



CONTRACT NO. SPW 12/2021

SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORK

**UNDER FURTHER ENVIRONMENTAL PERMIT NO. FEP-
02/474/2013**

**QUARTERLY ENVIRONMENTAL MONITORING & AUDIT
REPORT**

- OCTOBER TO DECEMBER 2022 -

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Contract No. SPW 12/2021

Shek Wu Hui Effluent Polishing Plant – Main Work

Quarterly Environmental Monitoring & Audit Report

October to December 2022

(May 2023)

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EXECUTIVE SUMMARY

- i. This is the Quarterly Environmental Monitoring and Audit (EM&A) Report – **October to December 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 quarterly report prepared by Environmental Team under Contract No. SPW 12/2021, presenting the environmental monitoring findings and information recorded during the period of **1 October 2022 to 31 December 2022**.

Construction Activities for the Reporting Quarter

- ii. During this reporting period, the principal work activities of individual contracts are summed up in **Table I**.

Table I Summary table of principal work activities in the reporting period

Contract No.	Contract Title	Month / Year	Principal work activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	October and November 2022	<ul style="list-style-type: none"> • RC works • Sewage, utility and pipe works • Backfilling • ABWF works
		December 2022	<ul style="list-style-type: none"> • RC works • Backfilling • Sewage, utility and pipe works • ABWF works • Construction of Outfall at Ng Tung River
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	October 2022	<ul style="list-style-type: none"> • ELS works • Sheet piling • RC works
		November and December 2022	<ul style="list-style-type: none"> • ELS works • Sheet piling • Excavation • RC works

DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	October and November 2022	<ul style="list-style-type: none"> • ELS works • Penstock and Stoplog Installation • Electrical Installation • Lift and Plumbing Installation • MFA, AFA and SPR System Installation • T&C UV System and T&C for Electrical Installation • Bio-Gas Holding tank Installation
		December 2022	<ul style="list-style-type: none"> • Formwork and Falsework • Penstock and Stoplog Installation • MVAC, Plumbing and Electrical Installation • MFA, AFA and SPR System Installation • EOT and Monorail Installation • T&C for Electrical Installation • Bio-Gas Holding tank Installation • EOT and Monorail Installation
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	October to December 2022	<ul style="list-style-type: none"> • Improvement Works for Temporary Primary Sludge Thickener and its accessories

iii. Implementation of the key mitigation measures during the reporting quarter

Table II Summary table of key mitigation measures implemented in the reporting period according to the contract no.

Contract No. DC/2018/06		
Oct 2022	Air Quality	To cover up the exposed stockpiles with tarpaulin.
Nov 2022	Air Quality	The Contractor was reminded to provide a cover to the cement bag stored at roof.
	Waste Management	The Contractor was reminded to provide a drip tray to chemical containers placed.
		Chemical waste containers placed without drip tray was observed at CHP and SD. The Contractor was advised to provide a drip tray to the chemical containers stored onsite.
Dec 2022	Air Quality	Silt was observed at vehicle exit. The Contractor was advised to provide wheel washing to the leaving vehicle.
		Soil was observed outside of site boundary. The Contractor was advised to provide preventive measures to ensure no construction material will be dropped into public area during the transporting process.
		The stockpile should be watering to remain surface wet.
	Waste Management	The chemical containers should be placed properly inside the drip tray with enough capacity.
Contract No. DC/2018/07		
Oct 2022	Waste Management	To clear the clogged drip tray.
Nov 2022	Air Quality	Breaking work conducted without dust control measure was observed at BR. The Contractor was advised to provide watering to the dusty work conducted onsite.
		The Contractor is reminded to maintain works area access for site vehicle free from loose material to prevent dust emission.
	Waste Management	The Contractor was reminded to provide a drip tray to the chemical containers placed onsite.
		Oil stain was observed at the earth near inert. The Contractor was advised to remove the oil stain and treat it properly.
Landscape	Unknown tree within sewage treatment plant area shall be fenced off to prevent unauthorized used / storage near the protection zone.	

Dec 2022	Others	The Contractor was reminded to update the CNP, which displayed at site entrance.
Contract No. DE/2018/03		
Oct 2022	-	-
Nov 2022	Others	The Contractor was reminded to display the discharge license on proper area.
	Water Quality	The Contractor was reminded to maintain the performance of the Wetsep.
Dec 2022	Air Quality	Dust measures (water spraying or regular cleaning) should be adopted for the dusty ground.
Contract No. DE/2018/04		
Oct 2022	-	-
Nov 2022	-	-
Dec 2022	-	-

Summary of Exceedances, Investigation and Follow-up

Noise Monitoring

- iv. Noise monitoring were conducted at noise monitoring stations namely, NM – G/F, Wai Loi Tsuen, NM2 – G/F, Fu Tei Au and NM3 – G/F, Man Kok Village on a weekly basis in the reporting period.
- v. No action or limit level exceedance was recorded in this reporting quarter.

Air Quality Monitoring

- vi. 1-hour Total Suspended Particulates (TSP) monitoring was conducted at air quality monitoring stations namely, AM1 – Wai Loi Tsuen, AM2 – Fu Tei Au; 24-hour TSP monitoring was conducted at air quality monitoring stations namely, AM1a* – Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW and AM2a – Site Boundary of the Shek Wu Hui STW (North). 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.
- vii. Power failures were encountered at AM1a* from 11 to 15 Oct 2022 and at AM2a from 14 to 23 Dec 2022, so the 24hr AQM for AM1a* and AM2Aa were temporarily suspended on the respective dates.
- viii. No action or limit level exceedance was recorded in this reporting quarter.

Ecological Monitoring

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

Water Quality Monitoring

- xi. Water quality monitoring was conducted at two monitoring stations, M1 – Impact Station and C1 – Control Station, three days per week in the reporting month.
- xii. [Twenty-six \(26\) limit level exceedances and five \(5\) action level exceedances were recorded in the reporting quarter. After investigations, all recorded exceedances were considered non-project related.](#)

Table III Summary table of non-compliance (exceedances) in the reporting period

Parameter	No. of Exceedance		Investigation result
	Action Level	Limit Level	
October 2022			
Air Quality (1-hour TSP)	0	0	-
Air Quality (24-hour TSP)	0	0	-
Noise	0	0	-
Ecology	0	0	-
November 2022			
Air Quality (1-hour TSP)	0	0	-
Air Quality (24-hour TSP)	0	0	-
Noise	0	0	-
Ecology	0	0	-
Water Quality	0	8	All recorded exceedances were non-project related.
December 2022			
Air Quality (1-hour TSP)	0	0	-
Air Quality (24-hour TSP)	0	0	-
Noise	0	0	-

Ecology	0	0	-
Water Quality	5	18	All recorded exceedances were non-project related.

Complaints, Notifications of Summons and Successful Prosecutions

- xiii. No environmental complaints, notification of summons and successful prosecution regarding the construction works was recorded in the reporting quarter.

Table IV Summary table of complaints, summons and successful prosecutions in the reporting period

Events	Number	Brief description	Follow up and remedial actions	Status and remarks
Complaints	0	-	-	-
Notification of Summons and Successful Prosecution	0	-	-	-

Reporting Changes

- xiv. Water quality monitoring for outfall works was commenced in November 2023.
- xv. Due to close proximity to construction works and heavy machines from another construction project, presence of physical barrier and safety concerns, adjustment for the location of AM2/NM2 were proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from Fu Tei Au to footbridge between Fu Tei Au and SWHSTW. The proposal has sought approval from ER and IEC, and agreement from EPD.

Future Key Issues

xvi. In the next reporting period, the principal work activities of individual contracts are anticipated as follows.

Table V Summary table of anticipated work activities in the next reporting period

Contract No. DC/2018/06
<ul style="list-style-type: none"> • RC works • Backfilling • Sewage, utility and pipe works • ABWF works • Construction of Outfall at Ng Tung River
Contract No. DC/2018/07
<ul style="list-style-type: none"> • ELS works • Sheet piling • Excavation • RC works
Contract No. DE/2018/03
<ul style="list-style-type: none"> • Formwork and Falsework • Installation of Earth Mat • Monorail, Penstock and Stoplog Installation • Lift, Plumbing, MVAC and Electrical Installation • MFA, AFA and SPR System Installation • EOT and Monorail Installation • T&C for Electrical Installation • Bio-Gas Holding tank Installation • Steam Boiler Transportation
Contract No. DE/2018/04
<ul style="list-style-type: none"> • Improvement Works for Temporary Primary Sludge Thickener and its accessories. • E&M installation works at Portion B-7, including DOU No.3A, Emergency Generator House and FS & Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant & Booster Pump Room and Temporary Chemical System. • E&M installation works at Portion B-2, Inert Works

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).

1.2 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 *Environmental Monitoring and Audit Requirements* – summarizes all monitoring parameters and methodology, no. of exceedances, influencing factors on the monitoring results.

Section 4 *Compliance Audit* – summarizes the auditing of monitoring results, all exceedances environmental parameters.

Section 5 *Complaints, Notification of Summons and Prosecution* – summarizes the cumulative statistics on complaints, notification of summons and prosecution.

Section 6 *Comments, Conclusion and Recommendations* – summarizes monitoring methodology, the effectiveness of EM&A Programme and mitigation measures, and recommendations based on findings during site audits.

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	CPC	Mr. Hanes Hui	2594 7459
AECOM	Supervisor Representative	Resident Engineer	Mr. Alex Leung	3907 6145
Kwan Lee - Chun Wo Joint Venture	Contractor (DC/2018/06)	Environmental Engineer	Ms. Ruby Hui	6218 6408
		Assistant Environmental Engineer	Mr. Marco Chan	6235 6017
	Contractor (DC/2018/07)	Environmental Engineer	Ms. Tiffany Choi	9789 1027
JEC	Contractor (DE/2018/03)	Environmental Officer	Ms. Juliet Ting	6826 7319
Bestwise	Contractor (DE/2018/04)	Environmental Officer	Mr. Albus Cheung	9731 0831
Meinhardt Infrastructure and Environment Ltd.	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Ms. Claudine Lee	9612 9229
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939

2.3 Principal Work and Activities

2.3.1. In the reporting month, the principal work activities conducted of individual contracts are as follow. [Appendix 1.1](#) lists the construction programmes of individual activities. The layout plans showing the locations of reported construction activities and key PME used for the works contracts in the reporting quarter are provided in [Appendix 2.1](#)

Table 2.2 Summary table of principal work activities in the reporting period

Contract No.	Contract Title	Month / Year	Principal work activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	October and November 2022	<ul style="list-style-type: none"> RC works Sewage, utility and pipe works Backfilling ABWF works
		December 2022	<ul style="list-style-type: none"> RC works Backfilling Sewage, utility and pipe works ABWF works Construction of Outfall at Ng Tung River
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	October 2022	<ul style="list-style-type: none"> ELS works Sheet piling RC works
		November and December 2022	<ul style="list-style-type: none"> ELS works Sheet piling Excavation RC works
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	October and November 2022	<ul style="list-style-type: none"> ELS works Penstock and Stoplog Installation Electrical Installation Lift and Plumbing Installation MFA, AFA and SPR System Installation T&C UV System and T&C for Electrical Installation Bio-Gas Holding tank Installation
		December 2022	<ul style="list-style-type: none"> Formwork and Falsework Penstock and Stoplog Installation MVAC, Plumbing and Electrical Installation MFA, AFA and SPR System Installation EOT and Monorail Installation T&C for Electrical Installation Bio-Gas Holding tank Installation EOT and Monorail Installation



DE/2018/ 04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	October to December 2022	<ul style="list-style-type: none">Improvement Works for Temporary Primary Sludge Thickener and its accessories
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3 Environmental Monitoring and Audit Requirements

- 3.0.1. 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. [Appendix 3.1](#) gives the details of the environmental monitoring requirements
- 3.0.2. The Action and Limit Levels for construction air quality, noise and ecological monitoring works are shown in [Appendix 3.2](#).
- 3.0.3. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor. The environmental mitigation implementation schedule is shown in [Appendix 3.3](#).

3.1 Weather conditions

- 3.1.1. The weather conditions were generally sunny, cloudy and with occasional rainstorms during the monitoring sessions of the reporting quarter. The details of weather conditions for each individual monitoring session were presented in the corresponding Monthly EM&A Reports within the reporting period.

3.2 Noise Monitoring Results

- 3.2.1. Noise monitoring results measured in this reporting period are reviewed and summarized. Graphical presentation of noise monitoring can be referred in [Appendix 3.4](#).
- 3.2.2. [No action or limit level exceedance was recorded in this reporting quarter.](#)

3.3 Air Monitoring Results

- 3.3.1. Both 1-hour and 24-hour TSP were all conducted as scheduled in the reporting period. Air quality monitoring results measured in this reporting period are reviewed and summarized. Graphical presentation of air quality monitoring can be referred in [Appendix 3.5](#).
- 3.3.2. [Power failures were encountered at AM1a* from 11 to 15 Oct 2022 and at AM2a from 14 to 23 Dec 2022, so the 24hr AQM for AM1a* and AM2Aa were temporarily suspended on the respective dates.](#)
- 3.3.3. No action or limit level exceedance was recorded in this reporting quarter.

3.4 Ecology Monitoring Results

- 3.4.1. Ecological monitoring was conducted as scheduled in the reporting period. Details of ecological monitoring results in the reporting period are provided in [Appendix 3.6](#).
- 3.4.2. [No action or limit level exceedance was triggered in this reporting quarter.](#)

3.5 Water Quality Monitoring Results

- 3.5.1. Water quality monitoring was conducted as scheduled in the reporting period. Details of water quality monitoring results in the reporting period are provided in [Appendix 3.7](#).
- 3.5.2. [Twenty-six \(26\) limit level exceedances and five \(5\) action level exceedances were recorded in the reporting quarter. After investigations, all recorded exceedances were considered non-project related.](#)

3.6 Waste Management

- 3.6.1. The Summary Waste Flow Table is shown in [Appendix 3.8](#). Whenever possible, materials were reused on-site as far as practicable.

3.7 Landscape and Visual

- 3.7.1. Site audits were conducted on a bi-weekly basis and the landscape and visual mitigation measures of this project were monitored from time to time.
- 3.7.2. [No non-compliance of the landscape and visual mitigation measures was recorded in the reporting quarter.](#)

3.8 Influencing Factors on the Monitoring Results

- 3.8.1. In this reporting quarter, major noise and dust sources were recorded at designated monitoring stations and are shown below.

Table 3.1 Major noise sources during monitoring sessions in the reporting period

Monitoring Stations	Major Noise Source
NM1 - Wai Loi Tsuen	Railway Noise and Road Traffic at Sheung Shui Tung Hing Road
NM2 - Fu Tei Au	Construction noise from other construction projects
NM2 ^{*(1)} - Footbridge between Fu Tei Au and SWHSTW	Construction noise from other construction projects

NM3 - Man Kok Village	Road traffic at Po Wan Road
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1. Remark: Due to close proximity to construction works and heavy machines from another construction project, presence of physical barrier and safety concerns, adjustment for the location of AM2/NM2 were proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from Fu Tei Au to footbridge between Fu Tei Au and SWHSTW. The proposal has sought approval from ER and IEC, and agreement from EPD on 28 December 2022.

Table 3.2 Major dust sources during monitoring sessions in the reporting period

Monitoring Stations	Major Dust Source
AM1 - Wai Loi Tsuen	Road Traffic at Sheung Shui Tung Hing Road
AM2 - Fu Tei Au	Construction activities from other construction projects
AM2 ⁽¹⁾ - Footbridge between Fu Tei Au and SWHSTW	Construction activities from other construction projects
AM1a* - Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW	Operating machines and vehicle movement within SWHSTW
AM2a - Site Boundary of the Shek Wu Hui STW (North)	N/A

1. Remark: Due to close proximity to construction works and heavy machines from another construction project, presence of physical barrier and safety concerns, adjustment for the location of AM2/NM2 were proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from Fu Tei Au to footbridge between Fu Tei Au and SWHSTW. The proposal has sought approval from ER and IEC, and agreement from EPD on 28 December 2022.

3.8.2. Major observations were also recorded at designated monitoring locations and are shown below

Table 3.3 Major observations during ecological monitoring in the reporting period

Monitoring locations	Observations	
	Project related	Non-project related
T1 (PC1, PC2)	N/A	Human activities: fishing Construction activities such as vegetation waste clearance, excavation and breaking works
T2 (PC3, PC4)	Sheet-piling, generator & welding works Scaffolding, sedimentation tank, Excavation and crane	Human activities: fishing, landscape planting Construction activities: scaffolding, excavation, sheet-piling, generator & welding works, sedimentation tank, vegetation waste clearance, excavation and crane and breaking works
PC5	Excavation and crane	N/A



T3 (PC6, PC7)	Sheet-piling	Human activities: Fishing and Landscape Planting Construction activities: excavation, sheet-piling, generator & welding works, scaffolding
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3.8.3. In this reporting quarter, major influence sources were recorded at designated monitoring stations and are shown below.

Table 3.4 Major water influencing sources during monitoring in the reporting period

Monitoring Stations	Major influencing source
M1 - Impact Station	<ul style="list-style-type: none"> - River from upstream of Ng Tung River - Discharge from Slaughterhouse
Control Station - Control Station	<ul style="list-style-type: none"> - River from upstream of Ng Tung River - Construction works from other construction project

4 Compliance Audit

- 4.0.1. Environmental monitoring works were performed in the reporting period and all monitoring results were checked and reviewed. The summary of exceedance of Action/Limit Level for environmental monitoring is presented in [Appendix 4.1](#).
- 4.0.2. The observations and recommendations made for each contract were shown in [Appendix 4.2](#).

4.1 Noise Monitoring

- 4.1.1. [No action or limit level exceedance was recorded in this reporting quarter.](#)

4.2 Air Quality Monitoring

- 4.2.1. [No action or limit level exceedance was recorded in this reporting quarter.](#)

4.3 Ecological Monitoring

- 4.3.1. [No action or limit level exceedance was triggered in this reporting quarter.](#)

4.4 Water Quality Monitoring

- 4.4.1. [Twenty-six \(26\) limit level exceedances and five \(5\) action level exceedances were recorded in the reporting quarter. After investigations, all recorded exceedances were considered non-project related.](#)

4.5 Landscape and visual impact

- 4.5.1. [No non-conformity for landscape and visual impact was recorded in the reporting quarter.](#)

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

- 4.5.1. [No environmental non-compliance was recorded in the reporting quarter.](#)

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

- 4.6.1. [There was no particular action taken since no non-compliance was recorded in the reporting quarter.](#)

5 Complaints, Notification of Summons and Prosecution

- 5.0.1 No environmental complaints, notification of summons and successful prosecution regarding construction works was recorded in the reporting quarter.
- 5.0.2 The details environmental complaints, notification of summons and successful prosecution for the Project are summarized by complaint log in [Appendix 5.1](#).
- 5.0.3 Cumulative statistics on complaints and successful prosecutions are summarized in **Table 5.1** and **Table 5.2** respectively.

Table 5.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works to 30 September 2022	4
October 2022	0
November 2022	0
December 2022	0
Project-to-Date	4

Table 5.2 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

6 Comment, Conclusions and Recommendations

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

6.1.1. In terms of project construction phase monitoring, with the implementation of mitigation measures as recommended, no project related exceedance was recorded. In general, no adverse construction air and noise impacts were recorded within the project area with the mitigation measures in place. It could be concluded that no adverse environmental impact was caused to the surrounding environment and the sensitive receivers. The overall environmental impact control of the Project is considered to be effective and efficient.

6.2 Review on Effectiveness of Mitigation Measures

6.2.1. The mitigation measures according to the Environmental Mitigation Implementation Schedule (EMIS) and the EIA are considered effective in minimizing environmental impacts as no exceedances related to the Project works was recorded throughout the monitoring period. Hence, the EM&A programme was considered effective and shall be maintained.

6.2.2. The Contractor has implemented the recommended mitigation measures except for those mitigation measures not applicable at this stage. [No site audit non-compliance was recorded during the reporting quarter.](#)

6.2.3. Environmental monitoring works were carried out in the reporting quarter and all monitoring results were checked and reviewed.

6.2.4. [Since the construction works of a footbridge under another construction project was found on Ng Tung River in November 2022, the baseline measured in October and November 2019 may not reflect the updated ambient environment condition of Ng Tung River.](#)

6.2.5. [The water quality monitoring for the Project commenced on 23 November 2022. Continuous exceedances were recorded since the commencement of water quality monitoring. According to the information from the Contractor, only preparation works for outfall construction were conducted on 23 November to 5 December 2022, during which were no water quality-related construction work conducted. However, continuous exceedances were still recorded in this period. That means the Action and Limit levels identified from baseline monitoring cannot be a practicable alarm to reflect the pollution contributed by the Project. Therefore, the ET team proposed the relocation of the water quality monitoring location and new action and limit levels for water quality monitoring to the EPD in monthly EM&A report for December 2022.](#)

6.3. Recommendations

6.3.1. In regards to the results and findings during the weekly environmental inspections in the reporting period, recommendations were made as follow.

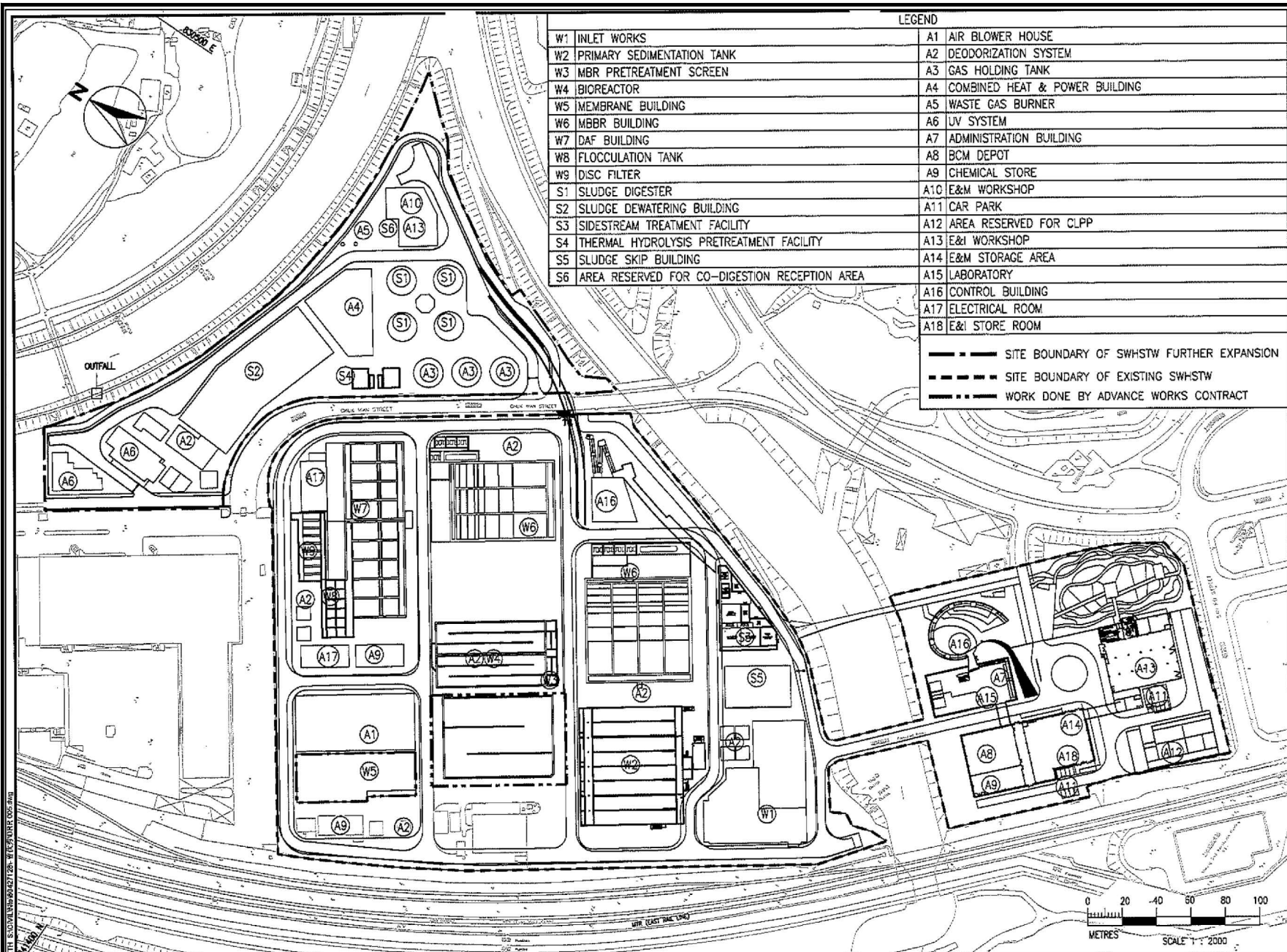
Table 6.1 Summary table of recommendations in terms of environmental parameters

Parameters	Recommendations
Air Quality	Dust suppression measures like water spraying or using tarpaulin should be enhanced for exposed stockpiles and other construction activities.
	To ensure all regulated machines in operation are displayed with valid NRMM labels.
Noise	Acoustic materials or other noise minimization measures should be adopted or enhanced especially for drilling and piling activities.
Water Quality	To maintain the proper function of the on-site drainage system and ensure the construction site runoff was properly treated.
	To provide proper water mitigation measures for the outfall work conducted between the site boundary and Ng Tung River.
Ecology	2m solid dull green barrier fences should be erected and maintained properly along the project boundaries of all active work sites under EP condition 2.7.
Waste Management	Oil/chemical containers should be stored properly.
	To maintain proper function of drip trays
	To maintain good housekeeping and remove the waste regularly.
	Good waste segregation practice should be maintained.



Figure 2.1

Project Layout



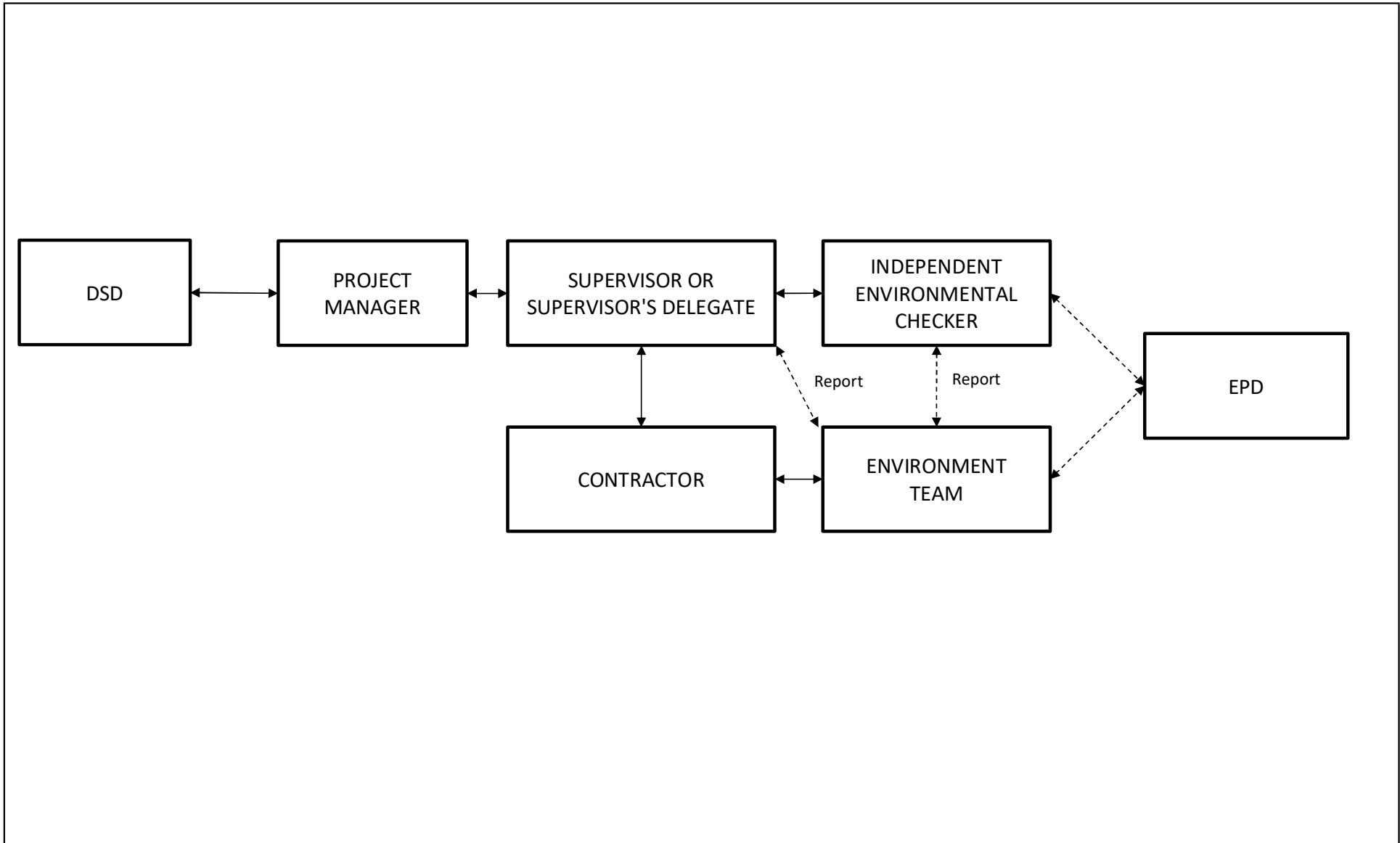
LEGEND			
W1	INLET WORKS	A1	AIR BLOWER HOUSE
W2	PRIMARY SEDIMENTATION TANK	A2	DEODORIZATION SYSTEM
W3	MBR PRETREATMENT SCREEN	A3	GAS HOLDING TANK
W4	BIOREACTOR	A4	COMBINED HEAT & POWER BUILDING
W5	MEMBRANE BUILDING	A5	WASTE GAS BURNER
W6	MBBR BUILDING	A6	UV SYSTEM
W7	DAF BUILDING	A7	ADMINISTRATION BUILDING
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

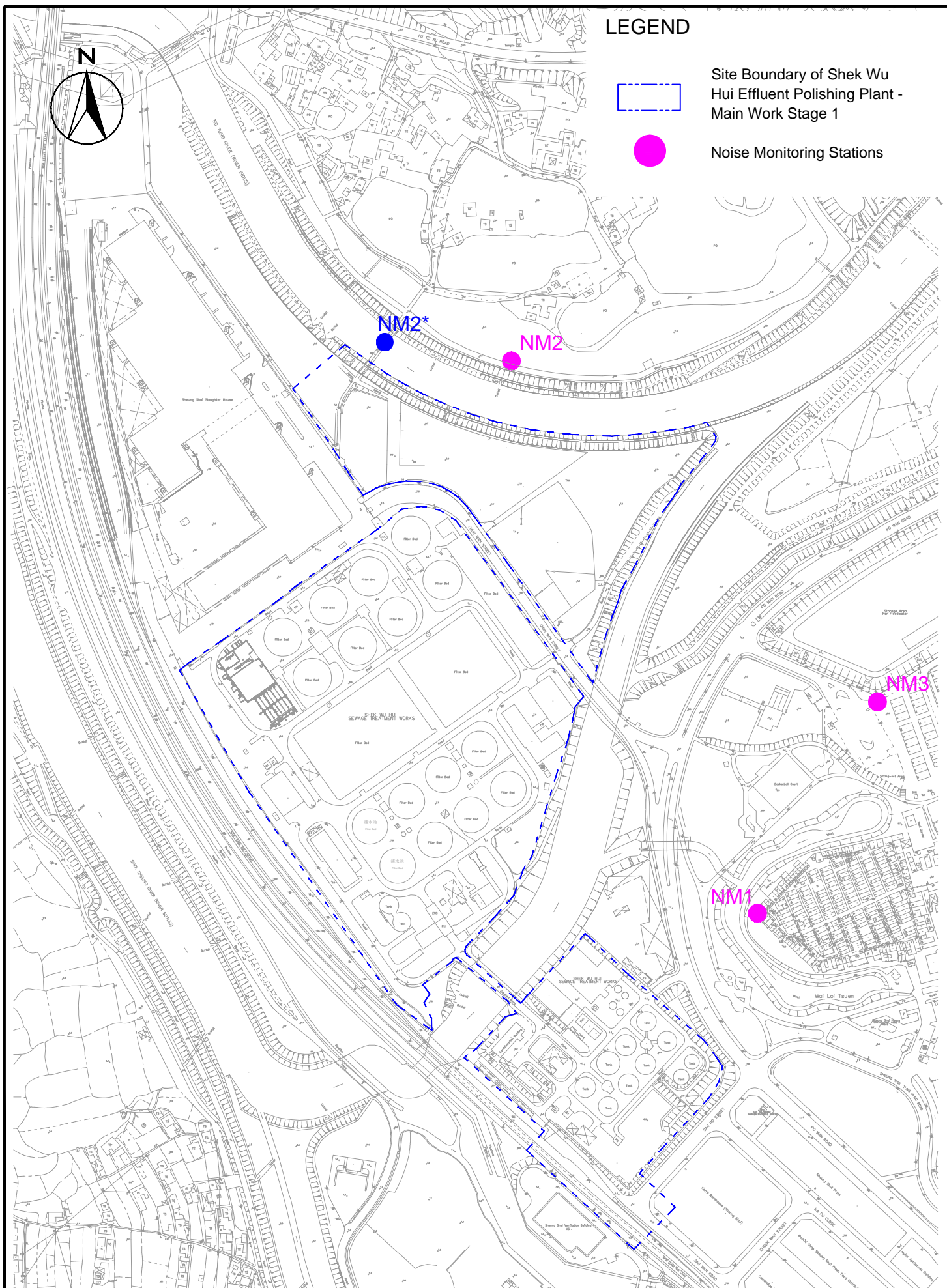
Project Organization Chart



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



LEGEND



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



Noise Monitoring Stations

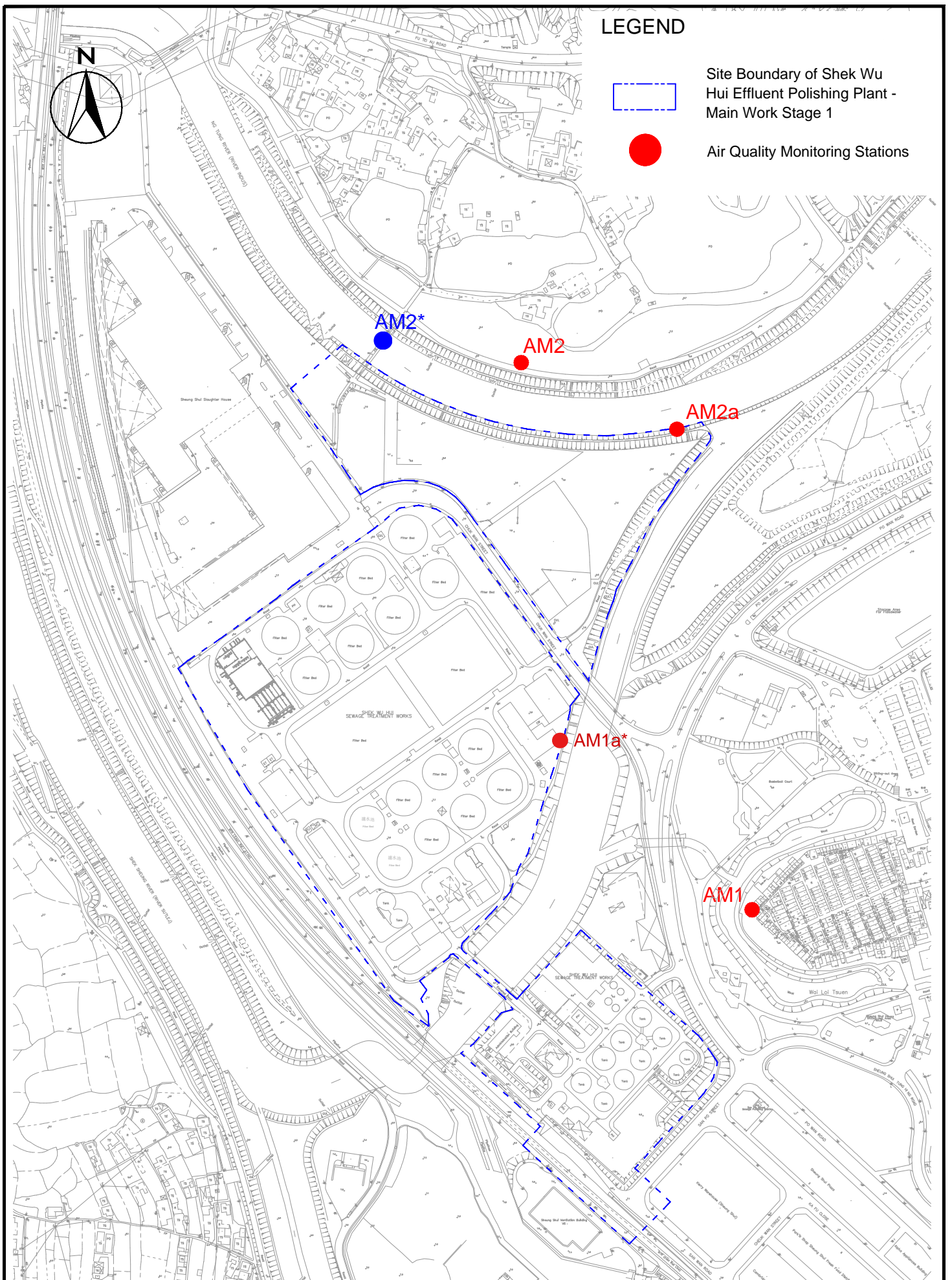
Shek Wu Hui Effluent Polishing Plant

Location of Noise Monitoring Stations

SCALE	1:4000@A4	DATE	SEP 2019	
CHECK	JM	DRAWN	SY	
JOB No.	MA19019	FIGURE NO.	3	REV -

Figure 4.2

Locations of Air Quality Monitoring Stations



LEGEND



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



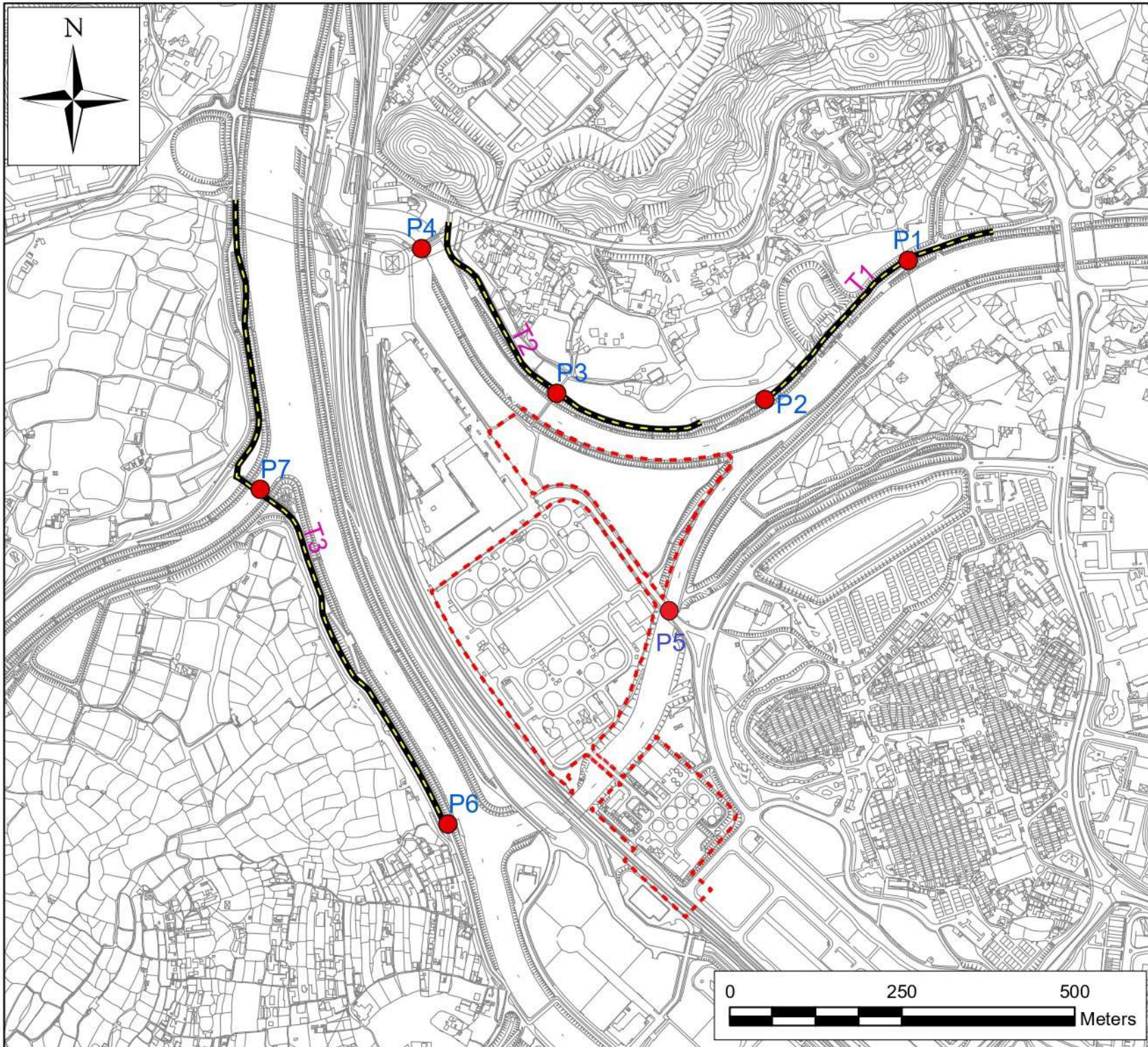
Air Quality Monitoring Stations

Shek Wu Hui Effluent Polishing Plant -
Location of Air Quality Monitoring Stations

