

# CONTRACT NO. SPW 12/2021

# SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS

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

# MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT DECEMBER 2022

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# Contract No. SPW 12/2021 Shek Wu Hui Effluent Polishing Plant – Main Work

Monthly Environmental Monitoring & Audit Report

December 2022

(January 2023)

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# **TABLE OF CONTENTS**

1	INTRO	DUCTION	9
	1.1 1.2	Scope of the ReportStructure of the Report	
2	PROJE	CT BACKGROUND	. 11
	2.1 2.2 2.3	BackgroundProject Organization and Contact PersonnelConstruction Activities	. 11
3	STATU	S OF REGULATORY COMPLIANCE	. 16
	3.1 3.2	Status of Environmental Licensing and Permitting under the Project Summary of submission status under FEP-02/474/2013	
4	MONIT	ORING REQUIREMENTS	. 19
	4.1 4.2 4.3 4.4	Noise Monitoring Air Monitoring Ecological Monitoring Water Quality Monitoring	. 22 . 26
5	MONIT	ORING RESULTS	. 33
	5.1 5.2 5.3 5.4 5.5	Noise Monitoring Results Air Quality Monitoring Results Ecology Monitoring Results Water Quality Monitoring Results Waste Management	.34
6	COMPI	LIANCE AUDIT	. 40
	6.1 6.2 6.3 6.4 6.5 6.6	Noise Monitoring	. 40 . 40 . 41 . 41
7	ENVIR	ONMENTAL SITE AUDIT	. 42
8	COMPI	AINTS, NOTIFICATION OF SUMMONS AND PROSECUTION	. 44
Q	CONCI	LISION	45



# **LIST OF TABLES**

Table 2.1	Contact Details of Key Personnel
Table 3.1	Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DC/2018/06
Table 3.2	Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DC/2018/07
Table 3.3	Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DE/2018/03
Table 3.4	Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DE/2018/04
Table 4.1	Noise Monitoring Station
Table 4.3	Noise Monitoring Equipment
Table 4.4	Action and Limit Level for Noise Monitoring
Table 4.5	Air Monitoring Station
Table 4.10	Water Quality Stations for Water Quality Monitoring
Table 4.11	Water Quality Monitoring Equipment
Table 4.12	Action and Limit Level for Water Quality Monitoring
Table 5.1	Summary Table of Noise Monitoring Results
Table 5.2	Summary Table of 1-hour TSP Monitoring Results
Table 5.3	Summary Table of 24-hour TSP Monitoring Results
Table 5.4	Abundance of Representative Waterbirds in the Reporting Month
Table 5.5	Summary Table of Water Quality Monitoring Results
Table 5.6	Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/06
Table 5.7	Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/07
Table 5.8	Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/03
Table 5.9	Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/04
Table 8.1	Cumulative Statistics on Complaints in the Reporting Month
Table 8.2	Cumulative Statistics on Successful Prosecutions
Table 9.1	Construction Activities and Recommended Mitigation Measures in Coming Reporting Month



Appendix 9.1 Construction Programme of Individual Contracts

# **LIST OF FIGURES**

Figure 2.1 Pr	oject Layout
Figure 2.2 Pr	oject Organization Chart
	ocations of Noise Monitoring Station
Figure 4.2 Lo	cations of Air Quality Monitoring Stations
Figure 4.3 Lo	ocations of Ecological Monitoring Stations
Figure 4.4 Lo	ocations of Water Quality Monitoring Stations
LIST OF APPE	NDICES
Appendix 2.1	Layout Plans of Construction Activities and Site Record Photos
Appendix 3.1	<b>Environmental Mitigation Implementation Schedule</b>
Appendix 4.1	Action and Limit Level
Appendix 4.2	Copies of Calibration Certificates
Appendix 4.3	Wind data
Appendix 5.1	<b>Monitoring Schedule for Reporting Month and Next Reporting Month</b>
Appendix 5.2	Noise Monitoring Results and Graphical Presentations
Appendix 5.3	<b>Air Quality Monitoring Results and Graphical Presentations</b>
Appendix 5.4	Details of Ecological Monitoring Results in the Reporting Month
Appendix 5.5	<b>Ecological Monitoring Results and Analysis</b>
Appendix 5.6	Photo Record of Ecological Monitoring
Appendix 5.7	Water Quality Monitoring Result and Graphical Presentations
Appendix 5.8	<b>Water Quality Monitoring Result and Graphical Presentations</b>
Appendix 5.9	Monthly Summary Waste Flow Table
Appendix 5.10	Investigation Reports for Exceedance recorded in Reporting Month
Appendix 6.1	Event and Action Plans
Appendix 6.2	Summary for Notification of Exceedance
Appendix 8.1	Complaint Log

#### **EXECUTIVE SUMMARY**

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report 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 16<sup>th</sup> EM&A report prepared by Environmental Team under Contract No. SPW 12/2021, presenting the environmental monitoring findings and information recorded during the period of 1 December 2022 to 31 December 2022. The cut-off date of reporting is at the end of each reporting month.
- ii. In the reporting month, the principal work activities of individual contracts are conducted as follows:

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

- RC works
- Backfilling
- Sewage, utility and pipe works
- ABWF works
- Construction of Outfall at Ng Tung River

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

- ELS works
- Sheet piling
- Excavation
- RC works

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

- Formwork and Falsework at Sidestream Treatment Facilities
- Penstock and Stoplog Installation at SAS PS
- MVAC, Plumbing and Electrical Installation at Workshop No.2
- MFA, AFA and SPR System Installation at SDB
- EOT and Monorail Installation at SDB
- T&C for Electrical Installation at UV No.1
- · Bio-Gas Holding tank Installation at Bio-Gas Tank
- EOT and Monorail Installation at CHP

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

Improvement Works for Temporary Primary Sludge Thickener and its accessories

# Air Quality Monitoring

- iii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring was conducted at two monitoring station. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 day in the reporting month.
- iv. No action or limit level exceedance was recorded in this reporting period.
- v. Power failure was encountered at AM2a during the period from 14 to 23 Dec 2022, so the 24hr AQM for AM2a were temporarily suspended.

#### Noise Monitoring

- vi. Noise monitoring was conducted at three noise monitoring stations once per week in the reporting month.
- vii. No action or limit level exceedance was recorded in this reporting period.

#### **Ecological Monitoring**

- viii. 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.
- ix. No Action or Limit level was triggered in the reporting month.

#### Water Quality Monitoring

- x. Water quality monitoring was conducted at two monitoring stations three days per week in the reporting month.
- xi. Eighteen (18) limit level exceedances and five (5) action level exceedances were recorded in the reporting month. After investigations, all recorded exceedances were considered non-project related.

#### Site Inspections and Audit

xii. The Environmental Team (ET) conducted weekly site inspections on 6(DE/2018/03 and DE/2018/04), 9(DC/2018/06 and DC/2018/07), 13(DE/2018/03 and DE/2018/04), 15(DC/2018/06 and DC/2018/07), 20, and 28 December 2022 and biweekly landscape inspection on 13, 15 and 28 December 2022. IEC attended the joint site inspection on 28 December 2022. No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

# Complaints, Notifications of Summons and Successful Prosecutions

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

# **Reporting Changes**

xiv. 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

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

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

- RC works
- Backfilling
- Sewage, utility and pipe works
- ABWF works
- Construction of Outfall at Ng Tung River

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

- ELS works
- Sheet piling
- RC works
- Excavation



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

- Formwork and Falsework at Sidestream Treatment Facilities
- Plumbing, MVAC and Electrical Installation at Workshop No.2
- Penstock and Stoplog Installation at SAS PS
- SPR, MFA and AFA Installation at SDB
- EOT and Monorail Installation at SDB
- Bio-Gas Holding tank Installation at Bio-Gas Tank
- EOT and Monorail Installation at CHP
- Steam Boiler Transportation at CHP

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

- 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).
- 1.1.2. In accordance with Clause 3.4 stated in FEP-02/474/2013, 3 hard copies and 2 electronic copies of Monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month throughout the entire construction period.
- 1.1.3. According to Section 9.4.1.1 of the Project EM&A Manual, the Monthly EM&A Report should be submitted within 10 working days at the end of each reporting month, with the first report due in the month after construction commences.

# 1.2 Structure of the Report

- **Section 1** *Introduction* details the scope and structure of the report.
- **Section 2 Project Background** summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- **Section 3** Status of Regulatory Compliance summarizes the status of valid Environmental Permits / Licenses during the reporting period.
- **Section 4** *Monitoring Requirements* summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.
- **Section 5** *Monitoring Results* summarizes the monitoring results obtained in the reporting period.
- **Section 6 Compliance Audit** summarizes the auditing of monitoring results, all exceedances environmental parameters.



**Section 7 Environmental Site Audit** – summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.

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

Section 9 Conclusion

# 2 Project Background

# 2.1 Background

- 2.1.1. The existing Shek Wu Hui Sewage Treatment Works (SWHSTW) has been operating and maintaining for 30 years by the Drainage Services Department (DSD). It provides secondary level treatment to sewage collected from Sheung Shui, Fanling and adjacent areas. SWHSTW was completed in two stages and expanded progressively in the past years. In 1984, Stage I of SWHSTW was commissioned with design capacity of 60,000 cubic meters per day (m³/day) at Average Dry Weather Flow (ADWF). In 2001, Stage II of SWHSTW was completed with design capacity enhanced to 80,000 m³/day at ADWF. In 2009, the expansion of SWHSTW was completed and its design capacity was increased to 93,000m³/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<sup>3</sup>/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 <u>Figure 2.2.</u> 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
	Contractor	Environmental Engineer	Ms. Ruby Hui	6218 6408
Kwan Lee - Chun Wo Joint Venture	(DC/2018/06)	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 Construction Activities

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



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

- RC works
- Backfilling
- Sewage, utility and pipe works
- ABWF works
- Construction of Outfall at Ng Tung River

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

- ELS works
- Sheet piling
- Excavation
- RC works

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

- Formwork and Falsework at Sidestream Treatment Facilities
- Penstock and Stoplog Installation at SAS PS
- MVAC, Plumbing and Electrical Installation at Workshop No.2
- MFA, AFA and SPR System Installation at SDB
- EOT and Monorail Installation at SDB
- T&C for Electrical Installation at UV No.1
- Bio-Gas Holding tank Installation at Bio-Gas Tank
- EOT and Monorail Installation at CHP

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

• Improvement Works for Temporary Primary Sludge Thickener and its accessories

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

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

Works Contract	Key PME	Number	Working locations
	Excavator	6	Section 4, SDB, Outfall
DC/2018/06	Tower Crane	2	Near Workshop No.2 and Gate 2
DC/2016/06	Mobile generator	1	Near Workshop No.2
	Scissor lift platform	4	SDB and CHP
	Excavator	17	BR2, Inlet, Area C, Area D, MFB, PST and SAS
	Generator	7	BR2, MFB, PST and Inlet
DC/2018/07	Air compressor	1	Inlet
	Mobile Crane	4	PST, Inlet and BR2
	Road Work Machine	1	Inlet
DE/2018/03	Generator	6	UV No.1, Sidestream and Workshop No.2
DE/2010/03	Tower Crane	1	Sidestream
DE/2018/04	-	-	-

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

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

- RC works
- Backfilling
- Sewage, utility and pipe works
- ABWF works
- Construction of Outfall at Ng Tung River



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

- ELS works
- Sheet piling
- RC works
- Excavation

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

- Formwork and Falsework at Sidestream Treatment Facilities
- Plumbing, MVAC and Electrical Installation at Workshop No.2
- Penstock and Stoplog Installation at SAS PS
- SPR, MFA and AFA Installation at SDB
- EOT and Monorail Installation at SDB
- Bio-Gas Holding tank Installation at Bio-Gas Tank
- EOT and Monorail Installation at CHP
- Steam Boiler Transportation at CHP

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

- 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

# 3 Status of Regulatory Compliance

# 3.1 Status of Environmental Licensing and Permitting under the Project

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

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210 (Portion A & C)	23 Sep 2019	N/A	Valid
Control (Construction Dust) Regulation	449211 (WM1)	23 Sep 2019	N/A	Valid
Water Pollution Ordinance Licence	WT00035431-2019 (Portion C)	27 Jul 2020	31 Jan 2025	Valid
water Politition Ordinance Licence	WT00035718-2020 (Portion A)	02 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035390	11 Oct 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-01	14 Nov 2019	N/A	Valid
Construction Noise Permit	GW-RN1155-22	28 Nov 2022	28 Feb 2023	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210	23 Sep 2019	N/A	Valid
Water Pollution Ordinance Licence	WT00035727-2020	1 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035985	9 Dec 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-02	6 Jan 2020	N/A	Valid
Special Waste	17144	17 Nov 2022	28 Feb 2023	Valid
Construction Noise Permit	GW-RN1155-22	28 Nov 2022	28 Feb 2023	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
	455843 (WA3)	6 May 2020	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	457212 (WA1-B)	15 Jun 2020	N/A	Valid
	460065 (Sidestream)	16 Sep 2020	N/A	Valid
Water Pollution Ordinance Licence	WT00037220-2020	16 Mar 2021	31 Jan 2026	Valid
Billing Account for Disposal of Construction Waste	7035700	6 Nov 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-T3861-01	14 Apr 2020	N/A	Valid
Construction Noise Permit	GW-RN1190-22	8 Dec 2022	7 Apr 2023	Valid

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	460181	17 Sep 2020	N/A	Valid
Billing Account for Disposal of Construction Waste	703621912	2 Jan 2020	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-B2592-01	7 Jul 2020	N/A	Valid

3.1.2. Implementation status of the recommended mitigation measures during this report month is presented in *Appendix 3.1.* 



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

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

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

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

# 4 Monitoring Requirements

# 4.1 Noise Monitoring

#### NOISE MONITORING STATIONS

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

Table 4.1 Noise Monitoring Station

Monitoring Station ID	Location
NM1	Wai Loi Tsuen
NM2	Fu Tei Au
NM2*	Footbridge between Fu Tei Au and SWHSTW
NM3	Man Kok Village

<sup>1.</sup> 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 Decem2022.

# NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

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

Table 4.2 Noise Monitoring Parameters, Frequency and Duration

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

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

# MONITORING EQUIPMENT

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



# Table 4.3 Noise Monitoring Equipment

Equipment	Brand and Model	Series Number
Integrated Sound Level Meter	NTi XL2	A2A-15269-EO
Acoustic Calibrator	LD CAL200	13098

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

# SAMPLING PROCEDURE AND MONITORING EQUIPMENT

### 4.1.5. Monitoring Procedure

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

# 4.1.6. Maintenance and Calibration

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



# **CONSTRUCTION NOISE LEVEL**

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

# **EVENT AND ACTION PLAN**

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

Table 4.4 Action and Limit Level for Noise Monitoring

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

# 4.2 Air Monitoring

#### AIR QUALITY MONITORING STATIONS

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

Table 4.5 Air Monitoring Station

Monitoring Station ID	Location	Measurement
AM1	House No. 15, Wai Loi Tsuen	1-hour TSP
AM2	Fu Tei Au	1-hour TSP
AM2*(1)	Footbridge between Fu Tei Au and SWHSTW	1-hour TSP
AM1a*	Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW	24-hour TSP
AM2a	Site boundary of the Shek Wu Hui STW (North)	24-hour TSP

#### Remarks

# AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

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

# SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.4. 24-hour TSP Measuring Installation (HVS)
  - (a)  $0.6 1.7 \text{ m}^3$  per minute adjustable flow range
  - (b) Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
  - (c) Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
  - (d) Capable of providing a minimum exposed area of 406 cm2;
  - (e) Flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
  - (f) Equipped with a shelter to protect the filter and sampler;
  - (g) Incorporated with an electronic mass flow rate controller or other equivalent devices;
  - (h) Equipped with a flow recorder for continuous monitoring;
  - (i) Provided with a peaked roof inlet;

<sup>(1)</sup> 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 the SWHSTW. The proposal has sought approval from ER and IEC, and agreement from EPD on 28 December 2022.

- (j) Incorporated with a manometer;
- (k) Able to hold and seal the filter paper to the sampler housing at horizontal position;
- (I) Easily changeable filter; and
- (m) Capable of operating continuously for a 24-hour period

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

#### 24-hour Measuring Procedures

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

### 4.2.5. 1-hour Measuring Procedures

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

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



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

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

#### 4.2.6. Maintenance and Calibration

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

# 4.2.7. Laboratory measurement / analysis

- (a) A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.
- (b) Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24 hours and be pre-weighed before use for the sampling.
- (c) After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity-controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.
- 4.2.8. High Volume Sampler (HVS Model TE-5025A) completed with the appropriate sampling inlets were installed for the 24-hour TSP sampling. 1-hour TSP air quality monitoring was performed by using portable direct reading dust meters at each designated monitoring station. The brand and model of the equipment are given in *Table 4.6*.

Table 4.6 Air Quality Monitoring Equipment

Equipment	Brand and model	Series Number
Portable direct	Met One BT- 645 / Met One	R14332
reading dust meter	AEROCET831	W15448
	Tisch Total Suspended	HVS001 (Serial number: 0401-
High Volume	Particulate Mass Flow	1105)
Sampler	Controlled High Volume Air	HVS003 (Serial number: 1096-
	Sampler (Model no. G3101)	2305)
Wind Anemometer	YGY-FSXY1	YG 21071630T0924

4.2.9. The calibration certificates of the air quality monitoring equipment are attached in <u>Appendix</u> 4.2.

# **WIND DATA**

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

# **EVENT AND ACTION PLAN**

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

Table 4.7 Action and Limit Level for Air Quality Monitoring

Parameter	Monitoring Station	Action Level (µgm <sup>-3</sup> )	Limit Level (µgm <sup>-3</sup> )
24-hour TSP Level	Site boundary of the Shek Wu Hui STW (East)	189	260.0
	Site boundary of the Shek Wu Hui STW (North)	187	
1-hour TSP Level	House No. 15, Wai Loi Tsuen	320	500.0
Thou Tot Level	Fu Tei Au	322	300.0

# 4.3 Ecological Monitoring

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

# **MONITORING LOCATIONS**

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

Table 4.8 Ecological Monitoring Stations

Monitoring Stations	Descriptions	Influenced by Tidal Action
Transect T1		
Point Count Location P1		No
Point Count Location P2	Along Ng Tung River	
Transect T2		V
Point Count Location P3		Yes
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





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

# MONITORING PARAMETERS, FREQUENCY AND DURATION

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

#### MONITORING METHODOLOGY

- 4.3.5. Transect survey was undertaken along the concerned rivers (Ng Tung River, Sheung Yue River and Shek Sheung River) adjacent to proposed construction activities. As the sensitive receivers (large waterbirds) are easily visible and the surveyor has used auxiliary equipment such as camera(s) and binoculars (magnification 7-10x). The transect route only follows one bank of these rivers.
- 4.3.6. At point count locations, surveyors identified and recorded bird species which were seen or heard along the river channel. For each point count, surveyors quantitatively recorded all species seen and heard for the duration of five minutes up to the distance where birds were still detectable. All avifauna along the walk transect were recorded. Noticeable behaviours (e.g. breeding behaviours such as nesting and presence of recently fledged juveniles, roosting and feeding activities, etc.) were recorded as well.
- 4.3.7. Ornithological nomenclature used in report should follow *The Avifauna of Hong Kong (Carey et al. (2001))*, *The Birds of Hong Kong and South China (Viney et al. (2005))* and the most recent updated list from other sources (e.g. Hong Kong Bird Watching Society).
- 4.3.8. Weather conditions, tidal information at the time of the survey and other noticeable activities occurring within or in the vicinity of the survey areas (e.g. ongoing routine drainage channel maintenance works and other human activities that could create disturbances to birds) were recorded

# **ANALYTICAL METHODOLOGY**

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

Table 4.9 Representative Waterbirds

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

- 4.3.10. When a decline in abundance of all or representative waterbird is identified, one-tailed Student t-test was adopted to statistically analyse whether the drop is significant. If the collected data for the reporting month fails to show no significant difference from that in the baseline phase at 95% confidence level, the action level will be triggered. Likewise, the limit level is set at 99% confidence level.
- 4.3.11. In addition, if important behaviours such as breeding, brooding, nesting and presence of recently fledged juveniles of species of conservation importance are observed, the Resident Engineer, Contractor and IEC should be notified immediately after the survey. The Contractor should review current construction programme and minimize disturbance due to construction activities

# 4.4 Water Quality Monitoring

#### WATER QUALITY MONITORING STATIONS

4.4.1. Water quality monitoring was undertaken at 2 monitoring stations in the reporting month. The proposed water quality monitoring stations of the Project are shown in *Table 4.10* and *Figure 4.4*.

Table 4.10 Water Quality Stations for Water Quality Monitoring

Stations	Description	
M1	Impact Station, downstream of the proposed outfall	
C1	Control Station, upstream of the proposed outfall	

# WATER QUALITY PARAMETERS, FREQUENCY AND DURATION

- 4.4.2. The levels of 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.
- 4.4.3. In association with the water quality parameters, other relevant data shall also be recorded, such as monitoring location / position, time, DO saturation, weather conditions, and any special phenomena underway near the monitoring station.
- 4.4.4. During the course of the construction works at the outfall at Ng Tung River, impact monitoring shall be undertaken three days per week, with sampling/measurement at the monitoring stations. The ET should carry out spot check to ensure that the Contractor has undertaken all recommended control measures to prevent direct contact of pollutants with rainwater or runoff, and measures to abate contaminants in the stormwater runoff.
- 4.4.5. The interval between two sets of monitoring should not be less than 36 hours except where there are exceedances of Action and/or Limit Levels, in which case the monitoring frequency will be increased.
- 4.4.6. Replicate in-situ measurements should be carried out in each sampling event.

#### SAMPLING PROCEDURES AND MONITORING EQUIPMENT

Dissolved Oxygen and Temperature Measuring Equipment

- 4.4.7. The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
  - a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
  - a temperature of 0-45 degree Celsius



- 4.4.8. It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).
- 4.4.9. Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

**Turbidity Measurement Instrument** 

4.4.10. The instrument should be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment should use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and be complete with a cable (e.g. Hach model 2100P or an approved similar instrument).

Sampler

4.4.11. Due to low water level as mentioned in Section 6.4.3 of the EIA report, bucket sampler (Approximate 1L) will be use instead of water sampler in order to obtain surface water sample without disturb the stream sediment and collect representative results.

Salinity

4.4.12. A portable salinometer capable of measuring salinity in the range of 0-70 ppt shall be provided for measuring salinity of the water at each of monitoring location.

#### MONITORING METHODOLOGY

# 4.4.13. Monitoring Procedure

- (a) The condition near the monitoring stations shall be observed and recorded on the data log sheet.
- (b) Check of sensors and electrodes with certified standard solutions before each use.
- (c) Wet bulb calibration for a DO meter should be carried out before measurement.
- (d) Sample would be taken using bucket sampler at surface level.
- (e) Transfer the sampled water carefully into cleaned water bottles (2x 1000ml) provided by the laboratory at the spot after the collection of the water sample for the subsequent laboratory Suspended Solid testing.
- (f) Transfer the sampled water from the bucket sampler to the rinsed water container for in-situ measurement (In case of the in-situ measurement cannot be carried at spot due to safety and adverse weather condition, sampled water from the bucket sampler will be transfer to cleaned water bottles provided by laboratory. Then, Insitu measurement will be conducted at a safe location which sampled water inside cleaned water bottle will be transfer to the rinsed water container for in-situ measurement) In-situ measurement shall be measured in duplicate.



- (g) Parameters including Water Temperature (°C), pH (units), Salinity (ppt), DO (mg/L), DO saturation (%) will be measured by the Multifunctional Meter and Turbidity (NTU) will be measured by turbid meter. (Water Temperature and Salinity will be measured as reference parameters)
- (h) Record the result on the data log sheet and record any special finding during / after in-situ measurement.
- (i) The water sample bottles will be stored in a cool box (at cooled to 4°C without being frozen), which shall be delivered to HOKLAS laboratory (ALS Technichem (HK) Pty Ltd) for further testing to determine the level of SS.

# 4.4.14. Maintenance and Calibration

- (a) The responses of sensors and electrodes of the water quality monitoring equipment were cleaned and checked at regular intervals.
- (b) DO meter (Multifunctional Meter) and turbid meter was certified by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently re-calibrated at three monthly intervals.
- 4.4.15. Brand and model of the equipment are given in **Table 4.11**.

Table 4.11 Water Quality Monitoring Equipment

Equipment	Brand and model	Series Number
Multifunctional Meter	YSI Professional Plus	19H100656
Turbid meter	Xin Rui WGZ-3B	2202001

4.4.16. The calibration certificates of the water quality monitoring equipment are attached in **Appendix 4.2**.

# **LABORATORY MEASUREMENT / ANALYSIS**

4.4.17. Analysis of suspended solids has been carried out in a HOKLAS accredited laboratory, which is ALS Technichem (HK) Pty Ltd.

# **EVENT AND ACTION PLAN**

4.4.18. The Action and Limit levels for water quality are defined in **Table 4.12**. Should the monitoring results of the water quality parameters at impact station exceed the water quality criteria, action in accordance with the Event and Action Plan in <u>Appendix 6.1</u> shall be carried out.

Table 4.12 Action and Limit Level for Water Quality Monitoring

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

# 5 Monitoring Results

- 5.0.1 The environmental monitoring will be implemented based on the division of works areas of each designed projects. Overall layout showing work areas and monitoring stations is shown in *Figure 2.1* and *Figure 4.1 4.4* respectively.
- 5.0.2 The environmental monitoring schedules for reporting month and coming month are presented in *Appendix 5.1*.

# 5.1 Noise Monitoring Results

5.1.1 Noise monitoring results measured in this reporting period are reviewed and summarized.

Details of noise monitoring results and graphical presentation are shown in **Table 5.1** and *Appendix 5.2*.

Table 5.1 Summary Table of Noise Monitoring Results

Monitoring Location	Range, Leq (30min) dB(A)	Limit Level
NM1	55.2 – 59.4	
NM2	59.2 – 69.7	75 dB
NM3	62.5 – 69.3	

Remark: +3dB(A) façade correction included

- 5.1.2 No action or limit level exceedance was recorded in this reporting month.
- 5.1.3 According to our field observations, the major noise source identified were nearby road traffic and human activities.
- 5.1.4 The noise monitoring result measured in reporting month was similar to previous months. The noise monitoring result was slightly variated in the reporting month, and no increasing trend was identified due to the construction works conducted in the reporting month. No correlation between the project's construction work and the monitoring data was identified.

# 5.2 Air Quality Monitoring Results

5.2.1 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in **Table 5.2**, **Table 5.3** and *Appendix 5.3*.

Table 5.2 Summary Table of 1-hour TSP Monitoring Results

Monitoring Station	Concentration (μg/m3)		Action Level,	Limit Level,
	Average	Range	(µg/m3)	(µg/m3)
AM1	32	23 - 53	320	500
AM2	36	18 - 56	322	500

Table 5.3 Summary Table of 24-hour TSP Monitoring Results

Monitoring Station	Concentration (µg/m3)		Action Level, (µg/m3)	Limit Level, (µg/m3)
	Average	Range		
AM1a	44	24 – 74	189	500
AM2a	94	84 – 116	187	500

- 5.2.2 Power failure was encountered at AM2a during the period from 14 to 23 Dec 2022, so the 24hr AQM for AM2a were temporarily suspended.
- 5.2.3 No action or limit level exceedance was recorded in this reporting period.
- 5.2.4 According to our field observations, the major dust source identified were nearby road traffic.
- 5.2.5 The air quality monitoring result measured in reporting month was similar to previous months. The air quality monitoring result was slightly variated in the reporting month, and no increasing trend was identified due to the construction works conducted in the reporting month. No correlation between the project's construction work and the monitoring data was identified.

### 5.3 Ecology Monitoring Results

5.3.1 Details of ecological Monitoring results in the reporting month are provided in <u>Appendix 5.4</u> and <u>Appendix 5.5.</u>

Table 5.4 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	88
Ardea cinerea	Grey Heron	蒼鷺	49
Ardeola bacchus	Chinese Pond Heron	池鷺	33
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	49
Ardea alba	Great Egret	大白鷺	28
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	26
	_	Total	273

- 5.3.2 No Action Level or Limit Level was triggered for ecological monitoring in the reporting month.
- 5.3.3 Site observation in the reporting month shows that construction activities are similar to previous months. The photos are provided in *Appendix 5.6.*
- 5.3.4 In recent months, it is found that there are different construction sites for example construction of footbridge, excavation and sheet-piling, and human activities such as grazing, fishing and landscape planting around the project site. The photos are provided in *Appendix*5.6. These construction and human activities may affect activities of the waterbird. Although, there is no significant impact reduction in number of waterbird, but it is recommended that construction site should continue keeping the good site practice to minimize disturbance caused to waterbirds.

#### 5.4 Water Quality Monitoring Results

5.4.1 Water quality monitoring results measured in this reporting period are reviewed and summarized. Details of water monitoring results and graphical presentation can be referred in **Table 5.5** and **Appendix 5.7**. The laboratory analysis results can be referred in **Appendix 5.8**.



Table 5.5 Summary Table of Water Quality Monitoring Results

	C1		M1		Action	Limit Level,
Parameter	Range	Average	Range	Average	Level, (µg/m3)	(µg/m3)
DO (mg/L)	5.6 – 8.5	7.2	5.5 – 9.1	7.2	≤ 7.8 mg/L	≤ 7.7 mg/L
Turbidity (NTU)	7.3 – 33.3	17.7	9.1 – 39.0	16.0	≥ 14.6 NTU or When M1 ≥ 120% of C1	≥ 15.6 NTU or When M1 ≥ 130% of C1
SS (mg/L)	4.2 – 72.3	15.0	7.4 – 27.3	11.4	≥ 18.8 mg/L or When M1 ≥ 120% of C1	≥ 19.5 mg/L or When M1 ≥ 130% of C1

- 5.4.2 Eighteen (18) limit level exceedances and five (5) action level exceedances were recorded in the reporting month.
- 5.4.3 NOEs were sent to IEC and RE after the exceedances recorded. Investigations were conducted for all exceedances recorded in the reporting month. Investigation reports were sent to IEC and RE before the submission of monthly EM&A report. The submitted investigation reports were annexed in *Appendix 5.10*.
- 5.4.4 After investigations, all recorded exceedances were considered non-project related.
- 5.4.5 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.
- 5.4.6 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 will propose new Action and Limit levels for ensuring any pollution contributed by the Project to Ng Tung River can be recorded effectively.

## 5.5 Waste Management

5.4.1 The quantities of waste for disposal in the Reporting Period are summarized in *Table 5.6* to *5.9*. The Monthly Summary Waste Flow Table is shown in *Appendix 5.9*. Whenever possible, materials were reused on-site as far as practicable.



Table 5.6 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/06

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000m³)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000m³)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m³)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m³)	2.558	4.051	15.906
Metals (in '000kg)	0.000	0.000	2.379
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.010
Plastics (in '000kg)	0.000	0.000	0.023
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000m³)	0.152	0.104	1.521

Table 5.7 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/07

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000m³)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000m³)	0.000	0.000	0.000
Reused in other Projects (Inert)	0.000	0.000	3.608

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
(in '000m³)			
Disposal as Public Fill (Inert) (in '000m³)	12.967	13.033	59.335
Metals (in '000kg)	0.000	0.000	23.300
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.010
Plastics (in '000kg)	0.000	0.000	0.026
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000m³)	0.027	0.655	0.902

Table 5.8 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/03

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000kg)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000kg)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000kg)	0.000	0.000	15479.440
Metals (in '000kg)	0.000	0.000	0.000
Paper / Cardboard Packing (in '000kg)	0.131	0.000	1.324
Plastics (in '000kg)	0.005	0.000	0.040
Chemical Wastes (in '000kg)	0.000	0.000	0.000

Waste Type	Quantity	Quantity	Annual Cumulative
	(Previous month)	(Reporting month)	Quantity (2022)
General Refuses (in '000kg )	2.240	16.270	32.420

Table 5.9 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/04

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000kg)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m³)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m³)	0.000	0.000	0.000
Metals (in '000kg)	0.000	0.000	0.000
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.000
Plastics (in '000kg)	0.000	0.000	0.000
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000kg)	0.000	1.300	8.140



### 6 Compliance Audit

- 6.0.1 The Event Action Plan for construction noise, air quality and ecological monitoring are presented in *Appendix 6.1.*
- 6.0.2 The summary of exceedance is presented in *Appendix* 6.2.

### 6.1 Noise Monitoring

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

## 6.2 Air Quality Monitoring

- 6.2.1 No action or limit level exceedance was recorded in this reporting period.
- 6.2.2 Power failure was encountered at AM2a during the period from 14 to 23 Dec 2022, so the 24hr AQM for AM2a were temporarily suspended.

### 6.3 Water Quality Monitoring

- 6.3.1 Eighteen (18) limit level exceedances and five (5) action level exceedances were recorded in the reporting month. After investigations, all recorded exceedances were considered nonproject related.
- 6.3.2 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.
- 6.3.3 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 will propose new Action and Limit levels for ensuring any pollution contributed by the Project to Ng Tung River can be recorded effectively.



- 6.4 Ecological Monitoring
- 6.4.1 No Action Level or Limit Level was triggered for ecological monitoring in the reporting month.
- 6.5 Review of the Reasons for and the Implications of Non-compliance
- 6.5.1 No environmental non-compliance was recorded in the reporting month.
- 6.6 Summary of action taken in the event of and follow-up on non-compliance
- 6.6.1 There was no particular action taken since no non-compliance was recorded in the reporting period.

#### 7 Environmental Site Audit

- 7.1.1. Within this reporting month, weekly environmental site audits were conducted on 6(DE/2018/03 and DE/2018/04), 9(DC/2018/06 and DC/2018/07), 13(DE/2018/03 and DE/2018/04), 15(DC/2018/06 and DC/2018/07), 20, and 28 December 2022 and biweekly landscape inspection on 13, 15 and 28 December 2022. IEC attended the joint site inspection on 28 December 2022.
- 7.1.2. No non-compliance was found during the environmental site inspection while reminders on environmental measures were recommended. Results and findings of these inspections in this reporting month are listed below in *Table 7.1 to 7.4*.

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20221209_1	9-Dec- 2022	Silt was observed at vehicle exit. The Contractor was advised to provide wheel washing to the leaving vehicle.	Wheel washing was provided to leaving vehicle, no silt was observed at exit.	Rectified on 15- Dec-22.
20221215_1	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.	The soil at outside of site boundary near SDB was removed.	Rectified on 20- Dec-22.
20221228_1	28-Dec- 2022	The stockpile should be watering to remain surface wet. (DC/2018/06)	Watering was provided to stockpile.	Rectified on 3-Jan- 23.
20221228_1	28-Dec- 2022	The chemical containers should be placed properly inside the drip tray with enough capacity	Watering was provided to stockpile.	Rectified on 3-Jan-23.

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20221209_2	9-Dec- 2022	The Contractor was reminded to update the CNP, which displayed at site entrance.	The CNP at site entrance was updated	Rectified on 20-Dec-22.

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20221228_4	28-Dec- 2022	Dust measures (water spraying or regular cleaning) should be adopted for the dusty ground. (DE/2018/03)	The dusty material on the ground was removed.	Rectified on 3-Jan-23.

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

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

## 8 Complaints, Notification of Summons and Prosecution

- 8.1.1. No environmental complaint, notification of summons and successful prosecution regarding construction works was recorded in the reporting period.
- 8.1.2. The details environmental complaints for the Project are summarized by complaint log in *Appendix 8.1.*
- 8.1.3. Cumulative statistics on complaints and successful prosecutions are summarized in *Table 8.1* and *Table 8.2* respectively.

Table 8.1 Cumulative Statistics on Complaints in the Reporting Month

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

Table 8.2 Cumulative Statistics on Successful Prosecutions

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

#### 9 Conclusion

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

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

	,	
Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	<ul> <li>RC works</li> <li>Sewage, utility and pipe works</li> <li>Backfilling</li> <li>ABWF works</li> </ul>	<ul> <li>Implement proper dust mitigation measures on dusty surface and stockpiles</li> <li>Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies</li> <li>Implement proper noise mitigation measures to</li> </ul>
	Construction of Outfall at Ng Tung River	<ul> <li>Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers</li> <li>Proper maintenance of the on-site drainage system</li> <li>Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system</li> <li>Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal</li> <li>Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.</li> <li>Implement proper water mitigation measures on Outfall works for preventing water pollution.</li> </ul>

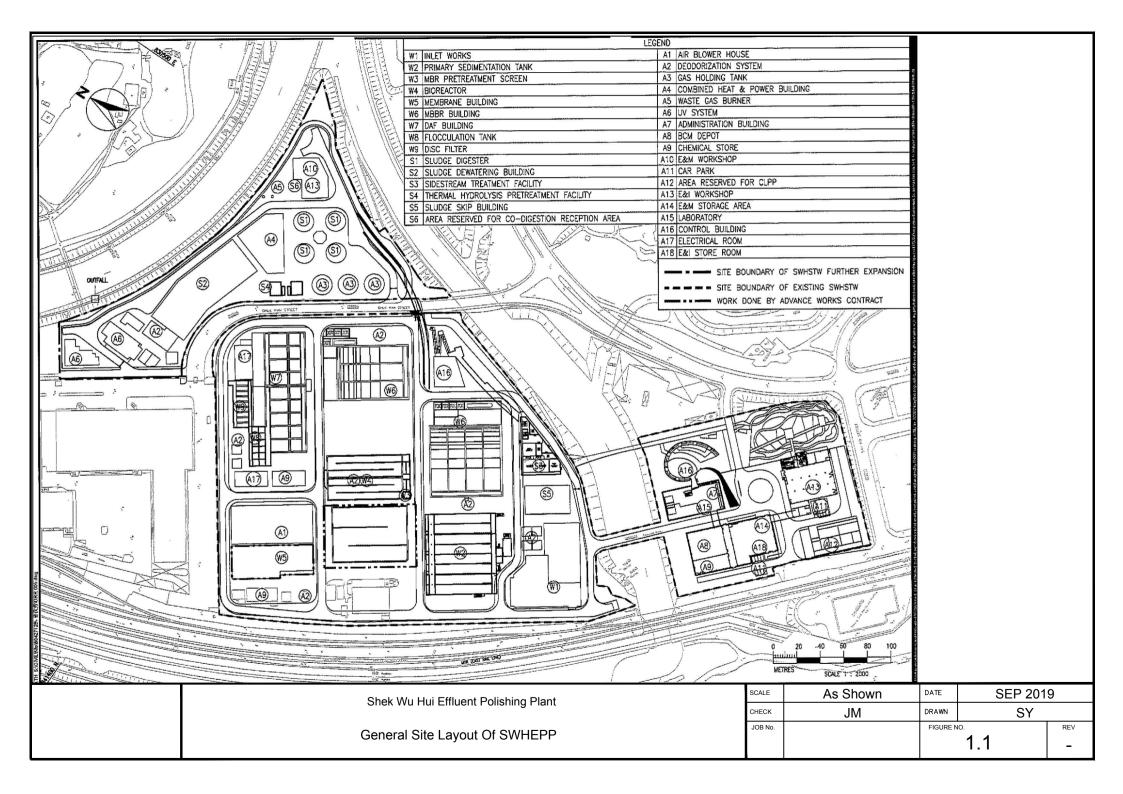
Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/07	<ul> <li>ELS works</li> <li>Sheet piling</li> <li>RC works</li> <li>Excavation</li> </ul>	<ul> <li>Implement proper dust mitigation measures on dusty surface and stockpiles</li> <li>Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies</li> <li>Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities</li> <li>Proper maintenance of the on-site drainage system</li> <li>Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system</li> <li>Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.</li> <li>Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.</li> </ul>
DE/2018/03	<ul> <li>Formwork and         Falsework</li> <li>Plumbing, MVAC and         Electrical Installation</li> <li>Penstock and Stoplog         Installation</li> <li>SPR, MFA and AFA         Installation</li> <li>EOT and Monorail         Installation</li> <li>Bio-Gas Holding tank         Installation</li> <li>Steam Boiler         Transportation</li> </ul>	<ul> <li>Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers</li> <li>Implement proper waste mitigation measures to prevent accidental leakage of chemical</li> <li>Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>Proper maintenance of the on-site drainage system</li> <li>Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.</li> <li>Ensure all on-site regulated machines have displayed valid NRMM labels and the application of</li> </ul>



Contract No.	Key Construction Works	Recommended Mitigation Measures				
		ULSD as fuel for diesel-powered machinery.				
DE/2018/04	<ul> <li>Improvement Works for Temporary Primary Sludge Thickener and its accessories</li> <li>E&amp;M Installation works at Portion B-7, including DOU No.3A, Emergency Generator House and FS &amp; Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant &amp; Booster Pump Room and Temporary Chemical System</li> <li>E&amp;M installation works at Portion B-2, Inert Works</li> </ul>	<ul> <li>Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.</li> </ul>				

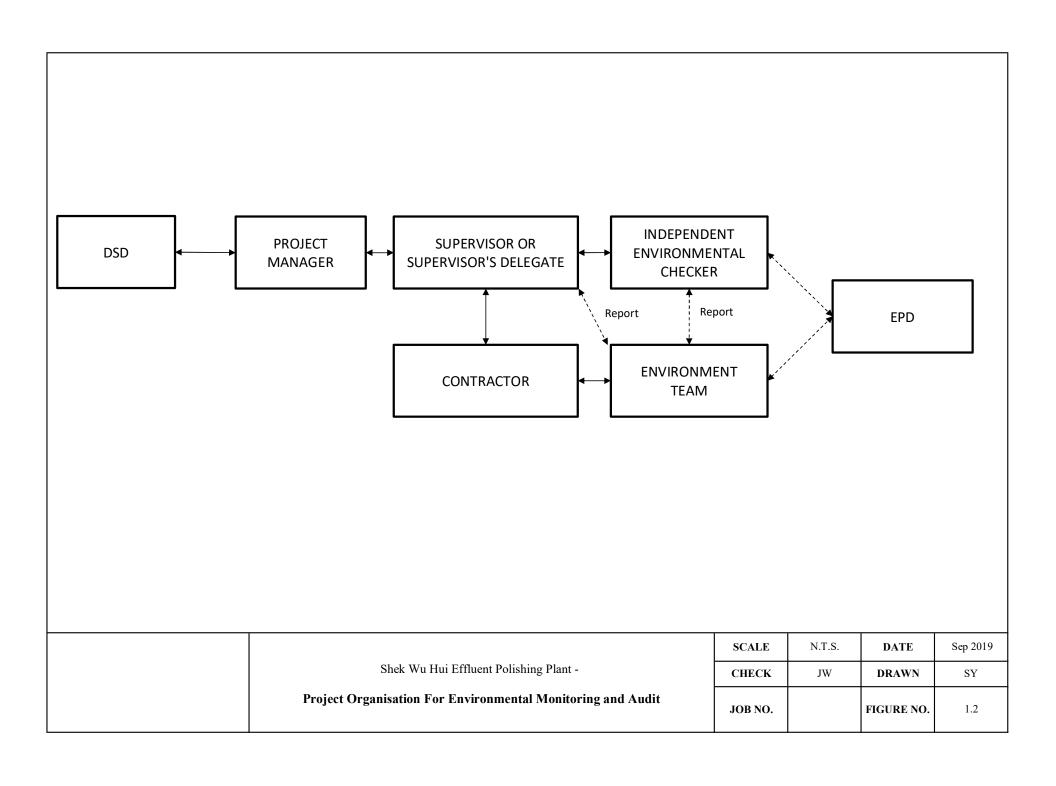
## Figure 2.1

**Project Layout** 

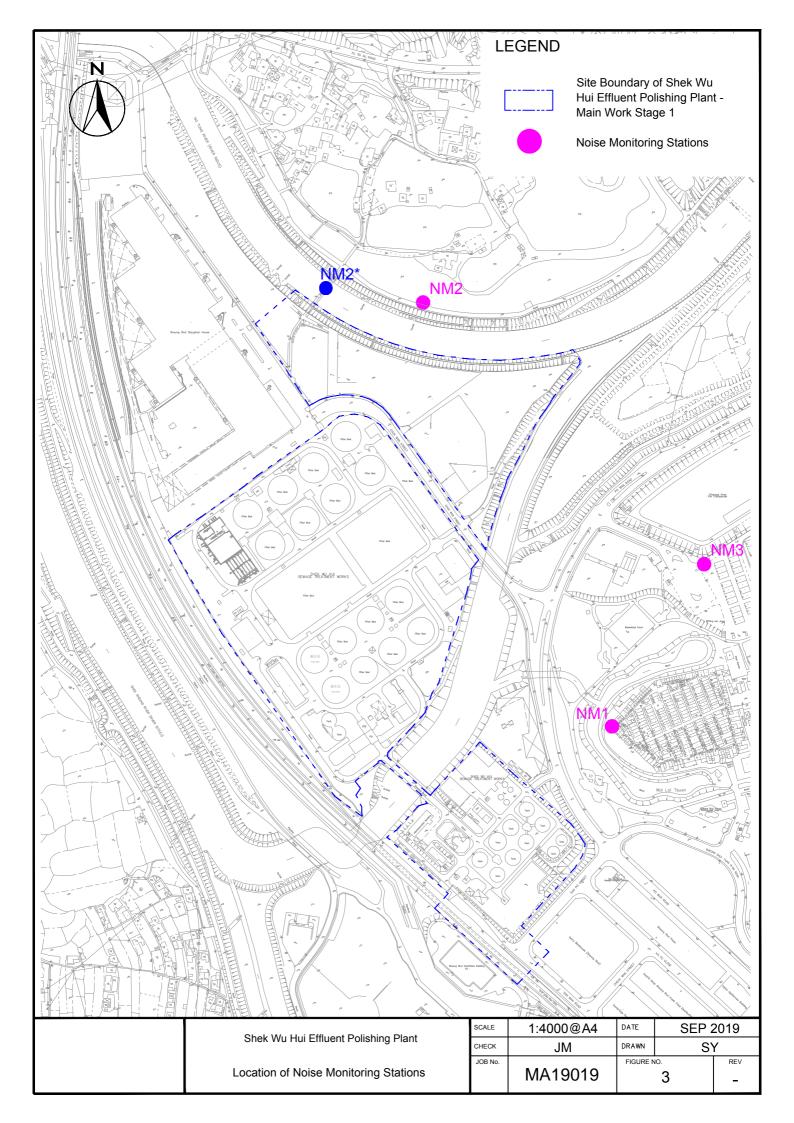


## Figure 2.2

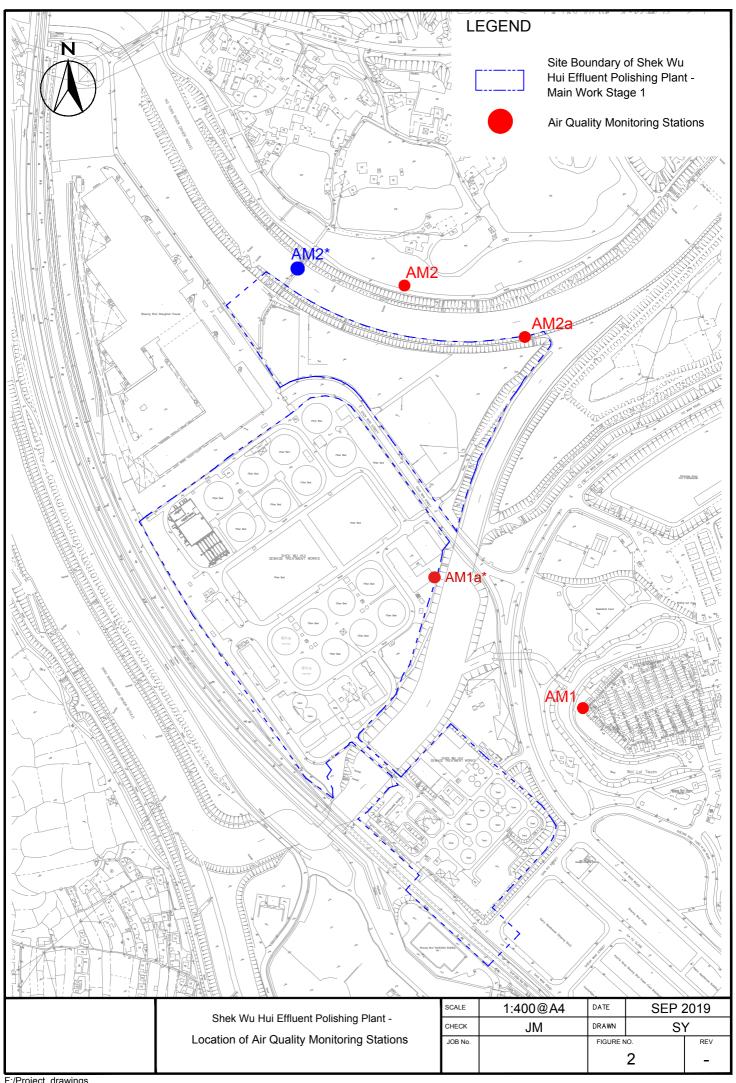
## **Project Organization Chart**



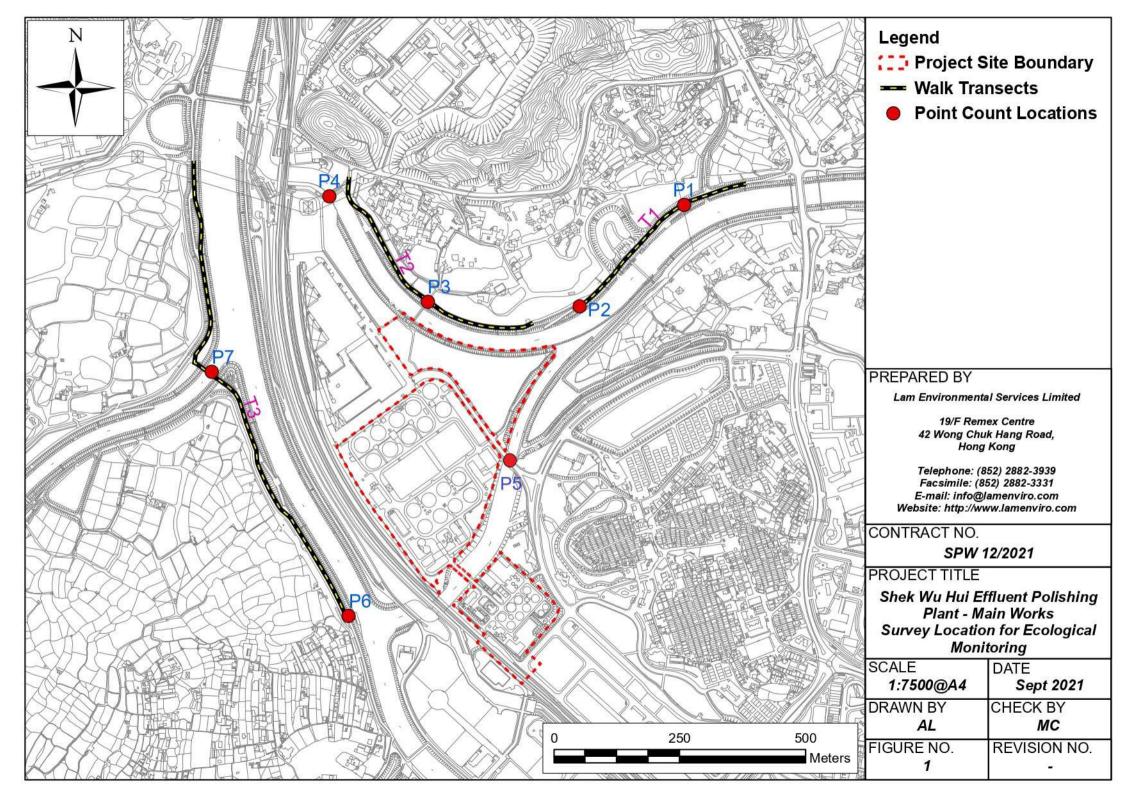
## Locations of Noise Monitoring Stations



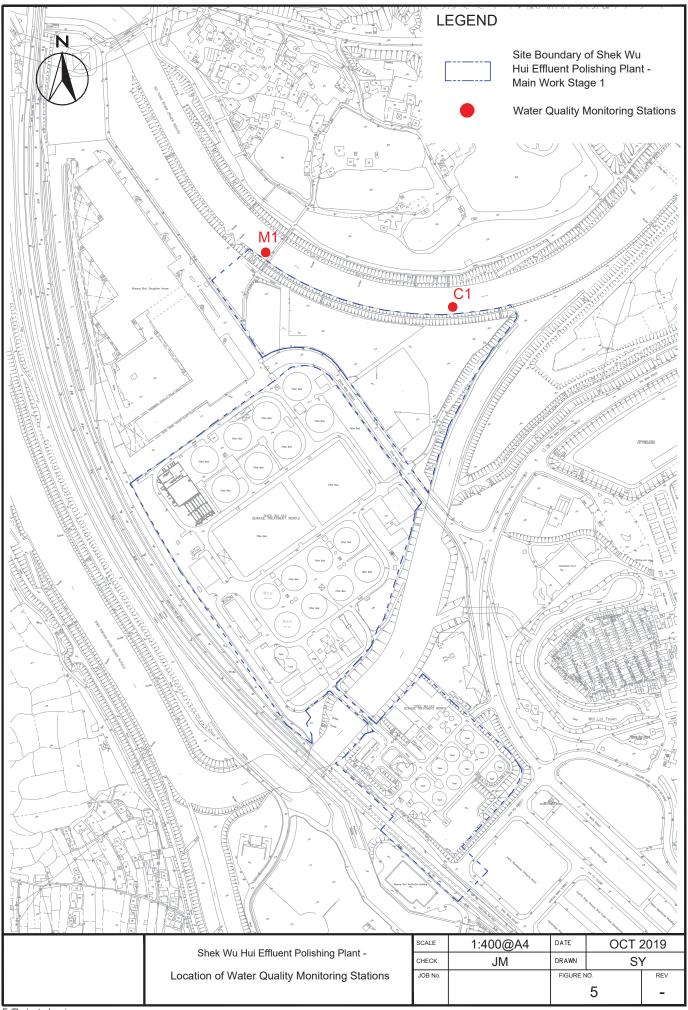
## Locations of Air Quality Monitoring Stations



## Locations of Ecological Monitoring Stations

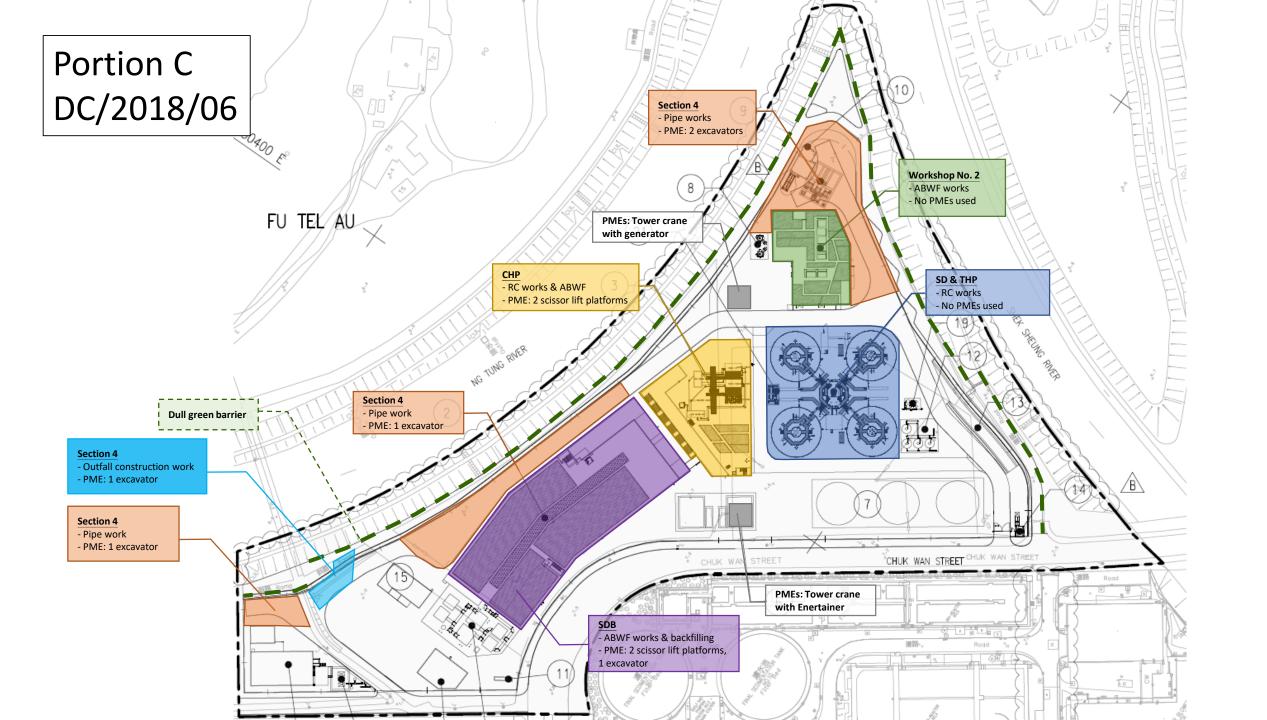


## Locations of Water Quality Monitoring Stations

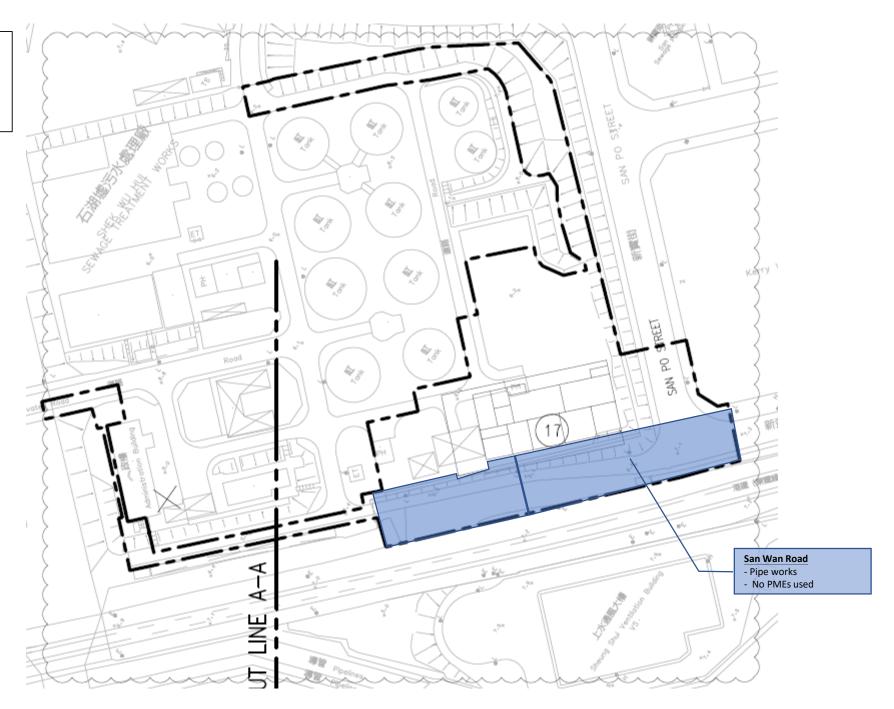


## Appendix 2.1

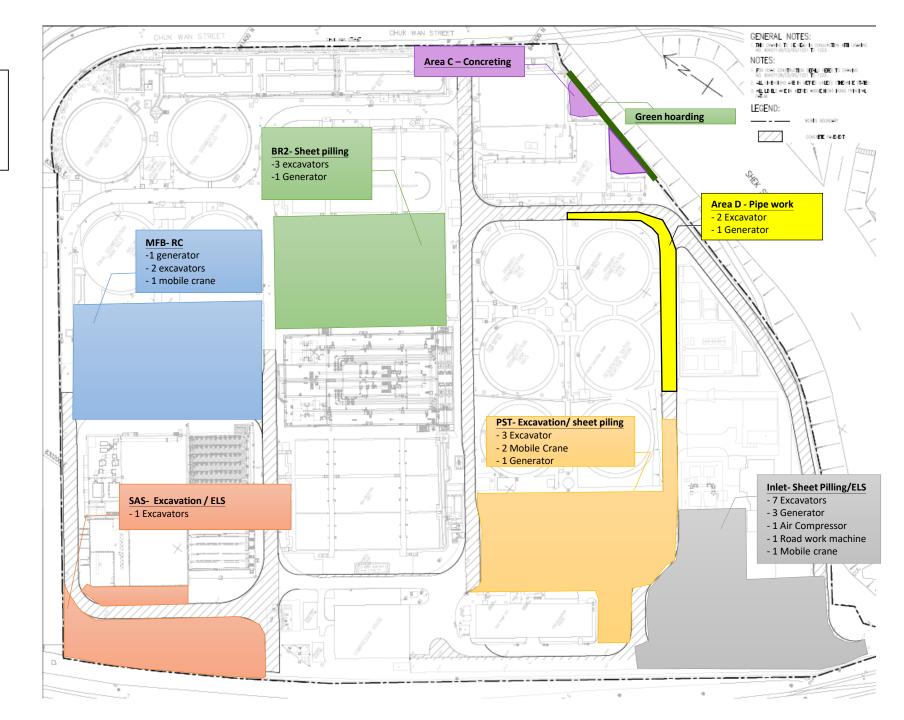
## Layout Plan of Construction Activities and Site Record Photos

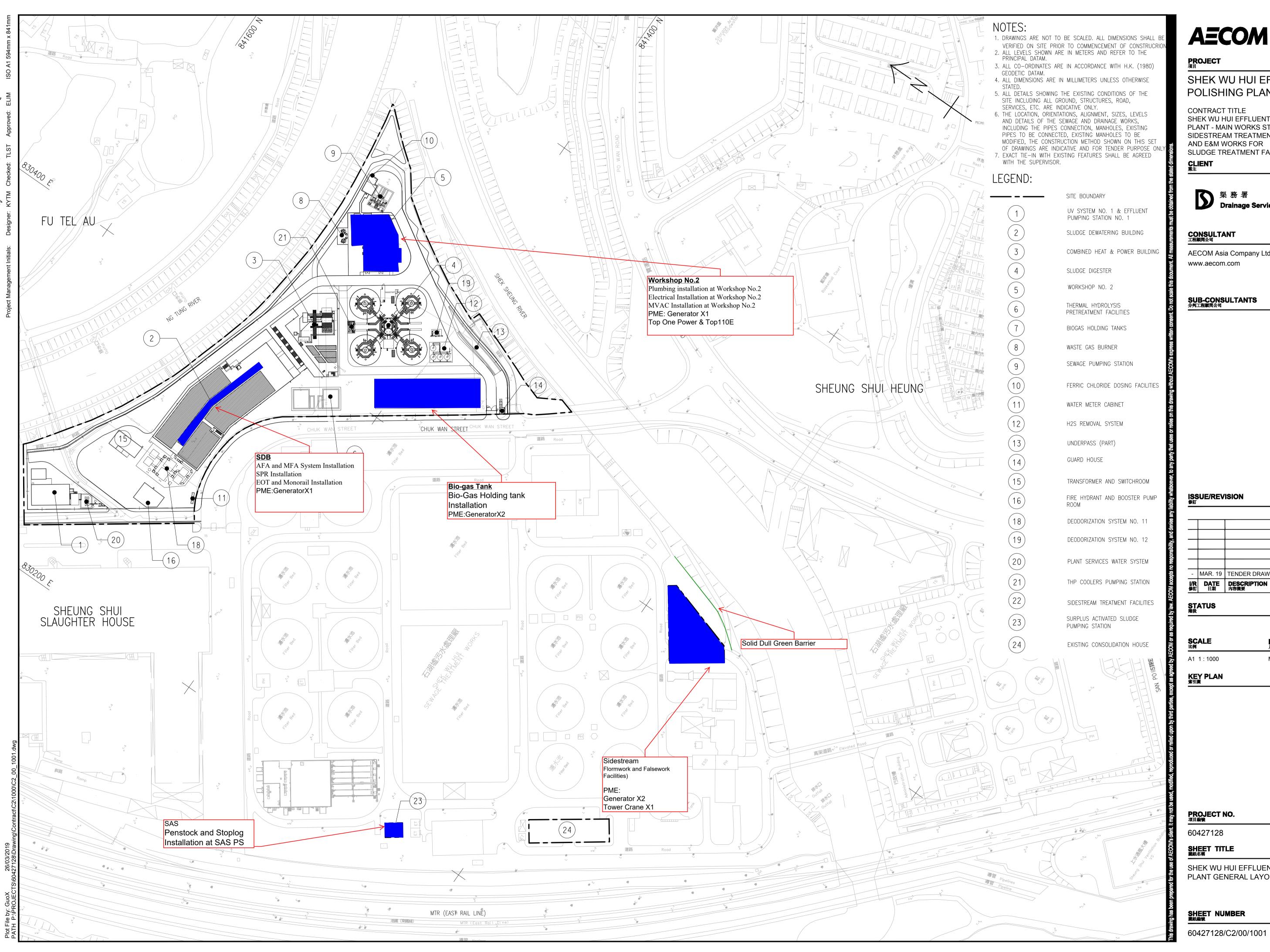


Portion A DC/2018/06



## Portion B DC/2018/07





SHEK WU HUI EFFLUENT **POLISHING PLANT** 

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

**Drainage Services Department** 

AECOM Asia Company Ltd.

TLST
CHK.
複核 - MAR. 19 TENDER DRAWING I/R DATE DESCRIPTION 内容摘要

DIMENSION UNIT 尺寸單位

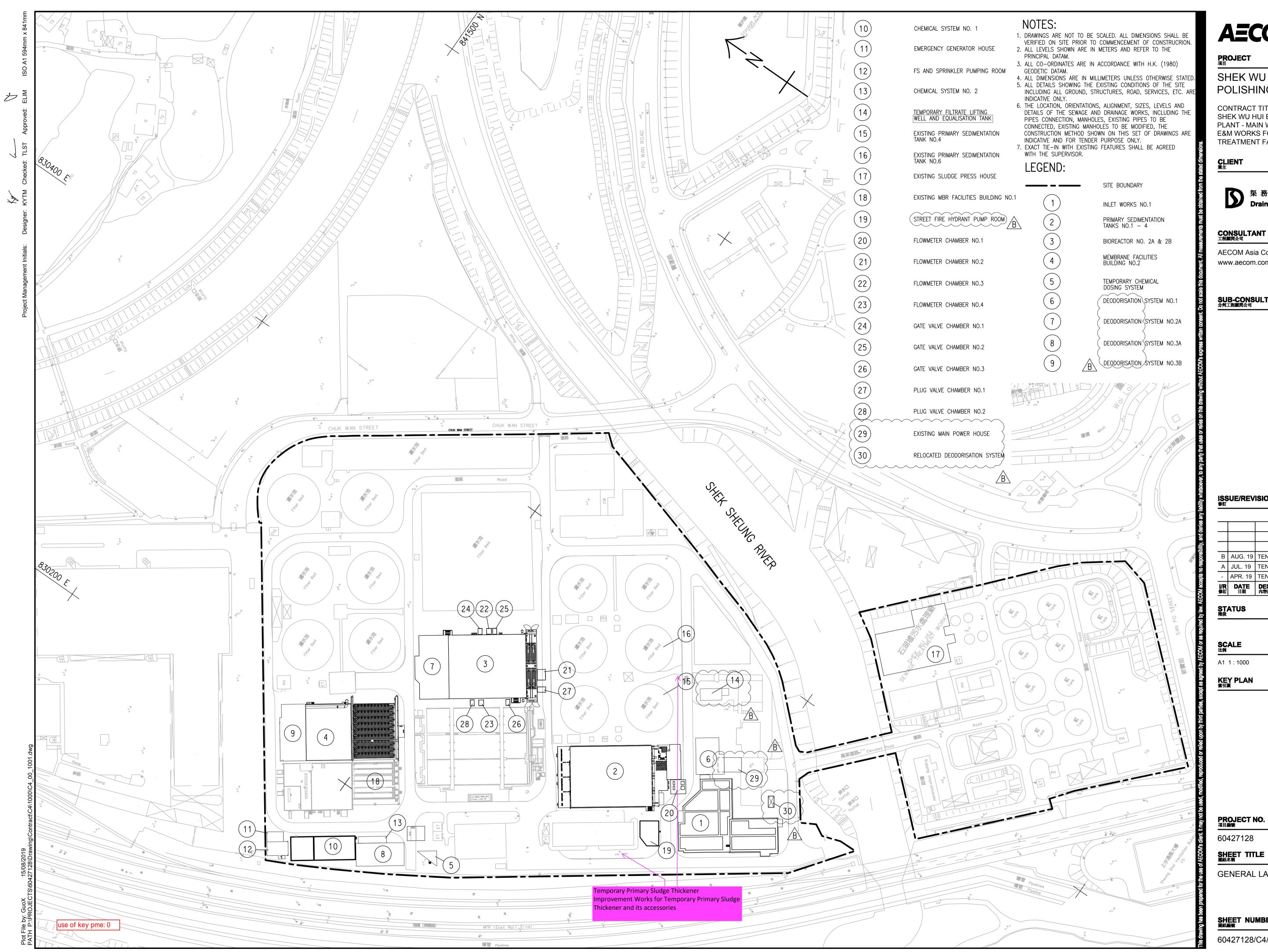
**METRES** 

CONTRACT NO.

