19/23	Sun 6/4/23	Sun 10/8/23	50 days	449,439	452,487,FS+9	
453	453.5.18.8.2	Basement EOT Crane LA-02-01 SWL 10t	30 days	Sat 4/15/23	Sun 5/14/23	Sat 4/15/23	Sun 5/14/23	Sun 6/4/23	Mon 7/3/23	0 days		454,455,459	LA - A x 4-6 men
454	454.5.18.8.2	Coping Level EOT Crane LA-02-02 SWL 5t	30 days	Mon 5/15/23	Tue 6/13/23	Mon 5/15/23	Tue 6/13/23	Sun 10/1/23	Sun 10/1/23	60 days	453	459	LA - A x 4-6 men
455	455.5.18.8.2	Coping Level EOT Crane LA-02-03 SWL 5t	30 days	Mon 5/15/23	Tue 6/13/23	Mon 5/15/23	Tue 6/13/23	Tue 7/4/23	Wed 8/2/23	0 days	453	459	LA - B x 4-6 men
456	456.5.18.8.2	Coping Level EOT Crane LA-02-04 SWL 5t	30 days	Wed 6/14/23	Thu 7/13/23	Wed 6/14/23	Thu 7/13/23	Sat 9/2/23	Sun 10/1/23	30 days	455	459	LA - A x 4-6 men
457	457.5.18.8.2	Coping Level EOT Crane LA-02-05 SWL 5t	30 days	Wed 6/14/23	Thu 7/13/23	Wed 6/14/23	Thu 7/13/23	Thu 8/3/23	Fri 9/1/23	0 days	455	459	LA - B x 4-6 men
458	458.5.18.8.2	Coping Level EOT Crane LA-02-06 SWL 2t	30 days	Fri 7/14/23	Sat 8/12/23	Fri 7/14/23	Sat 8/12/23	Sat 9/2/23	Sun 10/1/23	0 days	457	459	LA - A x 4-6 men
459	459.5.18.8.2	T&C, Loading Test for Lifting Appliances at PST No. 1~4	7 days	Sun 8/13/23	Sat 8/19/23	Sun 8/13/23	Sat 8/19/23	Mon 10/2/23	Sun 10/8/23	0 days	453,454,455,456,456,453	459	LA - A x 4-6 men
460	460.5.18.8.1	Mechanical Installations at PST No. 1~4	240 days	Sat 4/15/23	Sun 12/10/23	Sat 4/15/23	Sun 12/10/23	Fri 5/12/23	Sat 1/6/24	20 days		484	
461	461.5.18.8.2	Installation of penstocks and stoplogs (Penstock 1)	90 days	Sat 4/15/23	Thu 7/13/23	Sat 4/15/23	Thu 7/13/23	Fri 5/12/23	Wed 8/9/23	0 days	433	467,472	ME - E x 4-6 men
462	462.5.18.8.2	Installation of penstocks and valves, EQT036	240 days	Sat 4/15/23	Sun 12/10/23	Sat 4/15/23	Sun 12/10/23	Fri 5/12/23	Sat 1/6/24	27 days	436	467,472	ME - B x 4-6 men
463	463.5.18.8.2	Installation of lamella plate settlers (x4), EQT014	60 days	Sun 8/20/23	Wed 10/18/23	Sun 8/20/23	Wed 10/18/23	Mon 10/9/23	Thu 12/7/23	0 days	464,459,412	465,466	ME - A x 4-6 men
464	464.5.18.8.2	Installation of reciprocating type bottom scrapers	30 days	Sat 4/15/23	Sun 5/14/23	Sat 4/15/23	Sun 5/14/23	Sat 9/9/23	Sun 10/8/23	97 days	415	463	ME - A x 4-6 men
465	465.5.18.8.2	Installation of surface scum skimmers (x1), EQT01	30 days	Thu 10/19/23	Fri 11/17/23	Thu 10/19/23	Fri 11/17/23	Fri 12/8/23	Sat 1/6/24	50 days	463,418	468	ME - A x 4-6 men
466	466.5.18.8.2	Installation of scum collector pipes (x1), EQT015	30 days	Thu 10/19/23	Fri 11/17/23	Thu 10/19/23	Fri 11/17/23	Fri 12/8/23	Sat 1/6/24	50 days	463,421	468	ME - B x 4-6 men
467	467.5.18.8.2	Installation of piston type primary sludge pumps (x1)	30 days	Fri 7/14/23	Sat 8/12/23	Fri 7/14/23	Sat 8/12/23	Fri 8/10/23	Fri 9/8/23	0 days	461,424	468	ME - C x 4-6 men
468	468.5.18.8.2	Installation of drain pumps (x1), EQT007	30 days	Sun 8/13/23	Mon 9/11/23	Sun 8/13/23	Mon 9/11/23	Sat 9/9/23	Sun 10/8/23	0 days	467,427	469	ME - C x 4-6 men
469	469.5.18.8.2	Installation of air blowers (x2), EQT018	30 days	Tue 9/12/23	Wed 10/11/23	Tue 9/12/23	Wed 10/11/23	Mon 10/9/23	Tue 11/7/23	0 days	468,430	470	ME - C x 4-6 men
470	470.5.18.8.2	Installation of instrumentations, EQT035-1	60 days	Thu 10/12/23	Sun 12/10/23	Thu 10/12/23	Sun 12/10/23	Wed 11/8/23	Sat 1/6/24	27 days	469,52	470	ME - C x 4-6 men
471	471.5.18.8.2	Installation of Platforms, Covers etc., PST, EQT050	60 days	Thu 9/21/23	Sun 11/19/23	Thu 9/21/23	Sun 11/19/23	Wed 11/8/23	Sat 1/6/24	48 days		471	ME - F x 4-6 men
472	472.5.18.8.2	Site Acceptance Tests - mechanical aspects including	150 days	Fri 7/14/23	Sun 12/10/23	Fri 7/14/23	Sun 12/10/23	Thu 8/10/23	Sat 1/6/24	27 days	461	471	ME - D x 2-4 men
473	473.5.18.8.1	Electrical Installations for PST No. 1~4	260 days	Sat 4/15/23	Sat 12/30/23	Sat 4/15/23	Sat 12/30/23	Sat 4/22/23	Sat 1/6/24	0 days	449	484	
474	474.5.18.8.2	Installation of LV Switchboards, PST	60 days	Sat 4/15/23	Tue 6/13/23	Sat 4/15/23	Tue 6/13/23	Mon 5/22/23	Thu 7/20/23	30 days	443	477	LV - A x 4-6 men
475	475.5.18.8.2	Installation of PLC Panel, PST	60 days	Thu 4/20/23	Sun 6/18/23	Thu 4/20/23	Sun 6/18/23	Mon 5/22/23	Thu 7/20/23	25 days	447	477	EE - A x 4-6 men
476	476.5.18.8.2	Installation of cable trays and cable containments,	90 days	Sat 4/15/23	Thu 7/13/23	Sat 4/15/23	Thu 7/13/23	Sat 4/22/23	Thu 7/20/23	0 days	474,475,476	479,FS-30 day,EE - B x 4-6 men	EE - B x 4-6 men
477	477.5.18.8.2	Cables laying and terminations, PST	90 days	Fri 7/14/23	Wed 10/11/23	Fri 7/14/23	Wed 10/11/23	Fri 7/14/23	Wed 10/18/23	0 days	474,475,476	479,FS-30 day,EE - B x 4-6 men	EE - B x 4-6 men
478	478.5.18.8.2	Tentative Civil Handover Date, LV cables draw pits	1 day	Thu 7/20/23	Thu 7/20/23	Thu 7/20/23	Thu 7/20/23	Thu 12/7/23	Thu 12/7/23	24 days		479,FS+30 day	
479	479.5.18.8.2	Energyisation of LV Switchboards, PST	1 day	Tue 9/12/23	Tue 9/12/23	Tue 9/12/23	Tue 9/12/23	Sat 1/6/24	Sat 1/6/24	109 days	477,FS-30 days,478,484	484	LV - A x 4-6 men
480	480.5.18.8.2	Site Acceptance Tests - Electrical aspects including	80 days	Thu 10/12/23	Sat 12/30/23	Thu 10/12/23	Sat 12/30/23	Thu 10/19/23	Sat 1/6/24	2 days	477	355	LV - A x 4-6 men
481	481.5.18.8.1	SCADA Systems, PST No. 1~4	60 days	Thu 10/12/23	Sun 12/10/23	Thu 10/12/23	Sun 12/10/23	Fri 12/8/23	Mon 2/5/24	57 days		484	
482	482.5.18.8.2	Configuration of PLC System	45 days	Thu 10/12/23	Sat 11/25/23	Thu 10/12/23	Sat 11/25/23	Fri 12/8/23	Sun 1/21/24	0 days	477	483	PLC - B x 1 man
483	483.5.18.8.2	Site Acceptance Test for PLC System at PST No. 1~4	15 days	Sun 11/26/23	Sun 12/10/23	Sun 11/26/23	Sun 12/10/23	Mon 1/22/24	Mon 2/5/24	0 days	482	485,FF,1284	PLC - A x 1 man
484	484.5.18.8.2	Site Acceptance Test for E&M Equip and Instrumentation	15 edays	Sat 12/30/23	Sun 1/14/24	Sat 12/30/23	Sun 1/14/24	Mon 1/22/24	Mon 1/22/24	0.63 edays	460,473,479	485	
485	485.5.18.8.2	System Commissioning for E&M Equip at PST No. 1~4	15 days	Mon 1/15/24	Mon 1/29/24	Mon 1/15/24	Mon 1/29/24	Mon 2/5/24	Mon 2/5/24	0 days	484,483,FF	486	
486	486.5.18.8.2	Risk Allowances for Completion of Processing Plant at PST No. 1~4	7 edays	Mon 1/29/24	Mon 2/5/24	Mon 1/29/24	Mon 2/5/24	Tue 2/13/24	Tue 2/13/24	2.63 edays	485	1280	
487	487.5.18.8.1	Building Services Installations for PST No. 1~4	150 days	Fri 7/14/23	Sun 12/10/23	Fri 7/14/23	Sun 12/10/23	Sun 7/16/23	Mon 4/1/24	2 days	449,FS+90 days,406	494	MVAC - B x 4-6 men
488	488.5.18.8.2	Mechanical Ventilation and Air Conditioning System	90 days	Fri 7/14/23	Wed 10/11/23	Fri 7/14/23	Wed 10/11/23	Sat 11/4/23	Thu 2/1/24	0 days		494	MVAC - B x 4-6 men
489	489.5.18.8.2	Lighting and Power Distribution System, PST	90 days	Fri 7/14/23	Wed 10/11/23	Fri 7/14/23	Wed 10/11/23	Sat 11/4/23	Thu 2/1/24	0 days		494	BS - A x 4-6 men
490	490.5.18.8.2	Plumbing Installation, PST	80 days	Fri 7/14/23	Sun 10/1/23	Fri 7/14/23	Sun 10/1/23	Tue 10/3/23	Tue 10/3/23	0 days	1271	1273,494	Pb - B x 4-6 men
491	491.5.18.8.2	CCTV Installation (9 indoor + 2 outdoor Cameras),	60 days	Fri 7/14/23	Mon 9/11/23	Fri 7/14/23	Mon 9/11/23	Thu 2/1/24	Thu 2/1/24	0 days	449,FS+60 days	494,1283	BS - B x 4-6 men
492	492.5.18.8.2	Fire Services Installation, PST	85 days	Fri 7/14/23	Fri 10/6/23	Fri 7/14/23	Fri 10/6/23	Tue 7/18/23	Tue 10/10/23	0 days		1224,1236,1,FS - A x 4-6 men	FS - A x 4-6 men
493	493.5.18.8.2	Earthing and Lightning Protection System, PST	90 days	Fri 7/14/23	Wed 10/11/23	Fri 7/14/23	Wed 10/11/23	Sat 11/4/23	Thu 2/1/24	0 days		494	BS - C x 2-4 men
494	494.5.18.8.2	Testing and Commissioning of Building Services Installation	60 days	Thu 10/12/23	Sun 12/10/23	Thu 10							

Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
517	517.5.19.5.1	BR - scum removal systems, C11, EQT031, EQT032	150 days Mon 9/14/20 Wed 2/10/21	Mon 9/14/20	Wed 2/10/21	Mon 9/14/20	Wed 2/10/21	Mon 9/14/20	Wed 2/10/21	0 days			
518	518.5.19.5.1	Submission for acceptance of purchasing package	60 days Mon 9/14/20 Thu 11/12/20	Mon 9/14/20	Thu 11/12/20	Mon 9/14/20	Thu 11/12/20	Mon 9/14/20	Thu 11/12/20	0 days	519		
519	519.5.19.5.1	Invitation of quotations for purchasing package	60 days Fri 11/13/20 Mon 3/11/21	Fri 11/13/20	Mon 3/11/21	Fri 11/13/20	Mon 3/11/21	Fri 11/13/20	Mon 3/11/21	0 days	518		
520	520.5.19.5.1	Acceptance of conforming quotation (Completed)	30 days Tue 3/1/21 Wed 2/10/21	Tue 3/1/21	Wed 2/10/21	Tue 3/1/21	Wed 2/10/21	Tue 3/1/21	Wed 2/10/21	0 days	519		
521	521.5.19.5.1	BR - aeration blowers (Marking Scheme Approach), EQT039	180 days Mon 9/14/20 Fri 3/12/21	Mon 9/14/20	Fri 3/12/21	Mon 9/14/20	Fri 3/12/21	Mon 9/14/20	Fri 3/12/21	0 days			
522	522.5.19.5.1	Submission for acceptance of purchasing package including prop	60 days Mon 9/14/20 Sat 12/12/20	Mon 9/14/20	Sat 12/12/20	Mon 9/14/20	Sat 12/12/20	Mon 9/14/20	Sat 12/12/20	0 days	523		
523	523.5.19.5.1	Invitation of quotations for purchasing package	60 days Sun 12/13/20 Wed 2/10/21	Sun 12/13/20	Wed 2/10/21	Sun 12/13/20	Wed 2/10/21	Sun 12/13/20	Wed 2/10/21	0 days	522		
524	524.5.19.5.1	Acceptance of conforming quotation (Completed)	30 days Thu 2/11/21 Fri 3/12/21	Fri 3/12/21	Thu 2/11/21	Fri 3/12/21	Thu 2/11/21	Fri 3/12/21	Thu 2/11/21	0 days	523		
525	525.5.19.5.1	BR - Instrumentation, C13, EQT035-2	150 days Thu 10/1/20 Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	115 days			
526	526.5.19.5.1	Submission for acceptance of purchasing package	60 days Thu 10/1/20 Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days	527		
527	527.5.19.5.1	Invitation of quotations for purchasing package	60 days Mon 11/30/20 Thu 1/28/21	Mon 11/30/20	Thu 1/28/21	Mon 11/30/20	Thu 1/28/21	Mon 11/30/20	Thu 1/28/21	0 days	526		
528	528.5.19.5.1	Acceptance of conforming quotation	30 days Fri 1/29/21 Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	13 days	527		
529	529.5.19.6	Design Submissions for BR 2A & 2B	578 days Sat 8/15/20 Tue 3/15/22	Sat 8/15/20	Tue 3/15/22	Sat 8/15/20	Tue 3/15/22	Sat 8/15/20	Tue 3/15/22	0 days			
530	530.5.19.6.1	Electrical schematic drawings for BR No. 2A & 2B	60 days Sat 8/15/20 Tue 10/13/20	Sat 8/15/20	Tue 10/13/20	Sat 8/15/20	Tue 10/13/20	Sat 8/15/20	Tue 10/13/20	0 days			
531	531.5.19.6.2	CS020-3 - Civil and dimensional requirements drawings for BR 2A&B	55 days Tue 9/1/20 Sun 10/25/20	Tue 9/1/20	Sun 10/25/20	Tue 9/1/20	Sun 10/25/20	Tue 9/1/20	Sun 10/25/20	0 days			
532	532.5.19.6.3	CS021-3 - Civil and dimensional requirements drawing	281 days Fri 8/28/20 Fri 6/4/21	Fri 8/28/20	Fri 6/4/21	Fri 8/28/20	Fri 6/4/21	Fri 8/28/20	Fri 6/4/21	0 days			
533	533.5.19.6.4	CS004 - Detailed Design for Bioreactor 2A and 2B	120 edays Fri 3/12/21 Sat 7/10/21	Fri 3/12/21	Sat 7/10/21	Fri 3/12/21	Sat 7/10/21	Fri 3/12/21	Sat 7/10/21	0.63 edays	504,508,512,516,525,40,543,546,		
534	534.5.19.6.5	CS023 - Detailed Design for Electrical Installations for	159.38 edays Thu 10/7/21 Tue 3/15/22	Thu 10/7/21	Tue 3/15/22	Thu 10/7/21	Tue 3/15/22	Thu 10/7/21	Tue 3/15/22	0 edays	75,85,93,194FF,97	76,498FF,727	
535	535.5.19.6.6	CS034-3 - Detailed Design for Electrical Installations B	100 edays Fri 3/12/21 Sun 6/20/21	Fri 3/12/21	Sun 6/20/21	Fri 3/12/21	Sun 6/20/21	Fri 3/12/21	Sun 6/20/21	0 edays	140	599,498FF,6C	
536	536.5.19.6.7	CS025-3 - Detailed Design for LV Switchboards for BR	60 edays Mon 5/3/21 Fri 7/2/21	Mon 5/3/21	Fri 7/2/21	Mon 5/3/21	Fri 7/2/21	Mon 5/3/21	Fri 7/2/21	0.63 edays	71	713,498FF	
537	537.5.19.6.8	CS050-3 - Detailed Design for Lifting Appliances - BR 2	120 edays Thu 10/1/20 Fri 1/29/21	Thu 10/1/20	Fri 1/29/21	Thu 10/1/20	Fri 1/29/21	Thu 10/1/20	Fri 1/29/21	0 edays	120	567,498FF	
538	538.5.19.7	Manufacturing and Delivery of Plant & Materials	740 days Fri 1/29/21 Tue 2/7/23	Fri 1/29/21	Tue 2/7/23	Fri 1/29/21	Tue 2/7/23	Fri 1/29/21	Tue 2/7/23	258 days			
539	539.5.19.7.1	Pre-treatment Fine Screens, EQT019	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	185 days			
540	540.5.19.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	541	
541	541.5.19.7.1	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	16 days	540,570SS-60	edays	583
542	542.5.19.7.1	Air Diffusion System, EQT017	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	168 days			
543	543.5.19.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	544	
544	544.5.19.7.2	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	83 days	543,570SS-60	edays	584
545	545.19.7.1	Submersible Mixer, EQT020	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	213 days			
546	546.5.19.7.2	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	547	
547	547.5.19.7.2	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	44 days	546,570SS-60	edays	585
548	548.5.19.7.4	Mixed Liquor Return Pumps, EQT008	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	228 days			
549	549.5.19.7.4	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	550	
550	550.5.19.7.4	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	16 days	549,570SS-60	edays	586
551	551.5.19.7.5	Sum Removal System, EQT021, EQT022	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	258 days			
552	552.5.19.7.5	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	553	
553	553.5.19.7.5	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	46 days	552,570SS-60	edays	587
554	554.5.19.7.6	Aeration Blowers, EQT039	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	258 days			
555	555.5.19.7.6	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	556	
556	556.5.19.7.6	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	173 days	555,570SS-60	edays	588
557	557.5.19.7.7	Instrumentations, EQT035-2	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	243 days			
558	558.5.19.7.7	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	559	
559	559.5.19.7.7	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	166 days	558,570SS-60	edays	589
560	560.5.19.7.8	Stoplogs and Penstocks, EQT013	577 days Sun 7/11/21 Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	Sun 7/11/21	Tue 2/7/23	33 days			
561	561.5.19.7.8	Manufacturing and Factory Acceptance Test of Plant	240 days Sun 7/11/21 Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	Sun 7/11/21	Mon 3/7/22	292 days	533	562	
562	562.5.19.7.8	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	16 days	561,570SS-60	edays	581
563	563.5.19.7.5	Pipework, Valves and Electric Actuators, EQT036, EQT037	359 days Mon 2/14/22 Tue 2/7/23	Mon 2/14/22	Tue 2/7/23	Mon 2/14/22	Tue 2/7/23	Mon 2/14/22	Tue 2/7/23	93 days	56,63		
564	564.5.19.7.5	Manufacturing and Factory Acceptance Test of Plant	240 days Mon 2/14/22 Tue 10/11/22	Mon 2/14/22	Tue 10/11/22	Mon 2/14/22	Tue 10/11/22	Mon 2/14/22	Tue 10/11/22	74 days	533	565	
565	565.5.19.7.5	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	16 days	564,570SS-60	edays	582
566	566.5.19.7.1	Lifting Appliances	740 days Fri 1/29/21 Tue 2/7/23	Fri 1/29/21	Tue 2/7/23	Fri 1/29/21	Tue 2/7/23	Fri 1/29/21	Tue 2/7/23	101 days			
567	567.5.19.7.1	Manufacturing and Factory Acceptance Test of Plant	210 days Fri 1/29/21 Thu 8/26/21	Fri 1/29/21	Thu 8/26/21	Fri 1/29/21	Thu 8/26/21	Fri 1/29/21	Thu 8/26/21	485 days	537	568	
568	568.5.19.7.1	Shipping and Delivery of Plant to site	45 days Sun 12/25/22 Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	Sun 12/25/22	Tue 2/7/23	16 days	567,570SS-60	edays	574
569	569.5.19.8	Site Installation Work	1209.38 days Mon 3/1/21 Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	0 days			
570	570.5.19.8.1	Tentative Civil Handover Date, Portion B-4, BR2A & 2B	1 day Thu 2/23/23 Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	0 days			
571	571.5.19.8.2	Tentative Civil Handover Date, LV cables draw pits from	1 day Thu 6/1/23 Thu 6/1/23	Thu 6/1/23	Thu 6/1/23	Thu 6/1/23	Thu 6/1/23	Thu 6/1/23	Thu 6/1/23	30 days			
572	572.5.19.8.3	Commencement of E&M Installation at Bioreactor No.	1209.38 days Mon 3/1/21 Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	0 days			
573	573.5.19.8.3	Provision of Temporary Water Supply, Electricity Sup	7 days Fri 2/24/23 Thu 3/2/23	Fri 2/24/23	Thu 3/2/23	Fri 2/24/23	Thu 3/2/23	Fri 2/24/23	Thu 3/2/23	0 days	570		
574	574.5.19.8.3	Installation of Lifting Appliances at BR 2A & 2B	67 days Fri 2/24/23 Mon 5/1/23	Fri 2/24/23	Mon 5/1/23	Fri 2/24/23	Mon 5/1/23	Fri 2/24/23	Mon 5/1/23	85 days	570,568		
575	575.5.19.8.3	Coping Level EOT Crane LA-03-01 SWL 5t	30 days Fri 2/24/23 Sat 3/25/23	Fri 2/24/23	Sat 3/25/23	Fri 2/24/23	Sat 3/25/23	Fri 2/24/23	Sat 3/25/23	0 days	577,578,579	LA - A x 4-6 men	
576	576.5.19.8.3	Coping Level EOT Crane LA-03-02 SWL 5t	30 days Fri 2/24/23 Sat 3/25/23	Fri 2/24/23	Sat 3/25/23	Fri 2/24/23	Sat 3/25/23	Fri 2/24/23	Sat 3/25/23	0 days	577,578,579	LA - B x 4-6 men	
577	577.5.19.8.3	Coping Level EOT Crane LA-03-03 SWL 5t	30 days Sun 3/26/23 Mon 4/24/23	Sun 3/26/23	Mon 4/24/23	Sun 3/26/23	Mon 4/24/23	Sun 3/26/23	Mon 4/24/23				

Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
601	603.5.19.8.3	Fire Services Installation, BR2	120 days	Thu 5/25/23	Thu 9/21/23	Thu 5/25/23	Thu 9/21/23	Tue 6/13/23	Tue 10/10/23	15 days	1224,1236,1	FS - B x 4-6 men	
604	604.5.19.8.3	Lightning Protection System, BR2	60 days	Thu 5/25/23	Sun 7/23/23	Thu 5/25/23	Sun 7/23/23	Fri 2/2/24	Mon 4/1/24	253 days	499FF	BS - C x 2-4 men	
605	605.5.19.8.3	Testing and Commissioning of Building Services Installation	45 days	Sun 10/22/23	Tue 12/5/23	Sun 10/22/23	Tue 12/5/23	Sat 2/17/24	Mon 4/1/24	118 days	600,601,602,603	499FF	BS - C x 2-4 men
606	606.5.19.8.1	Photovoltaic Power System (PS 6B.6.11)	1209.38 days	Mon 3/1/21	Sat 6/22/24	Mon 3/1/21	Sat 6/22/24	Mon 3/1/21	Mon 4/1/24	0 days			
607	607.5.19.8.3	Planned Sectional Completion Date - Section 1	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	617FF		
608	608.5.19.8.3	Planned Sectional Completion Date - Section 2	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days	625FF		
609	609.5.19.8.1	Selection of Suppliers for major plant and materials	73 days	Mon 3/1/21	Wed 5/12/21	Mon 3/1/21	Wed 5/12/21	Mon 3/1/21	Wed 5/12/21	0 days			
610	610.5.19.8.1	PV System (EQTO41)	73 days	Mon 3/1/21	Wed 5/12/21	Mon 3/1/21	Wed 5/12/21	Mon 3/1/21	Wed 5/12/21	0 days			
611	611.5.19.8.3	Submission for acceptance of purchasing package	30 days	Mon 3/1/21	Tue 3/30/21	Mon 3/1/21	Tue 3/30/21	Mon 3/1/21	Tue 3/30/21	0 days		612	
612	612.5.19.8.3	Invitation of quotations for purchasing package	21 days	Wed 3/31/21	Tue 4/20/21	Wed 3/31/21	Tue 4/20/21	Tue 4/20/21	Wed 3/31/21	0 days	611	613	
613	613.5.19.8.3	Acceptance of conforming quotation	21 days	Wed 4/21/21	Tue 5/11/21	Wed 4/21/21	Tue 5/11/21	Wed 4/21/21	Tue 5/11/21	0 days	612	614	
614	614.5.19.8.3	Commencement of Design Work	1 day	Wed 5/12/21	Wed 5/12/21	Wed 5/12/21	Wed 5/12/21	Wed 5/12/21	Wed 5/12/21	0 days	613	616	
615	615.5.19.8.1	Design Submissions	761.38 days	Wed 5/12/21	Tue 6/13/23	Wed 5/12/21	Tue 6/13/23	Wed 5/12/21	Mon 7/12/21	0 days			
616	616.5.19.8.3	CDS060 - Detailed Design for PV System	757.75 edays	Wed 5/12/21	Fri 6/9/23	Wed 5/12/21	Fri 6/9/23	Fri 6/9/23	Wed 5/12/21	0 days	614	617	
617	617.5.19.8.3	Complete the CLP's Electronic Application Form	4 days	Fri 6/9/23	Tue 6/13/23	Fri 6/9/23	Tue 6/13/23	Fri 6/9/23	Mon 7/12/21	0 days	616	607FF,619	
618	618.5.19.8.2	Material ordering and delivery to site	195 days	Tue 6/13/23	Mon 12/25/23	Tue 6/13/23	Mon 12/25/23	Fri 3/24/23	Wed 10/4/23	0 days			
619	619.5.19.8.3	Manufacturing and Factory Acceptance Test	150 days	Tue 6/13/23	Fri 11/10/23	Tue 6/13/23	Fri 11/10/23	Fri 11/10/23	Sun 8/20/23	0 days	617	620	
620	620.5.19.8.3	Shipping and Delivery of Plant to site	45 days	Fri 11/10/23	Mon 12/25/23	Fri 11/10/23	Mon 12/25/23	Mon 8/21/23	Wed 10/4/23	0 days	619,622,625+120	eda 623	
621	621.5.19.8.1	Site Installation Work	394.38 days	Thu 5/25/23	Sat 6/22/24	Thu 5/25/23	Sat 6/22/24	Sat 6/22/24	Mon 4/1/24	0 days			
622	622.5.19.8.3	Installative Civil Handover Date, Portion B-4, B	1 day	Thu 5/25/23	Thu 5/25/23	Thu 5/25/23	Thu 5/25/23	Sun 4/23/23	Sun 4/23/23	0 days	620,625+120	eda 624	
623	623.5.19.8.3	Commencement of Site Installation Work	90 days	Mon 12/25/23	Sun 3/24/24	Mon 12/25/23	Sun 3/24/24	Thu 10/5/23	Tue 1/2/24	0 days	620	624	PV - A x 4-6 men
624	624.5.19.8.3	Technical Assessment, System Test and Installation	60 days	Sun 3/24/24	Thu 5/23/24	Sun 3/24/24	Thu 5/23/24	Wed 1/3/24	Sat 3/2/24	0 days	623	625	PV - A x 4-6 men
625	625.5.19.8.3	CLP's smart meter installation and Final on-grid	30 days	Thu 5/23/24	Sat 6/22/24	Thu 5/23/24	Sat 6/22/24	Sun 3/3/24	Mon 4/1/24	0 days	624	608FF	
626	626.5.20	Membrane Facilities Building, Portion B-5 (PS 6B.2.4)	1320 days	Fri 8/21/20	Mon 4/1/24	Fri 8/21/20	Mon 4/1/24	Fri 8/21/20	Mon 4/1/24	0 days			
627	627.5.20.1	Planned Key Date Completion Date - KD1A, MFB No. 2	0 days	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	Fri 10/30/20	0 days	673FF,674FF		
628	628.5.20.2	Planned Key Date Completion Date - KD1B, MFB No. 2	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	675FF		
629	629.5.20.3	Planned Sectional Completion Date - Section 1, MFB No. 2	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	676FF,677FF,678FF		
630	630.5.20.4	Planned Sectional Completion Date - Section 2, MFB No. 2	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days			
631	631.5.20.5	Selection of Suppliers for major plant and materials for MFS	224 days	Tue 9/1/20	Mon 4/12/21	Tue 9/1/20	Mon 4/12/21	Tue 9/1/20	Tue 6/15/21	64 days			
632	632.5.20.5.1	MFS - hollow fibre membrane modules (Marking Scheme Approved)	130 days	Tue 9/1/20	Thu 1/28/21	Tue 9/1/20	Thu 1/28/21	Tue 9/1/20	Thu 1/28/21	0 days			
633	633.5.20.5.1.1	Submission for acceptance of purchasing package including proposal	60 days	Tue 9/1/20	Fri 10/30/20	Tue 9/1/20	Fri 10/30/20	Tue 9/1/20	Fri 10/30/20	0 days		634	
634	634.5.20.5.1.1	Invitation of quotations for purchasing package	60 days	Sat 10/31/20	Tue 12/29/20	Sat 10/31/20	Tue 12/29/20	Sat 10/31/20	Tue 12/29/20	0 days	633	635	
635	635.5.20.5.1.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	634	636	
636	636.5.20.5.2	MFS - air scour blowers, C11, ref. EQTO40	150 days	Tue 9/1/20	Thu 1/28/21	Tue 9/1/20	Thu 1/28/21	Tue 9/1/20	Thu 1/28/21	0 days			
637	637.5.20.5.2.1	Submission for acceptance of purchasing package	60 days	Tue 9/1/20	Fri 10/30/20	Tue 9/1/20	Fri 10/30/20	Tue 9/1/20	Fri 10/30/20	0 days		638	
638	638.5.20.5.2.1	Invitation of quotations for purchasing package	60 days	Sat 10/31/20	Tue 12/29/20	Sat 10/31/20	Tue 12/29/20	Sat 10/31/20	Tue 12/29/20	0 days	637	639	
639	639.5.20.5.2.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	638	638	
640	640.5.20.5.3	MFS - permeate pumps, C11, ref. EQTO24	180 days	Tue 9/1/20	Sat 3/27/21	Tue 9/1/20	Sat 3/27/21	Tue 9/1/20	Sat 3/27/21	0 days			
641	641.5.20.5.3.1	Submission for acceptance of purchasing package	90 days	Tue 9/1/20	Sun 11/29/20	Tue 9/1/20	Sun 11/29/20	Tue 9/1/20	Sun 11/29/20	0 days		642	
642	642.5.20.5.3.1	Invitation of quotations for purchasing package	60 days	Mon 11/30/20	Thu 1/28/21	Mon 11/30/20	Thu 1/28/21	Mon 11/30/20	Thu 1/28/21	0 days	641	643	
643	643.5.20.5.3.1	Acceptance of conforming quotation (Completed)	30 days	Fri 1/29/21	Sat 3/27/21	Fri 1/29/21	Sat 3/27/21	Fri 1/29/21	Sat 3/27/21	0 days	642	644	
644	644.5.20.5.4	MFS - compressed air system, C11, ref. EQTO29	120 days	Tue 9/15/20	Tue 3/13/21	Tue 9/15/20	Tue 3/13/21	Tue 9/15/20	Tue 3/13/21	0 days			
645	645.5.20.5.4.1	Submission for acceptance of purchasing package	60 days	Tue 9/15/20	Fri 11/13/20	Tue 9/15/20	Fri 11/13/20	Tue 9/15/20	Fri 11/13/20	0 days		646	
646	646.5.20.5.4.1	Invitation of quotations for purchasing package	30 days	Sat 11/14/20	Sun 12/13/20	Sat 11/14/20	Sun 12/13/20	Sat 11/14/20	Sun 12/13/20	0 days	645	647	
647	647.5.20.5.4.1	Acceptance of conforming quotation (Completed)	30 days	Mon 12/14/20	Tue 1/12/21	Mon 12/14/20	Tue 1/12/21	Mon 12/14/20	Tue 1/12/21	0 days	646	648	
648	648.5.20.5.5	MFS - chemical storage tanks, C11, ref. EQTO31	110 days	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	0 days			
649	649.5.20.5.5.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		650	
650	650.5.20.5.5.1	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	0 days	649	651	
651	651.5.20.5.5.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	650	678	
652	652.5.20.5.6	MFS - chemical dosing pumps, C11, ref. EQTO30	120 days	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	0 days			
653	653.5.20.5.6.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days	2,30	654	
654	654.5.20.5.6.1	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	0 days	653	655	
655	655.5.20.5.6.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	654	678	
656	656.5.20.5.7	MFS - return activated sludge pumps (Marking Scheme Approved)	180 days	Thu 10/1/20	Mon 3/29/21	Thu 10/1/20	Mon 3/29/21	Thu 10/1/20	Mon 3/29/21	0 days			
657	657.5.20.5.7.1	Submission for acceptance of purchasing package	90 days	Thu 10/1/20	Tue 12/29/20	Thu 10/1/20	Tue 12/29/20	Thu 10/1/20	Tue 12/29/20	0 days		658	
658	658.5.20.5.7.1	Invitation of quotations for purchasing package	60 days	Wed 12/30/20	Sat 2/27/21	Wed 12/30/20	Sat 2/27/21	Wed 12/30/20	Sat 2/27/21	0 days	657	659	
659	659.5.20.5.7.1	Acceptance of conforming quotation (Completed)	30 days	Sun 2/28/21	Mon 3/29/21	Sun 2/28/21	Mon 3/29/21	Sun 2/28/21	Mon 3/29/21	0 days	658	676	
660	660.5.20.5.8	MFS - membrane tank drain pumps, C11, ref. EQTO09	180 days	Tue 9/15/20	Sat 3/13/21	Tue 9/15/20	Sat 3/13/21	Tue 9/15/20	Sat 3/13/21	0 days			
661	661.5.20.5.8.1	Submission for acceptance of purchasing package	90 days	Tue 9/15/20	Sun 12/13/20	Tue 9/15/20	Sun 12/13/20	Tue 9/15/20	Sun 12/13/20	0 days		662	
662	662.5.20.5.8.1	Invitation of quotations for purchasing package	60 days	Mon 12/14/20	Thu 2/11/21	Mon 12/14/20	Thu 2/11/21	Mon 12/14/20	Thu 2/11/21	0 days	661	663	
663	663.5.20.5.8.1	Acceptance of conforming quotation (Completed)	30 days	Fri 2/12/21	Sat 3/13/21	Fri 2/12/21	Sat 3/13/21	Fri 2/12/21	Sat 3/13/21	0 days	662	676	
664	664.5.20.5.9	Plant Service Water System - booster pumps, C11, ref.	180 days	Thu 10/15/20	Mon 4/12/21	Thu 10/15/20	Mon 4/12/21	Thu 10/15/20	Mon 4/12/21	0 days			
665	665.5.20.5.9.1	Submission for acceptance of purchasing package	90 days	Thu 10/15/20	Tue 1/12/21	Thu 10/15/20	Tue 1/12/21	Thu 10/15/20	Tue 1/12/21	0 days		666	
666	666.5.20.5.9.1	Invitation of quotations for purchasing package	60 days	Wed 1/13/21	Sat 3/13/21	Wed 1/13/21	Sat 3/13/21	Wed 1/13/21	Sat 3/13/21	0 days	665	667	
667	667.5.20.5.9.1	Acceptance of conforming quotation (Completed)	30 days	Sun 3/14/21	Mon 4/12/21	Sun 3/14/21	Mon 4/12/21	Sun 3/14/21	Mon 4/12/21	0 days	666	676	
668	668.5.20.5.1	Plant Service Water System - hydro-pneumatic pressure	120 days	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Tue 6/15/21	138 days			
669	669.5.20.5.1.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Fri 4/16/21	0 days		670	
670	670.5.20.5.1.1	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20</								

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

ID	WBS	Task Name	Duration between Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
689	689.5.20.7.2	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 7/2/21	Sat 2/26/22	Fri 7/2/21	Sat 2/26/22	Tue 5/17/22	Wed 1/11/23	111 days	676	690	
690	690.5.20.7.2	Shipping and Delivery of Plant to site	45 days	Sat 6/18/22	Mon 8/1/22	Sat 6/18/22	Mon 8/1/22	Thu 1/12/23	Sat 2/25/23	0 days	689,75755-60	edays 746	
691	691.5.20.7.1	Permeate Pump, EQT024	285 days	Fri 7/2/21	Tue 4/12/22	Fri 7/2/21	Tue 4/12/22	Mon 8/15/22	Fri 5/26/23	409 days			
692	692.5.20.7.3	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 7/2/21	Sat 2/26/22	Fri 7/2/21	Sat 2/26/22	Mon 8/15/22	Tue 4/11/23	0 days	676	693	
693	693.5.20.7.3	Shipping and Delivery of Plant to site	45 days	Sun 2/27/22	Tue 4/12/22	Sun 2/27/22	Tue 4/12/22	Wed 4/12/23	Fri 5/26/23	201 days	692	747	
694	694.5.20.7.4	Compressed Air System, EQT029	396 days	Fri 7/2/21	Mon 8/1/22	Fri 7/2/21	Mon 8/1/22	Thu 6/16/22	Sat 2/25/23	208 days			
695	695.5.20.7.4	Manufacturing and Factory Acceptance Test of Plant	210 days	Fri 7/2/21	Thu 1/27/22	Fri 7/2/21	Thu 1/27/22	Thu 6/16/22	Wed 1/11/23	141 days	676	696	
696	696.5.20.7.4	Shipping and Delivery of Plant to site	45 days	Sat 6/18/22	Mon 8/1/22	Sat 6/18/22	Mon 8/1/22	Thu 1/12/23	Sat 2/25/23	0 days	695,75755-60	edays 746	
697	697.5.20.7.1	Chemical Storage Tanks, EQT025	225 days	Thu 6/10/21	Thu 1/20/22	Thu 6/10/21	Mon 12/6/21	Mon 7/18/22	Mon 2/27/23	403 days			
698	698.5.20.7.5	Manufacturing and Factory Acceptance Test of Plant	180 days	Thu 6/10/21	Mon 12/6/21	Thu 6/10/21	Mon 12/6/21	Mon 7/18/22	Fri 1/13/23	0 days	678	699	
699	699.5.20.7.5	Shipping and Delivery of Plant to site	45 days	Tue 12/7/21	Thu 1/20/22	Tue 12/7/21	Thu 1/20/22	Sat 1/14/23	Mon 2/27/23	104 days	698	751	
700	700.5.20.7.4	Chemical Dosing Pumps, EQT026	225 days	Thu 6/10/21	Thu 1/20/22	Thu 6/10/21	Mon 12/6/21	Mon 7/18/22	Mon 2/27/23	403 days			
701	701.5.20.7.6	Manufacturing and Factory Acceptance Test of Plant	180 days	Thu 6/10/21	Mon 12/6/21	Thu 6/10/21	Mon 12/6/21	Mon 7/18/22	Fri 1/13/23	0 days	678	702	
702	702.5.20.7.6	Shipping and Delivery of Plant to site	45 days	Tue 12/7/21	Thu 1/20/22	Tue 12/7/21	Thu 1/20/22	Sat 1/14/23	Mon 2/27/23	104 days	701	752	
703	703.5.20.7.1	Stopplogs and Penstocks, EQT013	396 days	Fri 7/2/21	Mon 8/1/22	Fri 7/2/21	Mon 8/1/22	Tue 5/17/22	Sat 2/25/23	208 days			
704	704.5.20.7.2	Manufacturing and Factory Acceptance Test of Plant	240 days	Fri 7/2/21	Sat 2/26/22	Fri 7/2/21	Sat 2/26/22	Tue 5/17/22	Wed 1/11/23	111 days	676		
705	705.5.20.7.2	Shipping and Delivery of Plant to site	45 days	Sat 6/18/22	Mon 8/1/22	Sat 6/18/22	Mon 8/1/22	Thu 1/12/23	Sat 2/25/23	0 days	704,75755-60	edays 744	
706	706.5.20.7.4	Pipework, Valves and Electric Actuators, EQT036 (Rev.	285 days	Mon 2/14/22	Fri 11/25/22	Mon 2/14/22	Fri 11/25/22	Sun 11/13/22	Thu 8/24/23	272 days	56,63		
707	707.5.20.7.6	Manufacturing and Factory Acceptance Test of Plant	240 days	Mon 2/14/22	Tue 10/11/22	Mon 2/14/22	Tue 10/11/22	Sun 11/13/22	Mon 7/10/23	0 days	676	708	
708	708.5.20.7.6	Shipping and Delivery of Plant to site	45 days	Wed 10/12/22	Fri 11/25/22	Wed 10/12/22	Fri 11/25/22	Tue 7/11/23	Thu 8/24/23	64 days	707	750	
709	709.5.20.7.5	Lifting Appliances	356 days	Sun 3/14/21	Fri 3/4/22	Sun 3/14/21	Fri 3/4/22	Sat 1/15/22	Mon 9/26/22	206 days			
710	710.5.20.7.5	Manufacturing and Factory Acceptance Test of Plant	210 days	Sun 3/14/21	Sat 10/9/21	Sun 3/14/21	Sat 10/9/21	Sat 10/9/21	Sat 1/15/22	101 days	682	711	
711	711.5.20.7.5	Shipping and Delivery of Plant to site	45 days	Wed 1/19/22	Fri 3/4/22	Wed 1/19/22	Fri 3/4/22	Sat 8/13/22	Mon 9/26/22	16 days	710,73455-60	edays 737,760	
712	712.5.20.7.1	LV Switchboards	395 days	Sat 7/3/21	Mon 8/1/22	Sat 7/3/21	Mon 8/1/22	Mon 8/1/22	Thu 1/26/23	178 days			
713	713.5.20.7.1	BR - Manufacturing of Plant	240 days	Sat 7/3/21	Sun 2/27/22	Sat 7/3/21	Sun 2/27/22	Mon 1/17/22	Tue 9/13/22	0 days	536	714	
714	714.5.20.7.1	BR - Factory Acceptance Test of Plant (to be witness)	90 days	Mon 2/28/22	Sat 5/28/22	Mon 2/28/22	Sat 5/28/22	Wed 9/14/22	Mon 12/12/22	0 days	713	715	
715	715.5.20.7.1	BR - Shipping and Delivery of Plant to site	45 days	Sun 5/29/22	Tue 7/12/22	Sun 5/29/22	Tue 7/12/22	Tue 12/13/22	Thu 1/26/23	126 days	714	775	
716	716.5.20.7.1	MFS - Manufacturing of Plant	240 days	Sat 7/3/21	Sun 2/27/22	Sat 7/3/21	Sun 2/27/22	Mon 1/17/22	Tue 9/13/22	0 days	680	717	
717	717.5.20.7.1	MFS - Factory Acceptance Test of Plant (to be witness)	90 days	Mon 2/28/22	Sat 5/28/22	Mon 2/28/22	Sat 5/28/22	Wed 9/14/22	Mon 12/12/22	20 days	716	718	
718	718.5.20.7.1	MFS - Shipping and Delivery of Plant to site	45 days	Sat 6/18/22	Mon 8/1/22	Sat 6/18/22	Mon 8/1/22	Tue 12/13/22	Thu 1/26/23	106 days	717,75755-60	edays 776	
719	719.5.20.7.1	HV Switchboards, EQT031	410 days	Fri 6/18/21	Mon 8/1/22	Fri 6/18/21	Mon 8/1/22	Sun 4/17/22	Sat 2/25/23	208 days			
720	720.5.20.7.1	MFS - Manufacturing of Plant	180 days	Fri 6/18/21	Tue 12/14/21	Fri 6/18/21	Tue 12/14/21	Sun 4/17/22	Thu 10/13/22	0 days	681	721	
721	721.5.20.7.1	MFS - Factory Acceptance Test of Plant (to be witness)	90 days	Wed 12/15/21	Mon 3/14/22	Wed 12/15/21	Mon 3/14/22	Fri 10/14/22	Wed 1/11/23	95 days	720	722	
722	722.5.20.7.1	MFS - Shipping and Delivery of Plant to site	45 days	Sat 6/18/22	Mon 8/1/22	Sat 6/18/22	Mon 8/1/22	Thu 1/12/23	Sat 2/25/23	106 days	721,75755-60	edays 779	
723	723.5.20.7.1	11kV/380V Stepdown Power Transformers, EQT032	285 days	Wed 3/16/22	Sun 12/25/22	Wed 3/16/22	Sun 12/25/22	Mon 11/7/22	Fri 8/18/23	236 days			
724	724.5.20.7.1	MFS - Manufacturing and Factory Acceptance Test of Plant	240 days	Wed 3/16/22	Thu 11/10/22	Wed 3/16/22	Thu 11/10/22	Sun 11/10/22	Tue 7/4/23	0 days	677	725	
725	725.5.20.7.1	MFS - Shipping and Delivery of Plant to site	45 days	Fri 11/11/22	Sun 12/25/22	Fri 11/11/22	Sun 12/25/22	Wed 7/5/23	Fri 8/18/23	0 days	724	780	
726	726.5.20.7.1	PLC System	285 days	Wed 3/16/22	Sun 12/25/22	Wed 3/16/22	Sun 12/25/22	Sun 4/17/22	Thu 8/24/23	32 days			
727	727.5.20.7.1	Manufacturing of Plant, PLC for BR2A & B	210 days	Wed 3/16/22	Tue 10/11/22	Wed 3/16/22	Tue 10/11/22	Sun 4/17/22	Sat 11/12/22	0 days	534	728	
728	728.5.20.7.1	Factory Acceptance Test of Plant, PLC for BR2A & B (I	30 days	Wed 10/12/22	Thu 11/10/22	Wed 10/12/22	Thu 11/10/22	Sun 11/13/22	Mon 12/12/22	0 days	727	729	
729	729.5.20.7.1	Shipping and Delivery of Plant to site	45 days	Fri 11/11/22	Sun 12/25/22	Fri 11/11/22	Sun 12/25/22	Tue 12/13/22	Thu 1/26/23	0 days	728	777	
730	730.5.20.7.1	Manufacturing of Plant, PLC for MFB2	210 days	Wed 3/16/22	Tue 10/11/22	Wed 3/16/22	Tue 10/11/22	Sun 11/13/22	Sat 6/10/23	0 days	677	731	
731	731.5.20.7.1	Factory Acceptance Test of Plant, PLC for MFB2 (To b	30 days	Wed 10/12/22	Thu 11/10/22	Wed 10/12/22	Thu 11/10/22	Sun 6/11/23	Mon 7/10/23	0 days	730	732	
732	732.5.20.7.1	Shipping and Delivery of Plant to site	45 days	Fri 11/11/22	Sun 12/25/22	Fri 11/11/22	Sun 12/25/22	Tue 7/11/23	Thu 8/24/23	0 days	731	778	
733	733.5.20.8	Site Installation Work	683 days	Sun 3/20/22	Wed 1/31/24	Sun 3/20/22	Wed 1/31/24	Sun 3/20/22	Tue 2/13/24	0 days			
734	734.5.20.8.1	Tentative Civil Handover Date, Portion B-SA, MFB No. 2	1 day	Sun 3/20/22	Sun 3/20/22	Sun 3/20/22	Sun 3/20/22	Sun 3/20/22	Sun 3/20/22	0 days		737,743FS+4	
735	735.5.20.8.1	Commencement of E&M Installation at MFB No. 2 Low	404 days	Mon 3/21/22	Fri 4/28/23	Mon 3/21/22	Fri 4/28/23	Mon 3/21/22	Wed 11/22/23	0 days	734		
736	736.5.20.8.2	Provision of Temporary Water Supply, Electricity Sup	7 days	Mon 3/21/22	Sun 3/27/22	Mon 3/21/22	Sun 3/27/22	Mon 3/21/22	Sun 3/27/22	0 days	734		
737	737.5.20.8.1	Installation of Lifting Appliances at MFB No. 2	66 days	Mon 3/21/22	Wed 5/25/22	Mon 3/21/22	Sun 5/25/22	Thu 11/24/22	Sat 1/28/23	248 days	734,711		
738	738.5.20.8.2	B2 EOT Crane LA-04-01 SWL 5t	45 days	Mon 3/21/22	Wed 5/4/22	Mon 3/21/22	Wed 5/4/22	Thu 11/24/22	Sat 1/7/23	0 days		740,741,742	
739	739.5.20.8.2	B2 EOT Crane LA-04-02 SWL 5t	30 days	Mon 3/21/22	Tue 4/19/22	Mon 3/21/22	Tue 4/19/22	Fri 12/9/22	Sat 1/7/23	15 days		740,741,742	
740	740.5.20.8.2	B2 MR LA-04-03 SWL 5t	14 days	Thu 5/5/22	Wed 5/18/22	Thu 5/5/22	Wed 5/18/22	Sun 1/8/23	Sat 1/21/23	0 days	738,739	742	
741	741.5.20.8.2	B1 MR LA-04-04 SWL 3t	14 days	Thu 5/5/22	Wed 5/18/22	Thu 5/5/22	Wed 5/18/22	Sun 1/8/23	Sat 1/21/23	0 days	738,739	742	
742	742.5.20.8.2	T&C, Loading Test for Lifting Appliances	7 days	Thu 5/19/22	Wed 5/25/22	Thu 5/19/22	Wed 5/25/22	Sun 1/22/23	Sat 1/28/23	57 days	738,739,740,741	745	
743	743.5.20.8.1	Mechanical Installations for E&M Equip. at MFB No.	359 days	Thu 5/5/22	Fri 4/28/23	Thu 5/5/22	Fri 4/28/23	Sun 1/29/23	Wed 11/22/23	0 days	734FS+45	edays 75555	
744	744.5.20.8.2	Installation of penstocks and stoplogs (Penstocks)	90 days	Tue 8/2/22	Sun 10/30/22	Tue 8/2/22	Sun 10/30/22	Sat 2/26/23	Fri 5/26/23	0 days	705	754	ME - E x 4-6 men
745	745.5.20.8.2	Installation of hollow fibre membrane modules (x1	90 days	Fri 7/22/22	Wed 10/19/22	Fri 7/22/22	Wed 10/19/22	Sun 1/29/23	Fri 4/28/23	191 days	687,742		ME - A x 4-6 men
746	746.5.20.8.2	Installation of air scour blowers (x3), EQT040	90 days	Tue 8/2/22	Sun 10/30/22	Tue 8/2/22	Sun 10/30/22	Sun 2/26/23	Fri 5/26/23	0 days	690,696	750,747,748	ME - B x 4-6 men
747	747.5.20.8.2	Installation of permeate pumps (x10), EQT024	90 days	Mon 10/31/22	Sat 1/28/23	Mon 10/31/22	Sat 1/28/23	Sat 5/27/23	Thu 8/24/23	0 days	746,693	750	ME - A x 4-6 men
748	748.5.20.8.2	Installation of return activated sludge pumps (x5),	90 days	Mon 10/31/22	Sat 1/28/23	Mon 10/31/22	Sat 1/28/23	Sat 5/27/23	Thu 8/24/23	0 days	746	750	ME - B x 4-6 men
749	749.5.20.8.2	Installation of membrane tank drain pumps (x2), E	45 days	Thu 5/5/22	Sat 6/18/22	Thu 5/5/22	Sat 6/18/22	Thu 7/11/23	Thu 8/24/23	224 days		750	ME - C x 4-6 men
750	750.5.20.8.2	Installation of pipework and valves, EQT036	90 days	Sun 1/29/23	Fri 4/28/23	Sun 1/29/23	Fri 4/28/23	Fri 8/25/23	Wed 11/22/23	0 days	746,747,748,749,7C754FF		ME - C x 4-6 men
751	751.5.20.8.2	Installation of chemical storage tank, EQT091 (Rev	60 days	Thu 5/5/22	Sun 7/3/22	Thu 5/5/22	Sun 7/3/22	Tue 2/28/23	Fri 4/28/23	299 days	699		ME - D x 2-4 men
752	752.5.20.8.2	Installation of chemical dosing pumps, EQT090 (Rev	60 days	Thu 5/5/22	Sun 7/3/22	Thu 5/5/22	Sun 7/3/22	Tue 2/28/23	Fri 4/28/23	299 days	702		ME - D x 2-4 men
753	753.5.20.8.2	Installation of plant service water system	90 days	Thu 5/5/22	Tue 8/2/22	Thu 5/5/22	Tue 8/2/22	Sun 1/29/23	Fri 4/28/23	269 days			ME - C x 4-6 men
754	754.5.20.8.2	Site Acceptance Tests - mechanical aspects includi	180 days	Mon 10/31/22	Fri 4/28/23	Mon 10/31/22	Fri 4/28/23	Sat 5/27/23	Wed 11/22/23	176 days	744,750FF	794	ME - D x 2-4 men
755	755.5.20.8.												