SCALE	1:400@A4	DATE	SEP 2019	
CHECK	JM	DRAWN	SY	
JOB No.		FIGURE NO.	2	REV
				-

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
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CONTRACT NO.
SPW 12/2021

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

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

Figure 4.4

Locations of Water Quality Monitoring Stations



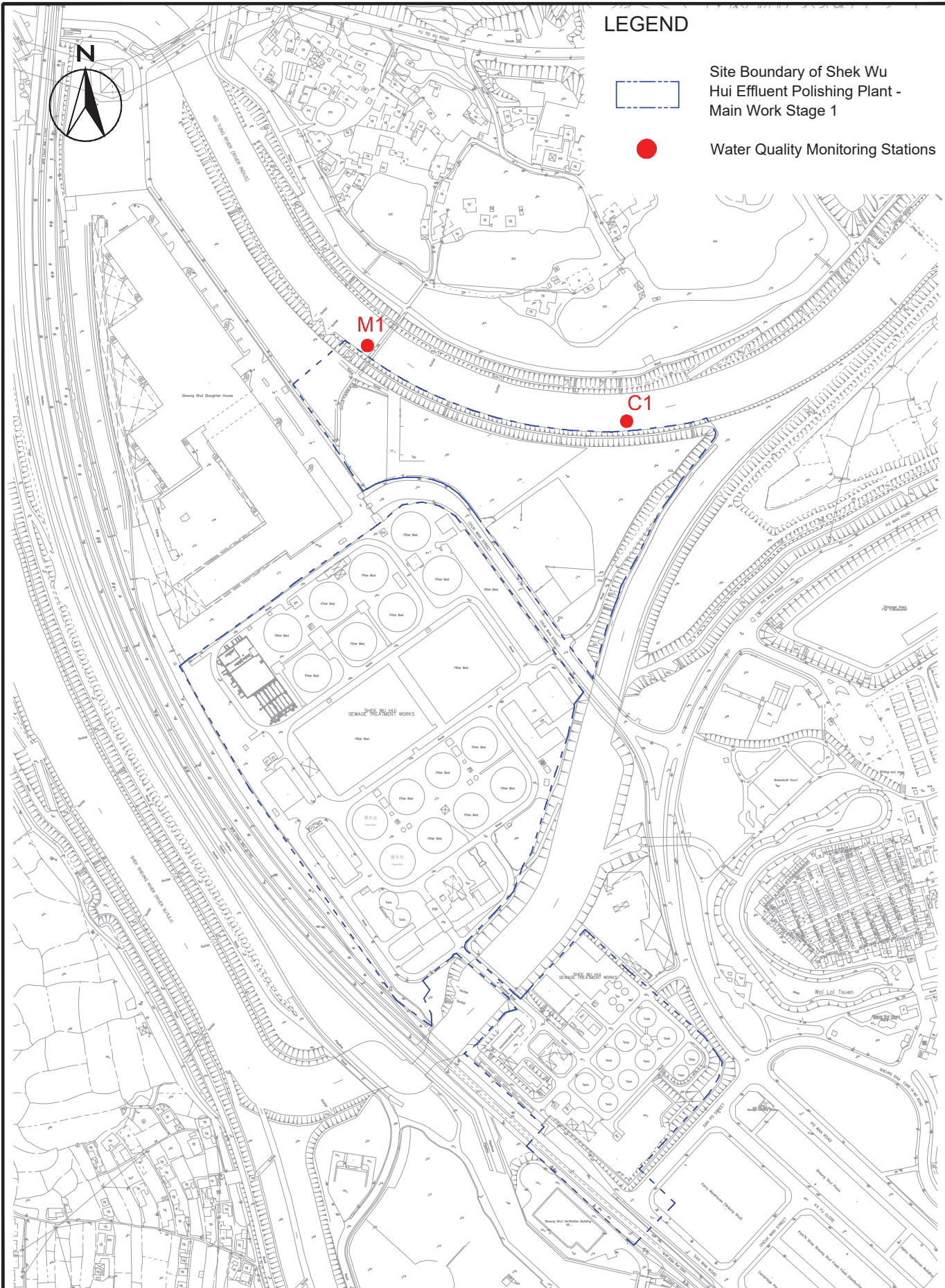
LEGEND



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



Water Quality Monitoring Stations



Shek Wu Hui Effluent Polishing Plant -
Location of Water Quality Monitoring Stations

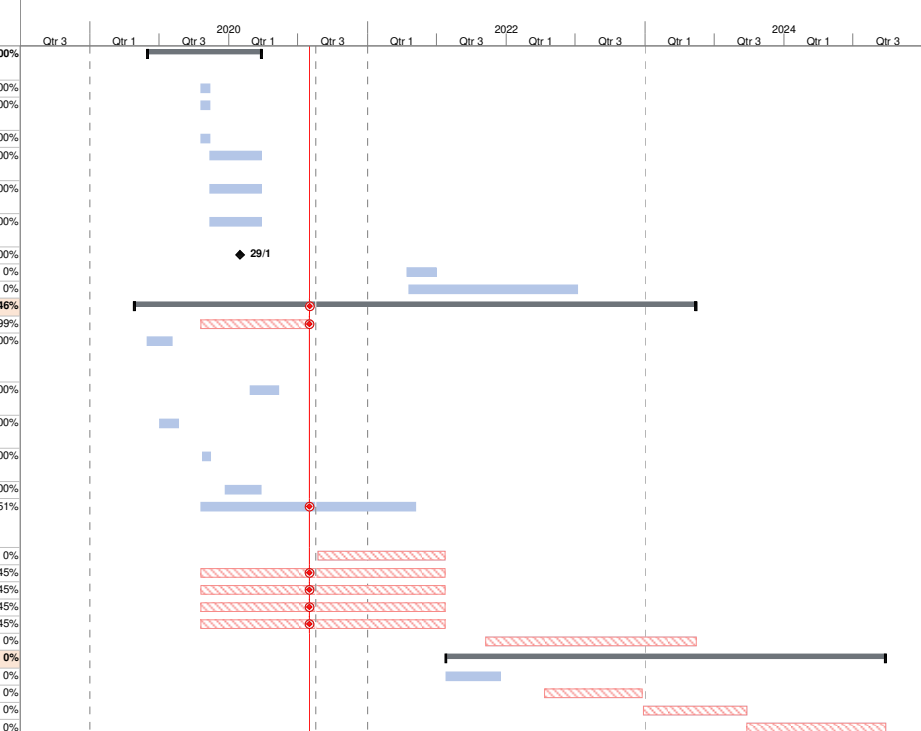
SCALE	1:400@A4	DATE	OCT 2019
CHECK	JM	DRAWN	SY
JOB No.		FIGURE NO.	5
		REV	-



Appendix 1.1

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
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	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020	2021	2022	2023	2024	2025
SWH - Main Works Stage 1 Sidestream Treatment Facilities & E&M Works for Slur										Remarks: The Defect Date is 05 Jun 2025 (365 days after Completion of the whole of the works) The period of Establishment Works is 365 days start from 06 Jun 2024 to 05 Jun 2025					
Contract Data		2015	11-Oct-19 A	16-Apr-25	20-Mar-22	16-Apr-25	0								
Starting Date & Completion Date		2015	11-Oct-19 A	16-Apr-25	20-Mar-22	16-Apr-25	0								
CD1000	Contract Date (LOA)	0	11-Oct-19 A		20-Mar-22				CD1010, S1P1000, S1D1040, AD1050,						
CD1010	Starting Date	0	23-Oct-19 A		20-Mar-22			CD1000	CD1040, CD1030						
CD1020	Whole Contract Period (1626 days from starting date)	1626	23-Oct-19 A	04-Apr-24	21-Nov-22	04-Apr-24	0	CD1010	CD1040						
CD1030	Extension of Time Granted (Total 61.5days)	62	05-Apr-24	05-Jun-24*	05-Apr-24	05-Jun-24	0	CD1020	CD1040						
CD1040	Completion Date for the whole of the Works	0		16-Apr-25		16-Apr-25	0	CD1020, CD1010, CD1030							
Access Date		1434	23-Oct-19 A	21-Nov-22	20-Mar-22	16-Apr-25	877								
AD1000	Portion C-1A (within 480 to 550 days from starting date)	550	23-Oct-19 A	24-Apr-21 A	12-Oct-22	12-Oct-22		CD1010	AD1010						
AD1010	Planned Access Date for Portion C-1A (Partial Access)	1	24-Apr-21 A	24-Apr-21 A	12-Oct-22	12-Oct-22		CD1010, AD1000	PL1470, S4C1010						
AD1020	Planned Access Date for Portion C-1A (Access for Remaining Area)	1	12-May-21 A	12-May-21 A	12-Oct-22	12-Oct-22			S4C1010						
AD1030	Portion C-2A (within 705 to 795 days from starting date) (SS by NCE-NCE-288, within 705 to 831 days from starting date)	831	23-Oct-19 A	30-Jan-22 A	16-Apr-25	16-Apr-25		CD1010	AD1040						
AD1040	Planned Access Date for Portion C-2A	1	09-Sep-22 A	09-Sep-22 A	16-Apr-25	16-Apr-25		CD1010, AD1030							
AD1050	Portion C-2B (within 765 to 855 days from starting date) (SS by NCE-NCE-286, within 765 to 880 days from starting date)	880	23-Oct-19 A	20-Mar-22 A	20-Mar-22	20-Mar-22		CD1010	AD1060						
AD1060	Planned Access Date for Portion C-2B	1	21-Nov-22	21-Nov-22*	20-Mar-22	20-Mar-22	-246	CD1010, AD1050	S5CHPC1020						
AD1070	Portion C-2C (within 715 to 805 days from starting date) (SS by NCE-NCE-287, within 715 to 934 days from starting date)	934	23-Oct-19 A	13-May-22 A	13-May-22	13-May-22		CD1010	AD1080						
AD1080	Planned Access Date for Portion C2-C	1	21-Nov-22	21-Nov-22*	13-May-22	13-May-22	-192	CD1010, AD1070	S5DIGC1040, S5DIGC1210, S5DIGC1030						
AD1090	Portion C-2D (within 825 to 945 days from starting date)	945	23-Oct-19 A	24-May-22 A	24-May-22	24-May-22		CD1010	AD1100						
AD1100	Planned Access Date for Portion C-2D	1	21-Nov-22	21-Nov-22*	24-May-22	24-May-22	-181	AD1090	S5BIOC1020, S5BIOC1030,						
AD1110	Portion C-3 (within 615 to 705 days from starting date) (SS by NCE-NCE-273, within 615 to 815 days from starting date)	815	23-Oct-19 A	31-Dec-21 A	03-Aug-22	03-Aug-22		CD1010	AD1120						
AD1120	Planned Access Date for Portion C-3 (SS by NCE-NCE-273)	1	31-Dec-21 A	31-Dec-21 A	03-Aug-22	03-Aug-22		AD1110, S2D1110	KD1060, S5WS2C1000, S5WS2C1010, KD1060-1						
AD1130	Portion B-1 (within 285 to 345 days from starting date)	345	23-Oct-19 A	30-Sep-20 A	01-Sep-22	01-Sep-22		CD1010	AD1140						
AD1140	Planned Access Date for Portion B-1	1	30-Sep-20 A	30-Sep-20 A	01-Sep-22	01-Sep-22		AD1130	KD1030, S3C1020,						
AD1150	Portion B-2a (within 615 to 705 days from starting date) (SS by NCE-NCE-219, within 771 to 891 days from starting date)	891	23-Oct-19 A	23-Mar-22 A	03-Dec-22	03-Dec-22		CD1010	AD1160						
AD1160	Planned Access Date for Portion B-2a (SS by NCE-NCE-219)	1	23-Mar-22 A	23-Mar-22 A	03-Dec-22	03-Dec-22		AD1150	S5SASC1010, S5SASC1000						
AD1170	Portion B-2b (within 615 to 705 days from starting date) (SS by NCE-NCE-219)	705	23-Oct-19 A	24-Sep-21 A	16-Apr-25	16-Apr-25									
AD1180	Planned Access Date for Portion B-2b (SS by NCE-NCE-219)	1	24-Sep-21 A	24-Sep-21 A	16-Apr-25	16-Apr-25									
AD1190	Works Area WA1-B (starting date)	1	23-Oct-19 A	23-Oct-19 A	05-Jul-22	05-Jul-22		CD1010	AD1200						
AD1200	Planned Access Date for Works Area WA1-B	1	23-Oct-19 A	23-Oct-19 A	05-Jul-22	05-Jul-22		CD1010, AD1190	PL1000, PL1020						
AD1210	Works Area WA3 (starting date)	1	23-Oct-19 A	23-Oct-19 A	03-Oct-23	03-Oct-23		CD1010	AD1220						
AD1220	Planned Access Date for Works Area WA3	1	23-Oct-19 A	23-Oct-19 A	03-Oct-23	03-Oct-23		CD1010, AD1210	PL1000, PL1030						
Key Dates		1620	23-Oct-19 A	29-Mar-24	17-Nov-22	16-Apr-25	384								

	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - WBS Page 1 of 58	 Remaining Work  Critical Activity  Milestone  Actual Progress	Contract No. DE/2018/03 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities Revised Programme - as at 20 Nov 2022				Date	Revision	Checked	Approved
						31-Jul-22	Rev24	LT	KM	
						31-Aug-22	Rev25	LT	KM	
						30-Sep-22	Rev26	LT	KM	
						31-Oct-22	Rev27	LT	KM	
					30-Nov-22	Rev28	LT	KM		

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart (2020-2025)																									
Contractual Completion (Include Implemented CE)										[Gantt Chart: 2020-2025]																									
KD1000	KD1A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of UV System No.1 and Effluent Pumping Station No.1	196	23-Oct-19 A	05-May-20 A	15-Feb-23	15-Feb-23		CD1010, S1D1040, S1D1100	CD1040, S4P1040	[Gantt Chart: 2020-2025]																									
KD1010	KD2A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, Workshop No.2, etc.	226	23-Oct-19 A	04-Jun-20 A	16-Apr-25	16-Apr-25		CD1010, S2D1080, S2D1160	KD1020	[Gantt Chart: 2020-2025]																									
KD1020	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	461	23-Oct-19 A	16-Jan-21 A	16-Apr-25	16-Apr-25		CD1010, S2D1120, S2D1220, KD1010	SC21110	[Gantt Chart: 2020-2025]																									
KD1030	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	21-Nov-22	14-Nov-23	0	AD1140	KD1040	[Gantt Chart: 2020-2025]																									
KD1040	Extension of Time Granted for KD3A (Total 61.5days)	62	15-Nov-23	15-Jan-24	15-Nov-23	15-Jan-24	0	KD1030	SC31110, KD1050	[Gantt Chart: 2020-2025]																									
KD1050	Revised Completion Date for KD3A	0		15-Jan-24*		15-Jan-24	0	KD1040		[Gantt Chart: 2020-2025]																									
KD1060	KD5A - Completion of BS Fitting at CLP Sub-Station at Workshop No.2 (245d after Portion C-3 Access)(Impacted by NCE-273)	246	31-Dec-21 A	02-Sep-22 A	16-Apr-25	16-Apr-25		AD1120, S5WS2C1010		[Gantt Chart: 2020-2025]																									
Expected Completion (Include Non-Implemented CE)										[Gantt Chart: 2020-2025]																									
KD1030-1	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	17-Nov-22	10-Nov-23	-4	AD1140	KD1040-1	[Gantt Chart: 2020-2025]																									
KD1040-1	Extension of Time Granted for KD3A (Total 61.5days)	62	15-Nov-23	15-Jan-24	11-Nov-23	11-Jan-24	-4	KD1030-1	SC31110, KD1045	[Gantt Chart: 2020-2025]																									
KD1045	Extension of Time for KD3A - Non-Implemented (Total 74days)	74	15-Jan-24	29-Mar-24	11-Jan-24	25-Mar-24	-4	KD1040-1	KD1050-1	[Gantt Chart: 2020-2025]																									
KD1050-1	Expected Completion Date for KD3A	0		29-Mar-24*		25-Mar-24	-4	KD1045		[Gantt Chart: 2020-2025]																									
Planned Completion										[Gantt Chart: 2020-2025]																									
KD1050-2	Planned Completion Date for KD3A	0		29-Mar-24*		15-Jan-24	-74	S3T1115	SC31110	[Gantt Chart: 2020-2025]																									
KD1060-1	Planned Completion Date for KD5A	0		02-Sep-22 A		16-Apr-25		AD1120, S5WS2C1010		[Gantt Chart: 2020-2025]																									
Completion Date		2003	23-Oct-19 A	16-Apr-25	21-Nov-22	16-Apr-25	0			[Gantt Chart: 2020-2025]																									
Section 1 - Complete All Design at UV System No.1 & EP Station No. 1										[Gantt Chart: 2020-2025]																									
SC11000	Contract Duration of Section 1	291	23-Oct-19 A	08-Aug-20 A	16-Apr-25	16-Apr-25		CD1010	SC11100	[Gantt Chart: 2020-2025]																									
SC11100	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20 A		16-Apr-25		SC11000	SC11120	[Gantt Chart: 2020-2025]																									
Time Risk Allowance and Planned Completion										[Gantt Chart: 2020-2025]																									
SC11110	Time Risk Allowance for Section 1	1	08-Aug-20 A	08-Aug-20 A	16-Apr-25	16-Apr-25		S1P1000, S1P1040,	SC11120	[Gantt Chart: 2020-2025]																									
SC11120	Planned Completion for Section 1	0		08-Aug-20 A		16-Apr-25		SC11110, SC11100	CD1040	[Gantt Chart: 2020-2025]																									
Section 2 - Complete All Designs (exclude Sec. 1 & 3)										[Gantt Chart: 2020-2025]																									
SC21000	Contract Duration of Section 2	601	23-Oct-19 A	11-Jun-21 A	16-Apr-25	16-Apr-25		CD1010	SC21100	[Gantt Chart: 2020-2025]																									
SC21100	Completion date - Section 2 (600 days after starting date)	0		11-Jun-21 A		16-Apr-25		SC21000	SC21120	[Gantt Chart: 2020-2025]																									
Time Risk Allowance and Planned Completion										[Gantt Chart: 2020-2025]																									
SC21110	Time Risk Allowance for Section 2	6	11-Jun-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25		S2P1000, S2P1010,	SC21120	[Gantt Chart: 2020-2025]																									
SC21120	Planned Completion for Section 2	0		11-Jun-21 A		16-Apr-25		SC21110, SC21100,	CD1040	[Gantt Chart: 2020-2025]																									
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities										[Gantt Chart: 2020-2025]																									
Contractual Completion (Include Implemented CE)										[Gantt Chart: 2020-2025]																									
SC31000	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Nov-22	04-Apr-24	0		SC31001	[Gantt Chart: 2020-2025]																									
SC31001	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC31000	SC31002	[Gantt Chart: 2020-2025]																									
SC31002	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	SC31001	SC31003	[Gantt Chart: 2020-2025]																									
SC31003	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	SC31002	SC31005	[Gantt Chart: 2020-2025]																									
SC31005	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	24-Apr-24	09-May-24	24-Apr-24	09-May-24	0	SC31003	SC31100, SC31006	[Gantt Chart: 2020-2025]																									



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- Remaining Work
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Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 Nov 2022

Date	Revision	Checked	Approved
31-Jul-22	Rev24	LT	KM
31-Aug-22	Rev25	LT	KM
30-Sep-22	Rev26	LT	KM
31-Oct-22	Rev27	LT	KM
30-Nov-22	Rev28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart (2020-2025)											
										2020	2021	2022	2023	2024	2025						
SC41100-1	Expected Completion for Section 4	0		13-Sep-22 A		16-Apr-25		SC41015-1, SC41017-1,		[Gantt Chart: Blue bar from Sep-22 to Apr-25, Milestone at Apr-25]											
Time Risk Allowance and Planned Completion		7	13-Sep-22 A	13-Sep-22 A	16-Apr-25	16-Apr-25				[Gantt Chart: Yellow bar from Sep-22 to Apr-25]											
SC41110	Time Risk Allowance for Section 4	7	13-Sep-22 A	13-Sep-22 A	16-Apr-25	16-Apr-25		SC41001-1, S4C1100,	SC41120	[Gantt Chart: Yellow bar from Sep-22 to Apr-25]											
SC41120	Planned Completion for Section 4	0		13-Sep-22 A		16-Apr-25		SC41110	CD1040	[Gantt Chart: Blue bar from Sep-22 to Apr-25, Milestone at Apr-25]											
Section 5 - Complete all remaining Works (incl. T&C)		1989	23-Oct-19 A	02-Apr-25	21-Nov-22	02-Apr-25	0			[Gantt Chart: Green bar from Oct-19 to Apr-25]											
Contractual Completion (Include Implemented CE)		1668	23-Oct-19 A	16-May-24	21-Nov-22	16-May-24	0			[Gantt Chart: Yellow bar from Oct-19 to May-24]											
SC51000	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Nov-22	04-Apr-24	0		SC51001	[Gantt Chart: Blue bar from Oct-19 to Apr-24, Milestone at Apr-24]											
SC51001	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC51000	SC51002	[Gantt Chart: Milestone at Apr-24]											
SC51002	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	SC51001	SC51100, SC51003	[Gantt Chart: Red bar from Apr-24 to Apr-24]											
SC51003	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	19-Apr-24	07-May-24	19-Apr-24	07-May-24	0	SC51002	SC51100, SC51004	[Gantt Chart: Red bar from Apr-24 to May-24]											
SC51004	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	08-May-24	11-May-24	08-May-24	11-May-24	0	SC51003	SC51007	[Gantt Chart: Red bar from May-24 to May-24]											
SC51007	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	11-May-24	11-May-24	11-May-24	11-May-24	0	SC51004	SC51008	[Gantt Chart: Red bar from May-24 to May-24]											
SC51008	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	12-May-24	16-May-24	12-May-24	16-May-24	0	SC51007	SC51100	[Gantt Chart: Red bar from May-24 to May-24]											
SC51100	Revised Completion for Section 5	0		16-May-24*		16-May-24	0	SC51002, SC51003, SC51008		[Gantt Chart: Milestone at May-24]											
Expected Completion (Include Non-implemented CE)		1989	23-Oct-19 A	02-Apr-25	21-Nov-22	02-Apr-25	0			[Gantt Chart: Yellow bar from Oct-19 to Apr-25]											
SC51000-1	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Nov-22	04-Apr-24	0	CD1010	SC51001-1	[Gantt Chart: Blue bar from Oct-19 to Apr-24, Milestone at Apr-24]											
SC51001-1	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC51000-1	SC51110, SC51002-1	[Gantt Chart: Milestone at Apr-24]											
SC51002-1	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	SC51001-1	SC51003-1	[Gantt Chart: Red bar from Apr-24 to Apr-24]											
SC51003-1	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	19-Apr-24	07-May-24	19-Apr-24	07-May-24	0	SC51002-1	SC51004-1	[Gantt Chart: Red bar from Apr-24 to May-24]											
SC51004-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	08-May-24	11-May-24	08-May-24	11-May-24	0	SC51003-1	SC51005-1	[Gantt Chart: Red bar from May-24 to May-24]											
SC51005-1	CNE-019 Inclement Weather (October 2021) - 6days	6	11-May-24	17-May-24	11-May-24	17-May-24	0	SC51004-1	SC51006-1	[Gantt Chart: Red bar from May-24 to May-24]											
SC51006-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	17-May-24	21-May-24	17-May-24	21-May-24	0	SC51005-1	SC51007-1	[Gantt Chart: Red bar from May-24 to May-24]											
SC51007-1	ICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemen	1	21-May-24	21-May-24	21-May-24	21-May-24	0	SC51006-1	SC51008-1	[Gantt Chart: Red bar from May-24 to May-24]											
SC51008-1	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	22-May-24	26-May-24	22-May-24	26-May-24	0	SC51007-1	SC51009-1	[Gantt Chart: Red bar from May-24 to May-24]											
SC51009-1	CNE-036 Inclement Weather (January 2022) - 3days	3	27-May-24	29-May-24	27-May-24	29-May-24	0	SC51008-1	SC51010-1	[Gantt Chart: Red bar from May-24 to May-24]											
SC51010-1	CNE-040 Inclement Weather (February 2022) - 5days	5	30-May-24	03-Jun-24	30-May-24	03-Jun-24	0	SC51009-1	SC51011-1	[Gantt Chart: Red bar from May-24 to Jun-24]											
SC51011-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	04-Jun-24	08-Jun-24	04-Jun-24	08-Jun-24	0	SC51010-1	SC51012-1	[Gantt Chart: Red bar from Jun-24 to Jun-24]											
SC51012-1	CNE-048 Inclement Weather (April 2022) - 2days	2	08-Jun-24	10-Jun-24	08-Jun-24	10-Jun-24	0	SC51011-1	SC51013-1	[Gantt Chart: Red bar from Jun-24 to Jun-24]											
SC51013-1	CNE-050 Inclement Weather (May 2022) - 8days	8	10-Jun-24	18-Jun-24	10-Jun-24	18-Jun-24	0	SC51012-1	SC51099-1, SC51014-1	[Gantt Chart: Red bar from Jun-24 to Jun-24]											
SC51014-1	CNE-052 Inclement Weather (June 2022) - 9days	9	18-Jun-24	27-Jun-24	18-Jun-24	27-Jun-24	0	SC51013-1	SC51015-1	[Gantt Chart: Red bar from Jun-24 to Jun-24]											
SC51015-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1day	1	27-Jun-24	28-Jun-24	27-Jun-24	28-Jun-24	0	SC51014-1	SC51099-1, SC51016-1	[Gantt Chart: Red bar from Jun-24 to Jun-24]											
SC51016-1	CNE-054 Inclement Weather (July 2022) - 4days	4	28-Jun-24	02-Jul-24	28-Jun-24	02-Jul-24	0	SC51015-1	SC51017-1	[Gantt Chart: Red bar from Jun-24 to Jul-24]											
SC51017-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1	02-Jul-24	03-Jul-24	02-Jul-24	03-Jul-24	0	SC51016-1	SC51099-1, SC51018-1	[Gantt Chart: Red bar from Jul-24 to Jul-24]											
SC51018-1	CNE-056 Inclement Weather (August 2022) - 13.5days	14	03-Jul-24	16-Jul-24	03-Jul-24	16-Jul-24	0	SC51017-1	SC51019-1	[Gantt Chart: Red bar from Jul-24 to Jul-24]											
SC51019-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1	17-Jul-24	17-Jul-24	17-Jul-24	17-Jul-24	0	SC51018-1	SC51099-1, SC51020-1	[Gantt Chart: Red bar from Jul-24 to Jul-24]											
SC51020-1	CNE-058 Inclement Weather (September 2022) - 8days	8	18-Jul-24	25-Jul-24	18-Jul-24	25-Jul-24	0	SC51019-1	SC51099-1, SC51021-1	[Gantt Chart: Red bar from Jul-24 to Jul-24]											
SC51021-1	CNE-059 Inclement Weather (October 2022) - 4days	4	26-Jul-24	29-Jul-24	26-Jul-24	29-Jul-24	0	SC51020-1	SC51099-1	[Gantt Chart: Red bar from Jul-24 to Jul-24]											
SC51099-1	EWN-0314 Extension of Time for change of access date	247	30-Jul-24	02-Apr-25	30-Jul-24	02-Apr-25	0	SC51013-1, SC51015-1,	SC51100-1	[Gantt Chart: Red bar from Jul-24 to Apr-25]											
SC51100-1	Expected Completion for Section 5	0		02-Apr-25*		02-Apr-25	0	SC51099-1		[Gantt Chart: Milestone at Apr-25]											

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			31-Jul-22	Rev24	LT	KM			
			31-Aug-22	Rev25	LT	KM			
			30-Sep-22	Rev26	LT	KM			
			31-Oct-22	Rev27	LT	KM			
30-Nov-22	Rev28	LT	KM						

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart Timeline (2020-2025)																							
Time Risk Allowance and Planned Completion		12	22-Mar-25	02-Apr-25	05-May-24	16-May-24	-321																										
SC51110	Time Risk Allowance for Section 5	12	22-Mar-25	02-Apr-25	05-May-24	16-May-24	-321	SC51001-1, S5S1250, S5S1250, S5S1250	SC51120																								
SC51120	Planned Completion for Section 5	0		02-Apr-25*		16-May-24	-321	SC51110, PL1520, PL1560, S5S1040	CD1040																								
Compensation Event		1621	23-Oct-19 A	21-Nov-22	30-Jan-22	16-Apr-25	877																										
CE0001	CE No.001 - Special Work Arrangement in Reducing the Risk of the Spread of Novel Coronavirus	0		30-Jan-20 A		16-Apr-25				◆																							
CE0002	CE No.002 - The Contractor's Site Accommodation by Modular Integrated Construction (MIC) Method	0		23-Mar-20 A		16-Apr-25				◆																							
CE0003	CE No.003 - Flowmeter Relocation & Pipework Rearrangement at Effluent Transfer Pumping Station	0		20-Apr-20 A		16-Apr-25				◆																							
CE0004	CE No.004 - Designated Area for the Contractor's Site Accommodation in Works Area WA1	0		26-Feb-20 A		16-Apr-25				◆																							
CE0005	CE No.005 - Revised Size of Penstock at UV System No.1 & Effluent Pumping Station No.1 for Ex. Outfall	0		30-Mar-20 A		16-Apr-25				◆																							
CE0006	CE No.006 - Additional Duty Point for Effluent Transfer Pumps	0		27-Mar-20 A		16-Apr-25				◆																							
CE0007	CE No.007 - Additional Adjustable Weir at UV System No.1 & Effluent Pumping Station No.1	0		30-Jun-20 A		16-Apr-25				◆																							
CE0008	CE No.008 - Provision of Additional 2nd Temp. Power Supply for UV System No.1 & Effluent Pumping Station No.1	0		03-Aug-20 A		16-Apr-25				◆																							
CE0009	CE No.009 - Employment of Temporary Staff under Anti-Epidemic Fund	0		07-Jul-20 A		16-Apr-25				◆																							
CE0010	CE No.010 - Revised Setting Out Plan for Sidestream Treatment Facilities	0		07-Jul-20 A		16-Apr-25				◆																							
CE0012	CE No.012 - Provision of Touchscreen Display System for the Project Manager's Office	0		06-Oct-20 A		16-Apr-25				◆																							
CE0013	CE No.013 - Feasibility Study for Adopting emMIC & DfMA	0		22-Oct-20 A		16-Apr-25				◆																							
CE0014	CE No.014 - Revised FS Water Supply Arrangement for CHP, Guard House, Workshop No.2, Sludge Digester & Distribution Chamber	0		28-Oct-20 A		16-Apr-25				◆																							
CE0015	CE No.015 - Revised Plumbing Arrangement for Workshop No.2, UV & Effluent No.1, CHP, SPS & FCDF, DOU No. 11 & 12, H2S, SDDC	0		30-Oct-20 A		16-Apr-25				◆																							
CE0016	CE No.016 - Elect. Provisions for Addit. 800A ACB w/ CMPD as Standby Supply for MBBR for UV No.2 for Future Expansion	0		28-Oct-20 A		16-Apr-25				◆																							
CE0018	CE No.018 - MVAC Layout for Plant Service Water System	0		05-Nov-20 A		16-Apr-25				◆																							
CE0020	CE No.020 - Addit. set of 11kV power feeder panel at 11kV SB in CHP for future connection to Zone B in Stage 2	0		09-Nov-20 A		16-Apr-25				◆																							
CE0201	NCE-PMI-0201 - Provision of Access Platform for EOT cranes in UV System No.1 & Effluent Pumping Station No.1	0		16-Nov-20 A		16-Apr-25				◆																							
CE0202	NCE-PMI-0202 - Revised Plumbing Arrangement for Sludge Dewatering Building	0		26-Nov-20 A		16-Apr-25				◆																							
CE0203	NCE-PPMI-0203 - MVAC Layout for SAS Pumping Station	0		25-Nov-20 A		16-Apr-25				◆																							
CE0204	NCE-PMI-0204 - CHP - Provisional of Additional ATS for Power Supply for UPS	0		08-Dec-20 A		16-Apr-25				◆																							
CE0205	NCE-PPMI-0205 - Fibre Optics Network Connection for SCADA Systems between Zone B & Zone C	0		23-Nov-20 A		16-Apr-25				◆																							
CE0206	NCE-PMI-0206 - SDB - Provisional of Additional ATS for Power Supply for UPS	0		15-Dec-20 A		16-Apr-25				◆																							
CE0207	NCE-PMI-0207 - TX Rm & Switch Rm - Provision of ATS for Power Supply for UPS	0		01-Dec-20 A		16-Apr-25				◆																							
CE0208	NCE-PPMI-0208 - Provision of Drainage service Layout for SAS Pumping Station	0		26-Nov-20 A		16-Apr-25				◆																							
CE0209	NCE-PPMI-0209 - Drainage System for Plant Service Water System	0		26-Nov-20 A		16-Apr-25				◆																							
CE0210	NCE-PPMI-0210 - Electrical provisions for MVAC & Drainage Systems in SAS Pumping Station	0		08-Dec-20 A		16-Apr-25				◆																							
CE0211	NCE-PPMI-0211 - Revised MVAC Layout & Electrical Provisions for MVAC in TX and Switch Rm	0		02-Dec-20 A		16-Apr-25				◆																							