DE/2018/03

SHEK WU HUI EFFLUENT POLISHING PLANT GENERAL LAYOUT PLAN

60427128/C2/00/1001



**AECOM** 

PROJECT 項目

SHEK WU HUI EFFLUENT POLISHING PLANT

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

CLIENT 業主

算務署
Drainage Services Department

CONSULTANT 工程順間公司

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分判工程順間公司

ISSUE/REVISION 修訂

DIMENSION UNIT 尺寸單位 **METRES** 

CONTRACT NO. 合約線號 DE/2018/04

60427128

SHEET TITLE 岡紙名標

GENERAL LAYOUT PLAN

SHEET NUMBER **画纸编號** 

60427128/C4/00/1001B



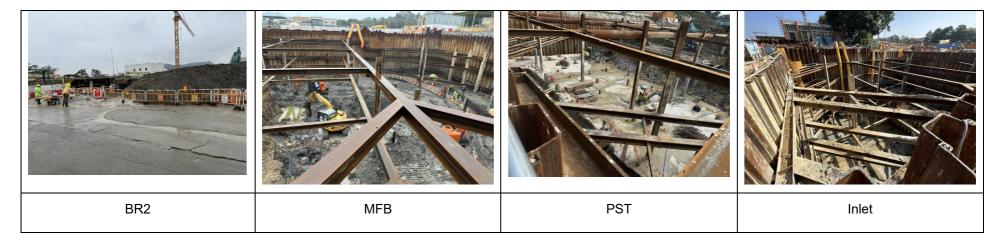
## **Site Record Photos**



## DC/2018/06



## DC/2018/07





## DE/2018/03



Sidestream

## Appendix 3.1

# Environmental Mitigation Implementation Schedule

## **Appendix 3.1 Environmental Mitigation Implementation Schedule**

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Air Quality	y Monitoring						
S2.4.1.3	Dust suppression measures stipulated in the Air Pollution Control (Con	struction Dust) Regulation	on and good site	e practices:			
	Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;	To minimize the dust impact	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Air Pollution Control Ordinance (APCO) and Air Pollution Control	۸
	Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;					(Construction Dust)	۸
	<ul> <li>A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;</li> </ul>	ing or traffic cones; als on a vehicle leaving a construction intirely by impervious sheeting to ensure do not leak from the vehicle;  cle washing facilities with high pressure ded at every discernible or designated rea where vehicle washing takes place ween the washing facilities and the exit		*			
	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;						۸
	Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;						*

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.						^
	The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;						٨
	<ul> <li>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;</li> </ul>						*
	<ul> <li>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;</li> </ul>						٨
	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;						۸
	Any skip hoist for material transport should be totally enclosed by impervious sheeting;						۸
	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;						۸
	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;						^

Contract No. SPW 12/2021 Environmental Team (2021 – 2024) for Shek Wu Hui Effluent Polishing Plant – Main Work

<ul> <li>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</li> </ul>			
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 Imp	pact						
S3.4.1.1	Use of movable barrier, enclosure, acoustic mat and quiet plant. Use of wooden frames barrier with a small-cantilevered upper portion of superficial density not less than 14kg/m² on a skid footing with 25mm thick internal sound absorptive lining.	To minimize construction noise impact arising from the Project at the affected noise sensitive receivers (NSRs)	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, Noise Control Ordinance (NCO)	۸
S3.4.1.2	Good Site Practice:		•	•			•
	<ul> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.</li> <li>Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.</li> </ul>	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	^
	<ul> <li>Mobile plant, if any, should be sited as far away from NSRs as possible.</li> </ul>						
	<ul> <li>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.</li> </ul>						^
	<ul> <li>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.</li> </ul>						۸
	Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
Ecologica							
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	٨
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	٨
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	۸
S4.2.1.4	The following measures to avoid, minimise and mitigate impact on water	er quality during constru	ction phase sha	II be implemen		EIAO-TM	
	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,	EIAO-TM	٨
	<ul> <li>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;</li> </ul>	water quality			Stage 2 and Stage 3		۸
	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;						٨

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> <li>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;</li> <li>Proper locations for discharge outlets of temporary wastewater</li> </ul>						٨
	treatment facilities well away from sensitive receivers should be identified;						
	<ul> <li>Adequate lateral support should be erected where necessary in order to prevent soil/mud from slipping into water bodies;</li> </ul>						^
	<ul> <li>Site boundaries should be clearly marked and any works beyond the boundary strictly prohibited;</li> </ul>						٨
	<ul> <li>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;</li> </ul>						٨
	Excavation profiles should be properly designed and executed with attention to the relevant requirements for environment, health and safety;						^
	Where soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; Stockpiling sites should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of						٨
	contaminated soil to minimize contaminated runoff and construction materials should be properly covered and located away from nearby water bodies; and						^
	<ul> <li>Supply of suitable clean backfill material after excavation, if required.</li> </ul>						٨

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should be sealed to prevent discharge during transport or during wet season;						^
	Speed control for the trucks carrying contaminated materials should be enforced;						٨
	Vehicle wheel washing facilities at construction sites' exit points should be established and used, where necessary; and						۸
	Other measures as detailed in this schedule.						٨

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 Qu	ality 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	٨
S5.2.2.2	Sewage from Workforce						
- \$5.2.2.3	<ul> <li>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;</li> </ul>	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	٨
	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	anagement						
S6.2.2.1	Good Site Practices and Waste Reduction Measures	Minimize waste	Camtrastara	Work	Construction	Masta Diamasal	٨
	<ul> <li>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;</li> </ul>	generation during construction	Contractors	Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal Ordinance (WDO)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	<ul> <li>Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;</li> </ul>						^
	<ul> <li>Provision of sufficient waste disposal points and regular collection for disposal;</li> </ul>						۸
	<ul> <li>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> </ul>						^
	<ul> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> </ul>						^
	An Environmental Management Plan (EMP) should be prepared by the contractor and submitted to the Supervisor for approval.						۸
S6.2.3.1	Waste Reduction Measures	1			1	1	
	Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;	Reduce waste generation	Contractors	Work Sites	Prior to the commencement of construction	WDO	٨
	<ul> <li>Proper storage and site practices to minimize the potential for damage and contamination of construction materials;</li> </ul>	]			of Main Works Stage 1, Stage 2		۸
	<ul> <li>Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;</li> </ul>				and Stage 3		۸
	<ul> <li>Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); and</li> </ul>						۸
	<ul> <li>Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.</li> </ul>						^

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:  Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;  Stockpiling area should be provided with covers and water spraying system to prevent materials from windblown or being washed away; and  Different locations should be designated to stockpile each material to enhance reuse.	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^ ^
S6.2.4.2	Storage, Collection and Transportation of Waste (con't)  Remove waste in timely manner;  Employ the trucks with cover or enclosed containers for waste transportation;  Obtain relevant waste disposal permits from the appropriate authorities; and  Disposal of waste should be done at licensed waste disposal facilities	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^ ^
S6.2.5.2	C&D Materials from Site Formation  Maintain temporary stockpiles and reuse excavated fill material for backfilling;  Carry out on-site sorting;  Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;  Adopt "selective demolition" technique to demolish the existing structure and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible; and  Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified.	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	^ ^
S6.2.5.3	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> <li>The Contractor should recycle as much as possible of the C&amp;DM on-site. Public fill and C&amp;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.</li> <li>The use of wooden hoardings shall not be allowed. An alternative material, such as metal, aluminium or alloy etc, could be used.</li> <li>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.</li> <li>In order to minimize the impacts of the demolition works, the</li> </ul>	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	^ ^
	generated wastes must be cleared as quickly as possible after demolition. Therefore, the demolition and clearance works should be undertaken simultaneously. To facilitate proper segregation of inert and non-inert C&D material arising from demolition works, selective demolition method should be adopted.						
S6.2.5.4	Chemical Waste						
	<ul> <li>If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers.</li> </ul>	Control the chemical waste and ensure proper storage,	Contractor	Work Sites	Construction phase of Main Works Stage 1,	Waste Disposal (Chemical Waste General)	^
	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.	handling and disposal			Stage 2 and Stage 3	Regulation, Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	*
S6.2.5.5	General Refuse	<u> </u>	<u> </u>			•	

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> <li>General refuse should be stored in enclosed bins separately from construction and chemical wastes.</li> <li>Recycling bins should also be placed to encourage recycling.</li> </ul>	Minimize production of the general refuse and avoid odour,	Contractor	Work Sites	Construction phase of Main Works Stage 1,	Waste Disposal (Chemical Waste General)	٨
	<ul> <li>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.</li> </ul>	pest and litter impacts			Stage 2 and Stage 3	Regulation	٨
	A reputable waste collector should be employed to remove general refuse on a daily basis.						۸

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
Landscap	e and Visual						
S7.3.1.1	For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction		N/A
	With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.				phase		N/A
\$7.3.2.1	<ul> <li>MM4 - Tree Protection &amp; Preservation</li> <li>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.</li> </ul>	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	٨

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	<ul> <li>MM5 - Tree Transplantation</li> <li>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.</li> </ul>	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
\$7.3.2.1	MM6 - Slope Landscaping     Site formation should be reduced as far as possible. Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape recourses and charter. Woodland tree seedings and/or shrubs should be planted where slope gradient and site conditions allow.  In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping  MM7 - Compensatory Planting	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

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under DEVB TC(W) No. 7/2015.	Compensate for trees and shrubs lost due to the Project	Designer / Contractor	Work Sites where possible. Otherwise consider	Prior to construction, construction phase and operation	DEVB TC(W) No. 7/2015 and ETWB TCW No. 2/2004	N/A
	Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.			offsite locations	phase		N/A
	Compensatory planting for shrubs should be considered in suitable locations. Native species such as Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii are suggested.						N/A
S7.3.2.1	MM9 - Vertical Greening  • Planting of climbers to grow up vertical surfaces were appropriate.	Soften hard surfaces and facilities	Designer / Contractor	On appropriate structures	Prior to construction, construction phase and operation phase	ETWB TCW No.11/2004 – Cyber Manual for Greening	N/A
\$7.3.2.1	MM10 - Green Roof     Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to visually sensitive receivers (VSRs) at high levels. Provide greening	Designer / Contractor	On appropriate buildings	Prior to construction, construction phase and operation phase	CIBSE HK Branch, Technical Guidelines for Green Roof Systems in Hong Kong (2011); ArchSD/Urbis Study on Green Roof Application in HK (2007)	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S7.3.2.1	MM11 - Screen Planting     Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Designer / Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the structures.	Prior to construction, construction phase and operation phase	ETWB TCW No. 10/2013 and 3/2006	N/A
\$7.3.2.1	<ul> <li>MM16 - Screen Hoarding</li> <li>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)]</li> </ul>	To screen undesirable views of the works site.	Designer	Work Sites	Construction phase		N/A
S7.3.2.1	<ul> <li>MM17 - Light Control</li> <li>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.</li> </ul>	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
Not Applicable N/A

# Appendix 4.1

**Action and Limit Level** 

# **Lam Environmental Services Limited**

# **Action and Limit Levels**

# **Air Quality Monitoring**

Monitoring	1-hour TSP Level in µg/m³		24-hour TSP Level in μg/m³		
Station	Action Level	Limit Level	Action Level	Limit Level	
AM1	320	500	189	260	
AM2	322	500	187	260	

# **Noise Monitoring**

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

<sup>\*</sup>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.

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

<sup>\*</sup>Note: Whether numbers are significant depend on species and season after collection and evaluation of baseline data.

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



# **Lam Environmental Services Limited**

# **Water Quality Monitoring**

Parameter			
(Unit)	Depth	Action Level	Limit Level
DO	N 4: -1 -11 -	< 7.0 mm/l	4.7.7 mm/l
(mg/L)	Middle	≤ 7.8 mg/L	≤ 7.7 mg/L
		≥ 14.6 NTU	≥ 15.6 NTU
Turbidity	Depth-	or 120% of upstream control	or 130% of upstream control
(NTU)	average	station's Turbidity at the same	station's Turbidity at the same tide
		tide of the same day	of the same day
		≥ 18.8 mg/L	≥ 19.5 mg/L
SS	Depth-	or 120% of upstream control	or 130% of upstream control
(mg/L)	average	station's SS at the same tide of	station's SS at the same tide of the
		the same day	same day

# Appendix 4.2

# Copies of Calibration Certificates





# RECALIBRATION DUE DATE:

June 28, 2023

# Certificate of Calibration

**Calibration Certification Information** 

Cal. Date: June 28, 2022

Rootsmeter S/N: 438320

Ta: 296

°K

Operator: Jim Tisch

Pa: 755.1

mm Hg

Calibration Model #: TE-5025A

Calibrator S/N: 3880

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4500	3.2	2.00
2	3	4	1	1.0240	6.4	4.00
3	5	6	1	0.9130	7.9	5.00
4	7	8	1	0.8690	8.8	5.50
5	9	10	1	0.7180	12.8	8.00

	Data Tabulation						
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	√∆H(Ta/Pa)		
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)		
0.9961	0.6870	1.4144	0.9958	0.6867	0.8854		
0.9918	0.9686	2.0003	0.9915	0.9683	1.2522		
0.9899	1.0842	2.2364	0.9895	1.0838	1.4000		
0.9887	1.1377	2.3456	0.9883	1.1373	1.4683		
0.9834	1.3696	2.8289	0.9830	1.3691	1.7708		
	m=	2.07013		m=	1.29628		
QSTD[	b=	-0.00727	QA	b=	-0.00455		
	r=	0.99999	,	r=	0.99999		

	Calculatio	ns	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/∆Time	Qa=	Va/ΔTime
	For subsequent flow ra	te calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions					
Tstd:	298.15 °K	П			
Pstd:	760 mm Hg				
	Key				
ΔH: calibrate	r manometer reading (in H2O)	_			
ΔP: rootsmet	ter manometer reading (mm Hg)	Π			
	solute temperature (°K)				
Pa: actual barometric pressure (mm Hg)					
b: intercept					
m: slope					

## RECALIBRATION

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

Tisch Environmental, Inc. 145 South Miami Avenue

Village of Cleves, OH 45002

www.tisch-env.com

TOLL FREE: (877)263-7610 FAX: (513)467-9009

# Calibration Data for High Volume Sampler (TSP Sampler)

Location	: _	AM1a	Calbration Date	:	1-Nov-22
Equipment no.	:	HVS001 (0401-1105)	Calbration Due Date	:	1-Jan-23

#### CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition							
Temperature, T <sub>a</sub>	302	Kelvin	Pressure, P <sub>a</sub>	1008	mmHg		

Orifice Transfer Standard Information							
Equipment No.	3880	Slope, m <sub>c</sub>	2.07013	Intercept, bc	-0.00727		
Last Calibration Date	28-Jun-22	$(Hx P_a / 1013.3 \times 298 / T_a)^{1/2}$					
Next Calibration Date	28-Jun-23	$= m_c \times Q_{std} + b_c$					

	Calibration of TSP							
Calibration	Manometer Reading		Q <sub>std</sub>	Continuous Flow	IC			
Point	H (inches of water)		(m <sup>3</sup> / min.)	Recorder, W	(W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)			
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis		
1	1.4	1.4	2.8	0.8044	21	20.8058		
2	2.3	2.3	4.6	1.0300	32	31.7041		
3	3.5	3.5	7.0	1.2698	44	43.5932		
4	4.3	4.3	8.6	1.4070	51	50.5285		
5	5.6	5.6	11.2	1.6052	60	59.4452		

By Linear Regression of Y on X

Slope, m = 48.9134 Intercept, b = -17.5531

Correlation Coefficient\* = 0.9998

Calibration Accepted = Yes/Ne\*\*

Remarks : Serial No.:0401-1105

 Calibrated by Date
 :
 Alan Ng
 Checked by
 :
 Alex Chan

 Date
 :
 1-Nov-22
 Date
 :
 1-Nov-22

 $<sup>\</sup>ensuremath{^*}$  if Correlation Coefficient < 0.990, check and recalibration again.

<sup>\*\*</sup> Delete as appropriate.

# Calibration Data for High Volume Sampler (TSP Sampler)

Location	: _	AM2a	Calbration Date	:	1-Nov-22
Equipment no.	:	HVS003 (1096-2305)	Calbration Due Date	:	1-Jan-23

#### CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T <sub>a</sub>	302	Kelvin	Pressure, P <sub>a</sub>	1008	mmHg	

Orifice Transfer Standard Information						
Equipment No.	3880	Slope, m <sub>c</sub>	2.07013	Intercept, bc	-0.00727	
Last Calibration Date	28-Jun-22	$(HxP_a/1013.3x298/T_a)^{1/2}$				
Next Calibration Date	28-Jun-23	$= m_c \times Q_{std} + b_c$				

Calibration of TSP							
Calibration	Manometer Reading		Q <sub>std</sub>	Continuous Flow	IC		
Point	H (inches of water)		(m <sup>3</sup> / min.)	Recorder, W	(W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)		
	(up)	(down)	(difference)	X-axis	(CFM)	Y-axis	
1	2.3	2.3	4.6	1.0300	23	22.7873	
2	3.5	3.5	7.0	1.2698	33	32.6949	
3	4.6	4.6	9.2	1.4552	44	43.5932	
4	5.2	5.2	10.4	1.5469	48	47.5562	
5	6.1	6.1	12.2	1.6752	55	54.4915	

Slope, m = 47.3405 Intercept, b = -26.2467

Calibration Accepted = 0.9980

Yes/Ne\*\*

Remarks : Serial No.: 1096-2305

 Calibrated by
 :
 Alan Ng
 Checked by
 :
 Alex Chan

 Date
 :
 1-Nov-22
 Date
 :
 1-Nov-22

 $<sup>\</sup>ensuremath{^*}$  if Correlation Coefficient < 0.990, check and recalibration again.

<sup>\*\*</sup> Delete as appropriate.



# **Calibration Certificate**

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

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

**Instrument Model#** 

Aerocet 831

Instrument Serial# R14332

**Date of Calibration** 

4/29/2022

Sensor # 12228

JGoddard A

**Calibration Technician** 

**Temperature** 

O<sub>C</sub>

**Quality Check** 

Relative Humidity 32

**Test Procedure:** 

Aerocet 831-6100

22

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

		JA 18 4	
Standards	Model	SN	Cal Due
FLOW	SWIFT 6.0	B20457	11/24/2022
DMM	289	27720071	8/24/2022
RH/TEMP SENSOR	083E-1-6	R20313	9/13/2022
Particle Counter	GT-526S	X17421	5/29/2022

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



# **Lam Environmental Services Limited**

## Portable Dust Meter Performance Check Record

## Portable Dust Meter

Type Particulare Monitor

Manufacturer MET ONE INSTRUMENTS

**Model Number** AEROCET831

**Serial Number** R14332

**Performance Check Date** 17-May-22

**Standard Equipment** 

High Volume Sampler Type

Manufacturer TISCH

**Model Number** TE-5170

**Equipment Number** HVS018 (S/N:2656)

**Last Calibration Date** 29-Apr-22

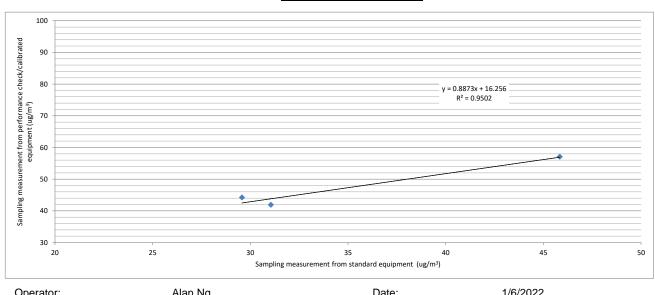
#### **Portable Dust Meter Performance Check Results**

Trial no. in 1-hr period	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m <sup>3</sup> (Standard equipment) (Y - Axis)	Concentration in ug/m³ (Performance Check / Calibrated equipment) (X - Axis)
1	17/5/22 09:30	33	1020	46	57
2	17/5/22 10:32	33	1020	30	44
3	17/5/22 13:00	33	1020	31	42

<sup>\*</sup> Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X Slope (K- factor) Correlation Coefficient

Validity of Performance Check / Calibration Record



Operator.	Alailing	Dale.	1/0/2022
Checked by:	Derek Lo	Date:	1/6/2022
,			



# **Calibration Certificate**

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

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

Instrument Model#	Aerocet 831		Instrument Serial#	W15448
Date of Calibration	4/28/2022		200	Sensor # 16438
JGoddard A 8			A 5	
Calibration Technicia	ın	1134	Quality Check	
Temper	ature <b>22</b>	°c	Relative Humidity 3	2 %

Test Procedure: Aerocet 831-6100

0.3       Pass       ± 10%       240943         0.5       Pass       ± 10%       219480         1.0       Pass       ± 10%       229294         2.5       Pass       ± 10%       REF         4.0       Pass       ± 10%       REF         7.0       Pass       ± 10%       REF	Γ Expiration	Lot# NIST	Test Spec.	Test Results	PSL Size (µm)
1.0     Pass     ± 10%     229294       2.5     Pass     ± 10%     REF       4.0     Pass     ± 10%     REF	05/31/2024	240943	± 10%	Pass	0.3
2.5	11/30/2022	219480	± 10%	Pass	0.5
4.0 Pass ± 10% REF	8/31/2023	229294	± 10%	Pass	1.0
	NA	REF	± 10%	Pass	2.5
7.0 Pass + 10% RFF	NA	REF	± 10%	Pass	4.0
7.0   7.03	NA	REF	± 10%	Pass	7.0
10.0 Pass ± 10% REF	NA	REF	± 10%	Pass	10.0

Ctomolovelo	Model	SN	Cal Due
Standards	Wodel	3/4	Car Due
Particle Counter	GT-526S	X17421	5/29/2022
FLOW	SWIFT 6.0	B20457	11/24/2022
RH/TEMP SENSOR	083E-1-6	R20313	9/13/2022
DMM	289	27720071	8/24/2022

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



# **Lam Environmental Services Limited**

## **Portable Dust Meter Performance Check Record**

## Portable Dust Meter

Type Particulare Monitor

Manufacturer MET ONE INSTRUMENTS

**Model Number** AEROCET831

**Serial Number** W15448

**Performance Check Date** 17-May-22

**Standard Equipment** 

High Volume Sampler Type

Manufacturer TISCH

**Model Number** TE-5170

**Equipment Number** HVS018 (S/N:2656)

**Last Calibration Date** 29-Apr-22

#### **Portable Dust Meter Performance Check Results**

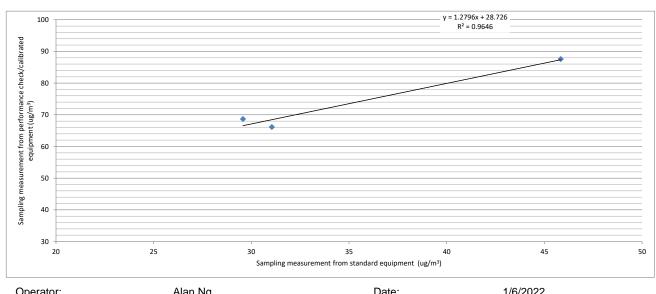
Trial no. in 1-hr period	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m <sup>3</sup> (Standard equipment) (Y - Axis)	Concentration in ug/m <sup>3</sup> (Performance Check / Calibrated equipment) (X - Axis)
1	17/5/22 09:30	33	1020	46	88
2	17/5/22 10:32	33	1020	30	69
3	17/5/22 13:00	33	1020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

<sup>\*</sup> Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X Slope (K- factor) Correlation Coefficient

Validity of Performance Check / Calibration Record

0.8000 0.9821 17/5/2023



Operator.	Alailing	Dale.	1/0/2022
Checked by:	Derek Lo	Date:	1/6/2022
,			



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# CERTIFICATE OF CALIBRATION

Certificate No.:

22CA0224 04-02

Page

of

2

Item tested

Description:

Sound Level Meter (Type 1) Nti

Microphone Nti Andio

Preamp Nti Andio

Manufacturer: Type/Model No.:

XL2

MC230A A16673

MA220

Serial/Equipment No.: Adaptors used:

A2A-15269-EO

8034

Item submitted by

Customer Name:

Lam Environmental Services Limited.

Address of Customer:

Request No .:

Date of receipt:

24-Feb-2022

Date of test:

01-Mar-2022

Reference equipment used in the calibration

Description:

Serial No. Model:

**Expiry Date:** 23-Aug-2022

Traceable to:

Multi function sound calibrator Signal generator

B&K 4226 DS 360

2288444 33873

27-May-2022

CIGISMEC **CEPREI** 

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity:

55 ± 10 %

Air pressure:

1010 ± 5 hPa

## Test specifications

The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 1, and the lab calibration procedure SMTP004-CA-152.

The electrical tests were performed using an electrical signal substituted for the microphone which was removed and 2, replaced by an equivalent capacitance within a tolerance of +20%.

The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference 3, between the free-field and pressure responsess of the Sound Level Meter.

## Test results

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

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

Feng Junqi

Actual Measurement data are documented on worksheets.

Approved Signatory:

Date:

02-Mar-2022

Company Chop:

FNGIN

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

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



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# CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

22CA0224 04-02

Page

)

2

#### 1, Electrical Tests

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

			Expanded	Coverage
Test:	Subtest:	Status:	Uncertanity (dB)	Factor
		3.45	2.52	
Self-generated noise	Α	Pass	0.3	
	С	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	A	Pass	0.3	
	С	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
5 5	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/103 at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/104 at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

# 2, Acoustic tests

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

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

3, Response to associated sound calibrator

N/A

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

Calibrated by:

 $\Delta \Delta$ 

calibrated on a schedule to maintain the required accuracy level.

End

Checked by:

Date:

Chan Yuk Yiu 02-Mar-2022

Date:

01-Mar-2022\

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are

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Form No.CARP152-2/Issue 1/Rev.C/01/02/2007



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Test Data for Sound Level Meter

Page 1 of 6

Sound level meter type:

XL2

Serial No.

A2A-15269-EO Date

01-Mar-2022

Microphone

type:

MC230A

Serial No.

A16673

Report: 22CA0224 04-02

## SELF GENERATED NOISE TEST

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

Noise level in A weighting

11.0

dB

Noise level in C weighting

dB dB

14.5

20.9

dB

## LINEARITY TEST

Noise level in Lin

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

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



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Test Data for Sound Level Meter

Page 2 of 6

Sound level met Microphone	ter type: type:	XL2 MC230A		Serial No. Serial No.	A2A-15269-EO A16673		01-Mar-2022
200						Report:	22CA0224 04-02
32.0		32.2	32.2	0.7	0.2		0.2
31.0		31.2	31.2	0.7	0.2		0.2
30.0		30.3	30.3	0.7	0.3		0.3

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

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

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

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
40-140	51.0	51.7	0.7	0.7
	138.0	138.0	0.7	0.0
20-120	30.0	30.3	0.7	0.3
	118.0	118.0	0.7	0.0
0.400	30.0	30.0	0.7	0.0
0-100	98.0	98.0	0.7	0.0

# FREQUENCY WEIGHTING TEST

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

Frequency weighting A:

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

Frequency weighting C:

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



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Test Data for Sound Level Meter

Page 3 of 6

Sound level meter	er type:	XL2	Serial No.	A2A	∖-15269-EO	Date 01	-Mar-2022
Microphone	type:	MC230A	Serial No.	A16	673		
	10 80					Report: 220	CA0224 04-02
1000.0	94.0	94.0	94.0	0.0	0.0	0.0	
31.6	94.0	91.0	90.8	1.5	1.5	-0.2	
63.1	94.0	93.2	93.1	1.5	1.5	-0.1	
125.9	94.0	93.8	93.8	1.0	1.0	0.0	
251.2	94.0	94.0	93.9	1.0	1.0	-0.1	
501.2	94.0	94.0	94.0	1.0	1.0	0.0	
1995.0	94.0	93.8	93.8	1.0	1.0	0.0	
3981.0	94.0	93.2	93.1	1.0	1.0	-0.1	
7943.0	94.0	91.0	91.0	1.5	3.0	0.0	
12590.0	94.0	87.8	87.6	3.0	6.0	-0.2	

Frequency weighting Lin:

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

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

## TIME WEIGHTING FAST TEST

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

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

#### TIME WEIGHTING SLOW TEST

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

miles and and an arrangement and arrangement and arrangement and arrangement a	(		Declaration of the second			
Ref. level	Expected level	xpected level Actual level		nce(dB)	Deviation	
dB	dB	dB	+	-	dB	
116.0	111.9	111.9	1.0	1.0	0.0	



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Test Data for Sound Level Meter

Page 4 of 6

Sound level meter type:

XL2

Serial No.

A2A-15269-EO Date

01-Mar-2022

Microphone

type:

MC230A

Serial No.

A16673

Report: 22CA0224 04-02

# PEAK RESPONSE TEST

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

Positive polarities:

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

Course becaused			J , 1 ,	
Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.3	2.0	0.3

Negative polarities:

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

#### RMS ACCURACY TEST

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

Test frequency:

2000 Hz

Amplitude:

2 dB below the upper limit of the primary indicator range.

Burst repetition frequency:

40 Hz

Tone burst signal:

11 cycles of a sine wave of frequency 2000 Hz. (Set to INT)

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

#### TIME WEIGHTING IMPULSE TEST

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

Test frequency:

2000 Hz

Amplitude:

The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

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

Repeated at 100 Hz

1,101	catca at 100 Hz				
	Ref. Level	Repeated bu	ırst indication	Tolerance	Deviation
	dB	Expected (dB)	Actual (dB)	+/- dB	dB
	120.0	117.3	117.1	1.0	-0.2

# TIME AVERAGING TEST

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

Frequency of tone burst:

4000 Hz

Duration of tone burst:

1 ms

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

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Test Data for Sound Level Meter

Page 5 of 6

Sound level meter type:

XL2

Serial No.

A2A-15269-EO Date

01-Mar-2022

Microphone

type:

MC230A

Serial No.

A16673

Report: 22CA0224 04-02

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

# PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

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

Test frequency:

4000 Hz

Integration time:

10 sec

The integrating sound level meter set to Leq:

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

The integrating sound level meter set to SEL:

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

## **OVERLOAD INDICATION TEST**

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

Test frequency:

2000 Hz

Amplitude:

2 dB below the upper limit of the primary indicator range.

Burst repetition frequency:

40 Hz

Tone burst signal:

11 cycles of a sine wave of frequency 2000 Hz.

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

For integrating SLM, with the instrument indicating Leq.

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

Test frequency:

4000 Hz

Integration time:

10 sec

Single burst duration:

1 msec

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

#### **ACOUSTIC TEST**

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

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



**SMECLab** 

综合試驗有限公司 SOILS & MATERIALS ENGINEERING CO., LTD. 香港新界葵涌永基路22-24號好爸爸創科大廈 Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

Test Data for Sound Level Meter

Page 6 of 6

Sound level me Microphone	eter type: type:	XL2 MC230A	Serial Serial	500000000 140000	A2A A16	-15269-EO 673		01-Mar-2022 22CA0224 04-02
1000	94.0		94.0		0.0	0.0	0.0	
125 8000	77.9 92.9		77.9 93.3		1.0 1.5	3.0	0.0 0.4	

----END-----



香港新界葵涌永基路22-24號好爸爸創科大廈 Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com



# CERTIFICATE OF CALIBRATION

Certificate No.:

21CA1222 02-01

Page:

of

2

to:

Item tested

Description: Manufacturer: Acoustical Calibrator (Class 1)

Type/Model No.:

Larson Davis CAL200

Serial/Equipment No.:

13098

Adaptors used:

-

Item submitted by

Curstomer:

Lam Environmental Services Ltd.

Address of Customer:

-

Request No.: Date of receipt:

22-Dec-2021

Date of test:

29-Dec-2021

#### Reference equipment used in the calibration

raceable t
CL
EPREI

#### **Ambient conditions**

Temperature: Relative humidity:

22 ± 1 °C 55 ± 10 %

Air pressure:

1005 ± 5 hPa

## Test specifications

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

#### **Test results**

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

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

Jungi

Approved Signatory:

Date:

03-Jan-2022

Company Chop:

SENGWERNES 等合試験 CO 有限公司を 705米 OT

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

© Soils & Materials Engineering Co., Ltd.

Form No.CARP156-1/Issue 1/Rev.D/01/03/2007



香港新界葵涌永基路22-24號好爸爸創科大廈 Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com





# **CERTIFICATE OF CALIBRATION**

(Continuation Page)

Certificate No.:

21CA1222 02-01

Page:

of

2

#### 1, Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

(Output level in dB re 20 µPa)

Frequency	Output Sound Pressure	Measured Output	Estimated Expanded	
Shown	Level Setting	Sound Pressure Level	Uncertainty	
Hz	dB	dB	dB	
1000	94.00	93.76	0.10	

#### 2, Sound Pressure Level Stability - Short Term Fluctuations

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz

STF = 0.018 dB

Estimated expanded uncertainty

0.005 dB

### 3, Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz

Actual Frequency = 999.9 Hz

Estimated expanded uncertainty

0.1 Hz

Coverage factor k = 2.2

## 4, Total Noise and Distortion

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz

TND = 0.6%

Estimated expanded uncertainty

0.7 %

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

Calibrated by:

Date:

End∗

OL-

ung Chi Yip 29-Dec-2021 Checked by:

Date:

03-Jan-2022

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

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Form No.CARP156-2/Issue 1/Rev.C/01/05/2005



### **Lam Environmental Services Limite**

#### **Wind Station Performance Check Record**

Type : Weather Station

Manufacturer : 武汉辰云科技有限公司

Model Number : YGY-FSXY1

**Serial Number** : YG 21071630T0924

Performance Check Date : 30-Sep-2022

#### **Performance Check Results**

Wind Speed Range (m/s)	Reading Value (V1, m/s)	Anemometer Value (V2, m/s)	Difference (V1 - V2, m/s)
Zero Check	0.0	0.0	0.0
1 - 2	2.0	2.1	-0.1
3 - 4	3.4	3.2	0.2
5 - 6	5.7	5.6	0.1
7 - 8	7.9	8.2	-0.3

Wind Direction (°)	Reading Value (W1, °)	Compass Value (W2, °)	Difference (W1 - W2, °)
0	-1	0	-1
90	90	90	0
180	178	180	-2
270	272	270	2

#### Test Reference:

- 1. Wind Speed Check Speed reading checked on-site against anemometer logged value.
- 2. Wind Direction Check Direction reading checked on on-site against compass marked reading.

Conducted by:	William Cheung	Checked by:	Ravmond Dai
conducted by.	rrimaiii Ciicaiig	Checked by.	i tayiii oi ia bai



11/F., Chung Shun Knitting Centre,1 - 3 Wing Yip Street,

Kwai Chung, N.T., Hong Kong

T: +852 2610 1044 F: +852 2610 2021 www.alsglobal.com

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: DEREK LO WORK ORDER: HK2241587

**CLIENT:** LAM GEOTECHNICS LIMITED

**ADDRESS:** 19/F, REMEX CENTRE, SUB-BATCH:

42 WONG CHUK HANG ROAD, HONG KONG

LABORATORY: HONG KONG

**DATE RECEIVED:** 20-Oct-2022 **DATE OF ISSUE:** 31-Oct-2022

### **SPECIFIC COMMENTS**

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type: Multifunctional Meter Service Nature: Performance Check

Scope: Dissolved Oxygen, pH Value, Salinity and Temperature

Brand Name/ Model No.: [YSI]/ [Professional Plus]

Serial No./ Equipment No.: [19H100656/14E101065]/ [N/A]

Date of Calibration: 25-October-2022

#### **GENERAL COMMENTS**

This report superseded any previous report(s) with same work order number.

10.3

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganics

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### REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**WORK ORDER:** HK2241587

**SUB-BATCH:** 0

31-Oct-2022 **DATE OF ISSUE:** 

**CLIENT:** LAM GEOTECHNICS LIMITED

Equipment Type:

Multifunctional Meter

25-October-2022

Brand Name/ Model No.:

[YSI]/ [Professional Plus]

Serial No./

[19H100656/14E101065]/[N/A]

Equipment No.: Date of Calibration:

Date of Next Calibration:

25-January-2023

**PARAMETERS:** 

**Dissolved Oxygen** 

Method Ref: APHA (23rd edition), 4500O: G

ſ	Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
ĺ	3.57	3.63	+0.06
	5.34	5.42	+0.08
	7.92	7.98	+0.06
		Tolerance Limit (mg/L)	±0.20

pH Value

Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.93	-0.07
7.0	7.03	+0.03
10.0	9.90	-0.10
	Tolerance Limit (pH unit)	±0.20

**Salinity** 

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	
10	10.09	+0.9
20	19.81	-1.0
30	30.35	+1.2
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

### REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2241587

**SUB-BATCH:** 0

**DATE OF ISSUE:** 31-Oct-2022

**CLIENT:** LAM GEOTECHNICS LIMITED

Equipment Type:

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/ [Professional Plus]

Serial No./

Equipment No.:

[19H100656/14E101065]/[N/A]

Date of Calibration:

25-October-2022

Date of Next Calibration: 2

25-January-2023

**PARAMETERS:** 

**Temperature** 

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
7.5	6.7	-0.8
25.0	24.0	-1.0
40.0	38.8	-1.2
	Tolerance Limit (°C)	±2.0

Reference Thermometer:

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

HK1250

N:5

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganics

<sup>\*</sup> The calibration solutions do not have Certificate of Analysis.



#### REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

In	formation	supplied	bv	customer:

CONTACT:

MR. JAMES CHU

JOB REFERENCE NO.:

22777053-K20C3901

CLIENT:

LAM ENVIRONMENTAL SERVICES LTD.

DATE RECEIVED: DATE OF ISSUE:

20/10/2022 02/11/2022

ADDRESS:

19/F, REMAX CENTRE, 42 WONG CHUK HANG ROAD,

HONG KONG

PROJECT:

---

#### METHOD OF PERFORMANCE CHECK/ CALIBRATION:

Ref: APHA22nd ed 2130B

#### COMMENTS

It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory.

Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of FT Laboratories Ltd will be followed.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1807073
Equipment No.:	
Date of Calibration:	31/10/2022

Remarks:

This is the Final Report. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Certified By:

WONG Chi Wai Sanio Senior Chemist Issue Date:

02/11/2022

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Form No.: HG022-002 Rev 0 20190101

Page 1 of 2

Address: Lot No. DD77 Section 1552 S.A. ss 1RP, Ng Chow South Road, Ping Che, N.T., H.K. Tel: 27584861, Fax: 27588962



#### REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: 22777053-K20C3901

**DATE OF ISSUE:** 02/11/2022

CLIENT: LAM ENVIRONMENTAL SERVICES LTD,

Equipment Type:	Turbidimeter	
Brand Name:	Xin Rui	
Model No.:	WGZ-3B	
Serial No.:	1807073	
Equipment No.:		
Date of Calibration:	31/10/2022	
Date of next Calibation:	31/01/2023	
Lab I.D.:	H220050-01	

#### Parameters:

#### Turbidity

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance	
0	0.00		
4	4.00	0.0%	
10	10.00	0.0%	
40	39.99	0.0%	
100	99.99	0.0%	
400	400	0.0%	
1000	1000	0.0%	
	Tolerance Limit (±)	10%	

Remark: "Displayed Reading" presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.

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Form No.: HG022-002 Rev 0 20190101

Page 2 of 2

Address: Lot No. DD77 Section 1552 S.A. ss 1RP, Ng Chow South Road, Ping Che, N.T., H.K. Tel: 27584861, Fax: 27584862

## Appendix 4.3

Wind Data



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	4.5	249(WSW)
	01:00	3.9	267(W)
	02:00	2.3	225(SW)
	03:00	1.5	149(SSE)
	04:00	3.9	236(SW)
	05:00	2.9	271(W)
	06:00	4.5	215(SW)
	07:00	4.1	257(WSW)
	08:00	2.7	199(SSW)
	09:00	2.1	243(WSW)
	10:00	2.9	265(W)
1-Dec-22	11:00	3.1	216(SW)
1-Dec-22	12:00	1.5	299(WNW)
	13:00	2.9	299(WNW)
	14:00	3.3	216(SW)
	15:00	3.9	285(WNW)
	16:00	2.9	237(WSW)
	17:00	2.7	249(WSW)
	18:00	2.5	194(SSW)
	19:00	2.3	229(SW)
	20:00	1.7	61(ENE)
	21:00	1.9	272(W)
	22:00	2.5	236(SW)
	23:00	2.1	220(SW)
	00:00	3.3	222(SW)
	01:00	1.1	251(WSW)
	02:00	3.3	201(SSW)
	03:00	5.1	238(WSW)
	04:00	1.5	143(SE)
	05:00	6.7	198(SSW)
	06:00	2.3	235(SW)
	07:00	4.7	202(SSW)
	08:00	3.7	225(SW)
	09:00	1.9	166(SSE)
	10:00	3.7	208(SSW)
2-Dec-22	11:00	2.7	179(S)
2-060-22	12:00	4.1	248(WSW)
	13:00	1.9	148(SSE)
	14:00	1.9	253(WSW)
	15:00	2.1	161(SSE)
	16:00	1.9	269(W)
	17:00	0.9	321(NW)
	18:00	1.1	114(ESE)
	19:00	1.9	241(WSW)
	20:00	2.9	247(WSW)
	21:00	1.1	167(SSE)
	22:00	1.9	189(S)
	23:00	1.9	263(W)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	0.7	301(WNW)
	01:00	0.7	288(WNW)
	02:00	2.3	167(SSE)
	03:00	1.9	182(S)
	04:00	1.3	191(S)
	05:00	2.3	229(SW)
	06:00	2.3	212(SSW)
	07:00	2.1	258(WSW)
	08:00	2.7	165(SSE)
	09:00	2.9	238(WSW)
	10:00	1.3	264(W)
0 Dec 00	11:00	1.5	308(NW)
3-Dec-22	12:00	2.1	234(SW)
	13:00	2.1	247(WSW)
	14:00	1.7	287(WNW)
	15:00	0.0	323(NW)
	16:00	1.5	253(WSW)
	17:00	1.1	308(NW)
	18:00	1.3	283(WNW)
	19:00	1.3	134(SE)
	20:00	0.9	159(SSE)
	21:00	1.5	279(W)
	22:00	0.5	7(N)
	23:00	2.3	262(W)
	00:00	0.7	261(W)
	01:00	0.0	331(NNW)
	02:00	0.5	312(NW)
	03:00	0.0	265(W)
	04:00	0.7	282(WNW)
	05:00	2.3	200(SSW)
	06:00	2.3	213(SSW)
	07:00	1.7	218(SW)
	08:00	1.7	256(WSW)
	09:00	1.9	211(SSW)
	10:00	1.9	255(WSW)
_	11:00	1.5	244(WSW)
4-Dec-22	12:00	2.1	257(WSW)
	13:00	3.3	230(SW)
	14:00	1.7	266(W)
	15:00	4.7	204(SSW)
	16:00	1.3	329(NNW)
	17:00	2.7	291(WNW)
	18:00	1.9	273(W)
	19:00	1.5	183(S)
	20:00	0.9	121(ESE)
	21:00	2.3	178(S)
	21:00	2.3	223(SW)
	23:00	1.9	186(S)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	1.5	230(SW)
	01:00	2.5	193(SSW)
	02:00	3.3	258(WSW)
	03:00	1.5	174(S)
	04:00	1.3	264(W)
	05:00	3.1	196(SSW)
	06:00	1.9	162(SSE)
	07:00	3.7	224(SW)
	08:00	3.7	197(SSW)
	09:00	3.3	240(WSW)
	10:00	3.5	248(WSW)
5-Dec-22	11:00	1.9	232(SW)
5-Dec-22	12:00	2.3	222(SW)
	13:00	4.9	223(SW)
	14:00	2.5	251(WSW)
	15:00	2.9	152(SSE)
	16:00	1.7	152(SSE)
	17:00	1.3	288(WNW)
	18:00	2.3	265(W)
	19:00	1.7	122(ESE)
	20:00	2.5	217(SW)
	21:00	2.7	211(SSW)
	22:00	1.9	255(WSW)
	23:00	4.3	210(SSW)
	00:00	2.7	253(WSW)
	01:00	3.1	173(S)
	02:00	3.9	205(SSW)
	03:00	1.7	262(W)
	04:00	1.3	165(SSE)
	05:00	3.1	227(SW)
	06:00	1.9	270(W)
	07:00	2.7	265(W)
	08:00	1.1	227(SW)
	09:00	1.1	291(WNW)
			, ,
			, ,
6-Dec-22			
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6-Dec-22	10:00 11:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00	1.1 2.9 1.9 2.1 1.1 1.5 3.1 1.9 1.3 1.5 1.7 0.7 2.3 1.3	291(WNW) 210(SSW) 241(WSW) 269(W) 313(NW) 206(SSW) 246(WSW) 216(SW) 264(W) 211(SSW) 258(WSW) 244(WSW) 244(WSW) 249(WSW) 309(SSW)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	1.1	268(W)
	01:00	4.9	250(WSW)
	02:00	2.5	254(WSW)
	03:00	3.1	241(WSW)
	04:00	0.0	321(NW)
	05:00	0.9	246(WSW)
	06:00	2.5	242(WSW)
	07:00	0.7	290(WNW)
	08:00	0.7	284(WNW)
	09:00	1.5	227(SW)
	10:00	3.1	247(WSW)
7-Dec-22	11:00	1.5	193(SSW)
7-Dec-22	12:00	2.7	234(SW)
	13:00	2.3	213(SSW)
	14:00	1.3	312(NW)
	15:00	3.5	278(W)
	16:00	1.1	177(S)
	17:00	2.1	214(SW)
	18:00	2.7	280(W)
	19:00	0.9	323(NW)
	20:00	1.1	161(SSE)
	21:00	1.3	290(WNW)
	22:00	0.9	274(W)
	23:00	1.1	151(SSÉ)
	00:00	1.1	264(W)
	01:00	0.9	109(ESE)
	02:00	0.5	296(WNW)
	03:00	1.1	276(W)
	04:00	1.1	132(SE)
	05:00	0.7	293(WNW)
	06:00	1.3	321(NW)
	07:00	1.1	252(WSW)
	08:00	0.9	297(WNW)
	09:00	2.7	194(SSW)
	10:00	2.3	236(SW)
	11:00	1.5	246(WSW)
8-Dec-22	12:00	1.7	224(SW)
	13:00	1.1	88(E)
	14:00	1.1	124(SE)
	15:00	1.3	145(SE)
	16:00	1.1	254(WSW)
	17:00	1.5	241(WSW)
	18:00	1.1	277(W)
	19:00	1.1	292(WNW)
	20:00	1.1	80(E)
	21:00	0.0	12(NNE)
	22:00	0.7	96(E)
	23:00	1.1	265(W)
	20.00	1.1	200(VV)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	0.9	128(SE)
	01:00	0.5	66(ENE)
	02:00	0.7	122(ESE)
	03:00	0.5	10(N)
	04:00	0.9	278(W)
	05:00	0.5	280(W)
	06:00	2.5	270(W)
	07:00	1.9	266(W)
	08:00	2.9	216(SW)
	09:00	2.9	243(WSW)
	10:00	1.3	183(S)
0 D 00	11:00	2.5	192(SSW)
9-Dec-22	12:00	1.9	202(SSW)
	13:00	2.7	265(W)
	14:00	0.5	213(SSW)
	15:00	2.5	237(WSW)
	16:00	0.9	150(SSE)
	17:00	1.3	114(ESE)
	18:00	1.7	253(WSW)
	19:00	2.1	271(W)
	20:00	0.7	304(NW)
	21:00	1.7	280(W)
	22:00	1.7	260(W)
	23:00	0.7	240(WSW)
	00:00	0.9	312(NW)
	01:00	2.9	257(WSW)
	02:00	2.9	205(SSW)
	03:00	2.7	273(W)
	04:00	2.5	267(W)
	05:00	1.7	232(SW)
	06:00	1.7	226(SW)
	07:00	2.7	175(S)
	08:00	2.7	256(WSW)
	09:00	5.3	256(WSW)
	10:00	2.7	138(SE)
	11:00	1.3	209(SSW)
10-Dec-22	12:00	1.5	299(WNW)
	13:00	2.9	231(SW)
	14:00	1.9	198(SSW)
	15:00	2.1	279(W)
	16:00	1.7	133(SE)
	17:00	3.9	230(SW)
	18:00	0.7	175(S)
	19:00	1.7	173(S)
	20:00	1.3	258(WSW)
	21:00	2.3	263(W)
	22:00	3.5	237(WSW)
	23:00	1.5	292(WNW)
	23.00	1.0	292(VVINVV)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	0.9	316(NW)
	01:00	1.3	339(NNW)
	02:00	1.9	196(SSW)
	03:00	2.1	255(WSW)
	04:00	1.1	215(SW)
	05:00	1.7	284(WNW)
	06:00	5.1	248(WSW)
	07:00	3.7	212(SSW)
	08:00	2.5	266(W)
	09:00	3.7	244(WSW)
	10:00	2.5	287(WNW)
11-Dec-22	11:00	2.3	244(WSW)
11-Dec-22	12:00	2.7	276(W)
	13:00	3.1	201(SSW)
	14:00	1.3	157(SSE)
	15:00	3.7	286(WNW)
	16:00	1.9	226(SW)
	17:00	3.7	264(W)
	18:00	3.3	269(W)
	19:00	6.1	266(W)
	20:00	3.5	253(WSW)
	21:00	3.1	263(W)
	22:00	2.9	251(WSW)
	23:00	1.5	253(WSW)
	00:00	2.5	261(W)
	01:00	2.3	250(WSW)
	02:00	3.9	189(S)
	03:00	2.1	262(W)
	04:00	0.9	172(S)
	05:00	2.5	242(WSW)
	06:00	2.7	257(WSW)
	07:00	2.7	259(W)
	08:00	1.9	254(WSW)
	09:00	4.1	261(W)
	10:00	4.1	207(SSW)
40 D 00	11:00	3.7	274(W)
12-Dec-22	12:00	5.7	241(WSW)
	13:00	2.1	266(W)
	14:00	4.3	226(SW)
	15:00	2.9	245(WSW)
	16:00	2.7	264(W)
	17:00	5.5	265(W)
	18:00	3.5	240(WSW)
	19:00	2.7	252(WSW)
	20:00	1.7	267(W)
	21:00	3.9	233(SW)
	22:00	3.5	232(SW)
	23:00	2.1	269(W)
	20.00	۷. ۱	200(VV)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	3.1	270(W)
	01:00	3.3	252(WSW)
	02:00	3.1	199(SSW)
	03:00	2.1	231(SW)
	04:00	2.1	144(SE)
	05:00	1.9	259(W)
	06:00	3.1	228(SW)
	07:00	2.5	225(SW)
	08:00	2.7	226(SW)
	09:00	0.9	172(S)
	10:00	1.3	183(S)
13-Dec-22	11:00	3.7	256(WSW)
13-Dec-22	12:00	1.7	221(SW)
	13:00	2.1	238(WSW)
	14:00	2.1	185(S)
	15:00	1.7	193(SSW)
	16:00	1.7	252(WSW)
	17:00	2.7	224(SW)
	18:00	3.5	226(SW)
	19:00	2.1	283(WNW)
	20:00	1.3	281(W)
	21:00	4.3	255(WSW)
	22:00	3.3	232(SW)
	23:00	2.1	196(SSW)
	00:00	1.3	288(WNW)
	01:00	2.3	272(W)
	02:00	2.1	264(W)
	03:00	4.5	173(S)
	04:00	2.1	275(W)
	05:00	0.0	114(ESE)
	06:00	1.3	261(W)
	07:00	2.7	219(SW)
	08:00	4.7	226(SW)
	09:00	3.5	249(WSW)
	10:00	1.5	189(S)
44 Dag 00	11:00	4.1	197(SSW)
14-Dec-22	12:00	2.3	218(SW)
	13:00	1.9	286(WNW)
	14:00	2.3	214(SW)
	15:00	1.7	214(SW)
	16:00	0.0	355(N)
	17:00	2.3	265(W)
	18:00	1.7	263(W)
	19:00	1.9	261(W)
	20:00	1.9	241(WSW)
	21:00	2.1	241(WSW)
	22:00	1.5	279(W)
	23:00	1.9	229(SW)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	1.9	283(WNW)
	01:00	0.9	152(SSE)
	02:00	2.1	188(S)
	03:00	1.7	180(S)
	04:00	2.1	258(WSW)
	05:00	0.9	183(S)
	06:00	1.7	228(SW)
	07:00	0.7	160(SSE)
	08:00	2.3	230(SW)
	09:00	0.0	129(SE)
	10:00	1.3	194(SSW)
15-Dec-22	11:00	0.9	170(S)
15-Dec-22	12:00	1.1	250(WSW)
	13:00	0.0	269(W)
	14:00	0.0	352(N)
	15:00	2.3	173(S)
	16:00	1.3	303(WNW)
	17:00	1.1	267(W)
	18:00	1.5	276(W)
	19:00	1.1	273(W)
	20:00	1.3	267(W)
	21:00	0.9	314(NW)
	22:00	1.1	270(W)
	23:00	0.5	283(WNW)
	00:00	1.5	285(WNW)
	01:00	1.3	288(WNW)
	02:00	0.5	294(WNW)
	03:00	0.5	242(WSW)
	04:00	0.0	330(NNW)
	05:00	1.7	251(WSW)
	06:00	1.3	287(WNW)
	07:00	0.7	89(E)
	08:00	0.7	80(E)
	09:00	0.9	313(NW)
	10:00	1.5	109(ESE)
	11:00	0.7	134(SE)
16-Dec-22	12:00	0.0	352(N)
	13:00	0.9	262(W)
	14:00	2.3	225(SW)
	15:00	1.5	179(S)
	16:00	0.9	271(W)
	17:00	2.1	217(SW)
	18:00	2.5	272(W)
	19:00	1.3	249(WSW)
	20:00	2.3	289(WNW)
	21:00	1.1	215(SW)
	22:00	2.1	249(WSW)
			194(SSW)
	23:00	2.3	194(3577)



00:00 3.7 205(SSW) 01:00 4.3 256(WSW) 02:00 2.7 274(W) 03:00 2.9 258(WSW) 04:00 1.5 207(SSW) 05:00 3.3 263(W) 06:00 1.9 271(W) 07:00 3.3 257(WSW) 08:00 3.3 257(WSW) 09:00 3.9 270(W) 10:00 4.7 223(SW) 11:00 5.5 283(WNW) 15:00 1.9 200(SSW) 15:00 1.9 200(SSW) 16:00 3.1 268(W) 16:00 3.1 268(W) 17:00 2.5 276(W) 18:00 2.5 283(WNW) 19:00 4.3 268(W) 19:00 4.3 268(W) 19:00 4.3 268(W) 20:00 2.7 264(W) 21:00 3.7 274(W) 22:00 5.3 288(WNW) 20:00 2.7 264(W) 21:00 3.7 274(W) 22:00 5.3 288(WNW) 20:00 2.7 246(WSW) 00:00 3.5 303(WNW) 00:00 2.7 246(WSW) 00:00 2.7 246(WSW) 00:00 2.7 246(WSW) 00:00 2.7 256(WSW) 00:00 2.1 251(WSW) 00:00 2.1 251(WSW) 00:00 2.2 246(WSW) 00:00 3.5 303(WNW) 00:00 2.9 311(NW) 00:00 2.9 311(NW) 00:00 3.5 320(NW) 00:00 3.1 320(NW) 00:00 3.2 320(NW)	Date	Time	Wind Speed (m/s)	Wind Direction (degree)
02:00		00:00	3.7	205(SSW)
03:00   2.9   258(WSW)   04:00   1.5   207(SSW)   05:00   3.3   263(W)   06:00   1.9   271(W)   07:00   3.3   257(WSW)   08:00   3.9   270(W)   10:00   4.7   223(SW)   11:00   5.5   283(WNW)   12:00   2.9   120(ESE)   13:00   2.1   228(SW)   14:00   3.7   214(SW)   15:00   1.9   200(SSW)   16:00   3.1   268(W)   17:00   2.5   264(W)   22:00   2.7   264(W)   22:00   5.3   288(WNW)   23:00   2.1   221(WSW)   22:00   5.3   288(WNW)   22:00   3.5   303(WNW)   20:00   2.7   246(WSW)   01:00   6.9   221(WSW)   03:00   3.5   303(WNW)   04:00   2.9   311(NW)   05:00   2.3   229(WNW)   06:00   3.5   320(NW)   320(NW		01:00	4.3	256(WSW)
04:00		02:00	2.7	274(W)
05:00   3.3   263(W)   06:00   1.9   271(W)   07:00   3.3   257(WSW)   08:00   3.3   257(WSW)   09:00   3.9   270(W)   10:00   4.7   223(SW)   12:00   2.9   120(ESE)   13:00   2.1   228(SW)   16:00   3.1   268(W)   17:00   2.5   283(WNW)   16:00   3.1   268(W)   17:00   2.5   283(WNW)   18:00   2.7   2264(W)   22:00   3.7   274(W)   22:00   3.7   274(W)   22:00   3.7   274(W)   22:00   5.3   288(WNW)   23:00   2.1   251(WSW)   20:00   2.7   264(W)   20:00   2.7   246(WSW)   20:00   2.7   246(WSW)   20:00   3.5   303(WNW)   20:00   8.3   292(WNW)   20:00   8.3   292(WNW)   20:00   8.3   292(WNW)   20:00   3.5   303(WNW)   20:00   3.5   303(WNW)   20:00   3.5   303(WNW)   20:00   3.5   328(WNW)   30:00   3.5   3		03:00	2.9	258(WSW)
06:00 1.9 271(W) 07:00 3.3 257(WSW) 08:00 3.9 270(W) 10:00 4.7 223(SW) 11:00 5.5 283(WNW) 11:00 5.5 283(WNW) 11:00 3.7 214(SW) 15:00 1.9 200(SSW) 16:00 3.1 268(W) 17:00 2.5 276(W) 18:00 2.5 283(WNW) 19:00 4.3 269(W) 20:00 2.7 264(W) 21:00 3.7 274(W) 22:00 5.3 288(WNW) 23:00 2.1 251(WSW) 00:00 2.7 246(WSW) 01:00 6.9 281(W) 02:00 8.3 292(WNW) 01:00 6.9 281(W) 02:00 3.5 303(WNW) 03:00 3.5 303(WNW) 04:00 2.9 311(NW) 05:00 2.3 249(WSW) 06:00 3.5 320(NW) 07:00 3.5 320(NW) 08:00 4.9 279(W) 09:00 3.9 229(SW) 10:00 5.9 246(WSW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 7.7 248(WSW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 1.3 125(WSW) 11:00 1.3 125(WSW) 11:00 1.7 248(WSW) 11:00 2.1 201(SSW) 11:00 1.1 259(W) 11:00 2.1 201(SSW) 11:00 2.1 201(SSW) 11:00 2.1 279(W) 12:00 0.0 0.0 279(W) 12:00 0.0 0.0 279(W)		04:00	1.5	207(SSW)
17-Dec-22   07:00   3.3   257(WSW)   08:00   3.3   284(WNW)   09:00   3.9   270(W)   10:00   4.7   223(SW)   11:00   5.5   283(WNW)   12:00   2.9   120(ESE)   13:00   2.1   228(SW)   14:00   3.7   214(SW)   15:00   1.9   200(SSW)   16:00   3.1   268(W)   17:00   2.5   276(W)   18:00   2.5   283(WNW)   19:00   4.3   269(W)   20:00   2.7   264(W)   22:00   5.3   288(WNW)   22:00   5.3   288(WNW)   22:00   2.1   251(WSW)   00:00   2.7   246(WSW)   00:00   3.5   303(WNW)   00:00   3.5   303(WNW)   00:00   3.5   303(WNW)   00:00   3.5   325(WSW)   00:00   3.5   325(WSW)   00:00   3.5   320(NW)   10:00   5.9   246(WSW)   10:00   5.		05:00	3.3	263(W)
17-Dec-22  17-Dec-22  17-Dec-22  11:00  08:00  3.9  270(W)  10:00  4.7  223(SW)  11:00  5.5  283(WNW)  12:00  2.9  12(ESE)  13:00  2.1  228(SW)  14:00  3.7  214(SW)  15:00  1.9  200(SSW)  16:00  3.1  268(W)  17:00  2.5  276(W)  18:00  2.1  228(WNW)  19:00  2.5  283(WNW)  19:00  2.5  284(WNW)  20:00  2.7  264(W)  21:00  3.7  274(W)  22:00  5.3  288(WNW)  23:00  2.1  251(WSW)  00:00  2.7  246(WSW)  01:00  6.9  281(W)  02:00  8.3  292(WNW)  03:00  3.5  303(WNW)  04:00  2.9  311(NW)  05:00  2.3  249(WSW)  06:00  3.5  320(NW)  08:00  4.9  279(W)  11:00  5.9  246(WSW)  11:00  5.9  246(WSW)  11:00  5.9  246(WSW)  11:00  5.9  246(WSW)  11:00  7.7  235(SW)  14:00  3.1  255(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  19:00  2.1  20:0(SSW)  19:00  2.1  20:0(SSW)  11:00  1.7  248(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  19:00  2.1  20:0(SSW)  19:00  2.1  20:0(SSW)  19:00  2.1  20:0(SSW)  19:00  21:00  21:00  22:00  23:00  249(WW)  248(WSW)  255(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  259(W)  20:00  20:00  20:00  279(W)  20:00  21:00  279(W)		06:00	1.9	271(W)
17-Dec-22  17-Dec-22  17-Dec-22  10:00  10:00  10:00  4.7  223(SW)  11:00  2.9  120(ESE)  13:00  2.1  228(SW)  14:00  3.7  214(SW)  15:00  1.9  200(SSW)  16:00  3.1  268(W)  17:00  2.5  283(WNW)  18:00  2.5  283(WNW)  18:00  2.5  283(WNW)  19:00  4.3  268(W)  21:00  3.7  274(W)  22:00  5.3  288(WNW)  22:00  5.3  288(WNW)  22:00  5.3  288(WNW)  22:00  5.3  288(WNW)  23:00  2.1  251(WSW)  00:00  2.7  246(WSW)  01:00  6.9  281(W)  02:00  8.3  292(WNW)  03:00  3.5  303(WNW)  04:00  2.9  311(NW)  05:00  2.3  249(WSW)  06:00  3.5  251(WSW)  07:00  3.5  320(NW)  08:00  4.9  279(W)  10:00  5.9  246(WSW)  11:00  7.7  235(SW)  11:00  7.7  235(SW)  14:00  3.1  18:Dec-22		07:00	3.3	257(WSW)
17-Dec-22  17-Dec-22  11:00  11:00  5.5  283(WNW)  12:00  2.9  120(ESE)  13:00  2.1  228(SW)  14:00  3.7  214(SW)  15:00  1.9  200(SSW)  16:00  3.1  268(W)  17:00  2.5  276(W)  18:00  2.7  264(W)  21:00  3.7  274(W)  22:00  5.3  288(WNW)  23:00  2.1  251(WSW)  00:00  2.7  246(WSW)  01:00  6.9  281(W)  02:00  8.3  292(WNW)  03:00  3.5  303(WNW)  04:00  2.9  311(NW)  05:00  2.3  249(WSW)  07:00  3.5  320(NW)  08:00  4.9  279(W)  10:00  5.9  246(WSW)  11:00  7.7  235(SW)  14:00  3.1  255(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  17:00  2.1  220(SSW)  18:00  1.3  18-Dec-22		08:00	3.3	284(WNW)
17-Dec-22  11:00  12:00  2.9  120(ESE)  13:00  2.1  228(SW)  14:00  3.7  214(SW)  15:00  1.9  200(SSW)  16:00  3.1  268(W)  17:00  2.5  283(WNW)  18:00  2.5  283(WNW)  19:00  4.3  269(W)  20:00  2.7  264(W)  21:00  3.7  274(W)  22:00  5.3  288(WNW)  23:00  2.1  251(WSW)  00:00  2.7  246(WSW)  01:00  6.9  281(W)  02:00  8.3  292(WNW)  03:00  3.5  303(WNW)  04:00  2.9  311(NW)  05:00  2.3  292(WSW)  06:00  3.5  303(WNW)  06:00  3.5  303(WNW)  10:00  5.9  246(WSW)  10:00  5.9  229(SW)  11:00  7.7  235(SW)  11:00  7.7  235(SW)  11:00  1.3  272(W)  13:00  2.1  251(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  19:00  2.1  259(W)  19:00  1.1  259(W)  19:00  21.1  270(W)		09:00	3.9	270(W)
17-Dec-22  12:00		10:00	4.7	223(SW)
12:00 2.9 120(ESE) 13:00 2.1 228(SW) 14:00 3.7 214(SW) 15:00 1.9 200(SSW) 16:00 3.1 268(W) 17:00 2.5 276(W) 18:00 2.5 283(WNW) 19:00 4.3 269(W) 20:00 2.7 264(W) 21:00 3.7 274(W) 22:00 5.3 288(WNW) 23:00 2.1 251(WSW) 01:00 6.9 281(W) 02:00 8.3 292(WNW) 03:00 3.5 303(WNW) 04:00 2.9 311(NW) 05:00 2.3 249(WSW) 07:00 3.5 320(NW) 07:00 3.5 320(NW) 07:00 3.5 320(NW) 08:00 4.9 279(W) 09:00 3.9 229(SW) 10:00 5.9 246(WSW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 3.1 255(WSW) 11:00 3.1 255(WSW) 11:00 1.3 168(SSE) 16:00 1.7 248(WSW) 11:00 2.1 201(SSW) 11:00 2.1 201(SSW) 11:00 1.1 259(W) 11:00 1.9 282(WNW) 11:00 1.9 282(WNW) 11:00 1.9 282(WNW) 11:00 1.1 259(W)	17 Dec 22	11:00	5.5	
13:00 2.1 228(SW) 14:00 3.7 214(SW) 15:00 1.9 200(SSW) 16:00 3.1 268(W) 17:00 2.5 276(W) 18:00 2.5 283(WNW) 19:00 4.3 269(W) 20:00 2.7 264(W) 21:00 3.7 274(W) 22:00 5.3 288(WNW) 23:00 2.1 251(WSW) 00:00 6.9 281(W) 02:00 8.3 292(WNW) 03:00 3.5 303(WNW) 03:00 3.5 303(WNW) 04:00 2.9 311(NW) 05:00 2.3 249(WSW) 06:00 3.5 320(NW) 06:00 3.5 320(NW) 07:00 3.5 320(NW) 10:00 5.9 246(WSW) 10:00 5.9 229(SW) 10:00 5.9 246(WSW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 1.3 168(SSE) 16:00 1.7 248(WSW) 15:00 1.3 168(SSE) 16:00 1.7 248(WSW) 19:00 1.1 259(W) 19:00 1.1 259(W) 19:00 1.1 259(W) 19:00 1.1 259(W) 19:00 0.0 279(W) 20:00 0.0 279(W) 21:00 1.1 259(W) 20:00 0.0 279(W) 21:00 1.1 259(W) 20:00 0.0 279(W) 21:00 2.1 270(W)	17-Dec-22	12:00	2.9	120(ESE)
15:00			2.1	
16:00 3.1 268(W) 17:00 2.5 276(W) 18:00 2.5 283(WNW) 19:00 4.3 269(W) 20:00 2.7 264(W) 21:00 3.7 274(W) 22:00 5.3 288(WNW) 23:00 2.1 251(WSW) 00:00 2.7 246(WSW) 01:00 6.9 281(W) 02:00 8.3 292(WNW) 03:00 3.5 303(WNW) 04:00 2.9 311(NW) 05:00 2.3 249(WSW) 06:00 3.5 320(NW) 07:00 3.5 320(NW) 07:00 3.5 320(NW) 10:00 5.9 246(WSW) 11:00 7.7 235(SW) 11:00 7.7 235(SW) 11:00 3.1 255(WSW) 11:00 3.1 255(WSW) 11:00 3.1 255(WSW) 11:00 3.1 255(WSW) 11:00 1.3 168(SSE) 16:00 1.7 248(WSW) 17:00 2.1 201(SSW) 18:00 1.9 282(WNW) 18:00 1.9 282(WNW) 19:00 1.1 259(W) 20:00 0.0 279(W) 21:00 21:00 2.1 270(W)		14:00	3.7	214(SW)
17:00 2.5 276(W)  18:00 2.5 283(WNW)  19:00 4.3 269(W)  20:00 2.7 264(W)  21:00 3.7 274(W)  22:00 5.3 288(WNW)  23:00 2.1 251(WSW)  00:00 2.7 246(WSW)  01:00 6.9 281(W)  02:00 8.3 292(WNW)  03:00 3.5 303(WNW)  04:00 2.9 311(NW)  05:00 2.3 249(WSW)  06:00 3.5 320(NW)  07:00 3.5 320(NW)  07:00 3.5 320(NW)  10:00 5.9 246(WSW)  10:00 5.9 246(WSW)  11:00 7.7 235(SW)  11:00 7.7 235(SW)  11:00 3.1 255(WSW)  14:00 3.1 255(WSW)  15:00 1.3 168(SSE)  16:00 1.7 248(WSW)  19:00 1.9 282(WNW)  19:00 1.1 259(W)  19:00 1.1 259(W)  19:00 1.1 259(W)  20:00 0.0 279(W)  21:00 21:00 2.1 270(W)		15:00	1.9	200(SSW)
18:00		16:00	3.1	268(W)
18:00		17:00	2.5	276(W)
20:00   2.7   264(W)		18:00		
18-Dec-22    21:00		19:00	4.3	269(W)
22:00 5.3 288(WNW) 23:00 2.1 251(WSW)  00:00 2.7 246(WSW)  01:00 6.9 281(W)  02:00 8.3 292(WNW)  03:00 3.5 303(WNW)  04:00 2.9 311(NW)  05:00 2.3 249(WSW)  07:00 3.5 320(NW)  08:00 4.9 279(W)  09:00 3.9 229(SW)  10:00 5.9 246(WSW)  11:00 7.7 235(SW)  12:00 1.3 272(W)  13:00 2.7 237(WSW)  14:00 3.1 255(WSW)  15:00 1.3 168(SSE)  16:00 1.7 248(WSW)  18:00 1.9 282(WNW)  19:00 1.1 259(W)  20:00 0.0 279(W)  22:00 2.1 270(W)				, ,
22:00 5.3 288(WNW) 23:00 2.1 251(WSW)  00:00 2.7 246(WSW)  01:00 6.9 281(W)  02:00 8.3 292(WNW)  03:00 3.5 303(WNW)  04:00 2.9 311(NW)  05:00 2.3 249(WSW)  07:00 3.5 320(NW)  08:00 4.9 279(W)  09:00 3.9 229(SW)  10:00 5.9 246(WSW)  11:00 7.7 235(SW)  12:00 1.3 272(W)  13:00 2.7 237(WSW)  14:00 3.1 255(WSW)  15:00 1.3 168(SSE)  16:00 1.7 248(WSW)  18:00 1.9 282(WNW)  19:00 1.1 259(W)  20:00 0.0 279(W)  22:00 2.1 270(W)			3.7	, ,
23:00 2.1 251(WSW)  00:00 2.7 246(WSW)  01:00 6.9 281(W)  02:00 8.3 292(WNW)  03:00 3.5 303(WNW)  04:00 2.9 311(NW)  05:00 2.3 249(WSW)  06:00 3.5 251(WSW)  07:00 3.5 320(NW)  08:00 4.9 279(W)  09:00 3.9 229(SW)  10:00 5.9 246(WSW)  11:00 7.7 235(SW)  12:00 1.3 272(W)  13:00 2.7 237(WSW)  14:00 3.1 255(WSW)  15:00 1.3 168(SSE)  16:00 1.7 248(WSW)  17:00 2.1 201(SSW)  19:00 1.1 259(W)  20:00 0.0 279(W)  20:00 2.1 270(W)				. ,
18-Dec-22    01:00		23:00	2.1	
18-Dec-22  01:00  02:00  8.3  292(WNW)  03:00  3.5  303(WNW)  04:00  2.9  311(NW)  05:00  2.3  249(WSW)  06:00  3.5  251(WSW)  07:00  3.5  320(NW)  08:00  4.9  279(W)  09:00  3.9  229(SW)  10:00  5.9  246(WSW)  11:00  7.7  235(SW)  12:00  1.3  272(W)  13:00  2.7  237(WSW)  14:00  3.1  255(WSW)  15:00  1.3  168(SSE)  16:00  1.7  248(WSW)  17:00  2.1  201(SSW)  19:00  1.1  259(W)  20:00  0.0  279(W)		00:00	2.7	246(WSW)
02:00     8.3     292(WNW)       03:00     3.5     303(WNW)       04:00     2.9     311(NW)       05:00     2.3     249(WSW)       06:00     3.5     251(WSW)       07:00     3.5     320(NW)       08:00     4.9     279(W)       09:00     3.9     229(SW)       10:00     5.9     246(WSW)       11:00     7.7     235(SW)       12:00     1.3     272(W)       13:00     2.7     237(WSW)       14:00     3.1     255(WSW)       15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		01:00	6.9	, ,
04:00     2.9     311(NW)       05:00     2.3     249(WSW)       06:00     3.5     251(WSW)       07:00     3.5     320(NW)       08:00     4.9     279(W)       09:00     3.9     229(SW)       10:00     5.9     246(WSW)       11:00     7.7     235(SW)       12:00     1.3     272(W)       13:00     2.7     237(WSW)       14:00     3.1     255(WSW)       15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		02:00	8.3	, ,
04:00     2.9     311(NW)       05:00     2.3     249(WSW)       06:00     3.5     251(WSW)       07:00     3.5     320(NW)       08:00     4.9     279(W)       09:00     3.9     229(SW)       10:00     5.9     246(WSW)       11:00     7.7     235(SW)       12:00     1.3     272(W)       13:00     2.7     237(WSW)       14:00     3.1     255(WSW)       15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		03:00	3.5	303(WNW)
18-Dec-22  06:00 3.5 251(WSW) 07:00 3.5 320(NW) 08:00 4.9 279(W) 09:00 3.9 229(SW) 10:00 5.9 246(WSW) 11:00 7.7 235(SW) 12:00 1.3 272(W) 13:00 2.7 237(WSW) 14:00 3.1 255(WSW) 15:00 1.3 168(SSE) 16:00 1.7 248(WSW) 17:00 2.1 201(SSW) 18:00 1.9 282(WNW) 19:00 1.1 259(W) 20:00 21:00 2.1 270(W)		04:00	2.9	
18-Dec-22  06:00 3.5 251(WSW) 07:00 3.5 320(NW) 08:00 4.9 279(W) 09:00 3.9 229(SW) 10:00 5.9 246(WSW) 11:00 7.7 235(SW) 12:00 1.3 272(W) 13:00 2.7 237(WSW) 14:00 3.1 255(WSW) 15:00 1.3 168(SSE) 16:00 1.7 248(WSW) 17:00 2.1 201(SSW) 18:00 1.9 282(WNW) 19:00 1.1 259(W) 20:00 21:00 2.1 270(W)		05:00	2.3	249(WSW)
07:00     3.5     320(NW)       08:00     4.9     279(W)       09:00     3.9     229(SW)       10:00     5.9     246(WSW)       11:00     7.7     235(SW)       12:00     1.3     272(W)       13:00     2.7     237(WSW)       14:00     3.1     255(WSW)       15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		06:00	3.5	251(WSW)
09:00     3.9     229(\$W)       10:00     5.9     246(W\$W)       11:00     7.7     235(\$W)       12:00     1.3     272(W)       13:00     2.7     237(W\$W)       14:00     3.1     255(W\$W)       15:00     1.3     168(\$S\$E)       16:00     1.7     248(W\$W)       17:00     2.1     201(\$S\$W)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		07:00	3.5	
09:00     3.9     229(\$W)       10:00     5.9     246(W\$W)       11:00     7.7     235(\$W)       12:00     1.3     272(W)       13:00     2.7     237(W\$W)       14:00     3.1     255(W\$W)       15:00     1.3     168(\$S\$E)       16:00     1.7     248(W\$W)       17:00     2.1     201(\$S\$W)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		08:00	4.9	
18-Dec-22  10:00 5.9 246(WSW)  11:00 7.7 235(SW)  12:00 1.3 272(W)  13:00 2.7 237(WSW)  14:00 3.1 255(WSW)  15:00 1.3 168(SSE) 16:00 1.7 248(WSW)  17:00 2.1 201(SSW)  18:00 1.9 282(WNW) 19:00 1.1 259(W) 20:00 2.1 270(W)		09:00	3.9	
12:00 1.3 272(W) 13:00 2.7 237(WSW) 14:00 3.1 255(WSW) 15:00 1.3 168(SSE) 16:00 1.7 248(WSW) 17:00 2.1 201(SSW) 18:00 1.9 282(WNW) 19:00 1.1 259(W) 20:00 0.0 279(W) 21:00 2.1 270(W)		10:00		
12:00 1.3 272(W) 13:00 2.7 237(WSW) 14:00 3.1 255(WSW) 15:00 1.3 168(SSE) 16:00 1.7 248(WSW) 17:00 2.1 201(SSW) 18:00 1.9 282(WNW) 19:00 1.1 259(W) 20:00 0.0 279(W) 21:00 2.1 270(W)	40 D 00	11:00	7.7	235(SW)
13:00     2.7     237(WSW)       14:00     3.1     255(WSW)       15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)	18-Dec-22			
14:00     3.1     255(WSW)       15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)		13:00		, ,
15:00     1.3     168(SSE)       16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)				
16:00     1.7     248(WSW)       17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)				, ,
17:00     2.1     201(SSW)       18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)				
18:00     1.9     282(WNW)       19:00     1.1     259(W)       20:00     0.0     279(W)       21:00     2.1     270(W)				\ /
19:00 1.1 259(W) 20:00 0.0 279(W) 21:00 2.1 270(W)				\ /
20:00 0.0 279(W) 21:00 2.1 270(W)				, ,
21:00 2.1 270(W)				` '
				\ /
23:00 1.5 220(SW)				, ,