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

ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
775	775.20.8.4	Installation of LV Switchboards, BR2	90 days	Wed 11/16/22	Mon 2/13/23	Wed 11/16/22	Mon 2/13/23	Fri 1/27/23	Wed 4/26/23	40 days	715	782	LV - B x 4~6 men
776	776.20.8.4	Installation of LV Switchboards, MFB No. 2	90 days	Wed 11/16/22	Mon 2/13/23	Wed 11/16/22	Mon 2/13/23	Fri 1/27/23	Wed 4/26/23	40 days	718	782	LV - A x 4~6 men
777	777.5.20.8.4	Installation of PLC Panels, BR2	90 days	Mon 12/26/22	Sat 3/25/23	Mon 12/26/22	Sat 3/25/23	Fri 1/27/23	Wed 4/26/23	0 days	729	782,790	PLC - B x 1 man
778	778.5.20.8.4	Installation of PLC Panels, MFB No. 2	90 days	Mon 12/26/22	Sat 3/25/23	Mon 12/26/22	Sat 3/25/23	Fri 1/27/23	Wed 4/26/23	0 days	722	782,784,785+3	HV - A x 4~6 men
779	779.5.20.8.4	Installation of HV Switchboards, MFB No. 2	60 days	Wed 11/16/22	Sat 1/14/23	Wed 11/16/22	Sat 1/14/23	Sun 2/26/23	Wed 4/26/23	0 days	722	782,784,785+3	HV - A x 4~6 men
780	780.5.20.8.4	Installation of transformer, MFB No. 2, EQT032	45 days	Mon 12/26/22	Wed 2/8/23	Mon 12/26/22	Wed 2/8/23	Sat 8/19/23	Mon 10/2/23	0 days	725	785FS+30 da	
781	781.5.20.8.4	Installation of cable trays and cable containments	180 days	Wed 11/16/22	Sun 5/14/23	Wed 11/16/22	Sun 5/14/23	Sat 5/27/23	Wed 11/22/23	192 days	756		
782	782.5.20.8.4	Cables laying and terminations	150 days	Sun 3/26/23	Tue 8/22/23	Sun 3/26/23	Tue 8/22/23	Thu 4/27/23	Sat 9/23/23	0 days	775,776,777,779	791,788	
783	783.5.20.8.4	Cable provision and laying between buildings for C	150 days	Sun 3/26/23	Tue 8/22/23	Sun 3/26/23	Tue 8/22/23	Thu 4/27/23	Sat 9/23/23	0 days	775,776,777,779	791,788	
784	784.5.20.8.4	Testing of HV Switchboards, MFB No. 2	21 days	Tue 2/14/23	Mon 3/6/23	Tue 2/14/23	Mon 3/6/23	Thu 11/2/23	Wed 11/22/23	261 days	779FS+30 days		HV - A x 4~6 men
785	785.5.20.8.4	Testing of Transformers, MFB No. 2	21 days	Sat 3/11/23	Fri 3/31/23	Sat 3/11/23	Fri 3/31/23	Thu 11/2/23	Wed 11/22/23	236 days	780FS+30 days		HV - A x 4~6 men
786	786.5.20.8.4	Energisation of LV Switchboards, MFB No. 2 (Rev.	1 day	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Thu 11/2/23	Wed 11/22/23	222 days			LA - A x 4~6 men
787	787.5.20.8.4	Energisation of HV Switchboards, MFB No. 2 (Rev.	1 day	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Fri 4/14/23	Wed 11/2/23	Wed 11/22/23	222 days			LV - A x 4~6 men
788	788.5.20.8.4	Site Acceptance Tests - Electrical aspects including	60 days	Wed 8/23/22	Sat 10/21/23	Wed 8/23/22	Sat 10/21/23	Sun 9/24/23	Wed 11/22/23	0 days	782	794	LV - A x 4~6 men
789	789.5.20.8.4	SCADA Systems, BR No. 1 & No 2, MFB No. 2	91 days	Wed 8/23/22	Tue 11/21/23	Wed 8/23/22	Tue 11/21/23	Thu 11/2/23	Fri 12/22/23	31 days			PLC - A x 1 man
790	790.5.20.8.4	Configuration of PLC System for BR No. 1 & No. 2	30 days	Mon 10/2/23	Tue 10/31/23	Mon 10/2/23	Tue 10/31/23	Thu 11/2/23	Fri 12/22/23	0 days	777,593	792	PLC - A x 1 man
791	791.5.20.8.4	Configuration of PLC System for MFB No. 2	30 days	Wed 8/23/22	Thu 9/21/23	Wed 8/23/22	Thu 9/21/23	Thu 11/2/23	Fri 12/22/23	0 days	782	793	
792	792.5.20.8.4	Site Acceptance Test for PLC System at BR No. 1 a	21 days	Wed 11/1/23	Tue 11/21/23	Wed 11/1/23	Tue 11/21/23	Sat 12/2/23	Fri 12/22/23	19 days	790	795,597,128	
793	793.5.20.8.4	Site Acceptance Test for PLC System at MFB No. 2	21 days	Fri 9/22/23	Thu 10/12/23	Fri 9/22/23	Thu 10/12/23	Sat 12/2/23	Fri 12/22/23	59 days	791	795,1284	
794	794.5.20.8.4	Site Acceptance Test for E&M Equip at MFB No. 2	30 edays	Sat 10/21/23	Mon 11/20/23	Sat 10/21/23	Mon 11/20/23	Thu 11/23/23	Sat 12/23/23	20.63 edays	769,774,788,754	795	
795	795.5.20.8.4	System Commissioning for E&M Equip at MFB No. 2	45 days	Mon 12/13/22	Wed 1/24/24	Mon 12/13/22	Wed 1/24/24	Sat 12/23/23	Mon 2/5/24	0 days	792,794,804,793,807	796	
796	796.5.20.8.4	Risk Allowances for Completion of Processing Plant a	7 edays	Wed 1/24/24	Wed 1/31/24	Wed 1/24/24	Wed 1/31/24	Tue 2/6/24	Tue 2/13/24	7.63 edays	795	1280	
797	797.5.20.8.4	Building Services Installations for MFB No. 2	330 days	Sun 1/15/23	Sun 12/10/23	Sun 1/15/23	Sun 12/10/23	Fri 1/27/23	Mon 2/5/24	12 days	757FS+150 edays,6'		
798	798.5.20.8.4	Mechanical Ventilation and Air Conditioning System	120 days	Sun 1/15/23	Sun 5/14/23	Sun 1/15/23	Sun 5/14/23	Thu 4/27/23	Thu 8/24/23	90 days		804	MVAC - A x 4~6 men
799	799.5.20.8.4	Lighting and Power Distribution System, MFB No.	210 days	Sun 1/15/23	Sat 8/12/23	Sun 1/15/23	Sat 8/12/23	Fri 1/27/23	Thu 8/24/23	0 days		804	BS - A x 4~6 men
800	800.5.20.8.4	Plumbing Installation, MFB No. 2	180 days	Sun 1/15/23	Thu 7/13/23	Sun 1/15/23	Thu 7/13/23	Sun 2/26/23	Thu 8/24/23	30 days	1273,804		Pb - B x 4~6 men
801	801.5.20.8.4	CCTV Installation (10 indoor + 3 outdoor Cameras)	90 days	Sun 1/15/23	Fri 4/14/23	Sun 1/15/23	Fri 4/14/23	Sat 5/27/23	Thu 8/24/23	120 days	757FS+120 days	804,1283	BS - B x 4~6 men
802	802.5.20.8.4	Fire Services Installation, MFB No. 2	120 days	Sun 1/15/23	Sun 5/14/23	Sun 1/15/23	Sun 5/14/23	Thu 4/27/23	Thu 8/24/23	90 days		1224,1236,11'	FS - B x 4~6 men
803	803.5.20.8.4	Earthing and Lightning Protection System, MFB No.	60 days	Sun 1/15/23	Wed 3/15/23	Sun 1/15/23	Wed 3/15/23	Fri 12/8/23	Mon 2/5/24	315 days		795FF	BS - C x 2~4 men
804	804.5.20.8.4	Testing and Commissioning of Building Services In	120 days	Sun 8/13/23	Sun 12/10/23	Sun 8/13/23	Sun 12/10/23	Fri 12/22/23	Fri 12/22/23	0 days	798,799,800,801,807	795	BS - C x 2~4 men
805	805.5.21.1	Chemical System No. 1 and No. 2, Portion B-7 & B-7B (PS 6)	1351 days	Tue 7/21/20	Mon 4/1/24	Tue 7/21/20	Mon 4/1/24	Tue 7/21/20	Mon 4/1/24	0 days			
806	806.5.21.1	Planned Key Date Completion Date - KD1B, Chem Sys No.	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	823FF,824FF		
807	807.5.21.1	Planned Sectional Completion Date - Section 1, Chem Sys	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	825FF,826FF,827FF		
808	808.5.21.1	Planned Sectional Completion Date - Section 2, Chem Sys	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days	854FF		
809	809.5.21.4	Selection of Suppliers for major plant and materials for C	240 days	Thu 10/1/20	Fri 5/28/21	Thu 10/1/20	Fri 5/28/21	Thu 10/1/20	Fri 5/28/21	0 days			
810	810.5.21.4.1	Chemical Storage and Dosing - chemical storage tanks, C11, ref. EQ	240 days	Thu 10/1/20	Fri 5/28/21	Thu 10/1/20	Fri 5/28/21	Thu 10/1/20	Fri 5/28/21	0 days			
811	811.5.21.4.1.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		812	
812	812.5.21.4.1.1	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	0 days	811	813	
813	813.5.21.4.1.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	812	825	
814	814.5.21.4.2	Chemical Storage and Dosing - chemical dosing pumps, C11, ref. EQ	150 days	Thu 10/1/20	Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	0 days			
815	815.5.21.4.2.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		816	
816	816.5.21.4.2.2	Invitation of quotations for purchasing package	60 days	Mon 11/30/20	Thu 1/18/21	Mon 11/30/20	Thu 1/18/21	Mon 11/30/20	Thu 1/18/21	0 days	815	817	
817	817.5.21.4.2.3	Acceptance of conforming quotation (Completed)	30 days	Fri 1/29/21	Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	0 days	816	825,826,827	
818	818.5.21.4.3	Chemical Storage and Dosing - transfer pumps, C11, ref. EQT016	120 days	Thu 10/1/20	Thu 1/18/21	Thu 10/1/20	Thu 1/18/21	Thu 10/1/20	Thu 1/18/21	0 days			
819	819.5.21.4.3.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		820	
820	820.5.21.4.3.2	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	0 days	819	821	
821	821.5.21.4.3.3	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	820	825	
822	822.5.21.5	Design Submissions for Chemical System No. 1 and No. 2	324 days	Tue 7/21/20	Thu 6/10/21	Tue 7/21/20	Thu 6/10/21	Tue 7/21/20	Mon 7/12/21	33 days			
823	823.5.21.5.1	Electrical schematic drawings for Chemical Systems No.	60 days	Tue 7/21/20	Fri 9/18/20	Tue 7/21/20	Fri 9/18/20	Tue 7/21/20	Tue 6/1/21	256 days		806FF	
824	824.5.21.5.2	CD5081-5 - Civil and dimensional requirements drawing	70 days	Fri 8/28/20	Thu 11/5/20	Fri 8/28/20	Thu 11/5/20	Fri 8/28/20	Thu 11/5/20	0 days		806FF	
825	825.5.21.5.3	CD5006 - Detailed Design for Chemical Dosing System	90 edays	Sat 2/27/21	Fri 5/28/21	Sat 2/27/21	Fri 5/28/21	Sat 2/27/21	Mon 7/12/21	0.63 edays	813,817,821	831,834,837,	
826	826.5.21.5.4	CD5027 - Detailed Design for Electrical Installations for	90 edays	Sat 2/27/21	Fri 5/28/21	Sat 2/27/21	Fri 5/28/21	Sat 2/27/21	Mon 7/12/21	45 edays	817	844,807FF	
827	827.5.21.5.5	CD5028 - Detailed Design for Electrical Installations for	90 edays	Sat 2/27/21	Fri 5/28/21	Sat 2/27/21	Fri 5/28/21	Sat 2/27/21	Mon 7/12/21	45 edays	817	844,807FF	
828	828.5.21.5.6	CD5034-5 - Detailed Design for Electrical Installations B	90 edays	Fri 3/12/21	Thu 6/10/21	Fri 3/12/21	Thu 6/10/21	Fri 3/12/21	Mon 7/12/21	32.38 edays	140	844,807FF	
829	829.5.21.6	Manufacturing and Delivery of Plant & Materials	296 days	Sat 5/29/21	Sun 3/20/22	Sat 5/29/21	Sun 3/20/22	Thu 9/29/22	Thu 5/11/23	417 days			
830	830.5.21.6.1	Chemical Storage Tanks, EQT025	225 days	Sat 5/29/21	Sat 1/8/22	Sat 5/29/21	Sat 1/8/22	Thu 9/29/22	Thu 5/11/23	488 days			
831	831.5.21.6.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Sat 5/29/21	Wed 11/24/21	Sat 5/29/21	Wed 11/24/21	Thu 9/29/22	Mon 3/27/23	0 days	825	832	
832	832.5.21.6.1	Shipping and Delivery of Plant to site	45 days	Thu 11/25/21	Sat 1/8/22	Thu 11/25/21	Sat 1/8/22	Tue 3/28/23	Thu 5/11/23	73 days	831	843	
833	833.5.21.6.1	Chemical Dosing Pumps, EQT027	296 days	Sat 5/29/21	Sun 3/20/22	Sat 5/29/21	Sun 3/20/22	Thu 9/29/22	Thu 5/11/23	417 days			
834	834.5.21.6.2	Manufacturing and Factory Acceptance Test of Plant	180 days	Sat 5/29/21	Wed 11/24/21	Sat 5/29/21	Wed 11/24/21	Thu 9/29/22	Mon 3/27/23	71 days	825	835	
835	835.5.21.6.2	Shipping and Delivery of Plant to site	45 days	Fri 2/4/22	Sun 3/20/22	Fri 2/4/22	Sun 3/20/22	Thu 9/29/22	Thu 5/11/23	2 days	834,840FF-60 edays	843	
836	836.5.21.6.3	Chemical Transfer Pumps, EQT026	296 days	Sat 5/29/21	Sun 3/20/22	Sat 5/29/21	Sun 3/20/22	Thu 9/29/22	Thu 5/11/23	417 days			
837	837.5.21.6.3	Manufacturing and Factory Acceptance Test of Plant	180 days	Sat 5/29/21	Wed 11/24/21	Sat 5/29/21	Wed 11/24/21	Thu 9/29/22	Mon 3/27/23	71 days	825	838	
838	838.5.21.6.3	Shipping and Delivery of Plant to site	45 days	Fri 2/4/22	Sun 3/20/22	Fri 2/4/22	Sun 3/20/22	Tue 3/28/23	Thu 5/11/23	2 days	837,840FF-60 edays	843	
839	839.5.21.7	Site Installation Work	307 days	Tue 3/22/22	Mon 1/23/23	Tue 3/22/22	Mon 1/23/23	Fri 5/12/23	Mon 4/1/24				