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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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30-Nov-22	Rev28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart													
										2020	2021	2022	2023	2024	2025								
CE0284	NCE-PMI-0284 - Revised Road Lighting System for Zone C	0		03-Dec-21 A		16-Apr-25																	
CE0286	NCE-NCE-0286 - Change of Site Access Date to Combined Heat and Power Building Forming Part of Portion C-2B of the Site	0		21-Jan-22 A		16-Apr-25																	
CE0286a	NCE-NCE-0286 - Portion C-2B (within 765 to 880 days from starting date)	880	23-Oct-19 A	20-Mar-22 A	20-Mar-22	20-Mar-22			CE0286b														
CE0286b	NCE-NCE-0286 - Revised Access Date for Portion C2-B	1	21-Nov-22	21-Nov-22*	20-Mar-22	20-Mar-22	-246	CE0286a															
CE0287	NCE-NCE-0287 - Change of Site Access Date to Sludge Digester & Distribution Chamber Forming Part of Portion C- 2C	0		24-Dec-21 A		16-Apr-25																	
CE0287a	NCE-NCE-0287 - Portion C-2C (within 715 to 934 days from starting date)	934	23-Oct-19 A	13-May-22 A	13-May-22	13-May-22			CE0287b														
CE0287b	NCE-NCE-0287 - Revised Access Date for Portion C2-C	1	21-Nov-22	21-Nov-22*	13-May-22	13-May-22	-192	CE0287a															
CE0288	NCE-NCE-0288 - Change of Site Access Date to Sludge Dewatering Building Forming Part of the Portion C- 2A of the site	0		18-Dec-21 A		16-Apr-25																	
CE0288a	NCE-NCE-0288 - Portion C-2A (within 705 to 831 days from starting date)	831	23-Oct-19 A	30-Jan-22 A	30-Jan-22	30-Jan-22			CE0288b														
CE0288b	NCE-NCE-0288 - Revised Access Date for Portion C-2A	1	21-Nov-22	21-Nov-22*	30-Jan-22	30-Jan-22	-295	CE0288a															
CE0292	RCNE-CNE-0292 - Inclement Weather - August 2021 (Time Implication)	0		02-Nov-21 A		16-Apr-25																	
CE0293	RCNE-CNE-0293 - Inclement Weather - September 2021 (Time Implication)	0		02-Nov-21 A		16-Apr-25																	
CE0294	NCE-PMI-0294 - IIB for FAT for THP System	0		30-Nov-21 A		16-Apr-25																	
CE0296	NCE-PMI-0296 - Provision of emMIC Adoption of FRP Walkway and Platform for Sludge Digesters	0		03-Dec-21 A		16-Apr-25																	
CE0297	NCE-PMI-0297-Provision of Addit. Module BIM Collaboration Pro to existing CDE&Omission of Procurement Maintenance of CDE	0		03-Dec-21 A		16-Apr-25																	
CE0298	NCE-PMI-0298 - Additional Light Fittings at Roof Floor of UV System No.1 & Effluent Pumping Station No.1	0		30-Nov-21 A		16-Apr-25																	
CE0299	NCE-PMI-0299 - Revised Plumbing Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-21 A		16-Apr-25																	
CE0300	NCE-PMI-0300 - Revised Plumbing Layout for CHP, DOU 12 and SD&DC	0		10-Mar-22 A		16-Apr-25																	
CE0301	NCE-PMI-0301 - Revised Plumbing Layout for SDB & FeCl3 Dosing System	0		24-Feb-22 A		16-Apr-25																	
CE0302	NCE-PMI-0302 - Revised Lighting Layout Plan for Workshop No.2	0		17-Dec-21 A		16-Apr-25																	
CE0303	NCE-CNE-0303 - Revise Fire Services Provision for Server Room of Workshop No.2	0		19-Jan-22 A		16-Apr-25																	
CE0304	NCE-PMI-0304 - Provision of Digital Displaying Screen and Softwarewithin Portion B Area	0		29-Dec-21 A		16-Apr-25																	
CE0305	NCE-PMI-0305 - Process Review for Advance Works	0		12-Jan-22 A		16-Apr-25																	
CE0306	NCE-CNE-0306 - Additional Trial Pits & the Associated Modification Works for Uncharted Utilities at STF	0		01-Mar-22 A		16-Apr-25																	
CE0307	NCE-PMI-0307 - Revised Quantity for Stoplogs of Sewage Pumping Station	0		13-Dec-21 A		16-Apr-25																	
CE0309	RCNE-CNE-0309 - Inclement Weather - October 2021 (Time Implication)	0		16-Dec-21 A		16-Apr-25																	
CE0310	NCE-PMI-0310 - Temp. Leased Line for UV System No.1, Effluent PS No.1 & existing Control Room at Zone B	0		20-Dec-21 A		16-Apr-25																	
CE0311	NCE-PMI-0311 - Temp. Setup for SCADA System Monitoring & CCTV System Surveillance	0		29-Dec-21 A		16-Apr-25																	
CE0312	CNE-0312 - Weather Condition Affecting the Site in Oct due to Typhoon Signal No.8 or above, Red/Black Rainstorm Warning	0		29-Dec-21 A		16-Apr-25																	
CE0313	CNE-0313 - Inclement Weather - November 2021 (Time Implication)	0		29-Dec-21 A		16-Apr-25																	
CE0315	NCE-PMI-0315 - Modification of Monorail LA-01-04 in Sludge Dewatering Building	0		30-Dec-21 A		16-Apr-25																	
CE0317	NCE-PMI-0317 - Revised CCTV Layout Plan & Addition of CCTV Camera for UV System No.1 & Effluent Pumping Station	0		11-Jan-22 A		16-Apr-25																	
CE0325	NCE-PMI-0325 - Provision of 2 Nos. of 3 Tons Mobile A-frame with Electrical Hoist in Sludge Dewatering Building	0		14-Mar-22 A		16-Apr-25																	
CE0327	NCE-PMI-0327 - Change of Material for Electrical Wiring Accessories	0		08-Mar-22 A		16-Apr-25																	

	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - WBS Page 9 of 58		<p style="text-align: center;">Contract No. DE/2018/03</p> <p style="text-align: center;">Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1</p> <p style="text-align: center;">Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities</p> <p style="text-align: center;">Revised Programme - as at 20 Nov 2022</p>	<table border="1"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>31-Jul-22</td> <td>Rev24</td> <td>LT</td> <td>KM</td> </tr> <tr> <td>31-Aug-22</td> <td>Rev25</td> <td>LT</td> <td>KM</td> </tr> <tr> <td>30-Sep-22</td> <td>Rev26</td> <td>LT</td> <td>KM</td> </tr> <tr> <td>31-Oct-22</td> <td>Rev27</td> <td>LT</td> <td>KM</td> </tr> <tr> <td>30-Nov-22</td> <td>Rev28</td> <td>LT</td> <td>KM</td> </tr> </tbody> </table>	Date	Revision	Checked	Approved	31-Jul-22	Rev24	LT	KM	31-Aug-22	Rev25	LT	KM	30-Sep-22	Rev26	LT	KM	31-Oct-22	Rev27	LT	KM	30-Nov-22	Rev28	LT	KM
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	31-Jul-22	Rev24	LT	KM																								
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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart (2020-2025)																											
										2020							2021							2022							2023						
CE0328	NCE-PMI-0328 - Provision of Chequer Plates at SAS Pumping Station	0	22-Mar-22 A	16-Apr-25						[Gantt bars and milestones for CE0328]																											
CE0329	NCE-PMI-0329 - Provision of IIB for FAT for Sludge Thickening and Dewatering Centrifuges	0	23-Mar-22 A	16-Apr-25						[Gantt bars and milestones for CE0329]																											
CE0333	NCE-PMI-0333 - Revised MVAC Layout and Control Schematic for Workshop No.2	0	30-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0333]																											
CE0334	NCE-PMI-0334 - Provision of 1 Set of SWL 1 Tons Davit with Electrical Chain Hoist on the Roof of Distribution Chamber	0	02-Sep-22 A	16-Apr-25						[Gantt bars and milestones for CE0334]																											
CE0335	NCE-PMI-0335 - Revised Power & Control for MVAC Provision at Workshop No.2	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0335]																											
CE0336	NCE-PMI-0336 - Provision of Additional Temporary Storage Area	0	30-Mar-22 A	16-Apr-25						[Gantt bars and milestones for CE0336]																											
CE0337	NCE-PMI-0337 - Revised Pipe Trenches in Zone C	0	24-Mar-22 A	16-Apr-25						[Gantt bars and milestones for CE0337]																											
CE0338	NCE-PMI-0338 - Provision of Additional RFID Handheld Readers with 4G Data SIM Card Service	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0338]																											
CE0339	NCE-PMI-0339 - Revised Lighting Layout for SDB	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0339]																											
CE0340	NCE-PMI-0340 - Building Services & SCADA Interface Provisions for Workshop No.2	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0340]																											
CE0341	NCE-PMI-0341 - Revised MVAC Layout for Sludge Digesters and Distribution Chamber	0	05-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0341]																											
CE0342	NCE-PMI-0342 - Provision and Installation of Additional Pipes to Manhole MHSS1	0	12-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0342]																											
CE0343	CNE-0343 - Inclement Weather - December 2021 (Time Implication)	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0343]																											
CE0344	CNE-0344 - Inclement Weather - January 2022 (Time Implication)	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0344]																											
CE0345	CNE-0345 - Inclement Weather - February 2022 (Time Implication)	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0345]																											
CE0346	NCE-CNE-0346 - Left in Temporary Steel Casing for Pile No. SSHP5 at Sidestream Treatment Facilities	0	16-Nov-22 A	16-Apr-25						[Gantt bars and milestones for CE0346]																											
CE0347	NCE-PMI-0347 - IIB for FAT for 11kV Switchboards	0	01-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0347]																											
CE0348	NCE-PMI-0348 - Provision of (IIB) for FAT for CHP Generating Sets	0	04-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0348]																											
CE0352	NCE-PMI-0352 - Revised MVAC Layout and for Transformer and Switch Room	0	10-Jun-22 A	16-Apr-25						[Gantt bars and milestones for CE0352]																											
CE0353	NCE-PMI-0353 - Additional Auto-sampler for sampling Location at UV system No.1 and Effluent Pumping Station No.1	0	27-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0353]																											
CE0354	NCE-EWP-0354 - Early Deployment of Tower Crane to Enhance Programme affected by Uncharted U/U at STF	0	10-Jun-22 A	16-Apr-25						[Gantt bars and milestones for CE0354]																											
CE0359	NCE-PMI-0359 - Revised Lighting Layout for Sludge Digesters and Distribution Chamber (Basement 1 and Basement 2)	0	16-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0359]																											
CE0360	NCE-PMI-0360 - Provision of Video Wall with Additional Monitors in the Control Room of Workshop No.2	0	29-Apr-22 A	16-Apr-25						[Gantt bars and milestones for CE0360]																											
CE0361	NCE-PMI-0361 - Revised Power Layout for Sludge Dewatering Building	0	08-Jun-22 A	16-Apr-25						[Gantt bars and milestones for CE0361]																											
CE0362	NCE-CNE-0362 - Amendment of Dangers Goods Ordinance (Cap.295)	0	19-Aug-22 A	16-Apr-25						[Gantt bars and milestones for CE0362]																											
CE0363	NCE-PMI-0363 - Revised MVAC Layout and Control Schematic for CHP Building	0	30-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0363]																											
CE0364	NCE-PMI-0364 - Provision of Security and Utility Services for Additional Temporary Storage Area	0	16-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0364]																											
CE0364-1	NCE-PMI-0364-1 - Provision of Security and Utility Services for Additional Temporary Storage Area	0	10-Oct-22 A	16-Apr-25						[Gantt bars and milestones for CE0364-1]																											
CE0366	CNE-0366 - No Access to and Use of Portion C-2B for Area for CHP	0	20-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0366]																											
CE0367	NCE-PMI-0367 - Sealing Works for UV System & Effluent Pumping Station No. 1	0	20-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0367]																											
CE0369	CNE-0369 - No Access to and use of Portion C-2C for Area for SD & DC	0	20-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0369]																											
CE0370	CNE-0370 - No Access to and Use of Portion C-2A for Area for SDB	0	20-May-22 A	16-Apr-25						[Gantt bars and milestones for CE0370]																											

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					31-Jul-22	Rev24	LT	KM
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					30-Sep-22	Rev26	LT	KM
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30-Nov-22	Rev28	LT	KM					

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart															
										2020	2021	2022	2023	2024	2025										
PL1030	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	503	20-Nov-19 A	05-Apr-21 A	03-Oct-23	03-Oct-23		AD1220, PL1010	PL1050																
PL1040	Maintain Contractor's Site Office	1255	28-Nov-20 A	05-May-24	03-Oct-23	17-Mar-25	316	PL1020	PL1060																
PL1050	Maintain Contractor's Storage Area	1126	06-Apr-21 A	05-May-24	03-Oct-23	17-Mar-25	316	PL1030	PL1060																
PL1060	Removal of Site Office, Storage & Relevant Facilities	30	06-May-24	04-Jun-24	18-Mar-25	16-Apr-25	316	PL1040, PL1050	CD1040																
Site Preliminaries			2003	23-Oct-19 A	16-Apr-25	13-Sep-23	16-Apr-25	0																	
PL1070	Provision of Insurance, Third Party Insurances & PII	1687	23-Oct-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010	CD1040																
PL1080	Provision of 2 Contract Car for the Use of the PM & Supervisor	1687	23-Oct-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010	CD1040																
PL1090	Provision of 1 Electric Car for the Use of the PM & Supervisor	1596	22-Jan-20 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1100	Provision of Photographs	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1110	Provision of Environmental Mitigation Measures	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1120	Provision of Air Pollution Abatement	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1130	Provision of Noise Pollution Abatement	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1140	Provision of Wastewater Pollution Abatement	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1150	Provision of Wastewater Management	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1160	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1170	Provision of Environmental Management	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1180	Provision of Site Management Plan for Trip Ticket System	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1190	Provision of As-constructed Drawings for Section 3	180	27-Feb-24	24-Aug-24	12-Nov-23	10-May-24	-107	CD1010, S3C1150	CD1040, SC31110																
PL1200	Provision of As-constructed Drawings for Section 4	60	13-Oct-22 A	11-Dec-22	27-Mar-25	16-Apr-25	857	CD1010, S4C1160	CD1040, SC41110																
PL1210	Provision of As-constructed Drawings for Section 5	180	29-Jan-24	26-Jul-24	07-Nov-23	04-May-24	-83	CD1010, S5DIGC1040	CD1040, SC51110																
PL1220	Provision of Systematic Risk Management	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1230	Provision of Site Liaison Group & Community Liaison Group	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1240	Provision of 24-Hour Telephone Line	1659	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040																
PL1260	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 3	90	21-Nov-22	18-Feb-23	13-Sep-23	12-Dec-23	297		PL1270																
PL1270	Provision of Training for Employer's Staff for Section 3	60	20-May-23	18-Jul-23	11-Mar-24	10-May-24	297	CD1010, PL1260	CD1040, SC31110																
PL1280	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 4	27	21-Nov-22	17-Dec-22	09-Mar-25	04-Apr-25	839		PL1290																
PL1290	Provision of Training for Employer's Staff for Section 4	12	18-Dec-22	29-Dec-22	05-Apr-25	16-Apr-25	839	CD1010, S4T1020, PL1280	CD1040, SC41110																
PL1300	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 5	90	02-Aug-24	30-Oct-24	08-Oct-23	05-Jan-24	-299		PL1310																
PL1310	Provision of Training for Employer's Staff for Section 5	30	29-Jan-25	27-Feb-25	05-Apr-24	04-May-24	-299	CD1010, S5T1180	CD1040, SC51110																
PL1320	Prepare & Submit O&M Manual for Section 3	90	06-Nov-24	03-Feb-25	26-Dec-23	25-Mar-24	-316	CD1010	CD1040, PL1330																
PL1330	PM Review & Comment O&M Manual for Section 3	21	04-Feb-25	24-Feb-25	25-Mar-24	15-Apr-24	-316	PL1320	PL1340																
PL1340	Revise & Re-submit O&M Manual for Section 3	30	25-Feb-25	26-Mar-25	15-Apr-24	15-May-24	-316	PL1330	PL1350																
PL1350	PM Review & Approval of O&M Manual for Section 3	21	27-Mar-25	16-Apr-25	15-May-24	05-Jun-24	-316	PL1340	CD1040, SC31110																



- Remaining Work
- Critical Activity
- Milestone
- Actual Progress

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 Nov 2022

Date	Revision	Checked	Approved
31-Jul-22	Rev24	LT	KM
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30-Sep-22	Rev26	LT	KM
31-Oct-22	Rev27	LT	KM
30-Nov-22	Rev28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020												2021												2022												2023												2024												2025																																																	
										1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
S3D1130	Review & Accept of ABWF Works Drawings by PM	406	12-Mar-21 A	21-Nov-22	16-Mar-23	17-Mar-23	116	S3D1120	S3C1140, S3D1090																																																																																																														
Civil / Structural		639	13-Jul-20 A	18-Feb-22 A	16-Jul-22	16-Apr-25																																																																																																																	
S3D1140	Prepare & Submit Loading Plan to ICE	60	13-Jul-20 A	25-Sep-20 A	16-Jul-22	16-Jul-22			S3D1150																																																																																																														
S3D1150	Review & Comment on Loading Plan by ICE	14	26-Sep-20 A	23-Oct-20 A	16-Jul-22	16-Jul-22		S3D1140	S3D1160																																																																																																														
S3D1160	Revise & Re-submit Loading Plan to ICE	175	24-Oct-20 A	20-Apr-21 A	16-Jul-22	16-Jul-22		S3D1150	S3D1170																																																																																																														
S3D1170	Review & Accept of Loading Plan by ICE	7	21-Apr-21 A	26-Apr-21 A	16-Jul-22	16-Jul-22		S3D1160	S3D1180																																																																																																														
S3D1180	Prepare & Submit Loading Plan to PM	7	27-Apr-21 A	27-Apr-21 A	16-Jul-22	16-Jul-22		S3D1170	S3D1190																																																																																																														
S3D1190	Review & Accept of Loading Plan by PM & DSD (incl. BCM)	359	28-Apr-21 A	18-Feb-22 A	16-Jul-22	16-Jul-22		S3D1180	S3C1090																																																																																																														
S3D1200	Prepare & Submit GI Plan	60	13-Jul-20 A	26-Aug-20 A	01-Sep-22	01-Sep-22			S3D1210																																																																																																														
S3D1210	Review & Comment on GI Plan by PM	14	27-Aug-20 A	10-Sep-20 A	01-Sep-22	01-Sep-22		S3D1200	S3D1220																																																																																																														
S3D1220	Revise & Re-submit GI Plan	7	11-Sep-20 A	28-Sep-20 A	01-Sep-22	01-Sep-22		S3D1210	S3D1230																																																																																																														
S3D1230	Review & Accept of GI Plan by PM	21	29-Sep-20 A	02-Nov-20 A	01-Sep-22	01-Sep-22		S3D1220	S3C1020																																																																																																														
S3D1240	Prepare & Submit Foundation Design / Drawings to ICE & PM	60	20-Aug-20 A	09-Oct-20 A	01-Sep-22	01-Sep-22			S3D1250, S3C1010, S3D1300, S3P1180																																																																																																														
S3D1250	Review & Comment on Foundation Design / Drawings by ICE & PM	79	10-Oct-20 A	27-Nov-20 A	16-Apr-25	16-Apr-25		S3D1240	S3D1260																																																																																																														
S3D1260	Revise & Re-submit Foundation Design / Drawings to ICE & PM	14	28-Nov-20 A	29-Jan-21 A	16-Apr-25	16-Apr-25		S3D1250	S3D1270																																																																																																														
S3D1270	Review & Accept of Foundation Design / Drawings by ICE & PM	10	30-Jan-21 A	26-Feb-21 A	16-Apr-25	16-Apr-25		S3D1260	S3D1280																																																																																																														
S3D1280	Prepare & Submit Foundation Design / Drawings to DSD (incl. BCM)	7	27-Feb-21 A	05-Mar-21 A	16-Apr-25	16-Apr-25		S3D1270	S3D1290																																																																																																														
S3D1290	Review & Accept of Foundation Design / Drawings by DSD (incl. BCM)	45	06-Mar-21 A	26-Mar-21 A	16-Apr-25	16-Apr-25		S3D1280																																																																																																															
S3D1300	Prepare & Submit Substructure / Superstructure Design / Drawings to ICE & PM	25	10-Oct-20 A	05-Nov-20 A	01-Sep-22	01-Sep-22		S3D1240	S3D1310, S3P1180																																																																																																														
S3D1310	Review & Comment on Substructure / Superstructure Design / Drawings by ICE & PM	55	06-Nov-20 A	30-Dec-20 A	01-Sep-22	01-Sep-22		S3D1300	S3D1320																																																																																																														
S3D1320	Revise & Re-submit Substructure / Superstructure Design / Drawings to ICE & PM	72	31-Dec-20 A	26-Apr-21 A	01-Sep-22	01-Sep-22		S3D1310	S3D1330																																																																																																														
S3D1330	Review & Accept of Substructure / Superstructure Design / Drawings by ICE & PM	271	27-Apr-21 A	18-Feb-22 A	01-Sep-22	01-Sep-22		S3D1320	S3D1340																																																																																																														
S3D1340	Prepare & Submit Substructure / Superstructure Design / Drawings to DSD (incl. BCM)	2	13-Dec-21 A	23-Dec-21 A	01-Sep-22	01-Sep-22		S3D1330	S3D1350																																																																																																														
S3D1350	Review & Accept of Substructure / Superstructure Design / Drawings by DSD (incl. BCM)	119	24-Dec-21 A	18-Feb-22 A	01-Sep-22	01-Sep-22		S3D1340	S3C1100																																																																																																														
ELS		214	07-Sep-21 A	26-Apr-22 A	01-Sep-22	01-Sep-22																																																																																																																	
S3D1360	Prepare & Submit ELS Plan to ICE	45	07-Sep-21 A	20-Oct-21 A	01-Sep-22	01-Sep-22		S3P1400	S3D1370																																																																																																														
S3D1370	Review & Accept of ELS Plan by ICE	5	21-Oct-21 A	18-Nov-21 A	01-Sep-22	01-Sep-22		S3D1360	S3D1380																																																																																																														
S3D1380	Prepare & Submit ELS Plan to PM	3	19-Nov-21 A	19-Nov-21 A	01-Sep-22	01-Sep-22		S3D1370	S3D1390																																																																																																														
S3D1390	Review & Accept of ELS Plan by PM	153	20-Nov-21 A	26-Apr-22 A	01-Sep-22	01-Sep-22		S3D1380	S3C1080																																																																																																														
Process Design		454	06-Jul-20 A	29-Oct-21 A	16-Apr-25	16-Apr-25																																																																																																																	
S3D1400	Prepare & Submit E&M Works (Process) Design Drawings	198	06-Jul-20 A	10-Nov-20 A	16-Apr-25	16-Apr-25			S3D1410																																																																																																														
S3D1410	Review & Comment on E&M Works (Process) Design Drawings by PM	21	11-Nov-20 A	08-Dec-20 A	16-Apr-25	16-Apr-25		S3D1400	S3D1420																																																																																																														

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Calendar																																																			
										2020	2021	2022	2023	2024	2025	26																																													
S3D1420	Revise & Re-submit E&M Works (Process) Design Drawings	87	09-Dec-20 A	26-Mar-21 A	16-Apr-25	16-Apr-25		S3D1410	S3D1430																																																				
S3D1430	Review & Accept of E&M Works (Process) Design Drawings by PM	278	27-Mar-21 A	29-Oct-21 A	16-Apr-25	16-Apr-25		S3D1420																																																					
E&M Design		715	07-Jun-20 A	21-Nov-22	01-Sep-22	16-Apr-25	877																																																						
S3D1440	Prepare & Submit General Arrangement Drawings	298	07-Jun-20 A	31-Mar-21 A	01-Sep-22	01-Sep-22		S3P1000	S3D1450, S3C1080																																																				
S3D1450	Review & Comment on General Arrangement Drawings by PM	37	01-Apr-21 A	07-May-21 A	16-Apr-25	16-Apr-25		S3D1440	S3D1460																																																				
S3D1460	Revise & Re-submit General Arrangement Drawings	247	08-May-21 A	06-Jan-22 A	16-Apr-25	16-Apr-25		S3D1450	S3D1470																																																				
S3D1470	Review & Accept of General Arrangement Drawings by PM	105	07-Jan-22 A	21-Nov-22	16-Apr-25	16-Apr-25	877	S3D1460																																																					
BS		598	03-Jul-20 A	21-Nov-22	15-Jan-23	16-Jan-23	56																																																						
S3D1480	Prepare & Submit BS Works Design & Dwgs for Sidestream Treatment Facilities	264	03-Jul-20 A	10-Dec-20 A	15-Jan-23	15-Jan-23			S3D1490																																																				
S3D1490	Review & Comment on BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	11-Jan-21 A	15-Jan-23	15-Jan-23		S3D1480	S3D1500																																																				
S3D1500	Revise & Re-submit BS Works Design & Dwgs for Sidestream Treatment Facilities	102	05-Jan-21 A	31-Mar-21 A	15-Jan-23	15-Jan-23		S3D1490	S3D1510																																																				
S3D1510	Review & Accept of BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	386	01-Apr-21 A	21-Nov-22	15-Jan-23	16-Jan-23	56	S3D1500	S3S1020																																																				
S3D1520	Submission & Submit FS Works Design & Dwgs for Sidestream Treatment Facilities	182	03-Aug-20 A	10-Dec-20 A	15-Jan-23	15-Jan-23			S3D1530																																																				
S3D1530	Review & Comment on FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	19-Jan-21 A	15-Jan-23	15-Jan-23		S3D1520	S3D1540																																																				
S3D1540	Revise & Re-submit FS Works Design & Dwgs for Sidestream Treatment Facilities	66	20-Jan-21 A	19-Mar-21 A	15-Jan-23	15-Jan-23		S3D1530	S3D1550																																																				
S3D1550	Review & Accept of FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	398	20-Mar-21 A	21-Nov-22	15-Jan-23	16-Jan-23	56	S3D1540	S3S1020																																																				
Major Plant & Materials Procurement		891	01-Feb-21 A	30-Aug-23	16-Jul-22	16-May-23	-107																																																						
Civil & Structure		378	01-Feb-21 A	19-Apr-22 A	16-Jul-22	01-Sep-22																																																							
S3P1410	Procurement, Manufacture & Delivery of Piling	60	01-Feb-21 A	14-Apr-21 A	01-Sep-22	01-Sep-22			S3C1040																																																				
S3P1420	Procurement, Manufacture & Delivery of Concrete Mix	15	21-Mar-22 A	19-Apr-22 A	16-Jul-22	16-Jul-22			S3C1090																																																				
S3P1430	Procurement, Manufacture & Delivery of Steel Reinforcement	15	11-Mar-22 A	25-Mar-22 A	16-Jul-22	16-Jul-22			S3C1090																																																				
S3P1440	Procurement, Manufacture & Delivery of Metal Works Material	80	09-May-21 A	07-Jul-21 A	01-Sep-22	01-Sep-22			S3C1080																																																				
ABWF		120	03-May-23	30-Aug-23	16-Jan-23	16-May-23	-107																																																						
S3P1450	Procurement, Manufacture & Delivery of Water Proofing Material	60	18-May-23	16-Jul-23	31-Jan-23	01-Apr-23	-107		S3C1130																																																				
S3P1460	Procurement, Manufacture & Delivery of ABWF Works Material	120	03-May-23	30-Aug-23	16-Jan-23	16-May-23	-107		S3C1140																																																				
E&M Process		354	20-May-22 A	14-Jul-23	11-Aug-22	20-Apr-23	-85																																																						
S3P1471	Procurement of Diffusers for Phospaq and Anammox Internals	93	21-Aug-22 A	21-Nov-22	27-Aug-22	27-Aug-22	-86		S3P1472																																																				
S3P1472	Manufacture & Delivery of Diffusers for Phospaq and Anammox Internals	215	12-Dec-22	14-Jul-23	17-Sep-22	19-Apr-23	-86	S3P1471	S3C2280, S3C2290																																																				
S3P1473	Procurement of Heat Exchanger (Plate type)	40	05-Dec-22*	13-Jan-23	25-Aug-22	04-Oct-22	-102		S3P1474																																																				
S3P1474	Manufacture & Delivery of Heat Exchanger (Plate type)	140	28-Jan-23	16-Jun-23	18-Oct-22	07-Mar-23	-102	S3P1473	S3C2250																																																				
S3P1475	Procurement of Mixer	22	11-Nov-22 A	21-Nov-22	08-Nov-22	08-Nov-22	-13		S3P1476																																																				
S3P1476	Manufacture & Delivery of Mixer	140	06-Dec-22	24-Apr-23	23-Nov-22	11-Apr-23	-13	S3P1475	S3C2145																																																				
S3P1477	Procurement of Ancillary Air Blower	96	21-Aug-22 A	24-Nov-22	28-Oct-22	31-Oct-22	-24		S3P1478																																																				
S3P1478	Manufacture & Delivery of Ancillary air blower	149	09-Dec-22	06-May-23	15-Nov-22	12-Apr-23	-24	S3P1477	S3C2270																																																				
S3P1479	Procurement of Buffer tank Lifting Pump	38	21-Aug-22 A	27-Sep-22 A	14-Nov-22	14-Nov-22			S3P1481																																																				
S3P1481	Manufacture & Delivery of Buffer tank Lifting Pump	120	29-Sep-22 A	26-Jan-23	14-Nov-22	20-Jan-23	-7	S3P1479	S3C2070																																																				



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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 Nov 2022

Date	Revision	Checked	Approved
31-Jul-22	Rev24	LT	KM
31-Aug-22	Rev25	LT	KM
30-Sep-22	Rev26	LT	KM
31-Oct-22	Rev27	LT	KM
30-Nov-22	Rev28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart Timeline (2020-2025)																																																			
										2020				2021				2022				2023				2024				2025																															
S3P1735	Procurement of uPVC pipe and GRP Pipe	101	21-Aug-22 A	31-Dec-22	22-Sep-22	02-Nov-22	-60		S3P1745	[Gantt Bar: 21-Aug-22 to 31-Dec-22]																																																			
S3P1745	Manufacture & Delivery of uPVC pipe and GRP Pipe	140	01-Jan-23	20-May-23	02-Nov-22	22-Mar-23	-60	S3P1735	S3C2251, S3C2275, S3C2300	[Gantt Bar: 01-Jan-23 to 20-May-23]																																																			
S3P1755	Procurement of Flushing pump and Hot water pump	97	24-Oct-22 A	24-Dec-22	07-Sep-22	10-Oct-22	-75		S3P1765	[Gantt Bar: 24-Oct-22 to 24-Dec-22]																																																			
S3P1765	Manufacture & Delivery of Flushing pump and Hot water pump	140	08-Jan-23	27-May-23	25-Oct-22	13-Mar-23	-75	S3P1755	S3C2271	[Gantt Bar: 08-Jan-23 to 27-May-23]																																																			
S3P1766	Procurement of EM Flowmeter	86	21-Aug-22 A	14-Nov-22 A	22-Dec-22	22-Dec-22			S3P1767	[Gantt Bar: 21-Aug-22 to 14-Nov-22]																																																			
S3P1767	Manufacture & Delivery of EM Flowmeter	112	29-Nov-22	20-Mar-23	30-Dec-22	20-Apr-23	31	S3P1766	B1363	[Gantt Bar: 29-Nov-22 to 20-Mar-23]																																																			
S3P1768	Procurement of Instrument	111	21-Aug-22 A	26-Nov-22	10-Dec-22	15-Dec-22	19		S3P1769	[Gantt Bar: 21-Aug-22 to 26-Nov-22]																																																			
S3P1769	Manufacture & Delivery of Instrument	112	11-Dec-22	01-Apr-23	30-Dec-22	20-Apr-23	19	S3P1768	B1363	[Gantt Bar: 11-Dec-22 to 01-Apr-23]																																																			
S3P1772	Procurement of Lifting Appliance	14	23-Aug-22 A	16-Sep-22 A	23-Sep-22	23-Sep-22			S3P1773	[Gantt Bar: 23-Aug-22 to 16-Sep-22]																																																			
S3P1773	Manufacture & Delivery of Lifting Appliance	140	30-Nov-22*	18-Apr-23	23-Sep-22	10-Feb-23	-68	S3P1772	S3C2000, S3C2010, S3C2020, S3C2030, S3C2040, S3C2050	[Gantt Bar: 30-Nov-22 to 18-Apr-23]																																																			
S3P1774	Procurement of Air Blower System	36	04-Jul-22 A	08-Aug-22 A	29-Nov-22	29-Nov-22			S3P1775	[Gantt Bar: 04-Jul-22 to 08-Aug-22]																																																			
S3P1775	Manufacture & Delivery of Air Blower System	222	09-Aug-22 A	18-Mar-23	29-Nov-22	26-Mar-23	8	S3P1774	S3C2260	[Gantt Bar: 09-Aug-22 to 18-Mar-23]																																																			
S3P1778	Procurement of PAM dosing pump	38	21-Aug-22 A	27-Sep-22 A	29-Dec-22	29-Dec-22			S3P1779	[Gantt Bar: 21-Aug-22 to 27-Sep-22]																																																			
S3P1779	Manufacture & Delivery of PAM dosing pump	120	29-Sep-22 A	26-Jan-23	29-Dec-22	05-Mar-23	38	S3P1778	S3C2200	[Gantt Bar: 29-Sep-22 to 26-Jan-23]																																																			
S3P1780	Manufacture & Delivery of Primary and Secondary Clarifiers for Phospaq	257	20-May-22 A	31-Jan-23	14-Jan-23	27-Mar-23	55		S3C2160, S3C2170	[Gantt Bar: 20-May-22 to 31-Jan-23]																																																			
S3P1781	Manufacture & Delivery of Tilted Plates for Phospaq and Anammox internals	235	11-Jun-22 A	31-Jan-23	17-Jan-23	29-Mar-23	57		S3C2180, S3C2190	[Gantt Bar: 11-Jun-22 to 31-Jan-23]																																																			
S3P1782	Manufacture & Delivery of Drum sludge thickener	210	31-May-22 A	26-Dec-22	30-Jan-23	07-Mar-23	71		S3C2215	[Gantt Bar: 31-May-22 to 26-Dec-22]																																																			
BS		378	12-Aug-22 A	24-Aug-23	06-Aug-22	09-May-23	-107			[Gantt Bar: 12-Aug-22 to 24-Aug-23]																																																			
S3P1480	Procurement, Manufacture & Delivery of BS Works Material	120	27-Apr-23	24-Aug-23	10-Jan-23	09-May-23	-107		S3T1080, S3C1250, S3T1020, S3T1000	[Gantt Bar: 27-Apr-23 to 24-Aug-23]																																																			
S3P1482	Procurement of MVAC System	76	21-Nov-22	04-Feb-23	02-Sep-22	17-Nov-22	-80		S3P1483	[Gantt Bar: 21-Nov-22 to 04-Feb-23]																																																			
S3P1483	Manufacture & Delivery of MVAC System	90	05-Feb-23	05-May-23	17-Nov-22	15-Feb-23	-80	S3P1482	B1353, B1354, B1355	[Gantt Bar: 05-Feb-23 to 05-May-23]																																																			
S3P1770	Procurement of Low Voltage Switchboard and Accessories	80	01-Nov-22 A	19-Jan-23	04-Sep-22	02-Nov-22	-78		S3P1771	[Gantt Bar: 01-Nov-22 to 19-Jan-23]																																																			
S3P1771	Manufacture & Delivery of Low Voltage Switchboard and Accessories	134	07-Feb-23*	20-Jun-23	02-Nov-22	15-Mar-23	-97	S3P1770	B1374	[Gantt Bar: 07-Feb-23 to 20-Jun-23]																																																			
S3P1783	Procurement of Transformer	75	12-Aug-22 A	25-Jan-23	06-Aug-22	10-Oct-22	-107		S3P1784	[Gantt Bar: 12-Aug-22 to 25-Jan-23]																																																			
S3P1784	Manufacture & Delivery of Transformer	136	26-Jan-23	10-Jun-23	11-Oct-22	23-Feb-23	-107	S3P1783	B1373	[Gantt Bar: 26-Jan-23 to 10-Jun-23]																																																			
Fitting-out		60	22-Nov-22	20-Jan-23	17-Mar-23	16-May-23	116			[Gantt Bar: 22-Nov-22 to 20-Jan-23]																																																			
S3P1490	Procurement, Manufacture & Delivery of Fit-out Works Material	60	22-Nov-22	20-Jan-23	17-Mar-23	16-May-23	116	S3D1090	S3C1140	[Gantt Bar: 22-Nov-22 to 20-Jan-23]																																																			
Ground Settlement, Tilting & Utility Monitoring		1184	12-Dec-20 A	09-Mar-24	29-Dec-23	16-Apr-25	403			[Gantt Bar: 12-Dec-20 to 09-Mar-24]																																																			
S3C1000	Ground Settlement, Tilting & Utility Monitoring	1184	12-Dec-20 A	09-Mar-24	29-Dec-23	16-Apr-25	403	S3C1010		[Gantt Bar: 12-Dec-20 to 09-Mar-24]																																																			
Civil Works Construction		1613	30-Sep-20 A	21-Mar-25	16-Jul-22	10-May-24	-316			[Gantt Bar: 30-Sep-20 to 21-Mar-25]																																																			
S3C1010	Site Clearance & Survey	50	30-Sep-20 A	12-Dec-20 A	01-Sep-22	01-Sep-22		S3D1240, AD1140, S3P1090	S3C1020, S3C1000	[Gantt Bar: 30-Sep-20 to 12-Dec-20]																																																			



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Revised Programme - as at 20 Nov 2022