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	1.9	239(WSW)
	01:00	1.7	237(WSW)
	02:00	1.3	185(S)
	03:00	1.3	224(SW)
	04:00	0.5	214(SW)
	05:00	0.5	268(W)
	06:00	0.0	335(NNW)
	07:00	0.5	311(NW)
	08:00	0.0	139(SE)
	09:00	3.1	258(WSW)
	10:00	1.7	205(SSW)
19-Dec-22	11:00	4.9	275(W)
19-060-22	12:00	1.1	214(SW)
	13:00	0.0	270(W)
	14:00	0.5	153(SSE)
	15:00	1.7	219(SW)
	16:00	0.7	270(W)
	17:00	1.9	128(SE)
	18:00	1.1	260(W)
	19:00	0.0	305(NW)
	20:00	0.0	269(W)
	21:00	0.0	14(NNE)
	22:00	0.0	255(WSW)
	23:00	1.7	263(W)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	0.7	230(SW)
	01:00	0.0	300(WNW)
	02:00	1.5	231(SW)
	03:00	1.3	257(WSW)
	04:00	1.1	253(WSW)
	05:00	1.9	253(WSW)
	06:00	1.9	275(W)
	07:00	0.0	269(W)
	08:00	2.1	284(WNW)
	09:00	2.1	290(WNW)
	10:00	3.1	248(WSW)
20-Dec-22	11:00	3.1	258(WSW)
20-Dec-22	12:00	3.3	256(WSW)
	13:00	1.7	210(SSW)
	14:00	1.7	266(W)
	15:00	1.7	277(W)
Ī	16:00	0.9	301(WNW)
Ī	17:00	0.9	279(W)
Ī	18:00	1.5	283(WNW)
Ī	19:00	0.0	252(WSW)
ľ	20:00	0.0	252(WSW)
ľ	21:00	0.0	324(NW)
ľ	22:00	0.0	282(WNW)
Ī	23:00	0.0	349(N)
	00:00	0.0	0(N)
Ī	01:00	0.0	17(NNE)
ľ	02:00	0.0	264(W)
Ī	03:00	1.3	245(WSW)
Ī	04:00	0.0	9(N)
ľ	05:00	0.9	260(W)
Ī	06:00	0.5	56(NE)
ľ	07:00	0.5	346(NNW)
ľ	08:00	1.7	237(WSW)
ľ	09:00	2.1	304(NW)
Ī	10:00	2.3	254(WSW)
04 D 00	11:00	1.9	148(SSE)
21-Dec-22	12:00	2.9	130(SE)
ľ	13:00	2.7	153(SSÉ)
ľ	14:00	3.3	169(S)
ţ	15:00	2.5	105(ESE)
ļ	16:00	1.1	186(S)
ţ	17:00	1.7	236(SW)
ļ	18:00	0.5	248(WSW)
ļ	19:00	0.0	105(ESE)
ļ	20:00	1.1	122(ESE)
ŀ	21:00	0.0	35(NE)
ŀ	22:00	0.0	167(SSE)
<u></u>	23:00	0.0	235(SW)
	23.00	0.0	233(3VV)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)
	00:00	2.3	225(SW)
	01:00	3.1	230(SW)
	02:00	0.9	268(W)
	03:00	1.1	282(WNW)
	04:00	0.7	319(NW)
	05:00	1.7	209(SSW)
	06:00	1.1	24(NNE)
	07:00	0.0	107(ESE)
	08:00	2.3	216(SW)
	09:00	1.1	170(S)
	10:00	2.3	234(SW)
22-Dec-22	11:00	3.9	255(WSW)
22-Dec-22	12:00	2.7	218(SW)
	13:00	1.5	204(SSW)
	14:00	2.5	263(W)
	15:00	1.1	238(WSW)
	16:00	4.3	258(WSW)
	17:00	2.1	275(W)
	18:00	0.0	244(WSW)
	19:00	0.0	281(W)
	20:00	0.0	102(ESE)
	21:00	0.0	117(ESE)
	22:00	0.0	80(E)
	23:00	0.0	103(ESE)
	00:00	1.5	259(W)
	01:00	2.3	255(WSW)
	02:00	1.7	263(W)
	03:00	1.9	253(WSW)
	04:00	1.7	258(WSW)
	05:00	1.1	346(NNW)
	06:00	1.1	276(W)
	07:00	1.1	218(SW)
	08:00	0.9	283(WNW)
	09:00	3.5	267(W)
	10:00	2.1	264(W)
23-Dec-22	11:00	1.3	55(NE)
23-Dec-22	12:00	3.5	194(SSW)
	13:00	1.7	270(W)
	14:00	1.9	210(SSW)
	15:00	0.0	281(W)
	16:00	0.0	219(SW)
	17:00	0.0	232(SW)
	18:00	0.0	301(WNW)
	19:00	0.0	87(E)
	20:00	0.0	278(W)
	21:00	0.0	129(SE)
	22:00	0.0	114(ESE)
	23:00	0.0	292(WNW)



00:00 0.0 103(ESE) 01:00 0.0 272(W) 02:00 0.0 310(NW) 03:00 0.0 84(E) 04:00 0.0 108(ESE) 05:00 1.9 328(NNW) 06:00 1.7 296(WNW) 07:00 0.0 327(NNW) 08:00 0.0 244(WSW) 09:00 1.1 285(WNW) 10:00 2.3 191(S) 11:00 1.3 79(E) 12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 19:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 256(WSW) 00:00 0.0 276(W) 23:00 0.0 325(NW) 00:00 0.0 325(NW)	Date	Time	Wind Speed (m/s)	Wind Direction (degree)
02:00		00:00	0.0	103(ESE)
03:00 0.0 84(E) 04:00 0.0 108(ESE) 05:00 1.9 328(NNW) 06:00 1.7 296(WNW) 07:00 0.0 327(NNW) 08:00 0.0 244(WSW) 09:00 1.1 285(WNW) 10:00 2.3 191(S) 11:00 1.3 79(E) 12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 248(WSW) 19:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 325(WSW) 22:00 0.0 325(WSW) 00:00 0.0 325(WSW)		01:00	0.0	272(W)
04:00		02:00	0.0	310(NW)
05:00 1.9 328(NNW) 06:00 1.7 296(WNW) 07:00 0.0 327(NNW) 08:00 0.0 244(WSW) 09:00 1.1 285(WNW) 10:00 2.3 191(S) 11:00 1.3 79(E) 12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 30(SW) 19:00 0.0 325(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 00:00 0.0 325(NW) 00:00 0.0 21(NNE) 00:00 0.0 346(NNW) 00:00 0.0 325(WSW) 23:00 0.9 250(WSW) 00:00 0.0 325(WSW) 00:00 0.0 306(NW) 00:00 0.1 3 235(WSW) 00:00 0.1 3 196(SSW) 25-Dec-22  25-Dec-22		03:00	0.0	84(E)
06:00 1.7 296(WNW) 07:00 0.0 327(NNW) 08:00 0.0 244(WSW) 09:00 1.1 285(WNW) 10:00 2.3 191(S) 11:00 1.3 79(E) 12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 19:00 0.0 256(WSW) 19:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 00:00 0.0 325(NW) 00:00 0.0 346(NNW) 00:00 0.0 271(NNE) 00:00 0.0 258(WSW) 00:00 0.0 325(WSW) 00:00 0.0 306(NW) 00:00 0.1 3 173(S) 11:00 1.3 196(SSW) 12:00 2.1 343(NNW) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.3 253(WSW) 19:00 1.5 284(WNW) 20:00 0.0 258(WSW)		04:00	0.0	108(ESE)
07:00		05:00	1.9	328(NNW)
24-Dec-22  24-Dec-22  10:00		06:00	1.7	296(WNW)
24-Dec-22    09:00		07:00	0.0	327(NNW)
24-Dec-22  10:00 2.3 191(S) 11:00 1.3 79(E)  12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 01:00 0.0 325(NW) 01:00 0.0 0.0 325(NW) 01:00 0.0 0.0 276(WSW) 02:00 0.7 266(W) 02:00 0.7 249(WSW) 03:00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		08:00	0.0	244(WSW)
24-Dec-22  11:00 12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 1.3 258(WSW) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 01:00 0.0 325(NW) 01:00 0.0 0.0 325(NW) 01:00 0.0 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 0.0 1.1 280(W) 11:00 1.3 173(S) 125-Dec-22  25-Dec-22		09:00	1.1	285(WNW)
12:00 2.5 276(W) 13:00 1.7 234(SW) 14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 01:00 0.0 325(WSW) 01:00 0.0 325(WSW) 02:00 0.0 0.0 21(NNE) 02:00 0.7 249(WSW) 03:00 0.9 250(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 258(WSW) 25-Dec-22 25-Dec-22 25-Dec-22 25-Dec-22 12:00 2.1 343(NNW) 13:00 0.9 187(S) 14:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.5 284(WNW) 20:00 0.0 265(WSW)		10:00	2.3	191(S)
12:00	24 Dag 22	11:00	1.3	79(E)
14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.9 250(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 25-Dec-22 11:00 1.3 173(S) 11:00 1.3 173(S) 12:00 2.1 343(NNW) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.3 223(WSW) 17:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.5 284(WNW) 20:00 0.0 258(WSW)	24-Dec-22	12:00	2.5	276(W)
14:00 3.1 184(S) 15:00 2.1 267(W) 16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.9 250(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 25-Dec-22 11:00 1.3 173(S) 11:00 1.3 173(S) 12:00 2.1 343(NNW) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.3 223(WSW) 17:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.5 284(WNW) 20:00 0.0 258(WSW)		13:00	1.7	234(SW)
16:00 1.7 248(WSW) 17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 306(NW) 09:00 1.1 280(W) 10:00 1.3 173(S) 11:00 1.3 196(SSW) 25-Dec-22 12:00 2.1 343(NNW) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.5 284(WNW) 20:00 0.0 258(WSW)		14:00	3.1	184(S)
17:00 1.1 278(W) 18:00 1.3 258(WSW) 19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.9 250(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 325(WSW) 25-Dec-22 11:00 1.3 173(S) 11:00 1.3 196(SSW) 13:00 0.9 187(S) 11:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 15:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.5 284(WNW) 19:00 1.5 284(WNW) 19:00 1.5 284(WNW) 19:00 1.5 284(WNW) 20:00 0.0 258(WSW)		15:00	2.1	267(W)
18:00 1.3 258(WSW) 19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 306(NW) 09:00 1.1 280(W) 10:00 1.3 173(S) 11:00 1.3 196(SSW) 25-Dec-22 11:00 2.1 343(NNW) 13:00 0.9 187(S) 14:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.1 280(W) 17:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW)		16:00	1.7	248(WSW)
19:00 0.0 130(SE) 20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 306(NW) 09:00 1.1 280(W) 10:00 1.3 173(S) 11:00 1.3 196(SSW) 25-Dec-22 25-Dec-22 12:00 2.1 343(NNW) 13:00 0.9 187(S) 14:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.1 280(WW) 17:00 1.7 310(NW) 18:00 1.5 284(WNW) 19:00 1.5 284(WNW) 20:00 0.0 258(WSW)		17:00	1.1	278(W)
20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 306(NW) 09:00 1.1 280(W) 10:00 1.3 173(S) 11:00 1.3 196(SSW) 25-Dec-22 11:00 2.1 343(NNW) 13:00 0.9 187(S) 14:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW)		18:00	1.3	258(WSW)
20:00 0.0 276(W) 21:00 1.1 257(WSW) 22:00 0.7 266(W) 23:00 0.9 250(WSW) 00:00 0.0 325(NW) 01:00 0.0 346(NNW) 02:00 0.7 249(WSW) 03:00 0.0 21(NNE) 04:00 0.9 250(WSW) 05:00 1.3 235(SW) 06:00 0.0 253(WSW) 07:00 0.7 266(W) 08:00 0.0 306(NW) 09:00 1.1 280(W) 10:00 1.3 173(S) 11:00 1.3 196(SSW) 25-Dec-22 11:00 2.1 343(NNW) 13:00 0.9 187(S) 14:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW)		19:00	0.0	130(SE)
22:00 0.7 266(W) 23:00 0.9 250(WSW)  00:00 0.0 325(NW)  01:00 0.0 346(NNW)  02:00 0.7 249(WSW)  03:00 0.0 21(NNE)  04:00 0.9 250(WSW)  05:00 1.3 235(SW)  06:00 0.0 253(WSW)  07:00 0.7 266(W)  08:00 0.0 306(NW)  09:00 1.1 280(W)  10:00 1.3 173(S)  11:00 1.3 196(SSW)  25-Dec-22 12:00 2.1 343(NNW)  13:00 0.9 187(S)  14:00 1.9 281(W)  15:00 3.5 129(SE)  16:00 1.5 231(SW)  17:00 1.7 310(NW)  18:00 1.3 253(WSW)  19:00 1.5 284(WNW)  20:00 0.0 261(W)  21:00 0.0 258(WSW)				\ /
22:00 0.7 266(W) 23:00 0.9 250(WSW)  00:00 0.0 325(NW)  01:00 0.0 346(NNW)  02:00 0.7 249(WSW)  03:00 0.0 21(NNE)  04:00 0.9 250(WSW)  05:00 1.3 235(SW)  06:00 0.0 253(WSW)  07:00 0.7 266(W)  08:00 0.0 306(NW)  09:00 1.1 280(W)  10:00 1.3 173(S)  11:00 1.3 196(SSW)  25-Dec-22 12:00 2.1 343(NNW)  13:00 0.9 187(S)  14:00 1.9 281(W)  15:00 3.5 129(SE)  16:00 1.5 231(SW)  17:00 1.7 310(NW)  18:00 1.3 253(WSW)  19:00 1.5 284(WNW)  20:00 0.0 261(W)  21:00 0.0 258(WSW)				` ,
23:00 0.9 250(WSW)  00:00 0.0 325(NW)  01:00 0.0 346(NNW)  02:00 0.7 249(WSW)  03:00 0.0 21(NNE)  04:00 0.9 250(WSW)  05:00 1.3 235(SW)  06:00 0.0 253(WSW)  07:00 0.7 266(W)  08:00 0.0 306(NW)  09:00 1.1 280(W)  10:00 1.3 173(S)  11:00 1.3 196(SSW)  25-Dec-22 12:00 2.1 343(NNW)  13:00 0.9 187(S)  14:00 1.9 281(W)  15:00 3.5 129(SE)  16:00 1.5 231(SW)  17:00 1.7 310(NW)  18:00 1.3 253(WSW)  19:00 1.5 284(WNW)  20:00 0.0 258(WSW)				
25-Dec-22    00:00		23:00	0.9	. ,
25-Dec-22    02:00		00:00	0.0	
03:00		01:00	0.0	346(NNW)
04:00         0.9         250(WSW)           05:00         1.3         235(SW)           06:00         0.0         253(WSW)           07:00         0.7         266(W)           08:00         0.0         306(NW)           09:00         1.1         280(W)           10:00         1.3         173(S)           11:00         1.3         196(SSW)           12:00         2.1         343(NNW)           13:00         0.9         187(S)           14:00         1.9         281(W)           15:00         3.5         129(SE)           16:00         1.5         231(SW)           17:00         1.7         310(NW)           18:00         1.3         253(WSW)           19:00         1.5         284(WNW)           20:00         0.0         261(W)           21:00         0.0         258(WSW)           22:00         1.3         276(W)				, ,
05:00         1.3         235(SW)           06:00         0.0         253(WSW)           07:00         0.7         266(W)           08:00         0.0         306(NW)           09:00         1.1         280(W)           10:00         1.3         173(S)           11:00         1.3         196(SSW)           12:00         2.1         343(NNW)           13:00         0.9         187(S)           14:00         1.9         281(W)           15:00         3.5         129(SE)           16:00         1.5         231(SW)           17:00         1.7         310(NW)           18:00         1.3         253(WSW)           19:00         1.5         284(WNW)           20:00         0.0         261(W)           21:00         0.0         258(WSW)           22:00         1.3         276(W)		03:00	0.0	21(NNE)
06:00         0.0         253(WSW)           07:00         0.7         266(W)           08:00         0.0         306(NW)           09:00         1.1         280(W)           10:00         1.3         173(S)           11:00         1.3         196(SSW)           12:00         2.1         343(NNW)           13:00         0.9         187(S)           14:00         1.9         281(W)           15:00         3.5         129(SE)           16:00         1.5         231(SW)           17:00         1.7         310(NW)           18:00         1.3         253(WSW)           19:00         1.5         284(WNW)           20:00         0.0         261(W)           21:00         0.0         258(WSW)           22:00         1.3         276(W)		04:00	0.9	250(WSW)
06:00         0.0         253(WSW)           07:00         0.7         266(W)           08:00         0.0         306(NW)           09:00         1.1         280(W)           10:00         1.3         173(S)           11:00         1.3         196(SSW)           12:00         2.1         343(NNW)           13:00         0.9         187(S)           14:00         1.9         281(W)           15:00         3.5         129(SE)           16:00         1.5         231(SW)           17:00         1.7         310(NW)           18:00         1.3         253(WSW)           19:00         1.5         284(WNW)           20:00         0.0         261(W)           21:00         0.0         258(WSW)           22:00         1.3         276(W)		05:00	1.3	235(SW)
07:00         0.7         266(W)           08:00         0.0         306(NW)           09:00         1.1         280(W)           10:00         1.3         173(S)           11:00         1.3         196(SSW)           12:00         2.1         343(NNW)           13:00         0.9         187(S)           14:00         1.9         281(W)           15:00         3.5         129(SE)           16:00         1.5         231(SW)           17:00         1.7         310(NW)           18:00         1.3         253(WSW)           19:00         1.5         284(WNW)           20:00         0.0         261(W)           21:00         0.0         258(WSW)           22:00         1.3         276(W)		06:00	0.0	253(WSW)
09:00     1.1     280(W)       10:00     1.3     173(S)       11:00     1.3     196(SSW)       12:00     2.1     343(NNW)       13:00     0.9     187(S)       14:00     1.9     281(W)       15:00     3.5     129(SE)       16:00     1.5     231(SW)       17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)		07:00	0.7	
09:00     1.1     280(W)       10:00     1.3     173(S)       11:00     1.3     196(SSW)       12:00     2.1     343(NNW)       13:00     0.9     187(S)       14:00     1.9     281(W)       15:00     3.5     129(SE)       16:00     1.5     231(SW)       17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)		08:00	0.0	` '
10:00 1.3 173(S)  11:00 1.3 196(SSW)  12:00 2.1 343(NNW)  13:00 0.9 187(S)  14:00 1.9 281(W)  15:00 3.5 129(SE)  16:00 1.5 231(SW)  17:00 1.7 310(NW)  18:00 1.3 253(WSW)  19:00 1.5 284(WNW)  20:00 0.0 261(W)  21:00 0.0 258(WSW)  22:00 1.3 276(W)		09:00	1.1	
25-Dec-22  11:00 1.3 196(\$SW)  12:00 2.1 343(\$NNW\$)  13:00 0.9 187(\$S)  14:00 1.9 281(\$W\$)  15:00 3.5 129(\$SE\$)  16:00 1.5 231(\$SW\$)  17:00 1.7 310(\$NW\$)  18:00 1.3 253(\$WSW\$)  19:00 1.5 284(\$WNW\$)  20:00 0.0 258(\$WSW\$)  22:00 1.3 276(\$W\$)		10:00	1.3	
25-Dec-22  12:00 2.1 343(NNW)  13:00 0.9 187(S) 14:00 1.9 281(W) 15:00 3.5 129(SE) 16:00 1.5 231(SW) 17:00 1.7 310(NW) 18:00 1.3 253(WSW) 19:00 1.5 284(WNW) 20:00 0.0 258(WSW) 22:00 1.3 276(W)	05 D 00	11:00		3 7
13:00     0.9     187(S)       14:00     1.9     281(W)       15:00     3.5     129(SE)       16:00     1.5     231(SW)       17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)	25-Dec-22	12:00		343(NNW)
14:00     1.9     281(W)       15:00     3.5     129(SE)       16:00     1.5     231(SW)       17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)		13:00		` ,
15:00     3.5     129(SE)       16:00     1.5     231(SW)       17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)		14:00	1	
16:00     1.5     231(SW)       17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)	ľ			` ,
17:00     1.7     310(NW)       18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)				` ,
18:00     1.3     253(WSW)       19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)	ľ			, ,
19:00     1.5     284(WNW)       20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)				\ /
20:00     0.0     261(W)       21:00     0.0     258(WSW)       22:00     1.3     276(W)	<b> </b>			, , ,
21:00 0.0 258(WSW) 22:00 1.3 276(W)	<b> </b>			\ /
22:00 1.3 276(W)	-			
■ 23'00   0.0   235(SW)	-	23:00	0.0	235(SW)



Date	Time	Wind Speed (m/s)	Wind Direction (degree)				
	00:00	0.0	244(WSW)				
	01:00	1.9	269(W)				
	02:00	0.9	291(WNW)				
	03:00	0.0	304(NW)				
	04:00	0.0	256(WSW)				
	05:00	2.5	276(W)				
	06:00	1.3	290(WNW)				
	07:00	1.7	250(WSW)				
	08:00	2.1	258(WSW)				
	09:00	2.1	291(WNW)				
	10:00	3.1	278(W)				
26-Dec-22	11:00	1.5	299(WNW)				
26-Dec-22	12:00	0.9	175(S)				
	13:00	0.0	267(W)				
	14:00	1.7	324(NW)				
	15:00	3.5	57(ENE)				
	16:00	0.0	140(SE)				
	17:00	2.3	275(W)				
	18:00	0.0	259(W)				
	19:00	0.0	256(WSW)				
	20:00	0.0	280(W)				
	21:00	0.0	248(WSW)				
	22:00	0.0	266(W)				
	23:00	0.0	285(WNW)				
	00:00	0.0	243(WSW)				
	01:00	0.0	269(W)				
	02:00	1.5	219(SW)				
	03:00	0.0	324(NW)				
	04:00	1.3	243(WSW)				
	05:00	0.5	34(NE)				
	06:00	0.7	292(WNW)				
	07:00	1.1	246(WSW)				
	08:00	0.0	266(W)				
	09:00	0.7	192(SSW)				
	10:00	0.0	222(SW)				
27-Dec-22	11:00	3.7	281(W)				
27-Dec-22	12:00	3.9	267(W)				
	13:00	3.7	267(W)				
	14:00	1.3	123(ESE)				
	15:00	2.9	350(N)				
	16:00	5.3	351(N)				
	17:00	1.7	63(ENE)				
	18:00	0.0	270(W)				
	19:00	0.0	216(SW)				
	20:00	1.7	220(SW)				
	21:00	1.7	249(WSW)				
	22:00	0.0	258(WSW)				
Ī	23:00	0.7	302(WNW)				



Date	Time	Wind Speed (m/s)	Wind Direction (degree)				
	00:00	0.7	236(SW)				
	01:00	3.7	271(W)				
	02:00	2.9	236(SW)				
	03:00	2.1	260(W)				
	04:00	0.9	284(WNW)				
	05:00	1.3	276(W)				
	06:00	0.7	25(NNE)				
	07:00	0.0	37(NE)				
	08:00	1.1	335(NNW)				
	09:00	1.5	205(SSW)				
	10:00	2.1	261(W)				
28-Dec-22	11:00	1.7	223(SW)				
20-060-22	12:00	1.5	238(WSW)				
	13:00	1.9	275(W)				
	14:00	2.3	233(SW)				
	15:00	3.1	183(S)				
	16:00	1.7	295(WNW)				
	17:00	1.5	218(SW)				
	18:00	0.0	254(WSW)				
	19:00	0.0	268(W)				
	20:00	0.0	316(NW)				
	21:00	0.0	296(WNW)				
	22:00	0.0	252(WSW)				
	23:00	0.0	276(W)				
	00:00	2.5	221(SW)				
	01:00	0.0	220(SW)				
	02:00	3.1	218(SW)				
	03:00	1.1	277(W)				
	04:00	2.1	263(W)				
	05:00	4.1	247(WSW)				
	06:00	2.7	215(SW)				
	07:00	1.1	177(S)				
	08:00	0.9	148(SSE)				
	09:00	2.7	200(SSW)				
	10:00	2.7	166(SSE)				
29-Dec-22	11:00	1.7	207(SSW)				
29-Dec-22	12:00	2.3	196(SSW)				
	13:00	1.9	238(WSW)				
	14:00	1.3	207(SSW)				
	15:00	1.1	110(ESE)				
	16:00	2.5	255(WSW)				
	17:00	0.9	286(WNW)				
	18:00	1.7	228(SW)				
	19:00	1.3	244(WSW)				
	20:00	1.1	241(WSW)				
	21:00	0.9	180(S)				
	22:00	2.1	215(SW)				
	23:00	3.3	240(WSW)				



Date	Time	Wind Speed (m/s)	Wind Direction (degree)				
	00:00	1.5	237(WSW)				
	01:00	1.3	165(SSE)				
L	02:00	1.7	207(SSW)				
	03:00	3.9	237(WSW)				
L	04:00	2.1	195(SSW)				
L	05:00	1.5	266(W)				
	06:00	1.9	315(NW)				
	07:00	1.5	130(SE)				
	08:00	1.7	172(S)				
	09:00	2.1	318(NW)				
	10:00	1.9	277(W)				
30-Dec-22	11:00	1.9	284(WNW)				
30-Dec-22	12:00	4.9	252(WSW)				
	13:00	1.5	273(W)				
	14:00	2.1	240(WSW)				
	15:00	3.1	274(W)				
	16:00	2.1	254(WSW)				
Ī	17:00	3.3	273(W)				
	18:00	1.5	268(W)				
	19:00	2.9	199(SSW)				
	20:00	1.5	216(SW)				
Ī	21:00	1.5	184(S)				
	22:00	2.3	271(W)				
	23:00	2.7	208(SSW)				
	00:00	5.3	194(SSW)				
	01:00	3.5	219(SW)				
	02:00	2.1	258(WSW)				
	03:00	1.1	158(SSE)				
	04:00	1.3	237(WSW)				
	05:00	2.3	231(SW)				
	06:00	2.1	264(W)				
	07:00	2.5	170(S)				
	08:00	4.5	247(WSW)				
	09:00	1.3	269(W)				
	10:00	1.9	268(W)				
21 Dog 22	11:00	2.3	205(SSW)				
31-Dec-22	12:00	2.5	217(SW)				
	13:00	1.7	303(WNW)				
<u> </u>	14:00	1.5	163(SSE)				
<u> </u>	15:00	0.7	292(WNW)				
<u> </u>	16:00	1.3	194(SSW)				
F	17:00	1.1	277(W)				
F	18:00	0.0	247(WSW)				
<u> </u>	19:00	0.9	261(W)				
<u> </u>	20:00	0.0	231(SW)				
<u> </u>	21:00	0.9	289(WNW)				
F	22:00	1.9	211(SSW)				
F	23:00	1.1	324(NW)				

## Appendix 5.1

## Monitoring Schedule for Reporting Month and Next Reporting Month



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

			Dec 2022			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Dec	2-Dec	3-Dec
					AQM+24hr TSP	AQM + 1hr TSP
					Water Quality Monitoring	
4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec	10-Dec
				AQM+24hr TSP	AQM + 1hr TSP	
					NM	
					Ecological Monitoring	
	Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec	17-Dec
11-Dec	12-Dec	13-Dec		AQM + 1hr TSP	16-Dec	17-Dec
			AQM+24hr TSP	NM		
				INIVI	Foots also Months do a	
	Mata Ovella Mada a		Water Ovella Maritagle		Ecological Monitoring	
	Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec
	AQM+24hr TSP	AQM + 1hr TSP			AQM+24hr TSP	AQM + 1hr TSP
		NM				
					Ecological Monitoring	
	Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec
25-060	20-Dec	27-Dec	Zo-Dec	AQM+24hr TSP	AQM + 1hr TSP	31-060
					NM	
			Ecological Monitoring			
			Leological Monitoring		Water Quality Monitoring	
			Water Cuelity Mandania			
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		Water Quality Monitoring	
			Water Quality Monitoring		Water Quality Monitoring	
			Water Quality Monitoring		water quanty monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	
			Water Quality Monitoring		water Quality Monitoring	

#### Remarks

- AQM: Air Quality Monitoring

- Nutl. Noise Monitoring, the monitoring dates are tentative and subject to change
   Ecological Monitoring dates are tentative and subject to change based on real-time tide.

  \* Water Quality Monitoring on 26 Dec was cancelled, since no outfall work will be carried out on that day.



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

#### Jan 2023

			Jan 2023			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan
			AQM+24hr TSP	AQM + 1hr TSP		
				NM		
					Ecological Monitoring	
			Water Quality Monitoring		Water Quality Monitoring	
			3		3	
8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan
		AQM+24hr TSP	AQM + 1hr TSP			
			NM			
		Ecological Monitoring				
	Water Quality Monitoring	Loological Worldoning	Water Quality Monitoring		Water Quality Monitoring	
	Water Quality Monitoring		water Quality Monitoring		water Quality Monitoring	
15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan
	AQM+24hr TSP	AQM + 1hr TSP			AQM+24hr TSP	AQM + 1hr TSP
		NM				NM
				Ecological Monitoring		
	Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan
	7.4			AQM+24hr TSP	AQM + 1hr TSP	
					NM	
					Ecological Monitoring	
					Water Quality Monitoring	
					Tator Quanty Morntoning	
29-Jan	30-Jan	31-Jan				
za-Jan	ou-Jan	31-Jan				
	Water Quality Monitoring					
						]
				l	l	ı

### Remarks

- AQM: Air Quality Monitoring

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

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

  \* According to information from the contractor, the outfall works are not schudle on 2, 23 and 25 Jan 2022, so the related WQM was cancelled.



# Contract No. SPW 12/2021 Environmental Team (2021-2024) for Shek Wui Effluent Polishing Plant - Main Works Tentative Impact Monitoring Schedule Feb 2023

			Feb 2023			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Feb	2-Feb	3-Feb	4-Feb
			AQM+24hr TSP	AQM + 1hr TSP NM		
				INIVI	Ecological Monitoring	
					Leological Worldoning	
			Water Quality Monitoring		Water Quality Monitoring	
			Water Quality Worldoning		Water Quality Monitoring	
5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb
		AQM+24hr TSP	AQM + 1hr TSP			
			NM			
				Ecological Monitoring		
	Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
12-Feb	AQM+24hr TSP	AQM + 1hr TSP	15-Feb	10-гер	17-Feb	AQM+24hr TSP
	Addition for	NM				/IQMIZIM TO
					Ecological Monitoring	
	Water Quality Monitoring		Water Quality Monitoring		Water Quality Monitoring	
	, , , , , , ,		, , , , , , , , , , , , , , , , , , ,		, , , , , , ,	
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
	AQM + 1hr TSP				AQM+24hr TSP	AQM + 1hr TSP
	NM					
	Water Overly	Ecological Monitoring	Water Overlit		Mater Over 14	
	Water Quality Monitoring*		Water Quality Monitoring*		Water Quality Monitoring	
26-Feb	27-Feb	28-Feb				
	Water Quality Monitoring					

- Remarks

   AOM: Air Quality Monitoring

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

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

## Appendix 5.2

# Noise Monitoring Results and Graphical Presentations



#### **Noise Monitoring Result**

Location: NM1 - G/F, Wai Loi Tsuen

				Measure	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level
Date	Time	Weather	Wind Speed	Leq	Leq L10		Leq	Leq	Leq
			(m/s)				Unit: dB(		
09/12/2022	11:25	Sunny	0.0	55.2	56.8	51.1	63.4	55	75
15/12/2022	8:25	Cloudy	0.2	56.2 58.6 50.6			63.4	56	75
20/12/2022	8:20	Fine	0.0	59.4 60.7 57.6			63.4	59	75
30/12/2022	9:30	Sunny	0.0	57.6	59.4	54.9	63.4	58	75

Location: NM2 - G/F, Fu Tei Au

				Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level		
Date	Time	Weather	Wind Speed	Leq L10 L90		Leq	Leq	Leq			
			(m/s)				Unit: dB(A), (30-min)				
09/12/2022	8:55	Sunny	0.0	69.7	71.2	66.2	58.0	69	75		
15/12/2022	9:15	Cloudy	0.2	68.9 70.9 66.0		58.0	69	75			
20/12/2022	9:00	Fine	0.0	59.2 61.2 55.8		58.0	53	75			
30/12/2022	11:30	Sunny	0.0	60.9			58.0	58	75		

Location: NM3 - G/F, Man kok Village

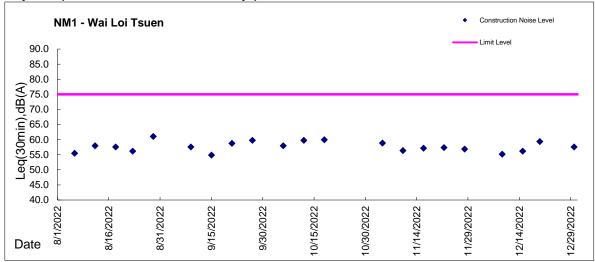
				Measure	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level		
Date	Time	Weather	Wind Speed	Leq	L10	L90	Leq	Leq	Leq		
			(m/s)				Unit: dB(A), (30min)				
09/12/2022	9:33	Sunny	0.0	63.1 63.9 57.4			63.4	63	75		
15/12/2022	10:00	Cloudy	0.1	63.5	64.2	58.0	63.4	47	75		
20/12/2022	10:15	Fine	0.0	69.3	75.0	55.0	63.4	68	75		
30/12/2022	10:15	Sunny	0.0	62.5	64.0	55.9	63.4	63	75		

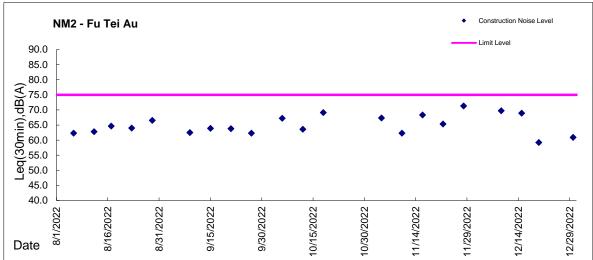
<sup>\*</sup> Free field correction (Additional 3dB(A)) was made on NM1, NM2, and NM3 measurement result

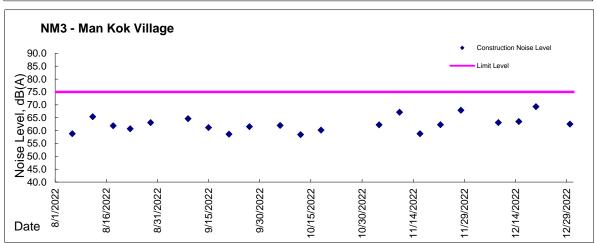


#### **Graphic Presentation of Noise Monitoring Result**

Day Time (0700 - 1900hrs on normal weekdays)







## Appendix 5.3

# Air Quality Monitoring Results and Graphical Presentations



Report on 1-hour TSP monitoring at AM1 - Wai Loi Tsuen Action Level ( $\mu$ g/m3) - 320 Limit Level ( $\mu$ g/m3) - 500

Date	Weather Condition	Time	Mass Concentration (µg/m3)	Model No.	Serial No.
3-Dec-22	Fine	8:12	30		
3-Dec-22	Fine	9:12	32		
3-Dec-22	Fine	10:12	29		
9-Dec-22	Sunny	8:40	34		
9-Dec-22	Sunny	9:40	37		
9-Dec-22	Sunny	10:40	34		
15-Dec-22	Cloudy	8:11	26		
15-Dec-22	Cloudy	9:11	24		
15-Dec-22	Cloudy	10:11	25	AEROCET 831	Y23154
20-Dec-22	Fine	8:38	27	ALKOCLI 631	123134
20-Dec-22	Fine	9:38	24		
20-Dec-22	Fine	10:38	23		
24-Dec-22	Sunny	8:45	29		
24-Dec-22	Sunny	9:45	32		
24-Dec-22	Sunny	10:45	34		
30-Dec-22	Sunny	13:00	45		
30-Dec-22	Sunny	14:00	45		
30-Dec-22	Sunny	15:00	53		



Report on 1-hour TSP monitoring at AM2 - Fu Tei Au Action Level ( $\mu$ g/m3) - 322 Limit Level ( $\mu$ g/m3) - 500

Date	Weather Condition	Time	Mass Concentration (µg/m3)	Model No.	Serial No.
3-Dec-22	Fine	8:37	24		
3-Dec-22	Fine	9:37	24		
3-Dec-22	Fine	10:37	21		
9-Dec-22	Sunny	8:34	44		
9-Dec-22	Sunny	9:34	56		
9-Dec-22	Sunny	10:34	48		
15-Dec-22	Cloudy	8:19	18		
15-Dec-22	Cloudy	9:19	30		
15-Dec-22	Cloudy	10:19	24	AEROCET 831	R14332
20-Dec-22	Fine	8:34	38	ALIKOCET 031	1(14332
20-Dec-22	Fine	9:34	35		
20-Dec-22	Fine	10:34	30		
24-Dec-22	Sunny	9:00	43		
24-Dec-22	Sunny	10:00	51		
24-Dec-22	Sunny	11:00	52		
30-Dec-22	Sunny	13:20	36		
30-Dec-22	Sunny	14:20	34		
30-Dec-22	Sunny	15:20	39		



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

Date	Sampling	Weather	Pressu	re, hPa	Temp	o., °C	Filter paper no.	Filter Weight	, g	Elapse Time	, hr	Sampling	Flow Rate,	, m³/min		Total	TSP Level,	Model No.	Serial No.
	Time	Condition	Initial	Final	Initial	Final		Initial	Final	Initial	Final	Time, hr	Initial, Qsi	Final, Qsf	Average	Volume, m <sup>3</sup>	ug/m <sup>3</sup>		
02-Dec-22	8:00	Fine	1019.4	1017.1	16.5	19.2	AM1a_24hr_011119	2.7659	2.8334	16211.89	16235.89	24.00	1.21	1.20	1.20	1733	39		
08-Dec-22	8:00	Sunny	1017.9	1015.8	18.7	19.9	AM1a_24hr_011121	2.7758	2.8637	16259.89	16283.89	24.00	1.25	1.27	1.26	1810	49		
14-Dec-22	8:00	Cloudy	1021.4	1017.9	12.5	14.6	AM1a_24hr_011113	2.7561	2.7981	16283.89	16307.89	24.00	1.21	1.23	1.22	1759	24	G3101	0401-1105
19-Dec-22	8:00	Sunny	1021.7	1018.3	16.6	19.2	AM1a_24hr_007871	2.6694	2.7276	16307.89	16331.89	24.00	1.25	1.25	1.25	1799	32		
23-Dec-22	8:00	Sunny	1019.0	1021.1	20.2	20.1	AM1a_24hr_011125	2.7661	2.8508	16331.89	16355.89	24.00	1.25	1.25	1.25	1794	47		
29-Dec-22	8:00	Sunny	1022.6	1024.2	17.7	16.8	AM1a_24hr_011126	2.7674	2.9280	16355.89	16379.89	24.00	1.50	1.50	1.50	2159	74		

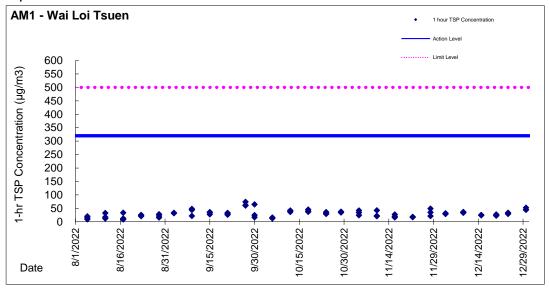


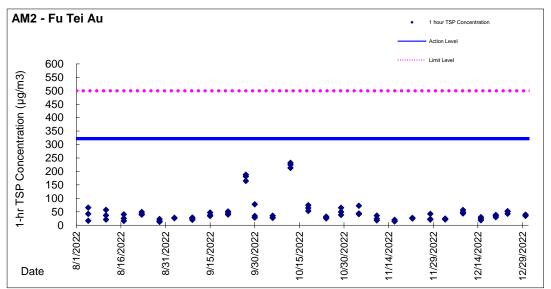
Location: AM2a - Site Boundary of the Shek Wu Hui STW (North) Impact Monitoring Result on 24-hour TSP monitoring

Date	Sampling	Weather	Pressure, hPa		Temp., °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling	Flow Rate, m <sup>3</sup> /min			Total	TSP Level,	Model No.	Serial No.
	Time	Condition	Initial	Final	Initial	Final		Initial	Final	Initial	Final	Time, hr	Initial, Qsi	Final, Qsf	Average	Volume, m <sup>3</sup>	ug/m <sup>3</sup>		
02-Dec-22	8:00	Fine	1019.4	1017.1	16.5	19.2	AM2a_24hr_011120	2.7707	2.9221	18923.53	18947.53	24.00	1.27	1.24	1.26	1808	84		
08-Dec-22	8:00	Sunny	1017.9	1015.8	18.7	19.9	AM2a_24hr_011112	2.7778	2.9638	18947.53	18971.53	24.00	1.54	1.54	1.54	2220	84		
14-Dec-22																	G3101	1096-2305	
19-Dec-22	24hr-TSP monitoring was suspended due to power failure.																		
23-Dec-22	arphi																		
29-Dec-22	8:00	Sunny	1022.6	1024.2	17.7	16.8	AM2a_24hr_011127	2.7766	3.0264	18971.53	18995.53	24.00	1.50	1.50	1.50	2163	116		



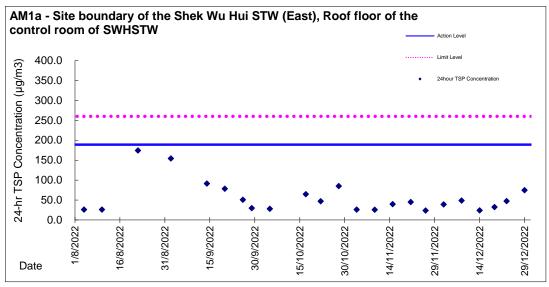
#### **Graphic Presentation of TSP Result**

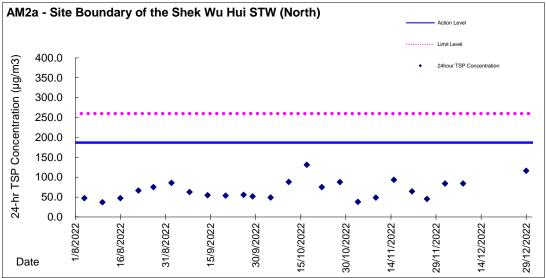






**Graphic Presentation of TSP Result** 





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

# Appendix 5.4

# Details of Ecological Monitoring Results in the Reporting Month

# 5.4. ECOLOGICAL MONITORING RESULTS

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

**Table 1 Total Bird Species and Abundance in the Reporting Month** 

	Number of Species	Abundance
All Avifauna	42	1087
Waterbirds	15	316

Table 2 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	88
Ardea cinerea	Grey Heron	蒼鷺	49
Ardeola bacchus	Chinese Pond Heron	池鷺	33
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	49
Ardea alba	Great Egret	大白鷺	28
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	26
		Total	273

# <u>Analysis</u>

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

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

T-values of Dat	a in Reporting M	Confidence Level (Critical Value)		
			95%	99%
Abundanaa	Monthly	0.408	✓	✓
Abundance	Seasonal	0.896	✓	✓

### Remarks:

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

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value		Confidence Level (Critical Value)		
	Monthly	95% (-2.353)	99% (-4.541)	Seasonal	95% (-2.353)			
Little Egret	1.468	~	~	1.142	~	~	~	
Grey Heron	-1.273	<b>✓</b>	~	-0.201	~	>	~	
Chinese Pond Heron	-0.397	~	~	-0.397	V	<b>\</b>	~	
Great Cormorant	0.074	~	~	1.553	V	٧	~	
Great Egret	0.481	~	~	0.962	~	~	~	
Eastern Cattle Egret	0.185	~	~	0.925	V	V	~	

### Remarks

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

<sup>🗶 =</sup> T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data.

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

<sup>🗶 =</sup> T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data.

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

- **5.4.3.** No Action Level and Limit Level was triggered for ecological monitoring in the reporting month.
- **5.4.4.** Site observation in the reporting month shows that construction activities are similar to previous months. The photos are provided in **Appendix 5.6**.
- 5.4.5. In recent months, it is found that there are different construction sites and human activities such as grazing, fishing and landscape planting around the project site. These construction and human activities may affect activities of the waterbirds. Although, there is no significant impact reduction in number of waterbirds, it is recommended that construction site should continue keeping the good site practice to minimize disturbance caused to waterbirds.
- **5.4.6.** The monitoring work will continue next month to evaluate any construction impact on waterbirds.

# **Observations**

- **5.4.7.** Waterbird behaviour observed during ecological monitoring are listed below:
  - Flying
  - Foraging
  - Soaring
  - Resting
- **5.4.8.** The anthropogenic activities observed during ecological monitoring are listed in **Table 5.**

**Table 5 Observations during Ecological Monitoring in the Reporting Month** 

		Observations
Location(s)	Project Related	Non-project Related
T1 (PC1, PC2)	N/A	Human Activities such as Fishing  Construction activities such as footbridge construction, excavation and breaking works
T2 (PC3, PC4)	Construction activities such as generator & welding works, Scaffolding, sedimentation tank, Excavation and crane	Human Activities such as Fishing, Grazing, and Landscape Planting  Construction activities such as Sheetpiling, generator & welding works, Scaffolding, sedimentation tank, Excavation, crane and breaking works
PC5	Construction activities such as Excavation and crane	N/A
T3 (PC6, PC7)	Construction activities such as Sheet-piling	Human Activities such as Fishing and Landscape Planting  Construction activities such as Excavation Sheet-piling, generator & wielding works, Scaffolding

# Appendix 5.5

# Ecological Monitoring Results and Analysis

# **Summary data of the Ecological Monitoring**

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count  Abundance	
	Chinese Pond		х	33	+++++	
Ardeola bacchus	Heron	池鷺				
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	Х	26	+++	
Ardea cinerea	Grey Heron	蒼鷺	Х	49	+++++	
Ardea alba	Great Egret	大白鷺	Х	28	++++	
Egretta garzetta	Little Egret	小白鷺	Х	88	++++	
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	Х	49	++++	
Milvus migrans	Black Kite	黑鳶	Х	4	+	
Amaurornis	White-breasted		Х	3	+	
phoenicurus	Waterhen	白胸苦惡鳥				
Himantopus			X	12	+++	
himantopus	Black-winged Stilt	黑翅長腳鷸				
	Common		X	2	+	
Tringa nebularia	Greenshank	青腳鷸				
Actitis hypoleucos	Common Sandpiper	磯鷸	Х	11	++	
Spilopelia chinensis	Spotted Dove	珠頸斑鳩		45	+++++	
Centropus sinensis	Greater Coucal	褐翅鴉鵑		1	+	
Apus pacificus	Pacific Swift	白腰雨燕		0	+	
	White-throated		Х	8	+	
Halcyon smyrnensis	Kingfisher	白胸翡翠	^	0	7	
Alcedo atthis	Common Kingfisher	普通翠鳥	Х	1	+	
Ceryle rudis	Pied Kingfisher	斑魚狗	Х	2	+	
Lanius schach	Long-tailed Shrike	棕背伯勞		0	+	
Urocissa	Red-billed Blue			2	+	
erythroryncha	Magpie	紅嘴藍鵲				

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Pica pica	Eurasian Magpie	喜鵲		8	+
Corvus torquatus	Collared Crow	白頸鴉	Х	0	+
Parus cinereus	Cinereous Tit	蒼背山雀		5	+
	Red-whiskered			118	+++++
Pycnonotus jocosus	Bulbul	紅耳鵯			
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		48	+++++
Hirundo rustica	Barn Swallow	家燕		3	+
Phylloscopus fuscatus	Dusky Warbler	褐柳鶯		5	++
Phylloscopus	Pallas's Leaf			3	+
proregulus	Warbler	黃腰柳鶯			
Phylloscopus .	Yellow-browed	# EL 101 %		10	+
inornatus	Warbler	黄眉柳鶯			
Prinia flaviventris	Yellow-bellied Prinia	黄腹鷦鶯		7	+
Prinia inornata	Plain Prinia	純色鷦鶯		8	+
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		36	+++++
	Masked			40	+++++
Garrulax perspicillatus	Laughingthrush	黑臉噪鶥			
Zosterops japonicus	Japanese White-eye	暗綠繡眼鳥		34	+++
Acridotheres	Crested Myna	n ar		240	++++
cristatellus		八哥			
Gracupica nigricollis	Black-collared Starling	黑領椋鳥		38	+++++
, ,	Oriental Magpie				
Copsychus saularis	Robin	鵲鴝		18	++
Phoenicurus auroreus	Daurian Redstart	北紅尾鴝		7	+
	Stejneger's				
Saxicola stejnegeri	Stonechat	黑喉石(即鳥)		2	+

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count	Transect Count	
				Abundance	Abundance	
	Eurasian Tree			35	++++	
Passer montanus	Sparrow	樹麻雀		30	++++	
	Scaly-breasted			11	++	
Lonchura punctulata	Munia	斑文鳥		11	***	
Motacilla alba	White Wagtail	白鶺鴒		44	+++++	
Anthus godlewskii	Olive-backed Pipit	樹鷚		3	+	

### Remarks:

# X: Waterbird ;

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

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

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

# **Waterbird Ecological Monitoring Result**

	Total Bird Abundance from Point Count									
Survey Information				Total Bird Abundance from Point Count						
No.	Date	Time	Tide Level	Individuals Recorded	Total	Species Recorded				
1	6/12/2022	10:15	Н	103	266	23				
•	0/12/2022	15:00	L	163	200	26				
2	13/12/2022	13:30	Н	89	287	22				
2	13/12/2022	11:30	L	198	201	29				
2	22/42/2022	12:15	Н	98	254	23				
3	23/12/2022	15:00	L	156	254	30				
4	20/42/2022	14:00	Н	147	200	21				
4	28/12/2022	12:00	L	133	280	27				

Remarks: H: High Tide; L: Low Tide

	Total Waterbird Abundance from Point Count								
	Survey Information				Total Waterbird Abundance from Point Count				
No.	Date	Time	Tide Level	Individuals Recorded	Total				
1	6/12/2022	10:15	Н	25	70				
•	0/12/2022	15:00	L	45	70				
2	13/12/2022	13:30	Н	28	100				
2	13/12/2022	11:30	L	72	100				
3	23/12/2022	12:15	Н	29	79				
3	23/12/2022	15:00	L	50	79				
4	4 00/40/0000		14:00		Н	23	67		
4	28/12/2022	12:00	Ĺ	44	07				

Remarks: H: High Tide; L: Low Tide

# **T-Test Analysis for All Waterbirds**

# **Baseline Data**

Monthly Average Abundance (December) 71.33 Seasonal Average Abundance (Winter season) 62.15

# **T-Test**

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

H<sub>0</sub>: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H<sub>1</sub>: The data collected does not falls within the normal distribution when compared to the baseline monitoring data.

If t-test value is **smaller** than the critical value, then rejects  $H_0$ .

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

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

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

T values of Do	to in Bonortina I	Confidence Level (Critical Value)		
1-values of Da	ta in Reporting I	viontn	95% (-2.353)	99% (-4.541)
Abundanaa	Monthly	0.408	✓	✓
Abundance	Seasonal	0.896	95% (-2.353) 99% (	✓

# Remarks:

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

<sup>💢 =</sup> T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data.

	Abundance of Representative Waterbirds from Point Count									
Representative Species				Recorded Abundance Base						line Data
			Week 1	Week2	Week 3	Week 4			Avg (Dec)	Avg (Winter)
Species Name	Common Name	Chinese Name	6/12/2022	13/12/2022	23/12/2022	28/12/2022	Total	Avg.		
Egretta garzetta	Little Egret	小白鷺	17	33	14	24	88	22	13	15
Ardea cinerea	Grey Heron	蒼鷺	15	19	9	6	49	12	17	13
Ardeola bacchus	Chinese Pond Heron	池鷺	7	8	9	9	33	8	9	9
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	13	18	11	7	49	12	12	7
Ardea alba	Great Egret	大白鷺	6	3	9	10	28	7	6	5
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	4	6	14	2	26	7	6	4

# **T-test Analysis for Representative Waterbirds from Point Count**

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

H<sub>0</sub>: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H<sub>1</sub>: The data collected does not falls within the normal distribution when compared to the baseline monitoring data.

If t-test value is  $\underline{smaller}$  than the critical value, then rejects  $H_0$ .