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

ID	WBS	Task Name	Duration	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
861	861.5.22.4.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		862	
862	862.5.22.4.1	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	0 days	861	863	
863	863.5.22.4.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	862	875,878	
864	864.5.22.4.1	Chemical Storage and Dosing - chemical dosing pumps	150 days	Thu 10/1/20	Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	Thu 10/1/20	Sat 2/27/21	0 days		866	
865	865.5.22.4.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		866	
866	866.5.22.4.1	Invitation of quotations for purchasing package	60 days	Mon 11/30/20	Tue 1/28/21	Mon 11/30/20	Tue 1/28/21	Mon 11/30/20	Tue 1/28/21	0 days	865	867	
867	867.5.22.4.1	Acceptance of conforming quotation (Completed)	30 days	Fri 1/29/21	Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	Fri 1/29/21	Sat 2/27/21	0 days	866	881	
868	868.5.22.4.1	Chemical Storage and Dosing - transfer pumps, C11, re	120 days	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	Thu 10/1/20	Thu 1/28/21	0 days		870	
869	869.5.22.4.1	Submission for acceptance of purchasing package	60 days	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	Thu 10/1/20	Sun 11/29/20	0 days		870	
870	870.5.22.4.1	Invitation of quotations for purchasing package	30 days	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	Mon 11/30/20	Tue 12/29/20	0 days	869	871	
871	871.5.22.4.1	Acceptance of conforming quotation (Completed)	30 days	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	Wed 12/30/20	Thu 1/28/21	0 days	870	884	
872	872.5.22.5	Design Submissions for Temporary Chemical Dosing Syst	275 days	Tue 7/28/20	Wed 4/28/21	Tue 7/28/20	Wed 4/28/21	Tue 7/28/20	Mon 7/12/21	75 days		856FF	
873	873.5.22.5.1	Electrical schematic drawings for Temporary Chemical I	60 days	Tue 7/28/20	Fri 9/25/20	Tue 7/28/20	Fri 9/25/20	Tue 7/28/20	Fri 9/25/20	0 days		856FF	
874	874.5.22.5.2	CDS081-6 - Civil and dimensional requirements drawing	70 days	Fri 8/28/20	Thu 11/5/20	Fri 8/28/20	Thu 11/5/20	Fri 8/28/20	Thu 11/5/20	0 days		856FF	
875	875.5.22.5.3	CDS029 - Detailed Design for Electrical Installations for	90 edays	Thu 1/28/21	Wed 4/28/21	Thu 1/28/21	Wed 4/28/21	Thu 1/28/21	Mon 7/12/21	75 edays	863	891,857FF	
876	876.5.22.6	Manufacturing and Delivery of Plant & Materials	416 days	Fri 1/29/21	Sun 3/20/22	Fri 1/29/21	Sun 3/20/22	Wed 12/28/22	Wed 8/9/23	507 days		879	
877	877.5.22.6.1	Chemical Storage Tanks, EQT025	416 days	Fri 1/29/21	Sun 3/20/22	Fri 1/29/21	Sun 3/20/22	Wed 12/28/22	Wed 8/9/23	507 days		879	
878	878.5.22.6.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Fri 1/29/21	Tue 7/27/21	Fri 1/29/21	Tue 7/27/21	Wed 12/28/22	Sun 6/25/23	191 days	863	879	
879	879.5.22.6.1	Shipping and Delivery of Plant to site	45 days	Fri 2/4/22	Sun 3/20/22	Fri 2/4/22	Sun 3/20/22	Mon 6/26/23	Wed 8/9/23	20 days	878,887FF-60 edays	890	
880	880.5.22.6.1	Chemical Dosing Pumps, EQT027	386 days	Sun 2/28/21	Sun 3/20/22	Sun 2/28/21	Sun 3/20/22	Wed 12/28/22	Wed 8/9/23	507 days		882	
881	881.5.22.6.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Sun 2/28/21	Thu 8/26/21	Sun 2/28/21	Thu 8/26/21	Wed 12/28/22	Sun 6/25/23	161 days	867	882	
882	882.5.22.6.2	Shipping and Delivery of Plant to site	45 days	Fri 2/4/22	Sun 3/20/22	Fri 2/4/22	Sun 3/20/22	Mon 6/26/23	Wed 8/9/23	20 days	881,887FF-60 edays	890	
883	883.5.22.6.1	Chemical Transfer Pumps, EQT026	416 days	Fri 1/29/21	Sun 3/20/22	Fri 1/29/21	Sun 3/20/22	Wed 12/28/22	Wed 8/9/23	507 days		885	
884	884.5.22.6.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Fri 1/29/21	Tue 7/27/21	Fri 1/29/21	Tue 7/27/21	Wed 12/28/22	Sun 6/25/23	191 days	871	885	
885	885.5.22.6.1	Shipping and Delivery of Plant to site	45 days	Fri 2/4/22	Sun 3/20/22	Fri 2/4/22	Sun 3/20/22	Mon 6/26/23	Wed 8/9/23	20 days	884,887FF-60 edays	890	
886	886.5.22.7	Site Installation Work	361 days	Sat 4/9/22	Wed 4/5/23	Sat 4/9/22	Wed 4/5/23	Tue 3/28/23	Tue 2/13/24	313 days			
887	887.5.22.7.1	Tentative Civil Handover Date, Temporary Chemical Do	1 day	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Tue 3/28/23	Tue 3/28/23	0 days		879FF-60 eda	
888	888.5.22.7.1	Tentative Civil Handover Date, Chemical Pipe Trench (b	1 day	Sun 5/1/22	Sun 5/1/22	Sun 5/1/22	Sun 5/1/22	Mon 9/18/23	Mon 9/18/23	51 days		890FF+50 da	
889	889.5.22.7.1	Commencement of E&M Installation at Temporary Ch	361 days	Sat 4/9/22	Wed 4/5/23	Sat 4/9/22	Wed 4/5/23	Tue 3/29/23	Tue 2/13/24	313 days			
890	890.5.22.7.1	Mechanical Installations for E&M Equip. for Chemica	90 edays	Sat 4/9/22	Fri 7/8/22	Sat 4/9/22	Fri 7/8/22	Thu 8/10/23	Wed 11/8/23	0 edays	888FF+50 days,125:89155+30 ed.	ME - D x 2-4 men	
891	891.5.22.7.3	Electrical Installations for E&M Equip. for Chemical D	90 edays	Mon 5/9/22	Sun 8/7/22	Mon 5/9/22	Sun 8/7/22	Fri 7/7/22	Sat 9/9/23	0 edays	89055+30 edays,87:892	EE - A x 4-6 men	
892	892.5.22.7.3	Site Acceptance Test for E&M Equip for Chemical Do	30 edays	Sun 8/7/22	Tue 9/6/22	Sun 8/7/22	Tue 9/6/22	Fri 12/8/23	Sun 1/7/24	174 edays	890,891	893	
893	893.5.22.7.3	System Commissioning for E&M Equip for Chemical I	30 edays	Mon 2/27/23	Wed 3/29/23	Mon 2/27/23	Wed 3/29/23	Sun 1/7/24	Tue 2/6/24	0 edays	892,900FF	894	
894	894.5.22.7.3	Risk Allowances for Completion of Processing Plant a	7 edays	Wed 3/29/23	Wed 4/5/23	Wed 3/29/23	Wed 4/5/23	Tue 2/6/24	Tue 2/13/24	308.63 ed...	893	1280	
895	895.5.22.7.1	Building Services Installations at Temp. Chemical Di	314 days	Fri 5/20/22	Wed 3/29/23	Fri 5/20/22	Wed 3/29/23	Wed 3/29/23	Mon 2/5/24	313 days			
896	896.5.22.7.3	Lighting and Power Distribution System, Temp. Ch	90 days	Fri 5/20/22	Wed 8/17/22	Fri 5/20/22	Wed 8/17/22	Mon 6/26/23	Mon 6/26/23	0 days	887	900,897	BS - A x 4-6 men
897	897.5.22.7.3	Fire Services Installation, DG Stores, Temp. Chem	90 days	Thu 8/18/22	Tue 11/15/22	Thu 8/18/22	Tue 11/15/22	Tue 6/27/23	Sun 9/24/23	0 days	896	1236,1237,9(FS - A x 4-6 men	
898	898.5.22.7.3	Lighting Protection System, Temp. Chem	30 days	Wed 11/16/22	Thu 12/15/22	Wed 11/16/22	Thu 12/15/22	Mon 9/25/23	Tue 10/24/23	0 days	897	899	EE - D x 4-6 men
899	899.5.22.7.3	Mechanical Ventilation System, Temp. Chem	14 days	Fri 12/16/22	Thu 12/29/22	Fri 12/16/22	Thu 12/29/22	Tue 11/7/23	Tue 11/7/23	0 days	898	900	MVAC - A x 4-6 men
900	900.5.22.7.3	Testing and Commissioning of Building Services In	90 days	Fri 12/30/22	Wed 2/9/23	Fri 12/30/22	Wed 2/9/23	Mon 2/5/24	Mon 2/5/24	0 days	896,897,899	893FF	BS - C x 2-4 men
901	901.5.23.1	Emergency Generator House, Portlon B7 & B-7B (PS 6B.6.6)	1279 days	Thu 10/1/20	Mon 4/1/24	Thu 10/1/20	Mon 4/1/24	Thu 10/1/20	Mon 4/1/24	0 days			
902	902.5.23.1	Planned Key Date Completion Date - KD1B, Emergency Ge	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	906FF		
903	903.5.23.2	Planned Sectional Completion Date - Section 1, Emergenc	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	907FF,908FF		
904	904.5.23.2	Planned Sectional Completion Date - Section 2, Emergenc	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days	921FF		
905	905.5.23.4	Design Submissions for Emergency Generator Set	252 days	Thu 10/1/20	Thu 6/10/21	Thu 10/1/20	Thu 6/10/21	Thu 10/1/20	Mon 7/12/21	33 days			
906	906.5.23.4.1	CDS081-10 - Civil and dimensional requirements drawin	90 days	Fri 1/1/21	Wed 3/31/21	Fri 1/1/21	Wed 3/31/21	Fri 1/1/21	Wed 3/31/21	0 days		902FF	
907	907.5.23.4.2	CDS061 - Detailed Design for Emergency Generator Set	150 edays	Thu 10/1/20	Sun 2/28/21	Thu 10/1/20	Sun 2/28/21	Thu 10/1/20	Mon 7/12/21	134.38 ed...		903FF	
908	908.5.23.4.3	CDS034-6 - Detailed Design for Electrical Installations B	90 edays	Fri 3/12/21	Thu 6/10/21	Fri 3/12/21	Thu 6/10/21	Fri 3/12/21	Mon 7/12/21	0 edays	140	910,915,903I	
909	909.5.23.5	Manufacturing and Delivery of Plant & Materials	285 days	Thu 6/10/21	Mon 3/21/22	Thu 6/10/21	Mon 3/21/22	Thu 2/16/23	Mon 11/27/23	616 days			
910	910.5.23.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Thu 6/10/21	Fri 2/4/22	Thu 6/10/21	Fri 2/4/22	Tue 2/16/23	Fri 10/13/23	0 days	908	911	
911	911.5.23.5.2	Shipping and Delivery of Plant to Site	45 days	Sat 2/5/22	Mon 3/21/22	Sat 2/5/22	Mon 3/21/22	Sat 10/14/23	Mon 11/27/23	589 days	910,913FF-60 edays	916	
912	912.5.23.6	Site Installation Work	826 days	Wed 12/1/21	Tue 3/5/24	Wed 12/1/21	Tue 3/5/24	Wed 12/1/21	Mon 4/1/24	27 days			
913	913.5.23.6.1	Tentative Civil Handover Date, Emergency Generator H	1 day	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Mon 9/18/23	Mon 9/18/23	1 day		890FF+50 da	
914	914.5.23.6.1	Commencement of E&M Installation at Emergency Ge	826 days	Wed 12/1/21	Tue 3/5/24	Wed 12/1/21	Tue 3/5/24	Wed 12/1/21	Mon 4/1/24	27 days			
915	915.5.23.6.2	Application for EPD's Approval for Installation of Die	60 days	Wed 12/1/21	Sat 1/29/22	Wed 12/1/21	Sat 1/29/22	Wed 12/1/21	Mon 11/27/23	640 days	908	916	
916	916.5.23.6.2	Installation and SAT of Emergency Power Generator	60 days	Wed 11/1/23	Sat 12/30/23	Wed 11/1/23	Sat 12/30/23	Fri 1/26/24	Fri 1/26/24	0 days	915,911	918	GS - A x 4 men
917	917.5.23.6.1	Building Services Installation at Emergency Generat	66 days	Sun 12/31/21	Tue 3/5/24	Sun 12/31/23	Tue 3/5/24	Sat 1/27/24	Mon 4/1/24	27 days			
918	918.5.23.6.2	Fire Services Installation, GH	30 days	Sun 12/31/21	Mon 1/29/24	Sun 12/31/23	Mon 1/29/24	Sat 1/27/24	Sun 2/25/24	0 days	916	919	FS - A x 4-6 men
919	919.5.23.6.2	Mechanical Ventilation System, GH	14 days	Tue 1/30/24	Mon 2/12/24	Tue 1/30/24	Mon 2/12/24	Mon 2/26/24	Sun 3/10/24	0 days	918	920	MVAC - A x 4-6 men
920	920.5.23.6.2	Lighting Protection System, GH	15 days	Tue 2/13/24	Tue 2/27/24	Tue 2/13/24	Tue 2/27/24	Mon 3/11/24	Mon 3/25/24	0 days	919	921	EE - D x 4-6 men
921	921.5.23.6.2	Testing and Commissioning of Building Services In	7 days	Wed 2/28/24	Tue 3/5/24	Wed 2/28/24	Tue 3/5/24	Mon 4/1/24	Mon 4/1/24	27 days	920	904FF	BS - A x 4-6 men
922	922.5.24	Deodorisation System, DOU 1, Portlon B7 & B-7B (PS 6B.2.4)	1583 days	Mon 12/2/19	Mon 4/1/24	Mon 12/2/19	Mon 4/1/24	Mon 12/2/19	Mon 4/1/24	0 days			
923	923.5.24.1	Planned Key Date Completion Date - KD1B, DOU 1	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	936FF,937FF		
924	924.5.24.2	Planned Sectional Completion Date - Section 1, DOU 1	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	938FF		
925	925.5.24.3	Planned Sectional Completion Date - Section 2, DOU 1	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days			
926	926.5.24.4	Selection of Plant and Materials	485 days	Mon 12/2/19	Tue 3/30/21	Mon 12/2/19	Tue 3/30/21	Mon 12/2/19	Mon 6/28/21	90 days			
927	927.5.24.4.1	DOU - biotrickling filter (DOU No. 1), C11, ref. EQT001	194 days	Mon 12/2/19	Fri 6/12/20	Mon 12/2/19	Fri 6/12/20	Mon 12/2/19	Fri 6/12/20				

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

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
947	5.24.7.1	Tentative Civil Handover, DOU 1 (Rev. 5)	1 day	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Fri 8/25/23	Fri 8/25/23	0 days		950FF+45 da	
948	5.24.7.2	Tentative Civil Handover Date, underground air pipe	1 day	Mon 8/1/22	Mon 8/1/22	Mon 8/1/22	Mon 8/1/22	Mon 10/9/23	Mon 10/9/23	30 days		950FF+45 da	
949	5.24.7.3	Commencement of E&M Installation at DOU 1	171 days	Fri 6/17/22	Mon 12/5/22	Fri 6/17/22	Mon 12/5/22	Sat 8/26/23	Tue 2/13/24	434 days			
950	5.24.7.3	Mechanical Installations for DOU 1	90 edays	Fri 6/17/22	Thu 9/15/22	Fri 6/17/22	Thu 9/15/22	Sat 8/26/23	Fri 11/24/23	0 edays	948FF+45 days,947	951SS+30 ed.	ME - F x 4-6 men
951	5.24.7.3	Electrical Installations for DOU 1	90 edays	Sun 7/17/22	Sat 10/15/22	Sun 7/17/22	Sat 10/15/22	Mon 9/25/23	Sun 12/24/23	0 edays	950SS+30 edays	952	EE - C x 4-6 men
952	5.24.7.3	Site Acceptance Test for DOU1	30 edays	Sat 10/15/22	Mon 11/14/22	Sat 10/15/22	Mon 11/14/22	Mon 12/24/23	Tue 1/23/24	0 edays	950,951	953	
953	5.24.7.3	System Commissioning for DOU 1	21 edays	Mon 11/14/22	Mon 12/5/22	Mon 11/14/22	Mon 12/5/22	Tue 1/23/24	Tue 2/13/24	429.63 ed.	952	1280	
954	5.25	Deodorisation System, DOU 2A, Portion B-4 (PS 6B.2.6)	1583 days	Mon 12/2/21	Mon 4/1/24	Mon 12/2/21	Mon 4/1/24	Mon 12/2/19	Mon 4/1/24	0 days			
955	5.25.1	Planned Key Date Completion Date - KD1B, DOU 2A	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days			
956	5.25.2	Planned Sectional Completion Date - Section 1, DOU 2A	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	964FF		
957	5.25.3	Planned Sectional Completion Date - Section 2, DOU 2A	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days			
958	5.25.4	Selection of Plant and Materials	194 days	Mon 12/2/21	Fri 6/12/20	Mon 12/2/21	Fri 6/12/20	Mon 12/2/19	Fri 6/12/20	0 days			
959	5.25.4.1	DOU - activated carbon filter (DOU No. 2A, No. 3A, No	194 days	Mon 12/2/21	Fri 6/12/20	Mon 12/2/21	Fri 6/12/20	Mon 12/2/19	Fri 6/12/20	0 days			
960	5.25.4.1	Submission for acceptance of purchasing package	120 days	Mon 12/2/21	Mon 3/30/20	Mon 12/2/21	Mon 3/30/20	Mon 12/2/19	Mon 3/30/20	0 days		961	
961	5.25.4.1	Invitation of quotations for purchasing package	60 days	Tue 3/31/20	Fri 5/29/20	Tue 3/31/20	Fri 5/29/20	Tue 3/31/20	Fri 5/29/20	0 days	960	962	
962	5.25.4.1	Acceptance of conforming quotation (Completed)	14 days	Sat 5/30/20	Fri 6/12/20	Sat 5/30/20	Fri 6/12/20	Sat 5/30/20	Fri 6/12/20	0 days	961	964,985,100	
963	5.25.5	Design Submissions for DOU No. 2A	200 days	Tue 9/1/20	Sat 3/20/21	Tue 9/1/20	Sat 3/20/21	Tue 9/1/20	Mon 7/12/21	115 days			
964	5.25.5.1	CD5007-2 - Detailed Design for Deodorisation System, I	200 edays	Tue 9/1/20	Sat 3/20/21	Tue 9/1/20	Sat 3/20/21	Tue 9/1/20	Mon 7/12/21	0 edays	962	967,970,956	
965	5.25.6	Manufacturing and Delivery of Plant & Materials	345 days	Sat 3/20/21	Sun 2/27/22	Sat 3/20/21	Sun 2/27/22	Sun 2/27/22	Mon 6/26/23	484 days			
966	5.25.6.1	DOU 2A	345 days	Sat 3/20/21	Sun 2/27/22	Sat 3/20/21	Sun 2/27/22	Sun 2/27/22	Mon 6/26/23	484 days			
967	5.25.6.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Sat 3/20/21	Thu 1/13/22	Sat 3/20/21	Thu 1/13/22	Sun 7/17/22	Fri 5/12/23	0 days	964	968	
968	5.25.6.1	Shipping and Delivery of Plant to site	45 days	Fri 1/14/22	Sun 2/27/22	Fri 1/14/22	Sun 2/27/22	Sat 5/13/23	Mon 6/26/23	361 days	967	975	
969	5.25.6.1	FRP Air Ductwork	345 days	Sat 3/20/21	Sun 2/27/22	Sat 3/20/21	Sun 2/27/22	Sun 2/27/22	Mon 6/26/23	484 days			
970	5.25.6.2	Manufacturing and Factory Acceptance Test of Plant	300 days	Sat 3/20/21	Thu 1/13/22	Sat 3/20/21	Thu 1/13/22	Sun 7/17/22	Fri 5/12/23	0 days	964	971	
971	5.25.6.2	Shipping and Delivery of Plant to site	45 days	Fri 1/14/22	Sun 2/27/22	Fri 1/14/22	Sun 2/27/22	Sat 5/13/23	Mon 6/26/23	361 days	970	975	
972	5.25.7	Tentative Civil Handover, DOU 2A (Rev. 5)	1 day	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	Thu 2/23/23	0 days			
973	5.25.8	Site Installation Work	231 days	Thu 2/23/23	Thu 10/12/23	Thu 2/23/23	Thu 10/12/23	Thu 2/23/23	Tue 2/13/24	123 days			
974	5.25.8.1	Commencement of E&M Installation at DOU 2A	231 days	Thu 2/23/23	Thu 10/12/23	Thu 2/23/23	Thu 10/12/23	Tue 6/27/23	Tue 2/13/24	123 days	570		
975	5.25.8.1	Mechanical Installations for DOU 2A	90 edays	Thu 2/23/23	Wed 5/24/23	Thu 2/23/23	Wed 5/24/23	Tue 6/27/23	Mon 9/25/23	0 edays	968,971	976	ME - F x 4-6 men
976	5.25.8.1	Electrical Installations for DOU 2A	90 edays	Wed 5/24/23	Tue 8/22/23	Wed 5/24/23	Tue 8/22/23	Mon 9/25/23	Sun 12/24/23	0 edays	975	977	EE - C x 4-6 men
977	5.25.8.1	Site Acceptance Test for E&M Equip for DOU 2A	30 edays	Tue 8/22/23	Thu 9/21/23	Tue 8/22/23	Thu 9/21/23	Sun 12/24/23	Tue 1/23/24	0 edays	996,997,976	978	
978	5.25.8.1	System Commissioning Test for DOU 2A	21 edays	Thu 9/21/23	Thu 10/12/23	Thu 9/21/23	Thu 10/12/23	Tue 1/23/24	Tue 2/13/24	118.63 ed.	977	1280	
979	5.26	Deodorisation System, DOU 3A, Portion B7 & B-7B (PS 6B.2	1313 days	Fri 8/28/20	Mon 4/1/24	Fri 8/28/20	Mon 4/1/24	Fri 8/28/20	Mon 4/1/24	0 days			
980	5.26.1	Planned Key Date Completion Date - KD1B, DOU 3A	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	984FF		
981	5.26.2	Planned Sectional Completion Date - Section 1, DOU 3A	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	985FF		
982	5.26.3	Planned Sectional Completion Date - Section 2, DOU 3A	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days			
983	5.26.4	Design Submissions for DOU No. 3A	234 days	Fri 8/28/20	Mon 4/19/21	Fri 8/28/20	Mon 4/19/21	Fri 8/28/20	Mon 7/12/21	85 days			
984	5.26.4.1	CD5081-B - Civil and dimensional requirements drawing	200 days	Fri 8/28/20	Mon 3/15/21	Fri 8/28/20	Mon 3/15/21	Fri 8/28/20	Mon 3/15/21	0 days		980FF	
985	5.26.4.2	CD5007-3 - Detailed Design for Deodorisation System, I	200 edays	Thu 10/1/20	Mon 4/19/21	Thu 10/1/20	Mon 4/19/21	Thu 10/1/20	Mon 7/12/21	0 edays	962	988,991,981	
986	5.26.5	Manufacturing and Delivery of Plant & Materials	225 days	Mon 4/19/21	Tue 11/30/21	Mon 4/19/21	Tue 11/30/21	Fri 1/13/23	Sat 8/26/23	634 days			
987	5.26.5.1	DOU 3A	225 days	Mon 4/19/21	Tue 11/30/21	Mon 4/19/21	Tue 11/30/21	Fri 1/13/23	Sat 8/26/23	634 days			
988	5.26.5.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Mon 4/19/21	Sat 10/16/21	Mon 4/19/21	Sat 10/16/21	Fri 1/13/23	Wed 7/12/23	0 edays	985	989	
989	5.26.5.1	Shipping and Delivery of Plant to Site	45 edays	Sat 10/16/21	Tue 11/30/21	Sat 10/16/21	Tue 11/30/21	Wed 7/12/23	Sat 8/26/23	0 edays	988	996	
990	5.26.5.1	FRP Air Ductwork	225 days	Mon 4/19/21	Tue 11/30/21	Mon 4/19/21	Tue 11/30/21	Fri 1/13/23	Sat 8/26/23	634 days			
991	5.26.5.2	Manufacturing and Factory Acceptance Test of Plant	180 edays	Mon 4/19/21	Sat 10/16/21	Mon 4/19/21	Sat 10/16/21	Fri 1/13/23	Wed 7/12/23	0 edays	985	992	
992	5.26.5.2	Shipping and Delivery of Plant to Site	45 edays	Sat 10/16/21	Tue 11/30/21	Sat 10/16/21	Tue 11/30/21	Wed 7/12/23	Sat 8/26/23	0 edays	991	996	
993	5.26.6	Tentative Civil Handover, DOU 3A (Rev. 5)	1 day	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	0 days			
994	5.26.7	Site Installation Work	171 days	Tue 11/30/22	Fri 5/20/22	Tue 11/30/22	Fri 5/20/22	Sat 8/26/23	Tue 2/13/24	634 days			
995	5.26.7.1	Commencement of E&M Installation at DOU 3A	171 days	Tue 11/30/22	Fri 5/20/22	Tue 11/30/22	Fri 5/20/22	Sat 8/26/23	Tue 2/13/24	634 days			
996	5.26.7.1	Mechanical Installations for DOU 3A	120 edays	Tue 11/30/22	Wed 3/30/22	Tue 11/30/22	Wed 3/30/22	Sat 8/26/23	Sun 12/24/23	0 edays	992,989	997SS+30 ed.	ME - F x 4-6 men
997	5.26.7.1	Electrical Installations for DOU 3A	90 edays	Thu 12/30/22	Wed 3/30/22	Thu 12/30/22	Wed 3/30/22	Mon 9/25/23	Sun 12/24/23	0 edays	996SS+30 edays	998,977	EE - D x 4-6 men
998	5.26.7.1	Site Acceptance Test for E&M Equip for DOU 3A	30 edays	Wed 3/30/22	Fri 4/29/22	Wed 3/30/22	Fri 4/29/22	Sun 12/24/23	Tue 1/23/24	0 edays	996,997	999	
999	5.26.7.1	System Commissioning Test for DOU 3A	21 edays	Fri 4/29/22	Fri 5/20/22	Fri 4/29/22	Fri 5/20/22	Tue 1/23/24	Tue 2/13/24	629 edays	998	1280	
1000	5.27	Deodorisation System, DOU 3B, Portion B-5B (PS 6B.2.6)	1265 days	Thu 10/15/20	Mon 4/1/24	Thu 10/15/20	Mon 4/1/24	Thu 10/15/20	Mon 4/1/24	0 days			
1001	5.27.1	Tentative Civil Handover Date, underground air pipe	1 day	Wed 8/17/22	Wed 8/17/22	Wed 8/17/22	Wed 8/17/22	Fri 8/25/23	Fri 8/25/23	0 days		1016FF+30 d.	
1002	5.27.2	Planned Key Date Completion Date - KD1B, DOU 3B	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days			
1003	5.27.3	Planned Sectional Completion Date - Section 1, DOU 3B	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	1006FF		
1004	5.27.4	Planned Sectional Completion Date - Section 2, DOU 3B	0 days	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	Mon 4/1/24	0 days			
1005	5.27.5	Design Submissions for DOU No. 3B	200 days	Thu 10/15/20	Mon 5/3/21	Thu 10/15/20	Mon 5/3/21	Thu 10/15/20	Mon 7/12/21	71 days			
1006	5.27.5.1	CD5007-4 - Detailed Design for Deodorisation System, I	200 edays	Thu 10/15/20	Mon 5/3/21	Thu 10/15/20	Mon 5/3/21	Thu 10/15/20	Mon 7/12/21	0 edays	962	1009,1012,10	
1007	5.27.6	Manufacturing and Delivery of Plant & Materials	471 days	Mon 5/3/21	Wed 8/17/22	Mon 5/3/21	Wed 8/17/22	Thu 12/29/22	Sat 8/26/23	374 days			
1008	5.27.6.1	DOU 3B	471 days	Mon 5/3/21	Wed 8/17/22	Mon 5/3/21	Wed 8/17/22	Thu 12/29/22	Sat 8/26/23	374 days			
1009	5.27.6.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Mon 5/3/21	Sat 10/30/21	Mon 5/3/21	Sat 10/30/21	Thu 12/29/22	Tue 6/27/23	231 edays	1006	1010	
1010	5.27.6.1	Shipping and Delivery of Plant to Site	60 edays	Sat 6/18/22	Wed 8/17/22	Sat 6/18/22	Wed 8/17/22	Tue 6/27/23	Sat 8/26/23	0 edays	1009,1001SS-60 ed.	1016	
1011	5.27.6.1	FRP Air Ductwork	456 days	Mon 5/3/21	Tue 8/2/22	Mon 5/3/21	Tue 8/2/22	Fri 1/13/23	Sat 8/26/23	389 days			
1012	5.27.6.2	Manufacturing and Factory Acceptance Test of Plant	180 edays	Mon 5/3/21	Sat 10/30/21	Mon 5/3/21	Sat 10/30/21	Fri 1/13/23	Wed 7/12/23	231 edays	1006	1013	
1013	5.27.6.2	Shipping and Delivery of Plant to Site	45 edays	Sat 6/18/22	Tue 8/2/22	Sat 6/18/22	Tue 8/2/22	Wed 7/12/23	Sat 8/26/23	15 edays	1012,1001SS-60 ed.	1016	
1014	5.27.7	Site Installation Work	171 days	Wed 8/17/22	Sat 2/4/23	Wed 8/17/22	Sat 2/4/23	Sat 8/26/23	Tue 2/13/24	374 days			
1015	5.27.7.1	Commencement of E&M Installation at DOU 3B	171 days	Wed 8/17/22	S								