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31-Jul-22	Rev24	LT	KM
31-Aug-22	Rev25	LT	KM
30-Sep-22	Rev26	LT	KM
31-Oct-22	Rev27	LT	KM
30-Nov-22	Rev28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart																																																			
										9	2020				2021				2022				2023				2024				2025				26																										
											J	A	S	J	J	J	J	J	J	J	J	J	J	A	S	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J										
S3C1020	Ground Investigation	65	12-Dec-20 A	18-Jan-21 A	01-Sep-22	01-Sep-22		AD1140, S3C1010, S3P1170, S3D1230	S3C1030	[Gantt Bar]																																																			
S3C1030	Pre-drilling Works	180	22-Feb-21 A	19-Mar-21 A	01-Sep-22	01-Sep-22		S3C1020, S3P1250, S3P1330	S3C1040	[Gantt Bar]																																																			
S3C1040	Minor Civil Works & Preparation Works for Piling	31	20-Mar-21 A	20-May-21 A	01-Sep-22	01-Sep-22		S3C1030, S3P1410	S3C1050	[Gantt Bar]																																																			
S3C1050	Piling Works (Impacted by Inclement Weather)	69	21-May-21 A	21-Aug-21 A	01-Sep-22	01-Sep-22		S3C1040	S3C1060	[Gantt Bar]																																																			
S3C1060	Post-drilling, Proof test & remaining works (Impacted by Inclement Weather)	23	22-Aug-21 A	17-Sep-21 A	01-Sep-22	01-Sep-22		S3C1050	S3C1080, S3C1070	[Gantt Bar]																																																			
S3C1070	Site Set-up / Mobilisation (Impacted by Inclement Weather)	51	18-Sep-21 A	20-Nov-21 A	01-Sep-22	01-Sep-22		S3C1060, S3P1400	S3C1080	[Gantt Bar]																																																			
S3C1080	Excavation / ELS (Impacted by Inclement Weather)	157	24-Nov-21 A	31-Aug-22 A	01-Sep-22	01-Sep-22		S3D1440, S3P1440, S3D1390, S3C1060, S3C1070	S3C1090	[Gantt Bar]																																																			
S3C1090	Pile Caps installation & Basement Slab	89	01-Sep-22 A	06-Jan-23	16-Jul-22	01-Sep-22	-128	S3C1080, S3P1420, S3P1430, S3D1190	S3C1100, S3C1130	[Gantt Bar]																																																			
S3C1100	Construction of Basement up to G/F Slab	137	07-Jan-23	23-May-23	01-Sep-22	16-Jan-23	-128	S3C1090, S3D1350, S3S1010	S3C1110, S3C1130, S3C2070, B1356, B1359	[Gantt Bar]																																																			
S3C1110	Construction of G/F up to 1/F Slab	83	27-Mar-23	17-Jun-23	19-Nov-22	10-Feb-23	-128	S3C1100	S3C1120, S3C1130, S3C1999	[Gantt Bar]																																																			
S3C1120	Construction of 1/F up to Roof	58	20-May-23	16-Jul-23	15-Jan-23	13-Mar-23	-125	S3C1110	S3C1130, S3C2049	[Gantt Bar]																																																			
S3C1130	Waterproofing	45	17-Jul-23	30-Aug-23	01-Apr-23	16-May-23	-107	S3P1450, S3C1120, S3C1090, S3C1100, S3C1110	S3C1140	[Gantt Bar]																																																			
S3C1140	External & Internal Finishes - 1st Fix (Blockwork, Plastering, Wet Trade)	90	31-Aug-23	28-Nov-23	16-May-23	14-Aug-23	-107	S3C1130, S3P1460, S3D1090, S3D1130, S3P1490	S3C1150, S3C1160	[Gantt Bar]																																																			
S3C1150	External & Internal Finishes - 2nd Fix (Ceiling / Wall / Floor Finishing, Door)	90	29-Nov-23	26-Feb-24	14-Aug-23	12-Nov-23	-107	S3C1140	SC31110, S3S1170, S3C1160, PL1190	[Gantt Bar]																																																			
S3C1160	Landscaping Works	120	22-Nov-24	21-Mar-25	11-Jan-24	10-May-24	-316	S3C1140, S3C1150	SC31110	[Gantt Bar]																																																			
E&M Installation		151	24-May-23	21-Oct-23	16-Jan-23	13-Jan-24	84																																																						
Mechanical Installations		122	24-May-23	22-Sep-23	20-Jan-23	29-Oct-23	37																																																						
Basement		122	24-May-23	22-Sep-23	20-Jan-23	25-May-23	-120																																																						
S3C2070	Installation of Buffer Tank Lifting pumps (3 nos.)	7	24-May-23	30-May-23	20-Jan-23	27-Jan-23	-124	S3P1481, S3C1100	S3C2090, S3C2300, S3T1032, S3C2080	[Gantt Bar]																																																			
S3C2080	Installation of Secondary Clarifier Sludge discharge pumps (3 nos.)	7	24-May-23	30-May-23	21-Feb-23	27-Feb-23	-92	S3P1550, S3C2070	S3C2100, S3C2300, S3T1032	[Gantt Bar]																																																			
S3C2090	Installation of Anammox Feed pumps (3 nos.)	7	31-May-23	06-Jun-23	27-Jan-23	03-Feb-23	-124	S3C2070, S3P1510	S3C2110, S3C2300, S3T1032	[Gantt Bar]																																																			
S3C2100	Installation of Metering Pumps (2 nos.)	7	31-May-23	06-Jun-23	28-Feb-23	06-Mar-23	-92	S3C2080, S3P1530	S3C2120, S3C2300, S3T1032	[Gantt Bar]																																																			



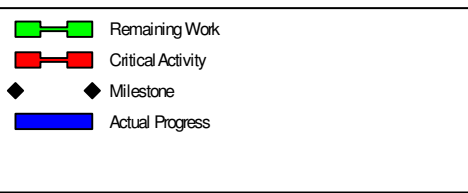
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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020	2021	2022	2023	2024	2025
S3T1170	Phase 2 Commissioning Tests with daily result to PM	45	30-Jun-24	13-Aug-24	03-Feb-24	19-Mar-24	-148	S3T1160, S3T1130, S3T1140	S3T1180, S3T1190, S3T1200, S5T1200						
S3T1180	Submission & Acceptance of Phase 2 Commissioning Tests Report	30	14-Aug-24	12-Sep-24	19-Mar-24	18-Apr-24	-148	S3T1170, S3T1150	S3T1210						
S3T1190	Commissioning of new Anaerobic Digesters (2 nos.) in Zone C Finished	0		28-Jan-25		19-Mar-24	-316	S3T1170, S5T1180	S3T1200						
S3T1200	Phase 3 Commissioning Tests with daily result to PM	30	29-Jan-25	27-Feb-25	19-Mar-24	18-Apr-24	-316	S3T1190, S3T1170	S3T1210						
S3T1210	Submission & Acceptance of Phase 3 Commissioning Tests Report	22	28-Feb-25	21-Mar-25	18-Apr-24	10-May-24	-316	S3T1200, S3T1180	SC31110						
Statutory Submission / Inspection (FSD)		1220	12-Jan-21 A	24-May-24	01-Sep-22	10-May-24	-15								
S3S1000	Prepare & Submit GBP for FSD approval	90	12-Jan-21 A	10-Feb-21 A	01-Sep-22	01-Sep-22			S3S1010						
S3S1010	FSD Review & Approval of GBP	180	11-Feb-21 A	11-Jun-21 A	01-Sep-22	01-Sep-22		S3S1000	S3S1150, S3C1100						
S3S1020	Submit WWO46 Part I/II to WSD (FS / PD)	0	24-May-23		16-Jan-23		-128	S3D1550, S3D1510	B1359, B1356						
S3S1030	Submit WWO46 Part IV to WSD (FS / PD)	0	22-Aug-23		04-Dec-23		105	B1358, B1361	S3S1040						
S3S1040	WSD Inspection	7	05-Sep-23	11-Sep-23	18-Dec-23	25-Dec-23	105	S3S1030	S3S1060, S3S1050						
S3S1050	Issuance of FS Water Certificate	0		25-Sep-23		08-Jan-24	105	S3S1040	S3S1150						
S3S1060	Issuance of Form WWO46 Part Va	0		25-Sep-23		12-Mar-24	169	S3S1040	S3S1080, S3S1070						
S3S1070	System Flushing / Sampling	45	26-Sep-23	09-Nov-23	12-Mar-24	26-Apr-24	169	S3S1060	S3S1080						
S3S1080	Issuance of Form WWO46 Part Vb	0		09-Nov-23		26-Apr-24	169	S3S1060, S3S1070	S3S1090						
S3S1090	Issuance of Water Certificate	0		23-Nov-23		10-May-24	169	S3S1080	SC31110						
S3S1100	Submission & Approval of DG Application to FSD	180	29-Apr-22 A	21-Nov-22	13-Sep-23	14-Sep-23	297		S3C2255						
S3S1110	Submit Application to FSD for DG Licence	0	02-Aug-23		29-Oct-23		89	S3C2255	S3S1120						
S3S1120	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	17-Aug-23	06-Sep-23	13-Nov-23	04-Dec-23	89	S3S1110	S3S1130						
S3S1130	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	21	07-Sep-23	27-Sep-23	04-Dec-23	25-Dec-23	89	S3S1120	S3S1140						
S3S1140	DG Licence issued	0		11-Oct-23		08-Jan-24	89	S3S1130	S3S1150						
S3S1150	Prepare & Submit FS/314, FS/501 & FS/501a	14	25-Oct-23	07-Nov-23	08-Jan-24	22-Jan-24	76	S3S1010, S3S1140, S3S1050, S3T1020	S3S1160						
S3S1160	FSD Review & Approval of FS/314, FS/501 & FS/501a	21	08-Nov-23	28-Nov-23	22-Jan-24	12-Feb-24	76	S3S1150	S3S1170						
S3S1170	F.S. Inspection, Defects Rectification & Re-inspection	60	27-Feb-24	26-Apr-24	12-Feb-24	12-Apr-24	-15	S3S1160, S3C1150, S3T1047, S3T1049, S3T1048, S3T1050	S3S1180						
S3S1180	Issuance of Acceptance Letter	28	27-Apr-24	24-May-24	12-Apr-24	10-May-24	-15	S3S1170	SC31110						
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		932	18-Apr-20 A	13-Sep-22 A	12-Oct-22	16-Apr-25									
Major Plant & Materials Fabrication & Delivery		725	18-Apr-20 A	16-Mar-22 A	15-Feb-23	27-Mar-25									
S4P1000	Procurement & PO for FRP Cover	409	18-Apr-20 A	31-May-21 A	15-Feb-23	15-Feb-23		PL1010	S4P1090						
S4P1010	Procurement & PO for Pipeworks & Associated Valves	90	25-Apr-20 A	15-Jul-20 A	15-Feb-23	15-Feb-23		S1D1000	S4P1130						
S4P1020	Procurement & PO for Elec. Materials	365	18-Jul-20 A	22-Jun-21 A	27-Mar-25	27-Mar-25		S1D1130	S4P1140						
S4P1030	Procurement & PO for FS System	60	02-Jul-20 A	04-Dec-20 A	27-Mar-25	27-Mar-25		S1D1330	S4P1150						
S4P1040	Fabrication of UV Disinfection System	239	18-Jan-21 A	17-Sep-21 A	15-Feb-23	15-Feb-23		S1P1000, KD1000, S1D1210	S4C1080, S4P1050						
S4P1050	FAT for UV Disinfection System	71	23-Jul-21 A	17-Sep-21 A	15-Feb-23	15-Feb-23		S4P1040	S4P1060						



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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart (2020-2025)											
										2020			2021			2022			2023		
S4C1120	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	139	13-Dec-21 A	21-May-22 A	27-Mar-25	27-Mar-25		S4C1110, S4P1140	S4C1150, PL1200	[Gantt bars showing completion by early finish]											
S4C1130	Excavation Works & Cable Laying - by CLP (Impacted by CNE-035)	184	22-Dec-21 A	23-Jun-22 A	15-Feb-23	15-Feb-23			S4C1140	[Gantt bars showing completion by early finish]											
S4C1140	Ready for Power Energization	0		23-Jun-22 A		15-Feb-23		S4C1000, S4C1130, S4S1000	S4S1030, S4T1010	[Gantt bars showing completion by early finish]											
S4C1150	Installation of CCTV System	37	14-Mar-22 A	19-Apr-22 A	27-Mar-25	27-Mar-25		S4C1120	SC41110, PL1200	[Gantt bars showing completion by early finish]											
S4C1160	Installation of FS Link	84	17-Nov-21 A	08-Feb-22 A	27-Mar-25	27-Mar-25			S4S1010, PL1200	[Gantt bars showing completion by early finish]											
Statutory Submission / Inspection		511	17-Apr-21 A	02-Aug-22 A	15-Feb-23	16-Apr-25				[Gantt bars showing completion by early finish]											
CLP Submission		425	17-Apr-21 A	15-Jun-22 A	15-Feb-23	15-Feb-23				[Gantt bars showing completion by early finish]											
S4S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP (Temp. Power)	425	17-Apr-21 A	15-Jun-22 A	15-Feb-23	15-Feb-23			S4C1140	[Gantt bars showing completion by early finish]											
FSD Submission & Inspection		176	01-Apr-22 A	02-Aug-22 A	16-Apr-25	16-Apr-25				[Gantt bars showing completion by early finish]											
S4S1010	Prepare & Submit FS/314, FS/501 & FS/501a	91	01-Apr-22 A	30-Jun-22 A	16-Apr-25	16-Apr-25		S4C1100, S4C1160	S4S1020	[Gantt bars showing completion by early finish]											
S4S1020	FSD Review & Approval of FS/314, FS/501 & FS/501a	25	01-Jul-22 A	25-Jul-22 A	16-Apr-25	16-Apr-25		S4S1010	S4S1030	[Gantt bars showing completion by early finish]											
S4S1030	F.S. Inspection, Defects Rectification & Re-inspection	4	26-Jul-22 A	29-Jul-22 A	16-Apr-25	16-Apr-25		S4S1020, S4C1140	S4S1040	[Gantt bars showing completion by early finish]											
S4S1040	Issuance of Acceptance Letter	14	30-Jul-22 A	02-Aug-22 A	16-Apr-25	16-Apr-25		S4S1030	SC41110	[Gantt bars showing completion by early finish]											
Testing & Commissioning		329	18-Sep-21 A	13-Sep-22 A	15-Feb-23	15-Feb-23				[Gantt bars showing completion by early finish]											
S4T1000	T&C and R.P.E inspection for EOT Cranes	133	18-Sep-21 A	28-Jan-22 A	15-Feb-23	15-Feb-23		S4C1020, S4C1030	S4T1010	[Gantt bars showing completion by early finish]											
S4T1010	SAT for UV System No. 1 & Effluent Transfer Pumping Station No. 1 (Impacted by CNE-035)	217	10-Jan-22 A	13-Sep-22 A	15-Feb-23	15-Feb-23		S4C1020, S4C1070, S4C1080, S4C1000, S4T1000, S4C1040, S4P1090, S4C1140	S4T1020	[Gantt bars showing completion by early finish]											
S4T1020	System Commissioning Tests	3	11-Sep-22 A	13-Sep-22 A	15-Feb-23	15-Feb-23		S4T1010	SC41110, PL1290, S5UVPC1000	[Gantt bars showing completion by early finish]											
Section 5 - Complete all remaining Works (incl. T&C)		1769	18-May-20 A	21-Mar-25	22-Mar-22	16-Apr-25	26			[Gantt bars showing completion by early finish]											
Fabrication, FAT & Delivery of Major Plant & Materials		802	18-May-20 A	14-Dec-22	13-Apr-22	16-Apr-25	854			[Gantt bars showing completion by early finish]											
S5P1000	Procurement & PO for Biogas Booster and Transfer Pumps	735	17-Jul-20 A	21-Nov-22	30-Jul-22	30-Jul-22	-114	S2P1000	S5BIOP1000	[Gantt bars showing completion by early finish]											
S5P1010	Procurement & PO for Pipeworks & Associated Valves	539	29-Jan-21 A	21-Nov-22	04-Aug-22	04-Aug-22	-109	S2D1070	S5CHPP1070, S5DIGP1020	[Gantt bars showing completion by early finish]											
S5P1020	Procurement & PO for Lifting Appliances	530	18-May-20 A	29-Oct-21 A	16-Apr-25	16-Apr-25		S2P1020		[Gantt bars showing completion by early finish]											
S5P1030	Procurement & PO for Ferric Chloride Storage Tank	668	20-Jul-20 A	18-May-22 A	30-Sep-22	30-Sep-22		S2P1000	S5FCDP1000	[Gantt bars showing completion by early finish]											
S5P1040	Procurement & PO for Ferric Chloride Dosing Pump	726	18-May-20 A	13-May-22 A	24-Nov-22	24-Nov-22		S2P1020	S5FCDP1010	[Gantt bars showing completion by early finish]											



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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020			2021			2022			2023			2024			2025																				
										J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J												
Testing and Commissioning										9	-	-	-	5	-	-	-	5	-	-	-	5	7	3	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	3
S5SDBT1032	SAT for Sludge Thickening Cneutrige	30	01-May-23	30-Dec-23	27-Dec-22	27-Feb-24	59																																						
S5SDBT1032	SAT for Sludge Thickening Cneutrige	30	01-Nov-23	30-Nov-23	01-Apr-23	30-Apr-23	-214	S5SDBT1060, S5SDBC1570, S5SDBT1191	S5T1060																																				
S5SDBT1044	Wet Test for Pumps (excluded FS Water Pumps and Process Water Pumps)	7	08-Nov-23	14-Nov-23	17-Apr-23	23-Apr-23	-205	S5SDBT1080, S5SDBT1060	S5SDBT1045																																				
S5SDBT1045	Functional Check for Pumps (excluded FS Water Pumps and Process Water Pumps)	7	15-Nov-23	21-Nov-23	24-Apr-23	30-Apr-23	-205	S5SDBT1044, S5SDBT1060	S5T1060																																				
S5SDBT1047	Wet Test for Pumps (FS Water Pumps and Process Water Pumps)	7	08-Nov-23	14-Nov-23	17-Nov-23	23-Nov-23	9	S5SDBT1080, S5SDBT1060, S5SDBT1191	S5SDBT1048																																				
S5SDBT1048	Functional Check for Pumps (FS Water Pumps and Process Water Pumps)	7	15-Nov-23	21-Nov-23	24-Nov-23	30-Nov-23	9	S5SDBT1060, S5SDBT1047	S5S1220																																				
S5SDBT1058	SAT for Polymer System	30	01-Nov-23	30-Nov-23	01-Apr-23	30-Apr-23	-214	S5SDBC1560, S5SDBC1470, S5SDBC1265, S5SDBT1060	S5T1060																																				
S5SDBT1060	Ready for Power Energisation - LV	5	27-Oct-23	31-Oct-23	25-Feb-23	01-Mar-23	-244	S5SDBC1740, S5SDBT1090, S5SDBC1225, S5SDBT1190	S5SDBT1070, S5SDBT1110, S5SDBT1032, S5SDBT1048, S5SDBT1047, S5SDBT1058, S5SDBT1068, S5SDBT1120, S5SDBT1130, S5SDBT1140, S5SDBT1150, S5SDBT1160, S5SDBT1170, S5SDBT1180, S5SDBT1181, S5SDBT1044, S5SDBT1045, S5SDBT1080, S5SDBT1191																																				
S5SDBT1068	SAT for Conveyor	15	01-Nov-23	15-Nov-23	16-Apr-23	30-Apr-23	-199	S5SDBC1450, S5SDBT1060	S5T1060																																				
S5SDBT1070	SAT for Sludge Dewatering Centrifuges	30	01-Nov-23	30-Nov-23	01-Apr-23	30-Apr-23	-214	S5SDBT1060, S5SDBC1580, S5SDBT1191	S5T1060																																				
S5SDBT1078	SAT of Emergency Generator System	15	07-Nov-23	21-Nov-23	16-Feb-23	02-Mar-23	-264	S5SDBC1500	S5S1280																																				
S5SDBT1080	Dry Test for Pumps	7	01-Nov-23	07-Nov-23	10-Apr-23	16-Apr-23	-205	S5SDBC1790, S5SDBC1115, S5SDBC1125, S5SDBC1135, S5SDBC1145, S5SDBC1165, S5SDBC1175, S5SDBC1185, S5SDBC1780, S5SDBC1810, S5SDBC1610, S5SDBC1325, S5SDBC1105, S5SDBT1060	S5SDBT1044, S5SDBT1047																																				
S5SDBT1090	SAT for Switchboard	60	15-Jul-23	12-Sep-23	27-Dec-22	24-Feb-23	-200	S5SDBC1520	S5SDBT1060																																				
S5SDBT1100	Pipe Pressure Test	120	01-May-23	28-Aug-23	01-Jan-23	30-Apr-23	-120	S5SDBC1620, S5SDBC1460, S5SDBC1400	S5T1060																																				
S5SDBT1110	SAT for Lift	60	01-Nov-23	30-Dec-23	30-Dec-23	27-Feb-24	59	S5SDBC1770, S5SDBT1060	S5S1090																																				
S5SDBT1120	SAT of Electrical System (BS)	45	01-Nov-23	15-Dec-23	17-Oct-23	30-Nov-23	-15	S5SDBC1174, S5SDBC1074, S5SDBC1374, S5SDBT1060	S5S1220																																				



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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020			2021			2022			2023			2024			2025		
										J	F	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J
S5SDBT1130	SAT of FS System	30	01-Nov-23	30-Nov-23	01-Nov-23	30-Nov-23	0	S5SDBC1354, S5SDBC1154, S5SDBC1054, S5SDBT1060	S5S1220																		
S5SDBT1140	SAT of MVAC System	45	01-Nov-23	15-Dec-23	17-Oct-23	30-Nov-23	-15	S5SDBC1364, S5SDBC1164, S5SDBC1064, S5SDBT1060	S5S1220																		
S5SDBT1150	SAT of Plumbing System	30	01-Nov-23	30-Nov-23	02-Jan-24	31-Jan-24	62	S5SDBC1084, S5SDBC1184, S5SDBC1830, S5SDBT1060	S5S1160																		
S5SDBT1160	SAT of Mixer	45	01-Nov-23	15-Dec-23	17-Mar-23	30-Apr-23	-229	S5SDBC1600, S5SDBC1312, S5SDBC1314, S5SDBC1285, S5SDBT1060	S5T1060																		
S5SDBT1170	SAT of Screen Press	15	01-Nov-23	15-Nov-23	16-Apr-23	30-Apr-23	-199	S5SDBC1590, S5SDBT1060	S5T1060																		
S5SDBT1180	SAT of SCADA, PMS, CMMS and IDMS	60	01-Nov-23	30-Dec-23	02-Mar-23	30-Apr-23	-244	S5SDBC1760, S5SDBC1700, S5SDBC1730, S5SDBT1060	S5T1060																		
S5SDBT1181	SAT of Instrumentation	60	01-Nov-23	30-Dec-23	02-Mar-23	30-Apr-23	-244	S5SDBC1850, S5SDBC1840, S5SDBC1305, S5SDBT1060	S5T1060																		
S5SDBT1190	SAT for Transformer	14	13-Oct-23	26-Oct-23	11-Feb-23	24-Feb-23	-244	S5SDBC1510	S5SDBT1060																		
S5SDBT1191	Permanent Power ready for T&C	0	01-Nov-23		01-Apr-23		-214	S5SDBT1060, S5WS2C1120	S5SDBT1032, S5SDBT1047, S5SDBT1070																		
Combined Heat & Power Building		919	29-Jun-21 A	25-Jan-24	17-Apr-22	31-Jan-24	6																				
Fabrication, FAT & Delivery of Major Plant & Materials		889	29-Jun-21 A	26-Dec-23	17-Apr-22	11-Apr-23	-259																				
S5CHPP1000	Fabrication & Delivery of Pre-Treatment	120	15-Aug-22 A	04-Feb-23	04-Jul-22	17-Sep-22	-140		S5CHPC1170																		
S5CHPP1010	Fabrication of CHP System	270	29-Jun-21 A	06-Apr-22 A	15-Sep-22	15-Sep-22		S2P1070, S2D1610	S5CHPP1020																		
S5CHPP1020	FAT for CHP Generators	14	07-Apr-22 A	30-Apr-22 A	15-Sep-22	15-Sep-22		S5CHPP1010	S5CHPP1030																		
S5CHPP1030	Delivery of CHP Generators	60	02-May-22 A	14-Jul-22 A	15-Sep-22	15-Sep-22		S5CHPP1020	S5CHPC1050																		
S5CHPP1040	Fabrication & Delivery of Gas Detection System	150	30-Jul-23	26-Dec-23	13-Nov-22	11-Apr-23	-259	S2D2000, PL1020	S5CHPC1120, S5CHPC1250																		
S5CHPP1050	Fabrication & Delivery of LV Switchboard for G/F	141	07-Mar-23*	25-Jul-23	26-Jul-22	13-Dec-22	-224		S5CHPC1145																		
S5CHPP1055	Fabrication & Delivery of LV Switchboard for 1/F	134	21-Feb-23*	04-Jul-23	02-Aug-22	13-Dec-22	-203		S5CHPC1260																		
S5CHPP1060	Fabrication & Delivery of Lifting Appliances	90	24-Aug-22 A	31-Dec-22	07-May-22	16-Jun-22	-198		S5CHPC1030, S5CHPC1160, S5CHPC1040																		
S5CHPP1070	Fabrication & Delivery of Pipeworks & Associated Valves	45	21-Nov-22	04-Jan-23	04-Aug-22	17-Sep-22	-109	S5P1010	S5CHPC1070, S5CHPC1200																		
S5CHPP1080	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5CHPC1120, S5CHPC1250																		
Installation		431	21-Nov-22	25-Jan-24	04-Jun-22	31-Jan-24	6																				
S5CHPC1000	Access to CHP Building (Impacted by EWN-0314)	1	21-Nov-22*	21-Nov-22	04-Jun-22	04-Jun-22	-170		S5CHPC1020																		
S5CHPC1010	Access to CHP Building (Impacted by EWN-0314-1)	1	21-Nov-22*	21-Nov-22	04-Jun-22	04-Jun-22	-170		S5CHPC1020																		
S5CHPC1020	Mobilisation	12	22-Nov-22	03-Dec-22	05-Jun-22	16-Jun-22	-170	AD1060, S5S1020, S5CHPC1000, S5CHPC1010	PL1550, S5CHPC1030, S5CHPC1040, S5CHPC1080, S5CHPC1130, S5CHPC1140																		
E&M Installation		390	01-Jan-23	25-Jan-24	17-Jun-22	11-May-23	-259																				
Ground Floor		390	01-Jan-23	25-Jan-24	17-Jun-22	11-May-23	-259																				

	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - WBS Page 42 of 58		Contract No. DE/2018/03 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities Revised Programme - as at 20 Nov 2022	<table border="1" style="border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th>Date</th><th>Revision</th><th>Checked</th><th>Approved</th></tr> </thead> <tbody> <tr> <td>31-Jul-22</td><td>Rev24</td><td>LT</td><td>KM</td></tr> <tr> <td>31-Aug-22</td><td>Rev25</td><td>LT</td><td>KM</td></tr> <tr> <td>30-Sep-22</td><td>Rev26</td><td>LT</td><td>KM</td></tr> <tr> <td>31-Oct-22</td><td>Rev27</td><td>LT</td><td>KM</td></tr> <tr> <td>30-Nov-22</td><td>Rev28</td><td>LT</td><td>KM</td></tr> </tbody> </table>	Date	Revision	Checked	Approved	31-Jul-22	Rev24	LT	KM	31-Aug-22	Rev25	LT	KM	30-Sep-22	Rev26	LT	KM	31-Oct-22	Rev27	LT	KM	30-Nov-22	Rev28	LT	KM
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	31-Jul-22	Rev24	LT	KM																								
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30-Nov-22	Rev28	LT	KM																									

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020			2021			2022			2023			2024			2025									
										J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J			
S5CHPC1090	Installation of MVAC System	120	04-Mar-23	01-Jul-23	01-Jan-23	30-Apr-23	-62	S5CHPC1080	S5CHPC1100, S5S1220, S5CHPC1220																									
S5CHPC1110	Installation of Plumbing System	90	04-Mar-23	01-Jun-23	03-Nov-23	31-Jan-24	244	S5CHPC1080	S5S1160																									
First Floor		240	04-Mar-23	29-Oct-23	05-May-23	31-Jan-24	94																											
S5CHPC1210	Installation of FS System	90	04-Mar-23	01-Jun-23	05-May-23	02-Aug-23	62	S5CHPC1080	S5CHPC1220, S5CHPC1240, S5S1220																									
S5CHPC1220	Installation of MVAC System	120	02-Jul-23	29-Oct-23	03-Aug-23	30-Nov-23	32	S5CHPC1210, S5CHPC1090	S5S1220																									
S5CHPC1240	Installation of Plumbing System	90	02-Jun-23	30-Aug-23	03-Nov-23	31-Jan-24	154	S5CHPC1210	S5S1160																									
Testing and Commissioning		249	21-May-23	24-Jan-24	01-Jan-23	29-Jun-23	-209																											
S5CHPT1000	Pipe Pressure Test	120	21-May-23	17-Sep-23	01-Jan-23	30-Apr-23	-140	S5CHPC1200, S5CHPC1070	S5T1100, S5CHPT1030, S5CHPT1040, S5CHPT1050																									
S5CHPT1010	SAT for Transformer & Switchboard	30	24-Oct-23	22-Nov-23	14-Mar-23	12-Apr-23	-224	S5CHPC1260, S5CHPC1140, S5CHPC1130, S5CHPC1145	S5CHPT1020																									
S5CHPT1020	Ready for Power Energisation	3	23-Nov-23	25-Nov-23	13-Apr-23	15-Apr-23	-224	S5CHPC1260, S5WS2C1110, S5CHPC1130, S5CHPC1140, S5CHPT1010, S5CHPC1290, S5CHPC1145	S5CHPT1030, S5BIOT1010, S5THPT1010, S5CHPT1040, S5CHPT1050																									
S5CHPT1030	SAT for CHP System	60	26-Nov-23	24-Jan-24	01-May-23	29-Jun-23	-209	S5CHPT1020, S5CHPC1050, S5CHPC1100, S5CHPC1270, S5CHPT1000	S5T1100																									
S5CHPT1040	SAT for Pre-treatment System	45	26-Nov-23	09-Jan-24	16-May-23	29-Jun-23	-194	S5CHPC1170, S5CHPT1020, S5CHPC1230, S5CHPC1290, S5CHPT1000	S5T1100																									
S5CHPT1050	SAT for Steam Boiler System	60	26-Nov-23	24-Jan-24	01-May-23	29-Jun-23	-209	S5CHPC1060, S5CHPC1100, S5CHPT1020, S5CHPC1280, S5CHPT1000	S5T1100																									
Tx Rm & LV Switchroom (for UV)		389	21-Nov-22	14-Dec-23	31-May-22	11-May-23	-217																											
Fabrication, FAT & Delivery of Major Plant & Materials		296	21-Nov-22	12-Sep-23	31-May-22	25-Feb-23	-199																											
S5TXRP1000	Fabrication & Delivery of Transformers -UV (Tx 07 & 08)	120	21-Nov-22	20-Mar-23	31-May-22	27-Sep-22	-174	S1D1130, S1D1290, S1D1210, S2P1110	S5TXRC1030																									
S5TXRP1010	Fabrication & Delivery of LVSB -UV	141	25-Apr-23*	12-Sep-23	23-Jul-22	10-Dec-22	-276	S1D1210, S1D1290, S2P1130	S5TXRC1040																									
S5TXRP1020	Fabrication & Delivery of Control & Monitoring System -UV	30	20-Feb-23*	21-Mar-23	27-Jan-23	25-Feb-23	-24	S1D1290, S2P1140	S5TXRC1050																									
Installation		356	21-Nov-22	11-Nov-23	12-Aug-22	11-May-23	-184																											
S5TXRC1000	Access to TX Rm & LV Switchroom (Impacted by EWN-0314)	1	21-Nov-22*	21-Nov-22	12-Aug-22	12-Aug-22	-101		S5TXRC1020																									
S5TXRC1010	Access to TX Rm & LV Switchroom (Impacted by EWN-0314-1)	1	21-Nov-22*	21-Nov-22	12-Aug-22	12-Aug-22	-101		S5TXRC1020																									
S5TXRC1020	BS Fitting Intallation (at Tx Rm & LV Switchroom)	60	22-Nov-22	20-Jan-23	13-Aug-22	11-Oct-22	-101	AD1100, S5TXRC1000, S5TXRC1010	S5TXRT1010, S5TXRC1030																									
S5TXRC1030	E&M Installation of Transformers in Tx Rm	60	04-Apr-23	02-Jun-23	12-Oct-22	10-Dec-22	-174	S5TXRC1020, S4C1010, S5TXRP1000, S1D1310, S5P1050	S5TXRC1040, S5TXRT1000																									



Remaining Work
 Critical Activity
 Milestone
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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 Nov 2022

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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart (2020-2025)											
										2020	2021	2022	2023	2024	2025						
S5WS2P1010	FAT for 11kV to 380V Transformers	14	14-Jan-23	27-Jan-23	19-Jul-22	01-Aug-22	-179	S5WS2P1000	S5WS2P1020	[Gantt bar: 19-Jul-22 to 01-Aug-22]											
S5WS2P1020	Delivery of 11kV to 380V Transformers	60	28-Jan-23	28-Mar-23	02-Aug-22	30-Sep-22	-179	S5WS2P1010	S5CHPC1130, S5WS2C1070	[Gantt bar: 02-Aug-22 to 30-Sep-22]											
S5WS2P1060	Fabrication of 11 kV Switchboard	210	29-Nov-21 A	26-Jun-22 A	06-Sep-22	06-Sep-22		S2P1120	S5WS2P1070	[Gantt bar: 06-Sep-22 to 06-Sep-22]											
S5WS2P1070	FAT for 11 kV Switchboard	14	21-Nov-22*	04-Dec-22	06-Sep-22	19-Sep-22	-76	S5WS2P1060	S5WS2P1080	[Gantt bar: 06-Sep-22 to 19-Sep-22]											
S5WS2P1080	Delivery of 11kV Switchboard	55	05-Dec-22	28-Jan-23	20-Sep-22	13-Nov-22	-76	S5WS2P1070	S5WS2C1060, S5CHPC1140	[Gantt bar: 20-Sep-22 to 13-Nov-22]											
S5WS2P1090	Fabrication of LV Switchboard	100	04-Dec-22*	13-Mar-23	08-Aug-22	15-Nov-22	-118	S2P1130, S2D1250, S2D1190, S2D1270	S5WS2P1100	[Gantt bar: 08-Aug-22 to 15-Nov-22]											
S5WS2P1100	FAT for LV Switchboard	14	28-Feb-23	13-Mar-23	02-Nov-22	15-Nov-22	-118	S5WS2P1090	S5WS2P1110	[Gantt bar: 02-Nov-22 to 15-Nov-22]											
S5WS2P1110	Delivery of LV Switchboard	14	14-Mar-23	27-Mar-23	16-Nov-22	29-Nov-22	-118	S5WS2P1100	S5CHPC1260, S5WS2C1080	[Gantt bar: 16-Nov-22 to 29-Nov-22]											
S5WS2P1120	Fabrication & Delivery of Lift	210	18-Dec-21 A	10-Aug-22 A	12-May-23	12-May-23			S5WS2C1190	[Gantt bar: 12-May-23 to 12-May-23]											
S5WS2P1130	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	14-Sep-22	08-Sep-23	-109		S5WS2C1180	[Gantt bar: 14-Sep-22 to 08-Sep-23]											
Installation																					
S5WS2C1000	Mobilisation	14	31-Dec-21 A	12-Mar-22 A	03-Aug-22	03-Aug-22		AD1120, S5S1030	S5WS2C1010, S5WS2C1050	[Gantt bar: 03-Aug-22 to 03-Aug-22]											
CLP Substation																					
S5WS2C1010	BS Fitting Installation (at CLP Sub-station in Workshop No.2)	60	14-Mar-22 A	02-Sep-22 A	03-Aug-22	03-Aug-22	-110	S5WS2C1000, AD1120	KD1060, S5WS2C1020, S5WS2C1050, KD1060-1	[Gantt bar: 03-Aug-22 to 03-Aug-22]											
S5WS2C1020	Inspections, Rectification & H/O to CLP	60	03-Sep-22 A	01-Jan-23	03-Aug-22	13-Sep-22	-110	S5WS2C1010	S5WS2C1030	[Gantt bar: 03-Aug-22 to 13-Sep-22]											
S5WS2C1030	E&M Installation of HV Transformer (By CLP)	180	02-Jan-23	30-Jun-23	14-Sep-22	12-Mar-23	-110	S5WS2C1020	S5WS2C1040	[Gantt bar: 14-Sep-22 to 12-Mar-23]											
S5WS2C1040	Energisation (By CLP)	1	01-Jul-23	01-Jul-23	13-Mar-23	13-Mar-23	-110	S5WS2C1030, S5WS2C1060, S5S1000	S5TXRT1010	[Gantt bar: 13-Mar-23 to 13-Mar-23]											
HV Switchroom / Transformer Room / LV Switchroom																					
S5WS2C1050	BS Fitting Intallation	60	11-Apr-22 A	02-Dec-22	15-Oct-22	26-Oct-22	-37	S5WS2C1000, S5WS2C1010	S5WS2C1060	[Gantt bar: 15-Oct-22 to 26-Oct-22]											
S5WS2C1060	HV Switchroom Installation	60	30-Dec-22	27-Feb-23	27-Oct-22	25-Dec-22	-64	S5WS2C1050, S5WS2P1080	S5WS2C1130, S5TXRT1010, S5WS2C1040, S5WS2C1070, S5WS2T1000	[Gantt bar: 27-Oct-22 to 25-Dec-22]											
S5WS2C1070	TX Room Installation	60	28-Feb-23	28-Apr-23	30-Jul-23	27-Sep-23	152	S5WS2C1060, S5WS2P1020	S5WS2C1080, S5WS2T1000	[Gantt bar: 30-Jul-23 to 27-Sep-23]											
S5WS2C1080	LV Switchroom Installation	60	29-Apr-23	27-Jun-23	28-Sep-23	26-Nov-23	152	S5WS2C1070, S5WS2P1110	S5WS2T1000	[Gantt bar: 28-Sep-23 to 26-Nov-23]											
S5WS2C1090	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	16-Sep-22	16-Sep-22	-179		S5WS2C1110	[Gantt bar: 16-Sep-22 to 16-Sep-22]											
S5WS2C1100	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	31-Jul-23*	31-Jul-23	16-Apr-25	16-Apr-25	625			[Gantt bar: 16-Apr-25 to 16-Apr-25]											
S5WS2C1105	Access to Stage 1 External Area	0	15-Apr-23*		17-Sep-22		-210		S5WS2C1110	[Gantt bar: 17-Sep-22 to 17-Sep-22]											
S5WS2C1110	HV Cables Laying between Workshop No.2 & Tx Rm for CHP Bldg and Termination	60	15-Apr-23	13-Jun-23	17-Sep-22	15-Nov-22	-210	S5WS2C1090, S5WS2C1105	S5CHPT1020, S5DIGT1010, S5WS2C1120, S5WS2T1010, S5BIOT1000, S5THPT1000, S5H2ST1000, S5WGBT1000, S5DOUT1010, S5SPST1000, S5TCWT1000, S5FCDT1000, PL1210	[Gantt bar: 17-Sep-22 to 15-Nov-22]											
S5WS2C1120	HV Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg and Termination	70	15-May-23	23-Jul-23	17-Oct-22	25-Dec-22	-210	S5WS2C1110	S5WS2C1130, PL1210, S5SDBT1191	[Gantt bar: 17-Oct-22 to 25-Dec-22]											
S5WS2C1125	Access to Stage 3 External Area	0	01-Sep-23*		26-Dec-22		-249		S5WS2C1130	[Gantt bar: 26-Dec-22 to 26-Dec-22]											