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

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

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

Common Name of	T-value	Confidence Leve	el (Critical Value)	T-value	Confidence Leve	el (Critical Value)	
Representative Waterbird	Monthly	95%	99%	Seasonal	95%	99%	Overall
Little Egret	1.468	✓	✓	1.142	✓	✓	<b>√</b>
Grey Heron	-1.273	✓	✓	-0.201	✓	✓	<b>√</b>
Chinese Pond Heron	-0.397	<b>√</b>	✓	-0.397	<b>✓</b>	✓	<b>√</b>
<b>Great Cormorant</b>	0.074	✓	✓	1.553	✓	✓	✓
Great Egret	0.481	✓	✓	0.962	✓	✓	✓
Eastern Cattle Egret	0.185	<b>√</b>	✓	0.925	<b>✓</b>	<b>√</b>	<b>√</b>

#### Remarks:

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

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

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

# Appendix 5.6

# Photo Record of Ecological Monitoring

# **Conditions of Rivers**



Sheung Yue River – Survey Point 7 (Taken on 6 Dec 2022)



**Shek Sheung River - Survey Point 5 (Taken on 23 Dec 2022)** 



Shek Sheung River – Survey Point 6 (Taken on 13 Dec 2022)



Ng Tung River - Survey Point 4 (Taken on 6 Dec 2022)

# **Human Activities & Site Conditions**



Construction Activities (Ng Tung River)
(Project-related, taken on 6 Dec 2022)



Construction Activities (Sheung Yue River)
(Non-project-related, taken on 23 Dec 2022)



Construction Activities (Shek Sheung River)
(Project-related, taken on 13 Dec 2022)



Construction Activities (Ng Tung River)
(Non-Project-related, taken on 13 Dec 2022)







Human Activities (Sheung Yue River)
(Non-project-related, taken on 23 Dec 2022)

Human Activities ( Ng Tung River)
(Non- project-related, taken on 28 Dec 2022)

Human Activities (Ng Tung River)
(Non-project-related, taken on 13 Dec 2022)





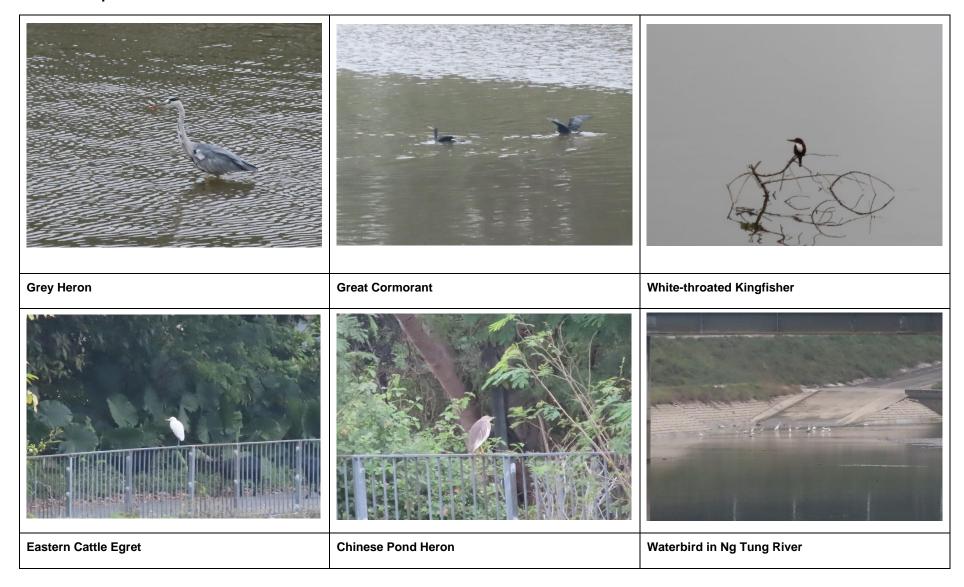


Construction Activities (Ng Tung River)
(Non-Project-related, taken on 13 Dec 2022)

Construction Activities (Sheung Yue River)
(Non-project-related, taken on 13 Dec 2022)

Construction Activities (Ng Tung River)
(Non-Project-related, taken on 23 Dec 2022)

# **Waterbird Species**



# Appendix 5.7

# Water Quality Monitoring Result



Date of Sampling:	2-Dec-22	. \	Weather Condition:		Fi	ne	. '	Ambient	Tempera	ture,°C:	1	6	•								
Station Reference	Sample ID	Time	Sampling Depth	Appearanc		erature	р	Н	Sal	nity		turation	D	Ю	DO Average	Turk	oidity	Turb Average	SS	SS Aaverage	Remarks / Observations
Station Reference			Camping Depar	е	9	С		-	р	pt	•	%		mg	/L		NT	ΓU		mg/L	
M1	M1	13:30	Middle	Pale Yellow	17.5	17.5	7.72	7.72	0.11	0.11	84.9	84.7	8.11	8.09	8.08	12.48	12.35		14.4	440	Turbidity and SS
Impact Station, Downstream of the proposed outfall	M1 DUP	13:02	Middle	Pale Yellow	17.5	17.5	7.72	7.72	0.11	0.11	84.5	84.1	8.08	8.03	8.08	12.56	12.76	<u>12.54</u>	13.6	14.0	levels exceeded limit levels
C1	C1	12:45	Middle	Pale Yellow	18.0	18.0	7.86	7.86	0.12	0.12	86.6	86.4	8.21	8.18	8.15	7.79	7.39	7.66	8.4	7.8	
Control Station, Upstream of the proposed outfall	C1 DUP	12:47	ivildale	Pale reliow	18.0	18.0	7.86	7.86	0.12	0.12	85.9	85.3	8.14	8.08	6.15	7.75	7.72		7.2	7.8	
Action Level Exceedance Limit Level Exceedance																					

Date of Sampling: 5-Dec-22 Weather Condition: Fine Ambient Temperature, °C: 16

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e		erature 'C	р	-	Sal p	inity pt		turation %	D	O mg/	DO Average	Turb	oidity NT	Turb Average		SS Aaverage	Remarks / Observations
														mg	_			Ü		19/2	
M1	M1	11:50	Middle	Pale Green	20.8	20.8	7.79	7.79	0.29	0.29	77.6	72.7	6.94	6.95	6.89	11.14	11.16	<u>11.16</u>	7.4	7.7	DO and Turbidity exceeded limit
Impact Station, Downstream of the proposed outfall	M1 DUP	11:52	ivildule	Fale Gleen	20.8	20.8	7.79	7.79	0.29	0.29	76.5	76.3	6.84	6.82	0.03	11.16	11.17		7.9	7.7	levels
C1	C1	11:40	Middle	Pale Green	19.6	19.6	8.00	8.00	0.20	0.20	91.5	92.0	8.38	8.43	8.36	8.26	8.26	8.26	13.3	13.0	
Control Station, Upstream of the proposed outfall	C1 DUP	11:42	Wilde	raie Green	19.6	19.6	8.00	8.00	0.20	0.20	90.9	90.5	8.34	8.29	0.30	8.26	8.26	0.20	12.7	13.0	

Action Level Exceedance Limit Level Exceedance

Date of Sampling: 7-Dec-22 Weather Condition: Sunny Ambient Temperature, °C: 20

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e		erature C	p	H -	Sal p	nity		turation %	D	O mg/	DO Average	Turb	oidity NT	Turb Average U		SS Aaverage	Remarks / Observations
M1	M1	9:55	Maria II	D-I- O	20.7	20.7	7.61	7.61	0.28	0.28	72.6	77.5	6.51	6.44	0.47	10.94	10.92		8.6		DO exceeded limit level and SS
Impact Station, Downstream of the proposed outfall	M1 DUP	9:57	Middle	Pale Green	20.7	20.7	7.61	7.61	0.28	0.28	72.4	72.1	6.48	6.46	<u>6.47</u>	10.93	10.95	10.94	8.1		exceeded action level
C1	C1	9:45	Middle	Pale Green	17.5	17.5	7.74	7.74	0.60	0.60	70.8	70.3	6.76	6.71	6.71	11.30	11.40	11.38	6.7	6.5	
Control Station, Upstream of the proposed outfall	C1 DUP	9:47	Wildlie	rale Green	17.5	17.5	7.74	7.74	0.60	0.60	70.2	69.9	6.70	6.68	0.71	11.41	11.41		6.2	0.5	

Action Level Exceedance Limit Level Exceedance



Date of Sampling:	9-Dec-22	. \	Weather Condition:		Fi	ne	-	Ambient	Tempera	ture,°C:	2	21	-								
0.1.07	Sample ID	Time	O D II	Appearanc	Tempe	erature	F	Н	Sali	nity	DO Sa	aturation	D	0	DO Average	Turk	bidity	Turb Average	SS	SS Aaverage	Remarks / Observations
Station Reference			Sampling Depth	e	٩	С		-	p	pt	•	%		mg/	/L		NT	U		mg/L	
M1	M1	12:30	Middle	Pale Yellow	23.8	23.8	7.08	7.08	0.32	0.32	87.6	87.4	7.39	7.37	<u>7.34</u>	13.65	13.65	13.89	10.1	10.4	DO exceeded limit
Impact Station, Downstream of the proposed outfall	M1 DUP	12:32	ivildale	rale reliow	23.8	23.8	7.08	7.08	0.32	0.32	87.0	85.9	7.34	7.24	7.54	14.11	14.16		10.6	10.4	level
C1	C1	12:15	Middle	Pale Yellow	22.4	22.4	7.12	7.12	0.25	0.25	84.4	84.9	7.31	7.36	7.37	23.71	23.72	23.61	18.7	18.7	
Control Station, Upstream of the proposed outfall	C1 DUP	12:17	ivildule	rale reliow	22.4	22.4	7.12	7.12	0.25	0.25	85.4	85.2	7.40	7.39	7.37	23.51	23.49		18.7	10.7	

Action Level Exceedance Limit Level Exceedance

Fine Date of Sampling: 12-Dec-22 Weather Condition: Ambient Temperature, °C: \_\_\_\_\_\_15

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e		erature C	p	H -	Sal p	nity		uturation %	D	O mg	DO Average	Turt	oidity NT	Turb Average U		SS Aaverage	Remarks / Observations
M1	M1	11:20	Middle	Pale Green	16.9	16.9	7.44	7.44	0.12	0.12	80.4	80.5	7.78	7.79	7.79	11.32	11.32	11.32	7.6	7.9	DO exceeded
Impact Station, Downstream of the proposed outfall	M1 DUP	11:22	Middle	Pale Green	16.9	16.9	7.44	7.44	0.12	0.12	80.6	80.5	7.80	7.79	7.79	11.32	11.32	-	8.2	7.9	action level
C1	C1	11:10	Middle	Pale Green	17.0	17.0	7.53	7.53	0.14	0.14	84.2	83.7	8.13	8.08	8.06	22.33	22.29	22.23	7.2	7.6	
Control Station, Upstream of the proposed outfall	C1 DUP	11:12	Wilde	rale Gleen	17.0	17.0	7.53	7.53	0.14	0.14	83.2	82.8	8.04	7.99	6.00	22.14	22.15	22.23	7.9	7.0	

**Action Level Exceedance** 

Limit Level Exceedance

Date of Sampling: 14-Dec-22 Weather Condition: Cloudy Ambient Temperature, °C: 11

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e		erature C	р	H -	Sal p	nity		turation %	D	O mg/	DO Average	Turt	oidity NT	Turb Average U		SS Aaverage	Remarks / Observations
M1	M1	11:30	M. J. II.	Data Carra	15.1	15.1	7.41	7.41	0.11	0.11	76.1	76.2	7.65	7.66		38.84	38.96		27.7		DO, Turbidity and SS levels
Impact Station, Downstream of the proposed outfall	M1 DUP	11:32	Middle	Pale Green	15.1	15.1	7.41	7.41	0.11	0.11	76.1	76.1	7.65	7.65	<u>7.65</u>	39.00	39.01	<u>38.95</u>	26.9	27.3	exceeded limit levels
C1	C1	11:15	Middle	Pale Green	15.5	15.5	7.45	7.45	0.12	0.12	66.8	691	6.66	6.88	6.82	33.24	33.28	33.34	72.7	72.3	
Control Station, Upstream of the proposed outfall	C1 DUP	11:17	ivildale	Pale Green	15.5	15.5	7.45	7.45	0.12	0.12	68.8	69.0	6.86	6.88	0.02	33.36	33.46	33.34	71.9	12.3	

Action Level Exceedance

Limit Level Exceedance



Date of Sampling:	16-Dec-22	- '	Weather Condition:		Clo	oudy	-	Ambient	Tempera	ature,°C:		15	-								
Station Reference	Sample ID	Time	Sampling Depth	Appearanc		erature	F	Н		inity		aturation	D	0	DO Average	Turl	bidity	Turb Average	SS	SS Aaverage	Remarks / Observations
Station Reference			Camping Bopai	е		C		-	p	pt		%		mg	/L		NT	U	1	mg/L	
M1	M1	10:06	Middle	Pale Green	16.9	16.9	7.32	7.32	0.11	0.11	67.0	67.4	6.49	6.53	6.26	21.00	21.11	24.47	16.0		DO, Turbidity and SS levels
Impact Station, Downstream of the proposed outfall	M1 DUP	10:08	Middle	Pale Green	16.9	16.9	7.32	7.32	0.11	0.11	67.4	66.9	5.53	6.48	6.26	21.03	21.55	<u>21.17</u>	14.7	<u>15.4</u>	exceeded limit levels
C1	C1	9:55	Middle	Pale Green	17.0	17.0	7.33	7.33	0.12	0.12	72.8	72.4	7.03	6.99	6.98	27.38	27.33	27.34	9.3	9.2	
Control Station,	C1 DUP	9:57	ivildate	rale Green	17.0	17.0	7.33	7.32	0.12	0.12	72.2	71.9	6.97	6.94	0.50	27.32	27.31	27.34	9.0	9.2	

Action Level Exceedance Limit Level Exceedance

Date of Sampling: Fine 19-Dec-22 Weather Condition: Ambient Temperature, °C: 9

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e	_	erature C	p	H -	Sal p	nity	DO Sa	turation %	D	O mg/	DO Average	Turb	oidity NT	Turb Average U		SS Aaverag	Remarks / Observations
M1	M1	9:10	Middle	Pale Yellow	10.7	10.7	7.50	7.50	0.15	0.15	73.5	76.5	8.07	8.16	8.22	21.26	21.25		6.6	7.4	Turibidity exceeded limit
Impact Station, Downstream of the proposed outfall	M1 DUP	9:12	Middle	Pale fellow	10.7	10.7	7.50	7.50	0.15	0.15	78.7	77.7	8.45	8.21	0.22	21.35	21.58	<u>21.36</u>	8.1	7.4	level
C1	C1	8:45	Middle	Pale Yellow	10.5	10.5	7.84	7.84	0.11	0.11	84.1	72.8	8.05	7.76	7.49	20.56	20.74	20.61	8.6	8.3	
Control Station, Upstream of the proposed outfall	C1 DUP	8:47	Wilde	rate reliow	10.5	10.5	7.84	7.84	0.11	0.11	67.3	65.7	7.11	7.03	7.45	20.58	20.55		7.9	0.3	

Action Level Exceedance Limit Level Exceedance

Date of Sampling: 21-Dec-22 Weather Condition: Fine Ambient Temperature, °C: 15

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e		erature C	р	H -	Sal p	inity pt		turation %	D	O mg/	DO Average	Turt	oidity NT	Turb Average U		SS Aaverage	Remarks / Observations
M1	M1	8:35	Middle	Pale Green	18.5	18.5	7.26	7.26	0.22	0.22	70.0	65.3	6.56	6.02	6.44	14.88	14.89	14.75	9.3		DO exceeded limit level and Turibidity
Impact Station, Downstream of the proposed outfall	M1 DUP	8:37	Middle	Pale Green	18.5	18.5	7.26	7.26	0.22	0.22	62.6	66.6	5.82	6.14	<u>6.14</u>	14.47	14.77	-	9.2		exceeded action level
C1	C1	8:35	Middle	Pale Green	17.3	17.3	8.13	8.13	0.11	0.11	58.0	54.3	5.86	5.22	5.61	21.64	21.43	21.52	13.8	14.5	
Control Station, Upstream of the proposed outfall	C1 DUP	8.:37	ivildale	Pale Green	17.3	17.3	8.13	8.13	0.11	0.11	60.6	57.9	5.82	5.54	5.01	21.49	21.53		15.2	14.5	

Action Level Exceedance
Limit Level Exceedance



8:15

8:17

Fine Date of Sampling: 23-Dec-22 Weather Condition: Ambient Temperature, °C: 13 Remarks / DO Saturation DO Average SS SS Aaverage Observations Time Temperature Salinity DO Turbidity Turb Average Sample ID Appearanc Station Reference Sampling Depth ppt mg/L NTU mg/L M1 8:45 14.4 14.4 7.53 7.53 0.24 0.24 90.6 88.2 9.23 9.30 9.36 9.07 8.3 M1 9.14 9.15 Middle Pale Yellow level and SS exceeded limit Impact Station, 9.01 9.15 9.4 M1 DUP 8:45 14.4 14.4 7.53 7.53 0.24 0.24 89.9 87.4 8.89

7.70

7.70

0.23

0.23

0.23

0.23

84.2

80.7

86.1 8.73 8.93

77.7 8.38 8.06

7.49 7.36

7.22 7.30

8.53

4.5

3.8

7.34

4.2

Action Level Exceedance
Limit Level Exceedance

Downstream of the proposed outfall

C1

Control Station,

Upstream of the proposed outfall

C1

C1 DUP

Date of Sampling: 28-Dec-22 Weather Condition: Fine Ambient Temperature, C: 15

Middle

13.7

13.7

Pale Yellow

13.7

13.7

7.70

7.70

Station Reference	Sample ID	Time	Sampling Depth	Appearanc e	0	erature C	p	H -	Sal p	nity	DO Sa	turation %	D	ng.	DO Average /L	Turk	oidity NT	Turb Average U		SS Aaverage	Remarks / Observations
M1	M1	8:45	Middle	Pale Green	16.5	16.5	7.79	7.79	0.14	0.14	71.8	70.8	7.08	6.93	6.00	11.27	11.30	11.36	10.9	7.9	DO exceeded limit level and SS
Impact Station, Downstream of the proposed outfall	M1 DUP	8:50	ivildale	Pale Green	16.5	16.5	7.99	7.79	0.14	0.14	69.2	67.1	6.98	6.56	<u>6.89</u>	11.40	11.45		4.9	7.9	exceeded action level
C1	C1	8:15	Middle	Pale Green	16.4	16.4	7.76	7.76	0.12	0.12	67.4	68.0	6.93	6.67	6.62	12.32	12.19	12.25	7.9	6.2	
Control Station, Upstream of the proposed outfall	C1 DUP	8:17	ivildale	Pale Green	16.4	16.4	7.76	7.76	0.12	0.12	66.4	64.7	6.52	6.35	0.02	12.29	12.20	12.25	4.4	6.2	

Action Level Exceedance Limit Level Exceedance

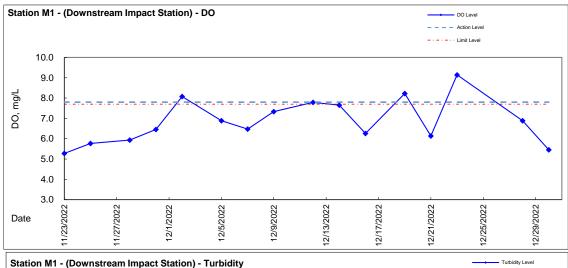
Date of Sampling: 30-Dec-22 Weather Condition: Fine Ambient Temperature, °C: 12

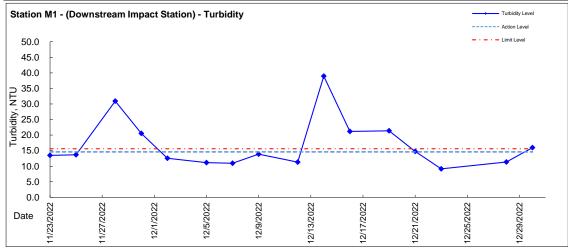
Station Reference	Sample ID	Time	Sampling Depth	Appearanc e	0	erature C	р	H -		nity	DO Sa	turation %	D	nO mg/	DO Average L	Turk	oidity NT	Turb Average U		SS Aaverage	Remarks / Observations
M1	M1	8:30	Middle	Pale Green	14.8	14.8	7.42	7.42	0.14	0.14	54.9	53.8	5.55	5.42	E 4E	15.88	15.98	15.94	12.2	12.5	DO and Turbidity exceeded limit
Impact Station, Downstream of the proposed outfall	M1 DUP	8:32	Middle	Pale Green	14.8	14.8	7.42	7.42	0.14	0.14	52.8	55.1	5.33	5.51	<u>5.45</u>	15.94	15.97	15.94	12.7	12.5	level
C1	C1	8:00	Middle	Pale Green	15.0	15.0	7.67	7.67	0.12	0.12	55.0	57.1	5.61	5.74	5.59	16.39	16.41	16.45	12.0	11.7	
Control Station, Upstream of the proposed outfall	C1 DUP	8:02	Wildule	raie Green	15.0	15.0	7.67	7.67	0.12	0.12	55.7	53.3	5.61	5.38	3.35	16.51	16.48	10.43	11.3	11.7	

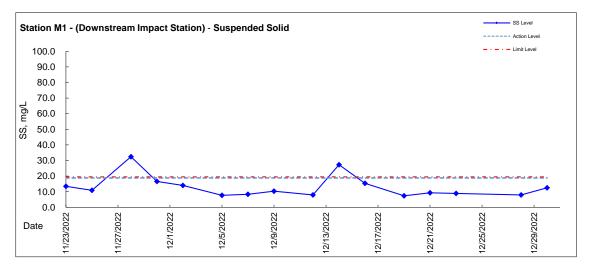
Action Level Exceedance
Limit Level Exceedance



**Graphic Presentation of WQM Result** 

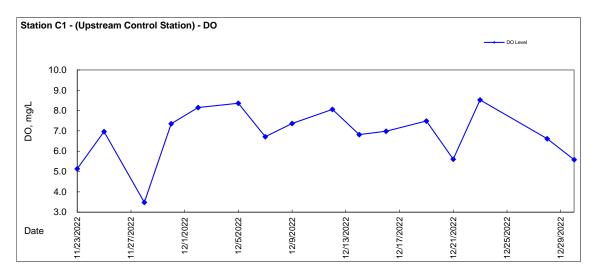


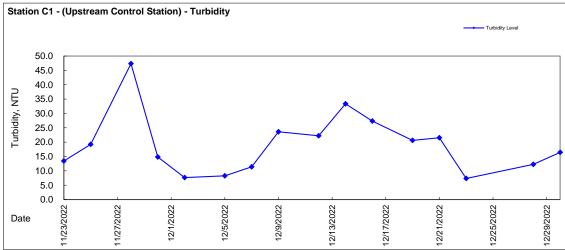


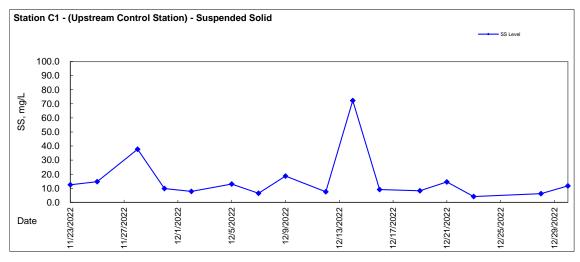




**Graphic Presentation of WQM Result** 







# Appendix 5.8

# Laboratory Analysis Result

# **ALS Technichem (HK) Pty Ltd**

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



# CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2246619 : Richard Fung Work Order Contact Contact

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: alexchan@lamenviro.com richard.fung@alsglobal.com E-mail : 2839 5629 : +852 2610 1044 Telephone

Telephone : 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received Project

: HKE/2224/2021\_V2 : 12-Dec-2022 Issue Date

number No. of samples received C-O-C number : ---No. of samples analysed : 4

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the testing laboratory. Position Authorised results for Signatories Kirland Jony

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: LAM ENVIRONMENTAL SERVICES LTD Work Order

HK2246619

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

### Specific Comments for Work Order: HK2246619

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.



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Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	02-Dec-2022	02-Dec-2022	02-Dec-2022	02-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2246619-001	HK2246619-002	HK2246619-003	HK2246619-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	8.4	7.2	14.4	13.6	_



Page Number Client Work Order : LAM ENVIRONMENTAL SERVICES LTD HK2246619

# Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)			
sample ID							Result				
EA/ED: Physical and Aggr	egate Properties (QC Lot: 475394	43)									
HK2246619-001	C1	EA025: Suspended Solids (SS)		0.5	mg/L	8.4	8.9	5.2			
HK2247473-003	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	8.6	8.8	2.3			

# Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

, ,,		,				<i>,</i> ,					
Matrix: WATER			Method Blank (MB	l) Report		Laboratory Contro	ol Splke (LCS) and Labore	atory Control S	plke Duplicate (	DCS) Report	
					Splike Concentration	Spike Red	covery (%)	Recove	ry Limits(%)	RP	D (%)
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties (0	QC Lot: 4753943)										
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	97.5		85.1	116		

# Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

# **ALS Technichem (HK) Pty Ltd**

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2247471 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG

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: alexchan@lamenviro.com richard.fung@alsglobal.com E-mail : 2839 5629 : +852 2610 1044

Telephone Telephone : 2882 3331 : +852 2610 2021 Facsimile Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 05-Dec-2022 Project

: HKE/2224/2021\_V3 : 12-Dec-2022 Issue Date

number No. of samples received C-O-C number : ---No. of samples analysed : 4

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the testing laboratory. Position Authorised results for Signatories

Kirland Jony

Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

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Work Order HK2247471

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

### Specific Comments for Work Order: HK2247471

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

Page Number

: LAM ENVIRONMENTAL SERVICES LTD HK2247471 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1-DUP	M1	M1-DUP	_
		Samplii	ng date / time	05-Dec-2022	05-Dec-2022	05-Dec-2022	05-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2247471-001	HK2247471-002	HK2247471-003	HK2247471-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	7.4	7.9	13.3	12.7	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2247471

# Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)				
sample ID							Result					
EA/ED: Physical and Aggr	egate Properties (QC Lot: 475394	43)										
HK2246619-001	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	8.4	8.9	5.2				
HK2247473-003	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	8.6	8.8	2.3				

# Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

, ,,		,				<i>,</i> ,					
Matrix: WATER			Method Blank (ME	l) Report		Laboratory Contro	ol Splke (LCS) and Labora	atory Control S	olke Duplicate (	(DCS) Report	
						Splike Recovery (%)		Recovery Limits(%)		<i>RPD</i> (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties (	QC Lot: 4753943)										
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	97.5		85.1	116		

# Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

# **ALS Technichem (HK) Pty Ltd**

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

Address



# CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

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: 2839 5629 : +852 2610 1044 Telephone Telephone : 2882 3331 : +852 2610 2021

Facsimile : CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT

Date Samples Received : 07-Dec-2022 Project : HKE/2224/2021\_V3 : 12-Dec-2022 Issue Date

number No. of samples received C-O-C number : ---

No. of samples analysed : 4

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Position Authorised results for Signatories Kirland Jony

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Work Order HK2247473

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

### Specific Comments for Work Order: HK2247473

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

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: LAM ENVIRONMENTAL SERVICES LTD HK2247473 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	07-Dec-2022	07-Dec-2022	07-Dec-2022	07-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2247473-001	HK2247473-002	HK2247473-003	HK2247473-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	6.7	6.2	8.6	8.1	_



Page Number Client Work Order : LAM ENVIRONMENTAL SERVICES LTD HK2247473

# Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)			
sample ID							Result				
EA/ED: Physical and Aggr	egate Properties (QC Lot: 475394	43)									
HK2246619-001	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	8.4	8.9	5.2			
HK2247473-003	M1	EA025: Suspended Solids (SS)		0.5	mg/L	8.6	8.8	2.3			

# Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

\ //	, ,	,			, ,	, ,					
Matrix: WATER			Method Blank (MB	l) Report		Laboratory Contro	ol Splke (LCS) and Labore	atory Control S	plke Duplicate (	DCS) Report	
					Splike Concentration	Spike Red	covery (%)	Recove	ry Limita(%)	RP	D (%)
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties (QC	Lot: 4753943)	•									
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	97.5		85.1	116		

# Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

# **ALS Technichem (HK) Pty Ltd**

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

Address



### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

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Telephone : 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 09-Dec-2022 Project

: HKE/2224/2021\_V3 : 15-Dec-2022 Issue Date number

No. of samples received C-O-C number : ---No. of samples analysed : 4

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> Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

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HK2247475

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

### Specific Comments for Work Order: HK2247475

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.



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: LAM ENVIRONMENTAL SERVICES LTD HK2247475 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	09-Dec-2022	09-Dec-2022	09-Dec-2022	09-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2247475-001	HK2247475-002	HK2247475-003	HK2247475-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	18.7	18.7	10.1	10.6	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2247475

# Laboratory Duplicate (DUP) Report

Education y Edpin	cate (201) respon		_							
Matrix: WATER				Laboratory Duplicate (DUP) Report						
Laboratory	Sample ID	Method: Compound CA	S Number	LOR	Unit	Original Result	Duplicate	RPD (%)		
sample ID							Result			
EA/ED: Physical and Aggr	regate Properties (QC Lot: 47666	23)								
HK2247475-001	C1	EA025: Suspended Solids (SS)		0.5	mg/L	18.7	19.1	2.1		

# Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MB	i) Report		Laboratory Contro	ol Spike (LCS) and Labon	atory Control S	plke Duplicate (	DCS) Report	
					Splice Concentration	Splike Red	covery (%)	Recove	ry Limits(%)	RP	D (%)
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties	(QC Lot: 4766623)										
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	96.5		85.1	116		

# Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

# **ALS Technichem (HK) Pty Ltd**

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2247477 : Richard Fung Work Order Contact Contact

: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Address KONG Yip Street, Kwai Chung, N.T., Hong Kong

Kwai Tsing Hong Kong

: alexchan@lamenviro.com richard.fung@alsglobal.com E-mail

: 2839 5629 : +852 2610 1044 Telephone Telephone : 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received Project

: HKE/2224/2021\_V3 : 15-Dec-2022 Issue Date

number No. of samples received C-O-C number : ---No. of samples analysed : 4

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Kirland Jony

Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

#### **ALS Technichem (HK) Pty Ltd** Part of the ALS Laboratory Group

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: LAM ENVIRONMENTAL SERVICES LTD Work Order

HK2247477

# General Comments

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

### Specific Comments for Work Order: HK2247477

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.



: LAM ENVIRONMENTAL SERVICES LTD HK2247477 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	12-Dec-2022	12-Dec-2022	12-Dec-2022	12-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2247477-001	HK2247477-002	HK2247477-003	HK2247477-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	7.2	7.9	7.6	8.2	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2247477

#### Laboratory Duplicate (DUP) Report

Education y Edpin	cate (201) respon		_							
Matrix: WATER				Laboratory Duplicate (DUP) Report						
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)		
sample ID							Result			
EA/ED: Physical and Aggr	regate Properties (QC Lot: 47666	23)								
HK2247475-001	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	18.7	19.1	2.1		

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MB	i) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
					Splice Concentration	Splike Red	covery (%)	Recove	ry Limits(%)	RP	D (%)		
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control		
											Limit		
EA/ED: Physical and Aggregate Properties	(QC Lot: 4766623)												
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	96.5		85.1	116				

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

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#### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2247478 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG

: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing KONG Yip Street, Kwai Chung, N.T., Hong Kong

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Telephone : 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 14-Dec-2022 Project

: HKE/2224/2021\_V3 : 22-Dec-2022 Issue Date number

No. of samples received C-O-C number : ---No. of samples analysed : 4

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the testing laboratory. Position Authorised results for Signatories Kirland Jony

> Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

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: LAM ENVIRONMENTAL SERVICES LTD Work Order

HK2247478

#### General Comments

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2247478

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

: LAM ENVIRONMENTAL SERVICES LTD HK2247478 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	14-Dec-2022	14-Dec-2022	14-Dec-2022	14-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2247478-001	HK2247478-002	HK2247478-003	HK2247478-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	72.7	71.9	27.7	26.9	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2247478

#### Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)			
sample ID							Result				
EA/ED: Physical and Aggr	regate Properties (QC Lot: 478402	29)									
HK2247478-001	C1	EA025: Suspended Solids (SS)		0.5	mg/L	72.7	73.3	0.8			
HK2249938-003	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	6.6	6.9	4.1			

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

, ,,	* .	,									
Matrix: WATER			Method Blank (ME	l) Report		Laboratory Contro	ol Spike (LCS) and Labor	atory Control S	plke Duplicate (	DCS) Report	
					Splike Concentration	Spike Red	covery (%)	Recove	ry Limits(%)	RP	D (%)
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties (0	QC Lot: 4784029)										
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	96.0		85.1	116		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

Address

: HK2247479 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing

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: 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 16-Dec-2022 Project

: HKE/2224/2021\_V3 : 22-Dec-2022 Issue Date

number No. of samples received C-O-C number : ---No. of samples analysed : 4

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Kirland Jony

Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

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: LAM ENVIRONMENTAL SERVICES LTD

Work Order HK2247479

#### General Comments

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2247479

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

: LAM ENVIRONMENTAL SERVICES LTD HK2247479 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	16-Dec-2022	16-Dec-2022	16-Dec-2022	16-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2247479-001	HK2247479-002	HK2247479-003	HK2247479-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	9.3	9.0	16.0	14.7	_



Page Number Client Work Order : LAM ENVIRONMENTAL SERVICES LTD HK2247479

#### Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)				
sample ID							Result					
EA/ED: Physical and Aggr	egate Properties (QC Lot: 478402	29)										
HK2247478-001	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	72.7	73.3	0.8				
HK2249938-003	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	6.6	6.9	4.1				

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

· //	, ,	,			, ,	, ,					
Matrix: WATER			Method Blank (MB	l) Report		Laboratory Contro	ol Splke (LCS) and Labore	atory Control S	plke Duplicate (	DCS) Report	
					Splike Concentration	Spike Red	covery (%)	Recove	ry Limita(%)	RP	D (%)
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties (Q	C Lot: 4784029)										
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	96.0		85.1	116		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

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#### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2249938 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing

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: alexchan@lamenviro.com richard.fung@alsglobal.com E-mail : 2839 5629 : +852 2610 1044 Telephone Telephone

: 2882 3331 : +852 2610 2021 Facs imile : CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received Project

: HKE/2224/2021\_V3 : 22-Dec-2022 Iss ue Date

number No. of s amples received C-O-C number : ---

No. of s amples analys ed : 4

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> Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

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Page Number

: LAM ENVIRONMENTAL SERVICES LTD

Work Order HK2249938

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not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been as sumed by the laboratory for processing purposes.

Testing period is from 20-Dec-2022 to 22-Dec-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from databas e maintained by Chemical Abs tracts Serv ices. The Chemical Abs tracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2249938

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Proj ect name, Sample ID, Sampling date/time, etc.) is provided by client.

Res ult(s) of sample(s) is /are reported on as received bas is, unles s otherwise s pecified.



: LAM ENVIRONMENTAL SERVICES LTD HK2249938 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID	C1	C1 - DUP	M1	M1 - DUP	_
		Samplii	ng date / time	19-Dec-2022	19-Dec-2022	19-Dec-2022 19-Dec-2022		
Compound	CAS Number	LOR	Unit	HK2249938-001	HK2249938-002	HK2249938-003	HK2249938-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	8.6	7.9	6.6	8.1	_



Page Number Client Work Order : LAM ENVIRONMENTAL SERVICES LTD HK2249938

#### Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)				
sample ID							Result					
EA/ED: Physical and Aggr	regate Properties (QC Lot: 478402	29)										
HK2247478-001	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	72.7	73.3	0.8				
HK2249938-003	M1	EA025: Suspended Solids (SS)		0.5	mg/L	6.6	6.9	4.1				

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

	, ,	,									
Matrix: WATER			Method Blank (ME	l) Report		Laboratory Contro	ol Spike (LCS) and Labor	atory Control S	plke Duplicate (	DCS) Report	
					Spike Concentration	Spike Red	covery (%)	Recove	ry Limits(%)	RP	D (%)
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control
											Limit
EA/ED: Physical and Aggregate Properties (	QC Lot: 4784029)										
EA025: Sus pended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	96.0		85.1	116		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

Addres s

C-O-C number : ---



: 31-Dec-2022

Iss ue Date

#### CERTIFICATE OF ANALYSIS

: HKE/2224/2021\_V3

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2249939 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG

KONG Yip Street, Kwai Chung, N.T., Hong Kong

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: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 21-Dec-2022 Project

number No. of s amples received

No. of s amples analys ed : 4

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> Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing

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Work Order HK2249939

#### General Comments

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from databas e maintained by Chemical Abs tracts Serv ices. The Chemical Abs tracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2249939

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested. Sample information (Proj ect name, Sample ID, Sampling date/time, etc.) is provided by client.

Res ult(s) of sample(s) is /are reported on as received bas is, unles s otherwise s pecified.

: LAM ENVIRONMENTAL SERVICES LTD HK2249939 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER			Sample ID C1 C1 - DUP		C1 - DUP	M1	M1 - DUP	_
		Samplir	ng date / time	21-Dec-2022 21-Dec-2022		21-Dec-2022 21-Dec-2022		
Compound	CAS Number LOR Unit		HK2249939-001	HK2249939-002	HK2249939-003	HK2249939-004		
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	2.0 mg/L		13.8	15.2	9.3	9.2	_	



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2249939

#### Laboratory Duplicate (DUP) Report

Matrix: WATER			Laboratory Duplicate (DUP) Report						
Laboratory	Sample ID	Method: Compound	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)		
sample ID						Result			
EA/ED: Physical and Aggr	egate Properties (QC Lot: 479502	24)							
HK2249939-001	C1	EA025: Suspended Solids (SS)		0.5	mg/L	13.8	14.6	6.1	
HK2249940-004	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	9.4	10.1	7.2	

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

, ,,	, ,	,	-		, ,	, ,						
Matrix: WATER			Method Blank (MB	l) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Splike Concentration	Spike Red	covery (%)	Recove	ry Limita(%)	RP	D (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control	
											Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 4795024)												
EA025: Sus pended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	95.5		85.1	116			

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

Address



#### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2249940 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing

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: 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 23-Dec-2022 Project : HKE/2224/2021\_V3 : 31-Dec-2022

number No. of samples received C-O-C number : ---

Address

No. of samples analysed : 4

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the testing laboratory. Position Authorised results for Signatories Kirland Jony

> Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

Issue Date

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Work Order HK2249940

#### General Comments

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Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2249940

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

: LAM ENVIRONMENTAL SERVICES LTD HK2249940 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER	Sample ID			C1	C1 - DUP	M1	M1 - DUP	_
		Samplin	ng date / time	23-Dec-2022	23-Dec-2022	23-Dec-2022	23-Dec-2022	
Compound	CAS Number	LOR	Unit	HK2249940-001	HK2249940-002	HK2249940-003	HK2249940-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	3.8	4.5	8.3	9.4	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2249940

#### Laboratory Duplicate (DUP) Report

Matrix: WATER			Laboratory Duplicate (DUP) Report						
Laboratory	Sample ID	Method: Compound	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)		
sample ID							Result		
EA/ED: Physical and Aggr	regate Properties (QC Lot: 479502	24)							
HK2249939-001	Anonymous	EA025: Suspended Solids (SS)		0.5	mg/L	13.8	14.6	6.1	
HK2249940-004	M1 - DUP	EA025: Suspended Solids (SS)		0.5	mg/L	9.4	10.1	7.2	

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

, ,,	, ,	,										
Matrix: WATER			Method Blank (ME	l) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Splike Concentration	Splike Recovery (%)		Recovery Limits(%)		<i>RPD</i> (%)		
Method: Compound	CAS Number	LOR	Unit	Result		LCS DCS		Low	High	Value	Control	
											Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 4795024)												
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	95.5		85.1	116			

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2249942 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing

KONG Yip Street, Kwai Chung, N.T., Hong Kong

Kwai Tsing Hong Kong

: alexchan@lamenviro.com richard.fung@alsglobal.com E-mail : 2839 5629 : +852 2610 1044 Telephone Telephone

: 2882 3331 : +852 2610 2021 Facs imile Facs imile : CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received Project

Addres s

: HKE/2224/2021\_V3 : 31-Dec-2022 Iss ue Date

number No. of s amples received C-O-C number : ---

No. of s amples analys ed : 4

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the testing laboratory. Position Authorised results for Signatories Richard Frong

> Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

#### **ALS Technichem (HK) Pty Ltd** Part of the ALS Laboratory Group

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: LAM ENVIRONMENTAL SERVICES LTD Work Order

HK2249942

#### General Comments

This report supers edes any previous report(s) with the same work order number. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been as sumed by the laboratory for processing purposes. Testing period is from 28-Dec-2022 to 30-Dec-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from databas e maintained by Chemical Abs tracts Serv ices. The Chemical Abs tracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2249942

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested. Sample information (Proj ect name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is / are reported on as received basis, unless otherwise specified.

: LAM ENVIRONMENTAL SERVICES LTD Client Work Order

HK2249942



Analytical	Kesults
------------	---------

Sub-Matrix: FRESH WATER	Sample ID			C1	C1 - DUP M1		M1 - DUP	_
		Samplir	ng date / time	28-Dec-2022	28-Dec-2022	28-Dec-2022	28-Dec-2022	
Compound C	CAS Number	LOR	Unit	HK2249942-001	HK2249942-002	HK2249942-003	HK2249942-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	_	2. 0	mg/L	7.9	4.4	10.9	4.9	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2249942

#### Laboratory Duplicate (DUP) Report

Matrix: WATER			Laboratory Duplicate (DUP) Report						
Laboratory	Sample ID	Method: Compound	LOR	Unit	Original Result	Duplicate	<b>RPD</b> (%)		
sample ID							Result		
EA/ED: Physical and Aggr	egate Properties (QC Lot: 479502	24)							
HK2249939-001	Anonymous	EA025: Suspended Solids (SS)	_	0. 5	mg/L	13.8	14. 6	6.1	
HK2249940-004	Anonymous	EA025: Suspended Solids (SS)	_	0. 5	mg/L	9. 4	10.1	7.2	

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

· /·		,				, ,						
Matrix: WATER			Method Blank (ME	l) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Splike Concentration	Spike Red	covery (%)	Recove	ry Limita(%)	RP	D (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control	
											Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 4795024)												
EA025: Sus pended Solids (SS)	_	0. 5	mg/L	<0. 5	20 mg/L	95. 5		85. 1	116		_	

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Technichem (HK) Pty Ltd**

## ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

Address



#### CERTIFICATE OF ANALYSIS

: LAM ENVIRONMENTAL SERVICES LTD : ALS Technichem (HK) Pty Ltd : 1 of 4

: HK2249943 : Richard Fung Work Order Contact Contact : 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG

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: 2839 5629 : +852 2610 1044 Telephone Telephone : 2882 3331 : +852 2610 2021 Facsimile

: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT Date Samples Received : 30-Dec-2022 Project

: HKE/2224/2021\_V3 : 09-Jan-2023 Issue Date

number No. of samples received C-O-C number : ---No. of samples analysed : 4

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the testing laboratory. Position Authorised results for Signatories

Kirland Jony

Fung Lim Chee, Richard Managing Director Inorganics, Kwai Tsing

: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing

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Page Number

: LAM ENVIRONMENTAL SERVICES LTD Work Order HK2249943

General Comments

This report supersedes any previous report(s) with the same work order number. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Testing period is from 30-Dec-2022 to 07-Jan-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### Specific Comments for Work Order: HK2249943

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.



3 of 4 LAM ENVIRONMENTAL SERVICES LTD HK2249943 Client Work Order



Analytical Results

Sub-Matrix: FRESH WATER	Sample ID			C1	C1 - DUP	M1	M1 - DUP	_
		Samplin	ng date / time	30-Dec-2022	30-Dec-2022	30-Dec-2022	30-Dec-2022	
Compound	CAS Number LOR Unit		HK2249943-001	HK2249943-002	HK2249943-003	HK2249943-004		
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2.0	mg/L	12.0	11.3	12.2	12.7	_



Page Number Client Work Order

: LAM ENVIRONMENTAL SERVICES LTD HK2249943

#### Laboratory Duplicate (DUP) Report

Education y Edpin	cate (201) respon		_								
Matrix: WATER			Laboratory Duplicate (DUP) Report								
Laboratory	Sample ID	Method: Compound CAS	Number	LOR	Unit	Original Result	Duplicate	RPD (%)			
sample ID							Result				
EA/ED: Physical and Aggregate Properties (QC Lot: 4803526)											
HK2249943-001	C1	EA025: Suspended Solids (SS)		0.5	mg/L	12.0	12.3	2.5			

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MB	i) Report		Laboratory Contro	ol Spike (LCS) and Labon	atory Control S	plke Duplicate (	DCS) Report			
					Splice Concentration	Splike Red	covery (%)	Recove	ry Limits(%)	RP	D (%)		
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control		
											Limit		
EA/ED: Physical and Aggregate Properties (QC Lot: 4803526)													
EA025: Suspended Solids (SS)		0.5	mg/L	<0.5	20 mg/L	98.5		85.1	116				

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

# Appendix 5.9

# Monthly Summary Waste Flow Table

Name of Department: DSD Contract No. DC/2018/06

## Monthly Summary Waste Flow Table for 2022

	Acti	ual Quantities	of Inert C&D	Materials Ge	nerated Mon	thly	Actu	al Quantities o	of C&D Wastes	Generated M	onthly
		Hard Rock									
N/L make	Total	and Large		Reused in				Paper/			Others, e.g.
Month	Quantity	Broken	Reused in	other	Disposed as	Imported		cardboard		Chemical	general
	Generated	Concrete	the Contract	Projects	Public Fill	Fill	Metals	packaging	Plastics	Waste	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 assued to be 0.8 kg/L.
- 5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
- 6. The slurry and bentonite are disposed at Tseung Kwun O 137.
- 7. The non-inert C&D wastes are disposed at NENT.

Name of Department: DSD <u>Contract No. DC/2018/07</u>

## **Monthly Summary Waste Flow Table for 2022**

	Actua	Quantities	of Inert C&D	Materials G	enerated Mo	onthly	Actual	Quantities o	f C&D Wastes	Generated	Monthly
		Hard Rock									
	Total	and Large	Reused in	Reused in	Disposed			Paper/			Others, e.g.
Month	Quantity	Broken	the	other	as Public	Imported		cardboard		Chemical	general
	Generated	Concrete	Contract	Projects	Fill	Fill	Metals	packaging	Plastics	Waste	refuse
	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)					
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
<b>Sub-total</b>	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 assued to be 0.8 kg/L. Chemical waste includes waste oil.
- 5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38
- 6. The slurry and bentonite are disposed at Tseung Kwun O 137  $\,$
- 7. The non-inert C&D wastes, including general refuse & special waste (i.e. sediment from DSD sedimentation tank) are disposed at NENT

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

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

## Contract No.: <u>DE/2018/03</u>

# Monthly Summary Waste Flow Table for 2022 (year)

		Actual Quantiti	es of Inert C&D	Materials Genera	ated Monthly		Ad	ctual Quantities of	C&D Wastes G	enerated Month	y
Month	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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
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

1

Name of Department: DSD

Contract No.: <u>DE/2018/04</u>

# Monthly Summary Waste Flow Table for 2022 (year)

		Actual Quanti	ties of Inert C&D	Materials Generate	ed Monthly			Actual Quantities of	C&D Wastes Ge	enerated Monthly	
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	6.84
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	1.30
Total	0	0	0	0	0	0	0	0	0	0	8.14

# Appendix 5.10

# Investigation Report for Exceedances reported in the reporting month



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_005_W	2-Dec-22	M1	Turbidity (NTU)	12.54 NTU (Limit Level Exceedance)		> 9.96 NTU (130 % of C1)	Finding:	-According to the Contractor's information, preparation for outfall works was mainly conducted on 2 December 2022. The construction works for the outfall were conducted mainly land-based works. And there was no water discharged from the Project site to Ng Tung River.
			SS (mg/L)	14.00 mg/L (Limit Level Exceedance)	9.36 mg/L (120 % of C1)	10.14 mg/L (130 % of C1)		-During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or silt dropped from outfall work to Ng Tung River was observed by the monitoring team during the monitoring process. Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are armesed in Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 2 December 2022, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	Turbidity (NTU) SS (mg/L)	7.66 NTU 7.80 mg/L			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuously.  -The Contractor should ensure the water quality mitigation measures are implemented properly for coming outfarelated construction work.

Attachment 1 - Photo record for water quality monitoring on 2 December 2022







Attachment 2 - Water quality measured on 2 December 20222

Date of Sampling: 2-Dec-22 Weather Condition: Fine Ambient Temperature, oc: 16	Date of Sampling:	2-Dec-22	Weather Condition:	Fine	Ambient Temperature,oC:	16	
--	-------------------	----------	--------------------	------	-------------------------	----	--

Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance		erature oc	p	bН -		inity	DO Sa	aturation %	D	ng/L	DO Average	Turt	oidity NTU	Turb Average		SS Aaverage	Remarks / Observations
M1	830288	M1	13:30			17.5	ras observe	7.72	7.72	0.11	0.11	84.9	84.7	8.11	8.09		12.48	12.35		14.4		Turbidity and SS
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	13:02	Middle	Pale Yellow	17.5	17.5	7.72	7.72	0.11	0.11	84.5	84.1	8.08	8.03	8.08	12.56	12.76	<u>12.54</u>	13.6		levels exceeded limit levels
C1	830355	C1	12:45	Middle	Pale Yellow	18.0	18.0	7.86	7.86	0.12	0.12	86.6	86.4	8.21	8.18	0.15	7.79	7.39	7.66	8.4	7.80	
Control Station, Upstream of the proposed outfall	841532	C1 DUP	12:47	ivildale	rale fellow	18.0	18.0	7.86	7.86	0.12	0.12	85.9	85.3	8.14	8.08	8.15	7.75	7.72	7.00	7.2	7.80	

Action Level Exceedance Limit Level Exceedance



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_006_W	5-Dec-22	M1	DO (mg/l)	6.89 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	<ul> <li>-According to the Contractor's information, preparation for outfall works was mainly conducted on 5 December 2022.</li> <li>The construction works for the outfall were conducted mainly land-based works. And there was no water discharged from the Project site to Ng Tung River.</li> </ul>
			Turbidity (NTU)	11.16 NTU (Limit Level Exceedance)		> 10.74 NTU (130 % of C1)		-During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or slit dropped from outfall work to Ng Tung River was observed by the monitoring pare and using the monitoring process. Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 5 December 2022, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/l) Turbidity (NTU)	8.36 mg/L 8.26 NTU			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuously.  -The Contractor should ensure the water quality mitigation measures are implemented properly for coming outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 5 December 2022







#### Attachment 2 - Water quality measured on 5 December 20222

Date of Sampling. 3-Dec-22 Weather Condition. Fine Ambient Temperature, oc. 10	Date of Sampling:	5-Dec-22	Weather Condition:	Fine	Ambient Temperature,oC:	16
--	-------------------	----------	--------------------	------	-------------------------	----

Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	Tempe		p	bН -	Sal	inity		ituration %	С	mg/L	DO Average	Turb	oidity NTU	Turb Average		SS Aaverage	Remarks / Observations
M1	830288	M1	11:50			20.8	20.8	7.79	7.79	0.29	0.29	77.6	72.7	6.94	6.95		11.14	11.16		7.4		DO and Turbidity
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	11:52	Middle	Pale Green	20.8	20.8	7.79	7.79	0.29	0.29	76.5	76.3	6.84	6.82	6.89	11.16	11.17	<u>11.16</u>	7.9	7.65	exceeded limit ' levels
C1	830355	C1	11:40	Middle	Pale Green	19.6	19.6	8.00	8.00	0.20	0.20	91.5	92.0	8.38	8.43	8.36	8.26	8.26	8.26	13.3	13.00	
Control Station, Upstream of the proposed outfall	841532	C1 DUP	11:42	ivildale	raie Green	19.6	19.6	8.00	8.00	0.20	0.20	90.9	90.5	8.34	8.29	6.36	8.26	8.26	0.20	12.7	13.00	

Action Level Exceedance Limit Level Exceedance



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_007_W	7-Dec-22	M1	DO (mg/l)	6.47 mg/l (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	-According to the Contractor's information, sheet piling mainly was conducted at outfall on 7 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotextile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River, and exposed earths surface was paved to minimize the generation of muddy water. Moreover, there was no water discharged from the Project site to Ng Tung River.
			SS (mg/l)	8.35 mg/l (Action Level Exceedance)	>7.74 mg/l (120 % of C1)	> 8.39 mg/l (130 % of C1)		-During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or silt dropped from outfall work to Ng Tung River was observed by the monitoring press and water quality mitigation measures were observed as mentioned by the Contractor.  Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.
								<ul> <li>Considering, land-based works was mainly conducted on 7 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process.</li> <li>There was no evidence showing the water quality affected by the Project. This exceedance was considered non- project related.</li> </ul>
			DO (mg/l)	6.71 mg/l			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuously.
		(Control Station for comparing to the impact station - M1)	SS (mg/l)	6.45 mg/l				-The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 7 December 2022







Attachment 2 - Water quality measured on 7 December 20222

Date of Sampling	ıg:	7-Dec-22		Weather Condition:		Sui	nny		Ambie	nt Temper	ature,oC:	2	20	<u>.</u>								
Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance		erature sc	F	Н .		inity <sub>pt</sub>		aturation %	С	mg/L	DO Average	Turi	bidity NTU	Turb Average		SS Aaverage mg/L	Remarks / Observations
M1	830288	M1	9:55	Middle	Pale Green	20.7	20.7	7.61	7.61	0.28	0.28	72.6	77.5	6.51	6.44	6.47	10.94	10.92	10.94	8.6	8.35	DO exceeded limit level and SS exceeded action
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	9:57			20.7	20.7	7.61	7.61	0.28	0.28	72.4	72.1	6.48	6.46		10.93	10.95		8.1		level
C1	830355	C1	9:45			17.5	17.5	7.74	7.74	0.60	0.60	70.8	70.3	6.76	6.71		11.30	11.40		6.7		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	9:47	Middle	Pale Green	17.5	17.5	7.74	7.74	0.60	0.60	70.2	69.9	6.70	6.68	6.71	11.41	11.41	11.38	6.2	6.45	

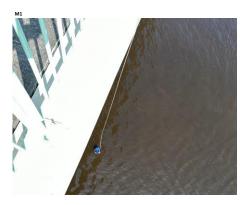
Action Level Exceedance Limit Level Exceedance

Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_008_W	9-Dec-22	M1	DO (mg/l)	7.34 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	According to the Contractor's information, sheet piling mainly was conducted at outfall on 9 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotexile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.  -During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or silt dropped from outfall work to Ng Tung River was observed by the monitoring team duing the monitoring process. Water quality mitigation measures were observed as mentioned by the Contractor.  Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 9 December 2022, water quality mitigation measure was identified during the monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/l)	6.71 mg/L			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuouslyThe Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 9 December 2022







#### Attachment 2 - Water quality measured on 9 December 20222

Date of Campling. 3 Dec 22 Weather Condition. The Ambient Temperature,00.	Date of Sampling:	9-Dec-22	Weather Condition:	Fine	Ambient Temperature,oC:	21
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Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	Tempe	erature c	р	ьН -	Sal	inity	DO Sa	turation %	D	O mg/L	DO Average	Turk	oidity NTU	Turb Average			Remarks / Observations
M1	830288	M1	12:30			23.8	23.8	7.08	7.08	0.32	0.32	87.6	87.4	7.39	7.37		13.65	13.65		10.1		DO 1.15.3
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	12:32	Middle	Pale Yellow	23.8	23.8	7.08	7.08	0.32	0.32	87.0	85.9	7.34	7.24	<u>7.34</u>	14.11	14.16	13.89	10.35 DO	DO exceeded limit level	
C1	830355	C1	12:15			22.4	22.4	7.12	7.12	0.25	0.25	84.4	84.9	7.31	7.36		23.71	23.72		18.7		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	12:17	Middle	Pale Yellow	22.4	22.4	7.12	7.12	0.25	0.25	85.4	85.2	7.40	7.39	7.37	23.51	23.49	23.61	18.7	18.70	

Action Level Exceedance Limit Level Exceedance

Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_009_W	12-Dec-22	M1	DO (mg/l)	7.79 mg/L (Action Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	According to the Contractor's information, escayation mainly was conducted at outfall on 12 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with gottextile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.  During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or sit dropped from outfall work to Ng Tung River was observed by the monitoring team during the monitoring process. Water quality mitigation measures were observed as mentioned by the Contractor.  Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 12 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/l)	8.06 mg/L			Action taken/ to be taken:	The Contractor and ET will monitor and check the outfall-related construction work continuously.     The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 12 December 2022







Attachment 2 - Water quality measured on 12 December 20222

Date of Sampling:	12-Dec-22	Weather Condition:	Fine	Ambient Temperature,oC:	15	
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Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	emperatu	re oc	pН		Salinity		O Saturati	on %	D	O mg/L	DO Average	Turb	bidity NTU	Turb Average			Remarks / Observations
M1	830288	M1	11:20	Middle	Pale Green	16.9	16.9	7.44	7.44	0.12	0.12	80.4	80.5	7.78	7.79	7.79	11.32	11.32	11.32	7.6		DO exceeded
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	11:22			16.9	16.9	7.44	7.44	0.12	0.12	80.6	80.5	7.80	7.79		11.32	11.32		8.2		action level
C1	830355	C1	11:10			17.0	17.0	7.53	7.53	0.14	0.14	84.2	83.7	8.13	8.08		22.33	22.29		7.2		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	11:12	Middle	Pale Green	17.0	17.0	7.53	7.53	0.14	0.14	83.2	82.8	8.04	7.99	8.06	22.14	22.15	22.23	7.9	7.55	

Action Level Exceedance Limit Level Exceedance



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_010_W	14-Dec-22	M1	DO (mg/l)	7.65 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	-According to the Contractor's information, excavation mainly was conducted at outfall on 14 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotextile and impensious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.
			Turbidity (NTU)	38.95 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU		-During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Centractor. And no soil or silt dropped from outfall work to Ng Tung River was observed by the monitoring team during the monitoring process. Water quality mitigation measures were observed as mentioned by the Contractor. Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.
			SS (mg/L)	27.30 mg/L (Limit Level Exceedance)	>18.8 mg/L	>19.5 mg/L		-Considering, land-based works was mainly conducted on 14 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/l) Turbidity (NTU) SS (mg/L)	6.82 mg/L 33.34 NTU 72.30 mg/L			Action taken/ to be taken:	The Contractor and ET will monitor and check the outfall-related construction work continuously.  -The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 14 December 2022







#### Attachment 2 - Water quality measured on 14 December 20222

Date of Sampling: 14-Dec-22	Weather Condition:	Cloudy	Ambient Temperature,oC:	11	
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Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	emperatur	re C	рН	-	Salinity		O Saturati	on %	D	Mg/L	DO Average	Turk	oidity NTU	Turb Average			Remarks / Observations
M1	830288	M1	11:30			15.1	15.1	7.41	7.41	0.11	0.11	76.1	76.2	7.65	7.66		38.84	38.96		27.7		DO, Turbidity and
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	11:32	Middle	Pale Green	15.1	15.1	7.41	7.41	0.11	0.11	76.1	76.1	7.65	7.65	<u>7.65</u>	39.00	39.01	<u>38.95</u>	26.9	27.30	SS levels exceeded limit levels
C1	830355	C1	11:15			15.5	15.5	7.45	7.45	0.12	0.12	66.8	691	6.66	6.88		33.24	33.28		72.7		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	11:17	Middle	Pale Green	15.5	15.5	7.45	7.45	0.12	0.12	68.8	69.0	6.86	6.88	6.82	33.36	33.46	33.34	71.9	72.30	

Action Level Exceedance Limit Level Exceedance

Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_011_W	16-Dec-22	M1	DO (mg/l)	6.26 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	According to the Contractor's information, excreation mainly was conducted at outfall on 16 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotestile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.
			Turbidity (NTU)	21.17 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU		During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or slit dropped from outfall work to Ng Tung River was observed by the monitoring team during the monitoring process. Water quality miligation measures were observed as mentioned by the Contractor. Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.
			SS (mg/L)	15.35 mg/L (Limit Level Exceedance)	>10.98 mg/L (120 % of C1)	>11.90 mg/L (130 % of C1)		-Considering, land-based works was mainly conducted on 16 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
			DO (mg/l)	6.98 mg/L			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuously.
		(Control Station for comparing to the impact station -	Turbidity (NTU)	27.34 NTU				<ul> <li>The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.</li> </ul>
		M1)	SS (mg/L)	9.15 mg/L				

Attachment 1 - Photo record for water quality monitoring on 16 December 2022







#### Attachment 2 - Water quality measured on 16 December 20222

Date of Sampling: 16-Dec-22 Weather Condition: Cloudy Ambient Temperature	e,oC:	15	
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Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance		erature c	р	»H	Sal	inity	DO Sa	turation %	D	O mg/L	DO Average	Turt	oidity NTU	Turb Average			Remarks / Observations
M1	830288	M1	10:06			16.9	16.9	7.32	7.32	0.11	0.11	67.0	67.4	6.49	6.53		21.00	21.11		16.0		DO, Turbidity and
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	10:08	Middle	Pale Green	16.9	16.9	7.32	7.32	0.11	0.11	67.4	66.9	5.53	6.48	<u>6.26</u> 21.	21.03	21.55	<u>21.17</u>	14.7	15.35	SS levels exceeded limit levels
C1	830355	C1	9:55	Middle	Pale Green	17.0	17.0	7.33	7.33	0.12	0.12	72.8	72.4	7.03	6.99	6.98	27.38	27.33		9.3		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	9:57			17.0	17.0	7.33	7.32	0.12	0.12	72.2	71.9	6.97	6.94		27.32	27.31	27.34	9.0	9.15	

Action Level Exceedance Limit Level Exceedance

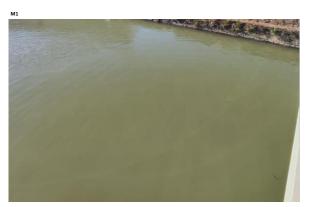


Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_012_W	19-Dec-22	M1	Turbidity (NTU)	21.36 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU	Finding:	-According to the Contractor's information, excavation mainly was conducted at outfall on 19 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks warpped with gedetedlin and impervious sheeting were placed to prevent wastewater or solf from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.  -During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or silt dropped from outfall work to Ng Tung River was observed by the monitoring team duing the monitoring process. Water quality mitigation measures were observed as mentioned by the Contractor. Construction work from another project was also identified at Na Tung River near to C1.1 he photo record taken
								Considering work from another project was associating at ray unity rever hear to 0.1. The proto record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 19 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project relations.
1		C1 (Control Station for comparing to the impact station - M1)	Turbidity (NTU)	20.61 NTU			Action taken/ to be taken:	The Contractor and ET will monitor and check the outfall-related construction work continuously.     The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 19 December 2022







#### Attachment 2 - Water quality measured on 19 December 20222

Date of Sampling:	19-Dec-22	Weather Condition:	Fine	Ambient Temperature,oC:	9
Date of Camping.	10 D00 ZZ	Wedner Condition.	TITIC	/ unbient remperature,ee.	<u> </u>

Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	emperatur		pН	-	Salinity		O Saturati	on %	D	O mg/L	DO Average	Turb	bidity NTU	Turb Average			Remarks / Observations
M1	830288	M1	9:10			10.7	10.7	7.50	7.50	0.15	0.15	73.5	76.5	8.07	8.16		21.26	21.25		6.6		Turibidity
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	9:12	Middle	Pale green	10.7	10.7	7.50	7.50	0.15	0.15	78.7	77.7	8.45	8.21	8.22	21.35	21.58	<u>21.36</u>	8.1		exceeded limit level
C1	830355	C1	8:45			10.5	10.5	7.84	7.84	0.11	0.11	84.1	72.8	8.05	7.76		20.56	20.74		8.6		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	8:47	Middle	Pale green	10.5	10.5	7.84	7.84	0.11	0.11	67.3	65.7	7.11	7.03	7.49	20.58	20.55	20.61	7.9	8.25	

Action Level Exceedance Limit Level Exceedance



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
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		According to the Contractor's information, reinforcement and concreting mainly were conducted at outfall on 21 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotestile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.
			Turbidity (NTU)	14.75 NTU (Action Level Exceedance)	>14.6 NTU	>15.6 NTU		During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or sit dropped from outfall work to Ng Tung River was observed by the monitoring team and unique the monitoring process. Water quality mitigation measures were observed as mentioned by the Contractor.  Construction work from another project was also identified at Ng Tung River near to C1.The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 21 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO mg/L Turbidity (NTU)	5.61 mg/L 21.52 NTU			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuously.  -The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 21 December 2022





Constrcution work from another project



#### Attachment 2 - Water quality measured on 21 December 20222

Date of Sampling: 21-Dec-22 Weather Condition: Fine Ambient Temperature,oC: 15

Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	Tempe		ţ	bН -		inity		aturation %	С	O mg/L	DO Average	Turk	oidity NTL	Turb Average		SS Aaverage	Remarks / Observations
M1	830288	M1	8:35			18.5	18.5	7.26	7.26	0.22	0.22	70.0	65.3	6.56	6.02		14.88	14.89		9.3		DO exceeded limit
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	8:37	Middle	Pale Green	18.5	18.5	7.26	7.26	0.22	0.22	62.6	66.6	5.82	6.14	<u>6.14</u>	14.47	14.77	14.75	9.2	9.25	level and Turibidity exceeded action level
C1	830355	C1	8:35			17.3	17.3	8.13	8.13	0.11	0.11	58.0	54.3	5.86	5.22		21.64	21.43		13.8		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	8.:37	Middle	Pale Green	17.3	17.3	8.13	8.13	0.11	0.11	60.6	57.9	5.82	5.54	5.61	21.49	21.53	21.52	15.2	14.50	

Action Level Exceedance
Limit Level Exceedance

Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
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)		According to the Contractor's information, reinforcement and concreting mainly were conducted at outfall on 23 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotextile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.
			SS (mg/L)	8.45 mg/L (Limit Level Exceedance)	>4.98 mg/L (120% of C1)	>5.40 mg/L (130% of C1)		-During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or silt dropped from outfall work to Ng Tung River was observed by the monitoring team during the monitoring process. Water quality miligation measures were observed as mentioned by the Contractor.  Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  Considering, land-based works was mainly conducted on 23 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	Turbidity (NTU) SS (mg/L)	7.34 NTU 4.15 mg/L				-The Contractor and ET will monitor and check the outfall-related construction work continuously.  -The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

#### Attachment 1 - Photo record for water quality monitoring on 23 December 2022





Constrcution work from another project



Attachment 2 - Water quality measured on 23 December 20222

Date of Sampling: 23-Dec-22 Weather Condition: Fine Ambient Temperature, oC: 13

Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance		erature oc		bН -	Sali		DO Sa	turation %	D	O mg/L	DO Average	Turb	oidity NTU	Turb Average		SS Aaverage	Remarks / Observations
M1	830288	M1	8:45			14.4	14.4	7.53	7.53	0.24	0.24	90.6	88.2	9.23	9.30		9.36	9.07		8.3		Turbidity exceeded action
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	8:45	Middle	Pale green	14.4	14.4	7.53	7.53	0.24	0.24	89.9	87.4	9.15	8.89	9.14	9.01	9.15	9.15	9.4	<u>8.85</u>	level and SS exceeded limit level
C1	830355	C1	8:15			13.7	13.7	7.70	7.70	0.23	0.23	84.2	86.1	8.73	8.93		7.49	7.36		4.5		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	8:17	Middle	Pale green	13.7	13.7	7.70	7.70	0.23	0.23	80.7	77.7	8.38	8.06	8.53	7.22	7.30	7.34	3.8	4.15	

Action Level Exceedance Limit Level Exceedance



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	·
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	Finding:	According to the Contractor's information, reinforcement and concreting mainly were conducted at outfall on 28 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with gootoxiale and impervious sheeting were placed to prevent wastewater or solf from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.
			SS (mg/L)	7.90 mg/L (Action Level Exceedance)	>7.38 mg/L (120% of C1)	>8.00 mg/L (130% of C1)		During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or sill dropped from outfall work to Ng Tung Rhev was observed by the monitoring team during the monitoring process. Water quality mitigation measures were observed as mentioned to the Contractor. Construction work from another project was also identified at Ng Tung River near to C1. The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively. -Considering, land-based works was mainly conducted on 28 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/L) SS (mg/L)	6.62 mg/L 6.15 mg/L			Action taken/ to be taken:	-The Contractor and ET will monitor and check the outfall-related construction work continuously.  -The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 28 December 2022





Constrcution work from another project



#### Attachment 2 - Water quality measured on 28 December 20222

Date of Sampling: 28-Dec-22 Weather Condition: Fine Ambient Temperature,oC: 1	15	
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Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	Tempo	erature c	р	bН -		inity	DO Sa	turation %	D	O mg/L	DO Average	Turt	oidity NTU	Turb Average		SS Aaverage	Remarks / Observations
M1	830288	M1	8:45			16.5	16.5	7.79	7.79	0.14	0.14	71.8	70.8	7.08	6.93		11.27	11.30		10.9		DO exceeded limit
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	8:50	Middle	Pale Green	16.5	16.5	7.99	7.79	0.14	0.14	69.2	67.1	6.98	6.56	<u>6.89</u>	11.40	11.45	11.36	4.9	7.90	level and SS exceeded action level
C1	830355	C1	8:15			16.4	16.4	7.76	7.76	0.12	0.12	67.4	68.0	6.93	6.67		12.32	12.19		7.9		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	8:17	Middle	Pale Green	16.4	16.4	7.76	7.76	0.12	0.12	66.4	64.7	6.52	6.35	6.62	12.29	12.20	12.25	4.4	6.15	

Action Level Exceedance Limit Level Exceedance



Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Investigation Result	
SWH_016_w	30-Dec-22	M1	DO (mg/l)	5.45 mg/L (Limit Level Exceedance)	<7.80mg/L	<7.70mg/L	Finding:	-According to the Contractor's information, reinforcement and concreting mainly were conducted at outfall on 30 December 2022. The construction works for the outfall were conducted mainly land-based works. During the construction works at the outfall, concrete blocks wrapped with geotextile and impervious sheeting were placed to prevent wastewater or soil from entering Ng Tung River. Moreover, there was no water discharged from the Project site to Ng Tung River.
			Turbidity (NTU)	15.94 NTU (Limit Level Exceedance)	>14.6 NTU	>15.6 NTU		-During the water quality monitoring process, mainly land-based work was observed by the monitoring team as mentioned by the Contractor. And no soil or slid dropped from outfall work to Ng Tung River was observed by the monitoring team during the monitoring process. Water quality mitigation measures were observed as mentioned by the Contractor.  Construction work from another project was also identified at Ng Tung River near to C1.The photo record taken during the monitoring process and water quality monitoring data are annexed in Attachment 1 and Attachment 2 respectively.  -Considering, land-based works was mainly conducted on 30 December 2022, water quality mitigation measure was identified during the monitoring process, no discharge or dropping soil was identified during monitoring process. There was no evidence showing the water quality affected by the Project. This exceedance was considered non-project related.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/l) Turbidity (NTU)	5.59 mg/L 16.45 NTU			Action taken/ to be taken:	- The Contractor and ET will monitor and check the outfall-related construction work continuously.  - The Contractor should ensure the water quality mitigation measures are implemented properly for outfall-related construction work.

Attachment 1 - Photo record for water quality monitoring on 30 December 2022





Constrcution work from another project



#### Attachment 2 - Water quality measured on 30 December 20222

Date of Sampling:	30-Dec-22	Weather Condition:	Fine	Ambient Temperature,oC:	12	1
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Station Reference	Coordinate (Easting, Northing)	Sample ID	Time	Sampling Depth	Appearance	Tempe		p	•H -	Sal	inity	DO Sa	turation %	D	O mg/L	DO Average	Turb	oidity NTU	Turb Average			Remarks / Observations
M1	830288	M1	8:30			14.8	14.8	7.42	7.42	0.14	0.14	54.9	53.8	5.55	5.42		15.88	15.98		12.2		DO and Turbidity
Impact Station, Downstream of the proposed outfall	841575	M1 DUP	8:32	Middle	Pale Green	14.8	14.8	7.42	7.42	0.14	0.14	52.8	55.1	5.33	5.51	<u>5.45</u>	15.94	15.97	<u>15.94</u>	12.7		exceeded limit level
C1	830355	C1	8:00			15.0	15.0	7.67	7.67	0.12	0.12	55.0	57.1	5.61	5.74		16.39	16.41		12.0		
Control Station, Upstream of the proposed outfall	841532	C1 DUP	8:02	Middle	Pale Green	15.0	15.0	7.67	7.67	0.12	0.12	55.7	53.3	5.61	5.38	5.59	16.51	16.48	16.45	11.3	11.65	

Action Level Exceedance Limit Level Exceedance

# Appendix 6.1

## **Event and Action Plans**



### **Event and Action Plan**

### **Event and Action Plan for Construction Noise**

Frant		Act	ion	
Event	ET	IEC	ER	Contractor
Action Level exceeded	1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness;	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	Submit noise     mitigation proposals     to IEC;     Implement noise     mitigation proposals.
Limit Level exceeded	1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

### **Event and Action Plan for Construction Dust Monitoring**

	Action Plan for Cor	Actio		
Event	ET	IEC	ER	Contractor
Action Level				
Action level being exceeded by one sampling	Identify source, investigate the causes of complaint and propose remedial measures;     Inform IEC and ER;     Repeat measurement to confirm finding;     Increase monitoring frequency to daily.	Check monitoring data submitted by ET;     Check Contractor's working method.	Notify the Contractor.	Rectify any unacceptable practices.     Amend working methods agreed with the ER as appropriate.
Action level being exceeded by two or more consecutive sampling	1. Identify sources. 2. Inform the IEC and ER. 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings. 5. Increase monitoring frequency to daily. 6. Discuss with the IEC, ER and Contractor on remedial action required. 7. If exceedance continues, arrange meeting with the IEC, Contractor and ER. 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to IEC within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level		l		1
Limit level being exceeded by one sampling	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor, IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.



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Frant		Actio	on	
Event	ET	IEC	ER	Contractor
Limit level being exceeded by two or more consecutive sampling	ER informed of the results.  1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

### **Event and Action Plan for Ecological Monitoring**

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

#### **Event and Action Plan for Landscape and Visual**

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

### **Event and Action Plan for Water Quality Monitoring**

- ,		Actio	on	
Event	ET	IEC	ER	Contractor
Action Level				
Action level being exceeded by one sampling day	1.Repeat in situ measurement on the next day of exceedance to confirm findings; 2.Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3.Identify source(s) of impact and record in notification of exceedance; 4.Inform IEC, Contractor(s) and ER	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Inform EPD.	Confirm receipt of notification of exceedance in writing	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice
Action level being exceeded by two or more consecutive sampling	1. Repeat in situ measurement on the next day of exceedance to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s) and ER; 5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Inform EPD; 3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented. 3. Ensure additional mitigation measures are properly implemented.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice; 3. Consider changes of working methods; 4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days; 5. Implement the agreed.

F		Actio	on	
Event	ET	IEC	ER	Contractor
Limit Level				
Limit level being exceeded by one sampling day	1. Repeat in situ measurement on the next day of exceedance to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s) and ER; 5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Inform EPD; 3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented. 3. Ensure additional mitigation measures are properly implemented. 4. Request Contractor(s) to critically review the working methods.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice; 3. Critically review the need to change working methods; 4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days; 5. Implement the agreed mitigation measures.
Limit level being exceeded by two or more consecutive sampling days	1. Repeat in situ measurement on the next day of exceedance to confirm findings; 2. Check monitoring data, plant, equipment and Contractor(s)'s working methods; 3. Identify source(s) of impact and record in notification of exceedance; 4. Inform IEC, Contractor(s) and ER; 5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.	1. Check monitoring data submitted by ET and Contractor(s)'s working methods; 2. Inform EPD; 3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of exceedance in writing; 2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented. 3. Ensure additional mitigation measures are properly implemented. 4. Request Contractor(s) to critically review the working methods.	1. Confirm receipt of notification of exceedance in writing; 2. Check plant and equipment and rectify unacceptable practice; 3. Critically review the need to change working methods; 4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days; 5. Implement the agreed mitigation measures.