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

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1033	1033.5.28.8.1	Commencement of Valves and Flowmeters Installation	150 days	Sun 9/12/21	Tue 2/8/22	Sun 9/12/21	Tue 2/8/22	Sat 9/16/23	Mon 2/12/24	734 days			
1034	1034.5.28.8.1	Installation of valves and flowmeters	90 days	Sun 9/12/21	Fri 12/10/21	Sun 9/12/21	Fri 12/10/21	Sat 9/16/23	Thu 12/14/23	0 days	1030	1035	ME - C x 4-6 men
1035	1035.5.28.8.1	cables laying and terminations	60 days	Sat 12/11/21	Tue 2/8/22	Sat 12/11/21	Tue 2/8/22	Fri 12/15/23	Mon 2/12/24	729 days	1034	1280	EE - A x 4-6 men
1036	1036.5.29	Underground Pipework, Modification and Connection Work	1161 days	Mon 3/1/21	Sat 5/4/24	Mon 3/1/21	Sat 5/4/24	Wed 3/3/21	Wed 5/1/24	0 days			
1037	1037.5.29.1	Planned Key Date Completion Date - K01B, UU	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	1041FF		
1038	1038.5.29.2	Planned Sectional Completion Date - Section 3, Undergro	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	1042FF		
1039	1039.5.29.3	Planned Sectional Completion Date - Section 4, Undergro	0 days	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	0 days	1052FF		
1040	1040.5.29.4	Design Submissions	90 days	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Wed 3/3/21	Mon 7/12/21	3 days			
1041	1041.5.29.4.1	CDS015 - Detailed Design for Underground Pipework M	90 edays	Mon 3/1/21	Sun 5/30/21	Mon 3/1/21	Sun 5/30/21	Wed 3/3/21	Tue 6/1/21	2.38 edays		1037FF	
1042	1042.5.29.4.2	CDS016 - Detailed Design for Temporary Pumping Syste	50 edays	Mon 3/1/21	Tue 4/20/21	Mon 3/1/21	Tue 4/20/21	Sun 5/23/21	Mon 7/12/21	0 edays		1044,1038FF	
1043	1043.5.29.5	Manufacturing and Delivery of Plant & Materials	1079 days	Tue 4/20/21	Tue 4/2/24	Tue 4/20/21	Tue 4/2/24	Thu 9/7/23	Thu 4/18/24	16 days			
1044	1044.5.29.5.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Tue 4/20/21	Sat 10/16/21	Tue 4/20/21	Sat 10/16/21	Thu 9/7/23	Mon 3/4/24	854 days	1042	1045	
1045	1045.5.29.5.2	Shipping and Delivery of Plant to Site	45 days	Sun 2/18/24	Tue 4/2/24	Sun 2/18/24	Tue 4/2/24	Tue 3/5/24	Thu 4/18/24	16 days	1044,1046SS-60 edi,1050		
1046	1046.5.29.6	Tentative Civil Handover, Road (Rev. 5)	1 day	Thu 4/18/24	Thu 4/18/24	Thu 4/18/24	Thu 4/18/24	Mon 4/15/24	Mon 4/15/24	0 days			1045SS-60 ec
1047	1047.5.29.7	Site Installation	16 days	Fri 4/19/24	Sat 5/4/24	Fri 4/19/24	Sat 5/4/24	Tue 4/16/24	Wed 5/1/24	0 days			
1048	1048.5.29.7.1	Commencement of underground pipework modification and connection works	16 days	Fri 4/19/24	Sat 5/4/24	Fri 4/19/24	Sat 5/4/24	Tue 4/16/24	Wed 5/1/24	0 days			
1049	1049.5.29.7.1.1	Temporary Flow Diversion and Road Excavation Work	3 days	Fri 4/19/24	Sun 4/21/24	Fri 4/19/24	Sun 4/21/24	Thu 4/18/24	Thu 4/18/24	0 days	1046	1050	
1050	1050.5.29.7.1.1	Pipe Laying and connection works	7 days	Mon 4/22/24	Sun 4/28/24	Mon 4/22/24	Sun 4/28/24	Fri 4/19/24	Thu 4/25/24	0 days	1049,1045	1051	
1051	1051.5.29.7.1.1	Pressure Tests	3 days	Mon 4/29/24	Wed 5/1/24	Mon 4/29/24	Wed 5/1/24	Fri 4/18/24	Sun 4/28/24	0 days	1050	1052	
1052	1052.5.29.7.1.1	Make Good	3 days	Thu 5/2/24	Sat 5/4/24	Thu 5/2/24	Sat 5/4/24	Mon 4/29/24	Wed 5/1/24	0 days	1051	1051FF	
1053	1053.5.30	Temporary Filtrate Lifting Well and Eq. Tank, Portion B-3B	450 days	Mon 3/2/20	Tue 5/25/21	Mon 3/2/20	Tue 5/25/21	Mon 3/2/20	Tue 5/25/21	0 days			
1054	1054.5.30.1	Selection of Suppliers for major plant and materials and	196 days	Mon 3/2/20	Sun 9/13/20	Mon 3/2/20	Sun 9/13/20	Mon 3/2/20	Mon 3/2/20	0 days			
1055	1055.5.30.1.1	Mis - filtrate lift pumps and filtrate transfer pumps, C11, rel. EQ10	73 days	Mon 3/2/20	Wed 5/13/20	Mon 3/2/20	Wed 5/13/20	Mon 3/2/20	Wed 5/13/20	0 days			
1056	1056.5.30.1.1.1	Submission for acceptance of purchasing package	29 days	Mon 3/2/20	Mon 3/30/20	Mon 3/2/20	Mon 3/30/20	Mon 3/2/20	Mon 3/30/20	0 days		1057	
1057	1057.5.30.1.1.1	Invitation of quotations for purchasing package	30 days	Tue 3/31/20	Wed 4/29/20	Tue 3/31/20	Wed 4/29/20	Tue 3/31/20	Wed 4/29/20	0 days	1056	1058	
1058	1058.5.30.1.1.1	Acceptance of conforming quotation and acceptance for Manufacture (Completed)	14 days	Thu 4/30/20	Wed 5/13/20	Thu 4/30/20	Wed 5/13/20	Thu 4/30/20	Wed 5/13/20	0 days	1057	1077,1030	
1059	1059.5.30.1.1.1	Mis - Instrumentations	73 days	Mon 3/2/20	Wed 5/13/20	Mon 3/2/20	Wed 5/13/20	Mon 3/2/20	Wed 5/13/20	0 days			
1060	1060.5.30.1.2	Submission for acceptance of purchasing package	29 days	Mon 3/2/20	Mon 3/30/20	Mon 3/2/20	Mon 3/30/20	Mon 3/2/20	Mon 3/30/20	0 days		1061	
1061	1061.5.30.1.2	Invitation of quotations for purchasing package	30 days	Tue 3/31/20	Wed 4/29/20	Tue 3/31/20	Wed 4/29/20	Tue 3/31/20	Wed 4/29/20	0 days	1060	1062	
1062	1062.5.30.1.2	Acceptance of conforming quotation and acceptance	14 days	Thu 4/30/20	Wed 5/13/20	Thu 4/30/20	Wed 5/13/20	Thu 4/30/20	Wed 5/13/20	0 days	1061	1077,1083	
1063	1063.5.30.1.1	Mis - Pipework (To be provided by Mechanical Sub-Co	42 days	Mon 8/3/20	Sun 9/13/20	Mon 8/3/20	Sun 9/13/20	Mon 8/3/20	Sun 9/13/20	0 days			
1064	1064.5.30.1.1	Submission for acceptance of purchasing package	7 days	Mon 8/3/20	Sun 8/9/20	Mon 8/3/20	Sun 8/9/20	Mon 8/3/20	Sun 8/9/20	0 days		1065	
1065	1065.5.30.1.1	Invitation of quotations for purchasing package	14 days	Mon 8/10/20	Sun 8/23/20	Mon 8/10/20	Sun 8/23/20	Mon 8/10/20	Sun 8/23/20	0 days	1064	1066	
1066	1066.5.30.1.1	Acceptance of conforming quotation and acceptance	21 days	Mon 8/24/20	Sun 9/13/20	Mon 8/24/20	Sun 9/13/20	Mon 8/24/20	Sun 9/13/20	0 days	1065	1077,1086	
1067	1067.5.30.1.1	Mis - Valve (To be provided by Mechanical Sub-Contr	42 days	Mon 8/3/20	Sun 9/13/20	Mon 8/3/20	Sun 9/13/20	Mon 8/3/20	Sun 9/13/20	0 days			
1068	1068.5.30.1.4	Submission for acceptance of purchasing package	7 days	Mon 8/3/20	Sun 8/9/20	Mon 8/3/20	Sun 8/9/20	Mon 8/3/20	Sun 8/9/20	0 days		1069	
1069	1069.5.30.1.4	Invitation of quotations for purchasing package	14 days	Mon 8/10/20	Sun 8/23/20	Mon 8/10/20	Sun 8/23/20	Mon 8/10/20	Sun 8/23/20	0 days	1068	1070	
1070	1070.5.30.1.4	Acceptance of conforming quotation and acceptance	21 days	Mon 8/24/20	Sun 9/13/20	Mon 8/24/20	Sun 9/13/20	Mon 8/24/20	Sun 9/13/20	0 days	1069	1077,1089	
1071	1071.5.30.1.1	Civil Work Subletting Package (Repeated WBS 5.13.17	19 days	Tue 7/14/20	Sat 8/1/20	Tue 7/14/20	Sat 8/1/20	Tue 7/14/20	Sat 8/1/20	0 days			
1072	1072.5.30.1.1	Submission for acceptance of subletting package	3 days	Tue 7/14/20	Thu 7/16/20	Tue 7/14/20	Thu 7/16/20	Tue 7/14/20	Thu 7/16/20	0 days		1073	
1073	1073.5.30.1.1	Invitation of tender for subletting package	14 days	Fri 7/17/20	Thu 7/30/20	Fri 7/17/20	Thu 7/30/20	Fri 7/17/20	Thu 7/30/20	0 days	1072	1074	
1074	1074.5.30.1.1	Acceptance of conforming quotation and acceptance	2 days	Fri 7/31/20	Sat 8/1/20	Fri 7/31/20	Sat 8/1/20	Fri 7/31/20	Sat 8/1/20	0 days	1073	1080,1083,10	
1075	1075.5.30.2	Design Submissions for Temporary Filtrate Lifting Well a	34 days	Tue 9/1/20	Sun 10/4/20	Tue 9/1/20	Sun 10/4/20	Tue 9/1/20	Sun 10/4/20	0 days			
1076	1076.5.30.2.1	CDS050-S - Detailed Design for Lifting Appliances - Tem	30 edays	Tue 9/1/20	Thu 10/1/20	Tue 9/1/20	Thu 10/1/20	Tue 9/1/20	Thu 10/1/20	0 edays	120	1105	
1077	1077.5.30.2.2	Design submission for E&M Installation works for temp	21 days	Mon 9/14/20	Sun 10/4/20	Mon 9/14/20	Sun 10/4/20	Mon 9/14/20	Sun 10/4/20	0 edays	1058,1062,1066,10	1079,1085,10	
1078	1078.5.30.3	Manufacturing and Delivery of Plant & Materials	165 days	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	0 days			
1079	1079.5.30.3.1	Filtrate Lift Pumps and Filtrate Transfer Pump, EQ1011	165 days	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	0 days	1077		
1080	1080.5.30.3.1.1	Manufacturing and Factory Acceptance Test of Plant	110 days	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	0 days	1074,1058	1081	
1081	1081.5.30.3.1.1	Shipping and Delivery of Plant to site (Delivered)	45 days	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	0 days	1080	1110	
1082	1082.5.30.3.2	Instrumentations	165 days	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	0 days	1077		
1083	1083.5.30.3.2	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	0 days	1074,1062	1084	
1084	1084.5.30.3.2	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	0 days	1083	1111	
1085	1085.5.30.3.3	Pipework	165 days	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	0 days	1077		
1086	1086.5.30.3.3	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	0 days	1074,1066	1087	
1087	1087.5.30.3.3	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	0 days	1086	1109	
1088	1088.5.30.3.4	Valve	165 days	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	Mon 10/5/20	Thu 3/18/21	0 days	1077		
1089	1089.5.30.3.4	Manufacturing and Factory Acceptance Test of Plant	120 days	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	Mon 10/5/20	Mon 2/1/21	0 days	1074,1070	1090	
1090	1090.5.30.3.4	Shipping and Delivery of Plant to site	45 days	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	Tue 2/2/21	Thu 3/18/21	0 days	1089	1109	
1091	1091.5.30.4	Site Installation Work	297 days	Sat 8/1/20	Tue 5/25/21	Sat 8/1/20	Tue 5/25/21	Sat 8/1/20	Tue 5/25/21	0 days			
1092	1092.5.30.4.1	Commencement of Civil Construction and E&M Install	297 days	Sat 8/1/20	Tue 5/25/21	Sat 8/1/20	Tue 5/25/21	Sat 8/1/20	Tue 5/25/21	0 days			
1093	1093.5.30.4.1	Civil Construction Work	297 days	Sat 8/1/20	Tue 5/25/21	Sat 8/1/20	Tue 5/25/21	Sat 8/1/20	Tue 5/25/21	0 days			
1094	1094.5.30.4.1	Civil on-site survey and report submission for acce	5 edays	Sat 8/1/20	Thu 8/6/20	Sat 8/1/20	Thu 8/6/20	Sat 8/1/20	Thu 8/6/20	0 edays	1074	1095,1096	
1095	1095.5.30.4.1	Civil structural design and drawing submission for	30 days	Fri 8/7/20	Sat 9/5/20	Fri 8/7/20	Sat 9/5/20	Fri 8/7/20	Sat 9/5/20	0 days	1094	1097	
1096	1096.5.30.4.1	Site Clearance, UU diversion and construction of U	21 days	Fri 8/7/20	Thu 8/27/20	Fri 8/7/20	Thu 8/27/20	Fri 8/7/20	Thu 8/27/20	0 days	1094	1097	
1097	1097.5.30.4.1	ELS (Sheeting and Excavation)	60 days	Sun 9/6/20	Wed 11/4/20	Sun 9/6/20	Wed 11/4/20	Sun 9/6/20	Wed 11/4/20	0 days	1096,1095	1098	
1098	1098.5.30.4.1	Grouting Works	60 days	Thu 11/5/20	Sun 1/3/21	Thu 11/5/20	Sun 1/3/21	Thu 11/5/20	Sun 1/3/21	0 days	1097	1099	
1099	1099.5.30.4.1	RC structure works including cast-in items	60 days	Mon 1/4/21	Thu 3/4/21	Mon 1/4/21	Thu 3/4/21	Mon 1/4/21	Thu 3/4/21	0 days	1098	1108,1105,11	
1100	1100.5.30.4.1	Removal Formwork and Flasework	8 days	Fri 3/5/21	Fri 3/12/21	Fri 3/5/21	Fri 3/12/21	Fri 3/5/21	Fri 3/12/21	0 days	1099	1	