	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - WBS Page 47 of 58	■ Remaining Work ■ Critical Activity ◆ Milestone ■ Actual Progress	Contract No. DE/2018/03 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities Revised Programme - as at 20 Nov 2022				Date	Revision	Checked	Approved
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Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020												2021												2022												2023												2024												2025											
										[Month-Year]												[Month-Year]												[Month-Year]												[Month-Year]												[Month-Year]												[Month-Year]											
S5SPSC1020	BS Installation for Sewage Pumping Station	60	27-Oct-23	25-Dec-23	13-Mar-23	11-May-23	-228	S5SPSC1000	S5S1160, S5T1000, S5T1010, S5T1020, S5T1030																																																																								
Testing and Commissioning		172	27-Sep-23	16-Mar-24	13-Apr-23	30-May-23	-291																																																																										
S5SPST0990	SAT of Switchboard	30	27-Sep-23	26-Oct-23	13-Apr-23	12-May-23	-167	S5SPSP1010	S5SPST1000																																																																								
S5SPST1000	Ready for Power Energisation	3	28-Feb-24	01-Mar-24	13-May-23	15-May-23	-291	S5SPSC1000, S5WS2C1110, S5SPST0990, S5EXAC1036, S5EXAC1045	S5SPST1010																																																																								
S5SPST1010	SAT & System Commissioning Tests for Sewage Pumping Station	15	02-Mar-24	16-Mar-24	16-May-23	30-May-23	-291	S5SPST1000	S5T1060																																																																								
THP Cooling Water Transfer Pumping Station		584	23-May-22 A	25-Jan-24	17-Apr-22	15-May-23	-255																																																																										
Fabrication, FAT & Delivery of Major Plant & Materials		554	23-May-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259																																																																										
S5TCWP1000	Fabrication & Delivery of THP Cooling Pump	150	23-May-22 A	19-Jan-23	29-Dec-22	26-Feb-23	38	S2P1210, S2D1970, S2D1370	S5TCWC1020																																																																								
S5TCWP1010	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259																																																																										
Installation		431	21-Nov-22	25-Jan-24	26-Feb-23	11-May-23	-259																																																																										
S5TCWC1000	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314)	1	21-Nov-22*	21-Nov-22	26-Feb-23	26-Feb-23	97																																																																										
S5TCWC1010	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314-1)	1	21-Nov-22*	21-Nov-22	26-Feb-23	26-Feb-23	97																																																																										
S5TCWC1020	E&M Installation of THP Cooling Pump	60	20-Jan-23	20-Mar-23	27-Feb-23	27-Apr-23	38	AD1100, S5TCWP1000, S5TCWC1000, S5TCWC1010	S5TCWT1000, PL1210, S5TCWC1030																																																																								
S5TCWC1030	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5TCWP1010, S5TCWC1020	S5T1000, S5T1010, S5T1020, S5T1030																																																																								
Testing and Commissioning		18	12-Oct-23	29-Oct-23	28-Apr-23	15-May-23	-167																																																																										
S5TCWT1000	Ready for Power Energisation	3	12-Oct-23	14-Oct-23	28-Apr-23	30-Apr-23	-167	S5TCWC1020, S5WS2C1110, S5EXAC1030	S5TCWT1010																																																																								
S5TCWT1010	SAT & System Commissioning Tests for THP Cooling Water Pumping System	15	15-Oct-23	29-Oct-23	01-May-23	15-May-23	-167	S5TCWT1000	S5T1050																																																																								
Ferric Chloride Dosing Facility		606	14-May-22 A	15-Apr-24	17-Apr-22	30-May-23	-321																																																																										
Fabrication, FAT & Delivery of Major Plant & Materials		495	14-May-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259																																																																										
S5FCDP1000	Fabrication & Delivery of Ferric Chloride Storage Tank	90	21-Nov-22	18-Feb-23	30-Sep-22	28-Dec-22	-52	S5P1030, S2D1980	S5FCDC1020																																																																								
S5FCDP1010	Fabrication & Delivery of Ferric Chloride Dosing Pump	150	14-May-22 A	10-Jan-23	24-Nov-22	13-Jan-23	3	S5P1040, S2D1980	S5FCDC1030																																																																								
S5FCDP1020	Fabrication & Delivery of LV Switchboard	120	15-Dec-22*	13-Apr-23	30-Sep-22	27-Jan-23	-76																																																																										
S5FCDP1030	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259																																																																										
Installation		431	21-Nov-22	25-Jan-24	28-Dec-22	11-May-23	-259																																																																										
S5FCDC1000	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314)	1	21-Nov-22*	21-Nov-22	28-Dec-22	28-Dec-22	37																																																																										
S5FCDC1010	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314-1)	1	21-Nov-22*	21-Nov-22	28-Dec-22	28-Dec-22	37																																																																										
S5FCDC1020	E&M Installation of Ferric Chloride Storage Tank	45	19-Feb-23	04-Apr-23	29-Dec-22	11-Feb-23	-52	AD1100, S5FCDP1000, S5FCDC1000, S5FCDC1010	S5FCDC1030, S5S1280																																																																								
S5FCDC1030	E&M Installation of Ferric Chloride Dosing Pump	45	14-Apr-23	28-May-23	28-Jan-23	13-Mar-23	-76	AD1100, S5FCDC1020, S5FCDP1010, S5FCDP1020	S5FCDT1000, S5FCDT0990, PL1210, S5FCDP1040																																																																								
S5FCDP1040	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5FCDP1030, S5FCDC1030	S5T1000, S5T1010, S5T1020, S5T1030																																																																								
Testing and Commissioning		323	29-May-23	15-Apr-24	14-Mar-23	30-May-23	-321																																																																										
S5FCDT0990	SAT of Switchboard	30	29-May-23	27-Jun-23	14-Mar-23	12-Apr-23	-76	S5FCDC1030	S5FCDT1000																																																																								




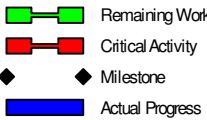
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31-Oct-22	Rev27	LT	KM
30-Nov-22	Rev28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	2020												2021												2022												2023												2024												2025											
										9												9												9												9												9												9											
S5FCDT1000	Ready for Power Energisation	3	28-Feb-24	01-Mar-24	13-Apr-23	15-Apr-23	-321	S5FCDC1030, S5WS2C1110, S5FCDT0990, S5EXAC1036	S5FCDT1010																																																																								
S5FCDT1010	SAT & System Commissioning Tests for FeCl3 Dosing Facility	45	02-Mar-24	15-Apr-24	16-Apr-23	30-May-23	-321	S5FCDT1000	S5T1080																																																																								
Fire Hydrant and Booster Pump Room		467	21-Nov-22	01-Mar-24	17-Apr-22	30-Nov-23	-92																																																																										
Fabrication, FAT & Delivery of Major Plant & Materials		401	21-Nov-22	26-Dec-23	17-Apr-22	11-Apr-23	-259																																																																										
S5SHPP1000	Fabrication & Delivery of Fire Hydrant and Booster Pump	60	21-Nov-22*	19-Jan-23	13-Dec-22	10-Feb-23	22		S5SHPC1020																																																																								
S5SHPP1010	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5SHPC1030																																																																								
Installation		431	21-Nov-22	25-Jan-24	10-Feb-23	11-May-23	-259																																																																										
S5SHPC1000	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314)	1	21-Nov-22*	21-Nov-22	10-Feb-23	10-Feb-23	81		S5SHPC1020																																																																								
S5SHPC1010	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314-1)	1	21-Nov-22*	21-Nov-22	10-Feb-23	10-Feb-23	81		S5SHPC1020																																																																								
S5SHPC1020	Fire Hydrant and Booster Pump Room Installation	90	20-Jan-23	19-Apr-23	11-Feb-23	11-May-23	22	S5S1120, AD1100, S5SHPC1000, S5SHPC1010, S5SHPP1000	S5S1130, S5SHPT1000, PL1210, S5SHPC1030																																																																								
S5SHPC1030	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5SHPP1010, S5SHPC1020	S5T1000, S5T1010, S5T1020, S5T1030																																																																								
Testing and Commissioning		33	29-Jan-24	01-Mar-24	29-Oct-23	30-Nov-23	-92																																																																										
S5SHPT1000	Ready for Power Energisation	3	29-Jan-24	31-Jan-24	29-Oct-23	31-Oct-23	-92	S5SHPC1020, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5SHPT1010																																																																								
S5SHPT1010	SAT for Fire Hydrant and Booster Pump	30	01-Feb-24	01-Mar-24	01-Nov-23	30-Nov-23	-92	S5SHPT1000	S5S1220																																																																								
External Area		351	14-Mar-23	27-Feb-24	15-Oct-22	06-Nov-23	-113																																																																										
Installation		351	14-Mar-23	27-Feb-24	15-Oct-22	06-Nov-23	-113																																																																										
S5EXAC1000	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	10-May-23	10-May-23	57		S5EXAC1050, S5EXAC1060																																																																								
S5EXAC1010	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	31-Jul-23*	31-Jul-23	30-Jan-23	30-Jan-23	-182		S5EXAC1050, S5EXAC1060, S5EXAC1030																																																																								
S5EXAC1020	E&M Installation of Pipe Trench No.1, No.2	100	03-Jul-23	10-Oct-23	05-Feb-23	15-May-23	-148	AD1100, S5EXAC1031	S5T1050, PL1210																																																																								
S5EXAC1025	Access to Stage 1 External Area	0	15-Apr-23*		15-Oct-22		-182		S5EXAC1030																																																																								
S5EXAC1030	LV Cable Laying from CHP to Sludge Digester, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)	180	15-Apr-23	11-Oct-23	15-Oct-22	12-Apr-23	-182	S5EXAC1010, S5P1050, S5EXAC1025	S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210																																																																								
S5EXAC1031	Access to Stage 2 External Area	0	03-Jul-23*		15-Oct-22		-261		S5EXAC1033, S5EXAC1020																																																																								
S5EXAC1033	LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)	180	03-Jul-23	29-Dec-23	15-Oct-22	12-Apr-23	-261	S5EXAC1031	S5BIOT1000, S5THPT1000, S5DOUT1010, S5H2ST1000																																																																								
S5EXAC1034	Access to Stage 3 External Area	0	01-Sep-23*		15-Oct-22		-321		S5EXAC1036, S5EXAC1040, S5EXAC1045																																																																								
S5EXAC1036	LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)	60	30-Dec-23	27-Feb-24	12-Feb-23	12-Apr-23	-321	S5EXAC1034, S5EXAC1040	S5SPST1000, S5WGBT1000, S5FCDT1000																																																																								
S5EXAC1040	LV Cable Laying from TX & SW Room to DOU no. 11, Street Hydrant Pump room and PSWS (90 days) & Termination (60 days)	150	01-Sep-23	28-Jan-24	15-Oct-22	13-Mar-23	-321	S5P1050, S5EXAC1034	S5SHPT1000, S5DOUT1000, S5PSWT1000, PL1210, S5EXAC1036																																																																								
S5EXAC1045	LV Cable Laying from SDB to SPS (20 days) & Termination (25 days)	45	01-Sep-23	15-Oct-23	29-Mar-23	12-May-23	-156	S5EXAC1034, S5P1050	S5SPST1000																																																																								

	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - WBS Page 53 of 58		Contract No. DE/2018/03 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities Revised Programme - as at 20 Nov 2022				Date	Revision	Checked	Approved		
									31-Jul-22	Rev24	LT	KM
									31-Aug-22	Rev25	LT	KM
									30-Sep-22	Rev26	LT	KM
									31-Oct-22	Rev27	LT	KM
						30-Nov-22	Rev28	LT	KM			

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart											
										2020	2021	2022	2023	2024	2025						
S5T1000	SAT of SCADA System	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040	[Gantt Chart showing activity duration from Jan 2024 to Jul 2024 with a red bar indicating critical activity]											
S5T1010	SAT of PMS	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040	[Gantt Chart showing activity duration from Jan 2024 to Jul 2024 with a red bar indicating critical activity]											
S5T1020	SAT of CMMS	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040	[Gantt Chart showing activity duration from Jan 2024 to Jul 2024 with a red bar indicating critical activity]											

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Gantt Chart (2020-2025)																											
										2020	2021	2022	2023	2024	2025																						
S5S1120	Submit WWO46 Part I / II to WSD (FS/PD)	30	01-Jul-21 A	30-Jul-21 A	11-Feb-23	11-Feb-23		S2D1910, S2D1860, S2D1870, S2D1880, S2D1890, S2D1900	S5S1130, S5WS2C1140, S5SHPC1020, S5DIGC1300, S5WS2C1170	[Gantt Chart: Activity starts in 2021, ends in 2021. Blue bar for actual progress.]																											
S5S1130	Submit WWO46 Part IV to WSD (FS)	0	20-Apr-23		22-Sep-23		155	S5S1120, S5WS2C1140, S5SHPC1020, S5SDBC1352, S5SDBC1152, S5SDBC1052	S5S1140, S5S1150	[Gantt Chart: Activity starts in 2023. Milestone diamond at start.]																											
S5S1140	WSD Inspection (FS)	28	04-May-23	31-May-23	06-Oct-23	02-Nov-23	155	S5S1130	S5S1250, S5S1150	[Gantt Chart: Activity starts in 2023. Green bar for remaining work.]																											
S5S1150	Issuance of FS Water Certificate	0		28-Jun-23		30-Nov-23	155	S5S1130, S5S1140	S5T1200, S5S1220	[Gantt Chart: Activity starts in 2023. Milestone diamond at start.]																											
S5S1160	Submit WWO46 Part IV to WSD (PD)	0	26-Dec-23		01-Feb-24		37	S5THPC1050, S5BIOC1060, S5SPSC1020, S5CHPC1240, S5CHPC1110, S5DIGC1300, S5WS2C1170, S5SDBT1150	S5S1170	[Gantt Chart: Activity starts in 2023. Milestone diamond at start.]																											
S5S1170	WSD Inspection	7	09-Jan-24	15-Jan-24	15-Feb-24	21-Feb-24	37	S5S1160	S5S1180	[Gantt Chart: Activity starts in 2024. Green bar for remaining work.]																											
S5S1180	Issuance of Form WWO46 Part Va	0		29-Jan-24		06-Mar-24	37	S5S1170	S5S1200, S5S1190	[Gantt Chart: Activity starts in 2024. Milestone diamond at start.]																											
S5S1190	System Flushing / Sampling	45	30-Jan-24	14-Mar-24	07-Mar-24	20-Apr-24	37	S5S1180	S5S1200	[Gantt Chart: Activity starts in 2024. Green bar for remaining work.]																											
S5S1200	Issuance of Form WWO46 Part Vb	0		14-Mar-24		20-Apr-24	37	S5S1180, S5S1190	S5S1210	[Gantt Chart: Activity starts in 2024. Milestone diamond at start.]																											
S5S1210	Issuance of Water Certificate	0		28-Mar-24		04-May-24	37	S5S1200	SC51110	[Gantt Chart: Activity starts in 2024. Milestone diamond at start.]																											
FSD Submission / Inspection		437	26-May-23	04-Aug-24	04-Sep-22	17-Mar-24	-140			[Gantt Chart: Summary bar for FSD submission/inspection.]																											
S5S1220	Prepare & Submit FSI/314 & FSI/501	14	19-Apr-24	02-May-24	01-Dec-23	14-Dec-23	-140	S5WS2C1150, S5S1310, S5S1150, S5EXAC1050, S5EXAC1060, S5CHPC1080, S5CHPC1090, S5CHPC1210, S5CHPC1220, S5DIGC1280, S5DIGC1290, S5SHPT1010, S5SDBT1048, S5SDBT1130, S5SDBT1140, S5SDBT1120	S5S1230	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											
S5S1230	FSD Review & Approval of FSI/314 & FSI/501	21	03-May-24	23-May-24	15-Dec-23	04-Jan-24	-140	S5S1220	S5S1240	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											
S5S1240	F.S. Inspection, Defects Rectification & Re-inspection	45	24-May-24	07-Jul-24	05-Jan-24	18-Feb-24	-140	S5S1230	S5S1250	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											
S5S1250	Issuance of Acceptance Letter	28	08-Jul-24	04-Aug-24	19-Feb-24	17-Mar-24	-140	S5S1240, S5S1140	SC51110, S5S1040	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											
S5S1260	Application of D.G. Licence	0	26-May-23		04-Sep-22		-264	S2D1860	S5S1270	[Gantt Chart: Activity starts in 2023. Milestone diamond at start.]																											
S5S1270	Processing of D.G. Licence Application	180	26-May-23	21-Nov-23	04-Sep-22	02-Mar-23	-264	S5S1260	S5S1280	[Gantt Chart: Activity starts in 2023. Red bar for critical activity.]																											
S5S1280	Apply for D.G. Inspection	45	22-Nov-23	05-Jan-24	03-Mar-23	16-Apr-23	-264	S5S1270, S5CHPC1150, S5FCDC1020, S5SDBT1078	S5S1310, S5S1290	[Gantt Chart: Activity starts in 2023. Red bar for critical activity.]																											
S5S1290	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	45	06-Jan-24	19-Feb-24	17-Apr-23	31-May-23	-264	S5S1280	S5S1310, S5S1300	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											
S5S1300	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	45	20-Feb-24	04-Apr-24	01-Jun-23	15-Jul-23	-264	S5S1290	S5S1310	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											
S5S1310	Issue D.G. Licence	14	05-Apr-24	18-Apr-24	16-Jul-23	29-Jul-23	-264	S5S1290, S5S1300, S5S1280	S5S1220, S5T1100	[Gantt Chart: Activity starts in 2024. Red bar for critical activity.]																											

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	3/1/2020	3/25/2020	3/30/2020	4/27/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 27 April 2020
	Acceptance of submission of onsite survey plan	3/1/2020	3/25/2020	3/30/2020	5/22/2020	Task Completed				100%	-	AECOM accepted the onsite survey plan on 22 May 2020. Onsite coordination with ST1
	KD3B: Submission of onsite survey report	7/11/2020	7/20/2020	7/16/2020	7/30/2021	Task Completed				100%	Bestwise	- Onsite survey conducted from 20 July 2020 to 22 July 2020. Bestwise submitted survey report on 5 August 2020. AECOM commented on 19 Aug 2020. Bestwise to resubmit upon conducting the remaining onsite survey. (Done) - Bestwise revised survey plan for remaining onsite checking of PST No. 6 on 1 Sep 2020. After discussion with plant operator, the remaining survey would be conducted after the dismantling work of PSTs. Formal survey record for PST No.4 was submitted on 24 May 2021. - Remaining survey (level of bridge & scraper) for PST 6 completed. - Formal survey report shall be submitted on 30 Jul 2021.
	KD3B: 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 end Feb and PMI modification work shall be completed by end March.
	KD3B: 9 June 2021										
Section 1 of Works (outstanding works list)											

6B.2.12 Provision of New Replacement Filter Plates	Submission of onsite survey plan for acceptance	3/1/2020	3/25/2020	3/30/2020	4/21/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 21 April 2020
	Acceptance of submission of onsite survey plan	3/1/2020	3/25/2020	3/30/2020	5/12/2020	Task Completed				100%	-	Survey plan acceptance received on 12 May 2020. Onsite discussion with ST1 was
	Submission of onsite survey report	5/21/2020	5/21/2020	5/29/2020	5/29/2020	Task Completed				100%		
	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-	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
	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	11/30/2022	Completed				-		Defect rectification for BCM comments was partially completed and Site Acceptance Test (72 hours) was completed.
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	12/30/2022	99%				-	Bestwise	All finalized design calculations for Inlet Works no.1 shall be submitted by 30 Dec 2022.
	Submission of P&M Submission	9/6/2020	9/7/2020	5/14/2021	12/30/2022	99%						P&M0022 - Inlet Pumps (status: B) P&M0003 - Coarse Screens & Fine Screens (status: B) P&M0085 - Grit Traps (status: B) P&M0084 - Screw Compactor (status: B) P&M0042 - Screw Conveyors for Coarse Screens and Fine Screens (status: B) All P&M for Inlet Works no.1 shall be submitted by 30 Dec 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	12/30/2022	99%						E&M GA submission DWG0082 resubmitted on 9 July 2021. AECOM commented on 19 Feb 2021. Bestwise reviewed GA in BIM with AECOM on 12 Jan 2022. Electrical GA DWG0095 resubmitted on 3 July 2021. AECOM commented on 21 Apr 2021. Bestwise reviewed GA in BIM with AECOM on 12 Jan 2022. All finalized drawings for Inlet Works no.1 shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 5, 12, 19/5/2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	12/30/2022	99%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for Inlet Works no.1 shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%					-	
	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	12/30/2022	99%				-	Bestwise		PFD (rev.B) under DWG0004 submitted on 22 June 2021. Finalized design calculations for PST shall be submitted by 30 Dec 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	12/30/2022	99%							P&M0058 - Lamella Plate Settler (status: B) P&M0097 - Scum Skimmer and Scum Collection Pipe (status: C) P&M0086 - Sludge Bottom Scraper (status: C) P&M0051 - Drain Pump (status: C) P&M0044 - Primary Sludge Pump (status: B) Finalized material submissions for PST shall be submitted by 30 Dec 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	12/30/2022	99%							Mechanical GA was submitted on 19 Jun 2021. Electrical GA under DWG0103 (rev.1) was submitted on 6 Jul 2021 and is accepted by AECOM. Finalized drawings for PST shall be submitted by 30 Aug 2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	12/30/2022	99%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawings for PST shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	4/2/2021	5/29/2021	12/30/2022	98%				-			Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for LV Switchboards for Primary Sedimentation Tanks (CDS025-2)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of civil work requirements for Primary Sedimentation Tanks up to +8.0 mPD (CDS080-2)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	4	4	100%			1st part of drafted drawing (2 nos.) was submitted on 23 Sept 2020. Remaining drawings (2 nos.) were submitted on 30 Sept 2020.
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	4	4	100%	Bestwise		Bestwise resubmitted (Rev.A) on 27 Oct & 13 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (Final)	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Task Completed	no.	1	1	100%	Bestwise		Bestwise submitted on 20 Oct 2020
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
6B.2.3 Chemical Storage and Dosing System	Submission of Contractor's Design for Chemical Dosing System (CDS006)	9/6/2020	1/7/2021	5/14/2021	10/29/2021	Task Completed				-	Bestwise		Design calculation (rev.0) of CHS1 and TCHS submitted on 2 Sep 2020 and 28 Aug 2020, AECOM commented on 24 Sep and 6 Oct 2020, Bestwise submitted CDS0060 on 15 Jul 2021 and CDS0044 on 19 Jul 2021. Finalized design calculation for chemical systems was submitted on 29 Oct 2021.
	Submission of P&M Submission	9/6/2020	9/6/2020	5/14/2021	10/30/2021	Task Completed							Finalized material submissions for chemical system was submitted on 30 Oct 2021.
	Submission of P&ID Drawing	9/6/2020	12/11/2020	5/14/2021	6/29/2021	Task Completed							PID resubmitted under DWG0053 (rev.1) on 28 Jun 2021, DWG0057 (rev.1) on 29 Jun 2021 and DWG0058 (rev.1) on 29 Jun 2021.

	Submission of GA Drawing	9/6/2020	2/8/2021	5/14/2021	12/30/2022	99%							Electrical GA drawings for CS1 under DWG0096 submitted on 10 April 2021. AECOM accepted subject to comments on 17 Apr 2021. Mechanical GA drawings for CS1 submitted on 1 April 2021. AECOM commented on 24 April 2021. Bestwise resubmitted DWG0093 (rev.1) on 30 Jun 2021 and is accepted by AECOM. Mechanical GA for Temp CS submitted on 12 Jun 2021. All finalized drawings for chemical systems shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 17. 21. 28/4/2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	12/30/2022	99%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for chemical system shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%				-			
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installations	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/16/2020	Task Completed	no.	2	2	100%			1st draft of drawing submitted on 15 September for CHS1 and 16 September 2020 for
	KD1A: Submission of civil requirement drawing for	9/7/2020	9/17/2020	11/5/2020	11/5/2020	Task Completed	no.	2	2	100%			Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed				-			1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for Chemical System No. 1 and No. 2 (Final)	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (First	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 15 September 2020
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (Final)	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed	no.	1	1	100%			Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Temporary Chemical System (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed				-			1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed							
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
6B.2.4 Membrane Bioreactor (MBR) System - Bio Reactor 2A and 2B	Submission of Contractor's Design for Bioreactor 2A and 2B (CDS004)	9/6/2020	1/12/2021	5/14/2021	12/30/2022	99%				-	Bestwise		PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 7 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Electrical CDS submitted on 23 Jun 2021. Finalized design calculations shall be submitted by 30 Dec 2022.
	Submission of P&M Submission	9/6/2020	11/26/2020	5/14/2021	12/30/2022	99%							P&M0060 - Pre-treatment Fine Screen (status: B) P&M0053 - MLR Pump (status: B) P&M0118 - Scum Skimmer & Scum Pump (status: C) P&M0088 - Fine Bubble Air Diffuser (status: B) P&M0xxx - Wash Compactor (status: B) P&M0041 - Submersible Mixer (status: B) Finalized material submission shall be submitted by 30 Dec 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	12/30/2022	99%							Mechanical GA under DWG0132 submitted on 26 Jun 2021 and is accepted by AECOM. Electrical GA submitted on 23 Jun 2021. Finalized drawing shall be submitted by 30 June 2022. BIM GA review meeting is scheduled on 1, 8, 15/6/2022.
	Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	12/30/2022	99%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%				-			Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for LV Switchboards for BR 2A and 2B (CDS025-3)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed							
	Submission of civil work requirements for BR 2A and 2B up to +8.0 mPD (CDS080-3)	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed	no.	2	2	100%			1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (Final)	8/28/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed	no.	2	2	100%	Bestwise		AECOM commented on 23 Oct 2020, Bestwise resubmitted on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for BR 2A and 2B (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed				-			1st draft of drawing was sent to AECOM via email on 15 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed							
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
6B.2.4 Membrane Bioreactor (MBR) System - Membrane Filtration System No. 2 (MFB No. 2)	Submission of Contractor's Design for Membrane Filtration System (CDS005)	9/6/2020	1/11/2021	5/14/2021	12/30/2022	99%				-	Bestwise		PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 10 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Finalized design calculations shall be submitted by 30 Aug 2022.

Submission of P&M Submission	9/6/2020	11/19/2020	5/14/2021	12/30/2022	99%							P&M0072 - Membrane Module (status: B) P&M0069 - Permeate Pump (status: B) P&M0047 - RAS Pump (status: B) P&M0050 - Drain Pump (status: B) P&M0074 - Air Scour Blower (status: C) P&M0073 - Aeration Blower (status: C) P&M0093 - Air Compressor (status: C) P&M0091 - Chemical Pump (status: B) P&M0xxx - Chemical Tank (to be submitted) Finalized material submission shall be submitted by 30 Dec 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	12/30/2022	99%							DWG0121 (rev.1) was resubmitted to AECOM on 17 Jul 2021 Finalized drawings shall be submitted by 30 June 2022. BIM GA review meeting is scheduled on 19, 26/5/2022 and 2/6/2022 (Lower part) BIM GA review meeting is scheduled on 16, 23, 30/6/2022 (Upper part)	
Submission of Electrical Drawing	4/15/2021	1/15/2021	5/14/2021	12/30/2022	99%							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 Dec 2022.	
Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%					-			
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	12/30/2022	99%							GA submitted on 21 Jun 2021 Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 11, 18, 25/5/2022.
	Submission of Electrical Drawing of DOU No. 1	3/21/2021	1/30/2021	5/14/2021	12/30/2022	99%							Control wiring diagrams was resubmitted on 1 April 2021. AECOM commented on 23 Apr 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%					-		
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/28/2020	Task Completed	no.	1	1	100%			1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (Final)	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise		Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 2A (CDS0019 & CDS0048)	9/6/2020	9/6/2020	5/14/2021	12/10/2021	Task Completed					-		CDS0019: Design Calculation for Deodorisation System (status: B) CDS0048: Design Calculation on DOU2A - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 2A	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed					-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 2A	9/6/2020	8/3/2020	5/14/2021	12/30/2022	99%					-	Bestwise	Bestwise submitted (rev.1) on 30 Nov 2020. AECOM commented on 16 Dec 2020. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 1, 8, 15/6/2022.
	Submission of Electrical Drawing of DOU No. 2A	3/21/2021	1/26/2021	5/14/2021	12/30/2022	99%							Bestwise submitted (rev.0) on 26 Jan 2021, AECOM commented on 4 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%					-		

	Submission of Contractor's Design for Deodorisation System , DOU No. 3A (CDS0019 & CDS0055)	9/6/2020	9/6/2020	5/14/2021	12/10/2021	Task Completed				-		CDS0019: Design Calculation for Deodorisation System (status: B) CDS0055: Design Calculation on DOU3A - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 3A	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 3A	9/6/2020	7/8/2020	5/14/2021	12/30/2022	99%				-	Bestwise	Bestwise submitted (rev.1) on 28 Oct 2020. AECOM commented on 16 Dec 2020. Bestwise resubmitted on 24 June 2021. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 27/4/2022, 4, 11/5/2022.
	Submission of Electrical Drawing of DOU No. 3A	3/21/2021	2/26/2021	5/14/2021	12/30/2022	99%						Bestwise submitted on 17 Apr 2021. AECOM commented on 27 Apr 2021. Bestwise to resubmit. GA submitted on 24 Jun 2021. Finalized drawing shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%						
	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 Submission of Contractor's Design for Deodorisation System , DOU No. 3B (CDS0019 & CDS0049)	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 3B (CDS0019 & CDS0049)	9/6/2020	9/6/2020	5/14/2021	12/10/2021	Task Completed						CDS0019: Design Calculation for Deodorisation System (status: B) CDS0049: Design Calculation on DOU3B - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 3B	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 3B	9/6/2020	9/6/2020	5/14/2021	12/30/2022	99%						Bestwise submitted DWG0081 (rev.0) on 5 Feb 2021. AECOM commented on 12 Mar 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 16, 23, 30/6/2022.
	Submission of Electrical Drawing of DOU No. 3B	3/21/2021	2/22/2021	5/14/2021	12/30/2022	99%						GA submitted on 24 Jun 2021. Finalized drawing shall be submitted by 30 Dec 2022.
	Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%				-		
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for LV Switchboards for	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	Submission of civil work requirements for MFB up to	9/1/2020	9/1/2020	9/30/2020	9/30/2020	Task Completed						
	Submission of civil requirement drawing for MFB up to	8/28/2020	8/28/2020	11/2/2020	11/2/2020	Task Completed						
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed				-		1st draft of drawing to be submitted by 30 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
04SC008 - Design, Supply and Installation of detailed design for lifting appliances	Acceptance of tender award (C9)	-	-	-	7/6/2020	Task Completed				100%	-	AECOM accepted tender report on 6 July 2020.
	Submission of detailed design for lifting appliances for Inlet Works No. 1 (CDS050-1)	9/6/2020	12/5/2020	9/6/2020	12/30/2022	99%						DWG 0055 (Rev.0) was submitted on 13 Mar 2021. AECOM commented on 20 Apr 2021. Bestwise to resubmit. Bestwise submitted P&M0025 on 15 June 2021. Finalized design shall be submitted by 30 Dec 2022.
	Submission of detailed design for lifting appliances for Primary Sedimentation Tanks (CDS050-2)	9/6/2020	12/5/2020	9/6/2020	12/30/2022	99%						DWG 0054 (Rev.0) was submitted on 18 Jan 2021. AECOM commented on 9 Mar 2021. Bestwise to resubmit. Finalized design shall be submitted by 30 Dec 2022.
	Submission of detailed design for lifting appliances for BR 2A and 2B (CDS050-3)	9/6/2020	12/5/2020	9/6/2020	12/30/2022	99%						DWG 0065 (Rev.0) was submitted on 18 Jan 2021. AECOM commented on 9 Mar 2021. Bestwise to resubmit. P&M-0026 (Rev.1) received status B. Finalized design calculation shall be submitted by 30 Dec 2022.
	Submission of detailed design for lifting appliances for MFB (CDS050-4)	9/6/2020	12/5/2020	9/6/2020	12/30/2022	99%						DWG 0066 (Rev.1) was submitted on 1 Mar 2021. AECOM commented on 5 Mar 2021. Bestwise to resubmit. P&M-0027 (Rev.1) received status B. Finalized design calculation shall be submitted by 30 Dec 2022.
	Submission of detailed design for lifting appliances for Temporary Filtration Tank (CDS050-5)	9/6/2020	12/5/2020	9/6/2020	5/21/2021	Task Completed						DWG 0051 (Rev.2) was resubmitted on 7 May 2021 and acceptance by AECOM subject to condition on 21 May 2021. Bestwise submitted P&M0021 on 21 June 2021.
Building Services System	Submission for MVAC system	N/A	12/10/2020	N/A	12/30/2022	99%						Design calculations and drawings for inlet works was submitted on 16 Dec 2020. AECOM commented on 15 Jan 2021 and 20 Jan 2021. Design calculations and drawings for PST was submitted on 30 Dec 2020. AECOM commented on 22 Jan 2021 and 26 Jan 2021. Design calculations and drawings for MFB2 was submitted on 29 Jan 2021. AECOM commented on 26 Mar 2021. Subletting package resubmitted by 18 Mar 2021. AECOM accepted on 19 Mar 2021. Finalized design shall be submitted by 30 Dec 2022.
	Submission for Fire Services System	N/A	3/15/2021	N/A	12/30/2022	98%						Subletting Package to be resubmitted by 31 Mar 2021. AECOM accepted on 9 Apr 2021. Drawings: Inlet Works: submitted on 8 June 2021. PST 1-4: submitted on 23 Jun 2021 BR2A & 2B: submitted on 8 Jun 2021 MFB 2: submitted on 8 Jun 2021 Finalized design shall be submitted by 30 Dec 2022.