# Appendix 6.2

# Summary of Notification of Exceedance

### Summary for Notification of Exceedance

Reporting Period: <u>December 2022</u>

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

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

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



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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	



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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 8.1

**Complaint Log** 



### **Summary of Environmental Complaints Log**

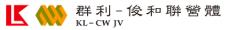
Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby	
					The investigation and mitigation measures included	
					- Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River	
					- Arranged to repair the wastewater treatment system	
1	18 March 2020	EPD	Expansion Site of SWHSTP (Portion C)	Water contamination	- Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity	Closed
					- 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	
					Significant odour nuisance was suspected to be emitted from the construction activities of SWHEPP	
					The investigation and mitigation measures included	
					- Ensured only PMEs with valid NRMM label were used on- site	
	19 February				- Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart	
2	2021	EPD	SWHEPP	Odour nuisance	- Used ULSD for diesel-powered equipment	Closed
					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	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Air nuisance was suspected to be originated from the construction activities of SWHEPP	
					The investigation and mitigation measures included	
					Ensured only PMEs with valid NRMM label were used on- site	
3	9 August 2021	EPD	SWHEPP	Air Quality	Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart	Closed
					- 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	
					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.	
20220304	4 March	EPD	SWHEPP	Odour nuisance	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:	Closed on 22 April
20220304	2022	EPD	SWIEPP	Odour nuisance	Ensure only equipment with valid NRMM label is allowed to be used at site and regular maintenance of equipment	with EPD.
					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	

## Appendix 9.1

# Construction Programme of Individual Contracts



Activity ID	KD	Task Name	Inclement Weather CE no. (NCE PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start A	ctual Finish Predecessors		% Time Complete Risk Allowan	2019   2020   2021   2022   2023   2024   2025
PD-00000	*	Planned Completion - Key Date (cal. day)	no.)		Wed 12/5/21	Wed 23/7/25	Wed 12/5/21	NA		26%	H1 H2 Z3/
PKD-00000 PKD-01000	* KD1A	Planned Completion - Key Dates KD1A		589 days 0 days	Wed 12/5/21 Wed 12/5/21	Thu 22/12/22 Wed 12/5/21	Wed 12/5/21 Wed 12/5/21	NA Wed 12/5/21 284FF	19FF	<b>0%</b> 100%	12/5 22/12
PKD-02000	KD2A	KD2A		0 days	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22 622FF	20FF	100%	<b>♦ 3/1</b>
PKD-03000	KD3A	KD3A		0 days	Fri 2/9/22	Fri 2/9/22	NA T. T/0/00	NA 314FF	21FF	0%	♦ 2/9 2.7/6
PKD-04000 PKD-05000	KD3B KD3C	KD3B KD3C		0 days 0 days	Tue 7/6/22 Fri 30/9/22	Tue 7/6/22 Fri 30/9/22	Tue 7/6/22 NA	Tue 7/6/22 345FF NA 367FF	22FF 23FF	100%	♦ 7/6 ♦ 30/9
PKD-06000	KD3D	KD3D		0 days	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21 399FF	24FF	100%	♦ 20/11
PKD-07000 PCD-00000	KD3E	KD3E Planned Completion - Section of the Works (cal. day)		0 days	Thu 22/12/22 Fri 25/3/22	Thu 22/12/22 Wed 23/7/25	NA Fri 25/3/22	NA 414FF,422FF,430FF,438FF,473F	F,425FF	0% <b>0%</b>	25/3
PCD-01000	SW1	Section 1 of Works		0 days	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22 520FF,551FF,552FF,553FF,554F	F,527FF	100%	♦ 25/3
PCD-02000	SW2 SW3	Section 2 of Works		0 days	Sat 19/8/23	Sat 19/8/23	NA NA	NA 643FF,655FF	28FF	0% 0%	♦ 19/8 • 11/5
PCD-03000 PCD-04000	SW3 SW4	Section 3 of Works Section 4 of Works		0 days 0 days	Thu 11/5/23 Sat 15/4/23	Thu 11/5/23 Sat 15/4/23	NA NA	NA 205FF,369FF,383FF,401FF,423F NA 521FF,324FF,350FF,370FF,384F		0%	♦ 11/5 ♦ 15/4
PCD-05000	SW5	Section 5 of Works		0 days	Tue 23/7/24	Tue 23/7/24	NA	NA 291FF,325FF,351FF,371FF,385F		0%	<b>♦ 23/7</b>
PCD-06000 IWKD1A-01040	DLP KD1A	Defect Liability Period  Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		365 days 0 days	Wed 24/7/24 Wed 16/6/21	Wed 23/7/25 Wed 16/6/21	NA Wed 16/6/21	NA 48,589FF Wed 16/6/21 55		0% 100%	♦ 16/6
IWKD2A-01040	KD2A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		0 days	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22 63		100%	♦ 21/2
IWKD3A-01040	KD3A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		1 day	Tue 2/8/22	Wed 3/8/22	Tue 2/8/22	NA 71		0%	2/8   3/8
IWKD3B-01040 IWKD3C-01040	KD3B KD3C	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022  Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		0 days 1 day	Tue 5/7/22 Fri 8/7/22	Tue 5/7/22 Fri 8/7/22	Tue 5/7/22 Fri 8/7/22	Tue 5/7/22 80 NA 88		100% 0%	♦ 5/7 8/7   8/7
IWKD3D-01040	KD3D	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		0 days	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22 96		100%	♦ 13/1
IWKD3E-01040 IWSW1-01040	KD3E	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		1 day	Sat 3/12/22	Sun 4/12/22	NA	NA 103		0%	3/12   4/12 24/5    25/5
IWSW1-01040	SW1 SW2	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022  Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022		1 day 1 day	Tue 24/5/22 Mon 8/4/24	Wed 25/5/22 Mon 8/4/24	Tue 24/5/22 NA	NA 111 NA 120		0%	24/5   25/5
IWSW3-01040	SW3	Delay and Disruption of works due to Red/Black Storm Signal/Typhoon No.8 or above for September 2022		1 day	Sun 29/10/23	Sun 29/10/23	NA	NA 129		0%	29/10   29/10
IWSW4-01040 IWSW5-01040	SW4 SW5	Delay and Disruption of works due to Red/Black Storm Signal/Typhoon No.8 or above for September 2022  Delay and Disruption of works due to Red/Black Storm Signal/Typhoon No.8 or above for September 2022		1 day 1 day	Tue 28/3/23 Wed 12/2/25	Wed 29/3/23 Wed 12/2/25	NA NA	NA 138 NA 147		0%	28/3   29/3
CWPC-00000	*	Construction Works of Portion C of the Site		_	wed 12/2/25 vs Mon 16/9/19		Mon 16/9/19	NA 147		46%	16/9
CUV1-00000	* VD1A	UV System No. 1 & Effluent Pumping Station No. 1 (1)  Wells State and stationary Construction @ 7 (mPD) to 45 (mPD) (Additional SD4 3 and the (DN100 v. 2 % DN	(100) (100) (140) (140) (170) (170)	970 days	Mon 16/9/19		Mon 16/9/19	NA Word 10/5/01 079	004 005 000 007	94%	16/9 21/12
CUV1-09041 CUV1-10000	KD1A KD1A	Walls, Slabs and staircase Construction @+7.4mPD to 16.4mPD [Additional SP1-3 puddle (DN100 x 2 & DN Construction of Switch room	(80) (204),(228) (108), (146), (148), (179), (182) (204),(228)	41 days 51 days	Sat 20/3/21 Tue 23/3/21	Wed 12/5/21 Wed 12/5/21	Sat 20/3/21 Tue 23/3/21	Wed 12/5/21 278 Wed 12/5/21	284,285,283,287	100% 100%	20/3 <b>1</b> 2/5 23/3 <b>1</b> 2/5
CUV1-11000	KD1A	Allow access to Contractor DE/2018/03 for E&M Installation		0 days	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21 281	36FF	100%	♦ 12/5
CUV1-12000 CUV1-12200	SW1 SW1	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining	(95), (296), (367), 359 292	256 days 163 days	Tue 18/5/21	Fri 25/3/22 Fri 25/3/22	Tue 18/5/21 Tue 7/9/21	Fri 25/3/22 242SS,168SS,281 Fri 25/3/22 287FS+1 day	581,582,583,286 44FF,289	100%	18/5 25/3 7/9   25/3
CUV1-12500	SW4	Effluent Chamber (including Additional Works from PMI)  Underground utilities works - Revised Cable Ducts plan	318, 276,219,248,207	47 days	Tue 7/9/21 Tue 16/8/22	Wed 12/10/22	NA	NA 286FF	496SS,432SS	0%	1/9   20/3
CUV1-13000	SW5	Surrounding Site formation works and road works		180 days	Fri 10/3/23	Wed 18/10/23	NA	NA 325FF	48FF	0%	
CSDC-00000 CSDC-12000	* KD3A	Sludge Digesters and Distribution Chamber (4)  Allow access to Contractor DE/2018/03 for E&M Installation		1143 days 1 day	Sat 7/12/19 Fri 2/9/22	Wed 18/10/23 Fri 2/9/22	Sat 7/12/19 Fri 2/9/22	NA Fri 2/9/22 305,313	38FF	<b>62%</b> 100%	7/12 18/10
CSDC-12050	SW3	Civil & Structural works at G/F		45 days	Tue 14/3/23	Thu 11/5/23	NA NA	NA 319	46FF	0%	14/3 11/5
CSDC-15000	SW3	ABWF Works & BS Works, Change to Work Information (Apply Internal Anti-corrosion Protective Lining)	(173),594	71 days	Wed 3/8/22	Thu 27/10/22	Wed 3/8/22	NA 242SS,168SS,305FS+15 days	46FF	0%	3/8 27/10
CSDC-15500 CSDC-16000	SW4 SW5	Surrounding sewerage, utility and process pipe works Surrounding Site formation works and road works	358,298,222,248,205,206	93 days 180 days	Tue 15/11/22 Fri 10/3/23	Fri 10/3/23 Wed 18/10/23	NA NA	NA 321 NA 324	47FF,581FS-360 days,582FS-3 48FF,351FF,371FF,385FF,403F	0%	15/11 10/3 10/3 18/10
CSDB-00000	*	Sludge Dewatering Building (2)		_	? Tue 26/11/19		Tue 26/11/19	NA		67%	
CSDB-12000 CSDB-14000	KD3B SW3	Allow access to Contractor DE/2018/03 for E&M Installation	(OE) (172) EQ4	0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22 344	39FF,346FS+65 days,348	100% 0%	♦ 7/6 30/4 12/12
CSDB-14000 CSDB-14500	SW3 SW4	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining Surrounding sewerage, utility and process pipe works	(95), (173),594 (335),(53),219,248,205,206,207	187 days 128 days	Sat 30/4/22 Thu 11/8/22	Mon 12/12/22 Fri 13/1/23	Sat 30/4/22 Thu 11/8/22	NA 242SS,168SS,344SS+37 days NA 346SS	47FF,581FS-367 days,582FS-3	0%	11/8 13/1
CSDB-15000	SW5	Surrounding Site formation works and road works		180 days	Fri 21/4/23	Wed 18/10/23	NA	NA 325FF	48FF	0%	21/4 18/10
CHPB-00000 CHPB-09000	* KD3C	Combined Heat Power Building (3)  Allow access to Contractor DE/2018/03 for E&M Installation		1141 days 0 days	Tue 10/12/19 Fri 30/9/22	Wed 18/10/23 Fri 30/9/22	Tue 10/12/19 Fri 30/9/22	NA Fri 30/9/22 366FS-20 days	40FF	<b>47%</b> 100%	10/12
CHPB-11000	SW3	ABWF Works & BS Works with additional/change to works information	(173)	52 days	Sat 8/10/22	Wed 7/12/22	NA	NA 242SS,168SS,366FS-15 days	46FF	0%	8/10 7/12
CHPB-11500	SW4	Surrounding sewerage, utility and process pipe works	221,219,220,248,205,206	64 days	Thu 3/11/22	Thu 19/1/23	NA	NA 366FS+7 days	47FF,581FS-428 days,582FS-4	0%	3/11 19/1
CHPB-12000 CSPS-00000	SW5	Surrounding Site formation works and road works  Sewage Pumping Station (9)		_	Fri 21/4/23 Fri 15/11/19	Wed 18/10/23 Wed 18/10/23	NA Fri 15/11/19	NA 325FF	48FF	0% <b>75%</b>	21/4 18/10 15/11 18/10
CSPS-09000	KD3E	R.C. Structure & waterproofing works - Change to Work Information (Additional Puddle Flange and Civil Provision)	268, 338, (204), (63) ,(303), (341)		Tue 26/1/21		Tue 26/1/21	Wed 26/1/22 380,166,238,239,240,381SS-2 em	or 383,42FF	100%	26/1 26/1
CSPS-10000 CSPS-10500	SW3 SW4	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining Surrounding sewerage, utility and process pipe works	386 , 299	90.5 days 45 days		Sat 20/8/22	Tue 3/5/22 Mon 13/6/22	Sat 20/8/22 242SS,168SS,167,382 Thu 4/8/22 311FS-38 days	46FF 47FF,581FS-148 days,582FS-1	100% 3 100%	3/5 20/8 13/6 4/8
CSPS-11000	SW5	Surrounding Site formation works and road works	300 , 299		Mon 13/6/22 Fri 21/4/23	Wed 18/10/23	NA	NA 325FF	48FF	0%	21/4 18/10
CWS2-00000	*	Workshop No. 2 (5)		-		Wed 18/10/23	Mon 16/9/19	NA		61%	16/9
CWS2-08030 CWS2-09000	KD3D KD3D	Roof Construction @+19.00mPD - Revised Civil Requirements in R/F  Allow access to Contractor DE/2018/03 for E&M Installation	(302)	14 days 0 days	Fri 5/11/21 Sat 20/11/21	Sat 20/11/21	Fri 5/11/21 Sat 20/11/21	Sat 20/11/21 397 Sat 20/11/21 398	399 41FF	100% 100%	5/11 20/11   • 20/11
CWS2-11000	SW3	ABWF Works & BS Works - Revised Architectural Layout & Schedule for Doors, Louvers and Windows	(95), (173), (406,407,408)	278 days		Mon 31/10/22	Mon 22/11/21	NA 242SS,168SS	46FF	64%	22/11 31/10
CWS2-11500	SW4	Surrounding sewerage, utility and process pipe works	221,219,220,205,206,207	40 days	Fri 5/8/22	Wed 21/9/22	Fri 5/8/22	Wed 21/9/22 384	47FF,581FS-200 days,582FS-2	100%	5/8 21/9
CWS2-12000 CTHP-00000	SW5	Surrounding Site formation works and road works  Thermal Hydrolysis Pretreatment (6)			Fri 21/4/23 rs Thu 19/12/19	Wed 18/10/23 Wed 10/7/24	NA Thu 19/12/19	NA 325FF NA	48FF	0% <b>29%</b>	19/12
CTHP-09000	KD3E, SW3	R.C. Plinth - Change to Works Information	268, 338 225, (115),(236)	0 days	Mon 2/11/20	Mon 2/11/20	Mon 2/11/20	Mon 2/11/20 412,308,413SS-2 emons	42FF,46FF	100%	
CTHP-09500	SW4	Surrounding sewerage, utility and process pipe works		64 days	Mon 31/10/22		NA NA	NA 346FS+28 days	47FF,581FS-200 days,582FS-2	0%	31/10 16/1
CTHP-10000 CFCD-00000	SW5	Surrounding Site formation works and road works  Ferric Chloride Dosing Facilities (10)		,	Sat 13/1/24 Tue 15/6/21	Wed 10/7/24 Wed 10/7/24	NA Tue 15/6/21	NA 325FF NA	48FF	0% <b>27%</b>	13/1 10/7
CFCD-04000	KD3E	Steel Roof Structure (On-site Fabrication)		25 days	Sat 30/7/22	Fri 7/10/22	Sat 30/7/22	NA 421	423,42FF,470FS-11 days	0%	30/7 , 7/10
CFCD-05000 CFCD-05500	SW3 SW4	ABWF Works & BS Works, Change to Work Information (Application of Protective Lining System)  Surrounding sewerage, utility and process pipe works - Updated Process Pipes Arrangement	<i>594</i> 386, 298	28 days 35 days	Fri 7/10/22 Wed 21/9/22	Wed 9/11/22 Wed 2/11/22	NA Wed 21/9/22	NA 422,242,168 NA 402	46FF,581FS-185 days,582FS-1 47FF,581FS-200 days,582FS-2	0%	7/10 ■ 9/11 21/9 ■ 2/11
CFCD-05500 CFCD-06000	SW5	Surrounding sewerage, utility and process pipe works - Updated Process Pipes Arrangement  Surrounding Site formation works and road works	300, 230	180 days	Sat 13/1/24	Wed 2/11/22 Wed 10/7/24	Wed 21/9/22 NA	NA 325FF	47FF,581FS-200 days,582FS-2	0%	13/1
CFHB-00000	*	Fire Hydrant and Booster Pump Room (16)		877.8 days	Fri 16/7/21	Wed 10/7/24	Fri 16/7/21	NA NA 10050 4 1	101 1055	0%	16/7
CFHB-03000 CFHB-04000	KD3E SW3	R.C. Structure & waterproofing works  ABWF Works & BS Works		40 days 24 days	Tue 1/11/22 Sat 17/12/22		NA NA	NA 428FS+1 day NA 430,242SS,168SS	431,42FF 46FF,581FS-320 days,582FS-3	0% 5 0%	17/11 <b>17</b> /12 17/12
CFHB-04500	SW4	Surrounding sewerage, utility and process pipe works		46 days	Wed 12/10/22	Mon 5/12/22	NA	NA 290SS,346SS	47FF,581FS-200 days,582FS-2	0%	12/10 5/12
CFHB-05000 CTFS-00000	SW5	Surrounding Site formation works and road works  Transformer and Switchroom (15)		180 days	Sat 13/1/24 Eri 16/7/21	Wed 10/7/24 Wed 18/10/23	NA Eri 16/7/21	NA 325FF NA	48FF	0% <b>0%</b>	13/1 10/7
CTFS-00000 CTFS-03000	KD3E	R.C. Structure		671 days 47 days	Fri 16/7/21 Fri 28/10/22	Wed 18/10/23 Thu 22/12/22	Fri 16/7/21 NA	NA 436,166,238,437	439,42FF	0% 5	28/10 = 22/12
CTFS-04000	SW3	ABWF Works & BS Works	(95)	22 days	Thu 22/12/22	Fri 20/1/23	NA	NA 438,242SS,168SS	46FF	0%	22/12 20/1
CTFS-04500 CTFS-05000	SW4 SW5	Surrounding sewerage, utility and process pipe works Surrounding Site formation works and road works		58 days 180 days	Thu 11/8/22 Fri 21/4/23	Thu 20/10/22 Wed 18/10/23	NA NA	NA 350SS NA 325FF	47FF,581FS-200 days,582FS-2 48FF	0%	11/8 20/10 21/4 18/10
CUC-00000	*	Utility Corridor (13)	204	310 days	Wed 5/10/22		NA NA	NA NA	.011	0%	5/10 20/10
CUC-03500	SW4	Surrounding sewerage, utility and process pipe works	248,205,207	50 days	Tue 10/1/23	Mon 13/3/23	NA	NA 444	47FF,581FS-200 days,582FS-2	0%	10/1 13/3
CUC-04000 CWMC-00000	SW5	Surrounding Site formation works and road works  Water Meter Cabinet (11)	204	_	Mon 13/3/23 Sun 4/9/22	Fri 20/10/23 Wed 18/10/23	NA NA	NA 446 NA	48FF	0% <b>0%</b>	13/3 20/10 4/9 18/10
CWMC-04000	SW5	Surrounding Site formation works and road works	204	-	Fri 21/4/23	Wed 18/10/23 Wed 18/10/23	NA NA	NA 325FF	48FF	0%	21/4 18/10
CGH-00000	*	Guard House (14)	205	834.8 days	Fri 16/7/21	Sat 18/5/24	Fri 16/7/21	NA NA 44400 FO dour		0%	16/7
CGH-03500 CGH-04000	SW4 SW5	Surrounding sewerage, utility and process pipe works Surrounding Site formation works and road works	205	-	Fri 20/1/23 Tue 21/11/23		NA NA	NA 444SS+59 days NA 325FF	48FF	0%	20/1 10/6 21/11 18/5
(,(aH-()4000		222ang one formation from and fold from			1/11/20	Wed 18/10/23	Fri 3/12/21	NA NA	. 91.1	23%	

Status Date: 20 Oct 22

Executive Summary Programme (Status Date: 20/10/2022)

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- Civil Works for Sludge Treatment Facilities and 132kV Primary Substation Duration Start Successors Allowan 2019 no. (NCE 466 CCPS-02000 KD3E R.C. Structure Wed 29/6/22 Mon 21/11/22 Wed 29/6/22 NA 166,238,465SS-2 emons,464FS+61 467FS+32 days 30/12 3/2 467 CCPS-02500 SW4 Surrounding sewerage, utility and process pipe works 26 days Fri 30/12/22 Fri 3/2/23 NA NA 466FS+32 days 47FF 468 CCPS-03000 SW5 21/4 18/10 180 days Fri 21/4/23 Wed 18/10/23 NA 325FF Surrounding Site formation works and road works 903.8 days Tue 15/6/21 Wed 10/7/24 469 CWGB-00000 Waste Gas Burner (8) 10/7 10/10 27/10 473 CWGB-03000 KD3F B.C. Plinth 15 days Mon 10/10/22 Thu 27/10/22 NA NA 166 472SS-2 emons 471 42FF 474 474 CWGB-03500 SW4 Surrounding sewerage, utility and process pipe works 34 days Tue 22/11/22 Tue 3/1/23 NA 473.384SS 47FF.581FS-200 days.582FS-2 0% 22/11 3/1 13/1 475 CWGB-04000 Sat 13/1/24 NA 325FF Surrounding Site formation works and road works 180 days 476 CPSW-00000 Plant Services Water System (20) 835 days Mon 21/12/20 Wed 18/10/23 Mon 21/12/20 21/12 480 CPSW-03000 KD3F Basement Construction @+1,20mPD - Change to Works Information (Basement) (136), (117) 30 days Tue 26/1/21 Thu 4/3/21 Tue 26/1/21 Thu 4/3/21 478 166 479SS-2 emons 42FF 481 100% 26/1 4/3 1/4 30/5 481 CPSW-03500 SW3 ABWF Works & BS Works Fri 1/4/22 Mon 30/5/22 Mon 30/5/22 480 482.46FF 60 days Fri 1/4/22 100% 16/8 \_\_\_ 6/12 482 CPSW-03600 Surrounding sewerage, utility and process pipe works - (Updated Process Pipe Arrangement) 439,455 94 days Tue 16/8/22 Tue 6/12/22 Tue 16/8/22 NA 481,350SS,432SS 47FF,581FS-200 days,582FS-2 0% 483 CPSW-04000 SW5 Surrounding Site formation works and road works 338.(204). 180 days Fri 21/4/23 Wed 18/10/23 NA 325FF 48FF 21/4 18/10 484 CDS11-00000 Deodorization System No. 11 (18) Tue 15/6/21 18/10 697 days Tue 15/6/21 Wed 18/10/23 0% 488 CDS11-03000 KD3E, SW3 R.C. Plinth 22/10 16/11 Sat 22/10/22 Wed 16/11/22 NA 486,166,487SS-2 emons 42FF.449SS.46FF 21 days 0% 489 CDS11-03500 Surrounding sewerage, utility and process pipe works Thu 11/8/22 Sat 22/10/22 Thu 11/8/22 NA 346SS 47FF 11/8 = 22/10 180 days 490 CDS11-04000 SW5 Surrounding Site formation works and road works Fri 21/4/23 Wed 18/10/23 NA 325FF 48FF 21/4 18/10 Fri 16/7/21 Biogas Holder (7) 671 days Fri 16/7/21 Wed 18/10/23 491 CBGH-00000 NA 25% 18/10 495 CBGH-03000 R.C. Plinth - Change to Works Information (Resize of Plinth) Mon 5/9/22 493,166,494SS-2 emons,492FS-17 42FF,46FF,496FS+16 days 15/7 = 5/9 KD3E, SW3 Fri 15/7/22 Mon 5/9/22 Fri 15/7/22 45 days 100% 24/9 15/4 21/4 18/10 496 CBGH-03500 Surrounding sewerage, utility and process pipe works - update process pipe arrangement, Revised Plan for Pipe 262 297 248 163 days Sat 24/9/22 Sat 15/4/23 Sat 24/9/22 NA 290SS,305,495FS+16 days 47FF,581FS-200 497 CRGH-04000 SW5 Surrounding Site formation works and road works 180 days Fri 21/4/23 Wed 18/10/23 NΔ NA 325FF 48FF Ω% 30/7 498 CH2S-00000 Sat 30/7/22 H2S Removal System (12) 363 days Sat 30/7/22 Wed 18/10/23 18/10 NA 2% 502 CH2S-03000 KD3E, SW3 Thu 6/10/22 6/10 22/10 Sat 22/10/22 15 days 503 CH2S-03500 SW4 Surrounding sewerage, utility and process pipe works 73 days Fri 30/12/22 Thu 30/3/23 NΔ NA 319SS+50 days 47FF,581FS-200 days,582FS-2 30/12 30/3 21/4 18/10 504 CH2S-04000 SW5 Surrounding Site formation works and road works 180 days Fri 21/4/23 Wed 18/10/23 NA NA 325FF 48FF 505 CDS12-00000 Deodorization System No. 12 (19) 697 days Tue 15/6/21 Wed 18/10/23 Tue 15/6/21 509 CDS12-03000 KD3E, SW3 NA 166,508SS-2 emons,507 42FF,46FF,510 20/9 8/10 Tue 20/9/22 Tue 20/9/22 15 days 510 CDS12-03500 SW4 Surrounding sewerage, utility and process pipe works 48 days Mon 10/10/22 Sat 3/12/22 NA NA 509 47FF.581FS-200 days.582FS-2 0% 10/10 = 3/12 511 CDS12-04000 SW5 21/4 18/10 Surrounding Site formation works and road works 180 days Fri 21/4/23 Wed 18/10/23 NA NA 325FF 48FF 0% 512 CUPH-00000 16/7 Underpass & Pump House 711 days Thu 20/2/20 Thu 20/2/20 47FF SW5 513 CPWU-00000 Pipe Works and Utility Installation 1140.8 days Fri 22/11/19 Wed 27/9/23 Fri 22/11/19 22/11 77% 28/4 | 6/5 518 CPWU-01130 KD1A Stage 1 - Backfilling Works for Drainage Diversion Tue 28/4/20 Wed 6/5/20 Tue 28/4/20 Wed 6/5/20 263 100% Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage Cul 338, (204), (228 519 CPWU-01140 KD1A 60 days Thu 4/3/21 Tue 18/5/21 Thu 4/3/21 Tue 18/5/21 275 520 100% Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Existing Drainage Cul 520 CPWU-01150 60 days Thu 20/5/21 Fri 30/7/21 Thu 20/5/21 Fri 30/7/21 519 100% 20/5 30/7 521 CPWU-01200 SW4 Trenchless Work for Pipe Installation 309 days Sat 13/6/20 Tue 29/6/21 Sat 13/6/20 Tue 29/6/21 47FF 100% 13/6 ■ 29/6 544 CPWU-01020 SW5 Surrounding Site formation works and road works 180 days Sat 1/4/23 Wed 27/9/23 NA 543.545 48FF 0% 1/4 27/9 31/3 545 CPWU-02160 SW4 Cable & Other Underground Utility Pipeworks 17, 21, 22, 33, 4(283) 561.8 days Thu 13/5/21 Fri 31/3/23 Thu 13/5/21 NA 171,336,393 544,47FF 61% 579 CPWU-02200 Thu 15/12/22 Thu 2/3/23 NA 344FS+120 days 15/12 2/3 580 CRWL-00000 Remaining Works & Landscape Works 861 days Thu 11/8/22 Thu 3/7/25 0% 11/3 23/7 581 CRWL-01000 SW5 Irrigation System 218 570 days Thu 11/8/22 Tue 23/7/24 NA 174.285.324FS-360 days.350FS-36748FF.50 0% 11/8 582 CRWL-02000 SW5 Hard Landscape Works Thu 11/8/22 Tue 23/7/24 NA 174,285,324FS-360 days,350FS-36748FF,50 570 days 0% 583 CRWL-03000 SW5 Soft Landscape Works 570 days Thu 11/8/22 Tue 23/7/24 NA 174,285,324FS-360 days,350FS-367589,48FF,50 11/8 584 CRWI -04000 SW5 Outfall for Effluent Pines 124 days Tue 1/11/22 Sat 1/4/23 NA NA 214 48FF 0% 1/11 1/4 585 CRWL-05000 Slope Formation Works near Outfall 1/11 1/4 SW5 Tue 1/11/22 Sat 1/4/23 48FF.587 0% 124 days NA 214 586 CRWL-06000 1/11 21/2 Removal of invasive trees along River Embankment (37) Tue 1/11/22 Tue 21/2/23 NA 214 90 days 0% 587 CRWL-07000 SW5 Retaining Wall along River Embankment, street furniture & road works Sat 1/4/23 Tue 25/7/23 NA 214,586,585 48FF 0% 1/4 25/7 11/5 588 CRWI -08000 SW5 Remaining Site formation works, road works and boundary fence wall (348) 299 250 days Thu 11/5/23 Tue 16/1/24 NA NA 46 48FF 0% 590 CWPA-0000 tion of Portion A of the Site 1077 days Wed 27/11/19 Thu 20/7/23 591 C132S-00000 1077 days Wed 27/11/19 Thu 20/7/23 27/11 -1 20/7 79% 622 C132SI-3100 KD2A Allow for CLP to carry out E&M installation works Mon 3/1/22 Mon 3/1/22 Mon 3/1/22 Mon 3/1/22 620.619.640 623SS-30 days,37FF,643 3/1 21/12 15/6 KD2A 625 C132SE-01000 Road Widening Works 139 days Mon 21/12/20 Tue 15/6/21 Mon 21/12/20 Tue 15/6/21 643 100% 12/11 3/1 634 C132SE-02030 Backfilling and Reinstatement Works (312), (332), (322) Fri 12/11/21 Mon 3/1/22 Fri 12/11/21 Mon 3/1/22 633 KD2A 42 days 100% 635 C132SE-02040 KD2A CLP Cable & Other Underground Utility Pipeworks 235 days Mon 10/5/21 Mon 21/2/22 Mon 10/5/21 Mon 21/2/22 643 100% 10/5 21/2 8/5 4/1 642 C132SF-03000 KD2A Construction of New Boundary Wall (155) 135 days Sat 8/5/21 Tue 4/1/22 Sat 8/5/21 Tue 4/1/22 606 655 100% Remaining Works after allowing CLP Plant and Power Cables Installation 643 C132SE-04000 NA 623,621,622,625,630,635 SW2 416 days Tue 22/2/22 Thu 20/7/23 Tue 22/2/22 45FF,655 22% 22/2

ontract No. DC/2018/07	a Plant - Main Works Stage 1								Revised	Works Programme (Status Date: 31/07/2021)							
D Activity ID Key Date	g Plant - Main Works Stage 1 Task Name	Inclement Weather CE no. PMI & CE no. (NCE no.)	. Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish /	Actual Start A	ctual Finish Predecessors	Successors	Total Slack Risk % Complete Allowance		2020		2022 .	2024 .
CD-1000	Contract Dates	(NCE no.)	1585 days	Mon 18/11/19	Thu 27/3/25	1651.5 days	Mon 18/11/19	Fri 13/6/25	Mon 18/11/19	NA NA			0%	1   Qtr 3   Qtr 1	Otr 3	Otr 1	Otr 1 Otr 3 Otr 1 Otr :
CD-1010 CAD-1000	Starting Date Access Dates (cal. day)		0 days 310 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Wed 23/9/20	0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Wed 2/9/20	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Wed 2/9/20	8,9,13FS+290 days,14FS+311 da		00% • 18/11			I I	
CAD-1010	Portion B-1 (Access Road AR3)		0 days	Mon 18/11/19	Mon 18/11/19	289 days 0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20 2	201		00% • 10/1	•	1		
CAD-1020	Portion B-1A (Area for the works for Sidestream Treatment Facilities by Others		0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20 2		0 days 10	00% • 10/1		- Ii - I		
CAD-1030	Portion B-2 (Inlet Works No.1)		0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20 2	295,306	0 days 10	00% • 10/1			 	
CAD-1040	Portion B-2A (Area for the pipe-jacking works by others)		0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20 2	335		00% <b>♦ 10/1</b>		1		
CAD-1050 CAD-1060	Portion B-3 (Primary Sedimentation Tanks No. 1-4) Portion B-4 (Bioreactor No. 2A & 2B)		0 days 0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	0 days 0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 2 Mon 18/11/19 2	353		00%		i i	i	
CAD-1070	Portion B-5 (Membrane Facilities Building No.2)		0 days	Mon 18/11/19	Mon 18/11/19	0 days	Tue 17/3/20	Tue 17/3/20	Tue 17/3/20	Tue 17/3/20 2	402,419,425 434		00%	17/3			
CAD-1080 CAD-1090	Portion B-6 (SAS Pumping Station) Portion B-7 (Ancillary structures)		0 days 0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	0 days 0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 2 Mon 18/11/19 2	434		00%		1		
B CAD-1100	Portion B-7A (Alternation works for existing Power House)		0 days	Wed 2/9/20	Wed 2/9/20	0 days	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20 2FS+290 days	539FS-1 day,29FS+179 days	0 days 10	00%	◆ 2/9	i i		
4 CAD-1110 5 CAD-1020	Portion B-8 (Alternation for existing Membrane Facilities Building No.1)  Portion B-8A (Alternation of air supply main for existing Air Blower House		0 days 0 days	Tue 22/9/20 Mon 18/11/19	Tue 22/9/20 Mon 18/11/19	0 days 0 days	Wed 26/8/20 Mon 18/11/19	Wed 26/8/20 Mon 18/11/19	Wed 26/8/20 Mon 18/11/19	Wed 26/8/20 2FS+311 days Mon 18/11/19 2	541FS-1 day 532		00% 00% <b>18/11</b>	◆ 26/8	1		
	No.2)														i i		
G CAD-1130 7 CAD-1140	Portion B-9 (remainder works in Zone B)  Portion B-9A (Area for the pipe-jacking works by others)		0 days 0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	0 days 0 days	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 Mon 18/11/19	Mon 18/11/19 2 Mon 18/11/19 2	542,556		00% • 18/11 00% • 18/11		1	 	
B CAD-1150	Portion B-9B (Area for underground pipework modification and connection works by others)		0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19 2			00% 🔷 18/11		1 1	1	
CAD-1160	Portion B-9C (Area for the works for pipeworks)		0 days	Wed 22/7/20	Wed 22/7/20	0 days	Fri 24/7/20	Fri 24/7/20	Fri 24/7/20	Fri 24/7/20 2FS+151 days		0 days 10	00%	<b>♦</b> 24/7	i i	i	
CKD-1000	Key Dates (cal. day)		1440 days	Tue 19/11/19	Sat 28/10/23	1144 days	Fri 27/11/20	Mon 15/1/24	Fri 27/11/20	NA			99%				15/1
CKD-1010 CKD-1020	KD1A completion of AR3 in Portion B-1 (375 days after starting date) KD1B completion of utilities diversion for commencement of Inlet Works		300 days 360 days	Tue 19/11/19 Tue 19/11/19	Sun 13/9/20 Thu 12/11/20	0 days 1 day	Fri 27/11/20 Sat 30/1/21	Fri 27/11/20 Sat 30/1/21	Fri 27/11/20 Sat 30/1/21	Fri 27/11/20 2FS+376 days Sat 30/1/21 2FS+439.5 days			00%	<b>♦</b> 27/11	! !	1	
	No.1 in Portion B-2 (438.5 days after starting date)		300 days		1110 12/1//20	1 day	Odt 30/1/21	Odt 50/1/21	Odt 30/1/21				00%	1	i i		
3 CKD-1030	KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (1068.5 days after starting date)	n	990 days	Tue 19/11/19	Thu 4/8/22	0 days	Sat 22/10/22	Sat 22/10/22	NA	NA 2FS+1069.5 days	67	1056.5 days	0%		1	◆ 22/10	
4 CKD-1040	KD1D completion of civil and structural works of Primary Sedimentation		1190 days	Tue 19/11/19	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA 2FS+1191 days	70	947 days	0%		i i	<b>♦</b> 20/2	
5 CKD-1050	Tanks in Portion B-3 (1190days after starting date)  KD1E completion of civil and structural works of Bioreactor in Portion B-4		1140 days	Tue 19/11/19	Sun 1/1/23	0 days	Sun 1/1/23	Sun 1/1/23	NA	NA 2FS+1141 days		997 days	0%			<b>♦ 1/1</b>	
	(1140days after starting date)														1		
6 CKD-1060	KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (855.5 days after starting date)		800 days	Tue 19/11/19	Wed 26/1/22	0 days	Wed 23/3/22	Wed 23/3/22	NA	NA 2FS+856.5 days	74	1273.5 days	0%		i i	◆ 23/3	
7 CKD-1070	KD1G completion of civil and structural works of MFB in Portion B-5 (1002.	5	950 days	Tue 19/11/19	Sat 25/6/22	0 days	Wed 17/8/22	Wed 17/8/22	NA	NA 2FS+1003.5 days	78	1126.5 days	0%			<b>♦</b> 17/8	
8 CKD-1080	days after starting date)  KD1H completion of civil and structural works of SAS Pumping Station in		630 days	Tue 19/11/19	Mon 9/8/21	0 days	Fri 22/10/21	Fri 22/10/21	NA	NA 2FS+704.5 days	82	1425.5 days	0%		♦ 22/1	0	
	Portion B-6 (703.5 days after starting date)														22/	-    -	
9 CKD-1090	KD1I completion alternation works for existing Power House in Portion B-7. (179days after access date of B-7A)	A	150 days	Fri 4/9/20	Sun 31/1/21	1 day	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21 13FS+179 days		0 days 10	00%	1	1 1		
0 CKD-1100	KD1J completion of auxiliary facilities in Portion B-7 (811.5 days after		800 days	Tue 19/11/19	Wed 26/1/22	0 days	Mon 7/2/22	Mon 7/2/22	NA	NA 2FS+812.5 days	86	1317.5 days	0%		- [i - i	<b>♦</b> 7/2	
1 CKD-1110	starting date)  KD2A completion of effluent pipes to UV system and connection to its		495 days	Tue 19/11/19	Sat 27/3/21	0 days	Fri 18/6/21	Fri 18/6/21	Fri 18/6/21	Fri 18/6/21 2FS+578.5 days	93	0 days 11	00%		<b>1</b> 8/6		
	downstream in Portion B-9 (577.5 days after starting date)					o days					33						
2 CKD-1120	KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (494 days after starting date)		420 days	Tue 19/11/19	Mon 11/1/21	0 days	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21 2FS+495 days		0 days 10	00%	◆ 26/3	<b>'</b>	İ	
3 CKD-1130	KD3A completion of all utilities and road works (1519 days after starting		1440 days	Tue 19/11/19	Sat 28/10/23	0 days	Mon 15/1/24	Mon 15/1/24	NA	NA 2FS+1520 days	99	606 days	0%		- 1	<u> </u>	15/1
4 CCD-1000	date)  Completion Date (cal. Day)		1956 days	Tue 19/11/19	Thu 27/3/25	1056 days	Sat 23/7/22	Fri 13/6/25	Sat 23/7/22	NA		50.5 days	0%		- Ii - I		→ 13/6
5 CCD-1010	Section 1 of the Works (1,543.5 after starting date)		1460 days	Tue 19/11/19	Fri 17/11/23	0 days	Fri 9/2/24	Fri 9/2/24	NA	NA 2FS+1544.5 days	105	0 days	0%		1 1	•	♦ 9/2
6 CCD-1020 7 CCD-1030	Section 2 of the Works (977.5 after starting date) Section 3 of the Works (1,667.5 after starting date)		900 days 1590 days	Tue 19/11/19 Tue 19/11/19	Fri 6/5/22 Tue 26/3/24	0 days 0 days	Sat 23/7/22 Wed 12/6/24	Sat 23/7/22 Wed 12/6/24	NA Wed 12/6/24	NA 2FS+978.5 days NA 2FS+1668.5 days	111 39FS+1 day,117,38FS+1 day	0 days -77.5 days	0% 99%		1 1	◆ 23/7	
8 CCD-1040	Defects Liability Period		365 days	Wed 27/3/24	Thu 27/3/25	365 days	Thu 13/6/24	Fri 13/6/25	NA NA	NA 37FS+1 day	331 341 day,117,301 341 day	0 days	0%		- Ii - I		
9 CCD-1050 0 <b>PD-1000</b> * <b>F</b>	Landscape Establishment Works Planned Completion		365 days 1686 days	Wed 27/3/24 Fri 14/8/20	Thu 27/3/25 Thu 27/3/25	365 days 1820 days	Thu 13/6/24 Wed 30/9/20	Fri 13/6/25 Wed 24/9/25	NA Wed 30/9/20	NA 37FS+1 day		103.5 days 0 days	0%				
1 PCD-1000 *	Planned Completion - Key Dates (cal. day)		1170 days	Fri 14/8/20	Sat 28/10/23	1321 days	Wed 30/9/20 Wed 30/9/20	Mon 13/5/24	Wed 30/9/20	NA NA			99%				<b>—</b>
2 PKD-1010 KD1A	KD1A completion of AR3 in Portion B-1 (300days after starting date)		0 days	Sat 12/9/20	Sat 12/9/20	0 days	Wed 30/9/20	Wed 30/9/20		Wed 30/9/20 210FF			00%	→ 30/9	į į		
3 PCD-1020 KD1B	KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (360days after starting date)		0 days	Fri 14/8/20	Fri 14/8/20	0 days	Fri 22/1/21	Fri 22/1/21	Fri 22/1/21	Fri 22/1/21 286FF,291FF,273FF		0 days 10	00%	<b>♦</b> 22/1		I I	
4 PCD-1030 KD1C	KD1C completion of civil and structural works of Inlet Works No.1 in Portio B-2 (990days after starting date)	n	0 days	Thu 4/8/22	Thu 4/8/22	0 days	Thu 1/12/22	Thu 1/12/22	NA	NA 330FF,322FF,248FF,294FF,212FF,250F	F	-40 days	0%		1 1	<b>♦ 1/12</b>	
5 PCD-1040 KD1D	KD1D completion of civil and structural works of Primary Sedimentation		0 days	Mon 20/2/23	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA 349FF,348FF,351FF,333FF		0 days	0%		i i	<b>♦</b> 20/2	
6 PCD-1050 KD1E	Tanks in Portion B-3 (1190days after starting date)  KD1E completion of civil and structural works of Bioreactor in Portion B-4		0 days	Sat 31/12/22	Sat 31/12/22	0 days	Sat 22/4/23	Sat 22/4/23	NA	NA 391FF,397FF,393FF,396FF,392FF		-111 days	00/			A 22/4	
	(1,140days after starting date)		o days			0 days	3dt 22/4/23	3dl 22/4/23	INA	14A 351FF,357FF,350FF,352FF		-111 days	076		1. 1	<b>♦</b> 22/4	
7 PCD-1060 KD1F	KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (800days after starting date)		0 days	Tue 25/1/22	Tue 25/1/22	0 days	Thu 4/8/22	Thu 4/8/22	NA	NA 430FF		-135 days	0%		i i	◆ 4/8	
8 PCD-1070 KD1G	KD1G completion of civil and structural works of MFB in Portion B-5		0 days	Sat 25/6/22	Sat 25/6/22	0 days	Wed 28/12/22	Wed 28/12/22	NA	NA 431FF		-133 days	0%			◆ 28/12	
9 PCD-1080 KD1H	(950days after starting date)  KD1H completion of civil and structural works of SAS Pumping Station in		0 days	Mon 9/8/21	Mon 9/8/21	0 days	Sat 19/3/22	Sat 19/3/22	NA	NA 459FF,458FF		-148 days	0%		i i	<b>♦</b> 19/3	
	Portion B-6 (630days after starting date)		o days			o days	Odt 13/0/22	Odi 15/5/22	INO.				i		i i	<b>V</b> 13/5	
0 PCD-1090 KD1I	KD1I completion alternation works for existing Power House in Portion B-7. (150days after access date of B-7A)	A	0 days	Sat 30/1/21	Sat 30/1/21	1 day	Fri 29/1/21	Fri 29/1/21	Fri 29/1/21	Fri 29/1/21 539FF		0 days 10	00%	◆ 29/1	1		
1 PCD-1100 KD1J	KD1J completion of auxiliary facilities in Portion B-7 (800days after starting		0 days	Wed 26/1/22	Wed 26/1/22	0 days	Mon 13/6/22	Mon 13/6/22	NA	NA 496FF,495FF,521FF,520FF,513FF,512F	F	-126 days	0%		i i	<b>♦ 13/6</b>	
2 PCD-1110 KD2A	date)  KD2A completion of effluent pipes to UV system and connection to its		0 days	Sat 27/3/21	Sat 27/3/21	0 days	Wed 4/8/21	Wed 4/8/21	NA	NA 545FF,543FF		-47 days	0%		4/8		
	downstream in Portion B-9 (495days after starting date)															1	
B PCD-1120 KD2B	KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (420days after starting date)		0 days	Thu 3/9/20	Thu 3/9/20	1 day	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21 532FF,536FF,537FF,538FF		0 days 10	00%	◆ 26/3	·	 	
PCD-1130 KD3A	KD3A completion of all utilities and road works (1440days after starting		0 days	Sat 28/10/23	Sat 28/10/23	0 days	Mon 13/5/24	Mon 13/5/24	NA	NA 555FF,557FF		-119 days	0%				♦ 13/5
5 PCD-1000 *	Planned Completion Date (cal. Day)		1056 days	Fri 6/5/22	Thu 27/3/25	1054 days	Sat 5/11/22	Wed 24/9/25	NA.	NA		-106 days	0%				
PCD-1010 SW1	Section 1 of the Works (1,460 after starting date)		0 days	Wed 23/8/23	Wed 23/8/23	0 days	Mon 27/11/23	Mon 27/11/23	NA	NA 522FF,514FF,477FF,504FF,488FF,460F		73 days	0%		-	<b>♦</b> 2	•
7 PCD-1020 SW2 B PCD-1030 SW3	Section 2 of the Works (900 after starting date) Section 3 of the Works (1,590 after starting date)		0 days 0 days	Fri 6/5/22 Tue 26/3/24	Fri 6/5/22 Tue 26/3/24	0 days	Sat 5/11/22 Tue 24/9/24	Sat 5/11/22 Tue 24/9/24	NA NA	NA 549FF,399FF,433FF,352FF,334FF,550F NA 558FF,559FF,541FF,540FF	F	-106 days -105 days	0%			<b>♦</b> 5/11	<b>♦</b> 24/9
PCD-1040 DLP	Defects Liability Period		0 days	Thu 27/3/25	Thu 27/3/25	0 days 0 days	Wed 24/9/25	Wed 24/9/25	NA NA	NA 560FF,153FF		0 days	0%				•
0 PCD-1050	Landscape Establishment Works		0 days	Thu 27/3/25	Thu 27/3/25	0 days	Wed 24/9/25	Wed 24/9/25	NA Er: 40/6/24	NA 560FF			0%				•
1 ET-1000 2 ET1C-1000	Effects from Inclement Weather and Other Time Affected Events  Effects to KD1C		0 days 0 days	NA NA	NA NA	1143 days 53 days	Fri 18/6/21 Sat 22/10/22	Sun 4/8/24 Wed 14/12/22	Fri 18/6/21 NA	NA NA		416.5 days 1015.5 days	0%			H	
3 ET1C-1100	Inclement Weather to KD1C (cal. Day)		0 days	NA NA	NA	49 days	Wed 26/10/22	Wed 14/12/22 Wed 14/12/22	NA NA	NA NA			0%		- [i - i	Ħ	
4 ET1C-1110	Delay and Disruption of Works before June 2021		0 days	NA	NA	23 days	Wed 26/10/22	Fri 18/11/22	NA	NA 67	65	1015.5 days	0%			•	
ET1C-1120 ET1C-1200	Delay and Disruption of Works in June 2021  Other Events to KD1C (not all)		0 days	NA NA	NA NA	26 days 4 days	Fri 18/11/22 Sat 22/10/22	Wed 14/12/22 Wed 26/10/22	NA NA	NA 64 NA		1015.5 days 1015.5 days	0%			.=	
ET1C-1210	Special working arrangement due to COVID-19 in January 2020		0 days	NA	NA NA	4 days	Sat 22/10/22	Wed 26/10/22	NA	NA 23	64	1056.5 days	0%			• I	
ET1D-1000	Effects to KD1D		0 days?	NA NA	NA NA	26 days	Mon 20/2/23	Wed 22/3/23	NA	NA NA			0%		1	Ħ	
ET1D-1100 ET1D-1110	Inclement Weather to KD1D (cal. Day)  Delay and Disruption of Works before June 2021		0 days? 0 days	NA NA	NA NA	26 days 0 days	Mon 20/2/23 Mon 20/2/23	Wed 22/3/23 Mon 20/2/23	NA NA	NA NA 24	71		0%		- Ji - Ji	<b>→</b> 20/2	
ET1D-1110	Delay and Disruption of Works in June 2021		0 days	NA NA	NA NA	26 days	Tue 21/2/23	Wed 22/3/23	NA NA	NA 70		749 days	0%			20/2	
ET1F-1000	Effects to KD1F		0 days	NA	NA	49 days	Wed 23/3/22	Wed 11/5/22	NA	NA		1232.5 days	0%			<b>—</b>	
ET1F-1100	Inclement Weather to KD1F (cal. Day)		0 days	NA	NA	49 days	Wed 23/3/22	Wed 11/5/22	NA	NA		1232.5 days	0%		-	H	
ET1F-1110	Delay and Disruption of Works before June 2021		0 days	NA	NA	23 days	Wed 23/3/22	Fri 15/4/22	NA	NA 26	75	1232.5 days	0%		1 1	<u> </u>	
ET1F-1120 ET1G-1000	Delay and Disruption of Works in June 2021  Effects to KD1G		0 days	NA NA	NA NA	26 days	Fri 15/4/22 Wed 17/8/22	Wed 11/5/22 Wed 5/10/22	NA NA	NA 74		1232.5 days 1085.5 days	0%		- [i - i		
ET1G-1000 ET1G-1100	Effects to KD1G Inclement Weather to KD1G (cal. Day)		0 days 0 days	NA NA	NA NA	49 days 49 days	Wed 17/8/22 Wed 17/8/22	Wed 5/10/22 Wed 5/10/22	NA NA	NA NA		1085.5 days 1085.5 days	0%				
	Delay and Disruption of Works before June 2021		0 days	NA NA	NA	23 days	Wed 17/8/22	Fri 9/9/22	NA NA	NA 27	79	1085.5 days	0%		- Ji - Ji		
			0 days	NA	NA	26 days	Fri 9/9/22	Wed 5/10/22	NA	NA 78		1085.5 days	0%			<b>-</b>	
ET1G-1110	Delay and Disruption of Works in June 2021						Fri 22/10/21	Fri 10/12/21	NΔ	NA		1384.5 days	0%			i	
ET1G-1110 ET1G-1120 ET1H-1000	Effects to KD1H		0 days	NA	NA	49 days									1 4 4	the state of the s	
ET1G-1110  ET1G-1120  ET1H-1000  ET1H-1100	Effects to KD1H Inclement Weather to KD1H (cal. Day)		0 days	NA	NA NA	49 days	Fri 22/10/21	Fri 10/12/21	NA NA	NA	83	1384.5 days	0%		-		
B ET1G-1110  P ET1G-1120  ET1H-1000  ET1H-1110	Effects to KD1H Inclement Weather to KD1H (cal. Day) Delay and Disruption of Works before June 2021		0 days 0 days		NA NA NA	49 days 23 days			NA NA	NA NA 28	83	1384.5 days 1384.5 days	0% 0%		- 1	 	
778 ET1G-1100 778 ET1G-1110 779 ET1G-1120 800 ET1H-1000 81 ET1H-1100 82 ET1H-1110 83 ET1H-1120 84 ET1H-1000	Effects to KD1H Inclement Weather to KD1H (cal. Day)		0 days	NA NA	NA NA NA NA	49 days	Fri 22/10/21 Fri 22/10/21	Fri 10/12/21 Sun 14/11/21	NA	NA	83	1384.5 days 1384.5 days 1384.5 days	0%		1 1	H	

	Plant - Main Works Stage 1 Fask Name	Inclement PMI & CE no.	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish A	ctual Start	Actual Finish Predecessors	Successors	Total Slack Risk %				
Date		CE no. (NCE no.)										Allowance	Ot	2020 tr 3	Otr 3	Otr 3 Otr 1 Otr 3 Otr 1
H-1100	Inclement Weather to KD1J (cal. Day)		0 days	NA	NA	49 days	Mon 7/2/22	Mon 28/3/22	NA	NA		1276.5 days	0%	, <u> </u>		<u> </u>
H-1110	Delay and Disruption of Works before June 2021		0 days	NA	NA	23 days	Mon 7/2/22	Wed 2/3/22	NA		87	1276.5 days	0%	i	i i •	i
I-1120	Delay and Disruption of Works in June 2021		0 days	NA	NA	26 days	Wed 2/3/22	Mon 28/3/22	NA	1 1 2 2		1276.5 days	0%			
-1000 A-1100	Effects to KD2A Inclement Weather to KD2A (cal. Day)		0 days 0 days	NA NA	NA NA	53 days 49 days	Fri 18/6/21 Tue 22/6/21	Tue 10/8/21 Tue 10/8/21	Fri 18/6/21 Tue 22/6/21			1506.5 days 1506.5 days	24% 17%			
-1110	Delay and Disruption of Works before June 2021		0 days	NΔ	NΔ	23 days	Tue 22/6/21	Thu 15/7/21	Tue 22/6/21		91	1506.5 days	37%			1
-1110	Delay and Disruption of Works in June 2021		0 days	NA NA	NA NA	26 days	Thu 15/7/21	Tue 10/8/21	NA NA		0.	1506.5 days	0%	i		i
A-1200	Other Events to KD2A (not all)		0 days	NA	NA	4 days	Fri 18/6/21	Tue 22/6/21	Fri 18/6/21			0 days	100%	_	1	I I
-1210	Special working arrangement due to COVID-19 in January 2020		0 days	NA	NA	4 days	Fri 18/6/21	Tue 22/6/21	Fri 18/6/21		90	0 days	100%	i	i i	i
-1000	Effects to KD3A		0 days	NA	NA	53 days	Tue 16/1/24	Fri 8/3/24	NA			565 days	0%			<b>—</b>
-1100	Inclement Weather to KD3A (cal. Day)		0 days	NA	NA	49 days	Sat 20/1/24	Fri 8/3/24	NA	NA		565 days	0%	i	i i	<b>—</b>
A-1110	Delay and Disruption of Works before June 2021		0 days	NA	NA	23 days	Sat 20/1/24	Sun 11/2/24	NA	NA 99	97	565 days	0%	I .		=
-1120	Delay and Disruption of Works in June 2021		0 days	NA	NA	26 days	Mon 12/2/24	Fri 8/3/24	NA	NA 96		565 days	0%			=
-1200	Other Events to KD3A (not all)		0 days	NA	NA	4 days	Tue 16/1/24	Fri 19/1/24	NA	NA NA		565 days	0%	1	I I	<b>!</b>
-1210	Special working arrangement due to COVID-19 in January 2020		0 days	NA	NA	4 days	Tue 16/1/24	Fri 19/1/24	NA		96	565 days	0%	I I		1
1000	Effects to Section 1 of the Works		0 days	NA	NA	53 days	Fri 9/2/24	Tue 2/4/24	NA	11		540.5 days	0%	I.	I I	
1100	Inclement Weather to Section 1 of the Works (cal. Day)		0 days	NA	NA	49 days	Tue 13/2/24	Tue 2/4/24	NA		100	540.5 days	0%			
1110	Delay and Disruption of Works before June 2021		0 days	NA NA	NA NA	23 days	Tue 13/2/24	Thu 7/3/24	NA NA		103	540.5 days	0%	i	i i	
-1120	Delay and Disruption of Works in June 2021  Other Events to Section 1 of the Works (not all)		0 days	NA NA	NA NA	26 days	Thu 7/3/24 Fri 9/2/24	Tue 2/4/24 Tue 13/2/24	NA NA	111111		540.5 days 540.5 days	0%	I I		-
<b>1200</b> 1210	Special working arrangement due to COVID-19 in January 2020		0 days	NA NA	NA NA	4 days	Fri 9/2/24	Tue 13/2/24	NA NA	1 ""1	102	540.5 days	0%	i	i i	i •
1000	Effects to Section 2 of the Works			NA NA	NA NA		Sat 23/7/22	Wed 14/9/22	NA NA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	102	1106.5 days	0%	1	! ! <b></b>	· '
1100	Inclement Weather to Section 2 of the Works (cal. Day)		0 days 0 days	NA	NA NA	53 days 49 days	Sat 23/7/22 Wed 27/7/22	Wed 14/9/22 Wed 14/9/22	NA NA			1106.5 days 1106.5 days	0%	i		i
110	Delay and Disruption of Works before June 2021		0 days	NA	NA	23 days	Wed 27/7/22	Fri 19/8/22	NA	NA 111	109	1106.5 days	0%	1		I I
120	Delay and Disruption of Works in June 2021		0 days	NA	NA	26 days	Fri 19/8/22	Wed 14/9/22	NA NA			1106.5 days	0%	1		
200	Other Events to Section 2 of the Works (not all)		0 days	NA	NA	4 days	Sat 23/7/22	Wed 27/7/22	NA			1106.5 days	0%	!	! ! .	1
210	Special working arrangement due to COVID-19 in January 2020		0 days	NA	NA	4 days	Sat 23/7/22	Wed 27/7/22	NA		108	1106.5 days	0%			
000	Effects to Section 3 of the Works		0 days	NA	NA	53 days	Wed 12/6/24	Sun 4/8/24	NA			416.5 days	0%	i	i i	
100	Inclement Weather to Section 3 of the Works (cal. Day)		0 days	NA	NA	49 days	Sun 16/6/24	Sun 4/8/24	NA			416.5 days	0%	1		H
110	Delay and Disruption of Works before June 2021		0 days	NA	NA	23 days	Sun 16/6/24	Tue 9/7/24	NA	NA 117	115	416.5 days	0%	i	i i	<b>-</b>
120	Delay and Disruption of Works in June 2021		0 days	NA	NA	26 days	Tue 9/7/24	Sun 4/8/24	NA	NA 114		416.5 days	0%	1		-
200	Other Events to Section 3 of the Works (not all)		0 days	NA	NA	4 days	Wed 12/6/24	Sun 16/6/24	NA	1 ""1		416.5 days	0%	1		•
1210	Special working arrangement due to COVID-19 in January 2020		0 days	NA	NA	4 days	Wed 12/6/24	Sun 16/6/24	NA	NA 37	114	416.5 days	0%	!	!!!	1 1
000	Submissions (cal.day)		1564 days	Mon 18/11/19	Wed 28/2/24	1956 days	Mon 18/11/19	Wed 26/3/25	Mon 18/11/19			182 days	60%	-	<u> </u>	
000	Subletting Package		96 days	Mon 18/11/19	Fri 21/2/20	562 days	Mon 18/11/19	Tue 1/6/21	Mon 18/11/19		104	0 days	100%	_	i i	i
1010	Prepare & submit subletting procedure  PM review and accept subletting procedure		12 days 15 days	Mon 18/11/19 Sat 30/11/19	Fri 29/11/19 Wed 11/12/19	12 days 12 days	Mon 18/11/19 Sat 30/11/19	Fri 29/11/19 Wed 11/12/19	Mon 18/11/19 Sat 30/11/19		121 142,122,125,124,123	0 days 0 days	100%	11		1
030	Subletting for demolition works		24 days	Thu 12/12/19	Sat 4/1/20	93 days	Tue 17/12/19	Wed 18/3/20	Tue 17/12/19	Wed 18/3/20 121,154	339,462,295,402,539,359	0 days	100%		i i	i I
040	Subletting for UU diversion for Inlet Works No.1		24 days	Thu 12/12/19	Sat 4/1/20	78 days	Fri 10/1/20	Fri 27/3/20	Fri 10/1/20	Fri 27/3/20 121	212	0 days	100%	1	!!!	1
050	Subletting for Inspection pit excavation		0 days	NA Thurstown	NA Wash 05 (40)(40	56 days	Thu 19/12/19	Wed 12/2/20	Thu 19/12/19		214,126	0 days	100%	=		I I
060 070	Subletting for Preliminary Works (topographic surveying) Subletting for AR3 access road		14 days 24 days	Thu 12/12/19 Thu 12/12/19	Wed 25/12/19 Sat 4/1/20	54 days 0 days	Fri 20/12/19 Fri 13/12/19	Tue 11/2/20 Tue 11/2/20	Fri 20/12/19 Fri 13/12/19		159,198,129,130,131,127 127,210	0 days 0 days	100%		i i	i
1080	Subletting for pre-drilling works		24 days 24 days	Thu 12/12/19	Sat 4/1/20	38 days	Thu 6/2/20	Fri 20/3/20	Thu 6/2/20		452,342,414,128	0 days	100%	<del>T</del> -		1
1090	Subletting for Contractor designer for temporary works and ICE		24 days	Thu 12/12/19	Sat 4/1/20	71 days	Mon 16/12/19	Mon 24/2/20	Mon 16/12/19	Mon 24/2/20 127		0 days	100%	-		i I
1100	Subletting for independent BIM consultant		24 days	Thu 12/12/19	4/1/120	0 days	Wed 11/12/19	Thu 23/1/20	Wed 11/12/19		193	0 days	100%	÷.	!!!	1
1110	Subletting for independent BIM services  Subletting for Design, Supply & Install of Temporary Activated Carbon		0 days 0 days	NA NA	NA NA	15 days 0 days	Tue 14/1/20 Fri 13/12/19	Wed 26/2/20 Tue 11/2/20	Tue 14/1/20 Fri 13/12/19		193 132,133	0 days 0 days	100%			I I
	Deodorization Units (E&M Works)											·		1	i i	i
-1130	Subletting for pre-bored H pile works		36 days	Thu 12/12/19	Thu 16/1/20	45 days	Sun 5/7/20	Tue 18/8/20	Sun 5/7/20		343,415,453,309	0 days	100%			1
-1140 -1150	Subletting for Sheetpile installation works  Subletting for ELS works for Inlet Works No.1		0 days 48 days	NA Sun 5/1/20	NA Fri 21/2/20	45 days 85 days	Tue 1/9/20 Fri 16/10/20	Thu 15/10/20 Fri 8/1/21	Tue 1/9/20 Fri 16/10/20		344,455,134,135	0 days	100%		i i	i I
1160	Subletting for ELS works for Membrance Facilities Building and other		48 days	Sun 5/1/20	Fri 21/2/20	85 days	Fri 16/10/20	Fri 8/1/21	Fri 16/10/20		346,389,456,136,137,138,139,1		100%			I I
	buildings															I I
i-1170 i-1180	Subletting for structural works for Inlet Works Building Subletting for structural works for Primary Sedimentation Tanks		48 days 48 days	Thu 12/12/19 Thu 12/12/19	Tue 28/1/20 Tue 28/1/20	48 days 48 days	Sat 9/1/21 Sat 9/1/21	Thu 25/2/21 Thu 25/2/21	Sat 9/1/21 Sat 9/1/21		348	0 days 0 days	100%		! !	I .
1190	Subletting for structural works for Bioreactors		48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21		391	0 days	100%	=		I I
-1200	Subletting for structural works for Membrance Facilities Building		48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21 135	426	0 days	100%	_	!!!	1
1210	Subletting for structural works for SAS pumping house and ancillary structures		48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21 135	141	0 days	100%	_		1
1220	Subletting for ABWF works		48 days	Thu 12/12/19	Tue 28/1/20	48 days	Fri 26/2/21	Wed 14/4/21	Fri 26/2/21	Wed 14/4/21 140	332,350,398,460,488,504,514,5	522, 0 days	100%	_	i i	i
1230	Subletting for Process Pipeworks, Utilities and Roadworks		48 days	Thu 12/12/19	Tue 28/1/20	150 days	Fri 22/5/20	Sun 18/10/20	Fri 22/5/20		532,549,551,552,553,554,543	0 days	100%		1 1	1
1240	Subletting for Landscape Hardworks and Softworks		48 days	Thu 12/12/19	Tue 28/1/20	48 days	Thu 15/4/21	Tue 1/6/21	Thu 15/4/21		559,560	0 days	100%	_		
1250	Subletting for Trial dewatering works and installation of additional stop logs at BR2 connon channel due to malfucntioned of existing penstock at FST	5	0 days	NA	NA	15 days	Tue 15/9/20	Tue 29/9/20	Tue 15/9/20	Tue 29/9/20	355	0 days	100%		! !	I .
	no. 5 and 7 (EWN 055)															I I
1260	Subletting for Diversion of Power supply for existing Slaghter House pump station (CE 034)		0 days	NA	NA	14 days	Mon 21/9/20	Sun 4/10/20	Mon 21/9/20	Sun 4/10/20		0 days	100%	- i	i i	i
270	Subletting for Decommission of exisiting power and signal systems in		0 days	NA	NA NA	14 days	Mon 21/9/20	Sun 4/10/20	Mon 21/9/20	Sun 4/10/20	439	0 days	100%			
	leachate Pump station switch room (PMI 039)		o dayo			ı - uays	···O11 2 1/3/20	Juli 7/10/20	MO11 21/3/20	3311 - 1.0120		o oujo	100/0	- i		T.
280	Subletting for Diversion of Existing DN250 Leachate Raising Main (PPMI		0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20		0 days	100%		!!!	1
1290	025)  Subletting for Construction of Cable trough for CLP 11kv Cable Diversion		0 days	NΔ	NΔ	21 down	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20	453	0 days	100%	_		I I
230	(PPMI 041)		0 days	130	100	31 days	WUII 21/9/20	**************************************	WU11 21/9/20	**************************************	700	0 days	100%		i i	i
1300	Subletting for Demolition of Existing Pillar box and its concrete plinth (CE		0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20	441	0 days	100%	-		1
1310	Subletting for Execution to locate evicting undergrand achieves		0 dave	NΔ	NA	21 4	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20		0 days	100%		i i	İ
510	Subletting for Excavation to locate existing underground cable near SAS Pump Station (PPMI 038)		0 days	INA	NA	31 days	rvi0⊓ ∠1/9/20	vvea ∠1/10/20	won ∠1/9/20	¥¥6U ∠ 1/ 1U/∠U		0 days	100%			I I
320	Subletting for Diversion of pumping system sewerage (PPMI 083)		0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20		446	0 days	100%	_		I I
1000	Statutory Submission, Submission and Approval		1564 days	Mon 18/11/19	Wed 28/2/24	1956 days	Mon 18/11/19	Wed 26/3/25	Mon 18/11/19		F055	182 days	49%	-	<u> </u>	1
010	Liaison with operator of SWHSTW and obtain their consent of associated method statement of major activities		0 days	NA	NA	1584 days	Mon 18/11/19	Wed 26/3/25	Mon 18/11/19	NA 2	59FF	156 days	30%			
1020	Prepare and submit Subcontractor Management Plan (SMP)		24 days	Mon 18/11/19	Wed 11/12/19	24 days	Mon 18/11/19	Wed 11/12/19	Mon 18/11/19	Wed 11/12/19 2	122,125,124	0 days	100%	■ !	l I	T.
1030	Prepare and submit Interface Management Plan		36 days	Mon 18/11/19	Mon 23/12/19	36 days	Mon 18/11/19	Mon 23/12/19	Mon 18/11/19		00:	0 days	100%	=		
040	Prepare and submit the TTA plans inside Treatment Plant for UU diversion and buildings construction		24 days	Mon 18/11/19	Wed 11/12/19	24 days	Mon 18/11/19	Wed 11/12/19	Mon 18/11/19	Wed 11/12/19 2	201	0 days	100%	=;	i i	i
050	Prepare and submit method statement for UU diversion for Inlet Works No	.1	12 days	Mon 18/11/19	Fri 29/11/19	12 days	Mon 18/11/19	Fri 29/11/19	Mon 18/11/19	Fri 29/11/19 2	158	0 days	100%	<ul> <li>* 1</li> </ul>	1 1	1
				0.107						W 1114045 :	04	·		_ i		T T
060	PM review and accept the method statement		12 days	Sat 30/11/19	Wed 11/12/19	0 days	Sat 30/11/19	Wed 11/12/19 Sat 18/1/20	Sat 30/11/19		213,214	0 days	100%	*1	!!!	!
070	Prepare and submit combine underground services drawing for PM's review the alignment	"	24 days	Thu 26/12/19	Sat 18/1/20	23 days	Thu 26/12/19	Sat 18/1/20	Thu 26/12/19	Sat 18/1/20 125		0 days	100%	7		l I
080	Prepare and submit method statement for demolition existing structures		24 days	Mon 18/11/19	Wed 11/12/19	66 days	Mon 18/11/19	Wed 22/1/20	Mon 18/11/19		402,339,462,295,539	0 days	100%	<u> </u>	i i	i
090	Prepare and submit method statement for structural works for buildings		24 days	Mon 18/11/19	Wed 11/12/19	197 days	Mon 18/11/19	Mon 1/6/20	Mon 18/11/19		000 100 500 5	0 days	100%			
100	Prepare and submit method statements to MTRC regarding the works with railing protection boundary	in	36 days	Mon 18/11/19	Mon 23/12/19	92 days	Sat 1/2/20	Mon 25/5/20	Sat 1/2/20	Mon 25/5/20 2	339,462,539,359	0 days	100%			T T
110	Prepare and submit & approve Safety Management Plan		24 days	Mon 18/11/19	Wed 11/12/19	3 days	Mon 18/11/19	Wed 20/11/19	Mon 18/11/19	Wed 20/11/19 2		0 days	100%	1.1	! !	
120	Prepare and submit Excavation and lateral support (ELS) proposal		24 days	Mon 10/2/20	Wed 4/3/20	128 days	Mon 10/2/20	Tue 16/6/20	Mon 10/2/20	Tue 16/6/20 2		0 days	100%			1
120a	Prepare and submit Excavation and lateral support (ELS) proposal for Inlet Works No.1	t	0 days	NA	NA	24 days	Wed 29/9/21	Sat 23/10/21	NA	NA 314SF		1433 days	0%	1		
120b			0 days	NA	NA	24 days	Fri 1/7/22	Mon 25/7/22	NA	NA 346SF		1158 days	09/-	!	! -	!
	Prepare and submit Excavation and lateral support (ELS) proposal for Primnary Sedimentation tanks No.1-4		o uays	130	100	z+ days	rii 1///22	IVIUI1 20/1/22	NA	IVA SHOSE		1100 days	0./6			I I
11200	Prepare and submit Excavation and lateral support (ELS) proposal for		0 days	NA	NA	24 days	Sun 15/5/22	Wed 8/6/22	NA	NA 389SF		1205 days	0%	i	i i •	i
120c	Bioreactor No. 2A&2B				Wed 4/3/20	105	M 40 20 20	Thu 23/7/20	Mon 10/2/20	Thu 23/7/20 2		0 days	100%	!	!!!!	1
120c			24 de:			165 days	Mon 10/2/20	rnu 23/7/20	naon 10/2/20			0 days				
	Prepare and submit Dewatering proposal for basement construction		24 days	Mon 10/2/20	W60 4/3/20	100 00,0	WOII TO/L/LO	1110 20 7720	111011 1012/20	1110 23/7/20 2		dayo	100%			ì
120c		et	24 days 0 days	Mon 10/2/20 NA	NA	24 days	Wed 29/9/21	Sat 23/10/21	NA			1433 days	0%			