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

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1118	1118.5.31.1	Planned Key Date Completion Date - KD3B	0 days	Mon 6/7/21	Mon 6/7/21	Mon 6/7/21	Mon 6/7/21	Mon 6/7/21	Mon 6/7/21	0 days	1185FF		
1119	1119.5.31.2	Planned Sectional Completion Date - Section 3, PST No. 4	0 days	Wed 9/1/21	Wed 9/1/21	Wed 9/1/21	Wed 9/1/21	Wed 9/1/21	Wed 9/1/21	0 days	1102FF,1211FF		
1120	1120.5.31.3	Selection of Suppliers for major plant and materials and	137 days	Sat 8/1/20	Tue 12/15/20	Sat 8/1/20	Tue 12/15/20	Sat 8/1/20	Tue 12/15/20	0 days			
1121	1121.5.31.3.1	Mls - Rotating Bridge Scrapers and associated materials, C11, ref. 1	41 days	Sat 8/1/20	Fri 8/1/20	Sat 8/1/20	Fri 8/1/20	Sat 8/1/20	Fri 8/1/20	0 days			
1122	1122.5.31.3.1.1	Submission for acceptance of purchasing package	7 days	Sat 8/1/20	Fri 8/7/20	Sat 8/1/20	Fri 8/7/20	Sat 8/1/20	Fri 8/7/20	0 days		1123	
1123	1123.5.31.3.1.1	Issuance of quotations for purchasing package	14 days	Sat 8/8/20	Fri 8/21/20	Sat 8/8/20	Fri 8/21/20	Sat 8/8/20	Fri 8/21/20	0 days		1122	
1124	1124.5.31.3.1.1	Acceptance of conforming quotation (Completed)	21 days	Sat 8/22/20	Fri 9/11/20	Sat 8/22/20	Fri 9/11/20	Sat 8/22/20	Fri 9/11/20	0 days		1123	
1125	1125.5.31.3.2	Mls - Pipework, C11, ref. EQT037-2	42 days	Sat 8/1/20	Fri 9/11/20	Sat 8/1/20	Fri 9/11/20	Sat 8/1/20	Fri 9/11/20	0 days			
1126	1126.5.31.3.2	Submission for acceptance of purchasing package	7 days	Sat 8/1/20	Fri 8/7/20	Sat 8/1/20	Fri 8/7/20	Sat 8/1/20	Fri 8/7/20	0 days		1127	
1127	1127.5.31.3.2	Invitation of quotations for purchasing package	14 days	Sat 8/8/20	Fri 8/21/20	Sat 8/8/20	Fri 8/21/20	Sat 8/8/20	Fri 8/21/20	0 days		1128	
1128	1128.5.31.3.2	Acceptance of conforming quotation (Completed)	21 days	Sat 8/22/20	Fri 9/11/20	Sat 8/22/20	Fri 9/11/20	Sat 8/22/20	Fri 9/11/20	0 days		1127	
1129	1129.5.31.3.1	Subletting of Electrical and Mechanical Installation Works	81 days	Sat 9/26/20	Tue 12/15/20	Sat 9/26/20	Tue 12/15/20	Sat 9/26/20	Tue 12/15/20	0 days			
1130	1130.5.31.3.3	Submission for Subletting Package	30 days	Sat 9/26/20	Sun 10/25/20	Sat 9/26/20	Sun 10/25/20	Sat 9/26/20	Sun 10/25/20	0 days		1131	
1131	1131.5.31.3.3	Invitation to tender	21 days	Mon 10/26/20	Sun 11/15/20	Mon 10/26/20	Sun 11/15/20	Mon 10/26/20	Sun 11/15/20	0 days		1130	
1132	1132.5.31.3.3	Acceptance of conforming tender (Completed)	30 days	Mon 11/16/20	Tue 12/15/20	Mon 11/16/20	Tue 12/15/20	Mon 11/16/20	Tue 12/15/20	0 days		1149	
1133	1133.5.31.4	Design Submissions	14 days	Sat 9/12/20	Fri 9/25/20	Sat 9/12/20	Fri 9/25/20	Sat 9/12/20	Fri 9/25/20	0 days			
1134	1134.5.31.4.1	Design submissions for retrofitting the existing PST No.	14 days	Sat 9/12/20	Fri 9/25/20	Sat 9/12/20	Fri 9/25/20	Sat 9/12/20	Fri 9/25/20	0 days		1137,1140,1141	
1135	1135.5.31.5	Manufacturing and Delivery of Plant & Materials	195 days	Sat 9/26/20	Thu 4/8/21	Sat 9/26/20	Thu 4/8/21	Sat 9/26/20	Thu 4/8/21	0 days			
1136	1136.5.31.5.1	Rotating Bridge Scrapers and associated materials	195 days	Sat 9/26/20	Thu 4/8/21	Sat 9/26/20	Thu 4/8/21	Sat 9/26/20	Thu 4/8/21	0 days			
1137	1137.5.31.5.1	Manufacturing and Factory Acceptance Test of Plant	150 days	Sat 9/26/20	Mon 2/22/21	Sat 9/26/20	Mon 2/22/21	Sat 9/26/20	Mon 2/22/21	0 days		1138	
1138	1138.5.31.5.1	Shipping and Delivery of Plant to site (Rev. B)	45 days	Tue 2/23/21	Thu 4/8/21	Tue 2/23/21	Thu 4/8/21	Tue 2/23/21	Thu 4/8/21	0 days		1155	
1139	1139.5.31.5.1	Pipework	120 days	Sat 9/26/20	Sat 1/23/21	Sat 9/26/20	Sat 1/23/21	Sat 9/26/20	Sat 1/23/21	0 days			
1140	1140.5.31.5.2	Manufacturing and Factory Acceptance Test of Plant	90 days	Sat 9/26/20	Thu 12/24/20	Sat 9/26/20	Thu 12/24/20	Sat 9/26/20	Thu 12/24/20	0 days		1141	
1141	1141.5.31.5.2	Shipping and Delivery of Plant to site	30 days	Fri 12/25/20	Sat 1/23/21	Fri 12/25/20	Sat 1/23/21	Fri 12/25/20	Sat 1/23/21	0 days		1150	
1142	1142.5.31.6	Tentative Civil Handover, Filtrate Lifting Well and Eq. Tank	1 day	Sat 5/1/21	Sat 5/1/21	Sat 5/1/21	Sat 5/1/21	Sat 5/1/21	Sat 5/1/21	0 days		1116FF,1107FF	
1143	1143.5.31.7	Site Installation Work	300 days	Thu 10/1/20	Tue 7/27/21	Thu 10/1/20	Tue 7/27/21	Thu 10/1/20	Tue 7/27/21	0 days			
1144	1144.5.31.7.1	Commencement of retrofitting the existing PST No. 4 and No. 6	300 days	Thu 10/1/20	Tue 7/27/21	Thu 10/1/20	Tue 7/27/21	Thu 10/1/20	Tue 7/27/21	0 days			
1145	1145.5.31.7.1.1	Temporary flow diversion of Filtrate from PST No. 4.	1 day	Thu 10/1/20	Thu 10/1/20	Thu 10/1/20	Thu 10/1/20	Thu 10/1/20	Thu 10/1/20	0 days		1146	
1146	1146.5.31.7.1	Dismantle and Removal of E&M Equipment at PST No. 4	60 days	Fri 10/2/20	Mon 11/30/20	Fri 10/2/20	Mon 11/30/20	Fri 10/2/20	Mon 11/30/20	0 days		1145	
1147	1147.5.31.7.1	Temporary flow diversion of Filtrate from PST No. 6	7 days	Tue 12/1/20	Mon 12/7/20	Tue 12/1/20	Mon 12/7/20	Tue 12/1/20	Mon 12/7/20	0 days		1148	
1148	1148.5.31.7.1	Dismantle and Removal of E&M Equipment at PST No. 6	119 days	Tue 12/8/20	Mon 4/5/21	Tue 12/8/20	Mon 4/5/21	Tue 12/8/20	Mon 4/5/21	0 days		1150	
1149	1149.5.31.7.1.1	Mechanical Installations of existing PSTs No. 4 (Completed)	86 days	Thu 4/8/21	Mon 5/31/21	Thu 4/8/21	Mon 5/31/21	Thu 4/8/21	Mon 5/31/21	2.5 days		1152	
1150	1150.5.31.7.1.1	Installation of PST Influent feed pipe	5 days	Thu 4/8/21	Sat 4/10/21	Thu 4/8/21	Sat 4/10/21	Thu 4/8/21	Sat 4/10/21	0 days		1148,1141	ME - A x 4-6 men
1151	1151.5.31.7.1.1	Installation of circular baffle diffuser box	5 days	Sun 4/11/21	Thu 4/15/21	Sun 4/11/21	Thu 4/15/21	Sun 4/11/21	Thu 4/15/21	0 days		1152	ME - A x 4-6 men
1152	1152.5.31.7.1.1	Installation of scum baffle plates	5 days	Fri 4/16/21	Tue 4/20/21	Fri 4/16/21	Tue 4/20/21	Fri 4/16/21	Tue 4/20/21	0 days		1153	ME - A x 4-6 men
1153	1153.5.31.7.1.1	Installation of scum box with collection valve and pipework	5 days	Wed 4/21/21	Sun 4/25/21	Wed 4/21/21	Sun 4/25/21	Wed 4/21/21	Sun 4/25/21	0 days		1154	ME - A x 4-6 men
1154	1154.5.31.7.1.1	Installation of v-notched weir plate	7 days	Mon 4/26/21	Sun 5/2/21	Mon 4/26/21	Sun 5/2/21	Mon 4/26/21	Sun 5/2/21	0 days		1155	ME - A x 4-6 men
1155	1155.5.31.7.1.1	Installation of center bearing and slip ring assembly for rotating bridge	5 days	Mon 5/3/21	Fri 5/7/21	Mon 5/3/21	Fri 5/7/21	Mon 5/3/21	Fri 5/7/21	0 days		1154,1158	ME - A x 4-6 men
1156	1156.5.31.7.1.1	Installation of motor and gearbox assembly for rotating bridge	5 days	Sat 5/8/21	Wed 5/12/21	Sat 5/8/21	Wed 5/12/21	Sat 5/8/21	Wed 5/12/21	0 days		1155	ME - A x 4-6 men
1157	1157.5.31.7.1.1	Installation of rotating bridge sludge and scum scraper assembly	5 days	Thu 5/13/21	Mon 5/17/21	Thu 5/13/21	Mon 5/17/21	Thu 5/13/21	Mon 5/17/21	0 days		1155,1160	ME - A x 4-6 men
1158	1158.5.31.7.1.1	Installation of removable FRP covers for effluent channel	14 days	Tue 5/18/21	Mon 5/31/21	Tue 5/18/21	Mon 5/31/21	Tue 5/18/21	Mon 5/31/21	0 days		1162	ME - A x 4-6 men
1159	1159.5.31.7.1.1	Electrical Installations of existing PST No. 4	10 days	Tue 5/18/21	Thu 5/27/21	Tue 5/18/21	Thu 5/27/21	Tue 5/18/21	Thu 5/27/21	0 days		1162	
1160	1160.5.31.7.1.1	Installation of local control panels	5 days	Tue 5/18/21	Sat 5/22/21	Tue 5/18/21	Sat 5/22/21	Tue 5/18/21	Sat 5/22/21	0 days		1161	EE - A x 4-6 men
1161	1161.5.31.7.1.1	Installation of cable trays and terminations	5 days	Sun 5/23/21	Thu 5/27/21	Sun 5/23/21	Thu 5/27/21	Sun 5/23/21	Thu 5/27/21	0 days		1162	EE - A x 4-6 men
1162	1162.5.31.7.1.1	Site Acceptance Test for E&M Equip at existing PST No. 4	5 days	Tue 6/1/21	Sat 6/5/21	Tue 6/1/21	Sat 6/5/21	Tue 6/1/21	Mon 7/26/21	49 days		1159,1158,1161	
1163	1163.5.31.7.1	CNE-0229 - Removal of accumulated sludge inside P	12 days	Wed 5/19/21	Sun 5/30/21	Wed 5/19/21	Sun 5/30/21	Wed 5/19/21	Sun 5/30/21	0 days		1173	
1164	1164.5.31.7.1	Filtrate diversion to Temporary Filtrate Equalisation	2 days	Wed 5/19/21	Thu 5/20/21	Wed 5/19/21	Thu 5/20/21	Wed 5/19/21	Thu 5/20/21	0 days		1165	
1165	1165.5.31.7.1	Removal of floating scum / sludge inside PST No. 6	7 days	Fri 5/21/21	Thu 5/27/21	Fri 5/21/21	Thu 5/27/21	Fri 5/21/21	Thu 5/27/21	0 days		1164,1169	1166,1167
1166	1166.5.31.7.1	Clearance of blockage of PST No. 6 drain pipe	3 days	Fri 5/28/21	Sun 5/30/21	Fri 5/28/21	Sun 5/30/21	Fri 5/28/21	Sun 5/30/21	0 days		1165	
1167	1167.5.31.7.1	Retrofitting Concrete Structure of PST No. 6	3 days	Fri 5/28/21	Sun 5/30/21	Fri 5/28/21	Sun 5/30/21	Fri 5/28/21	Sun 5/30/21	0 days		1165	
1168	1168.5.31.7.1	NCE-007 - Additional Contract Requirements for provision of ICE's Certificate	8 days	Mon 6/14/21	Mon 6/21/21	Mon 6/14/21	Mon 6/21/21	Mon 6/14/21	Mon 6/21/21	0 days			
1169	1169.5.31.7.1	Provision of ICE's Certificate	8 days	Mon 6/14/21	Mon 6/21/21	Mon 6/14/21	Mon 6/21/21	Mon 6/14/21	Mon 6/21/21	0 days		1165,1173	
1170	1170.5.31.7.1	NCE-008 - Additional Contract Requirements for provision of ICE's Certificate	14 days	Thu 6/24/21	Wed 7/7/21	Thu 6/24/21	Wed 7/7/21	Thu 6/24/21	Wed 7/7/21	0 days			
1171	1171.5.31.7.1	Provision of ICE's Certificate	14 days	Thu 6/24/21	Wed 7/7/21	Thu 6/24/21	Wed 7/7/21	Thu 6/24/21	Wed 7/7/21	0 days		1173	
1172	1172.5.31.7.1	Mechanical Installations of existing PST No. 6	48 days	Fri 6/4/21	Wed 7/21/21	Fri 6/4/21	Wed 7/21/21	Fri 6/4/21	Wed 7/21/21	0 days			
1173	1173.5.31.7.1	Installation of PST Influent feed pipe	2 days	Thu 7/8/21	Fri 7/9/21	Thu 7/8/21	Fri 7/9/21	Thu 7/8/21	Fri 7/9/21	0 days		1174	ME - A x 4-6 men
1174	1174.5.31.7.1	Installation of center bearing and slip ring assembly	2 days	Sat 7/10/21	Sun 7/11/21	Sat 7/10/21	Sun 7/11/21	Sat 7/10/21	Sun 7/11/21	0 days		1175,1178	ME - A x 4-6 men
1175	1175.5.31.7.1	Installation of motor and gearbox assembly for rotating bridge	5 days	Mon 7/12/21	Fri 7/16/21	Mon 7/12/21	Fri 7/16/21	Mon 7/12/21	Fri 7/16/21	0 days		1174	ME - A x 4-6 men
1176	1176.5.31.7.1	Installation of rotating bridge sludge and scum scraper assembly	5 days	Sat 7/17/21	Wed 7/21/21	Sat 7/17/21	Wed 7/21/21	Sat 7/17/21	Wed 7/21/21	0 days		1175	ME - A x 4-6 men
1177	1177.5.31.7.1	Installation of circular baffle diffuser box	2 days	Sat 7/17/21	Sun 7/18/21	Sat 7/17/21	Sun 7/18/21	Sat 7/17/21	Sun 7/18/21	0 days		1175	ME - A x 4-6 men
1178	1178.5.31.7.1	Installation of v-notched weir plate	2 days	Fri 6/4/21	Sat 6/5/21	Fri 6/4/21	Sat 6/5/21	Fri 6/4/21	Sat 6/5/21	0 days		1174	ME - A x 4-6 men
1179	1179.5.31.7.1	Installation of scum baffle plates	2 days	Sun 6/6/21	Mon 6/7/21	Sun 6/6/21	Mon 6/7/21	Sun 6/6/21	Mon 6/7/21	0 days		1178	ME - A x 4-6 men
1180	1180.5.31.7.1	Installation of scum collection box	2 days	Sun 6/6/21	Mon 6/7/21	Sun 6/6/21	Mon 6/7/21	Sun 6/6/21	Mon 6/7/21	0 days		1178	ME - A x 4-6 men
1181	1181.5.31.7.1	Electrical Installations of existing PSTs No. 6	6 days	Sat 7/17/21	Thu 7/22/21	Sat 7/17/21	Thu 7/22/21	Sat 7/17/21	Thu 7/22/21	0 days		1184	
1182	1182.5.31.7.1	Installation of local control panels	3 days	Sat 7/17/21	Mon 7/19/21	Sat 7/17/21	Mon 7/19/21	Sat 7/17/21	Mon 7/19/21	0 days		1183	
1183	1183.5.31.7.1	Installation of cable trays and terminations	3 days	Tue 7/20/21	Thu 7/22/21	Tue 7/20/21	Thu 7/22/21	Tue 7/20/21	Thu 7/22/21	0 days		1182	
1184	1184.5.31.7.1	Site Acceptance Test for E&M Equip at existing PST No. 6	2 days	Fri 7/23/21	Sat 7/24/21	Fri 7/23/21	Sat 7/24/21	Fri 7/23/21	Mon 7/26/21	0 days		1181,1183	1185
1185	1185.5.31.7.1.1	System Commissioning											

Proposed Work Programme for DE/2018/04

Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities

ID	WBS	Task Name	Duration between Task Start and Finish	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1202	1202.5.33.2.1.1	Submission for acceptance of purchasing package	21 days	Wed 7/1/20	Tue 7/21/20	Wed 7/1/20	Tue 7/21/20	Wed 7/1/20	Tue 7/21/20	0 days		1203	
1203	1202.5.33.2.1.1	Invitation of quotations for purchasing package	10 days	Wed 7/22/20	Fri 7/31/20	Wed 7/22/20	Fri 7/31/20	Wed 7/22/20	Fri 7/31/20	0 days	1202	1204	
1204	1202.5.33.2.1.1	Acceptance of conforming quotation (Completed)	21 days	Sat 8/1/20	Fri 8/21/20	Sat 8/1/20	Fri 8/21/20	Sat 8/1/20	Fri 8/21/20	0 days	1203	1205	
1205	1205.5.33.3	Design submission for replacement of filter plates	7 days	Fri 8/21/20	Fri 8/21/20	Fri 8/21/20	Fri 8/21/20	Fri 8/21/20	Fri 8/21/20	0 days	1204	1207	
1206	1205.5.33.4	Manufacturing and Delivery of Plant & Materials	345 days	Sat 8/29/20	Sun 8/8/21	Sat 8/29/20	Sun 8/8/21	Sat 8/29/20	Sun 8/8/21	0 days		1208	
1207	1207.5.34.1	Manufacturing and Delivery Acceptance Test of Plant	300 days	Sat 8/29/20	Thu 6/24/21	Sat 8/29/20	Thu 6/24/21	Sat 8/29/20	Thu 6/24/21	0 days	1206	1211	
1208	1208.5.34.2	Shipping and Delivery of Plant to site	45 days	Fri 6/25/21	Sun 8/8/21	Fri 6/25/21	Sun 8/8/21	Fri 6/25/21	Sun 8/8/21	0 days	1207	1211	
1209	1209.5.33.5	Site Installation Work	21 days	Mon 8/9/21	Sun 8/29/21	Mon 8/9/21	Sun 8/29/21	Mon 8/9/21	Sun 8/29/21	3 days			
1210	1210.5.33.5.1	Commencement of replacement of filter plates	21 days	Mon 8/9/21	Sun 8/29/21	Mon 8/9/21	Sun 8/29/21	Mon 8/9/21	Sun 8/29/21	3 days			
1211	1211.5.33.5.1	Replacement of filter plates (On Hold)	21 days	Mon 8/9/21	Sun 8/29/21	Mon 8/9/21	Sun 8/29/21	Mon 8/9/21	Sun 8/29/21	3 days	1208	1119FF	
1212	1212.5.34	Fire Services Installation (PS 6B.6.9)	1248 days	Tue 12/1/20	Wed 5/1/24	Tue 12/1/20	Wed 5/1/24	Tue 12/1/20	Wed 5/1/24	0 days			
1213	1213.5.34.1	Planned Key Date Completion Date - KD18, Fire	0 days	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	Tue 6/1/21	0 days	1217FF		
1214	1214.5.34.2	Planned Sectional Completion Date - Section 1, FSI	0 days	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	Mon 7/12/21	0 days	1218FF		
1215	1215.5.34.3	Planned Sectional Completion Date - Section 4, FSI	0 days	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	Wed 5/1/24	0 days	1233FF		
1216	1216.5.34.4	Design Submissions for FSI	334 days	Tue 12/1/20	Sat 10/30/21	Tue 12/1/20	Sat 10/30/21	Tue 12/1/20	Sat 10/30/21	0 days			
1217	1217.5.34.4.1	CDS081-11 - Civil and dimensional requirements drawi	120 days	Tue 12/1/20	Tue 3/30/21	Tue 12/1/20	Tue 3/30/21	Tue 12/1/20	Tue 3/30/21	0 days		1213FF	
1218	1218.5.34.4.2	CDS049 - Detailed Design for Fire Services include AFA,	180 days	Mon 5/3/21	Sat 10/30/21	Mon 5/3/21	Sat 10/30/21	Mon 5/3/21	Sat 10/30/21	0 days	163	1222,1219,1	
1219	1219.5.34.5	DG Stores Submissions to FSD for approval	120 days	Sun 10/31/20	Sun 2/27/22	Sun 10/31/21	Sun 2/27/22	Mon 10/2/23	Mon 1/29/24	690 days	1218	1228FF	
1220	1220.5.34.6	Site Installation Work	910 days	Sun 10/31/21	Sat 4/27/24	Sun 10/31/21	Sat 4/27/24	Sat 10/30/21	Wed 5/1/24	4 days			
1221	1221.5.34.6.1	Commencement of Fire Services Installation	910 days	Sun 10/31/21	Sat 4/27/24	Sun 10/31/21	Sat 4/27/24	Sat 10/30/21	Wed 5/1/24	4 days			
1222	1222.5.34.6.1.1	Design Review of Approved General Building Plan	326 days	Sun 10/31/21	Sat 3/5/22	Sun 10/31/21	Sat 3/5/22	Sat 10/30/21	Fri 1/13/23	0 days	1218	1223	
1223	1223.5.34.6.1.1	Submission of WWO542 for WSD's approval	110 days	Sun 3/6/22	Wed 11/30/22	Sun 3/6/22	Wed 11/30/22	Sat 1/14/23	Tue 10/10/23	310 days	1222	1224	
1224	1224.5.34.6.1.1	Submission of WWO46 for WSD's Inspection	30 days	Sat 10/7/23	Sun 11/5/23	Sat 10/7/23	Sun 11/5/23	Wed 10/11/23	Thu 11/9/23	0 days	1223,1223,492,603,802	1225	
1225	1225.5.34.6.1.1	Obtain WWO46 Part V	60 days	Mon 11/6/23	Thu 1/4/24	Mon 11/6/23	Thu 1/4/24	Fri 11/10/23	Mon 1/8/24	0 days	1224	1226,1226	
1226	1226.5.34.6.1.1	FSD Inspection and Approval for MVAC	21 days	Fri 1/15/24	Thu 1/25/24	Fri 1/15/24	Thu 1/25/24	Tue 1/9/24	Mon 1/29/24	0 days	1226,1227,1225	1229	
1227	1227.5.34.6.1.1	FSD Inspection and Approval for DG Stores	21 days	Wed 12/6/23	Tue 12/16/23	Wed 12/6/23	Tue 12/16/23	Tue 1/9/24	Mon 1/29/24	30 days	1226,1227,850	1229	
1228	1228.5.34.6.1.1	Submission of (FS/314 & FS/501) to FSD	14 days	Fri 1/15/24	Thu 1/18/24	Fri 1/15/24	Thu 1/18/24	Tue 1/16/24	Mon 1/29/24	7 days	1216,1227,1225,1150FF	1229	
1229	1229.5.34.6.1.1	Pre-inspection meeting with FSD	5 days	Fri 1/16/24	Tue 1/30/24	Fri 1/16/24	Tue 1/30/24	Tue 1/30/24	Sat 2/3/24	0 days	1228,1226,1227	1230	
1230	1230.5.34.6.1.1	Initial inspection with FSD	15 days	Wed 1/17/24	Wed 2/14/24	Wed 1/17/24	Wed 2/14/24	Sun 2/4/24	Sun 2/18/24	0 days	1229	1231	
1231	1231.5.34.6.1.1	Document Checking	45 days	Thu 2/15/24	Sat 3/30/24	Thu 2/15/24	Sat 3/30/24	Mon 2/19/24	Wed 4/3/24	0 days	1230	1232	
1232	1232.5.34.6.1.1	Re-inspections with FSD	14 days	Sun 3/31/24	Sat 4/13/24	Sun 3/31/24	Sat 4/13/24	Thu 4/4/24	Wed 4/17/24	0 days	1231	1233	
1233	1233.5.34.6.1.1	Issue of acceptance memo by FSD	14 days	Sun 4/14/24	Sat 4/27/24	Sun 4/14/24	Sat 4/27/24	Thu 4/18/24	Wed 5/1/24	4 days	1232	1215FF	
1234	1234.5.34.6.1.1	Installation of FS Pumps and Sprinkler Pumps	60 days	Mon 4/23/23	Thu 6/1/23	Mon 4/23/23	Thu 6/1/23	Mon 9/11/23	Thu 11/9/23	127 days		1237	FS - A x 4-6 men
1235	1235.5.34.6.1.1	Installation of Fire Hydrant and Booster Pumps	60 days	Mon 4/23/23	Thu 6/1/23	Mon 4/23/23	Thu 6/1/23	Mon 9/11/23	Thu 11/9/23	127 days		1237	FS - A x 4-6 men
1236	1236.5.34.6.1.1	SAT for Manual and automatic fire detection and alarm system	60 days	Sat 10/7/23	Tue 12/5/23	Sat 10/7/23	Tue 12/5/23	Fri 11/10/23	Mon 1/8/24	0 days	363,492,603,802,897,85	1228,1226,1227	
1237	1237.5.34.6.1.1	SAT for Fire hydrants, hose reels and street fire hydrant system	60 days	Sat 10/7/23	Tue 12/5/23	Sat 10/7/23	Tue 12/5/23	Tue 12/5/23	Mon 1/8/24	0 days	1234,1235,363,492,603,1228,1226,1227		
1238	1238.5.35	Fire Services Sprinkler Pumping Room, Portion B-7 & B-7B	421 days	Thu 5/19/22	Thu 7/13/23	Thu 5/19/22	Thu 7/13/23	Mon 12/5/22	Mon 1/29/24	200 days			
1239	1239.5.35.1	Site Installation Work	421 days	Thu 5/19/22	Thu 7/13/23	Thu 5/19/22	Thu 7/13/23	Mon 12/5/22	Mon 1/29/24	200 days			
1240	1240.5.35.1.1	Tentative Civil Handover Date, FS Sprinkler Pump Room	1 day	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Mon 12/5/22	Mon 12/5/22	0 days		1241,1246	
1241	1241.5.35.1.1	Commencement of E&M Installation at FS & Sprinkler	420 days	Thu 5/19/22	Thu 7/13/23	Thu 5/19/22	Thu 7/13/23	Tue 12/6/22	Mon 1/29/24	200 days	1240		
1242	1242.5.35.1.1	Mechanical Installations for FS & Sprinkler Pumps	90 days	Thu 5/19/22	Wed 8/17/22	Thu 5/19/22	Wed 8/17/22	Tue 12/6/22	Mon 3/6/23	0 days	1243	FS - A x 4-6 men	
1243	1243.5.35.1.1	Electrical Installations for FS & Sprinkler Pumps	90 days	Wed 8/17/22	Tue 11/15/22	Wed 8/17/22	Tue 11/15/22	Mon 3/6/23	Sun 6/4/23	0.63 days	1242	1244,1247,1:FS - A x 4-6 men	
1244	1244.5.35.1.1	Site Acceptance Test for FS & Sprinkler Pumps	45 days	Wed 11/16/22	Fri 12/30/22	Wed 11/16/22	Fri 12/30/22	Wed 10/18/23	Fri 12/1/23	0 days	1243	1245	
1245	1245.5.35.1.1	System Commissioning for FS & Sprinkler Pumps	45 days	Sat 12/31/22	Mon 2/13/23	Sat 12/31/22	Mon 2/13/23	Sat 12/2/23	Mon 1/15/24	325 days	1244	1228	
1246	1246.5.35.1.1	Building Services Installations at FS & Sprinkler Pump	240 days	Wed 11/16/22	Thu 7/13/23	Wed 11/16/22	Thu 7/13/23	Sun 6/4/23	Mon 1/29/24	200 days	1240		
1247	1247.5.35.1.1	Lighting and Power Distribution System, Chem 1&2	120 days	Wed 11/16/22	Wed 3/15/23	Wed 11/16/22	Wed 3/15/23	Sun 6/4/23	Sun 10/1/23	0 days	1243	1250	BS - A x 4-6 men
1248	1248.5.35.1.1	Lighting Protection System, FS & Sprinkler Pump	30 days	Wed 11/16/22	Thu 12/15/22	Wed 11/16/22	Thu 12/15/22	Sat 9/2/23	Sun 10/1/23	90 days	1243	1250	BS - A x 4-6 men
1249	1249.5.35.1.1	Mechanical Ventilation System, FS & Sprinkler PR	14 days	Wed 11/16/22	Tue 11/29/22	Wed 11/16/22	Tue 11/29/22	Mon 9/18/23	Sun 10/1/23	106 days	1243	1250	MVAC - A x 4-6 men
1250	1250.5.35.1.1	Testing and Commissioning of Building Services In	120 days	Thu 3/16/23	Thu 7/13/23	Thu 3/16/23	Thu 7/13/23	Mon 10/2/23	Mon 1/29/24	189 days	1247,1248,1249	1228FF	
1251	1251.5.36	Fire Hydrant and Booster Pumping Room, Portion B7 & B-7	465 days	Thu 5/19/22	Sat 8/26/23	Thu 5/19/22	Sat 8/26/23	Sat 10/22/22	Mon 1/29/24	156 days			
1252	1252.5.36.1	Site Installation Work	465 days	Thu 5/19/22	Sat 8/26/23	Thu 5/19/22	Sat 8/26/23	Sat 10/22/22	Mon 1/29/24	156 days			
1253	1253.5.36.1.1	Tentative Civil Handover Date, Fire Hydrant and Booste	1 day	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Thu 5/19/22	Sat 10/22/22	Sat 10/22/22	0 days		890FF+50 da	
1254	1254.5.36.1.1	Commencement of E&M Installation at Street FH Pum	464 days	Thu 5/19/22	Sat 8/26/23	Thu 5/19/22	Sat 8/26/23	Sun 10/23/22	Mon 1/29/24	156 days			
1255	1255.5.36.1.1	Mechanical Installations for Street FH Pumps	90 days	Thu 5/19/22	Wed 8/17/22	Thu 5/19/22	Wed 8/17/22	Sun 10/23/22	Sat 1/21/23	0 days	1253	1256	FS - A x 4-6 men
1256	1256.5.36.1.1	Electrical Installations for Street FH Pump	90 days	Wed 8/17/22	Tue 11/15/22	Wed 8/17/22	Tue 11/15/22	Sat 1/21/23	Fri 4/21/23	0.63 days	1255	1257,1260	FS - A x 4-6 men
1257	1257.5.36.1.1	Site Acceptance Test for Street FH Pump	45 days	Wed 11/16/22	Fri 12/30/22	Wed 11/16/22	Fri 12/30/22	Wed 11/1/23	Fri 12/15/23	0 days	1256	1258	
1258	1258.5.36.1.1	System Commissioning for Street FH Pumps	45 days	Sat 12/31/22	Mon 2/13/23	Sat 12/31/22	Mon 2/13/23	Sat 12/16/23	Mon 1/29/24	339 days	1257	1228FF	
1259	1259.5.36.1.1	Building Services Installations at Street FH Pump Ro	284 days	Wed 11/16/22	Sat 8/26/23	Wed 11/16/22	Sat 8/26/23	Fri 4/21/23	Mon 1/29/24	156 days			
1260	1260.5.36.1.1	Lighting and Power Distribution System, Street FH	120 days	Wed 11/16/22	Wed 3/15/23	Wed 11/16/22	Wed 3/15/23	Fri 4/21/23	Fri 8/18/23	0 days	1256	1263,1261	BS - A x 4-6 men
1261	1261.5.36.1.1	Lighting Protection System, Street FH PR	30 days	Thu 3/16/23	Fri 4/14/23	Thu 3/16/23	Fri 4/14/23	Sat 8/19/23	Sun 9/17/23	0 days	1260	1262,1263	BS - A x 4-6 men
1262	1262.5.36.1.1	Mechanical Ventilation System, Street FH PR	14 days	Sat 4/15/23	Fri 4/28/23	Sat 4/15/23	Fri 4/28/23	Mon 9/18/23	Sun 10/1/23	0 days	1261	1263	MVAC - A x 4-6 men
1263	1263.5.36.1.1	Testing and Commissioning of Building Services In	120 days	Sat 4/29/23	Sat 8/26/23	Sat 4/29/23	Sat 8/26/23	Mon 10/2/23	Mon 1/29/24	145 days	1260,1261,1262	1228FF	
1264	1264.5.37	Plumbing Installation (PS 6B.6.8)	1049 days	Tue 2/16/21	Tue 1/2/24	Tue 2/16/21	Tue 1/2/24	Tue 1/2/24	Tue 1/2/24	0 days			
1265	1265.5.37.1	Planned Sectional Completion Date - Section 1, Plumbing	0 days	Thu 7/1/21	Thu 7/1/21	Thu 7/1/21	Thu 7/1/21	Thu 7/1/21	Thu 7/1/21	0 days	1267FF		
1266	1266.5.37.2	Design Submissions for Plumbing	134 days	Tue 2/16/21	Wed 6/30/21	Tue 2/16/21	Wed 6/30/21	Tue 2/16/21	Thu 7/1/21	1 day			
1267	1267												