	Submission for Plumbing and Drainage System	N/A	3/15/2021	N/A	12/30/2022	98%							Subletting Package resubmitted by 10 Mar 2021. AECOM accepted on 12 Mar 2021. Tender invitation was conducted on 15 Mar 2021 and closed on 26 Mar 2021. Finalized design shall be submitted by 30 Dec 2022.
	Submission for Electrical Services System	N/A	12/10/2020	N/A	12/30/2022	99%							GA for lighting was submitted on 18 Dec 2020. AECOM commented on 6 Jan 2021. Bestwise to resubmit. GA for small power system was submitted in 8 Feb 2021. AECOM commented on 3 Mar 2021. Bestwise to resubmit. Finalized design shall be submitted by 30 Dec 2022.
	Submission of ELV system	N/A	1/8/2021	N/A	12/30/2022	99%							GA for CCTV was resubmitted on 16 Mar 2021. AECOM commented on 30 Mar 2021. Bestwise resubmitted on 25 Jun 2021. Finalized design shall be submitted by 30 Dec 2022.
	Submission for PV system	N/A	3/15/2021	N/A	12/30/2022	98%							Tender package was submitted to AECOM. Finalized design shall be submitted by 30 Dec 2022.
SCADA System & PMS	Submission for SCADA system	N/A	2/11/2021	N/A	12/30/2022	99%							Revised SCADA structure was provided via email on 9 Apr 2021 and tender package is under preparation. Finalized design shall be submitted by 30 Dec 2022.
	Submission for PMS system	N/A	3/8/2021	N/A	12/30/2022	98%							Tender package to be resubmitted on 29 June 2021. Finalized design shall be submitted by 30 Dec 2022.
	Submission for CMMS & IDMS system	N/A	6/1/2021	N/A	12/30/2022	98%							Finalized design shall be submitted by 30 Dec 2022.
Section 2 of Works													
Street Fire Hydrant Pump Room	KD1A: Submission of civil requirement drawing for	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for	8/28/2020	9/18/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%			Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed							1st draft of drawing to be submitted by 30 September 2020
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed							
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
FS & Sprinkler Pump Room	KD1A: Submission of civil requirement drawing for FS	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for FS	8/28/2020	9/18/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%			Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020	Task Completed							
	KD1A: Submission of electrical schematic drawings for	9/7/2020	10/1/2020	11/5/2020	11/5/2020	Task Completed							
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
Emergency Generator House	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (First	7/15/2020	7/15/2020	8/15/2020	9/18/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 18 September 2020
	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (Final)	8/28/2020	9/19/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%			Bestwise resubmitted (rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/30/2020								
	KD1A: Submission of electrical schematic drawings for Street Fire Hydrant Pump Room (Final)	9/7/2020	10/1/2020	11/5/2020	11/5/2020								
	KD1A: 6 November 2020												Notice of completion works was submitted on 17 Nov 2020
Lightning Protection System for DOU3A (underground)	Submission and Acceptance for Lightning Protection System Design	12/6/2021	12/6/2021	1/31/2022	1/31/2022	Task Completed							
	Material Delivery	2/7/2022	2/7/2022	2/28/2022	2/28/2022	Task Completed							Material Delivery was by End Feb 2022.
	Installation Work	3/31/2022	4/26/2022	5/5/2022	5/5/2022	Task Completed							The installation work was completed on 5 May 2022.
	Testing & Commissioning	1/7/2023	1/7/2023	1/31/2023	1/31/2023								
Lightning Protection System for Inlet Works (underground)	Submission and Acceptance for Lightning Protection System Design	12/20/2021	12/20/2021	1/31/2022	1/31/2022								
	Material Delivery	12/15/2022	10/1/2022	3/31/2022	10/31/2022								
	Installation Work	3/15/2022	11/1/2022	10/30/2022	12/14/2022								Underground works subject to site coordination with JV.
	Testing & Commissioning	11/1/2022	12/15/2022	11/15/2022	12/31/2022								
Section 3 of Works													
6B.2.12 Provision of New Replacement Filter Plates	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%			
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Submission	8/21/2020	8/21/2020	8/28/2020	12/7/2020	Task Completed				100%			Revised survey report (second draft) was sent to AECOM on 21 Oct 2020. Technical 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	Task Completed					-	-	
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 -> 30/05/2020 -> 30/7/2020*	8/14/2020	15/05/2020 -> 15/06/2020 -> 15/8/2020*	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)		8/15/2020		9/16/2020	Task Completed					100%	-	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
	Tender invitation (C9) (Mech)	15/06/2020-> 15/8/2020*	9/9/2020	22/06/2020-> 22/8/2020*	10/14/2020	Task Completed					100%	-	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation for FRP Tank was conducted on 9 Sep 2020, tender returned on 16 Sep 2020. - Tender invitation for mechanical installation was conducted on 29 Sept 2020, tender returned on 14 Oct 2020.

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

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



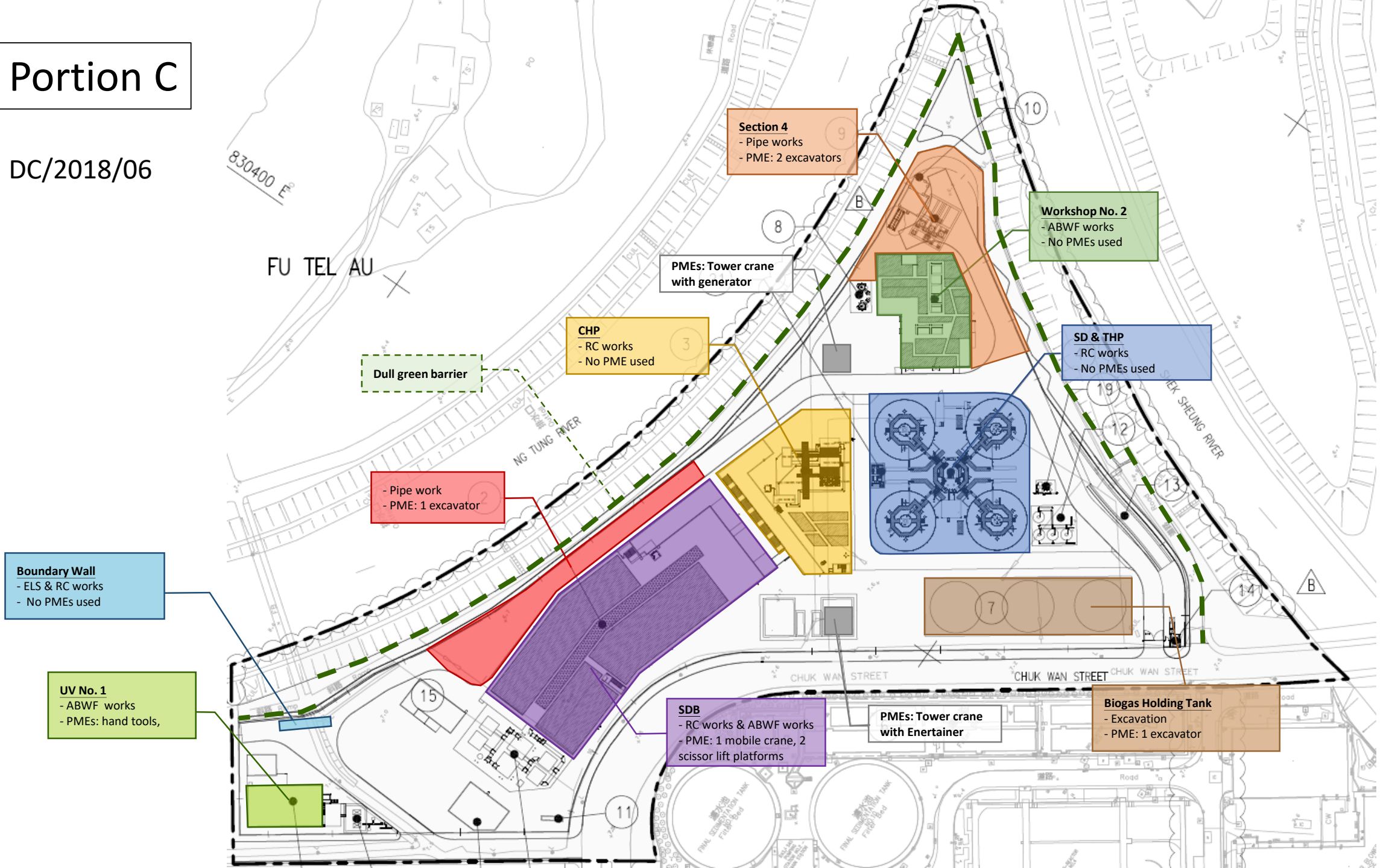
Appendix 2.1

Layout Plans of Construction Activities

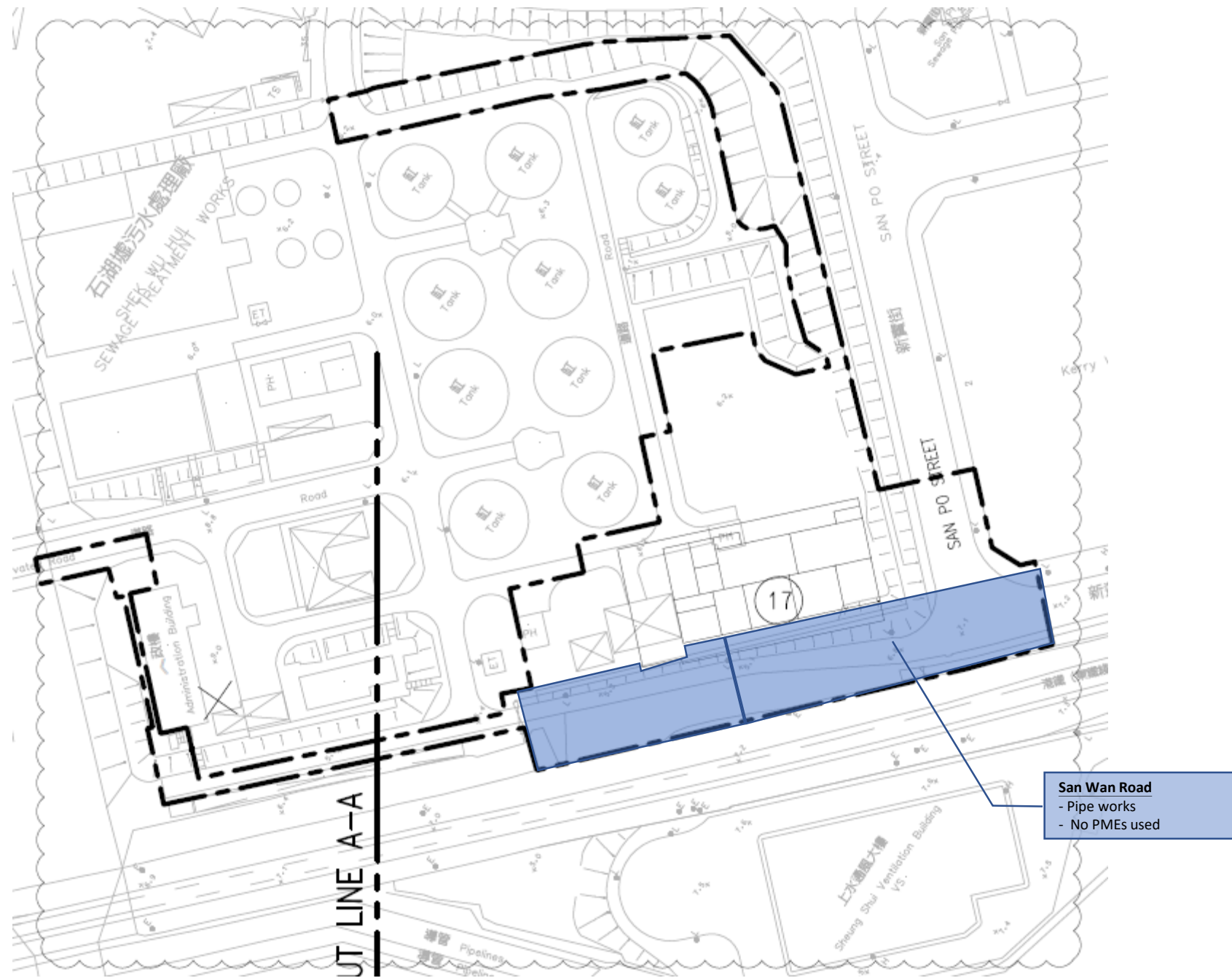
October 2022

Portion C

DC/2018/06



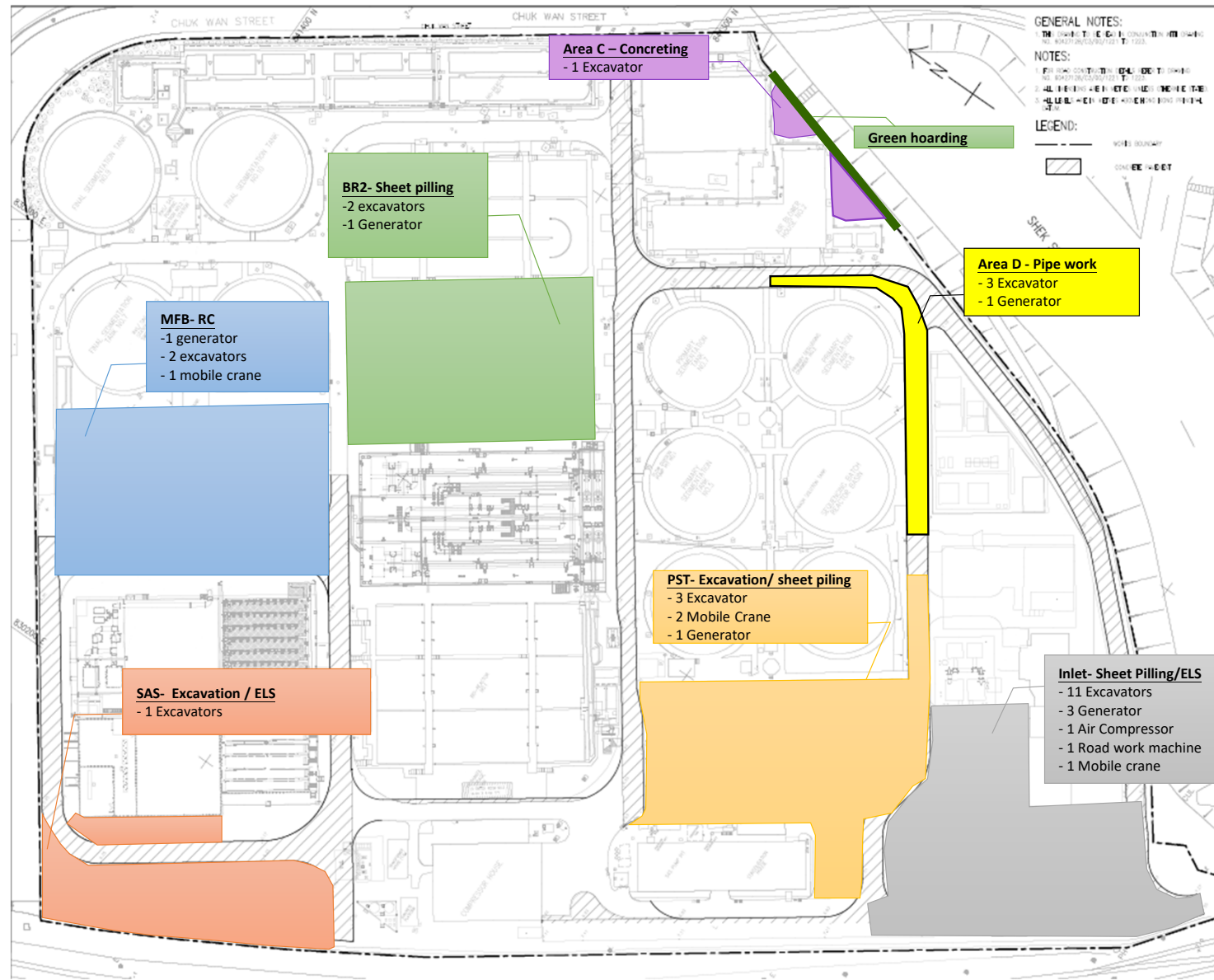
Portion A



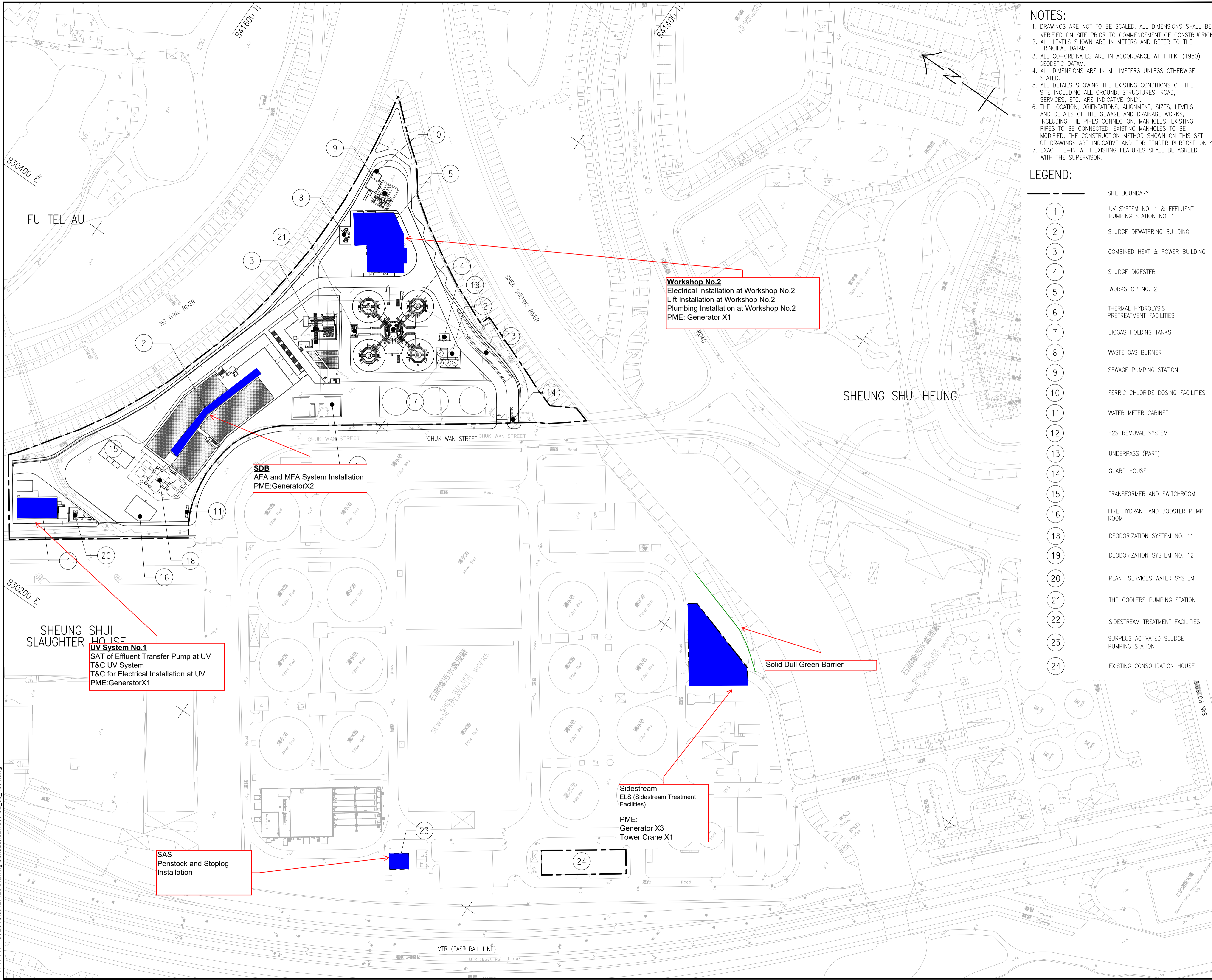
San Wan Road
- Pipe works
- No PMEs used

Portion B

DC/2018/07



Plot File by: GuoX 26/03/2019
 PATH: P:\PROJECTS\60427128\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.
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:

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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



PROJECT
 項目
SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT
 業主
 渠務署
 Drainage Services Department

CONSULTANT
 工程顧問公司
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程顧問公司

ISSUE/REVISION
 修訂

IR	DATE	DESCRIPTION	CHK.
-	MAR. 19	TENDER DRAWING	TLST

STATUS
 階段

SCALE
 比例
 A1 1:1000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖

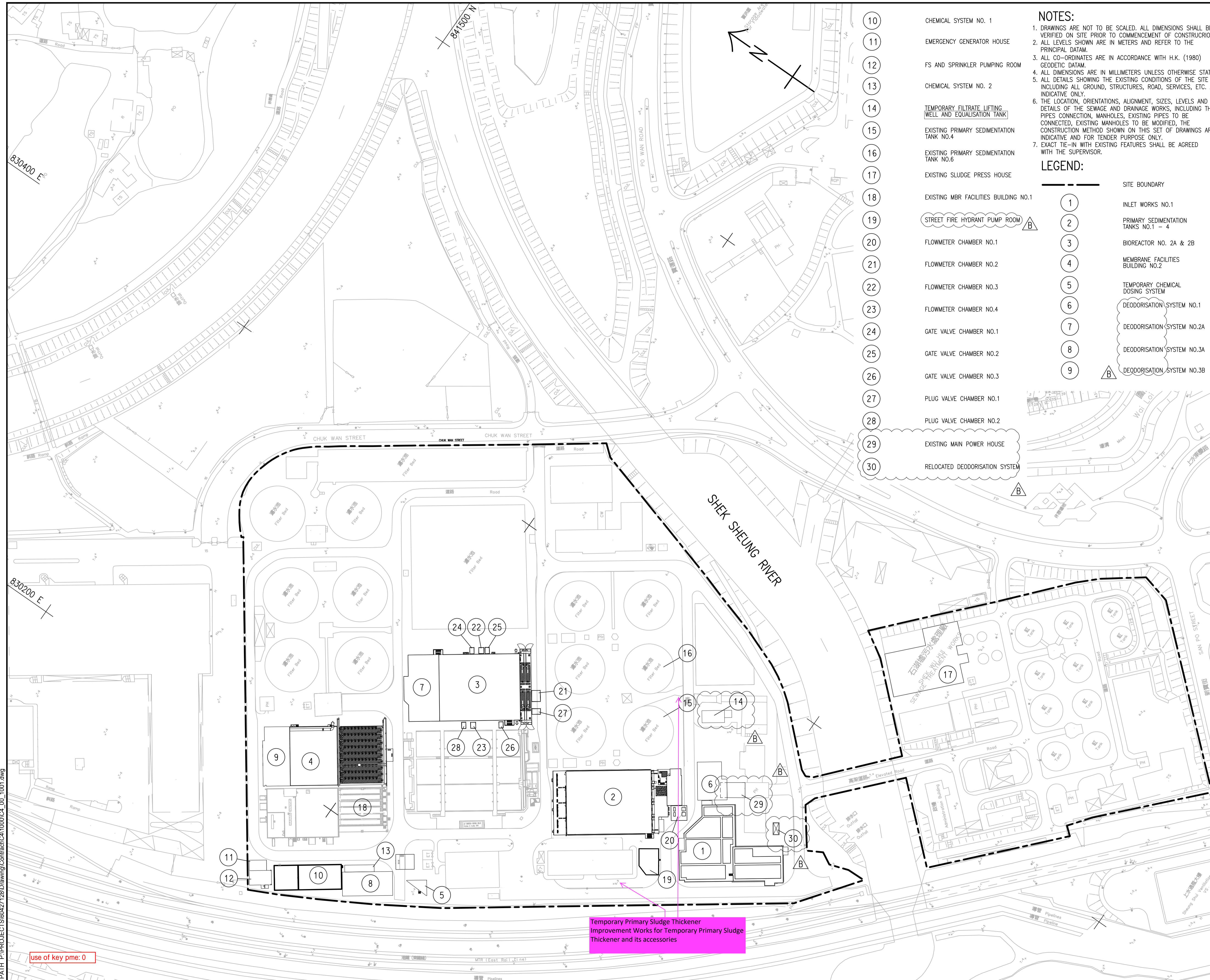
PROJECT NO.
 項目編號
 60427128

CONTRACT NO.
 合約編號
 DE/2018/03

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

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

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- 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:

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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

Temporary Primary Sludge Thickener Improvement Works for Temporary Primary Sludge Thickener and its accessories

Use of key pme: 0

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PROJECT
 項目
SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT
 業主
 渠務署
 Drainage Services Department

CONSULTANT
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-	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







Site Record Photos


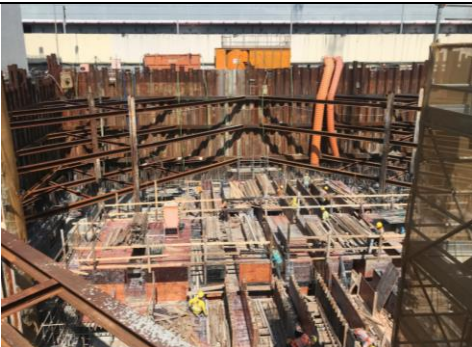

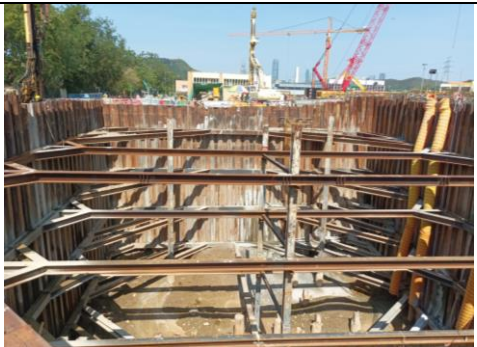




DC/2018/06

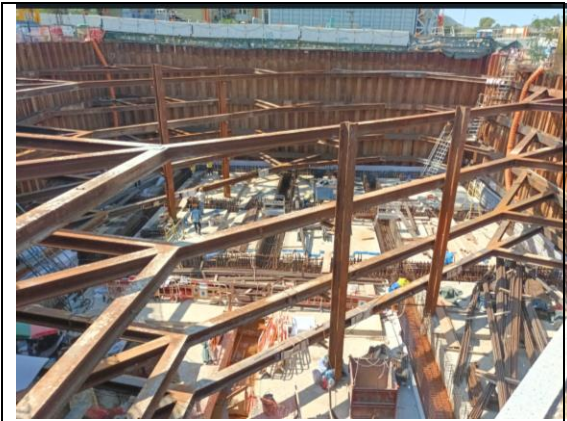
			
SD&THP	Section 4	SDB	Biogas Holding Tank

DC/2018/07

			
BR2	MFB	PST	Inlet



DE/2018/03

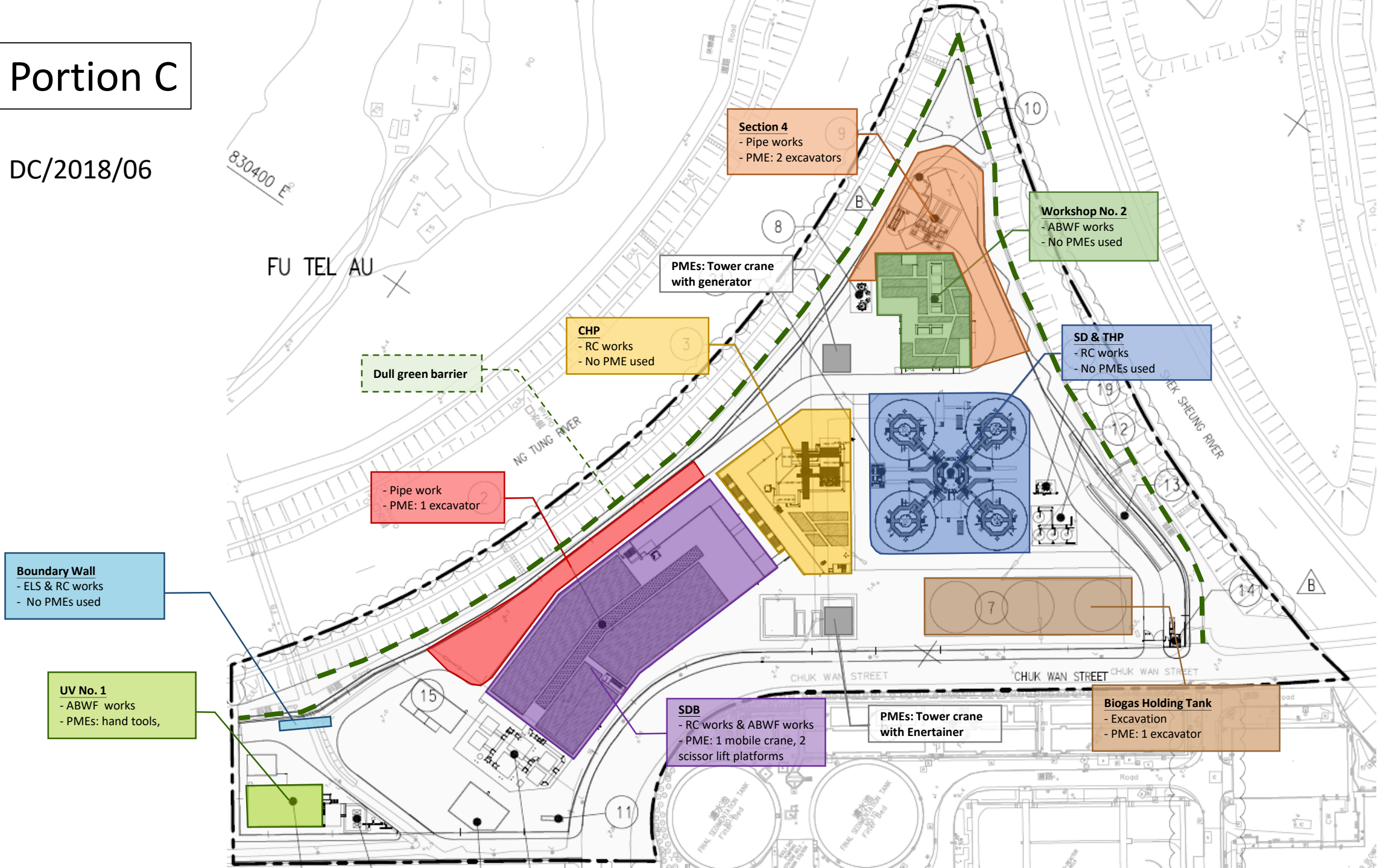


Sidestream

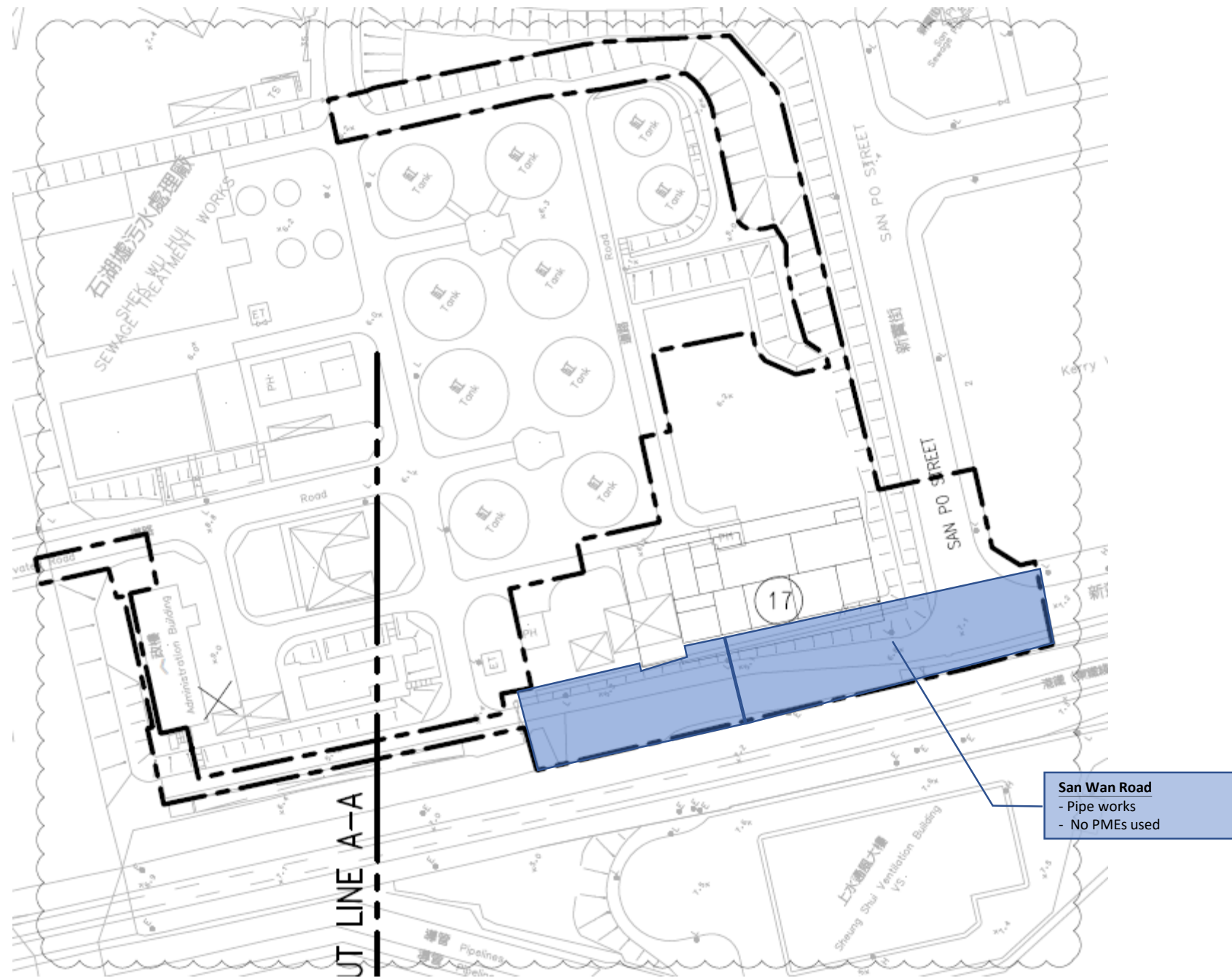
November 2022

Portion C

DC/2018/06

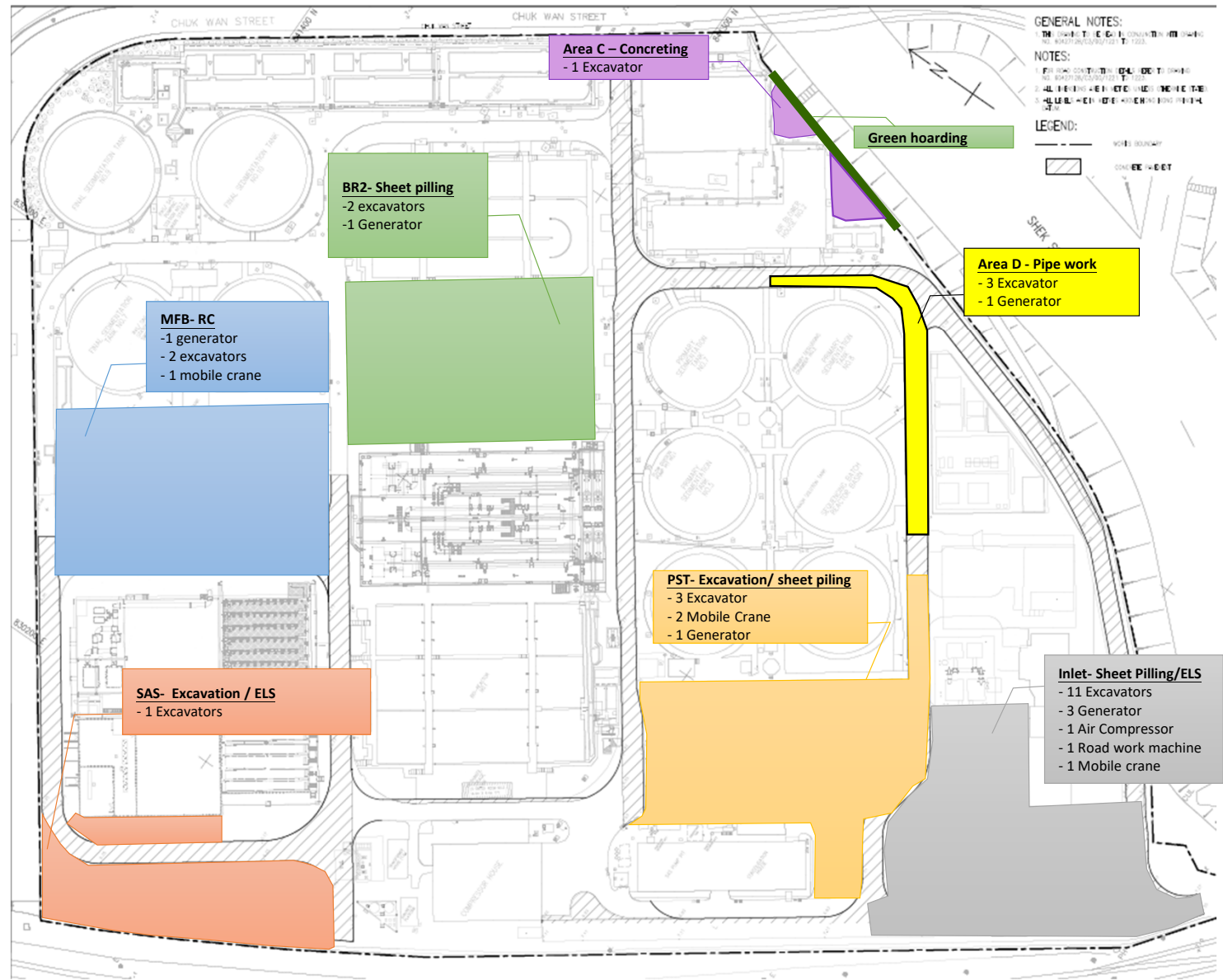


Portion A

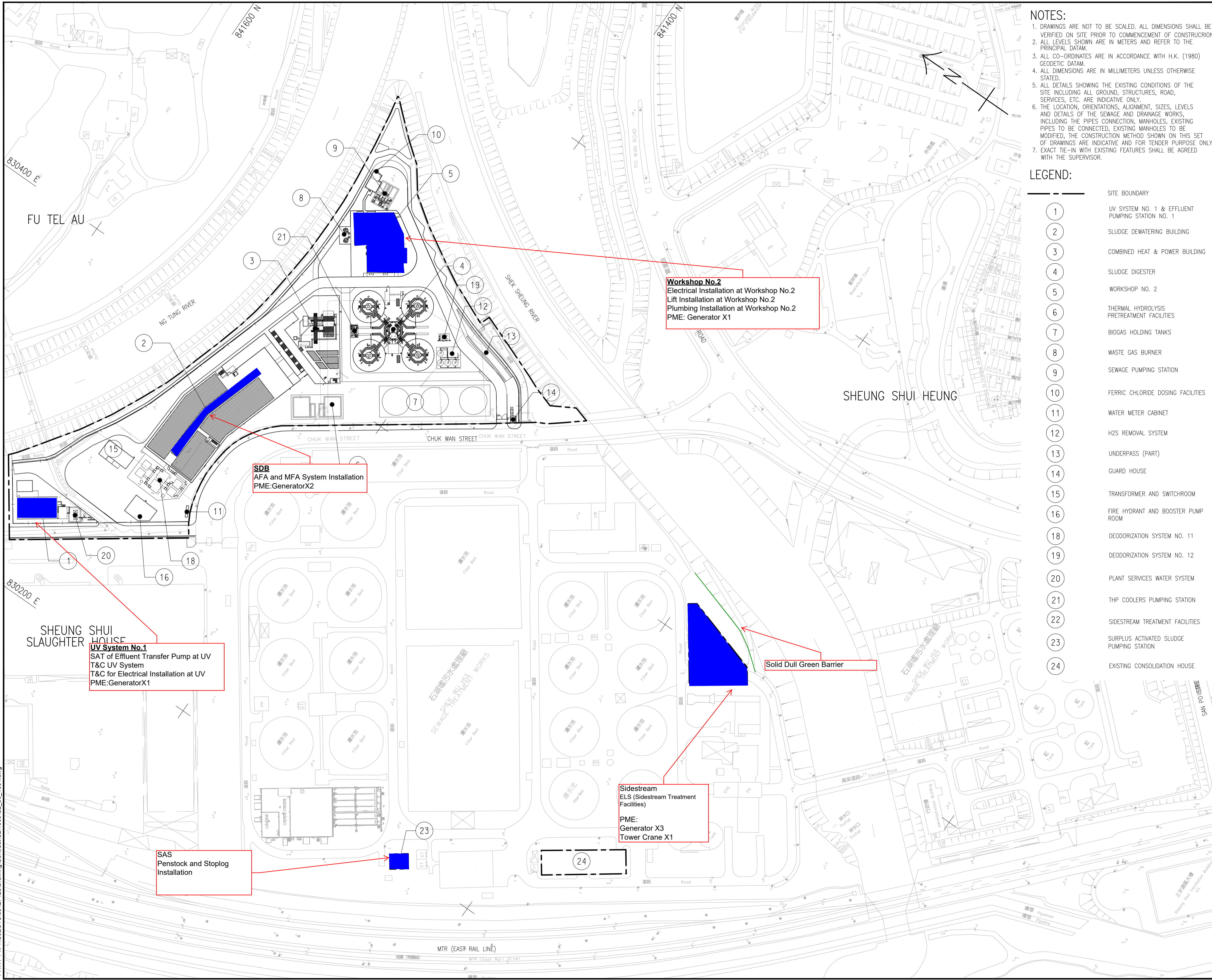


Portion B

DC/2018/07



Plot File by: GuoX 26/03/2019
 PATH: P:\PROJECTS\60427128\Drawing\Contract\C21000\C2_00_1001.dwg
 Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM
 ISO A1 594mm x 841mm