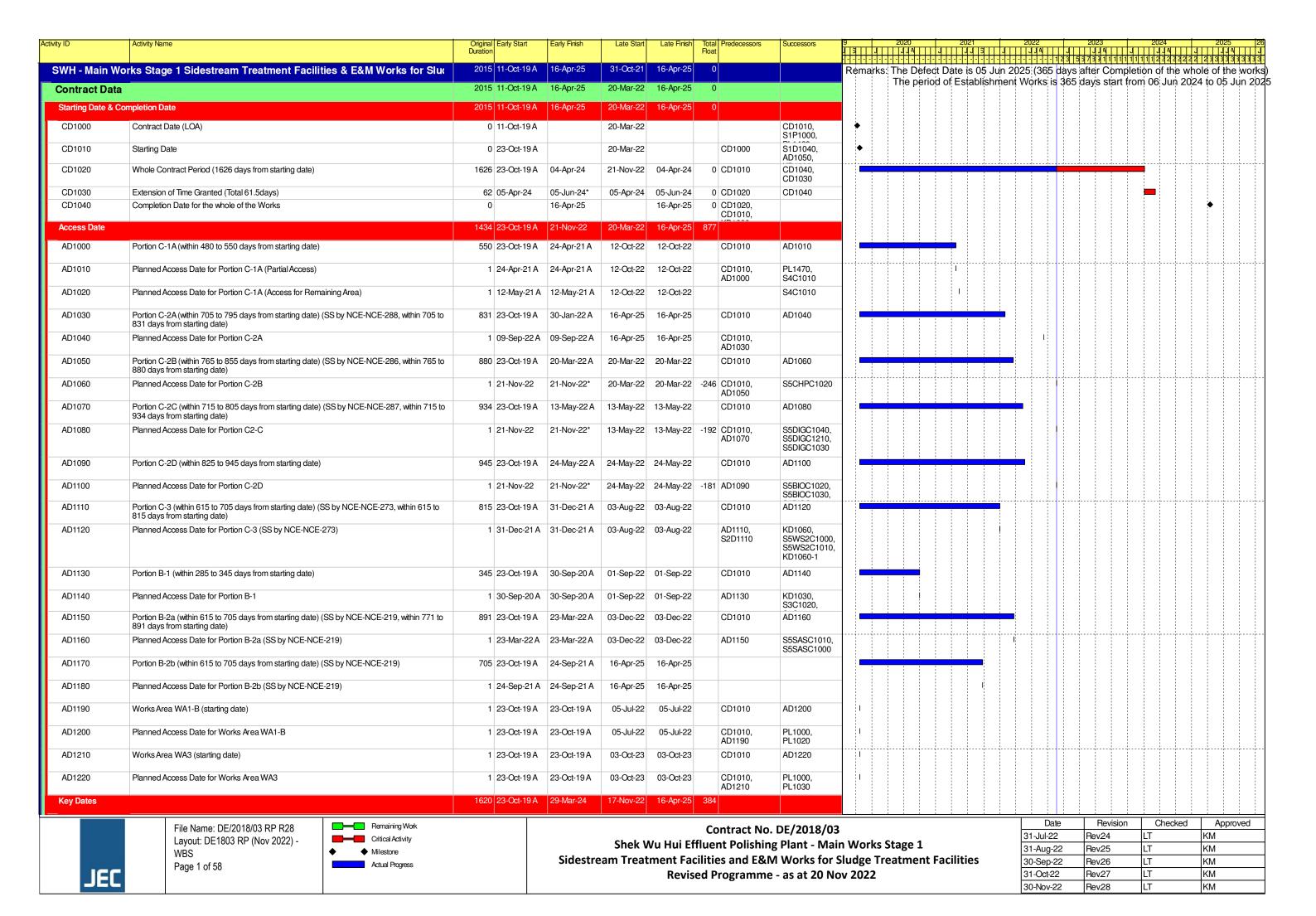
Contract No. DC/2018/07	in New Main World Chang 1								Revised	Works Programme (Status Date: 31/07/2021)						
Shek Wu Hui Effluent Polishi  ID Activity ID Key	Incleme	nt PMI & CE no.	. Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish A	Actual Start	Actual Finish Predecessors	Successors	Total Slack Risk	% Complete			
Date	Weathe CE no.	r (NCE no.)										Allow		Otr 3	2022	2024
170 SUBA-1130b	Prepare and submit Dewatering proposal for basement construction for	0.)	0 days	NA	NA	24 days	Fri 1/7/22	Mon 25/7/22	NA	NA 346SF		1158 days	0%	Qtr 3         Qtr 1         Qtr 3         Qtr 1         Qtr 3	Otr 1 Otr 3 Otr 1 Otr 3	Otr 1 Otr 3 Otr 1 Otr 3
171 SUBA-1130c	Primnary Sedimentation tanks No.1-4  Prepare and submit Dewatering proposal for basement construction for		0 days	NA	NA	24 days	Sun 15/5/22	Wed 8/6/22	NA.	NA 389SF		1205 days	0%	i i		i
470 OUDA 4440	Bioreactor No. 2A&2B		04 days	W 5000	F-: 00 /0 /00				M 10/11/10				4000/	_ <u> </u>		
172 SUBA-1140	Prepare and submit Pre-construction condition survey of existing structures/ services		24 days	Wed 5/2/20	Fri 28/2/20	0 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20 198		0 days	100%			
173 SUBA-1150	Prepare and submit Settlement and movement monitoring proposal of existing structures/ services		24 days	Wed 5/2/20	Fri 28/2/20	110 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20 198FS+120 days		0 days	100%	<u> </u>		
174 SUBA-1160	Prepare and submit design of structure elements of the temporary activated carbon deodourization unit		60 days	Fri 17/1/20	Mon 16/3/20	60 days	Mon 18/11/19	Mon 16/3/20	Mon 18/11/19	Mon 16/3/20 2FS+60 days		0 days	100%	i i		
175 SUBA-1170	Prepare of RSE and structural design for alternation and additional (A&A)		180 days	Mon 18/10/21	Fri 15/4/22	180 days	Mon 18/10/21	Fri 15/4/22	NA.	NA	541	332 days	0%		_	
	works at Membrane Facilities Building No.1															1
176 SUBA-1180	Prepare of RSE and structural design for alternation and additional (A&A) works at Main Power House		44 days	Wed 15/7/20	Thu 3/9/20	60 days	Mon 6/7/20	Thu 3/9/20	Mon 6/7/20	Thu 3/9/20	539	0 days	100%	_		
177 SUBE-1000 178 SUBE-1010	Environmental Aspect Submissions  Prepare, submit & approve Site Management Plan for Trip Tricket		45 days 45 days	Mon 18/11/19 Mon 18/11/19	Wed 1/1/20 Wed 1/1/20	81 days 66 days	Mon 18/11/19 Mon 18/11/19	Thu 6/2/20 Wed 22/1/20	Mon 18/11/19 Mon 18/11/19	Thu 6/2/20 Wed 22/1/20 2		0 days 0 days	100% 100%	<u> </u>		
	System											ĺ				
179 SUBE-1020 180 SUBE-1030	Prepare, submit & approve Waste Management Plan  Prepare, submit & approve Environmental Management Plan		45 days 45 days	Mon 18/11/19 Mon 18/11/19	Wed 1/1/20 Wed 1/1/20	81 days 66 days	Mon 18/11/19 Mon 18/11/19	Thu 6/2/20 Wed 22/1/20	Mon 18/11/19 Mon 18/11/19	Thu 6/2/20 2 Wed 22/1/20 2		0 days 0 days	100%			
181 SUBP-1000	Procurement		731 days	Mon 18/11/19	Wed 17/11/21	648 days	Mon 18/11/19	Thu 26/8/21	Mon 18/11/19	NA		278 days	94%	•		i
182 SUBP-1010 183 SUBP-1020	Prepare and submit the Procurement Procedure  PM Review & Accept Procurement Procedure		12 days 12 days	Mon 18/11/19 Sat 30/11/19	Fri 29/11/19 Wed 11/12/19	2 days 21 days	Mon 18/11/19 Tue 19/11/19	Tue 19/11/19 Tue 10/12/19	Mon 18/11/19 Tue 19/11/19	Tue 19/11/19 2 Tue 10/12/19 182	183 184,185,186,187,188,189,190,191	0 days 0 days	100%	<u> </u>		
184 SUBP-1030	Prepare, submit and approve the pipe works material		25 days	Thu 12/12/19	Sun 5/1/20	34 days	Thu 6/2/20	Tue 10/3/20	Thu 6/2/20 NA		212,532,551,552,554,553,549,557		100%	-		
185 SUBP-1040 186 SUBP-1050	Prepare, submit and approve the water proofing material  Prepare, submit and approve the concrete mix material		25 days 48 days	Thu 12/12/19 Thu 12/12/19	Sun 5/1/20 Tue 28/1/20	25 days 90 days	Mon 2/8/21 Mon 3/2/20	Thu 26/8/21 Sat 2/5/20	Mon 3/2/20	NA 183 Sat 2/5/20 183	329,325 391,426	278 days 0 days	100%			
187 SUBP-1060 188 SUBP-1070	Prepare, submit and approve the rebar material		48 days	Thu 12/12/19 Thu 12/12/19	Tue 28/1/20 Tue 28/1/20	49 days	Sat 23/5/20 Tue 1/9/20	Fri 10/7/20 Sun 18/10/20	Sat 23/5/20	Fri 10/7/20 183	391,426 391,426	0 days	100% 100%			i
189 SUBP-1080	Prepare, submit and approve the metal works material  Prepare, submit and approve the ABWF works material		48 days 48 days	Sat 12/12/20	Tue 28/1/20	48 days 48 days	Mon 1/3/21	Sat 17/4/21	Tue 1/9/20 Mon 1/3/21	Sun 18/10/20 183 Sat 17/4/21 183	332,350,398,460,488,504,514,522	0 days	100%			
190 SUBP-1090 191 SUBP-1100	Prepare, submit and approve the protective lining to concrete  Prepare, submit and approve the multi-part covers		0 days 0 days	NA NA	NA NA	48 days 21 days	Tue 1/9/20 Tue 5/5/20	Sun 18/10/20 Mon 25/5/20	Tue 1/9/20 Tue 5/5/20		391,426	0 days 0 days	100% 100%	· · · · · · · · · · · · · · · · · · ·		
192 SUBB-1000	BIM		1205 days	Thu 6/2/20	Wed 28/2/24	1562 days	Mon 18/11/19	Fri 28/2/25		NA		178 days	27%			
193 SUBB-1010	Prepare, submit and approve the proposal of details of Common data environment (CDE)		48 days	Thu 6/2/20	Wed 1/4/20	37 days	Mon 18/11/19	Wed 1/4/20	Mon 18/11/19	Wed 1/4/20 129,130	194	0 days	100%			
194	Prepare and submit BIM submission		1484 days	Thu 6/2/20	Wed 28/2/24	1451 days	Thu 2/4/20	Fri 28/2/25	Thu 2/4/20	NA 193		178 days	25%	•		+
195 <b>C-1000</b> * 196 <b>CPW-1000</b>	Construction Works (Working day) Preliminary Works		1957 days 109 days	Mon 18/11/19 Mon 18/11/19	Thu 27/3/25 Thu 5/3/20	2138 days 121 days	Mon 18/11/19 Mon 18/11/19	Wed 24/9/25 Tue 17/3/20	Mon 18/11/19 Mon 18/11/19	NA Tue 17/3/20		0 days 0 days	51% 100%			
197 CPW-1000	Initial Survey		24 days	Mon 18/11/19	Sat 14/12/19	10 days	Mon 18/11/19	Thu 28/11/19	Mon 18/11/19	Thu 28/11/19 2	198	0 days	100%			į į
198 CPW-2000 199 CPW-3000	Condition Survey Installation of Monitoring Markers		30 days 26 days	Fri 27/12/19 Wed 5/2/20	Tue 4/2/20 Thu 5/3/20	89 days 78 days	Mon 18/11/19 Fri 29/11/19	Fri 6/3/20 Thu 5/3/20	Mon 18/11/19 Fri 29/11/19	Fri 6/3/20 125,197 Thu 5/3/20 198	199,172,173FS+120 days,200	0 days 0 days	100%			
200 CPW-4000	Tree Felling Works	22, 235	0 days	NA	NA	9 days	Sat 7/3/20	Tue 17/3/20	Sat 7/3/20	Tue 17/3/20 198		0 days	100%			
201 CAR-0000 * 202 CAR-1000	Access Road (AR3), B-1 Site setup and clearance wroks	05	193 days 28 days	Mon 20/1/20 Mon 20/1/20	Sat 12/9/20 Mon 24/2/20	238 days 38 days	Thu 12/12/19 Mon 20/1/20	Wed 30/9/20 Fri 6/3/20	Thu 12/12/19 Mon 20/1/20	Wed 30/9/20 4,156 Fri 6/3/20	203	0 days 0 days	100% 100%	<u>'</u>		
203 CAR-1001	Awaiting for AECOM instruction for alignment confirmation for road works	055	0 days	NA	NA	5 days	Mon 17/2/20	Thu 12/3/20	Mon 17/2/20	Thu 12/3/20 202	204	0 days	100%	i i i		i
204 CAR-1002	Additional Works in Access Road AR3 to Settle Left-in Material by Contract	215-1	0 days	NA	NA	4 days	Thu 21/5/20	Mon 25/5/20	Thu 21/5/20	Mon 25/5/20 203	205	0 days	100%			
205 CAB-2000	DC/2016/07  Drainage and Utilities Works		76 davs	Fri 6/3/20	Tue 9/6/20	75 days	Sat 7/3/20	Tue 9/6/20	Sat 7/3/20	Tue 9/6/20 204	206	0 days	100%	! !! !		1
206 CAR-2000a	Trimming of Existing Sheet Piles in Access Road AR3	215-2	0 days	NA	NA	20 days	Tue 14/7/20	Wed 5/8/20	Tue 14/7/20	Wed 5/8/20 205	207	0 days	100%	i Ti		i
207 CAR-2000b	Installation of Multi-part Cover and Manhole Cover of Chamber RP6 and Associated Concreting Works in Portion B-1	215	0 days	NA	NA	7 days	Fri 28/8/20	Fri 4/9/20	Fri 28/8/20	Fri 4/9/20 206	208	0 days	100%			
208 CAR-2001	Diversion of Existing Underground Cables in Portion B-1A	036	0 days	NA	NA	172 days	Thu 5/3/20	Wed 30/9/20	Thu 5/3/20		210	0 days	100%	<u> </u>		
209 CAR-2002 210 CAR-3000 KD1A	Additional U-channel, beam barrier and footway concrete pavement  Roadworks	055	0 days 80 days	NA Wed 10/6/20	NA Sat 12/9/20	60 days 133 days	Thu 12/12/19 Fri 24/4/20	Wed 26/2/20 Wed 30/9/20	Thu 12/12/19 Fri 24/4/20	Wed 26/2/20 Wed 30/9/20 126,209,208	210 42FF	0 days 0 days	100%			
211 CIW-0000 *	Inlet Works No.1, B-2		854 days	Mon 6/1/20	Mon 21/11/22	594 days	Tue 26/11/19	Thu 25/11/21	Tue 26/11/19	NA		0 days	88%			i
212 CIW-1000	Diversion Works (1. Inlet Trunk Sewer, Leachate Rising Mains, Sludge Pipes, Tank Drains and Pipelines near Primary Sludge Thinkeners)		180 days	Mon 6/1/20	Fri 14/8/20	459 days	Tue 26/11/19	Wed 16/6/21	Tue 26/11/19	NA 184,123	44FF	111 days	88%			
213 CIW-1100	Utilities scanning to idenify existing UU arrangement		12 days	Mon 6/1/20	Sat 18/1/20	0 days	Fri 13/12/19	Sat 18/1/20	Fri 13/12/19	Sat 18/1/20 158	214SS,216	0 days	100%	<u> </u>		
214 CIW-1200	Trial pits to locate the collection points		24 days	Mon 6/1/20	Wed 5/2/20	0 days	Mon 6/1/20	Tue 10/3/20	Mon 6/1/20	Tue 10/3/20 158,213SS,124	232,251	0 days	100%	<u> </u>		
215 CIW-1300	Installation and Commissioning of Temporary Activated Carbon Deodorization Unit for the Existing Inlet Works		0 days	NA	NA	98 days	Wed 11/3/20	Sat 11/7/20	Wed 11/3/20	Sat 11/7/20		0 days	100%			
216 CIW-1310	Construction of concrete plinth		0 days	NA	NA	24 days	Wed 11/3/20	Wed 8/4/20	Wed 11/3/20	Wed 8/4/20 213	217	0 days	100%			
217 CIW-1320 218 CIW-1330	Installation of Deodorizer Testing & commissioning		0 days 0 days	NA NA	NA NA	40 days 15 days	Thu 9/4/20 Mon 1/6/20	Sat 30/5/20 Wed 17/6/20	Thu 9/4/20 Mon 1/6/20	Sat 30/5/20 216 Wed 17/6/20 217	218 219FS-1 day	0 days 0 days	100%			
219 CIW-1340	Demolishment of the existing carbon deodorization unit		0 days	NA	NA	20 days	Wed 17/6/20	Sat 11/7/20	Wed 17/6/20		,	0 days	100%			
220 CIW-1400	Diversion of Inlet Trunk Sewer (approx. 40m 1800mm dia concrete pipe, 4 deep manholes and Inlet Reception Chamber)		146 days	Thu 6/2/20	Mon 3/8/20	451 days	Mon 9/3/20	Mon 13/9/21	Mon 9/3/20	NA		0 days	97%			
221 CIW-1405	loist loitid Currey arrangement with MTDCI		0 days	NA	NA	24 doug	Thu 19/11/20	Wed 16/12/20	Thu 19/11/20	Wed 16/12/20	222	O dovo	100%	_		
221 CIW-1405 222 CIW-1410	Joint Initial Survey arrangement with MTRCL  Remedial Works for uncharted sludge Pipe leakage	41	0 days 0 days	NA NA	NA NA	24 days 8 days	Mon 9/3/20	Tue 17/3/20	Mon 9/3/20	Tue 17/3/20 221	223	0 days 0 days	100%			1
223 CIW-1420 224 CIW-1421	Diversion of uncharted DN250 sludge pipe Diversion of uncharted 2' water pipe	41	0 days 0 days	NA NA	NA NA	27 days 9 days	Tue 31/3/20 Wed 15/4/20	Thu 7/5/20 Fri 24/4/20	Tue 31/3/20 Wed 15/4/20	Thu 7/5/20 222 Fri 24/4/20 223	230,224,225 230	0 days 0 days	100% 100%			
225 CIW-1422	Additional Underground Utility Scanning for existing sludge pipe	32	0 days	NA NA	NA NA	1 day	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20 223	230	0 days	100%			
226 CIW-1423 227 CIW-1423a	HV Cable Diversion for Inlet Works Exposing, Removal and Diversion of Existing Cables near Inlet Works	84 236	0 days 0 days	NA NA	NA NA	135 days 268 days	Sat 10/10/20 Mon 4/5/20	Wed 24/3/21 Wed 24/3/21	Sat 10/10/20 Mon 4/5/20	Wed 24/3/21 Wed 24/3/21		0 days 0 days	100% 100%			1
	No. 1										007 00			!!!!		
228 CIW-1424 229 CIW-1425	Diversion of Existing Sludge Rising Main and Sewerage System  Demolition of Deodorization System and Facilities between Existing	81 037	0 days 0 days	NA NA	NA NA	102 days 1 day	Mon 28/9/20 Fri 28/8/20	Sat 30/1/21 Fri 28/8/20	Mon 28/9/20 Fri 28/8/20	Sat 30/1/21 Fri 28/8/20	307,309,279,280	0 days 0 days	100%			1
	Primary Sludge Thickeners and Primary Sludge Pump Pit										004					1
230 CIW-1430 231 CIW-1440	Removal of concrete surround and uncharted sludge pipe  Remedial works for uncharted pipe and unforeseen water seepage	030 273	0 days 0 days	NA NA	NA NA	20 days 10 days	Fri 24/4/20 Fri 8/5/20	Tue 19/5/20 Tue 19/5/20	Fri 24/4/20 Fri 8/5/20		231 232,233	0 days 0 days	100%	1 1		
232 CIW-1450			146 days		Mon 3/8/20	Í	Wed 11/3/20	Mon 28/12/20	Wed 11/3/20				100%	i		
232 CIW-1450 233 CIW-1450a	Trench Excavation for 1800mm dia pipeline and manholes  Sheetpile installation (on hold due to identification of uncharted	28	0 days	Thu 6/2/20 NA	NA NA	238 days 80 days	Wed 11/3/20 Wed 11/3/20	Thu 18/6/20	Wed 11/3/20 Wed 11/3/20		234	0 days 0 days	100%			
234 CIW-1450b	obstruction)  Trench Excavation for 1800mm dia pipeline and manholes		45 days	Thu 6/2/20	Sat 28/3/20	22 days	Thu 18/6/20	Wed 15/7/20	Thu 18/6/20	Wed 15/7/20 233	235,247	0 days	100%			
235 CIW-1450c	Identification of uncharted concrete surround and pipes near MHA01	28	0 days	NA NA	NA NA	29 days	Thu 16/7/20	Tue 18/8/20	Thu 16/7/20		238,243,247	0 days	100%	-   -		
236 CIW-1450d	MHA01  Removal of existing DSD drawpits near IRC & exposure of CLP	215-2	0 days	NA	NA	26 days	Thu 16/7/20	Fri 14/8/20	Thu 16/7/20	Fri 14/8/20		0 days	100%			
	cables with installation of additional temporary support				NA						000.040					1
237 CIW-1450e	Removal of uncharted concrete surround and pipes near MHA01 and Sheetpile installation	(045)	0 days	NA	NA	10 days	Fri 7/8/20	Tue 18/8/20	Fri 7/8/20		238,243	0 days	100%	• •		
238 CIW-1450f	Revised type of pipe bedding between Manholes no. MHA01 and MHA02	096	0 days	NA	NA	6 days	Sat 3/10/20	Fri 9/10/20	Sat 3/10/20	Fri 9/10/20 237,235	239	0 days	100%	•		į.
239 CIW-1450g	Replace top soil with Grade 200 Rockfill below Formation level of	079	0 days	NA	NA	3 days	Mon 10/8/20	Wed 12/8/20	Mon 10/8/20	Wed 12/8/20 238	241	0 days	100%			1
240 CIW-1450h	the proposed pipe between MHA01 and MHA02  Grade 200 Rockfill in ELS cofferdam of IRC	(161)	0 days	NA	NA	3 days	Wed 23/12/20	Mon 28/12/20	Wed 23/12/20	Mon 28/12/20	241	0 days	100%			1
241 CIW-1451	Construct M/H MHA01, MHA02, MHA04 and Inlet Reception Chamber	(.01)	65 days	Mon 30/3/20	Fri 19/6/20	395 days	Wed 23/12/20 Wed 20/5/20	Mon 13/9/21	Wed 23/12/20 Wed 20/5/20	NA 239,243,242,244,240	283	-135 days	91%	©		
242 CIW-1452	Enlarged size of Manhole MHA02	052	0 days	NA	NA	6 days	Tue 1/9/20	Mon 7/9/20	Tue 1/9/20	Mon 7/9/20	241	0 days	100%			1
243 CIW-1453	Additional Works for Manhole MHA01 Construction and Pipe Connection to Manhole MHA01	(094) (146)	0 days	NA NA	NA NA	160 days	Wed 16/9/20	Wed 31/3/21	Wed 16/9/20		241	0 days	100%			
244 CIW-1454	Additional Works for IRC and Pipe Connection to IRC from Existing	(096)	0 days	NA	NA	17 days	Fri 18/9/20	Fri 9/10/20	Fri 18/9/20	Fri 9/10/20	245,247,241	0 days	100%			
245 CIW-1455	Manhole FMH1004115	381	·	NA	NA		Mon 19/10/20	Wed 21/10/20	Mon 19/10/20			0 davs	100%			
246 CIW-1456	Removal of left-in sheetpiles at IRC Compliance Test for DN1800 Precast Concrete Pipe	381 065	0 days 0 days	NA	NA NA	3 days 1 day	Fri 18/9/20	Fri 18/9/20	Fri 18/9/20	Fri 18/9/20		0 days	100%			1
247 CIW-1457 248 CIW-1458	Lay 1800mm dia concretre pipe  Connection to existing Inlet Chamber		24 days 12 days	Sat 20/6/20 Tue 21/7/20	Mon 20/7/20 Mon 3/8/20	88 days 12 days	Thu 17/9/20 Tue 26/1/21	Mon 25/1/21 Mon 8/2/21	Thu 17/9/20 Tue 26/1/21	Mon 25/1/21 234,235,244 Mon 8/2/21 247	248 307,44FF	0 days 0 days	100% 100%			
249 CIW-1500	Diversion of Leachate Rising Main, Sludge Pipes and Tank Drain		150 days	Thu 6/2/20	Fri 7/8/20	594 days	Tue 26/11/19	Thu 25/11/21	Tue 26/11/19	NA NA	our year 1	-99 days	94%			
250 CIW-1510 KD1B	Diversion of Tank Drain MHD9.5 (approx. 70m CHES1 & CHES2)		150 days	Thu 6/2/20	Fri 7/8/20	406 days	Tue 26/11/19	Mon 12/4/21	Tue 26/11/19	Sat 10/4/21 278	307,44FF	0 days	100%			
251 CIW-1500a	Diversion of Tank Drain MHD9.5 to MHA04 (approx. 70m 675mm dia conrete pipe, 24m DN250 DI leachate rising main,		150 days	Thu 6/2/20	Fri 7/8/20	406 days	Tue 26/11/19	Mon 12/4/21	Tue 26/11/19	Sat 10/4/21 214		0 days	100%			
	90m CHES1&S2 DN250 CI )															<u>i</u>
Data Date: 31/07/2021										Page 3						Revision Date: 15/08/2021

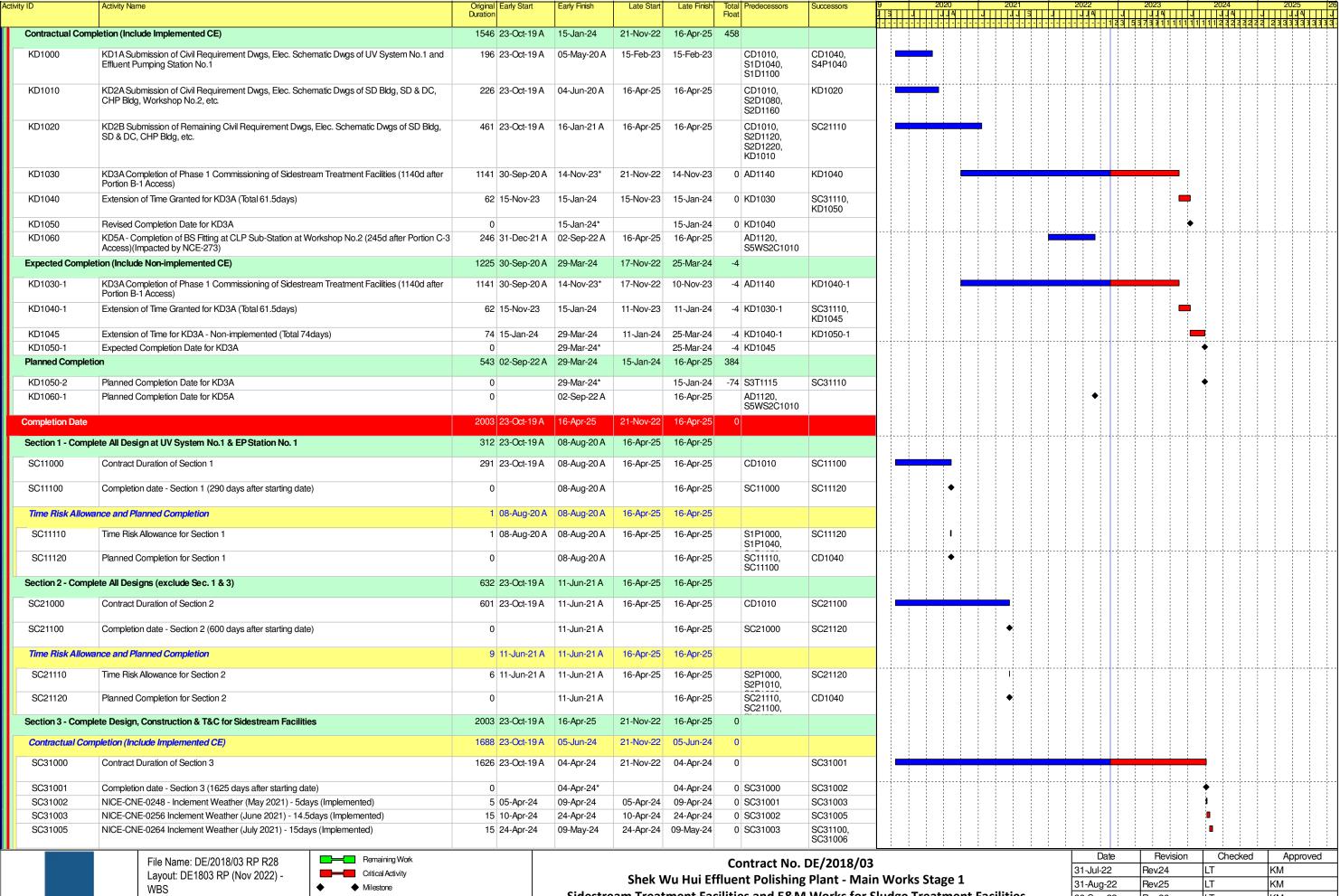
ontract No. DC/2018/07 hek Wu Hui Effluent Polishing	<u> </u>									Works Programme (Status Date: 31/07/2021)					
ID Activity ID Key Date	ask Name	Inclement PMI & CE no. (NCE no.)	. Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish A	ctual Start	Actual Finish Predecessors	Successors		Risk Allowance % Complete	0000	2002
52 CIW-1500b	Joint Initial Survey arrangement with MTRCL	CE no. (NCE no.)	0 days	NΔ	NΔ	158 days	Tue 26/11/19	Wed 10/6/20	Tue 26/11/19	Wed 10/6/20		0 days	Otr 3	2020 Qtr 1 Qtr 3 Qtr 1	Otr 3
53 CIW-1500c	Site Clearance & inspection pit excavation under conforming alignments		0 days	NA NA	NA NA	36 days	Fri 12/6/20	Sat 25/7/20	Fri 12/6/20			0 days	100%	_	
54 CIW-1511	Tank Drain Diversion near MTRCL track		0 days	NA	NA	248 days	Thu 11/6/20	Mon 12/4/21	Thu 11/6/20	Sat 10/4/21		0 days	100%		
255 CIW-1511a 256 CIW-1511b	Excavation of trial pit near MHD9.5 (TP45 & 47) Uncharted cables found near MTRC track and identification	040	0 days 0 days	NA NA	NA NA	12 days 1 day	Mon 27/7/20 Thu 18/6/20	Sat 8/8/20 Thu 18/6/20	Mon 27/7/20 Thu 18/6/20	Sat 8/8/20 Thu 18/6/20 255	256,260	0 days 0 days	100%		
257 CIW-1511c 258 CIW-1511d	Excavation of trial pit near MHD8.5	(046)	0 days	NA NA	NA	5 days	Fri 19/6/20 Thu 11/6/20	Wed 24/6/20 Fri 21/8/20	Fri 19/6/20 Thu 11/6/20	Wed 24/6/20	258 259	0 days 0 days	100%	<u>i</u>	
	Lower the ground surface, opening and additional trial pit (TP38)	( )	0 days	1	NA	60 days					259	, i	1	_	
259 CIW-1511e 260 CIW-1511f	Excavation of Trial Pits near Manhole MHA04 and MH09  Additional Trial Pit between MHD9.5 and MHA04	040 040	0 days 0 days	NA NA	NA NA	60 days 25 days	Thu 11/6/20 Fri 21/8/20	Fri 21/8/20 Fri 18/9/20	Thu 11/6/20 Fri 21/8/20	Fri 21/8/20 258 Fri 18/9/20 255		0 days	100%	_	
261 CIW-1511g 262 CIW-1511h	Sheetpile installation for MHD9.5 Sheetpile installation between MHD9.5 & MHA04		0 days 0 days	NA NA	NA NA	38 days 25 days	Tue 1/9/20 Tue 8/9/20	Fri 16/10/20 Thu 8/10/20	Tue 1/9/20 Tue 8/9/20			0 days 0 days	100% 100%		
263 CIW-1511i	UU supporting & ELS works& excavatuib between MHD9.5 & MHA04	5	0 days	NA NA	NA NA	73 days	Wed 7/10/20	Mon 4/1/21	Wed 7/10/20			0 days	100%		
264 CIW-1511j	Unsuit excavated material from MHD9.5 to MHA04	261	0 days	NA	NA	4 days	Fri 20/11/20	Tue 24/11/20	Fri 20/11/20	Tue 24/11/20		0 days	100%		
265 CIW-1511k 266 CIW-1511I	Revise design of manhole MHD9.5  Break up opening and plugging existing concrete pipe at	(167)	0 days 0 days	NA NA	NA NA	20 days 6 days	Thu 7/1/21 Mon 18/1/21	Fri 29/1/21 Sat 23/1/21	Thu 7/1/21 Mon 18/1/21			0 days 0 days	100%		
	MHD9.5												1		
267 CIW-1511I1 268 CIW-1511I2	Trimming existing concrete pipe at MHD9.5 Construction of manhole MHD9.5		0 days 0 days	NA NA	NA NA	13 days 49 days	Fri 22/1/21 Sat 6/2/21	Fri 5/2/21 Sat 10/4/21	Fri 22/1/21 Sat 6/2/21	Fri 5/2/21 Sat 10/4/21		0 days 0 days	100%	-	
269 CIW-1511m 270 CIW-1511n	Additional work to prevent backflow from MHI1 to MHD9.5 Sewage overflow incident of MHD11	(176)	0 days 0 days	NA NA	NA NA	9 days 9 days	Mon 18/1/21 Sat 13/2/21	Wed 27/1/21 Thu 25/2/21	Mon 18/1/21 Sat 13/2/21	Wed 27/1/21 Thu 25/2/21		0 days 0 days	100%	'. '	
271 CIW-1512	Additional Special manhole for tank drain (NCE)		0 days	NA NA	NA	35 days	Mon 24/8/20	Mon 5/10/20	Mon 24/8/20	Mon 5/10/20	272,273	0 days	100%	-	
272 CIW-1513	Breaking of concrete surround of cables (0.8mx0.8mx70m) (NCE)		0 days	1	NA	24 days	Tue 8/9/20	Wed 7/10/20	Tue 8/9/20			0 days	100%	•	
273 CIW-1514 KD1B	Construction of tank drain along revised alignment w/ concrete surround	051	0 days	NA	NA	10 days	Tue 5/1/21	Fri 15/1/21	Tue 5/1/21	Fri 15/1/21 271	43FF,307	0 days	100%		
274 CIW-1516	Backfilling trench between MHD9.5 & MHA04		0 days	NA Tuo 21/4/20	NA Tue 21/7/20	20 days	Sat 16/1/21	Mon 8/2/21	Sat 16/1/21	Mon 8/2/21		0 days	100%		į
275 <b>CIW-1520</b> 276 CIW-1520a	Diversion of Sludge Pipes  Excavation of trial pit and identification of connection point	351	75 days 0 days	Tue 21/4/20 NA	Tue 21/7/20 NA	364 days 103 days	Mon 11/5/20 Mon 11/5/20	Thu 29/7/21 Wed 9/9/20	Mon 11/5/20 Mon 11/5/20		277	0 days 0 days	100%		
277 CIW-1520b	Trench excavation for twin DN250 sludge pipe ,on hold due to encounter of uncharted sludge pipe	351	75 days	Tue 21/4/20	Tue 21/7/20	4 days	Wed 15/7/20	Sat 18/7/20	Wed 15/7/20	Sat 18/7/20 276	278	0 days	100%		
278 CIW-1520c	Additional hole drilling works and identification of connetion point		0 days	NA	NA	53 days	Mon 20/7/20	Fri 18/9/20	Mon 20/7/20	Fri 18/9/20 277	250	0 days	100%		
279 CIW-1520d	Temporary diversion of substandard DI 250 Leachate raising mai	in 202	0 days	NA	NA	127 days	Tue 20/10/20	Wed 24/3/21	Tue 20/10/20	Wed 24/3/21 228		0 days	100%	_	
280 CIW-1520e	Protection work for substandard DI 500 tank drain Pipe (near MH	D 302	0 days	NA	NA	93 days	Wed 18/11/20	Fri 12/3/21	Wed 18/11/20	Fri 12/3/21 228		0 days	100%	 	
281 CIW-1520f	9.5)			NA	NA.		Tue 10/11/20	Wed 11/11/20			282		1		
	Encounter of uncharted concrete pipe within sheetpile cofferdam MHA04	at	0 days	INA	NA	2 days			Tue 10/11/20			0 days	100%	'	
282 CIW-1520g 283 CIW-1530	Resumption and construction of sludge pipe construction Diversion of Leachate Rising Main		0 days 60 days	NA Tue 21/4/20	NA Fri 3/7/20	253 days 60 days	Sat 19/9/20 Tue 14/9/21	Thu 29/7/21 Thu 25/11/21	Sat 19/9/20 NA	NA 281 NA 241	307,44FF	-36 days -135 days	91%		
284 CIW-1600	Diversion of pipelines near Primary Sludge Thickeners (approx. 180m long 150mm to 375mm concrete pipes)		156 days	Thu 6/2/20	Fri 14/8/20	570 days	Tue 26/11/19	Thu 28/10/21	Tue 26/11/19	NA		0 days	55%		
285 CIW-1610	Trench Excavation from M/H MHD1E to MHD5 (approx. 90m long wi	i <del>th</del> 87	60 days	Thu 6/2/20	Mon 20/4/20	0-days	Tue 26/11/19	Tue 26/11/19	Tue 26/11/19	Tue 26/11/19		0 days	100%	26/11	
286 CIW-1620	M/Hs MHD1A, 1B, 1C, 1D & 1E) - realigned  Manholes construction and Pipe laying - emitted	87	60 days	Mon 30/3/20	Sat 13/6/20	0 days	Tue 2/6/20	Tue 2/6/20	Tuo-2/6/20	Tue 2/6/20	43FF.291	0 days	100%	♦ 2/6	
287 CIW-1621	Temporary Diversion of Existing DN200 Filitrate Rising Main	034	0 days	NA	NA	20 days	Sat 1/8/20	Mon 24/8/20	Sat 1/8/20	Mon 24/8/20	288	0 days	100%		
288 CIW-1623 289 CIW-1625	Pipeline Diversion Works near Primary Sludge Thickening Tank Uncharted underground utilities near Proposed MHD5B	(114) 0260	0 days 0 days	NA NA	NA NA	30 days 26 days	Fri 16/4/21 Mon 24/5/21	Sat 22/5/21 Wed 23/6/21	Fri 16/4/21 Mon 24/5/21	Sat 22/5/21 287 Wed 23/6/21 288	289 290,293	0 days 0 days	100%	•	
290 CIW-1630	Trench Excavation from M/H (approx. 90m long with M/Hs M1A to M3B)		60 days	Tue 21/4/20	Fri 3/7/20	32 days	Thu 19/3/20	Wed 29/4/20	Thu 19/3/20	Wed 29/4/20 289	291,292	0 days	100%	-	
291 CIW-1640	Manholes construction (M1A, M1B, M2B, M3B) and Pipe laying	44.6	25 days	Mon 15/6/20	Wed 15/7/20	12 days	Mon 4/5/20	Sat 16/5/20	Mon 4/5/20		43FF	0 days	100%	•	
292 CIW-1650	Trench Excavation from MHD5 to MHD9.5 (approx. 90m long with M/Hs MHD5A & 5B)	(114)	50 days	Thu 16/7/20	Fri 11/9/20	60 days	Wed 2/9/20	Wed 30/12/20	Wed 2/9/20	Wed 30/12/20 290,296,301,303,305		0 days	100%	-	
293 CIW-1660 294 CIW-1670	Provision of Pumping System from Screen to Flume Channel  Manholes construction (MHD5A, MHD5B, MHD5C) and Pipe laying	87	0 days 45 days	NA Sat 23/5/20	NA Thu 16/7/20	287 days 293 days	Tue 10/11/20 Tue 3/11/20	Thu 28/10/21 Thu 28/10/21	Tue 10/11/20 Tue 3/11/20	NA 289 NA 293	294 44FF	-111 days	75%		
295 CIW-2000	Decommission and Demolition of Existing Faciliates and Structures		240 days	Mon 2/3/20	Fri 18/12/20	222 days	Thu 19/3/20	Tue 15/12/20	Thu 19/3/20			0 days	100%		
296 CIW-2100	Primary Sludge Thickening Tank No.1 and No.2		80 days	Mon 2/3/20	Tue 9/6/20	222 days	Thu 19/3/20	Tue 15/12/20	Thu 19/3/20	Tue 15/12/20	292	0 days	100%		
297 CIW-2101	Additional Works for Temporary Diversion of Bypass Pipe near Primary Sludge Thickeners		0 days	NA	NA	45 days	Thu 19/3/20	Sun 17/5/20	Thu 19/3/20	Sun 17/5/20		0 days	100%	i l	
298 CIW-2110	Removal of E&M equipment of primary sludge thickening tank		0 days	NA NA	NA	1 day	Thu 4/6/20	Thu 4/6/20	Thu 4/6/20		299	0 days	100%	<u> </u>	
299 CIW-2120 300 CIW-2130	Decommission and Demolition the tank Demolition of structure no.2		80 days 0 days	Mon 2/3/20 NA	Tue 9/6/20 NA	150 days 24 days	Thu 18/6/20 Mon 18/5/20	Tue 15/12/20 Mon 22/6/20	Thu 18/6/20 Mon 18/5/20		301	0 days 0 days	100%		
301 CIW-2200 302 CIW-2300	Primary Sludge Pump Pit Septic Tank		60 days 50 days	Wed 10/6/20 Fri 21/8/20	Thu 20/8/20 Tue 20/10/20	18 days 18 days	Wed 22/7/20 Wed 12/8/20	Tue 11/8/20 Tue 1/9/20	Wed 22/7/20 Wed 12/8/20		302,303,292,304	0 days 0 days	100%		
303 <b>CIW-2400</b> 304 CIW-2410	Diesel Tank		50 days	Wed 21/10/20	Fri 18/12/20	53 days	Thu 2/7/20	Tue 1/9/20	Thu 2/7/20	Tue 1/9/20 301	292 305	0 days	100%	-	
305 CIW-2420	Transfers of Remaining Diesel Fuel of Existing Diesel Tank Demolition of diesel tank		0 days 50 days	Wed 21/10/20	NA Fri 18/12/20	15 days 18 days	Thu 2/7/20 Wed 12/8/20	Tue 21/7/20 Tue 1/9/20	Thu 2/7/20 Wed 12/8/20		292	0 days 0 days	100% 100%		
306 CIW-3000 * 307 CIW-3100	Inlet Works No.1 Building (1) Predrilling (10nrs, 1rigs, 2.5days/drillhole/rig) - stage 1		569 days 40 days	Sat 19/12/20 Mon 4/1/21	Mon 21/11/22 Mon 22/2/21	747 days 28 days	Tue 15/9/20 Tue 15/9/20	Thu 23/3/23 Mon 19/10/20	Tue 15/9/20 Tue 15/9/20	NA 6 Mon 19/10/20 248.250.273.228.282		748 days 0 days	18% 1 100%	•	
308 CIW-3100a	Predrilling (22nrs, 1rigs, 2.5days/drillhole/rig) - stage 2		0 days	NA	NA	60 days	Tue 8/12/20	Mon 22/2/21	Tue 8/12/20	Mon 22/2/21		0 days	100%	_	
309 CIW-3200 310 CIW-3400a	Pre-bored H piles (188nos, 1.8rigs, 2days/rig/pile) Pile Load Test at stage 1		133 days 26 days	Tue 23/2/21 Thu 5/8/21	Wed 4/8/21 Fri 3/9/21	210 days 21 days	Fri 19/2/21 Sat 21/8/21	Tue 2/11/21 Tue 14/9/21	Fri 19/2/21 NA	NA 228,132 NA 309SS+150 days	310SS+150 days,311 312	-34 days 83 days	5 63% I	 	
311 CIW-3400b 312 CIW-3300a	Pile Load Test at stage 2 & 3 Sheetpile Installation at Phase C( 900sq.m, 1rigs, 50sqm/rig/day)		0 days 80 days	NA Tue 23/3/21	NA Wed 30/6/21	21 days 30 days	Wed 3/11/21 Wed 15/9/21	Fri 26/11/21 Fri 22/10/21	NA NA	NA 309 NA 310	328,313 315	-34 days 83 days	0%	 	
313 CIW-3300b	Sheetpile Installation at Phase B ( 2300sq.m, 1rigs, 50sqm/rig/day)		0 days	NA	NA	50 days	Sat 27/11/21	Thu 27/1/22	NA	NA 311	316	-34 days	0%	ļ	
314 CIW-3500 315 CIW-3510	ELS works  Phrase C (Grid G3 to L7)) - Excavation to -3.3mPD and blinding (strutting)	ng	77 days 77 days	Sat 4/9/21 Fri 4/6/21	Mon 6/12/21 Mon 6/12/21	157 days 77 days	Sat 23/10/21 Sat 23/10/21	Fri 6/5/22 Mon 24/1/22	NA NA	NA NA 312	334,165SF,169SF 320,333	3 days 83 days	5 0% 0%		
316 CIW-3520	2 layers, excavate soil 2250 cu.m)  Phrase B (Grid A1 to G3) - Excavation to -7.5mPD and blinding (struttin		77 days	Fri 4/6/21	Mon 6/12/21	77 days	Fri 28/1/22	Fri 6/5/22	NA.	NA 313	324	-34 days	00/		
	4 layers, excavate soil 11000cu.m)	9									UC*		076		
317 CIW-3590 318 CIW-3600	Receiving of Civil Requirements from PM  R.C. Structure works		0 days 296 days	NA Thu 5/8/21	NA Thu 4/8/22	1 day 300 days	Mon 30/8/21 Sat 27/11/21	Mon 30/8/21 Thu 1/12/22	NA NA	NA 318SS-3 emons	317SS-3 emons,332	1211 days -34 days	5 0%	 	
319 CIW-3610	Phase C (Grid G3 to L7)		105 days	Thu 5/8/21	Wed 8/12/21	105 days	Tue 25/1/22	Tue 7/6/22	NA NA	NA NA 245		114 days	0%		
320 CIW-3611	Rebar fix and formwork and concreting for the pile cap (G/F) (including ELS demolition works)		40 days	Thu 5/8/21	Mon 20/9/21	40 days	Tue 25/1/22	Tue 15/3/22	NA	NA 315	321	114 days	0%	i	
321 CIW-3612 322 CIW-3613 KD1C	Rebar fix and formwork and concreting upto +13.45mPD (1/F)  Rebar fix and formwork and concreting upto +25.80mPD (R/F)		25 days 40 days	Tue 21/9/21 Sat 23/10/21	Fri 22/10/21 Wed 8/12/21	25 days 40 days	Wed 16/3/22 Tue 19/4/22	Thu 14/4/22 Tue 7/6/22	NA NA	NA 320 NA 321	322 44FF,331,524	114 days 114 days	0%	ļ	•
323 CIW-3620	Phase B (Gride A1 to G3)		193 days	Tue 7/12/21	Thu 4/8/22	173 days	Sat 7/5/22	Thu 1/12/22	NA NA	NA		-34 days	0%		
324 CIW-3621	Rebar fix and formwork and concreting for the Inlet Works structure upto Ground Level (including ELS demolition works)		54 days	Tue 7/12/21	Mon 14/2/22	54 days	Sat 7/5/22	Tue 12/7/22	NA	NA 316	325	-34 days	0%	 	
325 CIW-3622 326 CIW-3623 KD1C	Apply waterproofing membrance and backfilling  Rebar fix and formwork and concreting for the Inlet Works structure		14 days 105 days	Tue 15/2/22 Thu 3/3/22	Wed 2/3/22 Thu 4/8/22	14 days 105 days	Wed 13/7/22 Fri 29/7/22	Thu 28/7/22 Thu 1/12/22	NA NA	NA 324,185 NA 325	326 331	-34 days	0%	 	
327 CIW-3630	upto Roof Level			Tue 7/12/21				Sat 2/7/22		NA.				i I	
327 CIW-3630 328 CIW-3631	Phase A (G1 to L3)  Rebar fix and formwork and concreting for the Inlet Works structure		193 days 54 days	Tue 7/12/21 Tue 7/12/21	Thu 4/8/22 Mon 14/2/22	173 days 54 days	Sat 27/11/21 Sat 27/11/21	Sat 2/7/22 Fri 4/2/22	NA NA	NA 311	329	93 days 93 days	0%	ļ	<u> </u>
329 CIW-3632	upto Ground Level (including ELS demolition works)  Apply waterproofing membrance and backfilling		14 days	Tue 15/2/22	Wed 2/3/22	14 days	Sat 5/2/22	Mon 21/2/22	NA	NA 328,185	330	93 days	0%		
330 CIW-3633 KD1C	Rebar fix and formwork and concreting for the Inlet Works structure upto Roof Level		105 days	Thu 3/3/22	Thu 4/8/22	105 days	Tue 22/2/22	Sat 2/7/22	NA NA	NA 329	332,44FF,331	93 days	0%		
331 CIW-3700 KD1C	Allow access to Contractor DE/2018/04 for E&M installation and T&C work	s	0 days	Thu 4/8/22	Thu 4/8/22	0 days	Thu 1/12/22	Thu 1/12/22	NA	NA 330,322,326	44FF	-34 days	0%	 	<b>♦ 1/12</b>
332 CIW-3800 SW1	ABWF works + BS works		90 davs	Fri 5/8/22	Mon 21/11/22	90 days	Fri 2/12/22	Thu 23/3/23	NA.	NA 330,189,141,318	56FF	262 days	0%		
333 CIW-3900 KD1D	Process Pipe CHE chainage 0-20 & CHF chainage 0-20		0 days	NA	NA	50 days	Sat 17/12/22	Mon 20/2/23	NA	NA 315,351FF	45FF	0 days	0%	ļ	
334 CIW-4000 SW2 335 CPS-0000 *	Remaining sewerage and utilities in Portion B1 & B2  Primary Sedimentation Tanks, B-3 (2)		0 days 1115 days	NA Mon 18/11/19	NA Wed 23/8/23	60 days 1115 days	Sat 7/5/22 Mon 18/11/19	Tue 19/7/22 Wed 23/8/23	NA Mon 18/11/19	NA 314 NA 8	57FF,555	3 days 139 days	0% 44%		
336 CPS-1000 337 CPS-1100	Operation of the Existing Primary sedimentation Tanks Identification of existing cables near Primiary Sedimentation Tank	88	615 days 0 days	Mon 18/11/19 ΝΔ	Sat 24/7/21	615 days 3 days	Mon 18/11/19 Fri 19/2/21	Sat 24/7/21 Mon 22/2/21	Mon 18/11/19 Fri 19/2/21	Sat 24/7/21 2	339,338	0 days 0 days	100%		
337 CPS-1100 338 CPS-1200	Removal of residual sludge	00	0 days	NA	NA NA	12 days	Mon 26/7/21	Sat 7/8/21	NA	NA 336	339	-62 days	0%	' •	
			45 days	Mon 13/12/21	Wed 9/2/22	30 days	Mon 9/8/21	Sat 11/9/21	NA	NA 122,160,162,336,338	342,340	-62 days	0%	E CONTRACTOR DE	
339 CPS-2000 340 CPS-2000a	Demolition of existing primary sedimentation tanks no. 1  Demolition of existing primary sedimentation tanks no. 2		0 days	NA	NA	25 days	Mon 13/9/21	Wed 13/10/21	NA	NA 339	342	-62 days	0%	ı lı	

Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing	n Plant - Main Works Stage 1								Revised	d Works Programme (Status Date: 31/07/2021)						
ID Activity ID Key Date	Task Name In: W	clement PMI & CE no. (NCE no.)	b. Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish A	ctual Start	Actual Finish Predecessors	Successors	Total Slack	Allowance	2020	Otr 3	2024
342 CPS-3000	Predrilling (63nrs, 3rigs, 3days/drillhole/rig)	ICE no.)	38 days	Thu 10/2/22	Fri 25/3/22	38 days	Fri 15/10/21	Sat 27/11/21	NA	NA 127,452,339,340	343	-62 days	1 0%	Otr 3 Otr 1 Otr 3 Otr 1	drs dr1 drs dr1 drs	atri atri atri
343 CPS-4000 344 CPS-5000	Pre-bored H piles (205nos, 2.5rigs, 2days/pile/rig)  Sheetpile Installation (FSP-II, 3360sq.m, 1rigs, 50sqm/rig/day)		102 days 85 days	Sat 26/3/22 Wed 25/5/22	Mon 1/8/22 Fri 2/9/22	164 days 42 days	Mon 29/11/21 Thu 5/5/22	Wed 22/6/22 Fri 24/6/22	NA NA		344FS-40 days,346,345 346,352SS+27 days	-62 days	5 0%		<u> </u>	
345 CPS-6000	Pile Load Test		26 days	Tue 2/8/22	Wed 31/8/22	26 days	Thu 23/6/22	Sat 23/7/22	NA	NA 343	346	0 days	0%	I I		
346 CPS-7000 347 CPS-7900	ELS works (20000cu.m soil with 2 layers wailing / strutting)  Receiving of Civil Requirements from PM		45 days 0 days	Sat 3/9/22 NA	Fri 28/10/22 NA	60 days 1 day	Mon 25/7/22 Thu 7/7/22	Wed 5/10/22 Thu 7/7/22	NA NA		347FF-3 emons,348,166SF,170S 348SS-3 emons	SF 0 days 186 days	3 0%	!		
348 CPS-8000 KD1D	R.C. Structure works (including ELS demolition works)		92 days	Sat 29/10/22	Mon 20/2/23	112 days	Thu 6/10/22	Mon 20/2/23	NA	NA 137,346,347SS-3 emons	349,350,45FF,351FF	0 days	3 0%	i	<u></u>	
349 CPS-9000 KD1D 350 CPS-10000 SW1	Allow access to Contractor DE/2018/04 for E&M installation and T&C works  ABWF works + BS works		0 days 150 days	Mon 20/2/23 Tue 21/2/23	Mon 20/2/23 Wed 23/8/23	0 days 150 days	Mon 20/2/23 Tue 21/2/23	Mon 20/2/23 Wed 23/8/23	NA NA		45FF 56FF	0 days 139 days	0%	1	♦ 20/2	
351 CPS-11000 KD1D	Flowmeter Chamber no.1		60 days	Tue 21/2/23	Sat 6/5/23	60 days	Tue 6/12/22	Mon 20/2/23	NA	NA 348FF	45FF,333FF	0 days	0%			
352 CPS-12000 SW2	Process Pipe CHG chainage 0-50, CHH chainage 0-80, CHI chainage 0-95 & CHJ chianage 0-40 and surrounding utilities		0 days	NA	NA	100 days	Wed 8/6/22	Thu 6/10/22	NA	NA 344SS+27 days	57FF,555	-62 days	0%		SSSSSS	
353 CBR-0000 *	Bioreactors No.2A & 2B, B-4 (3)		1106 days	Mon 18/11/19	Sat 12/8/23	1194 days	Mon 18/11/19	Mon 27/11/23	Mon 18/11/19	NA 9		546 days	38%	1		
354 CBR-1000 355 CBR-2000	Operation of 2no. Existing 800mm air mains over bioreactor no.2  Construction of Removable Steel Shutter in the Common Channel of BR2	67	360 days	Mon 18/11/19	Wed 11/11/20	292 days	Mon 18/11/19 Thu 1/10/20	Wed 11/11/20 Fri 15/1/21	Mon 18/11/19 Thu 1/10/20		005	0 days	100%			
355 GBH-2000	and 3	67	0 days	NA .	NA	86 days	THU 1/10/20	FII 13/1/21	THU 1/10/20	Ffi 15/1/21 144	365	0 days	100%			
356 CBR-4100	Take Down E&M Equipment & cables in Bioreactor BR2 and Return to DSD	95	0 days	NA	NA	90 days	Thu 15/10/20	Mon 1/2/21	Thu 15/10/20	Mon 1/2/21	366	0 days	100%			
357 CBR-4200	Installation of monitoring points before demolition of BR2	219	0 days	NA	NA	5 days	Wed 27/1/21	Mon 1/2/21	Wed 27/1/21	Mon 1/2/21 363	358	0 days	100%	in the second of the second		
358 CBR-4300 359 CBR-5000	Condition Survey for BR2		0 days 60 days	NA Wed 3/2/21	NA Tue 20/4/21	1 day	Fri 30/10/20 Tue 10/11/20	Fri 30/10/20 Wed 10/3/21	Fri 30/10/20 Tue 10/11/20		366	0 days	100%			
360 CBR-5100	Demolition of existing bioreactor no.2  Identification and removal of existing cables on air main pipe bridge	210	0 days	NA	NA	98 days 35 days	Tue 10/11/20	Sat 19/12/20	Tue 10/11/20		361,365	0 days 0 days	100%		!!!!	
361 CBR-5300	Plugging and demolition of existing DN800 air main		0 days	NA	NA	5 days	Mon 28/12/20	Sat 2/1/21	Mon 28/12/20			0 days	100%	<u> </u>		
362 CBR-5200 363 CBR-5400	Diversion of existing lighting cable and Earthing ducts_stage 1  Overflow incident from BR1 to BR2 works area no.1 (Dec 2020)	264 285	0 days 0 days	NA NA	NA NA	43 days 33 days	Fri 4/12/20 Fri 18/12/20	Tue 26/1/21 Thu 28/1/21	Fri 4/12/20 Fri 18/12/20		366 357,362	0 days 0 days	100%			
364 CBR-5410	Overflow incident from BR1 to BR2 works area (Feb 2021)	340	0 days	NA	NA	8 days	Tue 16/2/21	Wed 24/2/21	Tue 16/2/21	Wed 24/2/21 365	366,363	0 days	100%	i i	i i	
365 CBR-3000	Construction of Isolation Wall & stoplog in common channel of BR2 & BR3	277	0 days	NA	NA	43 days	Sat 16/1/21	Wed 10/3/21	Sat 16/1/21	Wed 10/3/21 355,360	364	0 days	100%	_		
366 CBR-5500	Demolition of existing pipe bridge, partition wall and base slab (Stage 1)		30 days	Wed 3/2/21	Fri 12/3/21	26 days	Tue 2/2/21	Sat 6/3/21	Tue 2/2/21	Sat 6/3/21 362,358,364,356	367SS,368	0 days	100%			
367 CBR-5520	Removal of additional concrete infill within the partition walls	(174)	0 days	NA	NA	26 days	Tue 2/2/21	Sat 6/3/21	Tue 2/2/21	Sat 6/3/21 366SS	368	0 days	100%	_	i i	
368 CBR-5900	Construction of precautionary measures (i.e. isolation wall)	322	0 days	NA NA	NA	2 days	Tue 9/3/21	Wed 10/3/21	Tue 9/3/21	Wed 10/3/21 366,367	369,371	0 days	100%	7		
369 CBR-5905 370 CBR-5910	Construction of precautionary measures (i.e. bund wall)  Removal of abandoned DN250 air pipe	305 209	0 days 0 days	NA NA	NA NA	3 days 6 days	Thu 15/4/21 Tue 20/4/21	Sat 17/4/21 Mon 26/4/21	Thu 15/4/21 Tue 20/4/21	Sat 17/4/21 368 Mon 26/4/21		0 days 0 days	100% 100%	1		
371 CBR-6000	Predrilling (33nrs, 3rigs, 2days/drillhole/rig)_stage 1	203	44 days	Wed 21/4/21	Sat 12/6/21	44 days	Mon 1/3/21	Wed 5/5/21	Mon 1/3/21	Wed 5/5/21 368	372	0 days	1 100%			
372 CBR-7000 373 CBR-7100	Pre-bored H piles (113nos, 2rigs, 2days/pile/rig)_stage 1		113 days	Tue 15/6/21	Thu 18/11/21	113 days	Thu 6/5/21 Wed 30/6/21	Fri 17/9/21 Mon 21/3/22	Thu 6/5/21 Wed 30/6/21	NA 371	382SS+30 days,377SS+45 days,	,38 1 day 1046 days	5 41% 9%			
373 CBR-7100 374 CBR-7110	External works between BR2 and MFB2 DN700 (CHER)RAS Diversion		0 days 0 days	NA NA	NA NA	217 days 45 days	Wed 30/6/21 Wed 30/6/21	Mon 21/3/22 Sat 21/8/21	Wed 30/6/21 Wed 30/6/21	NA NA 372SS+45 days	375	1046 days 1212 days	9% 2%	' 		
375 CBR-7120	Temporary vehicle diversion for RAS operation		0 days	NA	NA	6 days	Mon 23/8/21	Sat 28/8/21	NA	NA 374		1212 days	0%	 	<u>)</u>	
376 CBR-7130 377 CBR-7131	DN600 Temporary Sewage diversion  2nos. Manhole Construction (MHTD1 and MHTD2)	204, 353	0 days 0 days	NA NA	NA NA	120 days 75 days	Wed 30/6/21 Wed 30/6/21	Sat 20/11/21 Mon 27/9/21	Wed 30/6/21 Wed 30/6/21	NA NA 372SS+45 days	378FS-30 days	-45 days	18% 36%	į		
378 CBR-7132	Existing DN600 tank drain diversion	204, 353	45 days	NA	NA	75 days	Mon 23/8/21	Sat 20/11/21	NA	NA 377FS-30 days	379	-88 days	0%	I I	15222	
379 CBR-7140	Demolition of abandoned DN600 pipe and existing surrounded wall & channel of BR2	353, 336	30 days	NA	NA	45 days	Mon 22/11/21	Sat 15/1/22	NA	NA 378	380	-88 days	0%	!	📉	
380 CBR-7150	Pre-drilling(3nr.) & Pre-bored H piles (20nrs, 1rig,		26 days	NA	NA	26 days	Mon 17/1/22	Fri 18/2/22	NA	NA 379	381	-88 days	0%	i		
381 CBR-7160	2days/drillhole/rig)_stage 2A Pile load test		26 days	NΔ	NΔ	26 days	Sat 19/2/22	Mon 21/3/22	NA	NA 380.386	389,388	-88 days	0%			
382 CBR-7200	External works between BR2 and PST		0 days	NA NA	NA NA	141 days	Wed 30/6/21	Wed 15/12/21	Wed 30/6/21		303,300	-38 days	19%	į		
383 CBR-7210	Demolition of existing DN1200. DN900 and DN500 pipe (w/ ELS works)	91	0 days	NA	NA	75 days	Wed 30/6/21	Mon 27/9/21	Wed 30/6/21	NA 372SS+45 days	384	-38 days	36%	i		
384 CBR-7220	Diversion of existing lighting cable and Earthing ducts (w/ ELS)	264	0 days	NA	NA	30 days	Tue 28/9/21	Wed 3/11/21	NA	NA 383	385	-38 days	0%	1		
385 CBR-7230	Demolition of existing side wall	336	0 days	NA	NA	12 days	Thu 4/11/21	Wed 17/11/21	NA	NA 384	386	-38 days	0%	i		
386 CBR-7240 387 CBR-7340	Pre-bored H piles (24nrs, 2rig, 2days/drillhole/rig)_stage 2B  Demolition of existing side wall between BR2 & BR3 and baseslab		24 days 0 days	NA NA	NA NA	24 days 60 days	Thu 18/11/21 Sat 18/9/21	Wed 15/12/21 Tue 30/11/21	NA NA	NA 385 NA 372	381 388	-38 days 1 day	0%	I I		
388 CBR-8000	Sheetpile Installation (3000sq.m, 1rigs, 50sqm/rig/day)		60 days	Wed 8/9/21	Fri 19/11/21	60 days	Tue 22/3/22	Tue 7/6/22	NA	NA 381,387	389	-88 days	0%	1	I 8888	
389 CBR-10000 390 CBR-10900	ELS works (18100cu.m soil with 4 layers wailing / strutting) Receiving of Civil Requirements from PM		125 days 0 days	Mon 20/12/21 NA	Fri 27/5/22 NA	80 days 1 day	Wed 8/6/22 Sat 11/6/22	Fri 9/9/22 Sat 11/6/22	NA NA		391,390FF-3 emons,399SS+46 d 391SS-3 emons	168 days	3 0%	i		
391 CBR-11000 KD1E	R.C. Structure works (including ELS demolition works)		180 days	Sat 28/5/22	Sat 31/12/22	180 days	Sat 10/9/22	Sat 22/4/23	NA		S-3 emons 398,46FF,397,393FF,394SS+25		5 0%	I I		
392 KD1E 393 CBR-11020 KD1E	Process Pipe CHO chainage 65-140  Additional backfill works after end wall construction at BR2 common channel	277	0 days 0 days	NA NA	NA NA	60 days 30 days	Wed 8/2/23 Wed 15/3/23	Sat 22/4/23 Sat 22/4/23	NA NA		46FF 46FF	-88 days	0%	i	SSS	
		277											0.6	I I	i i	
394 CBR-13000 KD1E 395 CBR-14000 KD1E	Flowmeter no. 2-4 Gate Valve Chamber no.1-3		180 days 180 days	2023/1/3 2023/1/3	2023/8/12	60 days 60 days	Thu 13/10/22 Wed 7/12/22	Wed 21/12/22 Tue 21/2/23	NA NA	NA 391SS+25 days NA 394FS-13 days	395FS-13 days 396FS-12 days	-88 days	0%	!		
396 CBR-15000 KD1E	Plug Valve Chamber no.1-2		180 days	2023/1/3	2023/8/12	60 days	Wed 8/2/23	Sat 22/4/23	NA NA	NA 395FS-12 days	46FF	-88 days	0%	i	I I	
397 CBR-12000 KD1E	Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	Sat 31/12/22	Sat 31/12/22	0 days	Sat 22/4/23	Sat 22/4/23	NA	NA 391	46FF	-88 days	0%	1	♦ 22/4	
398 CBR-16000 SW1	ABWF works + BS works		180 days	Tue 3/1/23	Sat 12/8/23	180 days	Mon 24/4/23		NA	NA 391,189,141	56FF	60 days	0%	!	!!!	
399 CBR-17000 SW2	Process Pipe CHQ chainage 65-170, CHP chainage 60-130, CHL chainage 0-35 & CHK chianage 0-50 and surrounding utilities		0 days	NA	NA	80 days	Tue 2/8/22	Sat 5/11/22	NA	NA 389SS+46 days	57FF,555	-88 days	0%	I I	SSSSS	
400 CMF-0000 *	Membrane Facilities Building, B-5		941 days	Mon 6/1/20	Thu 9/3/23	1133 days	Mon 18/11/19	Wed 13/9/23	Mon 18/11/19	NA 2		121 days	45%	1		
401 402 CMF-1000	Operation of existing Final Sedimentation Tanks no.3 & 4	26	0 days	NA Mon 6/1/20	NA Tue 21/1/20	98 days	Mon 18/11/19 Mon 6/1/20	Tue 17/3/20 Sun 28/2/21	Mon 18/11/19 Mon 6/1/20			0 days	100% 100%		i i	
403 CMF-1100	Demolition of existing final sedimentation tanks no. 3 & 4  Confirmation of Decommission Schedule 68	3 30	14 days 0 days	NA	NA	340 days 58 days	Mon 6/1/20	Mon 16/3/20	Mon 6/1/20		404	0 days 0 days	100%			
404 CMF-1200	Provision of new submersed pump 68		0 days	NA NA	NA NA	27 days	Wed 4/3/20	Fri 3/4/20	Wed 4/3/20	Fri 3/4/20 403	405	0 days	100%	1.5		
405 CMF-1205 406 CMF-1300	Assistant to decommissioning of Final Sedimentation Tank No. 3 and 4  Additional dismantling works to retain specified electrical and mechanical  75		0 days 0 days	NA NA	NA NA	14 days 21 days	Wed 4/3/20 Tue 7/4/20	Fri 3/4/20 Wed 6/5/20	Wed 4/3/20 Tue 7/4/20		406 407	0 days 0 days	100%		i i	
	equipment													_		
407 CMF-1400	Additional pluging works for DN 1200 Conc. S&S pipe at wash water pumping station chamber 76	5, 77, 144 (015)	0 days	NA	NA	70 days	Mon 8/6/20	Sat 29/8/20	Mon 8/6/20	Sat 29/8/20 406	408	0 days	100%	_		
408 CMF-1500		3, 77 032	0 days	NA	NA	21 days	Mon 15/6/20	Fri 10/7/20	Mon 15/6/20		409	0 days	100%			
409 CMF-1600 410 CMF-1710	Isolation wall for RAS Channel No.1 76 Removal of DN1400 Bioreactor No. 2 Effluent Pipe	6, 77 035 043	0 days 0 days	NA NA	NA NA	40 days 8 days	Mon 1/6/20 Fri 19/2/21	Sat 18/7/20 Sun 28/2/21	Mon 1/6/20 Fri 19/2/21	**** ** * * * * * * * * * * * * * * * *	413	0 days 0 days	100%	-		
411 CMF-1800	Exposed and disconnet uncharted existing cable between FST3 and FST 77		0 days	NA NA	NA	20 days	Thu 2/7/20	Fri 24/7/20	Thu 2/7/20			0 days	100%	and the second of the	i i	
412 CMF-1110	4 Demolition of structure no. 3 & 4 68	3, 75, 76,	14 days	Mon 6/1/20	Tue 21/1/20	122 days	Wed 1/4/20	Sat 29/8/20	Wed 1/4/20	Sat 29/8/20	414	0 days	100%			
	77	7, 144		110/1 U/ 1/EU	. 55 2 11 11 20											
413 CMF-1900 414 CMF-2000	Removal of Existing DN150 SAS Rising Main at RAS Channel No. 1 21 Predrilling (83nrs, 4rigs, 2.5days/drillhole/rig) 14	12 060 14, 212 120	0 days 42 days	NA Sat 6/6/20	NA Mon 27/7/20	23 days 31 days	Mon 31/8/20 Mon 10/8/20	Fri 25/9/20 Mon 14/9/20	Mon 31/8/20 Mon 10/8/20		415 415	0 days 0 days	100%	2		
415 CMF-3000	Pre-bored H piles (171nos, 2rigs, 1.5days/pile/rig) [Extended working hours 21		140 days	Tue 28/7/20	Wed 13/1/21	96 days	Mon 28/9/20	Sat 23/1/21	Mon 28/9/20		416,417	0 days	5 100%			
416 CMF-3100	0700-1900 & shortern pile length]	(102)	0 down	NA	NA	17	Tue 3/11/20	Sat 21/11/20	Tue 3/11/20	Sat 21/11/20 415			100%	i _	i i	
416 CMF-3100 417 CMF-4000	Change of Layout of Basement of MFB no. 2 Pile Load Test	(102)	0 days 25 days	NA Thu 14/1/21	NA Tue 16/2/21	17 days 19 days	Mon 4/1/21	Sat 21/11/20 Mon 25/1/21	Tue 3/11/20 Mon 4/1/21		421,418	0 days 0 days	100%			
418 CMF-5000 419 CMF-6000	Installation of sheetpile [with pre-boring]  ELS works	120	40 days 169 days	Wed 22/1/20 Wed 17/2/21	Wed 11/3/20 Thu 9/9/21	120 days 188 days	Mon 28/12/20 Fri 25/6/21	Thu 24/6/21 Thu 10/2/22	Mon 28/12/20 Fri 25/6/21		421 424FF-3 emons	0 days -87 days	100% 5 22%			
419 CMF-6000 420 CMF-6100	Pharse A (A1 to N6) - Excavation to -9mPD and blinding	45	169 days 169 days	Wed 17/2/21 Wed 17/2/21	Thu 9/9/21 Thu 9/9/21	188 days 188 days	Fri 25/6/21 Fri 25/6/21	Thu 10/2/22 Thu 10/2/22	Fri 25/6/21 Fri 25/6/21	NA 10 NA	424FF-3 emons 423SS	-87 days -100 days	5 22%			
421 CMF-6110	Soil Excavation [Extended working hours 0700-1900 & reduction of excavation volume]	120, 207	169 days	Wed 17/2/21	Thu 9/9/21	88 days	Fri 25/6/21	Fri 8/10/21	Fri 25/6/21	NA 418,135,417	422	-117 days	35%		<b>9</b> 22	
422 CMF-6120	Additional Rock Excavation [2200 cu.m, 7.5cu.m/group x 2]	120, 207	0 days	NA	NA	100 days	Sat 9/10/21	Thu 10/2/22	NA	NA 421	426	-117 days	0%	İ		
423 CMF-6200	Pharse B (A6 to N10) - Excavation to -1.9mPD and blinding		169 days	Wed 17/2/21	Thu 9/9/21	100 days	Fri 25/6/21	Sat 23/10/21	Fri 25/6/21		427,433	1 day	31%			
424 CMF-6900 425 CMF-7000	Receiving of Civil Requirements from PM  RC Structure works		0 days 232 days	NA Fri 10/9/21	NA Sat 25/6/22	1 day 262 days	Fri 12/11/21 Fri 11/2/22	Fri 12/11/21 Wed 28/12/22	NA NA	NA 419FF-3 emons NA 10,424SS-3 emons	425SS-3 emons	216 days -117 days	0% 5 0%			
426 CMF-7100 KD1F	Phase A - from B2 - Level 1 (including ELS demolition works)		112 days	Fri 10/9/21	Tue 25/1/22	112 days	Fri 11/2/22	Wed 29/6/22	NA	NA 139,186,187,190,188,422	427SS+30 days,428,430	-117 days	0%	i		
427 CMF-7110 KD1F 428 CMF-7120 KD1G	Phase B - from B1 - Level 1 (including ELS demolition works) Phase A - from Level 1 to Roof		112 days 120 days	Fri 10/9/21 Wed 26/1/22	Tue 25/1/22 Sat 25/6/22	112 days 120 days	Fri 18/3/22 Thu 30/6/22	Thu 4/8/22 Mon 21/11/22	NA NA	NA 426SS+30 days,423 NA 426	429,430 431,432	-117 days	0%			
429 CMF-7130 KD1G	Phase B - from Level 1 to Roof  Phase B - from Level 1 to Roof		120 days 120 days	Wed 26/1/22 Wed 26/1/22	Sat 25/6/22 Sat 25/6/22	120 days	Fri 5/8/22	Wed 28/12/22	NA NA		431,432	-87 days -117 days	0%	İ	200000	
430 CMF-8000 KD1F	Allow access to Contractor DE/2018/04 for E&M installation and T&C works (from B2-level 1)		0 days	Tue 25/1/22	Tue 25/1/22	0 days	Thu 4/8/22	Thu 4/8/22	NA	NA 426,427	47FF	-115 days	0%	I I	♦ 4/8	
431 CMF-9000 KD1G	Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	Sat 25/6/22	Sat 25/6/22	0 days	Wed 28/12/22	Wed 28/12/22	NA	NA 428,429	48FF	-117 days	0%		♦ 28/12	
	(from Level to Roof)									·			24			
432 CMF-10000 SW1 433 CMF-11000 SW2	ABWF works + BS works  Process Pipe CHQ chainage 0-65, CHM chainage 0-120, CHN chainage		210 days 0 days	Mon 27/6/22 NA	Thu 9/3/23 NA	210 days 176 days	Thu 29/12/22 Mon 25/10/21	Wed 13/9/23 Tue 31/5/22	NA NA	NA 189,428,429 NA 423	56FF 57FF,555	121 days 43 days	0%	1		
	0-125, CHO chainage 0-65, CHP chainage 0-60 & CHV chainage 0-50 and surrounding utilities					,			.21			.,,		1		
434 CSA-0000 *	SAS Pumping Station, B-6		455 days	Wed 20/5/20	Thu 25/11/21	728 days	Sat 18/4/20	Wed 28/9/22	Sat 18/4/20	NA 11		891 days	78%			
												,			-	
Data Date: 31/07/2021										Page 5						Revision Date: 15/08/20
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	nt - Main Works Stage 1				·				Revised V	orks Programme	(Status Date: 31/07/2021)					
ID Activity ID Key Task I	Name	Inclement PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish Ac	ctual Start Ac	tual Finish	Predecessors	Successors	Total Slack Risk Allowance	% Complete		
		CE no. (NCE no.)												Otr 3	2020 Qtr 1	2022   2024   Qtr.3   Qtr.1
435 <b>CSA-1000</b> 436 CSA-1020	Additional Preliminary Works  Expose and abandon existing electric cable & trial pits	78	0 days 0 days	NA NA	NA NA	330 days 39 days	Tue 9/6/20 Mon 17/8/20	Mon 19/7/21 Wed 30/9/20	Tue 9/6/20 Mon 17/8/20	NA Wed 30/9/20			1247 days 0 days	98% 100%		
437 CSA-1030 438 CSA-1100	Installation of standpipes	71	0 days	NA NA	NA NA	13 days	Mon 14/9/20	Mon 28/9/20	Mon 14/9/20	Mon 28/9/20			0 days	100%		
438 CSA-1100 439 CSA-1200	Decommission of exisiting power and signal systems in leachate Pump	312, 309, 74	0 days 0 days	NA NA	NA NA	170 days 58 days	Tue 9/6/20 Mon 21/9/20	Thu 31/12/20 Mon 30/11/20	Tue 9/6/20 Mon 21/9/20	Thu 31/12/20 Mon 30/11/20			0 days 0 days	100%		
440 CSA-1300		310 75, 76, 77, 161	0 days	NA	NA	54 days	Mon 19/10/20	Mon 21/12/20	Mon 19/10/20	Mon 21/12/20		453	0 days	100%		
441 CSA-1400 442 CSA-1500	Demolition of Existing Pillar box and its concrete plinth	144, 212, 3(30	0 days	NA NA	NA NA	53 days	Wed 12/8/20 Wed 17/6/20	Sat 14/11/20 Sat 21/11/20	Wed 12/8/20 Wed 17/6/20	Sat 14/11/20		453	0 days	100%	_ = =	
	Excavation to locate existing underground cble near SAS Pump Station		0 days			59 days				Sat 21/11/20			0 days			
443 CSA-1600	Diversion of Existing DN80 Permeate Rising Main near SAS Pumping station	89	0 days	NA	NA	72 days	Tue 6/10/20	Thu 31/12/20	Tue 6/10/20	Thu 31/12/20		453	0 days	100%		
444 CSA-1800 445 CSA-1700		309, 310 97 144, 212, 3(70	0 days	NA NA	NA NA	53 days	Mon 12/10/20 Mon 9/11/20	Sat 12/12/20 Fri 8/1/21	Mon 12/10/20 Mon 9/11/20	Sat 12/12/20 Fri 8/1/21			0 days	100%		
446 CSA-1900	Diversion of pumping system sewerage	212, 309, 3183	0 days	NA	NA	50 days 36 days	Wed 13/1/21	Fri 26/2/21	Wed 13/1/21	Fri 26/2/21	151	455,453,447	0 days	100%	_	
447 CSA-1910 448 CSA-1920	Diversion of Existing copper pipe near proposed SAS pumping station Pipework of proposed SAS Pumping Station - 13 nos. of puddles		0 days 0 days	NA NA	NA NA	61 days 180 days	Mon 19/10/20 Mon 7/12/20	Thu 31/12/20 Mon 19/7/21	Mon 19/10/20 Mon 7/12/20	Thu 31/12/20 4	146		0 days 1247 days	100% 92%		
449 CSA-1930 450 CSA-1940	Additional DN150 Rising main for SAS	220/69	0 days	NA	NA	15 days	Wed 2/12/20	Fri 18/12/20	Wed 2/12/20	Fri 18/12/20			0 days	100%		
450 CSA-1940 451 CSA-1970	Additional DN90 PE pipe diversion  Additional diversion of existing sludge rising main and sewerage system	89 81	0 days 0 days	NA NA	NA NA	7 days 15 days	Fri 11/12/20 Thu 21/1/21	Fri 18/12/20 Sat 6/2/21	Fri 11/12/20 Thu 21/1/21	Fri 18/12/20 Sat 6/2/21			0 days	100%		
452 CSA-2000	Predrilling (4nrs, 1rig, 4days/drillhole/rig)	68	16 days	Wed 20/5/20	Sat 6/6/20	7 days	Sat 18/4/20	Sat 25/4/20	Sat 18/4/20	Sat 25/4/20	127	342 453	0 days	100%		
453 CSA-3000	Pre-bored H piles (12nos, 1rigs, 4days/pile/rig)		60 days	Mon 8/6/20	Tue 18/8/20	19 days	Mon 4/1/21	Mon 25/1/21	Mon 4/1/21	Mon 25/1/21	132,452,148,438,439,441,442,443,445,44	343,454	0 days 2	100%		
	Pile Load Test Sheetpile Installation (FSP-II, 690sq.m, 40sqm/day)		21 days 28 days	Wed 19/8/20 Wed 19/8/20	Thu 17/9/20 Sat 19/9/20	22 days 28 days	Tue 23/2/21 Tue 30/3/21	Fri 19/3/21 Wed 5/5/21	Tue 23/2/21 Tue 30/3/21	Fri 19/3/21 4 Wed 5/5/21			0 days 0 days	100%		
	ELS works (1300cu.m soil with 2 layers wailing / strutting) Receiving of Civil Requirements from PM		75 days 0 days	Mon 21/9/20	Wed 19/2/20	75 days 1 day	Thu 6/5/21 Thu 6/5/21	Wed 4/8/21 Thu 6/5/21	Thu 6/5/21 Thu 6/5/21		155,135,454 156FF-3 emons		-121 days 2 0 days	96% 100%		i i
458 CSA-7000 KD1H	R.C. Structure works (including ELS demolition works)		186 days	Mon 21/12/20	Mon 9/8/21	186 days	Thu 5/8/21	Sat 19/3/22	NA	NA 4	156,457SS-3 emons	459,460,49FF	-121 days 5	0%	1	
	Allow access to Contractor DE/2018/03 for E&M installation and T&C works  ABWF works + BS works		0 days 90 days	Mon 9/8/21 Tue 10/8/21	Mon 9/8/21 Thu 25/11/21	0 days 90 days	Sat 19/3/22 Tue 14/6/22	Sat 19/3/22 Wed 28/9/22	NA NA	NA 4		49FF 56FF	-121 days 405 days	0%	I I	<b>♦ 19/3</b>
461 CAS-0000 * An	ncillary Structures, B-7		503 days	Mon 7/9/20	Sat 21/5/22	420 days	Mon 3/5/21	Wed 28/9/22	Mon 3/5/21	NA 1	12		891 days	7%		
462 CAS-1000	Demolition of Existing Faciliates and Structures (leachate pump pit & pumping station)		120 days	Mon 7/9/20	Sat 30/1/21	120 days	Mon 3/5/21	Thu 23/9/21	Mon 3/5/21	NA 1	122,160,162	497	48 days	41%		
	Fire Services Sprinkler Pumping Room & Emergency Generator House (9)+(10)**	301	220 days	Sat 10/4/21	Sun 3/1/21	419 days	Tue 4/5/21	Wed 28/9/22	Tue 4/5/21	NA			405 days	14%		
464 CFS-1000	Water Sampling and Testing for existing effluent pump pit	384	0 days	NA	NA	12 days	Tue 4/5/21	Mon 17/5/21	Tue 4/5/21	Mon 17/5/21		465	0 days	100%		
465 CFS-1150 466 CFS-1100	Identification, decommission and demolition of the existing kiosk Provision of Flowmeter chamber, gate valve chamber and associated	86 85	0 days 0 days	NA NA	NA NA	26 days 90 days	Tue 18/5/21 Sat 19/6/21	Fri 18/6/21 Tue 5/10/21	Tue 18/5/21 Sat 19/6/21	Fri 18/6/21 A		466,479 467,469FF	0 days -101 days	100%		
	seweage														1	
467 CFS-1200	Decommission and demolistion of the existing pump pit and associated sewerage manholes and pipes		0 days	NA	NA	40 days	Wed 6/10/21	Mon 22/11/21	NA	NA 4		470	-101 days	0%	I I	
468 CFS-1250 469 CFS-1300	Diversion of Leachate Rising Main near SSSH  E&M provision of flowmeter chamber and associated sewerage for	241 256	0 days 0 days	NA NA	NA NA	18 days 40 days	Wed 28/7/21 Wed 18/8/21	Wed 18/8/21 Tue 5/10/21	NA NA				18 days -61 days	0%	į	
	effluent and sewage from SSSH			NA	NA										l I	
470 CFS-2000 471 CFS-2800	Excavation for Raft Footing (800cu.m)  Plate load test at bottom level of compacted generall fill(2no.)		65 days 12 days	NA NA	NA NA	44 days 7 days	Tue 23/11/21 Mon 17/1/22	Sat 15/1/22 Mon 24/1/22	NA NA	NA 4		471 472	-101 days	0%	 	
472 CFS-2900 473 CFS-3000	Soil Replacement (14 layers SRT)  Plate load test at bottom level of base slab (3no.)		0 days 28 days	NA Fri 4/6/21	NA Mon 21/6/21	42 edays 7 days	Mon 24/1/22 Tue 8/3/22	Mon 7/3/22 Tue 15/3/22	NA NA	NA 4		473 474FF-3 mons,475	-124.42 edays -101 days	0%	 	
474 CFS-3900	Receiving of Civil Requirements from PM		0 days	NA	NA	1 day	Tue 23/11/21	Tue 23/11/21	NA	NA 4	173FF-3 mons	475SS-3 emons	59 days	0%	1	
475 CFS-4000 KD1J 476 CFS-5000 KD1J	R.C. structure works  Allow access to Contractor DE/2018/04 for E&M installation and T&C		120 days 0 days	NA Mon 13/9/21	NA Mon 13/9/21	70 days 0 days	Wed 16/3/22 Mon 13/6/22	Mon 13/6/22 Mon 13/6/22	NA NA	NA 4		477,476,51FF,521FF,520FF 51FF	-101 days 2 -101 days	0%	į	<b>↓ 13/6</b>
477 CFS-6000 SW1	works ABWF works + BS works		90 days	Tue 14/9/21	Mon 3/1/22	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA 4	175	56FF	405 days	0%	1	
478 CCS-1000 *	Chemical System No.1 (8)*		168 days	Mon 1/2/21	Thu 26/8/21	386 days	Sat 12/6/21	Wed 28/9/22	Sat 12/6/21	NA			891 days	4%		
479 CCS-1310 480 CCS-1110	Demolition of SSSH Pump Pit and Associated Sewerage System  Removal of existing Leachate Rising Main near SSSH	086 241	0 days	NA NA	NA NA	26 days 12 days	Sat 19/6/21 Wed 18/8/21	Tue 20/7/21 Tue 31/8/21	Sat 19/6/21 NA	NA 4			54 days 18 days	38%	1	
481 CCS-1100	Excavation for Raft Footing (20cu.m)		10 days	Mon 1/2/21	Thu 11/2/21	10 days	Wed 1/9/21	Sat 11/9/21	NA	NA 4	180,479	485FF-3 emons,486,482	18 days	0%	1	
482 CCS-1080 483 CCS-1090	Plate load test at bottom level of compacted generall fill(2no.)  Soil Replacement (10 layers SRT)		9 days 0 days	NA NA	NA NA	9 days 30 edays	Mon 13/9/21 Thu 23/9/21	Thu 23/9/21 Sat 23/10/21	NA NA	NA 4			18 days 23.58 edays	0%		
484 CCS-1200 485 CCS-1190	Plate load test at bottom level of base slab (1no.)  Receiving of Civil Requirements from PM		5 days 0 days	Tue 16/2/21 NA	Wed 3/3/21	5 days 1 day	Mon 25/10/21 Sat 12/6/21	Fri 29/10/21 Sat 12/6/21	NA Sat 12/6/21	NA 4	183 181 FF-3 emons		19 days 0 days	0%	1	T.
486 CCS-1300 KD1J	R.C. structure works		45 days	Mon 15/3/21	Mon 10/5/21	60 days	Sat 30/10/21	Tue 11/1/22	NA	NA 4	481,485SS-3 emons,484	51FF,488,487	20 days 2	0%	! !	
487 CCS-1400 KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	Mon 10/5/21	Mon 10/5/21	0 days	Tue 11/1/22	Tue 11/1/22	NA	NA 4	186	51FF	20 days	0%	I I	<b>♦ 11/1</b>
488 CCS-1500 SW1 489 CDS-0000 *	ABWF works + BS works Deodorization System No.3A (7)*		90 days 149 days	Tue 11/5/21 Tue 16/11/21	Thu 26/8/21 Sat 21/5/22	90 days 105 days	Tue 14/6/22 Thu 5/8/21	Wed 28/9/22 Wed 8/12/21	NA NA	NA NA	189,141,486,522SS		405 days 90 days	0%	1	
490 CDS-2000	Excavation for Raft Footing (400cu.m)		20 days	Tue 16/11/21	Wed 8/12/21	20 days	Sat 14/8/21	Tue 7/9/21	NA	NA 4	191SF		1205 days	0%		
491 CDS-2008 492 CDS-2100	Plate load test at bottom level of compacted generall fill(2no.)  Soil Replacement (14 layers SRT)		10 days 0 days	NA NA	NA NA	10 days 42 edays	Tue 7/9/21 Sat 18/9/21	Sat 18/9/21 Sat 30/10/21	NA NA			490SF 491SF	1195 days 1425.42 edays	0%		
493 CDS-3000 494 CDS-3900	Plate load test at bottom level of base slab (1no.)		4 days	Thu 9/12/21 NA	Fri 24/12/21 NA	4 days	Sat 30/10/21	Wed 3/11/21 Thu 5/8/21	NA NA	NA 4		494FF-3 emons,495,492SF,500FS 495SS-3 emons		0%	1	
495 CDS-4000 KD1J	Receiving of Civil Requirements from PM Footing works		0 days 20 days	Tue 4/1/22	Wed 26/1/22	1 day 30 days	Thu 5/8/21 Thu 4/11/21	Wed 8/12/21	NA NA		193,494SS-3 emons	496,51FF	46 days	0%		
496 CDS-5000 KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	Wed 26/1/22	Wed 26/1/22	0 days	Wed 8/12/21	Wed 8/12/21	NA	NA 4	195	51FF	46 days	0%	I I	<b>♦</b>  8/12
	Chemical System No.2 (11)		189 days	Thu 4/3/21	Thu 21/10/21	300 days	Fri 24/9/21	Wed 28/9/22	NA NA	NA 4	162 199SF		48 days	0%	I I	
498 CCS-2100 499 CCS-2110	Excavation for Raft Footing (100cu.m) Soil Replacement (8 layers SRT)		15 days 0 days	Thu 4/3/21 NA	Sat 20/3/21 NA	14 days 24 edays	Fri 24/9/21 Wed 6/10/21	Mon 11/10/21 Sat 30/10/21	NA	NA 5	500SF	498SF	1177 days 1425.42 edays	0%	I I	
500 CCS-2200 501 CCS-2290	Plate load test (2no.) Receiving of Civil Requirements from PM		14 days 0 days	Mon 22/3/21 NA	Fri 9/4/21 NA	15 days 1 day	Sat 30/10/21 Fri 24/9/21	Tue 16/11/21 Fri 24/9/21	NA NA			501FF-3 emons,502,499SF,510FS 502SS-3 emons	- 19 days 108 days	0%	· !	. •
502 CCS-2300 KD1J	R.C. structure works		45 days	Tue 11/5/21	Mon 5/7/21	45 days	Wed 17/11/21	Tue 11/1/22	NA	NA 5	500,501SS-3 emons	503,51FF,504,505	20 days 2	0%	l I	
503 CCS-2400 KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	Mon 5/7/21	Mon 5/7/21	0 days	Tue 11/1/22	Tue 11/1/22	NA	NA 5			20 days	0%	I I	<b>♦ 11/1</b>
504 CCS-2500 SW1 505 CCS-2600 SW1	ABWF works + BS works Demolition of existing chemical room		90 days 60 days	Tue 6/7/21 Tue 6/7/21	Thu 21/10/21 Mon 13/9/21	90 days 60 days	Tue 14/6/22 Wed 12/1/22	Wed 28/9/22 Fri 25/3/22	NA NA	NA 1			405 days 556 days	0%	I I	
506 CTC-0000 *	Temporary Chemical Dosing System (5)		191 days	Tue 22/6/21	Thu 10/2/22	330 days	Thu 19/8/21	Wed 28/9/22	NA	NA			89 days	0%	I I	
507 CTC-2000 508 CTC-2080	Excavation for Raft Footing (300cu.m)  Plate load test at bottom level of compacted generall fill(2no.)		30 days 9 days	Tue 22/6/21 NA	Tue 27/7/21 NA	30 days 9 days	Thu 26/8/21 Sat 2/10/21	Sat 2/10/21 Wed 13/10/21	NA NA		508SF 509SF	507SF	1185 days 1176 days	0%	: 	
509 CTC-2100 510 CTC-1000	Soil Replacement (10 layers SRT) Plate load test at bottom level of base slab (1no.)		0 days 5 days	NA Wed 28/7/21	NA Thu 12/8/21	30 edays 5 days	Wed 13/10/21 Fri 12/11/21	Fri 12/11/21 Wed 17/11/21	NA NA		510SF	508SF	1412.42 edays 19 days	0%		
511 CTC-2900	Receiving of Civil Requirements from PM		0 days	NA	NA	1 day	Thu 19/8/21	Thu 19/8/21	NA	NA 5	510FF-3 emons	512SS-3 emons	138 days	0%	I I	
512 CTC-3000 KD1J 513 CTC-4000 KD1J	R.C. structure works  Allow access to Contractor DE/2018/04 for E&M installation and T&C		30 days 0 days	Tue 14/9/21 Thu 21/10/21	Thu 21/10/21 Thu 21/10/21	45 days 0 days	Thu 18/11/21 Wed 12/1/22	Wed 12/1/22 Wed 12/1/22	NA NA	NA 5			19 days 1 19 days	0%	I I	<b>↓</b> 12/1
	works													200	I I	
	ABWF works + BS works Fire Hydrant and Booster Pump Room (13)*		90 days 177 days	Fri 22/10/21 Fri 13/8/21	Thu 10/2/22 Thu 17/3/22	90 days 193 days	Tue 14/6/22 Sat 5/2/22	Wed 28/9/22 Wed 28/9/22	NA NA	NA			405 days -28 days	0% <b>0</b> %		
516 CFB-1000 517 CFB-1100	Excavation for Raft Footing (200cu.m) Soil Replacement (7 layers SRT)		30 days 0 days	Fri 13/8/21 NA	Thu 16/9/21 NA	30 days 21 edays	Wed 23/2/22 Wed 30/3/22	Wed 30/3/22 Wed 20/4/22	NA NA		517SF 518SF	516SF	1039 days 1253.42 edays	0%		-
518 CFB-2000	Plate load test (3no.)		14 days	Fri 17/9/21	Tue 5/10/21	14 days	Wed 20/4/22	Sat 7/5/22	NA	NA 5	520SF		1011 days	0%	I I	
519 CFB-2900 520 CFB-3000 KD1J	Receiving of Civil Requirements from PM  R.C. structure works		0 days 30 days	NA Fri 22/10/21	NA Thu 25/11/21	1 day 30 days	Sat 5/2/22 Sat 7/5/22	Sun 6/2/22 Mon 13/6/22	NA NA		518FF-3 emons 475FF	521,522,51FF,518SF	1083 days -101 days 1	0%	I I	
521 CFB-4000 KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	Thu 25/11/21	Thu 25/11/21	0 days	Mon 13/6/22	Mon 13/6/22	NA			51FF	-101 days	0%	I I	→ 13/6
522 CFB-5000 SW1	ABWF works + BS works		90 days	Fri 26/11/21	Thu 17/3/22	90 days	Tue 14/6/22	Wed 28/9/22	NA		520,189,141	56FF,514SS,504SS,488SS,460SS		0%	I I	
523 CDS1-0000 524 CDS1-1000	Deodorization System No.1 (6)*  Excavation for Raft Footing (400cu.m)		64 days 20 days	NA NA	NA NA	105 days 20 days	Tue 10/5/22 Wed 8/6/22	Tue 13/9/22 Thu 30/6/22	NA NA	NA NA 3	322		418 days 420 days	0%		
525 CDS1-1080	Plate load test at bottom level of compacted generall fill(2no.)		10 days	NA	NA	10 days	Sat 2/7/22	Wed 13/7/22	NA	NA 5	524	526	420 days	0%	I I	
526 CDS1-1100 527 CDS1-2000	Soil Replacement (7 layers SRT) Plate load test at bottom level of base slab (1no.)		0 days 4 days	NA NA	NA NA	21 edays 4 days	Wed 13/7/22 Thu 4/8/22	Wed 3/8/22 Mon 8/8/22	NA NA	NA S	526	529,528FF-3 emons	513.58 edays 418 days	0%	I I	
	Receiving of Civil Requirements from PM		0 days 30 days	NA NA	NA NA	0 days 30 days	Tue 10/5/22 Tue 9/8/22	Tue 10/5/22 Tue 13/9/22	NA NA			529SS-3 emons	523 days 418 days	0%	 	♦ 10/5
528 CDS1-2900 529 CDS1-3000 SW1	Footing works				NA NA	0 days	Tue 13/9/22	Tue 13/9/22	NA NA	NA S			418 days	0%		400
528 CDS1-2900 529 CDS1-3000 SW1 530 CDS1-4000 SW1	Footing works Allow access to Contractor DE/2018/04 for E&M installation and T&C works		0 days	NA	ING.	0 days		100 10 0 12		INA	20	0011		1 77		♠ 13/9
529 CDS1-3000 SW1 530 CDS1-4000 SW1			0 days 662 days	Wed 29/1/20	Fri 22/4/22	918 days	Mon 1/6/20	Thu 6/7/23	Mon 1/6/20	NA NA			269 days	64%		<b>◆</b> 134

		hing Plant - Main Works Stage 1	I								I	1-		In the second								
Activity ID	Date	Task Name	Inclement Weather CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish Predecessors	Successors	Total Slack	Risk % Compl Allowance		20	)20			2022		2024 Qtr 3 Qtr 1
CAA-1000	0 KD2E	B B-8A Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)	(NCE no.)	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% Otr 3	Qtr 1 Qtr 3	Qtr 1	Otr 3	Qtr 1   Qtr 3	3   Qtr 1	Qtr 3 Qtr 1	Qtr3   Qtr1
CAA-1100	0	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%	100	1	1			1	
CAA-1200		Additional inspection pit to verify the connection point to existing (CE xxx)	(40.7)	0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20			536,537,538	0 days		100%		1				1	
CAA-1300	0	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%		1.	!				
CAA-1400		Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.l.)		180 days	Wed 29/1/20	Thu 3/9/20	111 days	Wed 11/11/20	Fri 26/3/21			53FF	0 days		100%	_						
CAA-1500	0 KD2B	Re-alignment 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%		i i	i			i I	
CAA-1600	0 KD2B	B Elevated Section of DN800 Temporary Air Main (CHTA) across existing Bioreactor's Distibution Chamber No. 2	062	0 days	NA	NA	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21 533,534,535	53FF,539	0 days		100%		1	1			I I	
CAA-2000	0 KD1I	B7-A Alternation works for existing Power House		122 days	Fri 4/9/20	Sat 30/1/21	0 days	Wed 11/11/20	Fri 29/1/21	Wed 11/11/20	Fri 29/1/21 13FS-1 day,122,160,162,176,538	50FF,540FS+356 days	0 days		100%		◆ 29/1	- !				
CAA-2100			224	0 days	NA	NA	60 days	Thu 14/4/22	Wed 29/6/22		1411000101000000	58FF	570 days		0%			- 1				
CAA-3000		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	N/	NA 14FS-1 day,175	58FF	269 days		0%		i	- 1				
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%		•					
CUU-1000	0 KD2A	Process Pipes CHR and CHS (approx. 93m twin DN900 D.I.)	33, 222, 255	325 days	Mon 24/2/20	Sat 27/3/21	379 days	Mon 27/4/20	Wed 4/8/21	Mon 27/4/20	NA 184,142	554SS+48 days,552SS+48 day	s,55-39 days		99%	1111	•	1			1	
CUU-1000	10a	Special Treatment for Removing the Existing Abandoned DN1800 By-pas: Pipe and the Concrete Mass in Conflict with the Proposed Sheetpile wall f trenching work of Process Pipeline CHR and CHS	33 or	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%	_		 				
CUU-1000	10b	Trenchless work for Process Pipes CHR and CHS (approx. 7m twin DN90 D.I.)	255	0 days	NA	NA	60 days	Thu 25/2/21	Mon 10/5/21	Thu 25/2/2	Mon 10/5/21	52FF	0 days		100%		1	1			I I	
CUU-1001		Removal of Abandoned DN1800 Concrete Pipe and Concrete Mass near Existing UV Disinfection Channel at CHR & CHS Process Pipe Works Are	a 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%		į					
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				0 days		100%		i					
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			549FF	0 days		100%			i			i	
CUU-2000	0 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%		•   	i				
CUU-2100	0 SW2	Remaining Process Pipes		0 days	NA	NA	270 days	Mon 23/8/21	Fri 22/7/22	N/	NA 549SS+250 days	57FF	0 days		0%		ıΒ	шшш			i	
CUU-3000				550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20		555,57FF	0 days	5	45%	2222		шшш			1	
CUU-4000				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%	2222		шшш			1	
CUU-5000	0 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%			mmm			1	
CUU-6000				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%	7777		anninini (				
CUU-7000	0 KD3A	A Roadworks		540 days	Fri 31/12/21	Sat 28/10/23	440 days	Mon 7/11/22	Mon 13/5/24	N/	NA 554,551,552,549,352,399,334,433	54FF,558SS+123 days	-88 days	5	0%		11			mumm		
CLW-0000	00 *	Landscaping Works		854 days	Wed 11/5/22	Thu 27/3/25	946 days	Tue 26/7/22	Wed 24/9/25	N/	NA 16		0 days		0%		- 11	- 1				
CLW-1000	00 KD3A	A Irrigation System		120 days	Wed 11/5/22	Fri 30/9/22	120 days	Tue 26/7/22	Thu 15/12/22	N/	NA 553FS+2 days,184	558,54FF	1 day		0%		li.	i				
CLW-2000	00 SW3	Hard Landscaping Works		220 days	Mon 3/10/22	Mon 3/7/23	214 days	Tue 11/4/23	Sat 23/12/23	N/	NA 557,555SS+123 days	559,58FF	-88 days	5	0%		li.	i			THE STATE OF THE S	
CLW-3000	00 SW3	Soft Landscaping Works		220 days	Tue 4/7/23	Tue 26/3/24	214 days	Wed 27/12/23	Tue 24/9/24	N/	NA 558,143	560,58FF	-88 days	5	0%		i i	1			annum .	<i></i>
CLW-4000	00 DIP	Establishment Works (365 days)		294 days	Wed 27/3/24	Thu 27/3/25	365 days	Wed 25/9/24	Wed 24/9/25	N/	NA 559.143	59FF 60FF	0 days	E	0%		1	1				mmmm





Page 2 of 58

Actual Progress

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

	<u> </u>		1 1 1 1
Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	IT	KM

ity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total   Float	Predecessors	Successors	9 2020 2021	2022	2023	2024	2025
SC31006	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19 09-May-24	28-May-24	09-May-24	28-May-24	0	SC31005	SC31100,	<u> </u>	123 [	3733111111	111122222222	2333333333
000.000	The Street and the st	io oo may = :		00 may 2 m				SC31007					
SC31007	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4 28-May-24	31-May-24	28-May-24	31-May-24	0	SC31006	SC31010				1	
SC31010	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1 01-Jun-24	01-Jun-24	01-Jun-24	01-Jun-24	0	SC31007	SC31011				1	
SC31011	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4 01-Jun-24	05-Jun-24	01-Jun-24	05-Jun-24	0 :	SC31010	SC31100				1	
SC31100	Revised Completion for Section 3	0	05-Jun-24*		05-Jun-24		SC31005, SC31006,					•	
Expected Comp	pletion (Include Non-implemented CE)	2003 23-Oct-19 A	16-Apr-25	21-Nov-22	16-Apr-25		3001000,						
SC31000-1	Contract Duration of Section 3	1626 23-Oct-19 A	04-Apr-24	21-Nov-22	04-Apr-24	0	CD1010	SC31001-1		1 1 1			
SC31001-1	Completion date - Section 3 (1625 days after starting date)	0	04-Apr-24*		04-Apr-24	0	SC31000-1	SC31110, SC31002-1				•	
SC31002-1	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5 05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0 :	SC31001-1	SC31003-1					
SC31003-1	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15 10-Apr-24	24-Apr-24	10-Apr-24	· ·		SC31002-1	SC31004-1					
SC31004-1	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1 24-Apr-24	25-Apr-24		25-Apr-24		SC31003-1	SC31005-1				1	
SC31005-1	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15 25-Apr-24	10-May-24		10-May-24		SC31004-1	SC31006-1			<del>   </del>		
SC31006-1	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19 10-May-24	29-May-24		29-May-24		SC31005-1	SC31007-1					
SC31007-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4 29-May-24	01-Jun-24	-	01-Jun-24		SC31006-1	SC31008-1				ī	
SC31008-1	CNE-019 Inclement Weather (October 2021) - 7days	7 02-Jun-24	08-Jun-24	02-Jun-24	08-Jun-24	0	SC31007-1	SC31009-1					
SC31009-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4 09-Jun-24	12-Jun-24	09-Jun-24			SC31007-1	SC31010-1				1	
SC31010-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1 13-Jun-24	13-Jun-24	13-Jun-24	13-Jun-24	0	SC31009-1	SC31011-1					
SC31011-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4 13-Jun-24	17-Jun-24	13-Jun-24	17-Jun-24	0	SC31010-1	SC31012-1				1	
SC31012-1	CNE-036 Inclement Weather (January 2022) - 4days	4 17-Jun-24	21-Jun-24	17- lun-24	21-Jun-24	0	SC31011-1	SC31013-1	_				
SC31013-1	CNE-040 Inclement Weather (February 2022) - 5days	5 21-Jun-24	26-Jun-24		26-Jun-24		SC31011-1	SC31013-1	_				
SC31014-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5 26-Jun-24	30-Jun-24	26-Jun-24			SC31012-1	SC31015-1					
SC31014-1	CNE-048 Inclement Weather (April 2022) - 2days	2 01-Jul-24	02-Jul-24	01-Jul-24			SC31013-1	SC31013-1					
3031013-1	CNE-040 incientent weather (April 2022) - 20dys	2 01-Jul-24	02-Jul-24	01-Jul-24	02-Jul-24		3031014-1	SC31039-1, SC31016-1					
SC31016-1	CNE-050 Inclement Weather (May 2022) - 8days	8 03-Jul-24	10-Jul-24	03-Jul-24	10-Jul-24	0	SC31015-1	SC31099-1, SC31017-1				•	
SC31017-1	CNE-052 Inclement Weather (June 2022) - 9days	9 11-Jul-24	19-Jul-24	11-Jul-24	19-Jul-24	0 :	SC31016-1	SC31018-1				•	
SC31018-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1day	1 20-Jul-24	20-Jul-24	20-Jul-24	20-Jul-24	0 :	SC31017-1	SC31099-1, SC31019-1				1	
SC31019-1	CNE-054 Inclement Weather (July 2022) - 4days	4 21-Jul-24	24-Jul-24	21-Jul-24	24-Jul-24	0 :	SC31018-1	SC31020-1				1	
SC31020-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1 25-Jul-24	25-Jul-24	25-Jul-24			SC31019-1	SC31099-1, SC31021-1					
SC31021-1	CNE-056 Inclement Weather (August 2022) - 13.5days	14 26-Jul-24	08-Aug-24	26-Jul-24	08-Aug-24	0 :	SC31020-1	SC31022-1					
SC31022-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1 08-Aug-24	09-Aug-24		09-Aug-24		SC31021-1	SC31099-1, SC31023-1				1	
SC31023-1	CNE-058 Inclement Weather (September 2022) - 8days	8 09-Aug-24	17-Aug-24	09-Aug-24	17-Aug-24	0	SC31022-1	SC31099-1, SC31024-1					
SC31024-1	CNE-059 Inclement Weather (October 2022) - 4days	4 17-Aug-24	21-Aug-24	17-Aua-24	21-Aug-24	0	SC31023-1	SC31099-1	_			1	
SC31099-1	EWN-0314 Extention of Time for change of access date	239 21-Aug-24	16-Apr-25	21-Aug-24		0 :	SC31015-1,	SC31100-1					#
		•	·			;	SC31016-1,		_				
SC31100-1	Expected Completion for Section 3	0	16-Apr-25*		16-Apr-25		SC31099-1		_				•
Time Risk Allow	wance and Planned Completion	26 22-Mar-25	16-Apr-25	10-May-24	05-Jun-24	-316							
SC31110	Time Risk Allowance for Section 3	26 22-Mar-25	16-Apr-25	10-May-24	05-Jun-24		SC31001-1, S3C1160,	SC31120					
SC31120	Planned Completion for Section 3	0	16-Apr-25*		05-Jun-24		~~~	CD1040					•
	plete Construction & T&C for UV System No.1 & EP Station No. 1	1133 23-Oct-19 A	-	16-Apr-25							<del></del>		
Contractual Con	ompletion (Include Implemented CE)	1094 23-Oct-19 A	13-Sep-22 A	16-Apr-25	16-Apr-25								
SC41000	Contract Duration of Section 4	886 23-Oct-19 A	26-Mar-22 A	16-Apr-25	16-Apr-25			SC41001		_			
SC41001	Completion date - Section 4 (885 days after starting date)	0	26-Mar-22 A		16-Apr-25		SC41000	SC41002		•			
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	File Name: DE/2018/03 RP R28  Remaining Work  Citized Adjusts							DE/2018/0		Date 31-Jul-22	Revision Rev.24	Checked LT	Approved KM
	Layout: DE1803 RP (Nov 2022) - Critical Activity			Shak V	A/ LIi Ef	ffluon	+ Dalichine	Diant Ma	ain Works Stage 1	- · · · · · · · · · · · · · · · · · ·	+	<del> </del>	+

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File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 3 of 58 Hemaining 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	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	lΤ	KM

SC41004         NICE-C           SC41005         NICE-C           SC41006         NICE-C           SC41009         NICE-C           SC41010         NICE-C           SC41100         Revised	CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)  CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)  CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)  CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)  CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)  CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)  d Completion for Section 4  clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)  07 Black and Red Rainstorm Waming (June 2021) - 1day	Duration  7 27-Mar-22 A  19 02-Apr-22 A  16 21-Apr-22 A  5 07-May-22 A  1 12-May-22 A  4 12-May-22 A  0  1129 23-Oct-19 A  886 23-Oct-19 A  0  7 27-Mar-22 A	21-Apr-22 A 07-May-22 A 11-May-22 A 12-May-22 A 16-May-22 A 13-Sep-22 A 26-Mar-22 A 26-Mar-22 A	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25		SC41001 SC41002 SC41004 SC41005 SC41006 SC41009 SC41004, SC41005, SC41010 CD1010	SC41004  SC41100, SC41005  SC41100, SC41006  SC41009  SC41010  SC41010  SC41010	<u> </u>		<u> </u>	3 3 1 1 1 1 1 1	111222222	2333333333
SC41004         NICE-C           SC41005         NICE-C           SC41006         NICE-C           SC41009         NICE-C           SC41010         NICE-C           SC41100         Revised	CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)  CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)  CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)  CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)  CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)  d Completion for Section 4  Clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	19 02-Apr-22 A 16 21-Apr-22 A 5 07-May-22 A 1 12-May-22 A 4 12-May-22 A 0 1129 23-Oct-19 A 886 23-Oct-19 A 0	21-Apr-22 A 07-May-22 A 11-May-22 A 12-May-22 A 16-May-22 A 13-Sep-22 A 26-Mar-22 A 26-Mar-22 A	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25	SC41002 SC41004 SC41005 SC41006 SC41009 SC41004, SC41005, SC41010	SC41100, SC41005 SC41100, SC41006 SC41009 SC41010 SC41100			•			
SC41005         NICE-C           SC41006         NICE-C           SC41009         NICE-C           SC41010         NICE-C           SC41100         Revised             Expected Completion (Inc.)	CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)  CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)  CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)  CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)  d Completion for Section 4  Clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	16 21-Apr-22 A 5 07-May-22 A 1 12-May-22 A 4 12-May-22 A 0 1129 23-Oct-19 A 886 23-Oct-19 A 0	07-May-22 A 11-May-22 A 12-May-22 A 16-May-22 A 13-Sep-22 A 26-Mar-22 A 26-Mar-22 A	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25	SC41004 SC41005 SC41006 SC41009 SC41004, SC41005, SC41010	SC41005 SC41100, SC41006 SC41009 SC41010 SC41100			•			
SC41006         NICE-C           SC41009         NICE-C           SC41010         NICE-C           SC41010         Revised           Expected Completion (Inc.)	CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)  CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)  CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)  d Completion for Section 4  Clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	5 07-May-22 A 1 12-May-22 A 4 12-May-22 A 0 1129 23-Oct-19 A 886 23-Oct-19 A 0	11-May-22 A 12-May-22 A 16-May-22 A 13-Sep-22 A 26-Mar-22 A 26-Mar-22 A	16-Apr-25 16-Apr-25 16-Apr-25	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25	SC41005 SC41006 SC41009 SC41004, SC41005, SC41010	SC41006 SC41009 SC41010 SC41100			•			
SC41009 NICE-C SC41010 NICE-C SC41100 Revised  Expected Completion (Inc.)	CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)  CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)  d Completion for Section 4  Clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	1 12-May-22 A 4 12-May-22 A 0 1129 23-Oct-19 A 886 23-Oct-19 A 0	12-May-22 A 16-May-22 A 13-Sep-22 A 13-Sep-22 A 26-Mar-22 A	16-Apr-25 16-Apr-25	16-Apr-25 16-Apr-25 16-Apr-25	SC41006 SC41009 SC41004, SC41005, SC41010	SC41009 SC41010 SC41100		1	•			
SC41010 NICE-C SC41100 Revised  Expected Completion (Inc.)	CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)  d Completion for Section 4  clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	4 12-May-22 A 0 1129 23-Oct-19 A 886 23-Oct-19 A 0	16-May-22 A 13-Sep-22 A 13-Sep-22 A 26-Mar-22 A 26-Mar-22 A	16-Apr-25	16-Apr-25 16-Apr-25	SC41009 SC41004, SC41005, SC41010	SC41100		1	•			
SC41100 Revised  Expected Completion (Inc.)	d Completion for Section 4  Clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	0 1129 23-Oct-19 A 886 23-Oct-19 A 0	13-Sep-22 A  13-Sep-22 A  26-Mar-22 A  26-Mar-22 A	16-Apr-25	16-Apr-25	SC41004, SC41005, SC41010			1	•			
Expected Completion (Inc	clude Non-implemented CE)  ct Duration of Section 4  etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	886 23-Oct-19 A	13-Sep-22 A 26-Mar-22 A 26-Mar-22 A	'	16-Apr-25	SC41005, SC41010	SC41001-1			•			
	ct Duration of Section 4 etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	886 23-Oct-19 A	26-Mar-22 A 26-Mar-22 A	'	· ·	SC41010	SC41001-1						
	ct Duration of Section 4 etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	886 23-Oct-19 A	26-Mar-22 A 26-Mar-22 A	'	· ·	CD1010	SC41001-1						
SC41000-1 Contrac	etion date - Section 4 (885 days after starting date)  CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	0	26-Mar-22 A	16-Apr-25	16-Apr-25	CD1010	SC41001-1						
	CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)							• 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1		
SC41001-1 Comple	, , , , , ,	7 27-Mar-22 A			16-Apr-25	SC41000-1	SC41110, SC41002-1		•				
SC41002-1 NICE-0	07 Black and Red Rainstorm Warning (June 2021) - 1day		02-Apr-22 A	16-Apr-25	16-Apr-25	SC41001-1	SC41004-1, SC41003-1						
SC41003-1 CNE-00		1 02-Apr-22 A	03-Apr-22 A	16-Apr-25	16-Apr-25	SC41002-1	SC41004-1						
SC41004-1 NICE-C	CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19 03-Apr-22 A	22-Apr-22 A	16-Apr-25	16-Apr-25	SC41002-1, SC41003-1	SC41005-1						
SC41005-1 NICE-C	CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	16 22-Apr-22 A	08-May-22 A	16-Apr-25	16-Apr-25	SC41004-1	SC41006-1						
SC41006-1 NICE-C	CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	5 08-May-22 A	12-May-22 A	16-Apr-25	16-Apr-25	SC41005-1	SC41007-1		1				
SC41007-1 CNE-0	19 Inclement Weather (October 2021) - 5days	5 13-May-22 A	17-May-22 A	16-Apr-25	16-Apr-25	SC41006-1	SC41008-1		1				
SC41008-1 CNE-02	20 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4 18-May-22 A	21-May-22 A	16-Apr-25	16-Apr-25	SC41007-1	SC41009-1						
SC41009-1 NICE-0	CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1 22-May-22 A	22-May-22 A	16-Apr-25	16-Apr-25	SC41008-1	SC41010-1		ı				
SC41010-1 NICE-C	CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4 22-May-22 A	26-May-22 A	16-Apr-25	16-Apr-25	SC41009-1	SC41011-1		1				
SC41011-1 CNE-03	36 Inclement Weather (January 2022) - 4days	4 26-May-22 A	30-May-22 A	16-Apr-25	16-Apr-25	SC41010-1	SC41012-1		1				
SC41012-1 CNE-04	40 Inclement Weather (February 2022) - 5days	5 30-May-22 A	04-Jun-22 A	16-Apr-25	16-Apr-25	SC41011-1	SC41013-1		1				
SC41013-1 CNE-04	44 Inclement Weather (March 2022) - 4.5days	5 04-Jun-22 A	08-Jun-22 A	16-Apr-25	16-Apr-25	SC41012-1	SC41014-1						
SC41014-1 CNE-04	48 Inclement Weather (April 2022) - 2days	2 09-Jun-22 A	10-Jun-22 A	16-Apr-25	16-Apr-25	SC41013-1	SC41015-1						
SC41015-1 CNE-09	50 Inclement Weather (May 2022) - 8days	8 11-Jun-22 A	18-Jun-22 A	16-Apr-25	16-Apr-25	SC41014-1	SC41100-1, SC41016-1			1			
SC41016-1 CNE-09	52 Inclement Weather (June 2022) - 9days	9 19-Jun-22 A	27-Jun-22 A	16-Apr-25	16-Apr-25	SC41015-1	SC41017-1						
SC41017-1 CNE-09	53 Inclement Weather (June 2022) (Time and Cost Implication) - 1day	1 28-Jun-22 A	28-Jun-22 A	16-Apr-25	16-Apr-25	SC41016-1	SC41100-1, SC41018-1						
SC41018-1 CNE-09	54 Inclement Weather (July 2022) - 4days	4 29-Jun-22 A	02-Jul-22 A	16-Apr-25	16-Apr-25	SC41017-1	SC41019-1						
SC41019-1 CNE-09	55 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1 03-Jul-22 A	03-Jul-22 A	16-Apr-25	16-Apr-25	SC41018-1	SC41100-1, SC41020-1						
SC41020-1 CNE-09	56 Inclement Weather (August 2022) - 13.5days	14 04-Jul-22 A	17-Jul-22 A	16-Apr-25	16-Apr-25	SC41019-1	SC41021-1			•			
SC41021-1 CNE-09	57 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1 17-Jul-22 A	18-Jul-22 A	16-Apr-25	16-Apr-25	SC41020-1	SC41100-1, SC41022-1						
SC41022-1 CNE-09	58 Inclement Weather (September 2022) - 8days	8 18-Jul-22 A	26-Jul-22 A	16-Apr-25	16-Apr-25	SC41021-1	SC41100-1, SC41023-1			•			
SC41023-1 CNE-09	59 Inclement Weather (October 2022) - 4days	4 26-Jul-22 A	30-Jul-22 A	16-Apr-25	16-Apr-25	SC41022-1	SC41100-1			1			
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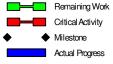
File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 4 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

14   15   15   15   15   15   15   15	ID	Activity Name	Original Early S Duration	tart Early F	nish Late Sta	urt Late Finish	Total Predecessors Float	Successors	9 2020 2021				
1	SC41100-1	Expected Completion for Section 4	0	13-Se	o-22 A	16-Apr-25					<u>[3/[33  1 1 1 1 </u>	11114444444	41433333333
	Time Risk Allowa	ance and Planned Completion	7 13-Se	p-22 A 13-Se	p-22 A 16-Apr-2	5 16-Apr-25							
Section   Sect	SC41110	Time Risk Allowance for Section 4	7 13-Se	p-22 A 13-Se	p-22 A 16-Apr-2	5 16-Apr-25		SC41120		ı			
Control   Cont	SC41120	Planned Completion for Section 4	0	13-Se	p-22 A	16-Apr-25		CD1040		•			
Control   Cont	Section 5 - Comple	ete all remaining Works (inc.) T&C)	1080 23.00	+-19 Δ 02-Δr	r-25 21-Nov-2	2 02-Apr-25	0						
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No. Col.   Col	SC51000	Contract Duration of Section 5	1626 23-Oc	t-19 A 04-Ap	r-24 21-Nov-2	2 04-Apr-24	0	SC51001					
Control   Cont		, , , , , , , , , , , , , , , , , , , ,	-	· ·		· ·						•	
Scholland Natic Civil Endis Indoment Washing (September 2021) 1.0days (Implemented)   1 May 24   1	SC51002	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14 05-Ap	r-24 18-Ap	r-24 05-Apr-2	4 18-Apr-24	0 SC51001						
Section   Sect	SC51003	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19 19-Ap	r-24 07-Ma	y-24 19-Apr-2	4 07-May-24	0 SC51002						
Control   Cont	SC51004	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4 08-Ma	ay-24 11-Ma	y-24 08-May-2	4 11-May-24	0 SC51003					1	
Part   Computation for Science   Computati	SC51007	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1 11-Ma	ıy-24 11-Ma	y-24 11-May-2	4 11-May-24	0 SC51004	SC51008	-			1	
Part   Part				•	,	•			_				
Section   Procession (Proclate Name Implemented CE)	SC51008	NICE-CINE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5 12-IVI8	ay-24 16-108	y-24   12-1/1ay-2	4 16-May-24	0 5051007	5051100				'	
Page   Page	SC51100	Revised Completion for Section 5	0	16-Ma	y-24*	16-May-24	SC51003,					•	
Section   Contract Quartient of Section   Section   Section   Completion date - Section   Sect			1000 00 0	1.10.1	05 04 N 0	00.4.05							
Sci-100-1   Completion disc - Section 5 (4625 days after staining date)						·							
Sciolog   Scio	SC51000-1	Contract Duration of Section 5	1626 23-Oc	:t-19 A 04-Ap	r-24 21-Nov-2	2 04-Apr-24	0 CD1010	SC51001-1					
SCS10021   NICE-ONE-0028 Indement Weather (Algust 2012) - 1 days (implemented)   19   94-9/20   19   7 / May-24   19 / May-24	SC51001-1	Completion date - Section 5 (1625 days after starting date)	0	04-Ap	r-24*	04-Apr-24	0 SC51000-1	SC51110, SC51002-1				•	
NCE-C019-c283 Indement Weather (September 2021) - 3.5days (Implemented)	SC51002-1	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14 05-Ap	r-24 18-Ap	r-24 05-Apr-2	4 18-Apr-24	0 SC51001-1						
Sciological   Checological   Checo		, , , , , , , , , , , , , , , , , , , ,	19 19-Ap			-							
SC51006-1 CNE-020 Indement Weather (Colober 2021) (Time and Cost Implication) - 4days	SC51004-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4 08-Ma	ay-24   11-Ma	y-24 08-May-2	4 11-May-24	0 SC51003-1	SC51005-1				1	
Sci-1007-1   ICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implement   1 21-May-24   21-May-24   21-May-24   21-May-24   26-May-24   26-	SC51005-1	CNE-019 Inclement Weather (October 2021) - 6days	6 11-Ma	ıy-24 17-Ma	y-24 11-May-2	4 17-May-24	0 SC51004-1	SC51006-1				1	
SC51008-1 NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented) 5 2-May-24 28-May-24 28-Ma	SC51006-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4 17-Ma	ay-24 21-Ma	y-24 17-May-2	4 21-May-24	0 SC51005-1	SC51007-1				1	
Sc5109-1   ONE-036 Inclement Weather (January 2022) - 3days   3 27-May-24   29-May-24   27-May-24   28-May-24   0   Sc5100-1   Sc5101-1   Sc5101-1   ONE-040 Inclement Weather (February 2022) - 5days   5   30-May-24   03-Jun-24   0   30-Jun-24   0   Sc5100-1   Sc5101-1   Sc5101-1   Sc5101-1   Sc5101-1   Sc5101-1   ONE-044 Inchement Weather (Matter 2022) - 45days   5   30-May-24   10-Jun-24   0   30-Jun-24   0   Sc5101-1   Sc	SC51007-1	ICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemen	1 21-Ma	ay-24 21-Ma	y-24 21-May-2	4 21-May-24	0 SC51006-1	SC51008-1				1	
SC51010-1 CNE-040 Inclement Weather (February 2022) - 5days 5 30-May-24 03-Jun-24 08-Jun-24 18-Jun-24 18-J	SC51008-1	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5 22-Ma	ay-24 26-Ma	y-24 22-May-2	4 26-May-24	0 SC51007-1	SC51009-1				1	
SC51010-1   CNE-040 Inclement Weather (February 2022) - 5days   5 30-May-24   03-Jun-24   03-Jun-24   04-Jun-24   05-S51012-1   SC51012-1   SC5102-1	SC51009-1	CNE-036 Inclement Weather (January 2022) - 3days	3 27-Ma	ay-24 29-Ma	y-24 27-May-2	4 29-May-24	0 SC51008-1	SC51010-1					
SC51012-1 CNE-048 Inchement Weather (April 2022) - 2days 2 08-Jun-24 10-Jun-24 08-Jun-24 10-Jun-24 0 SC51013-1 SC51013-1 SC51013-1 CNE-050 Inchement Weather (May 2022) - 8days 8 10-Jun-24 18-Jun-24 10-Jun-24 18-Jun-24 0 SC51013-1 SC51018-1 SC5101		CNE-040 Inclement Weather (February 2022) - 5days	5 30-Ma	y-24 03-Ju	n-24 30-May-2	4 03-Jun-24	0 SC51009-1	SC51011-1				1	
SC51013-1 CNE-050 Inclement Weather (May 2022) - 8days 8 10-Jun-24 18-Jun-24 10-Jun-24 18-Jun-24 0 SC51012-1 SC51013-1 SC51013-1 SC51013-1 SC51014-1 SC5104-1 SC51	SC51011-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5 04-Ju	n-24 08-Ju	n-24 04-Jun-2	4 08-Jun-24	0 SC51010-1	SC51012-1					
SC51014-1 CNE-052 Inclement Weather (June 2022) - 9days 9 18-Jun-24 27-Jun-24 18-Jun-24 27-Jun-24 0 SC51013-1 SC51015-1 CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1day 1 27-Jun-24 28-Jun-24 28-Jun-24 0 SC51014-1 SC51016-1	SC51012-1	CNE-048 Inclement Weather (April 2022) - 2days	2 08-Ju	n-24 10-Ju	n-24 08-Jun-2	4 10-Jun-24	0 SC51011-1	SC51013-1				1	
SC51014-1   CNE-052 Inclement Weather (June 2022) - 9days   9   18-Jun-24   27-Jun-24   18-Jun-24   27-Jun-24   28-Jun-24   0   SC51013-1   SC51015-1   SC51099-1   SC51015-1   SC51015-1   CNE-053 Inclement Weather (July 2022) - 4days   4   28-Jun-24   02-Jul-24   28-Jun-24   02-Jul-24   03-Jul-24   03-J	SC51013-1	CNE-050 Inclement Weather (May 2022) - 8days	8 10-Ju	n-24 18-Ju	n-24 10-Jun-2	4 18-Jun-24	0 SC51012-1					1	
SC51015-1 CNE-053 Inclement Weather (July 2022) (Time and Cost Implication) - 1 day  1 27-Jun-24 28-Jun-24 0 2-Jul-24 0 28-Jun-24 0 2-Jul-24 0 28-Jun-24 0 2-Jul-24 0 28-Jun-24 0 2-Jul-24 0 28-Jun-24 0 2-Jul-24	SC51014-1	CNF-052 Inclement Weather (June 2022) - 9days	9 18-Ju	n-24 27-Ju	n-24 18-Jun-2	4 27-Jun-24	0 SC51013-1						
SC51016-1 CNE-054 Inclement Weather (July 2022) - 4days 4 28-Jun-24 02-Jul-24 28-Jun-24 02-Jul-24 0 SC51017-1 CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day 1 02-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 05-Jul-24 0		` ' '					-	SC51099-1,				ı	
SC51017-1 CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day  1 02-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 03-Jul-24 05.51018-1  SC51018-1 CNE-056 Inclement Weather (August 2022) - 13.5days  14 03-Jul-24 16-Jul-24 0 SC51019-1  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  SC51020-1 CNE-058 Inclement Weather (September 2022) - 8days  8 18-Jul-24 25-Jul-24 18-Jul-24 25-Jul-24 0 SC51099-1, SC51020-1  SC51021-1 CNE-059 Inclement Weather (Cotober 2022) - 4days  4 26-Jul-24 29-Jul-24 29-Jul-24 29-Jul-24 0 SC51099-1  SC51099-1 EWN-0314 Extention of Time for change of access date  247 30-Jul-24 02-Apr-25 30-Jul-24 02-Apr-25 0 SC51013-1, SC5100-1  SC51015-1, SC51015-1, SC51010-1	00510101	ONE OF ALL LANGE (ALL COOC), ALL	4 00 1	04 00 1	04 00 1 0	4 00 1 104	0.0054045.4		_				
SC51018-1 CNE-056 Inclement Weather (August 2022) - 13.5days  14 03-Jul-24 16-Jul-24 0 SC51017-1 SC51019-1  SC51019-1 CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day  1 17-Jul-24 18-Jul-24 25-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 0 SC51099-1, SC51020-1	5051017-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - Tday	1 02-Ju	I-24 03-Ju	-24 02-Jul-2	4 03-Jul-24	0 5051016-1						
SC51020-1 CNE-058 Inclement Weather (September 2022) - 8days 8 18-Jul-24 25-Jul-24 18-Jul-24 25-Jul-24 0 SC51099-1, SC51021-1 SC51021-1 SC51021-1 SC51021-1 SC51099-1 EWN-0314 Extention of Time for change of access date SC51099-1 SC51015-1, SC		, , , ,								<u> </u>			
SC51021-1 CNE-059 Inclement Weather (October 2022) - 4days 4 26-Jul-24 29-Jul-24 29-Jul-24 0 SC51020-1 SC51099-1 EWN-0314 Extention of Time for change of access date 247 30-Jul-24 02-Apr-25 30-Jul-24 02-Apr-25 0 SC51013-1, SC51010-1 SC51015-1,	SC51019-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1 17-Ju	l-24   17-Ju	-24   17-Jul-2	4 17-Jul-24	0 SC51018-1					1	
SC51021-1 CNE-059 Inclement Weather (October 2022) - 4days 4 26-Jul-24 29-Jul-24 26-Jul-24 29-Jul-24 0 SC51099-1 SC51099-1 EWN-0314 Extention of Time for change of access date 247 30-Jul-24 02-Apr-25 30-Jul-24 02-Apr-25 0 SC51013-1, SC51010-1 SC51010-1	SC51020-1	CNE-058 Inclement Weather (September 2022) - 8days	8 18-Ju	l-24 25-Ju	-24 18-Jul-2	4 25-Jul-24	0 SC51019-1	SC51099-1, SC51021-1				1	
SC51099-1 EWN-0314 Extention of Time for change of access date 247 30-Jul-24 02-Apr-25 30-Jul-24 02-Apr-25 0 SC51013-1, SC5100-1	SC51021-1	CNE-059 Inclement Weather (October 2022) - 4days	4 26-վս	l-24 29-Ju	-24 26-Jul-2	4 29-Jul-24	0 SC51020-1		_			1	
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U2-7ψ1-20 0 0001099-1	SC51100-1	Expected Completion for Section 5	0	02-45	r-25*	02-Δnr-25			_				
	3031100-1	Expedied Completion for Section 3	U	UZ-AÇ	-20	02-Api-25	0 3031099-1			<u>: : : i   i   i   i   i   i   i   i   i </u>	<u> </u>	<u> </u>	<u> </u>