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

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

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

	Submission of subletting package for acceptance (C9)	3/1/2020	7/13/2020	3/14/2020	7/13/2020	Task Completed				100%		
	Acceptance of subletting package (C9)	3/15/2020	7/14/2020	3/28/2020	7/14/2020	Task Completed				100%		
	Tender invitation (C9)	3/29/2020	7/15/2020	4/11/2020	7/22/2020	Task Completed				100%		
	Tender award (C9)	4/12/2020	7/23/2020	4/25/2020	8/13/2020	Task Completed				100%		
	Acceptance of tender award for civil construction work (C9)	26/04/2020	8/14/2020	5/5/2020	9/2/2020	Task Completed				100%		
	Preparation of subletting package for mech work (C9)	01/08/2020 -> 01/12/2020*	1/25/2021	08/08/20 -> 08/12/2020*	3/1/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. Subletting package would be submitted on 25 Feb 2021 and AECOM accepted on 1 Mar 2021
	Tender invitation for mech work (C9)	08/08/20 ->	3/2/2021	15/08/2020 -	3/9/2021	Task Completed				100%		Tender invitation was conducted on 2 Mar 2021 and returned on 9 Mar 2021
	Tender Award for mech work (C9)	15/08/2020 ->	3/10/2021	22/08/2020 -	3/15/2021	Task Completed				100%		Tender report was submitted on 15 Mar 2021
	Acceptance of tender award for mech work (C9)	22/08/2020 ->	3/15/2021	29/08/2020 -	3/19/2021	Task Completed				100%		Tender award on 19 Mar 2021.
	Preparation of subletting package for elect work (C9)	01/08/2020 -> 01/12/2020*	2/2/2021	08/08/20 -> 08/12/2020*	3/1/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. Subletting package resubmitted on 26 Feb 2021 and AECOM accepted on 1 Mar 2021..
	Tender invitation for elect work (C9)	01/08/2020 ->	3/2/2021	15/08/2020 -	3/9/2021	Task Completed				100%		Tender invitation was conducted on 2 Mar 2021 and returned on 9 Mar 2021
	Tender Award for elect work (C9)	08/08/20 ->	3/10/2021	22/08/2020 -	3/15/2021	Task Completed				100%		Tender report was submitted on 15 Mar 2021
	Acceptance of tender award for elect work (C9)	15/08/2020 -> 15/12/2020*	3/15/2021	29/08/2020 -> 29/12/2020*	3/19/2021	Task Completed				100%		Tender award on 19 Mar 2021.
Construction of Temporary Filtrate Equalisation System	Construction of minor civil works under PMI 014	22/08/2020 -> 22/12/2020*	10/5/2020	10/15/2020	3/31/2021	Task Completed				100%	Bestwise	Utilities survey report of lifting well and EQ tank were submitted on 23 Sept 2020 and 29 Sept 2020. AECOM commented lifting well on 29 Sept 2020.
	RC Structure Works of lifting well	11/7/2020	1/12/2021	12/30/2020	2/25/2021	Task Completed				100%		
	Construction of concrete plinth for filtrate EQ tank	1/23/2021	2/8/2021	2/1/2021	2/26/2021	Task Completed				100%		
	Offsite fabrication and delivery of filtrate EQ tank	10/31/2020	1/16/2021	2/2/2021	3/4/2021	Task Completed				100%		First batch of filtrate EQ tank panel was delivered on 4 Mar 2021.
	Onsite assembly of filtrate EQ tank	2/2/2021	3/1/2021	3/12/2021	4/16/2021	Task Completed				100%		
6B.2.16 Temporary Filtrate Equalisation System	Mechanical Installation	3/17/2021	3/30/2021	4/12/2021	5/14/2021	Task Completed				-		
	Electrical Installation	3/13/2021	3/29/2021	4/15/2021	12/10/2021	Task Completed				-		PLC programme for water spray system (stage 1) is on-going, motorized gate valve for stage 2 under PMI is being fabricated and the delivery lead time is by end November.
	Testing and Commissioning	4/15/2021	4/22/2021	5/1/2021	1/31/2022	98%				-		Auto mode (without water spray system) is adopted, water spray system (stage 2) under PMI shall be commenced after delivery of motorized gate valve.
6B.1.17 Overall plant treatment process review by the Treatment Process Specialist	Submission of Treatment Process Specialist's review report	6/1/2020	6/1/2020	6/30/2020	7/2/2020	Task Completed				-	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial process design evaluation was submitted on 20 May 2020. Design calculation submitted on
	Acceptance of submission for further design	6/14/2020	7/3/2020	6/30/2020	7/17/2020	Task Completed				-		
6B Overall plant process equipment sizing review	Submission of Contractor's Design Calculation for	6/1/2020	6/1/2020	6/30/2020	7/2/2020	Task Completed				-	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial
	Acceptance of submission for further detail design	6/14/2020	7/3/2020	6/30/2020	7/17/2020	Task Completed				-		
6B.2.1 Inlet Works	Submission of Contractor's Design for Inlet Works No. 1	9/6/2020	11/16/2020	5/14/2021	1/31/2022	98%				-	Bestwise	All finalized design calculations for Inlet Works no.1 shall be submitted by 31 Jan 2022.
	Submission of P&M Submission	9/6/2020	9/7/2020	5/14/2021	1/31/2022	99%						P&M0003 (rev.3) for coarse screen and fine screen was submitted on 10 Feb 2021. AECOM accepted subject to comments on 16 Feb 2021. P&M submission (rev. 1) for inlet pumps was submitted on 10 Feb 2021. AECOM accepted subject to comments on 1 Apr 2021. P&M (rev.1) for penstock and actuator was submitted on 28 Jan 2021. AECOM commented on 12 Mar 2021. All finalized material submissions for Inlet Works no.1 shall be submitted by 31 Jan 2022.
	Submission of P&ID Drawing	9/6/2020	9/6/2020	5/14/2021	12/29/2020	Task Completed						PID (rev.B) submitted on 13 Nov 2020. AECOM accepted subject to comments on 29 Dec 2020.
	Submission of GA Drawing	9/6/2020	1/5/2021	5/14/2021	1/31/2022	98%						E&M GA submission submitted on 6 Feb 2021. AECOM commented on 19 Feb 2021. Bestwise resubmitted DWG-0082 Rev.1 on 9 July 2021. Electrical GA submitted on 7 Apr 2021. AECOM commented on 21 Apr 2021. Bestwise resubmitted DWG-0095 Rev.1 on 3 July 2021 and accepted by AECOM. All finalized drawings for Inlet Works no.1 shall be submitted by 31 Jan 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	1/31/2022	98%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for Inlet Works no.1 shall be submitted by 31 Jan 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	2/28/2022	88%				-		
	Submission of detailed design for electrical installation for Inlet Works No. 1 (CDS021)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for Inlet Works No. 1 (CDS025-1)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation BS for Inlet Works No. 1 (CDS034-1)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						

	Submission of civil work requirements for Inlet Works No. 1 up to +8.0 mPD (CDS080-1)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Inlet Works No. 1 up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	3	3	100%			1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for Inlet Works No. 1 up to +8.0 mPD (Final)	8/28/2020	9/18/2020	11/5/2020	11/5/2020	Task Completed	no.	3	3	100%	Bestwise		Bestwise resubmitted (rev.A) on 27 Oct 2020.
	KD1A: Submission of electrical schematic drawings for Inlet Works No. 1 (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	2	2	100%			1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for Inlet Works No. 1 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	2	2	100%	Bestwise		Bestwise submitted on 20 Oct 2020
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
6B.2.2 Primary Sedimentation Tank No. 1-4	Submission of Contractor's Design for Primary Sedimentation Tanks No. 1-4	9/6/2020	12/28/2020	5/14/2021	1/31/2022	98%					-	Bestwise	PFD (rev.B) under DWG0004 submitted on 22 June 2021. Finalized design calculations for PST shall be submitted by 31 Jan 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	1/31/2022	98%							Plant and Material (P&M0044) submission (Rev. 0) for primary sludge pump was submitted on 5 Feb 2021. AECOM commented on 1 Apr 2021. Bestwise to resubmit. Finalized material submissions for PST shall be submitted by 31 Jan 2022.
	Submission of P&ID Drawing	9/6/2020	10/2/2020	5/14/2021	6/24/2021	Task Completed							PID under DWG0037 (rev.1) submitted on 24 June 2021 and is accepted by AECOM.
	Submission of GA Drawing	9/6/2020	2/3/2021	5/14/2021	1/31/2022	98%							Mechanical GA was submitted on 19 Jun 2021. Electrical GA under DWG0103 (rev.1) was submitted on 6 Jul 2021 and is accepted by AECOM. Finalized drawings for PST shall be submitted by 31 Jan 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	1/31/2022	98%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawings for PST shall be submitted by 31 Jan 2022.
	Acceptance of submission	5/15/2021	4/2/2021	5/29/2021	5/31/2022	70%					-		
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for LV Switchboards for Primary Sedimentation Tanks (CDS025-2)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of civil work requirements for Primary Sedimentation Tanks up to +8.0 mPD (CDS080-2)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	4	4	100%			1st part of drafted drawing (2 nos.) was submitted on 23 Sept 2020. Remaining drawings (2 nos.) were submitted on 30 Sept 2020.
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	4	4	100%	Bestwise		Bestwise resubmitted (Rev.A) on 27 Oct & 13 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	1	1	100%	Bestwise		Bestwise submitted on 20 Oct 2020
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
6B.2.3 Chemical Storage and Dosing System	Submission of Contractor's Design for Chemical Dosing System (CDS006)	9/6/2020	1/7/2021	5/14/2021	10/29/2021	Task Completed					-	Bestwise	Design calculation (rev.0) of CHS1 and TCHS submitted on 2 Sep 2020 and 28 Aug 2020, AECOM commented on 24 Sep and 6 Oct 2020, Bestwise submitted CDS0060 on 15 Jul 2021 and CDS0044 on 19 Jul 2021. Finalized design calculation for chemical systems was submitted on 29 Oct 2021.
	Submission of P&M Submission	9/6/2020	9/6/2020	5/14/2021	10/30/2021	Task Completed							Finalized material submissions for chemical system was submitted on 30 Oct 2021.
	Submission of P&ID Drawing	9/6/2020	12/11/2020	5/14/2021	6/29/2021	Task Completed							PID resubmitted under DWG0053 (rev.1) on 28 Jun 2021, DWG0057 (rev.1) on 29 Jun 2021 and DWG0058 (rev.1) on 29 Jun 2021.
	Submission of GA Drawing	9/6/2020	2/8/2021	5/14/2021	1/31/2022	98%							Electrical GA drawings for CS1 under DWG0096 submitted on 10 April 2021. AECOM accepted subject to comments on 17 Apr 2021. Mechanical GA drawings for CS1 submitted on 1 April 2021. AECOM commented on 24 April 2021. Bestwise resubmitted DWG0093 (rev.1) on 30 Jun 2021 and is accepted by AECOM. Mechanical GA for Temp CS submitted on 12 Jun 2021. All finalized drawings for chemical systems shall be submitted by 31 Jan 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	1/31/2022	98%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for chemical system shall be submitted by 31 Jan 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	2/28/2022	88%					-		
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							

	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/16/2020	Task Completed	no.	2	2	100%			1st draft of drawing submitted on 15 September for CHS1 and 16 September 2020 for
	KD1A: Submission of civil requirement drawing for	9/7/2020	9/17/2020	11/5/2020	11/5/2020	Task Completed	no.	2	2	100%			Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed				-			1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for Chemical System No. 1 and No. 2 (Final)	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (First	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 15 September 2020
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (Final)	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed	no.	1	1	100%			Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Temporary Chemical System (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed				-			1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed							Notice of completion works was submitted on 17 Nov 2020
	KD1A: 6 November 2020												
6B.2.4 Membrane Bioreactor (MBR) System - Bio Reactor 2A and 2B	Submission of Contractor's Design for Bioreactor 2A and 2B (CDS004)	9/6/2020	1/12/2021	5/14/2021	1/31/2022	98%				-	Bestwise		PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 7 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Electrical CDS submitted on 23 Jun 2021. Finalized design calculations shall be submitted by 31 Jan 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	1/31/2022	98%							P&M0053 Mixed Liquor Return (MLR) Pump was resubmitted formally on 17 Jun 2021. Finalized material submission shall be submitted by 31 Jan 2022.
	Submission of P&ID Drawing	9/6/2020	11/2/2020	5/14/2021	7/2/2021	Task Completed							PID (Rev.1) under DWG0042 resubmitted on 6 July 2021.
	Submission of GA Drawing	9/6/2020	2/17/2021	5/14/2021	1/31/2022	98%							Mechanical GA under DWG0132 submitted on 26 Jun 2021 and is accepted by AECOM. Electrical GA submitted on 23 Jun 2021. Finalized drawing shall be submitted by 31 Jan 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	1/31/2022	98%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 31 Jan 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	5/31/2022	67%				-			
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for LV Switchboards for BR 2A and 2B (CDS025-3)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of civil work requirements for BR 2A and 2B up to +8.0 mPD (CDS080-3)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	2	2	100%			1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (Final)	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	2	2	100%	Bestwise		AECOM commented on 23 Oct 2020, Bestwise resubmitted on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for BR 2A and 2B (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed				-			1st draft of drawing was sent to AECOM via email on 15 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed							Notice of completion works was submitted on 17 Nov 2020
	KD1A: 6 November 2020												
6B.2.4 Membrane Bioreactor (MBR) System - Membrane Filtration System No. 2 (MFB No. 2)	Submission of Contractor's Design for Membrane Filtration System (CDS005)	9/6/2020	1/11/2021	5/14/2021	1/31/2022	98%				-	Bestwise		PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 10 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Finalized design calculations shall be submitted by 31 Jan 2022.
	Submission of P&M Submission	9/6/2020	11/19/2020	5/14/2021	1/31/2022	98%							P&M (rev.0) for penstock and actuator was submitted on 20 Nov 2020. AECOM commented on 5 Jan 2021. Bestwise to resubmit P&M0050 (rev. 0) for membrane tank drain pump was submitted on 5 Mar 2021. AECOM commented on 29 Mar 2021. Bestwise resubmitted formally on 19 Jun 2021. P&M0072 (rev. 0) for membrane module was submitted on 20 Apr 2021. AECOM commented on 20 May 2021, Bestwise to re-submit. P&M0069 (rev.0) for permeate pump was submitted on 4 Mar 2021. AECOM commented on 23 Apr 2021. Bestwise resubmitted formally on 19 Jun 2021. P&M0047 (rev. 1) for RAS pump was resubmitted on 17 Apr 2021. AECOM commented on 12 May 2021, Bestwise resubmitted formally on 19 Jun 2021. P&M0073 & 0074 (rev.0) for aeration blower and air scouring blower was submitted to AECOM formally on 19 Jun 2021. Finalized material submission shall be submitted by 31 Jan 2022.
	Submission of P&ID Drawing	9/6/2020	10/30/2020	5/14/2021	7/2/2021	Task Completed							DWG0049 (Rev.1) was resubmitted on 2 Jul 2021.
	Submission of GA Drawing	3/31/2021	2/18/2021	5/14/2021	2/28/2022	91%							DWG0121 (rev.1) was resubmitted to AECOM on 17 Jul 2021. Finalized drawings shall be submitted by 28 Feb 2022.
	Submission of Electrical Drawing	4/15/2021	1/15/2021	5/14/2021	4/30/2022	80%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Electrical GA under DWG0079 (rev.1) was resubmitted on 8 Jul 2021. Finalized drawings shall be submitted by 30 Apr 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	6/30/2022	62%				-			
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							