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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
 項目
SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT
 業主
 渠務署
 Drainage Services Department

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SUB-CONSULTANTS
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ISSUE/REVISION
 修訂

IR	DATE	DESCRIPTION	CHK.
-	MAR. 19	TENDER DRAWING	TLST

STATUS
 階段

SCALE
 比例
 A1 1:1000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖

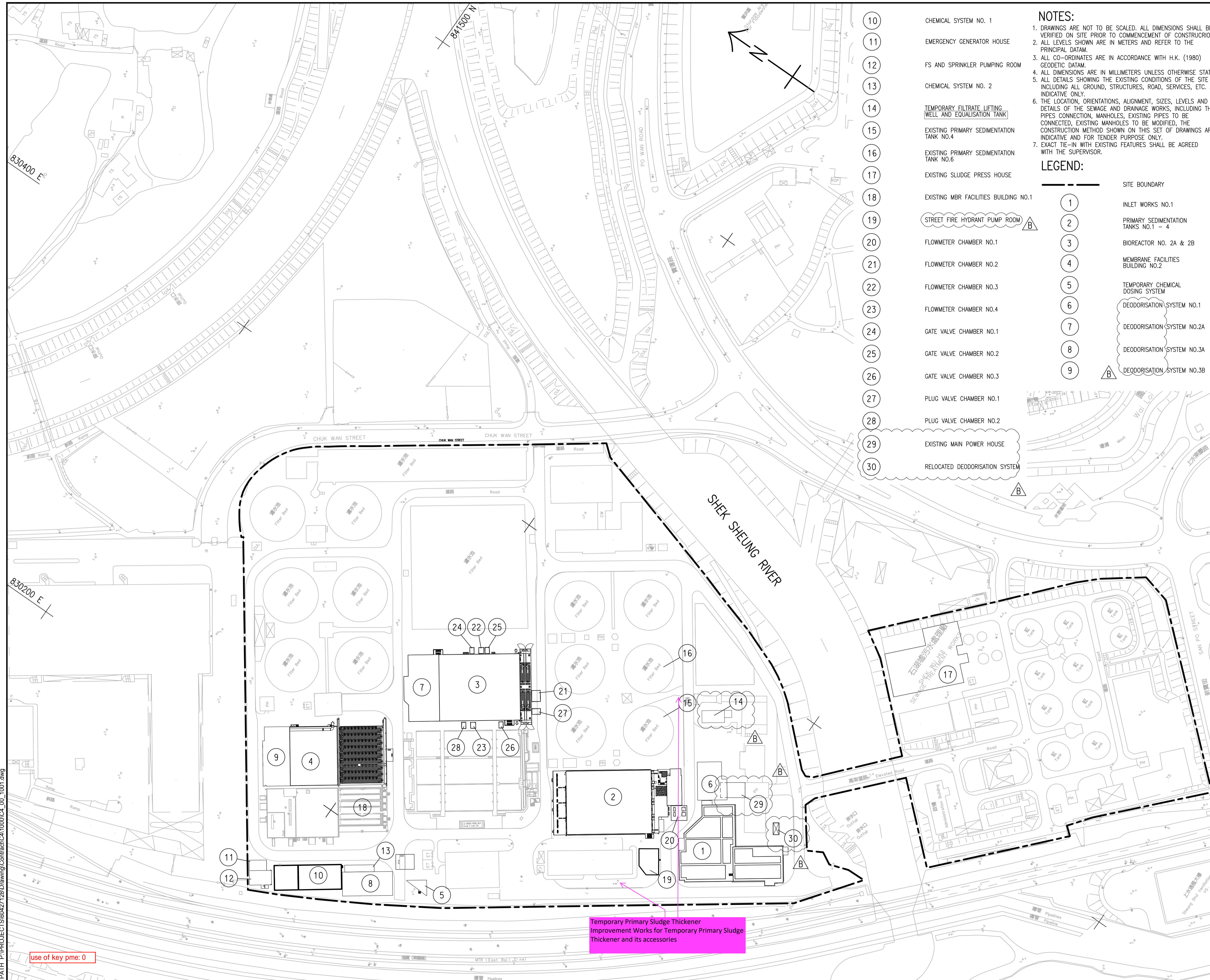
PROJECT NO.
 項目編號
 60427128

CONTRACT NO.
 合約編號
 DE/2018/03

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

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

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- 11 EMERGENCY GENERATOR HOUSE
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- 13 CHEMICAL SYSTEM NO. 2
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- 29 EXISTING MAIN POWER HOUSE
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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



PROJECT
 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
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 Drainage Services Department

CONSULTANT
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 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程師有限公司

ISSUE/REVISION

REV	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

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Use of key pme: 0







Site Record Photos



DC/2018/06

			
SD&THP	Section 4	SDB	Biogas Holding Tank

DC/2018/07

			
BR2	MFB	PST	Inlet



DE/2018/03



Sidestream

December 2022

Portion C DC/2018/06

Section 4
- Outfall construction work
- PME: 1 excavator

Section 4
- Pipe work
- PME: 1 excavator

Dull green barrier

Section 4
- Pipe work
- PME: 1 excavator

CHP
- RC works & ABWF
- PME: 2 scissor lift platforms

PMEs: Tower crane with generator

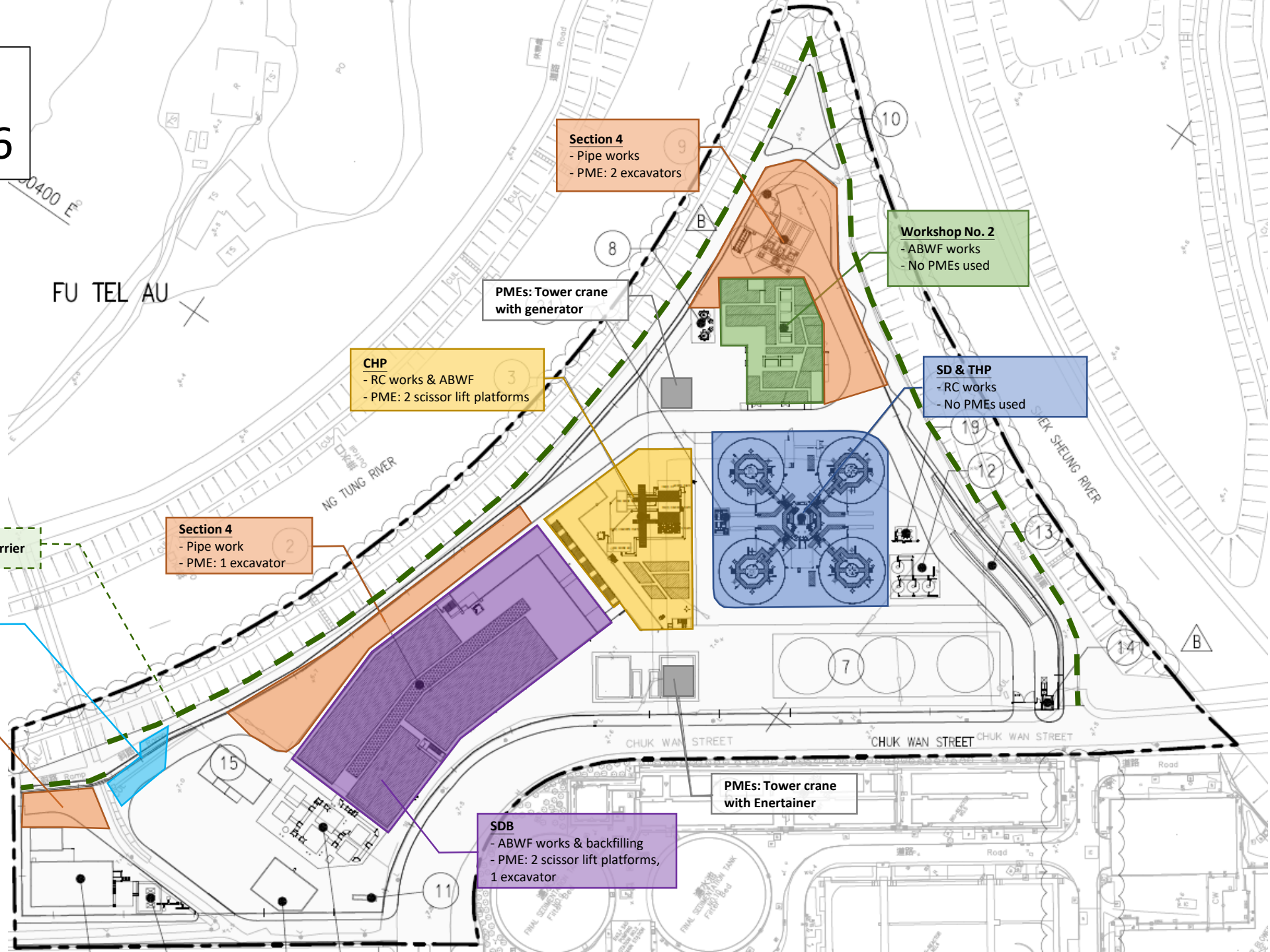
Section 4
- Pipe works
- PME: 2 excavators

Workshop No. 2
- ABWF works
- No PMEs used

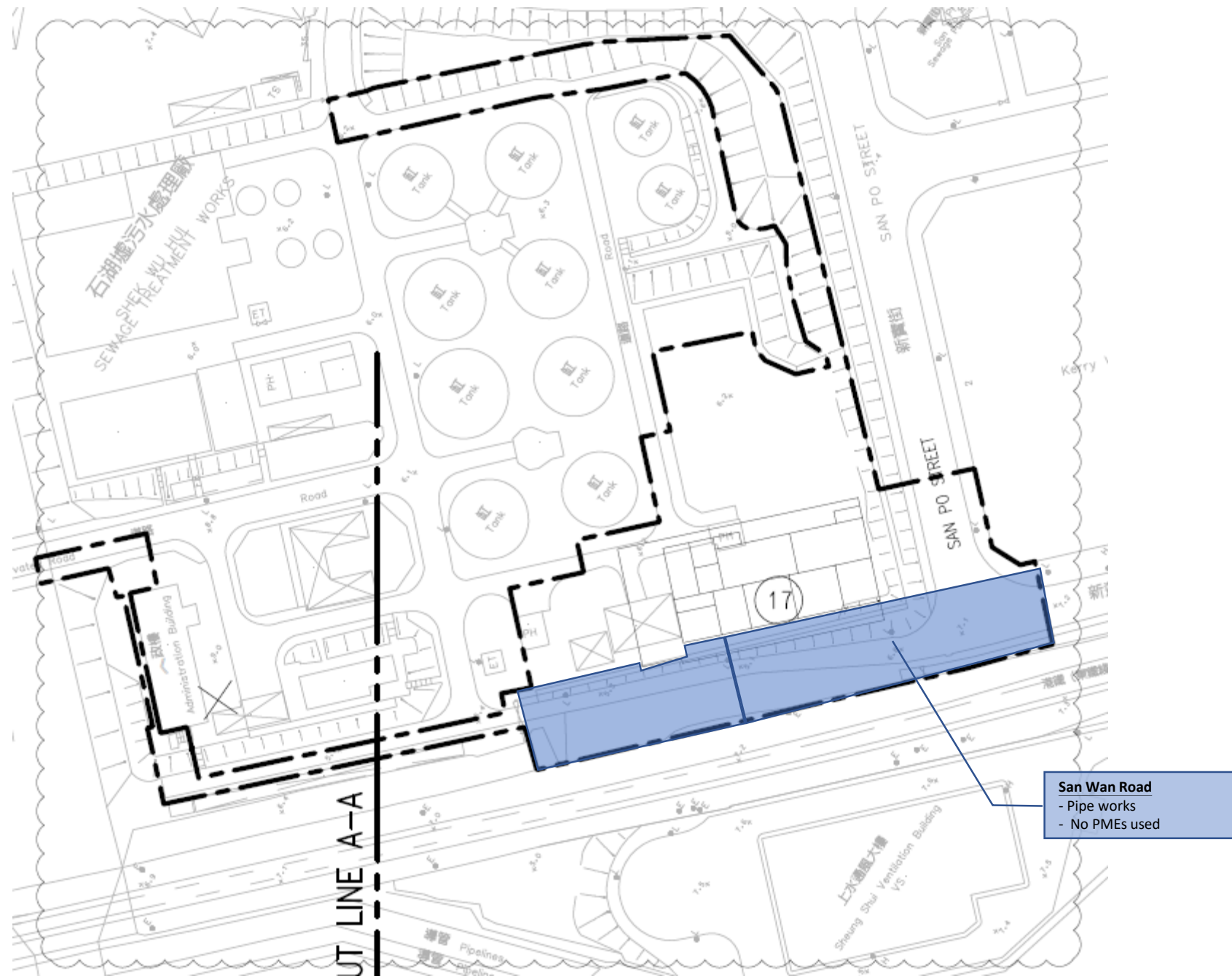
SD & THP
- RC works
- No PMEs used

SDB
- ABWF works & backfilling
- PME: 2 scissor lift platforms,
1 excavator

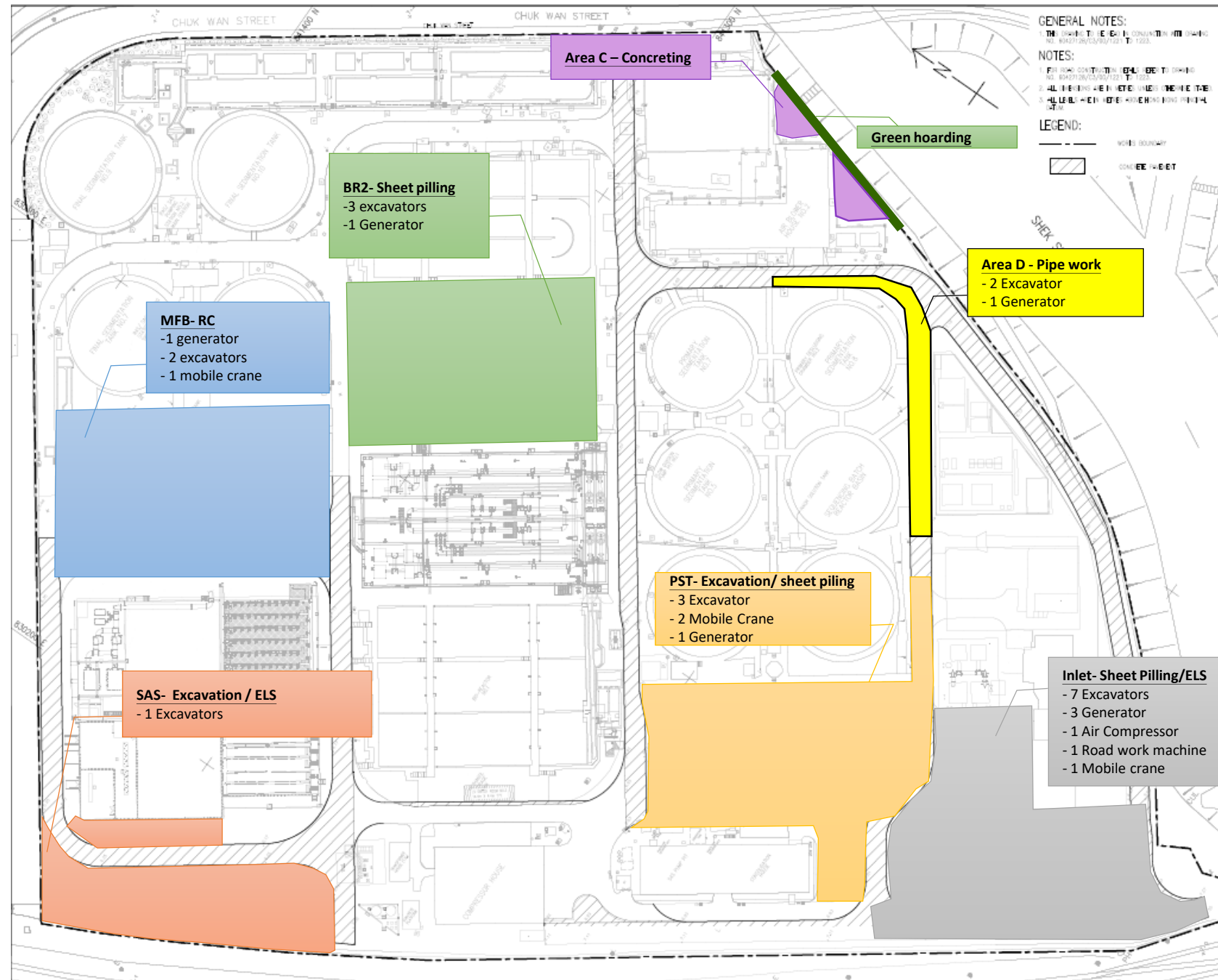
PMEs: Tower crane with Enerainer



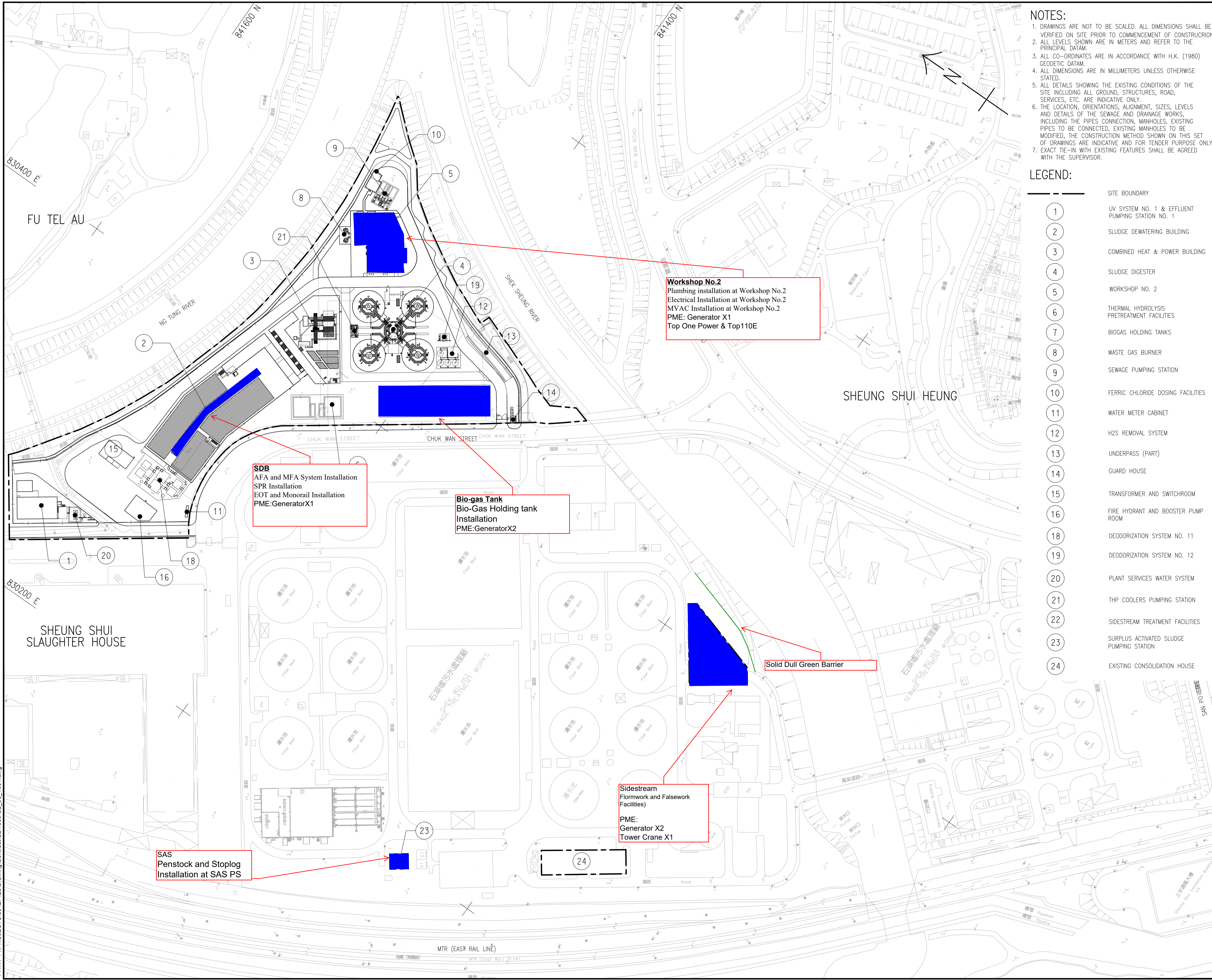
Portion A
DC/2018/06



Portion B DC/2018/07



Plot File by: GuoX 26/03/2019
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 Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM
 ISO A1 594mm x 841mm



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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
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⑲	DEODORIZATION SYSTEM NO. 12
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㉒	SIDESTREAM TREATMENT FACILITIES
㉓	SURPLUS ACTIVATED SLUDGE PUMPING STATION
㉔	EXISTING CONSOLIDATION HOUSE

Workshop No.2
 Plumbing installation at Workshop No.2
 Electrical Installation at Workshop No.2
 MVAC Installation at Workshop No.2
 PME: Generator X1
 Top One Power & Top110E

SDB
 AFA and MFA System Installation
 SPR Installation
 EOT and Monorail Installation
 PME:GeneratorX1

Bio-gas Tank
 Bio-Gas Holding tank Installation
 Installation
 PME:GeneratorX2

Solid Dull Green Barrier

Sidestream
 Formwork and Falsework Facilities
 PME: Generator X2
 Tower Crane X1

SAS
 Penstock and Stoplog Installation at SAS PS



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
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ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
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STATUS
 預備

SCALE
 A1 1:1000

DIMENSION UNIT
 METRES

KEY PLAN
 索引圖

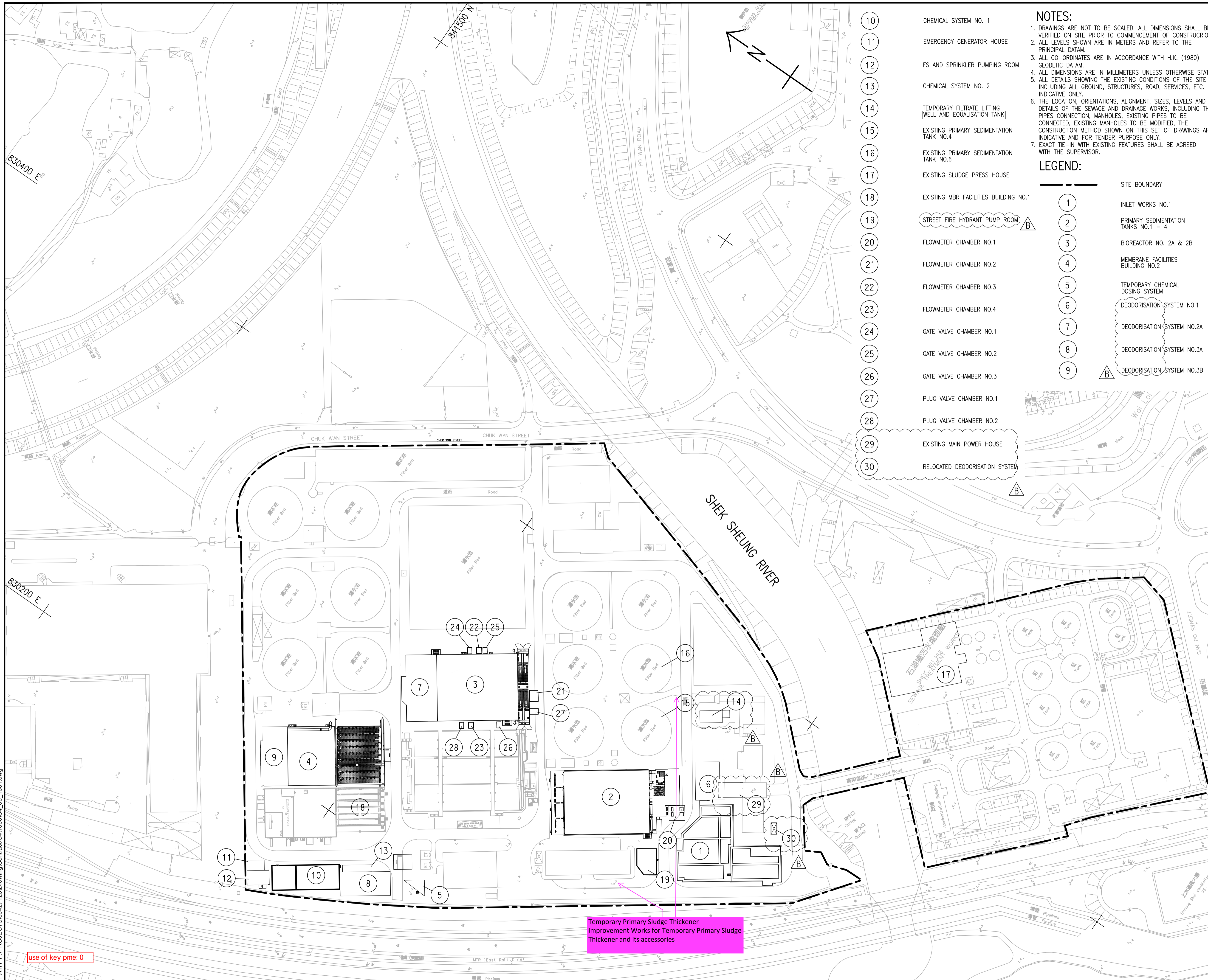
PROJECT NO.
 60427128

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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Temporary Primary Sludge Thickener
 Improvement Works for Temporary Primary Sludge
 Thickener and its accessories

Use of key pme: 0

- 10 CHEMICAL SYSTEM NO. 1
- 11 EMERGENCY GENERATOR HOUSE
- 12 FS AND SPRINKLER PUMP ROOM
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- 14 TEMPORARY FILTRATE LIFTING WELL AND EQUALISATION TANK
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- 26 GATE VALVE CHAMBER NO.3
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- 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

AECOM

PROJECT
 SHEK WU HUI EFFLUENT POLISHING PLANT

CLIENT
 渠務署
 Drainage Services Department

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ISSUE/REVISION

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A	JUL. 19	TENDER ADDENDUM NO. 2	TLST
-	APR. 19	TENDER DRAWING	TLST

STATUS
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DIMENSION UNIT
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KEY PLAN
 索引圖

PROJECT NO.
 項目編號
 60427128

CONTRACT NO.
 合約編號
 DE/2018/04

SHEET TITLE
 圖紙名稱
 GENERAL LAYOUT PLAN

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

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Site Record Photos



DC/2018/06



SD&THP



Section 4



SDB

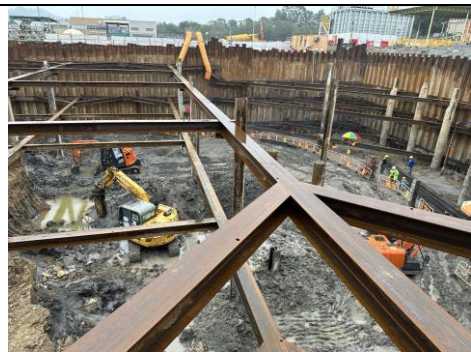


Biogas Holding Tank

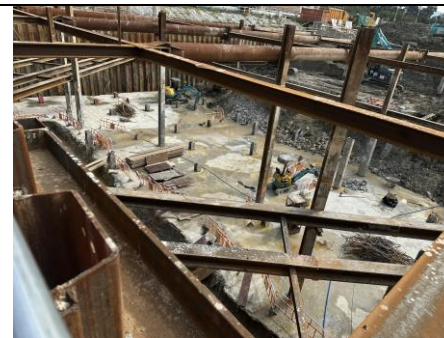
DC/2018/07



BR2



MFB



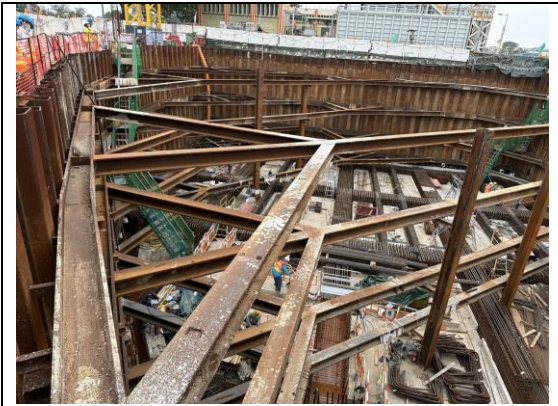
PST



Inlet



DE/2018/03



Sidestream



Appendix 3.1

Environmental Monitoring Requirements

Monitoring Requirements

Air Quality Monitoring

Parameter	Frequency	Location	Measurement Conditions
1-hour TSP	3 times per day, once every 6 days	AM1 – House No.15, Wai Loi Tsuen	Ground level
		AM2 – Fu Tei Au	
		AM2 ^{*(1)} - Footbridge between Fu Tei Au and SWHSTW	
24-hour TSP	Once every 6 days	AM1a* - Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW ⁽²⁾	Roof floor
		AM2a - Site Boundary of the Shek Wu Hui STW (North)	Ground level

Remarks

- (1) Due to close proximity to construction works and heavy machines from another construction project, presence of physical barrier and safety concerns, adjustment for the location of AM2/NM2 were proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from Fu Tei Au to footbridge between Fu Tei Au and SWHSTW. The proposal has sought approval from ER and IEC, and agreement from EPD on 28 December 2022.
- (2) Due to close proximity to construction works and heavy machines, presence of physical barrier and safety concerns, find adjustment for the location of AM1a was proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from the ground level near the control room of SWHSTW to the roof floor of that control room. The proposal has sought approval from ER and IEC, and agreement from EPD in May 2022.

Noise Monitoring

Parameter	Frequency	Location	Measurement Conditions
L _{eq} , L ₉₀ & L ₁₀ at 30-minute intervals during (0700 to 1900 on normal weekdays)	Once per week when noise generating activities are underway	NM1 – Wai Loi Tsuen	Ground level and free field measurement
		NM2 – Fu Tei Au	
		NM2 ^{*(1)} - Footbridge between Fu Tei Au and SWHSTW	
		NM3 - Man Kok Village	



Remarks

- (1) Due to close proximity to construction works and heavy machines from another construction project, presence of physical barrier and safety concerns, adjustment for the location of AM2/NM2 were proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from Fu Tei Au to footbridge between Fu Tei Au and SWHSTW. The proposal has sought approval from ER and IEC, and agreement from EPD on 28 December 2022.

Ecological Monitoring

Methodology	Monitoring Stations	Descriptions	Influenced by Tidal Action
Monitoring surveys were conducted on a weekly basis along the Ng Tung River, Sheung Yue River and Shek Sheung River at both high and low tides. Any sources of actual or potential disturbance to birds due to construction activities are identified.	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	



Water Quality Monitoring

Parameter	Frequency	Location	Measurement Conditions
Dissolved oxygen (DO), salinity, temperature, turbidity and pH shall be measured in situ while suspended solids (SS) is determined by laboratory analysis at all the designated monitoring stations.	Three days per week when construction works at the outfall at Ng Tung River	M1	Impact Station, downstream of the proposed outfall
		C1	Control Station, upstream of the proposed outfall



Appendix 3.2

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.