	Submission of detailed design for LV Switchboards for	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed								
	Submission of detailed design for electrical installation BS for MFB (CDS034-4)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed								
	Submission of civil work requirements for MFB up to	9/1/2020	9/1/2020	9/30/2020	9/30/2020	Task Completed								
	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	7	7	100%				1st draft of drawing submitted on 30 September
	KD1A: Submission of civil requirement drawing for MFB No. 2 up to +8.0 mPD (Final)	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	7	7	100%	Bestwise			Bestwise resubmitted (Rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	3	3	100%				1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for MFB No. 2 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	3	3	100%	Bestwise			Bestwise submitted (Rev.1) on 20 Oct 2020
	KD1A: 6 November 2020													Notice of completion works was submitted on 17 Nov 2020
6B.2.6 Deodorisation System (EQT-001 - Deodorization Unit)	Tender invitation (C11)	4/17/2020	4/17/2020	4/24/2020	4/24/2020	Task Completed				100%				
6B.2.6 Deodorisation System (EQT-001 - Deodorization Unit)	Tender award (C11)	4/25/2020	4/25/2020	5/12/2020	5/12/2020	Task Completed				100%	Bestwise			Bestwise submitted tender report on 13 May 2020. AECOM commented on 23 July 2020, Bestwise to resubmit.
	Acceptance of tender award (C11)	5/13/2020	5/13/2020	5/21/2020	5/21/2020	Task Completed				100%				
	Submission of Contractor's Design for Deodorisation System , DOU No. 1 (CDS0019 & CDS0045)	9/6/2020	9/6/2020	5/14/2021	12/31/2021	Task Completed				-				Design Calculation (Rev.0) was submitted on 24 Nov 2020. AECOM commented on 6 Jan 2021, Bestwise to resubmit. Bestwise submitted CDS0045 on 3 June 2021. Finalized design was completed.
	Submission of P&ID Drawing of DOU No. 1	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise			Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 1	9/6/2020	9/6/2020	5/14/2021	12/31/2021	Task Completed								GA submitted on 21 Jun 2021 Finalized drawings was completed.
	Submission of Electrical Drawing of DOU No. 1	3/21/2021	1/30/2021	5/14/2021	1/31/2022	98%								Control wiring diagrams was resubmitted on 1 April 2021. AECOM commented on 23 Apr 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 31 Jan 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	3/31/2022	79%				-				
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/28/2020	Task Completed	no.	1	1	100%				1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (Final)	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise			Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 2A (CDS0019 & CDS0048)	9/6/2020	9/6/2020	5/14/2021	1/31/2022	99%				-				Design Calculation (Rev.0) was submitted on 24 Nov 2020. AECOM commented on 6 Jan 2021, Bestwise to resubmit. Bestwise submitted CDS0048 on 17 June 2021. Finalized design shall be submitted by 31 Jan 2022. (follow BR2A2B)
	Submission of P&ID Drawing of DOU No. 2A	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise			Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 2A	9/6/2020	8/3/2020	5/14/2021	1/31/2022	99%				-	Bestwise			Bestwise submitted (rev.1) on 30 Oct 2020. AECOM commented on 16 Dec 2020. Bestwise to resubmit. Finalized drawing shall be submitted by 31 Jan 2022. (follow BR2A2B)
	Submission of Electrical Drawing of DOU No. 2A	3/21/2021	1/26/2021	5/14/2021	1/31/2022	98%								Bestwise submitted (rev.0) on 26 Jan 2021, AECOM commented on 4 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 31 Jan 2022. (follow BR2A2B)
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	5/31/2022	67%				-				
	Submission of Contractor's Design for Deodorisation System , DOU No. 3A (CDS0019)	9/6/2020	9/6/2020	5/14/2021	10/21/2021	Task Completed				-				Design Calculation (Rev.0) was submitted on 24 Nov 2020. AECOM commented on 6 Jan 2021, Bestwise to resubmit. Finalized design was submitted on 21 Oct 2021.
	Submission of P&ID Drawing of DOU No. 3A	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise			Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 3A	9/6/2020	7/8/2020	5/14/2021	11/19/2021	Task Completed				-	Bestwise			Bestwise submitted (rev.1) on 28 Oct 2020. AECOM commented on 16 Dec 2020. Bestwise resubmitted on 24 June 2021. Finalized drawing was completed.
	Submission of Electrical Drawing of DOU No. 3A	3/21/2021	2/26/2021	5/14/2021	1/31/2022	98%								Bestwise submitted on 17 Apr 2021. AECOM commented on 27 Apr 2021. Bestwise to resubmit. GA submitted on 24 Jun 2021 Finalized drawing shall be submitted by 31 Jan 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	3/31/2022	79%				-				
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 3A up to +8.0 mPD	7/15/2020	7/15/2020	8/15/2020	9/28/2020	Task Completed	no.	1	1	100%				1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise			Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 3B (CDS0019 & CDS0049)	9/6/2020	9/6/2020	5/14/2021	1/31/2022	99%								Design Calculation (Rev.0) was submitted on 24 Nov 2020. AECOM commented on 6 Jan 2021, Bestwise to resubmit. Bestwise submitted CDS0049 on 18 June 2021. Finalized design shall be submitted by 31 Jan 2022.
	Submission of P&ID Drawing of DOU No. 3B	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise			Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.

Street Fire Hydrant Pump Room	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for	8/28/2020	9/18/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed						1st draft of drawing to be submitted by 30 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
FS & Sprinkler Pump Room	KD1A: Submission of civil requirement drawing for FS	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for FS	8/28/2020	9/18/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed						
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
Emergency Generator House	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (First	7/15/2020	7/15/2020	8/15/2020	9/18/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 18 September 2020
	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (Final)	8/28/2020	9/19/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020							
	KD1A: Submission of electrical schematic drawings for Street Fire Hydrant Pump Room (Final)	9/7/2020	10/1/2020	11/5/2020	11/5/2020							
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
Lightning Protection System for DOU3A (underground)	Submission and Acceptance for Lightning Protection System Design	12/6/2021	12/6/2021	1/31/2022	1/31/2022							
	Material Delivery	2/7/2022	2/7/2022	3/31/2022	3/31/2022							
	Installation Work	2/15/2022	2/15/2022	12/31/2022	12/31/2022							Underground works subject to site coordination
	Testing & Commissioning	1/7/2023	1/7/2023	1/31/2023	1/31/2023							
Lightning Protection System for Inlet Works (underground)	Submission and Acceptance for Lightning Protection System Design	12/20/2021	12/20/2021	1/31/2022	1/31/2022							
	Material Delivery	12/15/2022	12/15/2022	3/31/2022	3/31/2022							
	Installation Work	3/15/2022	3/15/2022	10/30/2022	10/30/2022							Underground works subject to site coordination
	Testing & Commissioning	11/1/2022	11/1/2022	11/15/2022	11/15/2022							
Section 3 of Works												
6B.2.12 Provision of New Replacement Filter Plates	Submission of onsite survey plan for acceptance	3/1/2020	3/25/2020	3/30/2020	4/21/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 21 April 2020
	Acceptance of submission of onsite survey plan	3/1/2020	3/25/2020	3/30/2020	5/12/2020	Task Completed				100%	-	Survey plan acceptance received on 12 May 2020. Onsite discussion with ST1 was
	Submission of onsite survey report	5/21/2020	5/21/2020	5/29/2020	5/29/2020	Task Completed				100%		
	Acceptance of onsite survey report	5/30/2020	5/30/2020	6/15/2020	6/15/2020	Task Completed				-		
	Preparation of procurement package (C11)	6/22/2020	6/22/2020	7/6/2020	7/14/2020	Task Completed				100%		
	Tender invitation (C11)	7/15/2020	7/15/2020	7/22/2020	7/24/2020	Task Completed				100%		
	Tender Award (C11)	7/23/2020	7/25/2020	7/29/2020	7/31/2020	Task Completed				100%		Revised survey report (second draft) was sent to AECOM on 21 Oct 2020. Technical
	Material Submission	8/21/2020	8/21/2020	8/28/2020	12/7/2020	Task Completed				100%		Material submission (Rev.1) resubmitted on 7 Dec 2020. AECOM accepted subject to comments on 24 Dec 2020. Material submission (Rev. 2) resubmitted on 12 Jan 2021. AECOM accepted subject to comment on 22 Jan 2021.
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Delivery	12/1/2020	12/1/2020	8/8/2021	7/13/2021	Task Completed				-		Handed over to DSD.
	Completion Date of Section 3: 22 September 2021											
Subcontracting												
	Submission of subletting package for acceptance	1/1/2020	3/6/2020	3/30/2020	3/6/2020	Task Completed				100%	-	
	Acceptance of subletting package	3/1/2020	3/21/2020	3/30/2020	3/21/2020	Task Completed				100%	-	
	Tender invitation	3/1/2020	3/24/2020	4/1/2020	3/30/2020	Task Completed				100%	-	
	Tender award	3/22/2020		4/14/2020	4/6/2020	Task Completed				100%	-	Bestwise submitted tender report on 6 April 2020
	Acceptance of tender award	-	-	-	4/15/2020	Task Completed				100%		AECOM accepted tender report on 15 April 2020
Construction of Contractor's site accommodation in WA1-C	Design of MiC	4/15/2020	4/16/2020	6/1/2020	8/15/2020	Task Completed				100%		Revised layout drawings received from AluHouse on 28 May 2020. Comments provided to AluHouse on 2 June 2020.
	Submission of detailed design including foundation works, septic tank	7/1/2020	7/1/2020	7/14/2020	9/4/2020	Task Completed				100%		Design calculation of foundation work was submitted on 7 July 2020, comment received on 27 July 2020. Bestwise to resubmit.
	Site Clearance Work	7/15/2020	7/20/2020	7/31/2020	8/15/2020	Task Completed				100%		Tender invitation commenced on 29 May 2020 and tenders received on 4 June 2020. Tender
	Off-site fabrication of Septic tank	7/15/2020	7/20/2020	7/31/2020	7/31/2020	Task Completed				100%		Site clearance work started on 20 July 2020
	Submission of method statement with ICE certificate	8/1/2020	8/1/2020	8/7/2020	10/8/2020	Task Completed				100%		CV of ICE was submitted on 4 August 2020 and accepted on 25 August 2020
	Submission of design calculation with ICE certificate	8/1/2020	8/1/2020	8/7/2020	10/8/2020	Task Completed				100%		Design calculation of foundation work was submitted on 7 July 2020, comment received on
	Acceptance of method statement and design calculation	8/8/2020	10/9/2020	8/14/2020	10/16/2020	Task Completed				100%		Method Statement and Design Calculation was submitted on 8 Oct 2020.
	Submission of method statement with ICE certificate	8/1/2020	8/1/2020	8/7/2020	11/23/2020	Task Completed				100%		
	Submission of design calculation with ICE certificate	8/1/2020	8/1/2020	8/7/2020	11/23/2020	Task Completed				100%		
	Acceptance of method statement and design calculation	8/8/2020	11/24/2020	8/14/2020	11/27/2020	Task Completed				100%		
	Excavation work	8/17/2020	10/21/2020	8/18/2020	10/21/2020	Task Completed				100%		
	Installation of septic tank	8/19/2020	10/21/2020	8/20/2020	10/22/2020	Task Completed				100%		
	Construction of RC foundation	8/21/2020	10/23/2020	8/31/2020	11/12/2020	Task Completed				100%		

	Off-site fabrication and delivery of MiC Office	6/1/2020	9/30/2020	7/31/2020	12/4/2020	Task Completed				100%		
	On-site installation of MiC Office	8/1/2020	12/4/2020	8/30/2020	1/5/2021	Task Completed				100%		
	Installation of car park shelter	1/4/2021	1/7/2021	1/11/2021	1/9/2021	Task Completed				100%		Subject to the completion of car park shelter of PM office and JEC office.
04SC003 - Building Information Modeling (BIM)	Submission of subletting package for acceptance (C9)	3/1/2020	3/25/2020	3/14/2020	3/25/2020	Task Completed				100%	-	
	Acceptance of subletting package (C9)	3/14/2020	4/2/2020	3/30/2020	4/2/2020	Task Completed				100%	-	
	Tender invitation (C9)	4/1/2020	4/1/2020	4/8/2020	4/9/2020	Task Completed				100%	-	
	Tender award (C9)	-	-	-	4/15/2020	Task Completed				100%	-	Bestwise submitted tender report on 15 April 2020
	Submission of subletting package for acceptance	3/14/2020	3/16/2020	3/30/2020	4/20/2020	Task Completed				100%	-	Bestwise resubmitted on 20 April 2020
	Acceptance of subletting package	3/28/2020	5/4/2020	4/13/2020	5/13/2020	Task Completed				100%	-	AECOM accepted subletting package on 13 May 2020
	Tender invitation	4/11/2020	6/19/2020	4/27/2020	6/26/2020	Task Completed				-	-	Invitation to tender was commenced on 19 June 2020 and tender returned on 26 June 2020
	Tender award	4/25/2020	6/27/2020	5/11/2020	7/4/2020	Task Completed				-	-	Bestwise submitted tender report on 30 June 2020
	Acceptance of tender award	-	-	-	7/18/2020					-	-	
04SC007 - Independent Beam Plus Consultant	Submission of subletting package for acceptance	3/1/2020	3/30/2020	3/14/2020	3/30/2020	Task Completed				100%	-	
	Acceptance of subletting package	3/14/2020	4/3/2020	3/30/2020	4/3/2020	Task Completed				100%	-	
	Tender invitation	3/30/2020	3/30/2020	4/9/2020	4/9/2020	Task Completed				100%	-	
	Tender award	-	-	-	4/15/2020	Task Completed				100%	-	Bestwise submitted tender report on 15 April 2020
	Acceptance of tender award	-	-	-	4/17/2020	Task Completed				100%	-	AECOM accepted tender report on 17 April 2020
	Introduction meeting with IBPC, Cinotech	-	-	-	4/28/2020	Task Completed				100%	-	Meeting completed on 28 April 2020 followed by planning work progress
04SC008 - Design, Supply and Installation of detailed	Submission of subletting package for acceptance (C9)	4/1/2020	3/17/2020	4/14/2020	3/17/2020	Task Completed				100%	-	Bestwise submitted subletting package on 3 April 2020
	Acceptance of subletting package (C9)	4/14/2020	4/17/2020	4/30/2020	4/28/2020	Task Completed				100%	-	AECOM accepted subletting package on 28 April 2020
	Tender invitation (C9)	4/30/2020	5/6/2020	5/14/2020	5/28/2020	Task Completed				100%	-	Invitation to tender was commenced on 6 May 2020 and tender returned on 28 May 2020
	Tender award (C9)	5/14/2020	5/29/2020	5/30/2020	6/9/2020	Task Completed				100%	-	Bestwise submitted tender report on 9 June 2020.
Temporary Primary Sludge Thickener and its	Submission of subletting package (C9) for acceptance	15/05/2020 ->	8/14/2020	15/05/2020 -	8/27/2020	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020.
	Acceptance of subletting package (C9) (Mech)	30/05/2020 ->	8/15/2020	15/06/2020->	9/16/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
	Tender invitation (C9) (Mech)	15/06/2020->	9/9/2020	22/06/2020->	10/14/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation for FRP Tank was conducted on 9 Sep 2020, tender returned on 16 Sep 2020. - Tender invitation for mechanical installation was conducted on 29 Sept 2020, tender returned on 14 Oct 2020.
	Tender award (C9) (Mech)	22/06/2020->	9/17/2020	29/06/2020->	10/22/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender report for FRP Tank was submitted on 24 Sep 2020 and accepted on 9 Oct 2020. - Tender report for mechanical installation submitted on 22 Oct 2020 and accepted on 16 Nov 2020.
	Acceptance of tender award (C9) (Mech)	-	-	-	11/16/2020	Task Completed				100%		
	Submission of subletting package (C9) for acceptance (Elect)	15/05/2020 ->	12/9/2020	15/05/2020 ->	1/28/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Bestwise resubmitted subcontracting package of electrical installation on 28 Jan 2021
	Acceptance of subletting package (C9) (Elect)	30/05/2020 ->	1/29/2021	15/06/2020->	2/1/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
	Tender invitation (C9) (Elect)	15/06/2020->	2/1/2021	22/06/2020->	2/11/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation commenced on 1 Feb 2021 and returned on 11 Feb 2021
	Tender award (C9) (Elect)	22/06/2020->	2/11/2021	29/06/2020->	2/23/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender report target submitted on 23 Feb 2021 and accepted on 24 Feb 2021
	Acceptance of tender award (C9) (Elect)	-	-	-	2/26/2021	Task Completed				100%		
	Tender invitation (C11)	30/04/2020->	4/30/2020	30/06/2020->	11/18/2020	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. -Tender invitation of Primary Sludge Thickener commenced on 22 April 2020 and tender was received on 29 April 2020. Tender queries was requested on 5 May 2020 and received on 7 May 2020. Tender report was commented by PM and resubmitted on 22 May 2020. Accepted by AECOM on 12 Jun 2020. - Tender Invitation of process pumps for the thickening system was commenced on 5 Jun 2020 and tenders were received on 10 June 2020. Tender report submitted to PM on 2 July 2020. - Tender Invitation of activated carbon filter was commenced on 22 Oct 2020 and to be returned on 2 Nov 2020. Tender report submitted on 5 Nov 2020 and accepted on 16 Nov 2020 - Tender Invitation of FRP platform was commenced on 13 Nov 2020 and to be returned on 20 Nov 2020. Tender report submitted on 30 Nov 2020 and accepted on 11 Jan 2020 - Tender Invitation of instrument was commenced on 18 Nov 2020 and to be returned on 25 Nov 2020. Tender report submitted on 30 Nov 2020 - Based on the control philosophy agreed on 23 Dec 2020, motorized and solenoid valves were selected.
	Tender award (C11)	15/05/2020->	5/30/2020	15/07/2020->	11/30/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.

	Material submission P431 P&M-0087	21 May 2021	19 June 2021	28 May 2021	12 July 2021	Task Completed				100%	
	Fabrication of container at PRC	21 June 2021	21 June 2021	TBC	8/12/2021	Task Completed				100%	
	Container deliver to HK	TBC	8/12/2021	8/10/2021	8/12/2021	Task Completed				100%	
	Off site modification work at HK factory	TBC	8/16/2021	8/24/2021	8/24/2021	Task Completed				100%	
	FAT plan of modified Genset No.2 P431 MS-036	7/12/2021	7/12/2021	8/20/2021	8/20/2021	Task Completed				100%	
	FAT of Genset No.2 after modification works	8/25/2021	8/25/2021	8/25/2021	8/25/2021	Task Completed				100%	
	Installation Work of I-beam Support	8/26/2021	8/26/2021	8/26/2021	8/26/2021	Task Completed				100%	
	Transportation of Genset No. 2 to existing power house in SWHSTW and completion of the Genset No.2 installation on I-beam supporting frame	8/27/2021	8/27/2021	8/27/2021	8/27/2021	Task Completed				100%	
	Provision of one (1) can of 160L diesel and a diesel hand pump placed at diesel daily tank of Genset No.1 for standby top up (PPMI-012 item L) Location to be coordinated and advised by SWHSTW operator DSD/ST1	7/27/2021	7/27/2021	8/31/2021							Location to be further coordinated with DSD.
	Modification works of existing switchboard	9/1/2021	9/1/2021	9/8/2021	9/8/2021	Task Completed				100%	
	Cables (including control cable and power cables) laying and installation of cable containment, busbar chamber	7/21/2021	7/30/2021	9/8/2021	9/8/2021	Task Completed				100%	
	Supply of busbar chamber/ connection box	8/10/2021	8/10/2021	9/3/2021	9/3/2021	Task Completed				100%	
	Completion of all Genset cables and cable termination work to existing power house in SWHSTW after the completion of Genset No. 2 installation work	9/1/2021	9/1/2021	9/8/2021	9/8/2021	Task Completed				100%	
	Delivery of dummy load and self-test	9/9/2021	9/9/2021	9/14/2021	9/15/2021	Task Completed				100%	
	SAT and T&C (witness by AECOM and DSD/ST1) Please allow 1 week advance notice for coordination with DSD/ST1, e.g. genset signal start, etc.)	9/15/2021	9/15/2021	9/15/2021	9/16/2021	Task Completed				100%	
04SC009 - Design, Supply and Installation of HVSB	Submission of subletting package for acceptance	4/21/2020		5/1/2020		-					
	Acceptance of subletting package	5/21/2020		5/30/2020		-					
	Tender invitation	6/1/2020		6/14/2020		-					
	Tender award	7/1/2020		7/14/2020		-					
04SC010 - Design, Supply and Installation of LVSB	Submission of subletting package for acceptance	5/1/2020		5/14/2020		-					
	Acceptance of subletting package	6/1/2020		6/14/2020		-					
	Tender invitation	6/14/2020		6/30/2020		-					
	Tender award	7/1/2020		7/14/2020		-					
04SC011 - Design and Installation of Building	Submission of subletting package for acceptance	4/14/2020		4/30/2020		-					
	Acceptance of subletting package	5/14/2020		5/30/2020		-					
	Tender invitation	5/30/2020		6/14/2020		-					
	Tender award	6/21/2020		6/30/2020		-					
04SC012 - Facility Computerized Systems	Submission of subletting package for acceptance	5/14/2020		5/30/2020		-					
	Acceptance of subletting package	6/14/2020		6/30/2020		-					
	Tender invitation	7/1/2020		7/14/2020		-					
	Tender award	7/21/2020		8/14/2020		-					
Plant and Materials (Marking Scheme)											
PS Clause no. 6B.2.1 Inlet Pump	Submission of marking scheme for PM's acceptance (fourth draft)	5/1/2020	5/1/2020	9/1/2020	8/19/2020	Task Completed				100%	AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020.
	Submission of marking scheme for PM's acceptance	5/1/2020	5/1/2020	9/1/2020	8/19/2020	Task Completed				100%	Bestwise resubmitted on 19 Aug 2020.
	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed				100%	AECOM accepted on 1 Sep 2020
	Tender invitation	5/29/2020	9/9/2020	9/29/2020	9/18/2020	Task Completed				100%	Tender invitation was conducted on 9 Sept 2020 and returned on 18 Sept 2020.
PS Clause no. 6B.2.1 Inlet Pump	Tender award	6/5/2020	9/19/2020	10/5/2020	10/7/2020	Task Completed				100%	Technical Submission Evaluation Report was submitted on 5 Oct 2020, Tender report was submitted on 7 Oct 2020. AECOM noted on 8 Oct 2020.
	Acceptance of tender award	6/19/2020	10/17/2020	10/19/2020	11/15/2020	Task Completed				-	
	Submission of marking scheme for PM's acceptance (third draft)	5/1/2020	5/14/2020	9/1/2020	8/19/2020	Task Completed				100%	AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	5/1/2020	5/14/2020	9/1/2020	8/19/2020	Task Completed				100%	Bestwise resubmitted on 19 Aug 2020
	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed				100%	AECOM accepted on 1 Sep 2020
	Tender invitation	5/29/2020	11/20/2020	9/29/2020	12/11/2020	Task Completed				100%	Tender invitation was conducted on 20 Nov 2020 and returned on 11 Dec 2020. Tender Technical Submission Evaluation Report was submitted on 12 Jan 2021. AECOM noted on 22 Jan 2021.
	Tender award	6/5/2020	12/13/2020	10/5/2020	3/3/2021	Task Completed				100%	Tender Report was submitted on 4 Feb 2021, AECOM commented on 19 Feb 2021, Bestwise submitted supplementary information on 26 Feb 2021. AECOM noted on 3 Mar
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/1/2020	5/14/2020	9/1/2020	9/2/2020	Task Completed				100%	AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020