Water Quality Monitoring

Parameter (Unit)	Depth	Action Level	Limit Level
DO (mg/L)	Middle	≤ 7.8 mg/L	≤ 7.7 mg/L
Turbidity (NTU)	Depth- average	≥ 14.6 NTU or 120% of upstream control station's Turbidity at the same tide of the same day	≥ 15.6 NTU or 130% of upstream control station's Turbidity at the same tide of the same day
SS (mg/L)	Depth- average	≥ 18.8 mg/L or 120% of upstream control station's SS at the same tide of the same day	≥ 19.5 mg/L or 130% of upstream control station's SS at the same tide of the same day



Appendix 3.3

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"> Construction debris and spoil should be covered and/or properly disposed of as soon as possible to avoid these being washed into nearby water bodies; 						^
	<ul style="list-style-type: none"> Proper locations for discharge outlets of temporary wastewater treatment facilities well away from sensitive receivers should be identified; 						^
	<ul style="list-style-type: none"> Adequate lateral support should be erected where necessary in order to prevent soil/mud from slipping into water bodies; 						^
	<ul style="list-style-type: none"> Site boundaries should be clearly marked and any works beyond the boundary strictly prohibited; 						^
	<ul style="list-style-type: none"> Regular water monitoring and site audit should be carried out at adequate points along any watercourses where construction works are underway upstream within their catchments and also on the Ng Tung, Sheung Yue and Shek Sheung Rivers. If the monitoring and audit results show that pollution occurs, adequate measures including temporarily cessation of works should be considered; 						^
	<ul style="list-style-type: none"> Excavation profiles should be properly designed and executed with attention to the relevant requirements for environment, health and safety; 						^
	<ul style="list-style-type: none"> Where soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; Stockpiling sites should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of 						^
	<ul style="list-style-type: none"> contaminated soil to minimize contaminated runoff and construction materials should be properly covered and located away from nearby water bodies; and 						^
	<ul style="list-style-type: none"> Supply of suitable clean backfill material after excavation, if required. 						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<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 Disposal of waste should be done at licensed waste disposal facilities 						^
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 						^
<ul style="list-style-type: none"> Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified. 	^						
S6.2.5.3	C&D Material from Buildings Demolition and New Building Construction						

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<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	Chemical Waste						
	<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
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	<p>MM11 - Screen Planting</p> <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	<p>MM16 - Screen Hoarding</p> <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	<p>MM17 - Light Control</p> <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

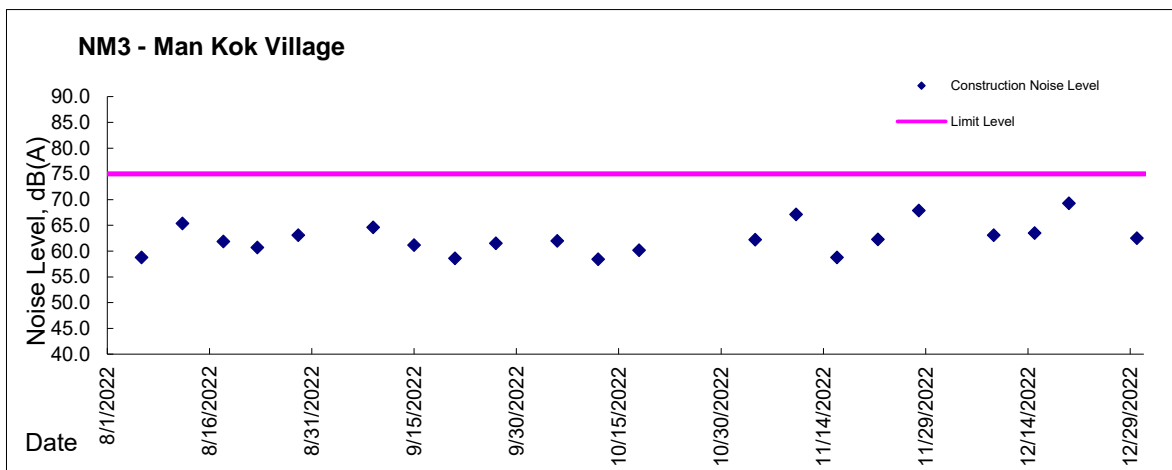
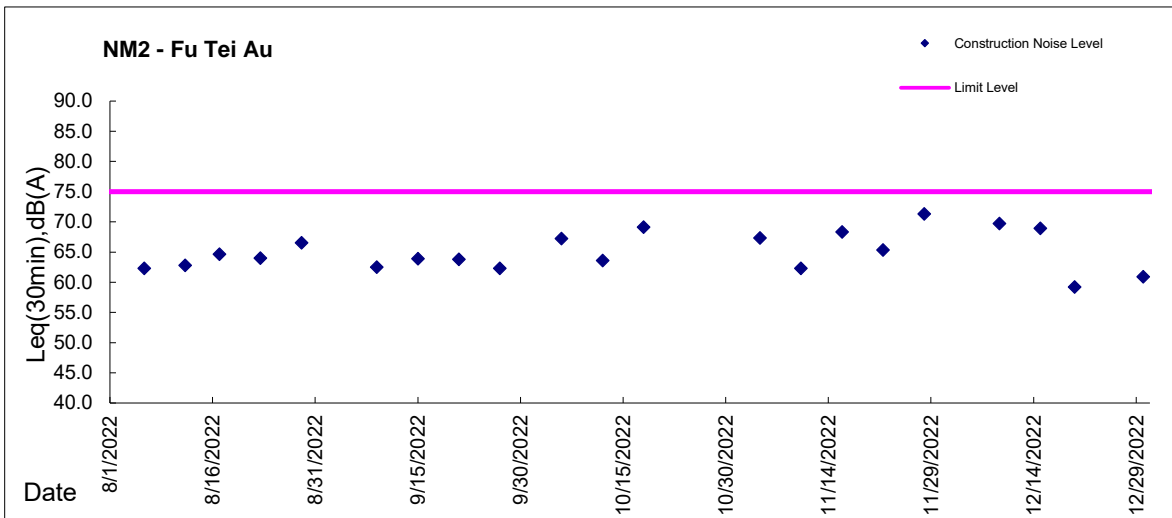
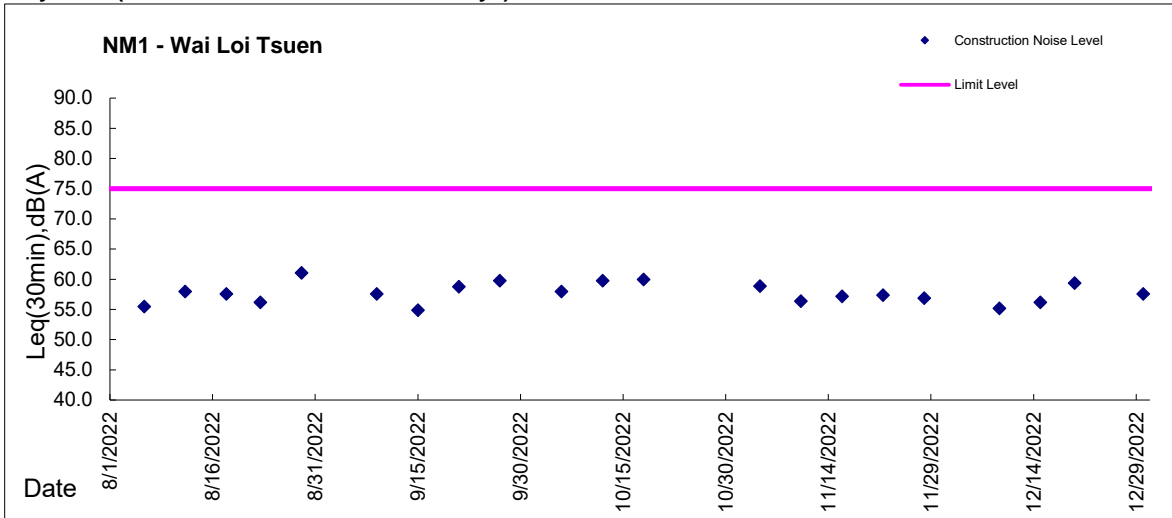


Appendix 3.4

Noise Monitoring Graphical Presentations



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



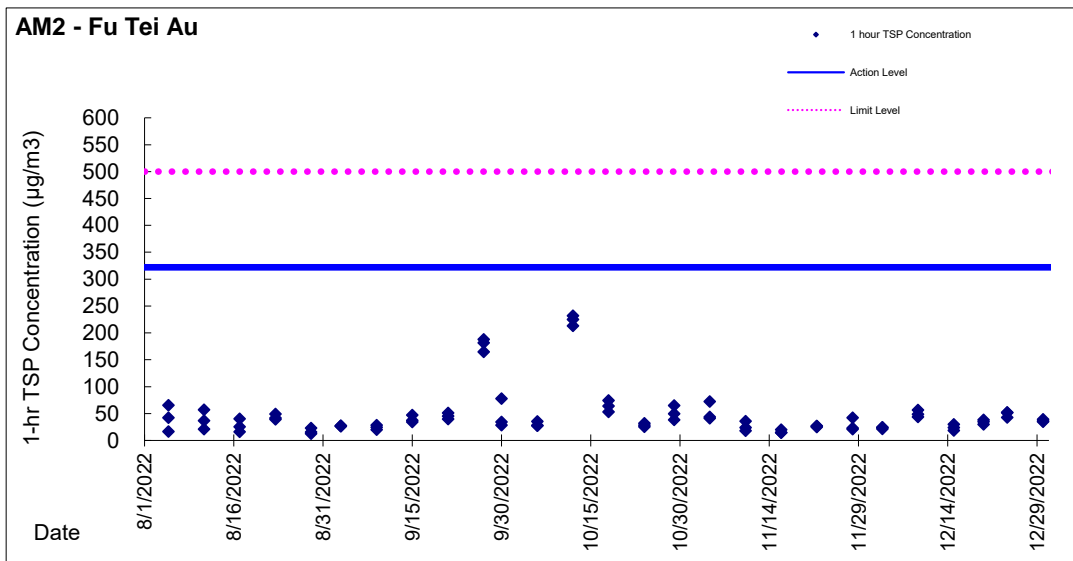
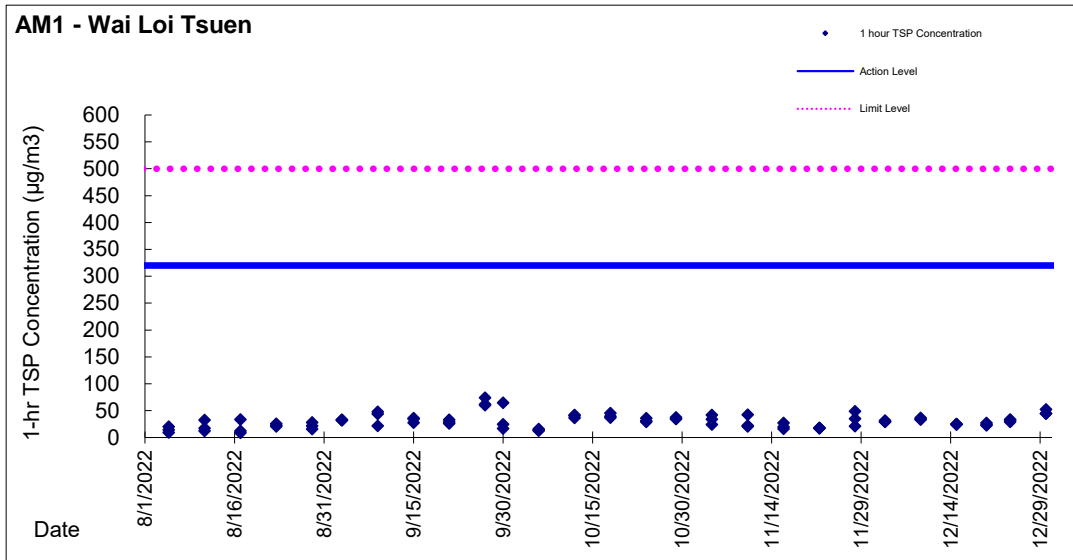


Appendix 3.5

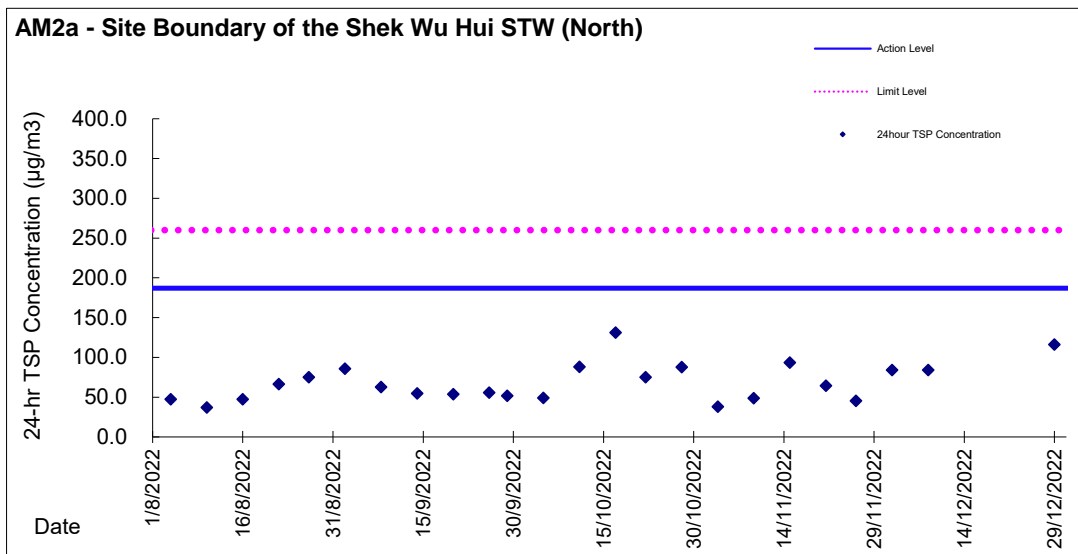
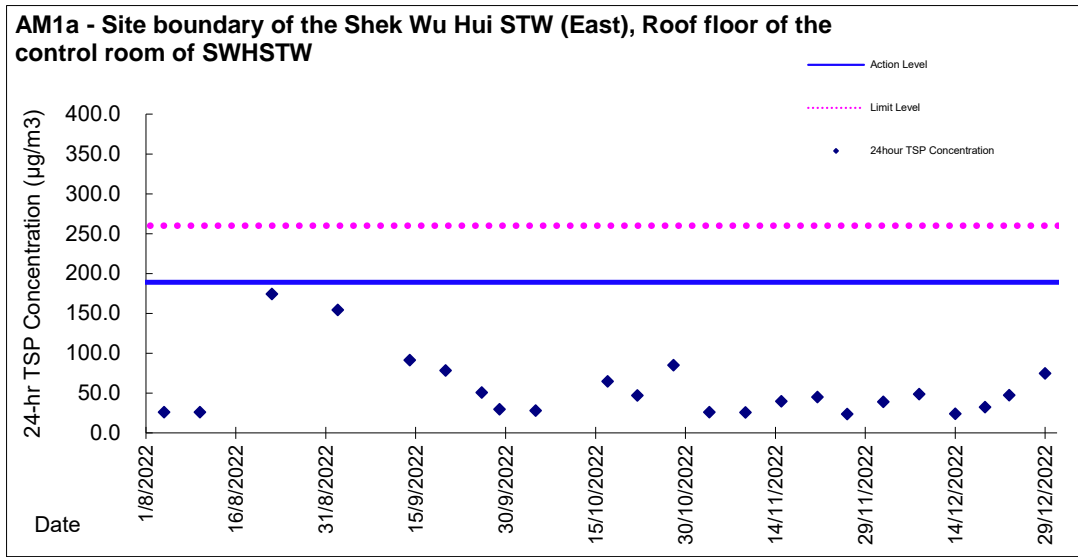
Air Quality Monitoring Graphical Presentations



Graphic Presentation of TSP Result



Graphic Presentation of TSP Result



1. 24hr-TSP monitoring for AM2a conducted on 14 to 23 Dec 2022 were suspended due to power failure.



Appendix 3.6

Details of Ecological Monitoring Results in the Reporting Period



Details of Ecological Monitoring Results in the Reporting Quarter

Reporting period: October to December 2022

Summary Result of T-Test Analysis for All Waterbird

Month	T-values of Data		Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
October 2022	Abundance	Monthly	✓	✓
		Seasonal	✓	✓
		Overall	✓	✓

Month	T-values of Data		Confidence Level (Critical Value)	
			95% (-2.132)	99% (-3.747)
November 2022	Abundance	Monthly	✓	✓
		Seasonal	✓	✓
		Overall	✓	✓

Month	T-values of Data		Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
December 2022	Abundance	Monthly	✓	✓
		Seasonal	✓	✓
		Overall	✓	✓

Remarks:

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



Summary of Abundance of Representative Waterbirds in the Reporting Period

Representative Species			Compliance		
Species Name	Common Name	Chinese Name	October 2022	November 2022	December 2022
<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	✓	✓	✓

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.

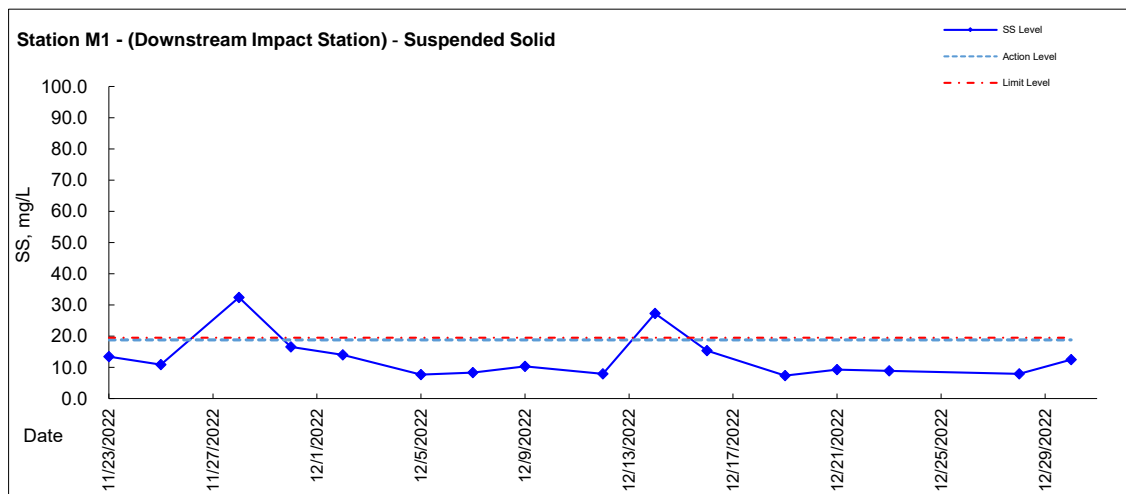
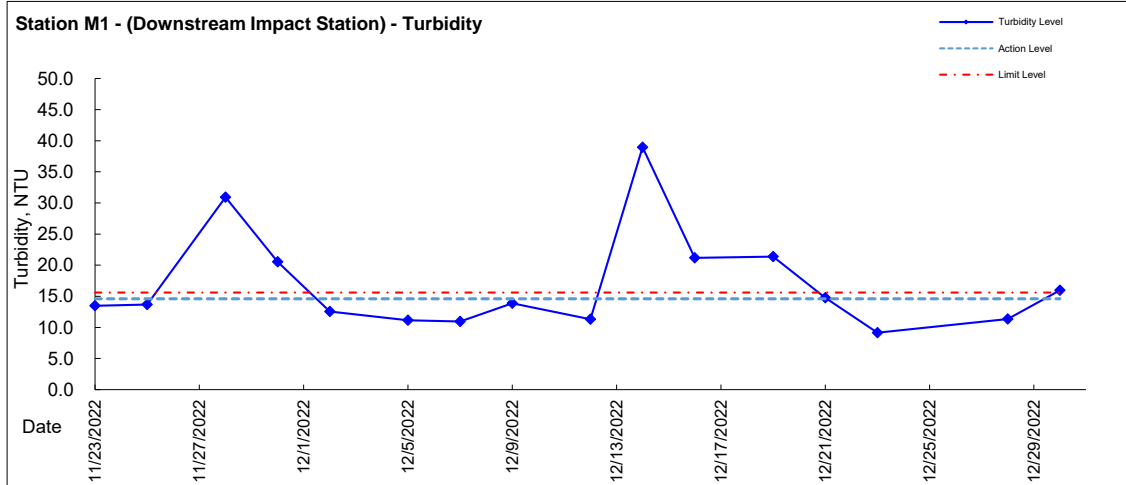
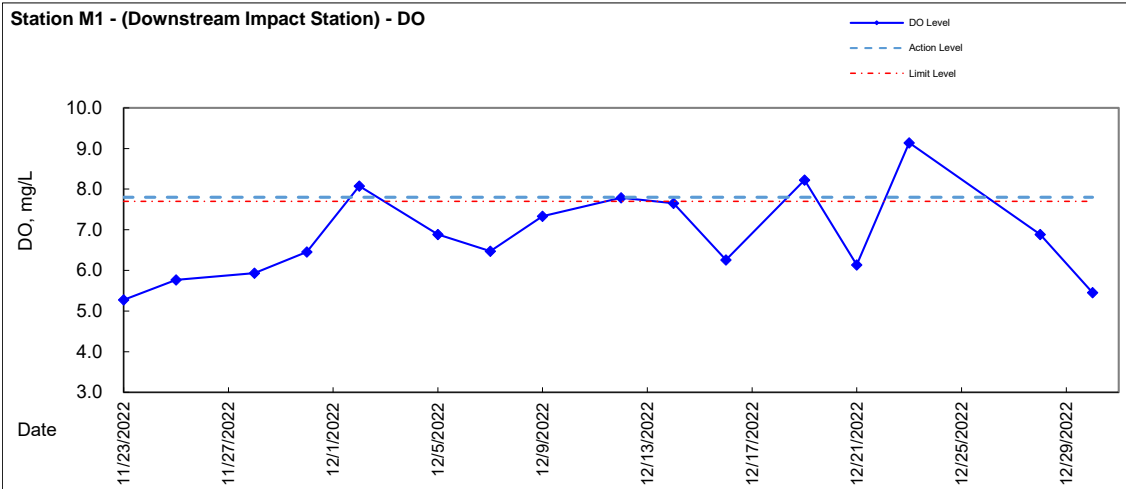


Appendix 3.7

Water Quality Monitoring Graphical Presentations

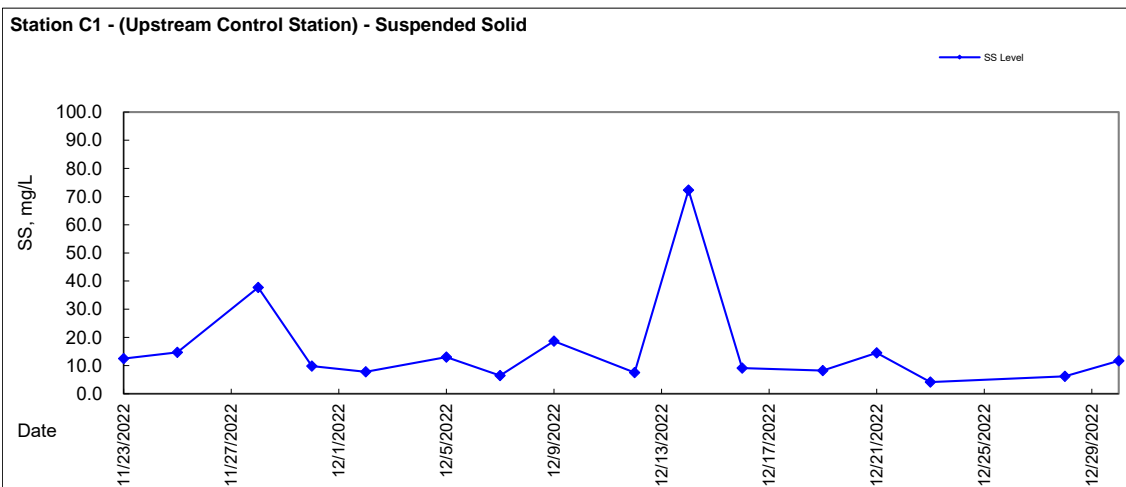
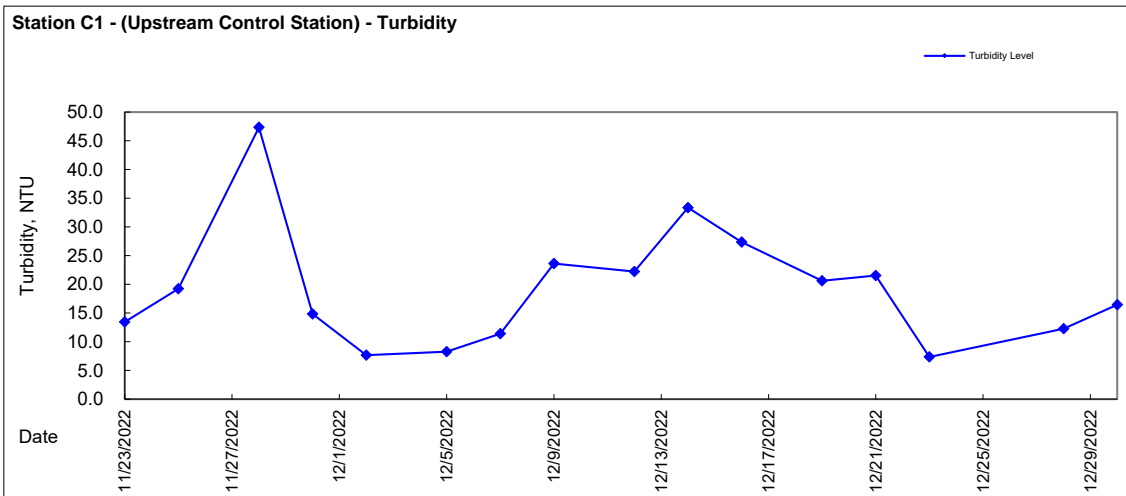
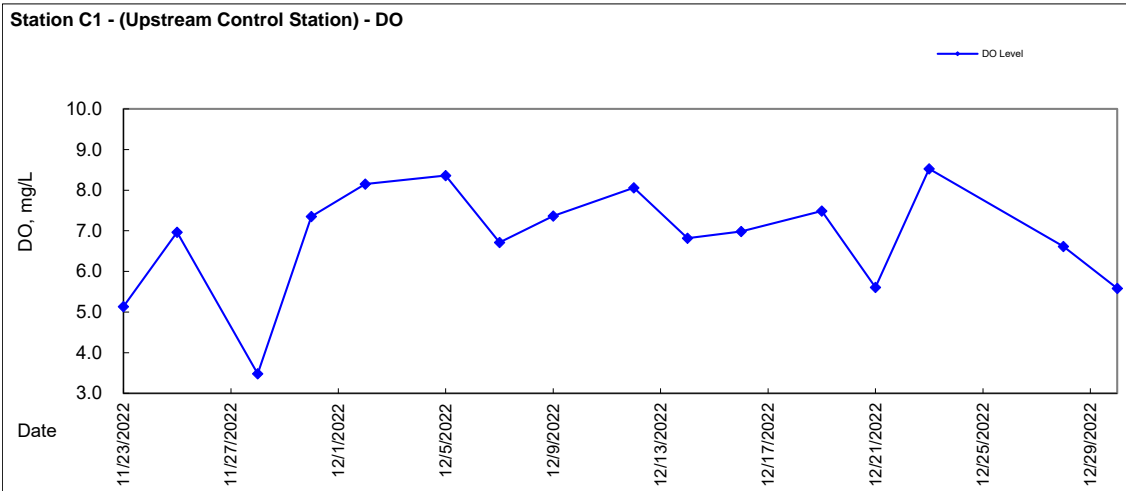


Graphic Presentation of WQM Result





Graphic Presentation of WQM Result





Appendix 3.8

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	2.370	0.000	0.000	0.000	0.068
Mar	0.398	0.000	0.000	0.000	0.398	0.756	0.000	0.000	0.000	0.000	0.094
Apr	1.624	0.000	0.000	0.000	1.624	0.133	0.000	0.000	0.000	0.000	0.088
May	0.362	0.000	0.000	0.000	0.362	0.046	0.000	0.000	0.000	0.000	0.090
Jun	0.397	0.000	0.000	0.000	0.397	0.069	0.000	0.010	0.000	0.000	0.077
Sub-total	4.433	0.000	0.000	0.000	4.433	1.233	2.370	0.010	0.000	0.000	0.620
Jul	1.635	0.000	0.000	0.000	1.635	0.104	0.003	0.000	0.001	0.000	0.122
Aug	1.409	0.000	0.000	0.000	1.409	0.487	0.000	0.000	0.005	0.000	0.160
Sep	1.032	0.000	0.000	0.000	1.032	0.429	0.004	0.000	0.010	0.000	0.229
Oct	0.789	0.000	0.000	0.000	0.789	0.320	0.003	0.000	0.008	0.000	0.133
Nov	2.558	0.000	0.000	0.000	2.558	1.413	0.000	0.000	0.000	0.000	0.152
Dec	4.051	0.000	0.000	0.000	4.051	1.482	0.000	0.000	0.000	0.000	0.104
Total	15.906	0.000	0.000	0.000	15.906	5.470	2.379	0.010	0.023	0.000	1.521

- 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	7.15	0.000	0.004	0.000	0.012
Feb	3.400	0.000	0.000	0.639	2.761	0.000	5.71	0.000	0.000	0.000	0.010
Mar	3.050	0.000	0.000	0.073	2.977	0.000	0.00	0.000	0.000	0.000	0.019
Apr	2.037	0.000	0.000	0.112	1.925	0.000	0.00	0.000	0.000	0.000	0.016
May	1.076	0.000	0.000	0.000	1.076	0.000	2.14	0.000	0.000	0.000	0.016
Jun	2.515	0.000	0.000	0.034	2.481	0.000	0.00	0.010	0.001	0.000	0.020
Sub-total	17.057	0.000	0.000	1.671	15.386	0.000	15.00	0.010	0.005	0.000	0.093
Jul	3.222	0.000	0.000	0.000	3.222	0.000	0.00	0.000	0.005	0.000	0.031
Aug	4.151	0.000	0.000	0.000	4.151	0.000	0.00	0.000	0.003	0.000	0.026
Sep	2.735	0.000	0.000	0.000	2.735	0.000	0.00	0.000	0.007	0.000	0.042
Oct	9.779	0.000	0.000	1.937	7.842	0.000	0.00	0.000	0.006	0.000	0.029
Nov	12.967	0.000	0.000	0.000	12.967	0.232	0.00	0.000	0.000	0.000	0.027
Dec	13.033	0.000	0.000	0.000	13.033	0.000	0.00	0.000	0.000	0.000	0.655
Total	62.943	0.000	0.000	3.608	59.335	0.232	15.01	0.010	0.026	0.000	0.902

- 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	0	0	0	0	0	0	0	0	0	0	3.06T
Apr	0	0	0	0	0	0	0	0.13	0.012	0	0
May	4029.56T	0	0	0	4029.56T	0	0	0	0	0	1.64T
June	5565.13T	0	0	0	5565.13T	0	0	0	0	0	1.19T
Sub-total	9854.98 T	0	0	0	9854.98 T	0	0	0.439	0.023	0	8.59
July	5374.59T	0	0	0	5374.59T	0	0	0	0	0	1.71T
Aug	149.1T	0	0	0	149.1T	0	0.006	0.646	0.005	0	0
Sept	43.17T	0	0	0	43.17T	0	0	0.108	0.007	0	3.61
Oct	57.6T	0	0	0	57.6T	0	0	0	0	0	2.13T
Nov	0	0	0	0	0	0	0	0.131	0.005	0	2.24
Dec	0	0	0	0	0	0	0	0.111	0.011	0	16.27T
Total	15479.44T	0	0	0	15479.44T	0	0.006	1.435	0.051	0	34.55T



Appendix 4.1

Summary of Notification of Exceedance



Summary for Notification of Exceedance

Reporting period: October to December 2022

Air Quality

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

Construction Noise

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

Ecology: Nil



Water Quality

Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up
SWH_001_W	23/11/2022	M1	DO(mg/L)	5.28 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
SWH_002_W	25-Nov-22	M1	DO (mg/L)	5.77 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
SWH_003_W	28-Nov-22	M1	DO (mg/L)	5.93 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	30.9 NTU (Limit Level Exceedance)	>14.6 NTU />120 % of C1	>15.6 NTU />130 % of C1	After investigation, the exceedance was considered non-project related.
			SS (mg/L)	32.4 mg/L (Limit Level Exceedance)	>18.8 mg/L/ >120% of C1	>19.5 mg/L />130% of C1	After investigation, the exceedance was considered non-project related.
SWH_004_W	30-Nov-22	M1	DO (mg/l)	6.46 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	20.6 NTU (Limit Level Exceedance)	>14.6 NTU />120 % of C1	>15.6 NTU />130 % of C1	After investigation, the exceedance was considered non-project related.
			SS (mg/L)	16.6 mg/L (Limit Level Exceedance)	>18.8 mg/L/ >120% of C1	>19.5 mg/L />130% of C1	After investigation, the exceedance was considered non-project related.



SWH_005_W	2-Dec-22	M1	Turbidity (NTU)	12.5 NTU (Limit Level Exceedance)	>9.20 NTU (120 % of C1)	> 9.96 NTU (130 % of C1)	After investigation, the exceedance was considered non-project related.
			SS (mg/L)	14.00 mg/L (Limit Level Exceedance)	9.36 mg/L (120 % of C1)	10.14 mg/L (130 % of C1)	
SWH_006_W	5-Dec-22	M1	DO (mg/l)	6.89 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	11.2 NTU (Limit Level Exceedance)	>9.91 NTU (120 % of C1)	> 10.74 NTU (130 % of C1)	
SWH_007_W	7-Dec-22	M1	DO (mg/l)	6.47 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			SS (mg/l)	8.35 mg/l (Action Level Exceedance)	>7.74 mg/l (120 % of C1)	> 8.39 mg/l (130 % of C1)	
SWH_008_W	9-Dec-22	M1	DO (mg/l)	7.34 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
SWH_009_W	12-Dec-22	M1	DO (mg/l)	7.79 mg/L (Action Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
SWH_010_W	14-Dec-22	M1	DO (mg/l)	7.65 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	39.0 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU	
			SS (mg/L)	27.30 mg/L (Limit Level Exceedance)	>18.8 mg/L	>19.5 mg/L	



SWH_011_W	16-Dec-22	M1	DO (mg/l)	6.26 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	21.2 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU	
			SS (mg/L)	15.35 mg/L (Limit Level Exceedance)	>10.98 mg/L (120 % of C1)	>11.90 mg/L (130 % of C1)	
SWH_012_W	19-Dec-22	M1	Turbidity (NTU)	21.4 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU	After investigation, the exceedance was considered non-project related.
SWH_013_W	21-Dec-22	M1	DO mg/L	6.14 mg/L (Limit Level Exceedance)	<7.8 mg/L	<7.7 mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	14.8 NTU (Action Level Exceedance)	>14.6 NTU	>15.6 NTU	
SWH_014_W	23-Dec-22	M1	Turbidity (NTU)	9.4 NTU (Action Level Exceedance)	>8.76 NTU (120% of C1)	>9.49 NTU (130% of C1)	After investigation, the exceedance was considered non-project related.
			SS (mg/L)	8.45 mg/L (Limit Level Exceedance)	>4.98 mg/L (120% of C1)	>5.40 mg/L (130% of C1)	
SWH_015_W	28-Dec-22	M1	DO (mg/L)	6.89 mg/L (Limit Level Exceedance)	7.8 mg/L	7.7 mg/L	After investigation, the exceedance was considered non-project related.
			SS (mg/L)	7.90 mg/L (Action Level Exceedance)	>7.38 mg/L (120% of C1)	>8.00 mg/L (130% of C1)	
SWH_016_w	28-Dec-22	M1	DO (mg/l)	5.45 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	After investigation, the exceedance was considered non-project related.
			Turbidity (NTU)	15.9 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU	



Appendix 4.2

Site Audit Summary

**Site Audit Summary**Reporting Quarter: **October to December 2022**

Contract No.: DC/2018/06		
Date	Observations and recommendations	Follow-up and status
October		
7 Oct 2022	No particular findings	-
10 Oct 2022	No particular findings	-
18 Oct 2022	To cover up the exposed stockpiles with tarpaulin near SDB.	Rectified on 25 Oct 2022.
25 Oct 2022		
November		
1 Nov 2022	No particular findings	-
11 Nov 2022	No particular findings	-
15 Nov 2022	No particular findings	-
21 Nov 2022	The Contractor was reminded to provide a drip tray to chemical containers placed at SD.	Rectified on 29-Nov-2022.
29 Nov 2022	Chemical waste containers placed without drip tray was observed at CHP. The Contractor was advised to provide a drip tray to the chemical containers stored onsite.	Rectified on 9-Dec-2022.
	The Contractor was reminded to provide a cover to the cement bag stored at roof of SDB.	Rectified on 9-Dec-2022.
December		
9 Dec 2022	Silt was observed at vehicle exit. The Contractor was advised to provide wheel washing to the leaving vehicle.	Rectified on 15-Dec-22.
15 Dec 2022	Soil was observed outside of site boundary near SDB. The Contractor was advised to provide preventive measures to ensure no construction material will be dropped into public area during the transporting process.	Rectified on 20-Dec-22.
20 Dec 2022	No particular findings	-
28 Dec 2022	The stockpile should be watering to remain surface wet.	Rectified on 3-Jan-23.
	The chemical containers should be placed properly inside the drip tray with enough capacity.	Rectified on 3-Jan-23.



Contract No.: DC/2018/07		
Date	Observations and recommendations	Follow-up and status
October		
7 Oct 2022	No particular findings	-
10 Oct 2022	To clear the clogged drip tray near PST.	Rectified on 18 Oct 2022.
18 Oct 2022	No particular findings	-
25 Oct 2022	No particular findings	-
November		
1 Nov 2022	The Contractor was reminded to provide a drip tray to the chemical containers placed onsite.	Rectified on 4-Nov-2022
11 Nov 2022	The Contractor is reminded to maintain works area access for site vehicle free from loose material to prevent dust emission.	Rectified on 15-Nov-2022
	Unknown tree within sewage treatment plant area shall be fenced off to prevent unauthorized used / storage near the protection zone.	Rectified on 15-Nov-2022
15 Nov 2022	No particular findings	-
21 Nov 2022	Oil stain was observed at the earth near inert. The Contractor was advised to remove the oil stain and treat it properly.	Rectified on 29-Nov-2022.
29 Nov 2022	Breaking work conducted without dust control measure was observed at BR. The Contractor was advised to provide watering to the dusty work conducted onsite.	Rectified on 9-Dec-2022.
December		
9 Dec 2022	The Contractor was reminded to update the CNP, which displayed at site entrance	Rectified on 20-Dec-22.
15 Dec 2022	No particular findings	-
20 Dec 2022	No particular findings	-
28 Dec 2022	No particular findings	-



Contract No.: DE/2018/03		
Date	Observations and recommendations	Follow-up and status
October		
7 Oct 2022	No particular findings	-
11 Oct 2022	No particular findings	-
18 Oct 2022	No particular findings	-
25 Oct 2022	No particular findings	-
November		
1 Nov 2022	The Contractor was reminded to display the discharge license on proper area.	Rectified on 18-Nov-2022.
8 Nov 2022	The Contractor was reminded to maintain the performance of the Wetsep.	Rectified on 18-Nov-2022.
15 Nov 2022	No particular findings	-
22 Nov 2022	No particular findings	-
29 Nov 2022	No particular findings	-
December		
6 Dec 2022	No particular findings	-
13 Dec 2022	No particular findings	-
20 Dec 2022	No particular findings	-
28 Dec 2022	Dust measures (water spraying or regular cleaning) should be adopted for the dusty ground.	Rectified on 3-Jan-23.



Contract No.: DE/2018/04		
Date	Observations and recommendations	Follow-up and status
October		
7 Oct 2022	No particular findings	-
11 Oct 2022	No particular findings	-
18 Oct 2022	No particular findings	-
25 Oct 2022	No particular findings	-
November		
1 Nov 2022	No particular findings	-
8 Nov 2022	No particular findings	-
15 Nov 2022	No particular findings	-
22 Nov 2022	No particular findings	-
29 Nov 2022	No particular findings	-
December		
6 Dec 2022	No particular findings	-
13 Dec 2022	No particular findings	-
20 Dec 2022	No particular findings	-
28 Dec 2022	No particular findings	-



Appendix 5.1

Summary of Complaints, Notification of Summons and Successful Prosecution



Summary of Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
1	18 March 2020	EPD	Expansion Site of SWHSTP (Portion C)	Water contamination	<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
20220304	4 March 2022	EPD	SWHEPP	Odour nuisance	<p>The complainant alleged the odour nuisance was sourced from the construction site of Shek Wu Hui Effluent Polishing Plant on 4 March 2022. Thus, all four contracts (Contract Nos. DC/2018/06, DC/2018/07, DE/2018/03 and DE/2018/04) were involved in the complaint investigation.</p> <p>After investigation, no construction activities undertaken by all four contracts was associated with the odour nuisance received on 4 March 2022. Nevertheless, the contractors were reminded and recommended to:</p> <ul style="list-style-type: none">• Ensure only equipment with valid NRMM label is allowed to be used at site and regular maintenance of equipment• Provide regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart• Use ULSD as fuel for diesel-powered equipment• Maintain proper segregation and storage of general refuse	Closed on 22 April 2022 as confirmed with EPD.



Summary of Notification of Summons and Successful Prosecution

Reporting period: October to December 2022

Log No.	Date	Received From and Received By	Location	Outcome	Status
-	-	-	-	-	-

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