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 5 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

activity ID	Activity Name	Original Ea Duration	arly Start	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 202	20 J A	2021	2022   J J A     J	2023	2024 	2025 20
Time Risk Allo	wance and Planned Completion	12 22	2-Mar-25	02-Apr-25	05-May-24	16-May-24	-321								17799999999
SC51110	Time Risk Allowance for Section 5	12 22	2-Mar-25	02-Apr-25	05-May-24	16-May-24	-321 SC51001-1, S5S1250,	SC51120							
SC51120	Planned Completion for Section 5	0		02-Apr-25*		16-May-24	-321 SC51110, PL1520, PL1560, S5S1040	CD1040							<b>•</b>
Compensation	on Event	1621 23	3-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 Accomodation 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			•	<b>&gt;</b>					
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, SludgeDigester&DistributionChamber	0		28-Oct-20 A		16-Apr-25				•					
CE0015	CE No.015 - Revised Plumbing Arranagement for Workshop No.2, UV & Effluent No.1, CHP, SPS&FCDF, DOU No.11 &1 2, 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			1	•					
CE0211	NCE-PPMI-0211 - Revised MVAC Layout & Electrical Provisions for MVAC in TX and Switch Rm	0		02-Dec-20 A		16-Apr-25				•					
	File Name: DE/2018/03 RP R28 Remaining Work	I.			1	,	Contract No.	DE/2019/0	12	· · · · · ·		Date	Revision	Checked	Approved
	Layout: DE1803 RP (Nov 2022) - Critical Activity				Chal. I	A/ 11: F			in Works Stag	1		31-Jul-22	Rev.24	LT	KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 6 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Accomodati	MI-0213 - Electrical provisions for MVAC & Drainage System in UV System No.1 & umping Station No.1  MI-0214 - Additional Sump Pump & Drain Pipes at UV System No.1 & Effluent Station  MI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station  MI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water  -0217 - Revised Duty Points for Effluent Transfer Pumps  -0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of  E-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of	1 705 1 0 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	07-Dec-20 A 21-Dec-20 A 14-Dec-20 A 14-Dec-20 A 31-Dec-20 A 29-Dec-20 A 04-Jan-21 A 19-Dec-20 A 23-Mar-22 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A 12-Jan-21 A 15-Jan-21 A	03-Dec-22 02-Dec-22	02-Dec-22 16-Apr-25 16-Apr-25	CD1010 CE0219a CE0219c	CE0219b S5SASC1010 CE0219d S5ECHC1000					3 1 3 4 / 3 7 1		
Effluent Pur	umping Station No.1  MI-0214 - Additional Sump Pump & Drain Pipes at UV System No.1 & Effluent Station  MI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station  MI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water  -0217 - Revised Duty Points for Effluent Transfer Pumps  -0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of  E-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of 2 of the Site  E-0219 - Portion B-2a (within 771 to 891 days from starting date)  E-0219 - Revised Access Date for Portion B-2a  E-0219 - Portion B-2b (within 615 to 705 days from starting date)  E-0219 - Revised Access Date for Portion B-2b  -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River  MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room  -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering  -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0 0 0 0 0 0 891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	14-Dec-20 A 14-Dec-20 A 31-Dec-20 A 29-Dec-20 A 04-Jan-21 A 19-Dec-20 A 23-Mar-22 A 23-Mar-22 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A	03-Dec-22 02-Dec-22	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 03-Dec-22 03-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		*					
Pumping St	Station MI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station MI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water -0217 - Revised Duty Points for Effluent Transfer Pumps -0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of E-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of 2 of the Site E-0219 - Portion B-2a (within 771 to 891 days from starting date) E-0219 - Revised Access Date for Portion B-2a E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0 0 0 0 0 891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	14-Dec-20 A 31-Dec-20 A 29-Dec-20 A 04-Jan-21 A 19-Dec-20 A 23-Mar-22 A 23-Mar-22 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A	03-Dec-22 02-Dec-22	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 03-Dec-22 02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d							
No.1	All-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water -0217 - Revised Duty Points for Effluent Transfer Pumps -0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of -0219 - Change of Site Access Date to SAS Pumping Station Forming Part of 2 of the Site -0219 - Portion B-2a (within 771 to 891 days from starting date) -0219 - Revised Access Date for Portion B-2a -0219 - Portion B-2b (within 615 to 705 days from starting date) -0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0 0 0 0 891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	31-Dec-20 A 29-Dec-20 A 04-Jan-21 A 19-Dec-20 A 23-Mar-22 A 23-Mar-22 A 24-Sep-21 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A	03-Dec-22 02-Dec-22	16-Apr-25 16-Apr-25 16-Apr-25 16-Apr-25 03-Dec-22 02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		•					
System	-0217 - Revised Duty Points for Effluent Transfer Pumps -0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of E-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of 2 of the Site E-0219 - Portion B-2a (within 771 to 891 days from starting date) E-0219 - Revised Access Date for Portion B-2a E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0 0 0 891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	29-Dec-20 A  04-Jan-21 A  19-Dec-20 A  23-Mar-22 A  23-Mar-22 A  24-Sep-21 A  24-Sep-21 A  24-Dec-20 A  12-Jan-21 A	03-Dec-22 02-Dec-22	16-Apr-25 16-Apr-25 16-Apr-25 03-Dec-22 03-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		*					
CE0218         NCE-PMI-0 SWHEPP           CE0219         NCE-NCE-1 Portion B-2           CE0219a         NCE-NCE-1           CE0219b         NCE-NCE-1           CE0219c         NCE-NCE-1           CE0219d         NCE-NCE-1           CE0219d         NCE-NCE-1           CE02210         NCE-PMI-0           CE02221         NCE-PMI-0           CE02222         NCE-PMI-0 Building           CE02233         NCE-PMI-0 UV Disinfect           CE02244         NCE-PMI-0 UV Disinfect           CE02255         NCE-PMI-0 Building           CE02266         NCE-PMI-0 Accomodat           CE02277         NCE-PMI-0 Effluent to S           CE0228         NCE-PMI-0 Effluent to S           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0 Heat and P	-0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of E-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of 2 of the Site E-0219 - Portion B-2a (within 771 to 891 days from starting date) E-0219 - Revised Access Date for Portion B-2a E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0 0 891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	04-Jan-21 A 19-Dec-20 A 23-Mar-22 A 23-Mar-22 A 24-Sep-21 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A	03-Dec-22 02-Dec-22	16-Apr-25 16-Apr-25 03-Dec-22 03-Dec-22 02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		*					
SWHEPP	E-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of 2 of the Site E-0219 - Portion B-2a (within 771 to 891 days from starting date) E-0219 - Revised Access Date for Portion B-2a E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0 891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	19-Dec-20 A 23-Mar-22 A 23-Mar-22 A 24-Sep-21 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A	03-Dec-22 02-Dec-22	16-Apr-25 03-Dec-22 03-Dec-22 02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		*					
Portion B-2	2 of the Site E-0219 - Portion B-2a (within 771 to 891 days from starting date) E-0219 - Revised Access Date for Portion B-2a E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities	891 1 705 1 0 0	23-Oct-19 A 23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	23-Mar-22 A 23-Mar-22 A 24-Sep-21 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A	03-Dec-22 02-Dec-22	03-Dec-22 03-Dec-22 02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		•					
CE0219b         NCE-NCE-0           CE0219c         NCE-NCE-0           CE0219d         NCE-NCE-0           CE0221         NCE-PMI-0           CE02221         NCE-PMI-0           CE02222         NCE-PMI-0           Building         CE02223           CE02234         NCE-PMI-0           CE02245         NCE-PMI-0           CE02256         NCE-PMI-0           Building         CE02266           NCE-PMI-0         Accomodat           CE02277         NCE-PMI-0           CE0228         NCE-PMI-0           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0           CE0232         NCE-PMI-0           Heat and P	E-0219 - Revised Access Date for Portion B-2a E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	1 705 1 0 0 0	23-Mar-22 A 23-Oct-19 A 24-Sep-21 A	23-Mar-22 A 24-Sep-21 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A 12-Jan-21 A	03-Dec-22 02-Dec-22	03-Dec-22 02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25	CE0219a	S5SASC1010 CE0219d		•					
CE0219c         NCE-NCE-0           CE0219d         NCE-NCE-0           CE0220         NCE-PMI-0           CE0221         NCE-PMI-0           CE0222         NCE-PMI-0           Building         NCE-PMI-0           CE0223         NCE-PMI-0           CE0224         NCE-PMI-0           UV Disinfect         NCE-PMI-0           CE0225         NCE-PMI-0           Building         NCE-PMI-0           CE0226         NCE-PMI-0           CE0227         NCE-PMI-0           CE0228         NCE-PMI-0           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0           CE0232         NCE-PMI-0           Heat and P	E-0219 - Portion B-2b (within 615 to 705 days from starting date) E-0219 - Revised Access Date for Portion B-2b -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	705 1 0 0 0	23-Oct-19 A 24-Sep-21 A	24-Sep-21 A 24-Sep-21 A 30-Dec-20 A 24-Dec-20 A 12-Jan-21 A	02-Dec-22	02-Dec-22 02-Dec-22 16-Apr-25 16-Apr-25		CE0219d		•					
CE0219d         NCE-NCE-0           CE0220         NCE-PMI-0           CE0221         NCE-PMI-0           CE0222         NCE-PMI-0           Building         NCE-PMI-0           CE0223         NCE-PMI-0           CE0224         NCE-PMI-0           UV Disinfect         NCE-PMI-0           CE0225         NCE-PMI-0           Building         NCE-PMI-0           CE0226         NCE-PMI-0           CE0227         NCE-PMI-0           CE0228         NCE-PMI-0           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0           CE0232         NCE-PMI-0           Heat and P	E-0219 - Revised Access Date for Portion B-2b  -0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River  MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room  -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering  -0223 - Construction of Trial Pits for Sidestream Treatment Facilities  -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	0 0 0	24-Sep-21 A	24-Sep-21 A 30-Dec-20 A 24-Dec-20 A 12-Jan-21 A		02-Dec-22 16-Apr-25 16-Apr-25	CE0219c			*					
CE0220         NCE-PMI-0           CE0221         NCE-PMI-0           CE0222         NCE-PMI-0           Building         NCE-PMI-0           CE0223         NCE-PMI-0           CE0224         NCE-PMI-0           UV Disinfect         NCE-PMI-0           Building         CE0225           NCE-PMI-0         Accomodat           CE0226         NCE-PMI-0           CE0227         NCE-PMI-0           CE0228         NCE-PMI-0           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0           CE0232         NCE-PMI-0           Heat and P	-0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River  MI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room  -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering  -0223 - Construction of Trial Pits for Sidestream Treatment Facilities  -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	0 0 0		30-Dec-20 A 24-Dec-20 A 12-Jan-21 A	02-Dec-22	16-Apr-25 16-Apr-25	CE0219c	S5ECHC1000		<b>*</b>					
CE0221         NCE-PPMI-0           CE0222         NCE-PMI-0           Building         NCE-PMI-0           CE0223         NCE-PMI-0           CE0224         NCE-PMI-0           UV Disinfect         NCE-PMI-0           Building         NCE-PMI-0           CE0226         NCE-PMI-0           Accomodat         NCE-PMI-0           CE0227         NCE-PMI-0           CE0228         NCE-PMI-0           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0           CE0232         NCE-PMI-0           Heat and P	//II-0221 - General Arrangement for Fire Hydrant & Booster Pump Room -0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	0 0		24-Dec-20 A 12-Jan-21 A		16-Apr-25				<b>*</b>					
CE0222         NCE-PMI-0 Building           CE0223         NCE-PMI-0           CE0224         NCE-PMI-0 UV Disinfect           CE0225         NCE-PMI-0 Building           CE0226         NCE-PMI-0 Accomodat           CE0227         NCE-PMI-0 Effluent to S           CE0228         NCE-PMI-0 Effluent to S           CE0230         NCE-PMI-0           CE0231         NCE-PMI-0 Heat and P	-0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering -0223 - Construction of Trial Pits for Sidestream Treatment Facilities -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	0		12-Jan-21 A		16-Apr-25				<b>*</b>					
Building	-0223 - Construction of Trial Pits for Sidestream Treatment Facilities -0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for	0				•				1 1 1		1 1 1 1			
CE0224 NCE-PMI-0 UV Disinfect CE0225 NCE-PMI-0 Building CE0226 NCE-PMI-0 Accomodat CE0227 NCE-PMI-0 CE0228 NCE-PMI-0 Effluent to S CE0230 NCE-PMI-0 CE0231 NCE-PMI-0 CE0232 NCE-PMI-0 Heat and P	-0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for			15-Jan-21 A		16 Apr 05				•					
UV Disinfect  CE0225 NCE-PMI-0 Building  CE0226 NCE-PMI-0 Accomodat  CE0227 NCE-PMI-0  CE0228 NCE-PMI-0 Effluent to S  CE0230 NCE-PMI-0  CE0231 NCE-PMI-0  CE0232 NCE-PMI-0 Heat and P		0		1		16-Apr-25				•					
Building				25-Jan-21 A		16-Apr-25				•					
Accomodat  CE0227 NCE-PMI-0  CE0228 NCE-PMI-0  Effluent to S  CE0230 NCE-PMI-0  CE0231 NCE-PMI-0  CE0232 NCE-PMI-0  Heat and P	-0225 - Supply of Ductile Iron Puddle Pipes at the Basement of Sludge Dewatering	0		09-Mar-21 A		16-Apr-25				•					
CE0228 NCE-PMI-0 Effluent to S CE0230 NCE-PMI-0 CE0231 NCE-PMI-0 CE0232 NCE-PMI-0 Heat and P	-0226 - Provision of Solar Water Heating System at the Contractor's Site ation	0		09-Mar-21 A		16-Apr-25				•					
CE0231 NCE-PMI-0 CE0232 NCE-PMI-0 Heat and P	-0227 - Dual Power Fedder for LV Switch Panel at Sewage Pumping Station	0		11-Mar-21 A		16-Apr-25				•					
CE0231 NCE-PMI-0 CE0232 NCE-PMI-0 Heat and P	-0228 - Provision of Effluent Pipes and Associated Valve and Supply of Supports for Shek Sheung River	0		11-Mar-21 A		16-Apr-25				•					
CE0232 NCE-PMI-0 Heat and Po	-0230 - Provision of Project Jackets with Fleece Vests	0		26-Mar-21 A		16-Apr-25				•					
Heat and P	-0231 - Extension of Sampling Pipe From Low Level on Sludge Digesters	0		12-Apr-21 A		16-Apr-25					<b>&gt;</b>				
CE0233 NCE-PML0	-0232 - Dual Power Fedder for LV Switch Panel at 1/F LV Switch Room of Combined Power (CHP) Building	0		22-Apr-21 A		16-Apr-25					•				
Viscosity of	-0233 - Sampling, Simulating and Testing of Existing Sludge for Obtaining the of the Mixed Sludge	0		06-May-21 A		16-Apr-25					•				
CE0234 NCE-PMI-0 Digester No	-0234 - Provision of FRP Walkway, Access Platform & Handrailing for Sludge No. 2	0		02-Jun-21 A		16-Apr-25					•				
CE0237 NCE-CNE-0	E-0237 - Provision of Inspectin Windows for Sludge Digester	0		25-Jun-21 A		16-Apr-25					•				
CE0238 NCE-PMI-0 Pumping St	-0238 - Supply of Stainless Steel Puddle Pipes for Surplus Activated Sludge (SAS) Station	0		27-May-21 A		16-Apr-25					•				
CE0239 NCE-PMI-0 Water Syste	-0239 - Revised the Arrangement for Process Water Supply and Plant Services stem	0		01-Jun-21 A		16-Apr-25					•				
CE0240 NCE-PMI-0 Pumping St	-0240 - Revised Coping and Invert Levels for Penstock and Stoplog of SAS Station	0		09-Jun-21 A		16-Apr-25					•				
CE0241 NCE-PMI-0		0		04-Jun-21 A		16-Apr-25					•				
CE0242 NCE-PMI-0 Station No.	-0241 - Revised Diesel Fuel Tank at Combined Heat and Power (CHP) Building	0		15-Jun-21 A		16-Apr-25			1		•				
	-0241 - Revised Diesel Fuel Tank at Combined Heat and Power (CHP) Building -0242 - Revised Fire Services Provision of UV System No. 1 and Effluent Pumping			-1											

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 7 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9	2020	2021 J J J S J	-	22 JA J J	2023       J J A   5 3 7 3 3 1 1 1 1		2024 	2025 26
CE0243	NCE-PMI-0243 - Provision of Flow Signal Inputs for UV Disinfection System	0	12-Jul-21 A		16-Apr-25					•			99/199/11	111111	114444444	14444444444
CE0244	RCNE-CNE-0244 - Access to and use of portion C-1A	0	29-Jun-21 A		16-Apr-25					•			+			
CE0245	NCE-PMI-0245 - Provision of Augmented Reality (AR) Mobile Application	0	30-Jun-21 A		16-Apr-25					•						
CE0246	NCE-PMI-0246 - Revised HV Remote Control Panels at CHP & Workshop No. 2	0	06-Jul-21 A		16-Apr-25					•						
CE0247	NCE-PMI-0247 - Temporary 4G System for SCADA System Monitoring	0	07-Jul-21 A		16-Apr-25					•						
CE0248	NCE-PMI-0248 - Inclement Weather - May 2021 (Time Implication)	0	05-Jul-21 A		16-Apr-25					•						
CE0250	NCE-PMI-0250 - Provision of Front Access LV Switch Panel in the LV Switch Room on G/F Workshop No. 2	0	14-Jul-21 A		16-Apr-25					•	1		+			
CE0252	NCE-PMI-0252 - Provision of Neutral Earthing Resistor (NER) at Workshop No. 2	0	19-Jul-21 A		16-Apr-25					•						
CE0253	NCE-PMI-0253 - Provision of Building Services Systems in New LV Switch Room on the G/F Workshop No. 2	0	16-Jul-21 A		16-Apr-25					•						
CE0254	NCE-CNE-0254 - Removal of Obstructions at Trail Pit No. 3 at Sidestreamt Facilities	0	10-Sep-21 A		16-Apr-25					•						
CE0256	RCNE-CNE-0256 - Amber Rainstrom Warning and Inclement Weather - June 2021 (Time Implication)	0	05-Aug-21 A		16-Apr-25					•						
CE0257	RCNE-CNE-0257 - Black and Red Rainstrom Warning - June 2021 (Time & Cost Implication)	0	05-Aug-21 A		16-Apr-25					•						
CE0258	NCE-PMI-0258 - Provision of FRP Cover for Overflow Chambers of Sludge Digesters	0	04-Aug-21 A		16-Apr-25					•						
CE0259	NCE-PMI-0259 - Provision of Virtual Reality (VR) Safety Training Platform	0	13-Aug-21 A		16-Apr-25					•						
CE0260	NCE-PMI-0260 - Provision of Chequer Plates at UV System No. 1 & Effluent Pumping Station No. 1	0	04-Aug-21 A		16-Apr-25					•						
CE0262	NCE-PMI-0262 - Emergency Access Door for Lift at Sludge Dewatering Building	0	18-Nov-21 A		16-Apr-25					•						
CE0263	NCE-PMI-0263 - Upgrade of the Supporting Frame of 1st and 2nd Stage Heat Exchangers for Future Expansion of THP System	0	07-Sep-21 A		16-Apr-25					•						
CE0264	RCNE-CNE-0264 - Inclement Weather - July 2021 (Time Implication)	0	10-Sep-21 A		16-Apr-25					•						
CE0265	NCE-PMI-0265 - Water Supply to Emergency Drench Shower and Eye Fountain at Deodorization System No. 11	0	16-Sep-21 A		16-Apr-25					•						
CE0269	NCE-PMI-0269 - Additional Cleansing Points at Sludge Skip Area of Sludge Dewatering Building	0	10-Sep-21 A		16-Apr-25					•						
CE0270	NCE-CNE-0270 - Extra sampling, simulating & testing of exiting sludge for obtaining the viscosity of the existing sludge	0	10-Sep-21 A		16-Apr-25					•						
CE0271	NCE-PMI-0271 - Provision of Access Platform for the EOT Crane (LA-01-02) in Sludge Dewatering Building	0	23-Sep-21 A		16-Apr-25					•						
CE0272	NCE-PMI-0272 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0	08-Oct-21 A		16-Apr-25					•						
CE0272-1	NCE-PMI-0272-1 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0	28-Mar-22 A		16-Apr-25						•					
CE0273	NCE-NCE-0273 - Change of Site Access Date to Workshop No. 2 Forming Part of Portion C-3 of the Site	0	24-Sep-21 A		16-Apr-25					•						
CE0273a	NCE-NCE-0273 - Portion C-3 (within 615 to 815 days from starting date)	815 23-Oct-19 A	31-Dec-21 A	16-Apr-25	16-Apr-25		CE0273b									
CE0273b	NCE-NCE-0273 - Revised Access Date for Portion C-3	1 31-Dec-21 A	31-Dec-21 A	16-Apr-25	16-Apr-25	CE0273a					†		++			
CE0275	NCE-PMI-0275 - Additional Lighting Fittings for UV System No.1 & Effluent Pumping Station No.1	0	29-Sep-21 A		16-Apr-25					•						
CE0277	NCE-PMI-0277 - Provision of Access Platform for the EOT Crane (LA-01-03) in Sludge Dewatering Building	0	27-Sep-21 A		16-Apr-25					•						
CE0279	NCE-PPMI-0279 - Implementation of Digital Twin Pilot Project in Advance Works Area of Shek Wu Hui Sewage Treatment Works	0	11-Aug-22 A		16-Apr-25							•				
CE0280	NCE-PMI-0280 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0	21-Oct-21 A		16-Apr-25					•						
CE0283	NCE-PMI-0283 - Provision of Metal Base Plate, Stopper&Guide Rail for Loading&Unloading of Sludge Skip at Skip Rm of SDB	0	11-Nov-21 A		16-Apr-25					•			+			
								<u> </u>	1 1 1	<u> </u>	1 1	: :   :	<u>:                                    </u>	1 1	!!!!	
	File Name: DE/2018/03 RP R28					Contract No	DE/2019/	າວ				Date	Revis	sion	Checked	Approved

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 8 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start	Early Finish	Late Start		Total Predecessors	Successors	9 2020 2021	2022	2023 20	24 2025 26
		Duration				Float		J S J J J J A J J J J J S J J	J J A J J J A J J A J A J A J A J A J A	<del></del>	
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			<b>-</b>			
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		<del>-</del>		
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			<b>-</b>			
CE0293	RCNE-CNE-0293 - Inclement Weather - September 2021 (Time Implication)	0	02-Nov-21 A		16-Apr-25			<b>-</b>			
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			<b>-</b>			
CE0305	NCE-PMI-0305 - Process Review for Advance Works	0	12-Jan-22 A		16-Apr-25			<b>-</b>			
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			1			
CE0311	NCE-PMI-0311 - Temp. Setup for SCADA System Monitoring & CCTV System Surveillance	0	29-Dec-21 A		16-Apr-25			7			
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			7			
CE0313	CNE-0313 - Inclement Weather - November 2021 (Time Implication)	0	29-Dec-21 A		16-Apr-25			<b>1</b>			
CE0315	NCE-PMI-0315 - Modification of Monorali LA-01-04 in Sludge Dewatering Building	0	30-Dec-21 A		16-Apr-25			7			
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			<b>7</b>			
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: DF/2018/03 RP R28 Remaining Work					_		_	Date	Revision C	Checked Approved
	1 lie Name. BE/2010/00 Nr. 1120						o. DE/2018/0		31-Jul-22	Rev.24 LT	KM
	Layout: DE1803 RP (Nov 2022) - Citical Activity  WRS  Milestone			Shek \	Wu Hui Eff	Iuent Polishi	ng Plant - M	ain Works Stage 1	31-Aug-22	Rev.25 LT	KM

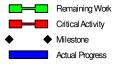
File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 9 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start		Total Predecessors Float	Successors	9	2020 J J A J J J	2021 J J 3 J	2022	2023 	2024 J J J J 1 1 1 1 1 1 2 2	A	2025 26 JJA J
CE0328	NCE-PMI-0328 - Provision of Chequer Plates at SAS Pumping Station	0	22-Mar-22 A		16-Apr-25				<del>                                     </del>		•		11111111		
CE0329	NCE-PMI-0329 - Provision of IIB for FAT for Sludge Thickening and Dewatering Centrifuges	0	23-Mar-22 A		16-Apr-25						•				
CE0333	NCE-PMI-0333 - Revised MVAC Layout and Control Schematic for Workshop No.2	0	30-May-22 A		16-Apr-25					•					
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						•				
CE0335	NCE-PMI-0335 - Revised Power & Control for MVAC Provision at Workshop No.2	0	01-Apr-22 A		16-Apr-25						•				
CE0336	NCE-PMI-0336 - Provision of Additional Temporary Storage Area	0	30-Mar-22 A		16-Apr-25			1			•		<del></del>		
CE0337	NCE-PMI-0337 - Revised Pipe Trenches in Zone C	0	24-Mar-22 A		16-Apr-25						•				
CE0338	NCE-PMI-0338 - Provision of Additional RFID Handheld Readers with 4G Data SIM Card Service	0	01-Apr-22 A		16-Apr-25						•				
CE0339	NCE-PMI-0339 - Revised Lighting Layout for SDB	0	01-Apr-22 A		16-Apr-25						<b>†</b>				
CE0340	NCE-PMI-0340 - Building Services & SCADA Interface Provisions for Workshop No.2	0	01-Apr-22 A		16-Apr-25						•				
CE0341	NCE-PMI-0341 - Revised MVAC Layout for Sludge Digesters and Distribution Chamber	0	05-May-22 A		16-Apr-25						•				
CE0342	NCE-PMI-0342 - Provision and Installation of Additional Pipes to Manhole MHSS1	0	12-May-22 A		16-Apr-25						•				
CE0343	CNE-0343 - Inclement Weather - December 2021 (Time Implication)	0	01-Apr-22 A		16-Apr-25						<b>•</b>				
CE0344	CNE-0344 - Inclement Weather - January 2022 (Time Implication)	0	01-Apr-22 A		16-Apr-25						<b>•</b>				
CE0345	CNE-0345 - Inclement Weather - February 2022 (Time Implication)	0	01-Apr-22 A		16-Apr-25						<b>•</b>				
CE0346	NCE-CNE-0346 - Left in Temporary Steel Casing for Pile No. SSHP5 at Sidesteam Treatment Facilities	0	16-Nov-22 A		16-Apr-25					<u> </u>	<del></del>				
CE0347	NCE-PMI-0347 - IIB for FAT for 11kV Switchboards	0	01-Apr-22 A		16-Apr-25						<b>•</b>				
CE0348	NCE-PMI-0348 - Provision of (IIB) for FAT for CHP Generating Sets	0	04-Apr-22 A		16-Apr-25						<b>•</b>				
CE0352	NCE-PMI-0352 - Revised MVAC Layout and for Transformer and Switch Room	0	10-Jun-22 A		16-Apr-25						•				
CE0353	NCE-PMI-0353 - Additional Auto-sampler for sampling Location at UV system No.1 and Effluent Pumping Station No.1	0	27-Apr-22 A		16-Apr-25						•				
CE0354	NCE-EWP-0354 - Early Deployment of Tower Crane to Enhance Programme affected by Uncharted U/U at STF	0	10-Jun-22 A		16-Apr-25						•				
CE0359	NCE-PMI-0359 - Revised Lighting Layout for Sludge Digesters and Districbution Chamber (Basement 1 and Basement 2)	0	16-May-22 A		16-Apr-25						•				
CE0360	NCE-PMI-0360 - Provision of Video Wall with Additional Monitors in the Control Room of Workshop No.2	0	29-Apr-22 A		16-Apr-25						•				
CE0361	NCE-PMI-0361 - Revised Power Layout for Sludge Dewatering Building	0	08-Jun-22 A		16-Apr-25						•				
CE0362	NCE-CNE-0362 - Amendment of Dangers Goods Ordinance (Cap.295)	0	19-Aug-22 A		16-Apr-25						•				
CE0363	NCE-PMI-0363 - Revised MVAC Layout and Control Schematic for CHP Building	0	30-May-22 A		16-Apr-25						•				
CE0364	NCE-PMI-0364 - Provision of Security and Utility Services for Additional Temporary Storage Area	0	16-May-22 A		16-Apr-25						•				
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						*				
CE0366	CNE-0366 - No Access to and Use of Portion C-2B for Area for CHP	0	20-May-22 A		16-Apr-25						•				
CE0367	NCE-PMI-0367 - Sealing Works for UV System & Effluent Pumping Station No. 1	0	20-May-22 A		16-Apr-25						•				
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						•				
CE0370	CNE-0370 - No Access to and Use of Portion C-2A for Area for SDB	0	20-May-22 A		16-Apr-25						•				
								<del></del>			Date			acked	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 10 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

	NCE-PMI-0372 - Building Services Control & Monitoring Provisions for SDB & Gas Detection							 1
CE0274	System for Pipe Tranch No.1	0	08-Jun-22 A		16-Apr-25			•
CE0374	NCE-PMI-0374 - Revised Power Layout for SDDC & Control Provisions for Sump Pumps at Pipe Trench No.1 & No.2	0	20-Jun-22 A		16-Apr-25			•
CE0375	NCE-PMI-0375 - Gas Detection System for Pipe Trench No.3 in Zone C	0	06-Jun-22 A		16-Apr-25			•
CE0376	NCE-PMI-0376 - BS Provisions for SDDC (G/F & Roof) & Pipe Trench No.2	0	10-Jun-22 A		16-Apr-25			•
CE0381	NCE-PMI-0381 - Employment of Temporary Staff under Job Creation Scheme 3.0 (JCS 3.0) under Anti-Epidemic Fund (AEF)	0	08-Aug-22 A		16-Apr-25			•
CE0384	NCE-PMI-0384 - Enhanced Protective Measures against Spread of Omicron COVID Variant	0	08-Jun-22 A		16-Apr-25			•
CE0386	CNE-0386 - Inclement Weather - March 2022 (Time Implication)	0	24-Jun-22 A		16-Apr-25			<b>†</b>
CE0387	CNE-0387 - Inclement Weather - April 2022 (Time Implication)	0	24-Jun-22 A		16-Apr-25			<b>,</b>
CE0389	NCE-PMI-0389 - Enhancement of Ventilation for CHP Acoustic Enclosures at Combined Heat and Power Building	0	27-Oct-22 A		16-Apr-25			•
CE0390	NCE-PMI-0390 - Electricity Supply for DSD Maintenance Works at Workshop No.2	0	26-Oct-22 A		16-Apr-25			•
CE0391	CNE-0391 - Inclement Weather - May 2022 (Time Implication)	0	30-Jun-22 A		16-Apr-25			<b>+</b>
CE0393	NCE-PMI-0393 - Automatic Changeover System for UV System No.1 in LV Switchboard at Transformer and Switchroom	0	22-Oct-22 A		16-Apr-25			<b>•</b>
CE0395	NCE-PMI-0395 - Omission of the Set-up Work for Temporary Water and Electricity Supply for Works Area WA1-B	0	20-Jul-22 A		16-Apr-25			
CE0397	CNE-0397 - Inclement Weather - Jun 2022 (Time Implication)	0	30-Jun-22 A		16-Apr-25			*
CE0398	CNE-0398 - Red Rainstorm Warning -June 2022 (Time and Cost Implication)	0	08-Sep-22 A		16-Apr-25			•
CE0399	NCE-PMI-0399 - Revised MVAC Layout for Sludge Dewatering Building	0	22-Sep-22 A		16-Apr-25			•
	NCE-PMI-0400 - Provision of High Tide Detection System for System No.1 and Effluent Pumping Station No. 1	0	23-Aug-22 A		16-Apr-25			•
CE0402	NCE-PMI-0402 - Provision of Flow Control System for Effluent to Shek Sheung River	0	24-Aug-22 A		16-Apr-25			•
CE0403	NCE-PMI-0403 - Revised MVAC Provisions for SDB, TX&Switchrrom, UV no.1 & EPS and FHBP Rm	0	03-Nov-22 A		16-Apr-25			•
CE0405	CNE-0405 - Inclement Weather -July 2022 (Time Implication)	0	08-Sep-22 A		16-Apr-25			•
CE0406	CNE-0406 - Tropical Cyclone Warning Signal No. 8 - July 2022 (Time and Cost Implication)	0	08-Sep-22 A		16-Apr-25			•
CE0409	CNE-0409 - Inclement Weather -August 2022 (Time Implication)	0	22-Sep-22 A		16-Apr-25			•
CE0410	CNE-0410 - Tropical Cyclone Warning Signal No. 8 - August 2022 (Time and Cost Implication)	0	22-Sep-22 A		16-Apr-25			-
CE0411	NCE-PMI-0411 - Revised Lighting Design for CHP Building	0	07-Nov-22 A		16-Apr-25			•
CE0413	NCE-PMI-0413 - MV for UV Plant Area (Level +4.9mPD) of UV System No.1 & Effluent Pumping Station No.1	0	25-Oct-22 A		16-Apr-25			•
CE0414	NCE-PMI-0414 - Sample Collection and Analysis for Existing Sewage Treatment Facilities	0	27-Oct-22 A		16-Apr-25			•
CE0415	NCE-PMI-0415 - Modification Works for Instrument of UV Channels	0	07-Nov-22 A		16-Apr-25			4
Preliminaries		2003 23-Oct-19 A		13-Apr-22	·	0		
Mobilisation		1687 23-Oct-19 A		13-Apr-22				
PL1000	Provison of Equipment / Facilities for the PM's Office	1687 23-Oct-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 AD1200, AD1220, CD1010	CD1040	
PL1010	Mobilisation	28 23-Oct-19 A	19-Nov-19 A	13-Apr-22	13-Apr-22	CD1010	PL1240, S2P1010,	
PL1020	Design, Procurement & PO & Construction of Contractor's Site Office (Works Area WA1 -B)	270 20-Nov-19 A	27-Nov-20 A	05-Jul-22	05-Jul-22	AD1200, PL1010	PL1040, S2D1930,	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 11 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

y ID	Activity Name	Original E Duration	Early Start	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 2020 2021 2022 2023 2024 2025   3   J   J   J   J   J   J   J   J   J
PL1030	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	503 2	20-Nov-19 A	05-Apr-21 A	03-Oct-23	03-Oct-23	AD1220, PL1010	PL1050	<u> </u>
PL1040	Maintain Contractor's Site Office	1255 2	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 Preliminarie	es ·	2003 2	23-Oct-19 A	16-Apr-25	13-Sep-23	16-Apr-25	0		
PL1070	Provision of Insurance, Third Party Insurances & PII	1687 2	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 2	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 2	22-Jan-20 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1100	Provision of Photographs	1659 2	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1110	Provision of Environmental Mitigation Measures	1659 2	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1120	Provision of Air Pollution Abatment	1659 2	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1130	Provision of Noise Pollution Abatment	1659 2	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1140	Provision of Wastewater Pollution Abatement	1659 2	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1150	Provision of Wastement Management		20-Nov-19 A				316 CD1010, PL1010	CD1040	
PL1160	Provision of Monitoring the Use of Ultra Low Sulphur Diesel		20-Nov-19 A			·	316 CD1010, PL1010	CD1040	
PL1170	Provision of Environmental Management		20-Nov-19 A		03-Oct-23		316 CD1010, PL1010	CD1040	
PL1180	Provision of Site Management Plan for Trip Ticket System		20-Nov-19 A			·	316 CD1010, PL1010	CD1040	
PL1190	Provision of As-constructed Drawings for Section 3	180 2	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		13-Oct-22 A	11-Dec-22		·	857 CD1010, S4C1160,	CD1040, SC41110	
PL1210	Provision of As-constructed Drawings for Section 5	180 2	29-Jan-24	26-Jul-24	07-Nov-23	04-May-24	-83 CD1010, S5DIGC1040	CD1040, SC51110	
PL1220	Provision of Systematic Risk Management	1659 2	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 2	20-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316 CD1010, PL1010	CD1040	
PL1240	Provision of 24-Hour Telephone Line		20-Nov-19 A			·	316 CD1010, PL1010	CD1040	
PL1260	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 3		21-Nov-22	18-Feb-23	13-Sep-23			PL1270	
PL1270	Provision of Training for Employer's Staff for Section 3	60 2	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 2	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 1	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 (	)2-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 2	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 Reivew & Comment O&M Manual for Section 3		04-Feb-25	24-Feb-25			-316 PL1320	PL1340	
PL1340 PL1350	Revise & Re-submit O&M Manual for Section 3  PM Reivew & Approval of O&M Manual for Section 3		25-Feb-25 27-Mar-25	26-Mar-25 16-Apr-25		-	-316 PL1330 -316 PL1340	PL1350 CD1040,	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 12 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ctivity ID	Activity Name	Original E	arly Start	Early Finish	Late Start	Late Finish	Tota Float	Predecessors	Successors	9 2020 2021	2022	2023	2024 JJA J	2025 26
PL1360	Prepare & Submit O&M Manual for Section 4	50 0	7-Feb-22 A	28-Mar-22 A	26-Mar-25	26-Mar-25		CD1010	CD1040, PL1370	1	1-	13/13/11/11/11/11	111144444444	1233333333333
PL1370	PM Reivew & Comment O&M Manual for Section 4	36 2	9-Mar-22 A	03-May-22 A	26-Mar-25	26-Mar-25		PL1360	PL1370					
PL1380	Revise & Re-submit O&M Manual for Section 4	79 0	4-May-22 A	21-Nov-22	26-Mar-25	26-Mar-25	856	6 PL1370	PL1390	$\dashv$				
PL1390	PM Reivew & Approval of O&M Manual for Section 4	21 2	2-Nov-22	12-Dec-22	27-Mar-25	16-Apr-25	856	PL1380	CD1040, SC41110					
PL1400	Prepare & Submit O&M Manual for Section 5	90 2	3-Oct-24	20-Jan-25	07-Dec-23	05-Mar-24	-321	CD1010	CD1040, PL1410					
PL1410	PM Reivew & Comment O&M Manual for Section 5	21 2	1-Jan-25	10-Feb-25	06-Mar-24	26-Mar-24	-321	PL1400	PL1420					,
PL1420	Revise & Re-submit O&M Manual for Section 5		1-Feb-25	12-Mar-25	27-Mar-24	25-Apr-24	-321	PL1410	PL1430					•
PL1430	PM Reivew & Approval of O&M Manual for Section 5	21 1	3-Mar-25	02-Apr-25	26-Apr-24	16-May-24	-321	PL1420	CD1040, SC51110					
PL1440	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	1659 2	0-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040					
Site Upkeeping		1659 2	0-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	6						
PL1450	General Site Upkeeping of the Site	1659 2	0-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	CD1010, PL1010	CD1040					
Safety and Envir	onmental Management	1675 1	0-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316							
PL1460	Construction Health and Safety Plan	1669 1	0-Nov-19 A	04-Jun-24	03-Oct-23	16-Apr-25	316	6 CD1000	CD1040	_			<u> </u>	
PL1470	Site Traffic Safety Management Plan	1137 2	5-Apr-21 A	04-Jun-24	03-Oct-23				CD1040					
	n BEAM Requirements		·	13-Aug-24		16-May-24								
						1								
Sludge Dewate		1069 1	1-Jun-21 A	14-Jun-24	16-Jan-23	16-May-24								
PL1490	Material Submission & Design Calculation Approved	0		11-Jun-21 A		16-Jan-23		S2D1290, S2D1330,	PL1500, SC21120	•				
PL1500	Issued approved submission & Calculation to Cinotech	161 2	1-Sep-21 A	11-Mar-22 A	16-Jan-23	16-Jan-23		PL1490	PL1510	_				
PL1510	Monthly Review & Submission	500 0	9-Sep-22 A	21-Jan-24	16-Jan-23	17-Mar-24	56	PL1500	PL1520					
PL1520	Submission & Approval of Test Record	60 1	6-Apr-24	14-Jun-24	18-Mar-24	16-May-24	-29	PL1510, S5T1060	SC51120				_	
CHP Building		1129 1	1-Jun-21 A	13-Aug-24	24-Nov-22	16-May-24	-89	)						
PL1530	Material Submission & Design Calculation Approved	0		11-Jun-21 A		24-Nov-22		S2D1610	PL1540, SC21120	•				
PL1540	Issued approved submission & Calculation to Cinotech	168 2	1-Sep-21 A	11-Mar-22 A	24-Nov-22	24-Nov-22		PL1530	PL1550	_				
PL1550	Monthly Review & Submission	480 2	2-Nov-22	15-Mar-24	24-Nov-22	17-Mar-24	2	2 S5CHPC1020, PL1540	PL1560					
PL1560	Submission & Approval of Test Record	60 1	5-Jun-24	13-Aug-24	18-Mar-24	16-May-24	-89	PL1550, S5T1100	SC51120				-	
BIM		1623 2	4-Oct-19 A	02-Apr-24	05-Dec-23	16-Apr-25	379							
PL1570	Prepare & Submit Construction Stage BIM Execution Plan	30.2	4-Oct-19 Λ	22-Nov-19 A	05-Doc-23	05-Doc-23		CD1010	PL1580,	<b>-</b>				
1 11370	1 repare & Submit Constitution Stage blivi Execution Flati	30 2	4-001-19 A	22-NOV-19 A	03-Dec-23	03-Dec-23		CD1010	PL1630, PL1620					
PL1580	PM Reivew & Comment Construction Stage BIM Execution Plan	21 2	3-Nov-19 A	13-Dec-19 A	05-Dec-23	05-Dec-23		PL1570	PL1590					
PL1590	Revise & Re-submit Construction Stage BIM Execution Plan	14 1	4-Dec-19 A	27-Dec-19 A	05-Dec-23	05-Dec-23		PL1580	PL1600					
PL1600	PM Reivew & Approval of Construction Stage BIM Execution Plan	21 2	8-Dec-19 A	17-Jan-20 A	05-Dec-23	05-Dec-23		PL1590	PL1630, PL1620					
PL1610	Contractor Review & Study Design Stage BIM	92 2	4-Oct-19 A	23-Jan-20 A	05-Dec-23	05-Dec-23		CD1010	CD1040, PL1640,					
PL1620	Contractor Develop 1st Construction Stage BIM	60 2	4-Jan-20 A	23-Mar-20 A	05-Dec-23	05-Dec-23		PL1600, PL1570,	CD1040, PL1640,					
PL1630	Review & Update BIM Execution Plan & BIM Model	1415 2	4-Mar-20 A	06-Feb-24	05-Dec-23	19-Feb-25	379	PL1570, PL1620,	CD1040, PL1640					
PL1640	Prepare & Submit the Fully Coordinated BIM	60 0	9-Dec-23	06-Feb-24	22-Dec-24	19-Feb-25	379	PL1620, PL1630,	PL1650					
				1		,	'	· DI 1010	,					
	File Name: DE/2018/03 RP R28						Co	ontract No.	DE/2018/0	03	Date 21 Jul 22	Revision Rev.24	Checked	Approved
	Layout: DE1803 RP (Nov 2022) - Critical Activity				Shak \	A/ LI: E				ain Works Stage 1	31-Jul-22	NEV.24	-1	KM

Layout: DE1803 RP (Nov 2022) -WBS Page 13 of 58 Hemaning Work
Critical Activity

Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

/ ID	Activity Name	Original Early Start	Early Finish	Late Start		Total Predecessors	Successors	9 2020 2021	2022 2023 2024 2025
		Duration				Float		J 3 J J J J A J J J J J S	J J J J J J J J J J J J J J J J J J J
PL1650	PM Reivew & Comment Fully Coordinated BIM	21 07-Feb-24	27-Feb-24	20-Feb-25	12-Mar-25	379 PL1640	PL1660		
PL1660	Revise & Re-submit Fully Coordinated BIM	14 28-Feb-24	12-Mar-24	13-Mar-25		379 PL1650	PL1670		
PL1670	PM Reivew & Approval of Fully Coordinated BIM	21 13-Mar-24	02-Apr-24	27-Mar-25	16-Apr-25	379 PL1660	CD1040		
ection 1 - D	esign for UV System No. 1 & Effluent Pumping Station No.1	284 21-Nov-19 A	08-Aug-20 A	31-May-22	16-Apr-25				
Major Plant & Ma	aterials Procurement	240 21-Nov-19 A	17-Jul-20 A	31-May-22	15-Feb-23				
S1P1000	Procurement & PO for UV Disinfection System (S10)	150 21-Nov-19 A	28-Apr-20 A	31-May-22	31-May-22	CD1000,	SC11110,		
			207 p. 207	0ay ==	0 : may ==	CD1010, PL1010	S4P1040, S1D1000, S1P1030		
S1P1010	Procurement & PO for Lift-up Pumps (S11)	150 21-Nov-19 A	28-Apr-20 A	31-May-22	31-May-22	CD1010, PL1010	SC11110, S4P1070, S1D1000		
S1P1020	Procurement & PO for Transfer Pumps (S13)	150 21-Nov-19 A	28-Apr-20 A	31-May-22	31-May-22	CD1010, PL1010	SC11110, S4P1080, S1P1040, S1P1050, S1D1000, S4P1090		
S1P1030	Procurement & PO for EOT Cranes (2T & 5T) (S19)	150 19-Jan-20 A	03-Jul-20 A	15-Feb-23	15-Feb-23	S1P1000	SC11110, S4P1100		
S1P1040	Procurement & PO for Stoplogs (S21)	90 18-Apr-20 A	17-Jul-20 A	15-Feb-23	15-Feb-23	S1P1020, PL1010	SC11110, S4P1110, S2P1160		
S1P1050	Procurement & PO for Penstocks (S21)	90 18-Apr-20 A	17-Jul-20 A	15-Feb-23	15-Feb-23	S1P1020, PL1010	SC11110, S4P1120, S2P1170		
Design & Submi	ission	217 27-Jan-20 A	08-Aug-20 A	31-May-22	16-Apr-25				
Conoral Among	ement Drawings	217 27-Jan-20 A	09 Δυα 20 Δ	21 May 22	16 Apr 25				
_	ement drawings	217 27-Jan-20 A	00-Aug-20 A	31-1VIAY-22	10-Api-25				
S1D1000	Prepare & Submit General Arrangement Drawings	90 27-Jan-20 A	19-Feb-20 A	31-May-22	31-May-22	S1P1000, S1P1010, S1P1020, PL1010	S1D1010, S1D1040, S1D1100, S1D1180, S1D1260, S4P1010		
S1D1010	Review & Comment on General Arrangement Drawings by PM	21 20-Feb-20 A	04-Mar-20 A	16-Apr-25	16-Apr-25	S1D1000	S1D1020	1	
S1D1020	Revise & Re-submit General Arrangement Drawings	14 16-May-20 A	05-Aug-20 A	16-Apr-25	16-Apr-25	S1D1010	S1D1030		
S1D1030	Review & Accept of General Arrangement Drawings by PM	5 06-Aug-20 A	08-Aug-20 A	16-Apr-25	16-Apr-25	S1D1020	SC11110	1	
Civil & Dimensi	ional / Tolerance Requirement Drawings	176 07-Mar-20 A	08-Aug-20 A	15-Feb-23	16-Apr-25				
S1D1040	Prepare & Submit Civil Requirement Drawings	60 07-Mar-20 A	08-Apr-20 A	15-Feb-23	15-Feb-23	CD1010, S1D1000	S1D1050, KD1000	-	
S1D1050	Review & Comment on Civil Requirement Drawings by PM	21 09-Apr-20 A	20-Apr-20 A	16-Apr-25	16-Apr-25	S1D1000	S1D1060	•	
S1D1060	Revise & Re-submit Civil Requirement Drawings	14 21-Apr-20 A	29-Apr-20 A	16-Apr-25	16-Apr-25	S1D1050	S1D1070	•	
S1D1070	Review & Comment of Civil Requirement Drawings by PM	21 30-Apr-20 A	25-May-20 A	16-Apr-25	16-Apr-25	S1D1060	SC11110, S1D1080	•	
S1D1080	Revise & Re-submit Civil Requirement Drawings	28 26-May-20 A		16-Apr-25		S1D1070	S1D1090		
S1D1090	Review & Accept of Civil Requirement Drawings by PM	5 06-Aug-20 A	_		16-Apr-25	S1D1080	SC11110	1	
Electrical Schei	matic Drawings	116 25-Feb-20 A	03-Jun-20 A	31-May-22	31-May-22				
S1D1100	Prepare & Submit Elec. Schematic Drawings	60 25-Feb-20 A	03-Apr-20 A	31-May-22	31-May-22	CD1010, S1D1000	S1D1110, KD1000, S1D1140, S1D1220		
S1D1110	Review & Comment on Elec. Schematic Drawings by PM	21 04-Apr-20 A	16-Apr-20 A	31-May-22	31-May-22	S1D1100	S1D1120	<b>—</b>	
	Revise & Re-submit Elec. Schematic Drawings	14 17-Apr-20 A				S1D1110	S1D1130		

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 14 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish	Total Predecessors	Successors	9 2020 2021	2022 2023	2024 2025 I
									123 53733111111	111122222222 2 2 2 3 3 3 3 3 3 3 3 3 3
S1D1130	Review & Accept of Elec. Schematic Drawings by PM	21 05-May-20 A	03-Jun-20 A	31-May-22	31-May-22	S1D1120	S5TXRP1000, S4C1000, S4C1010, S4P1020, SC11110			
UV System No.	1	146 24-Mar-20 A	08-Aug-20 A	31-May-22	16-Apr-25					
S1D1140	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60 24-Mar-20 A	•	_	_	CD1010, S1D1100	S1D1150, S1D1180	•		
S1D1150	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21 09-May-20 A	01-Jun-20 A	16-Apr-25	16-Apr-25	S1D1140	S1D1160	•		
S1D1160	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14 02-Jun-20 A	10-Jul-20 A	16-Apr-25	16-Apr-25	S1D1150	S1D1170			
S1D1170	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21 11-Jul-20 A	06-Aug-20 A			S1D1160	SC11110	•		
S1D1180	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60 15-Apr-20 A	29-May-20 A	31-May-22	31-May-22	CD1010, S1D1140, S1D1000	S1D1190, S4C1020	<b>-</b>		
S1D1190	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21 30-May-20 A	19-Jun-20 A	31-May-22	31-May-22	S1D1180	S1D1200			
S1D1200	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14 20-Jun-20 A	23-Jul-20 A	31-May-22	31-May-22	S1D1190	S1D1210	•		
S1D1210	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14 24-Jul-20 A	08-Aug-20 A	31-May-22	31-May-22	S1D1200	S4P1040, S5TXRP1000, S5TXRP1010, SC11110	•		
Effluent Pumpin	g Station No. 1	139 24-Mar-20 A	08-Aug-20 A	31-May-22	16-Apr-25					
S1D1220	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60 24-Mar-20 A	08-May-20 A	31-May-22	31-May-22	CD1010, S1D1100	S1D1230, S1D1260, S1D1300			
S1D1230	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21 09-May-20 A	01-Jun-20 A	16-Apr-25	16-Apr-25	S1D1220	S1D1240			
S1D1240	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14 02-Jun-20 A	10-Jul-20 A	16-Apr-25	16-Apr-25	S1D1230	S1D1250			
S1D1250	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21 11-Jul-20 A	08-Aug-20 A	16-Apr-25	16-Apr-25	S1D1240	SC11110			
S1D1260	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60 15-Apr-20 A	29-May-20 A	31-May-22	31-May-22	CD1010, S1D1220, S1D1000	S1D1270, S4C1020			
S1D1270	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21 30-May-20 A	19-Jun-20 A	31-May-22	31-May-22	S1D1260	S1D1280			
S1D1280	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14 20-Jun-20 A	23-Jul-20 A	31-May-22	31-May-22	S1D1270	S1D1290	•		
S1D1290	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14 24-Jul-20 A	08-Aug-20 A	31-May-22	31-May-22	S1D1280	S4P1110, S4P1120, S4P1070, S4P1080, S4P1090, S4P1100, S5TXRP1000, S5TXRP1010, S5TXRP1020, S4P1130, SC111110			
Building Service	s	147 15-Mar-20 A	06-Aug-20 A	12-Oct-22	27-Mar-25					
S1D1300	Prepare & Submit BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	90 15-Mar-20 A	27-Jul-20 A	12-Oct-22	12-Oct-22	S1D1220	S1D1320, S1D1310			
S1D1310	Review & Accept of BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8 21-Jul-20 A	05-Aug-20 A	12-Oct-22	12-Oct-22	S1D1300	SC11110, S5TXRC1030, S4C1110	•		
S1D1320	Prepare & Submit FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	60 14-Apr-20 A	05-Aug-20 A	27-Mar-25	27-Mar-25	S1D1300	S1D1330			
S1D1330	Review & Accept of FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8 09-Jul-20 A	06-Aug-20 A	27-Mar-25	27-Mar-25	S1D1320	SC11110, S4P1030, S4P1140, S4P1150			
	File Name: DF/2018/03 RP R28 Remaining Work					Contract Na	S4P1150	<u>[                                     </u>	Date Revision	Checked /

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 15 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

vity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start		Total Predecessors	Successors 9	2020	2021 203 	22 JA     J	2023	2024	2025 J     J J A
Section 2 - C	Complete All Designs (exclude Sec. 1 & 3)	943 20-Nov-19 A	21-Nov-22	31-Oct-21	16-Apr-25	877		<u>- - - - - - - - - - - - - - - - - - - </u>	1-	<u>-  -  -  1  2  3    5</u>	[373]1111111111	111112222222	1 2 3 3 3 3 3 3 3 3
Major Plant & M	laterials Procurement	571 20-Nov-19 A	23-Apr-21 A	13-Apr-22	16-Apr-25								
S2P1000	Procurement & PO for Sludge Screening System (S2)	150 18-May-20 A	16-Oct-20 A	06-May-22	06-May-22	S2P1020	SC21110, S2D1260, S5P1000, S2P1060, S2P1150, S5P1030						
S2P1010	Procurement & PO for Sludge Thickening System (S3)	180 20-Nov-19 A	08-Jun-20 A	06-May-22	06-May-22	PL1010, CD1010	SC21110, S2D1300, S2P1030						
S2P1020	Procurement & PO for Sludge Digestion System (S5)	150 18-Feb-20 A	12-Aug-20 A	06-May-22	06-May-22	CD1010, S2P1040	SC21110, S5DIGP1000, S2D1420, S5DIGP1010, S2P1180, S2P1210, S5P1040, S2P1000, S5P1020						
S2P1030	Procurement & PO for Sludge Dewatering System (S6)	180 20-Nov-19 A	08-Jun-20 A	06-May-22	06-May-22	PL1010, CD1010, S2P1010	SC21110, S2D1460						
S2P1040	Procurement & PO for THP System (S4)	180 20-Nov-19 A	05-Jun-20 A	13-Apr-22	13-Apr-22	CD1010, PL1010	SC21110, S5THPP1000, S2D1340, S2P1020						
S2P1050	Procurement & PO for Biogas Holding Tanks(S7)	180 20-Nov-19 A	20-Aug-20 A	06-May-22	06-May-22	PL1010	SC21110, S5BIOP1010, S2D1500						
S2P1060	Procurement & PO for H2S Removal System (S7)	234 17-Jul-20 A	17-Mar-21 A	06-May-22	06-May-22	S2P1000	SC21110, S5H2SP1000, S2D1500		•				
S2P1070	Procurement & PO for CHP System (S8)	180 20-Nov-19 A	08-Jun-20 A	06-May-22	06-May-22	PL1010	SC21110, S5CHPP1010, S2D1540, S2P1110						
S2P1080	Procurement & PO for Waste Gas Burning System (S9)	150 17-Jul-20 A	15-Jan-21 A	09-Sep-22	09-Sep-22		SC21110, S5WGBP1000						
S2P1090	Procurement & PO for Plant Service Water System (S12)	150 18-May-20 A	30-Sep-20 A	06-May-22	06-May-22		SC21110, S5PSWP1000, S2D1660, S2P1190						
S2P1100	Procurement & PO for SAS Pumping System (S14)	150 18-May-20 A	30-Sep-20 A	05-Jul-22	05-Jul-22		SC21110, S5SASP1000, S2D1700, S2P1220						
S2P1110	Procurement & PO for Transfomers (S17)	150 18-Feb-20 A	13-Jul-20 A	06-May-22	06-May-22	S2P1070	SC21110, S5WS2P1000, S2P1120, S2P1140, S5TXRP1000						
S2P1120	Procurement & PO for 11 kV Switchboard (S17)	150 18-Feb-20 A	13-Jul-20 A	06-May-22	06-May-22	S2P1110	SC21110, S5WS2P1060, S2P1130						
S2P1130	Procurement & PO for 380V Switchboard (S17)	174 21-Nov-20 A	23-Apr-21 A	06-May-22	06-May-22	S2P1120, S2D1220	SC21110, S5WS2P1090, S5P1050, S5TXRP1010						
S2P1140	Procurement & PO for Control & Monitoring System (S18)	183 17-Jul-20 A	11-Jan-21 A	27-Jan-23	27-Jan-23	PL1010, S2P1110	SC21110, S5TXRP1020						
S2P1150	Procurement & PO for DO System (S21)	150 15-Apr-20 A	24-Jun-20 A	03-Nov-22	03-Nov-22	S2P1000	SC21110, S5DOUP1000, S2D1930						
S2P1160	Procurement & PO for Stoplog (S21)	90 18-Apr-20 A	17-Jul-20 A	12-Mar-23	12-Mar-23	PL1010, S1P1040	SC21110, S5SASP1010, S2P1170						
	File Name: DE/2018/03 RP R28 Remaining Wo	ık I					DE 10010155		<u> </u>	Date	Revision	Checked	Approved
	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - Critical Activity						. DE/2018/03		31	-Jul-22	Rev.24	LT	KM
	Layout: DE 1003 RP (Nov 2022) -			Shek \	<b>№</b> u Hui Effl	uent Polishin	ig Plant - Main Wo	rks Stage 1		-Aug-22	Rev.25	ΙΤ	КМ

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 16 of 58

Critical Activity

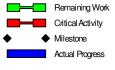
Milestone

Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	ΙΤ	KM

tivity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 2020 2021 2022 2023 2024 2025
S2P1170	Procurement & PO for Penstock (S21)	90 18-Apr-20 A	17-Jul-20 A	12-Mar-23	12-Mar-23	PL1010, S2P1160, S1P1050	SC21110, S5SASP1020	<u></u>
S2P1180	Procurement & PO for Sewage Pump (S21)	120 18-May-20 A	30-Sep-20 A	13-Nov-22	! 13-Nov-22	S2P1020	SC21110, S5SPSP1000, S2D1940, S2P1200	
S2P1190	Procurement & PO for Process Water Pump (S21)	120 18-May-20 /	30-Sep-20 A	16-Apr-25	16-Apr-25	S2P1090	SC21110, S2D1950	
S2P1200	Procurement & PO for External Sludge Transfer Pump (S21)	348 18-May-20 /	14-Apr-21 A	29-Dec-22	29-Dec-22	S2P1180	SC21110, S2D1960	
S2P1210	Procurement & PO for THP Cooling Pump (S21)	150 18-May-20 A	04-Dec-20 A	29-Dec-22	29-Dec-22	S2P1020	SC21110, S5TCWP1000, S2D1970	
S2P1220	Procurement & PO for Temporary Primary Sludge Pump (S21)	348 18-May-20 /	14-Apr-21 A	05-Jul-22	95-Jul-22	PL1010, S2P1100	SC21110, S5ECHP1000	
Design & Submi	ssion	860 20-Nov-19 A	11-Jun-21 A	13-Apr-22	16-Apr-25			
General Arrang	ement Drawings	715 20-Nov-19 A	11-Jun-21 A	13-Apr-22	16-Apr-25			
S2D1000	Prepare & Submit General Arrangement Drawings (from formation level up to +8mPD)	180 20-Nov-19 A	29-May-20 A	13-Apr-22	13-Apr-22	PL1010	S2D1010, S2D1080, S2D1160, S2D1040, S2D1340	
S2D1010	Review & Comment on General Arrangement Drawings by PM (from formation level up to +8mPD)	21 07-May-20 /	02-Jul-20 A	16-Apr-25	16-Apr-25	S2D1000	S2D1020	
S2D1020	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	381 26-May-20	10-Jun-21 A	16-Apr-25	16-Apr-25	S2D1010	S2D1030	
S2D1030	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	77 26-Mar-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1020	SC21110	
S2D1040	Prepare & Submit General Arrangement Drawings (remaining)	177 17-Jul-20 A	15-Jan-21 A	01-Jun-22	9 01-Jun-22	PL1010, S2D1000	S2D1050, S2D1120	
S2D1050	Review & Comment on General Arrangement Drawings by PM (remaining)	21 05-Sep-20 A	08-Feb-21 A	01-Jun-22	01-Jun-22	S2D1040	S2D1060	
S2D1060	Revise & Re-submit General Arrangement Drawings (remaining)	248 06-Oct-20 A	10-Jun-21 A	01-Jun-22	01-Jun-22	S2D1050	S2D1070	
S2D1070	Review & Accept of General Arrangement Drawings by PM (remaining)	77 26-Mar-21 <i>F</i>	11-Jun-21 A	01-Jun-22	2 01-Jun-22	S2D1060	SC21110, S5S1060, S5P1010, S5S1050	
Civil & Dimensi	onal / Tolerance Requirement Drawings	522 04-Mar-20 A	11-Jun-21 A	06-May-22	16-Apr-25			
S2D1080	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	90 04-Mar-20 A	04-Jun-20 A	06-May-22	2 06-May-22	S2D1000	S2D1090, S2D1660, KD1010	
S2D1090	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	21 30-Apr-20 A	23-Jun-20 A	03-Aug-22	9 03-Aug-22	S2D1080	S2D1100	
S2D1100	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	381 26-May-20 /	10-Jun-21 A	03-Aug-22	03-Aug-22	S2D1090	S2D1110	
S2D1110	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	55 17-Apr-21 A	11-Jun-21 A	03-Aug-22	9 03-Aug-22	S2D1100	SC21110, AD1120	
S2D1120	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	120 15-Sep-20 A	15-Jan-21 A	16-Apr-25	16-Apr-25	S2D1040	S2D1130, KD1020	
S2D1130	Review & Comment on Civil Requirement Drawings by PM (remaining)	21 28-Sep-20 A	08-Feb-21 A	16-Apr-25	16-Apr-25	S2D1120	S2D1140	<b>│                                    </b>
S2D1140	Revise & Re-submit Civil Requirement Drawings (remaining)	150 12-Jan-21 A	10-Jun-21 A	16-Apr-25	16-Apr-25	S2D1130	S2D1150	
S2D1150	Review & Accept of Civil Requirement Drawings by PM (remaining)	55 17-Apr-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1140	SC21110	
Electrical Sche	matic Drawings	754 05-Mar-20 A	11-Jun-21 A	06-May-22	16-Apr-25			
S2D1160	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	90 05-Mar-20 A	16-Mar-20 A	06-May-22	2 06-May-22	S2D1000	S2D1170, S2D1260, S2D1660, KD1010, S2D1220	
			!			'	1.	Data Davisian Charlest Accessed
	File Name: DE/2018/03 RP R28					Contract No.	DE /2010 /03	Date Revision Checked Approved

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 17 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish	Total Predecessors	Successors	9 J   3   1   J	2020	A I I I	2021           <b>J J</b>   <b>S</b>	202		2023		2024     J  J  A		2025 26   J J A       J
•													123	5373311	111111	1122222	222 23:	33333333
S2D1170	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21 17-Mar-20 A	24-Mar-20 A	06-May-22	06-May-22	S2D1160	S2D1180		II .									
S2D1180	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	28 25-Mar-20 A	23-Apr-20 A	06-May-22	06-May-22	S2D1170	S2D1190, S2D1220											
S2D1190	Review & Comment of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21 24-Apr-20 A	08-May-20 A	06-May-22	06-May-22	S2D1180	S2D1250, S5WS2P1090, S2D1220, S2D1200											
S2D1200	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	398 09-May-20 A	10-Jun-21 A	16-Apr-25	16-Apr-25	S2D1190	S2D1210		+									
S2D1210	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21 21-May-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1200	SC21110											
S2D1220	Prepare & Submit Elec. Schematic Drawings (remaining) -KD2B	120 05-Mar-20 A	16-Mar-20 A	06-May-22	06-May-22	S2D1160, S2D1180, S2D1190	S2D1230, KD1020, S2P1130		0									
S2D1230	Review & Comment on Elec. Schematic Drawings by PM (remaining)	21 17-Mar-20 A	24-Mar-20 A	08-Aug-22	08-Aug-22	S2D1220	S2D1240		0									
S2D1240	Revise & Re-submit Elec. Schematic Drawings (remaining)	443 25-Mar-20 A	10-Jun-21 A	08-Aug-22	08-Aug-22	S2D1230	S2D1250											
S2D1250	Review & Accept of Elec. Schematic Drawings by PM (remaining)	21 24-May-21 A	11-Jun-21 A	08-Aug-22	08-Aug-22	S2D1240, S2D1190	SC21110, S5WS2P1090											
Sludge Screening	(SSc)	357 02-Jul-20 A	11-Jun-21 A	06-May-22	16-Jan-23													
S2D1260	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344 02-Jul-20 A	10-Jun-21 A	06-May-22	06-May-22	S2D1160, S2P1000	S2D1270		-									
S2D1270	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21 A	11-Jun-21 A	06-May-22	06-May-22	S2D1260	S5WS2P1090, S5P1050, SC21110											
S2D1280	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274 10-Sep-20 A	10-Jun-21 A	16-Jan-23	16-Jan-23		S2D1290											
S2D1290	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21 A	11-Jun-21 A	16-Jan-23	16-Jan-23	S2D1280	SC21110, PL1490											
Sludge Thickening	g (STh)	357 02-Jul-20 A	11-Jun-21 A	06-May-22	16-Jan-23													
S2D1300	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344 02-Jul-20 A	10-Jun-21 A	06-May-22	06-May-22	S2P1010	S2D1310		-									
S2D1310	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21 A	11-Jun-21 A	06-May-22	06-May-22	S2D1300	SC21110, S5P1050				•							
S2D1320	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274 10-Sep-20 A	10-Jun-21 A	16-Jan-23	16-Jan-23		S2D1330											
S2D1330	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21 A	11-Jun-21 A	16-Jan-23	16-Jan-23	S2D1320	SC21110, PL1490											
Thermal Hydrolys	is Process (THP)	416 18-May-20 A	11-Jun-21 A	13-Apr-22	02-Nov-22													
S2D1340	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	241 18-May-20 A	07-Jan-21 A	13-Apr-22	13-Apr-22	S2P1040, S2D1000	S2D1350, S2D1970		-									
S2D1350	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21 08-Jan-21 A	27-Jan-21 A	13-Apr-22	13-Apr-22	S2D1340	S2D1360											
S2D1360	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	117 28-Jan-21 A	17-May-21 A	13-Apr-22	13-Apr-22	S2D1350	S2D1370				-							
S2D1370	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	24 18-May-21 A	11-Jun-21 A	13-Apr-22	13-Apr-22	S2D1360	SC21110, S5THPP1000, S5TCWP1000, S5P1050											
S2D1380	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180 17-Jul-20 A	07-Jan-21 A	02-Nov-22	02-Nov-22		S2D1390		-									
S2D1390	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21 08-Jan-21 A	27-Jan-21 A	02-Nov-22	02-Nov-22	S2D1380	S2D1400			ı								
S2D1400	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	117 28-Jan-21 A	17-May-21 A	02-Nov-22	02-Nov-22	S2D1390	S2D1410											
S2D1410	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	24 18-May-21 A	11-Jun-21 A	02-Nov-22	02-Nov-22	S2D1400	S5THPP1000, SC21110											
Sludge Digestion	(SDi)	325 01-Aug-20 A	11-Jun-21 A	06-May-22	22-Jul-22													
S2D1420	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	314 01-Aug-20 A	10-Jun-21 A	06-May-22	06-May-22	S2P1020	S2D1430		•									
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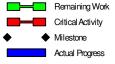
File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 18 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

y ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predecessors	Successors	 <del></del>	<del></del>	2021   J J   3   J   J	<del></del>	J J J 2 3   5 3 7 3	<del></del>	<del></del>	2025 J J J J A J J 2 2 3 3 3 3 3 3 3 3 3
S2D1430	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21	A 11-Jun-21 A	06-May-22	06-May-22	S2D1420	SC21110, S5P1050	<del></del>	<del></del>			4919979	<del>4111111</del>	1111444444	414343443433
S2D1440	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284 31-Aug-20	A 10-Jun-21 A	22-Jul-22	22-Jul-22		S2D1450								
S2D1450	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21	A 11-Jun-21 A	22-Jul-22	22-Jul-22	S2D1440	S5DIGP1000, SC21110, PL1490								
Sludge Dewate	ring (SDe)	357 02-Jul-20 A	11-Jun-21 A	06-May-22	16-Jan-23										
S2D1460	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344 02-Jul-20 A	10-Jun-21 A	06-May-22	06-May-22	S2P1030	S2D1470								
S2D1470	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21	A 11-Jun-21 A	06-May-22	06-May-22	S2D1460	SC21110, S5P1050			•					
S2D1480	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284 31-Aug-20	A 10-Jun-21 A	16-Jan-23	16-Jan-23		S2D1490								
S2D1490	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21	A 11-Jun-21 A	16-Jan-23	16-Jan-23	S2D1480	SC21110, PL1490			•					
Biogas Storage	& Pre-Treatment (BSPT)	295 31-Aug-20	A 11-Jun-21 A	06-May-22	01-Jun-22										
S2D1500	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	284 31-Aug-20	A 10-Jun-21 A	06-May-22	06-May-22	S2P1060, S2P1050	S2D1510	-							
S2D1510	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21	A 11-Jun-21 A	06-May-22	06-May-22	S2D1500	SC21110, S5P1050								
S2D1520	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	232 22-Oct-20 A	10-Jun-21 A	01-Jun-22	01-Jun-22		S2D1530	•							
S2D1530	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21	A 11-Jun-21 A	01-Jun-22	01-Jun-22	S2D1520	S5BIOP1010, S5H2SP1000, SC21110								
Combined Heat	t & Power Generation (CHP)	512 18-May-20	A 11-Jun-21 A	06-May-22	04-Jun-22										
S2D1540	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	233 18-May-20	A 21-Jul-20 A	06-May-22	06-May-22	S2P1070	S2D1550	-							
S2D1550	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21 22-Jul-20 A	11-Aug-20 A	06-May-22	06-May-22	S2D1540	S2D1560, S2D1870	•							
S2D1560	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28 12-Aug-20	A 21-Dec-20 A	06-May-22	06-May-22	S2D1550	S2D1570	 	-						
S2D1570	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	171 22-Dec-20	A 11-Jun-21 A	06-May-22	06-May-22	S2D1560	SC21110, S5P1050			•					
S2D1580	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180 18-May-20	A 21-Jul-20 A	04-Jun-22	04-Jun-22		S2D1590	_							
S2D1590	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21 22-Jul-20 A	11-Aug-20 A	04-Jun-22	04-Jun-22	S2D1580	S2D1600	•							
S2D1600	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28 12-Aug-20	A 21-Dec-20 A	04-Jun-22	04-Jun-22	S2D1590	S2D1610	-	-						
S2D1610	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	171 22-Dec-20	A 11-Jun-21 A	04-Jun-22	04-Jun-22	S2D1600	S5CHPP1010, SC21110, S5S1020, PL1530								
Waste Gas Burn	ning System (WGB)	264 15-Oct-20 A	11-Jun-21 A	06-May-22	09-Sep-22										
S2D1620	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	239 15-Oct-20 A	10-Jun-21 A	06-May-22	06-May-22		S2D1630	•							
S2D1630	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21	A 11-Jun-21 A	06-May-22	06-May-22	S2D1620	SC21110, S5P1050								
S2D1640	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	194 29-Nov-20	A 10-Jun-21 A	09-Sep-22	09-Sep-22		S2D1650								
S2D1650	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21	A 11-Jun-21 A	09-Sep-22	09-Sep-22	S2D1640	S5WGBP1000, SC21110								
Plant Service W	dater System (PSW)	325 16-Aug-20	A 11-Jun-21 A	06-May-22	16-Aug-22										
S2D1660	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	299 16-Aug-20	A 10-Jun-21 A	06-May-22	06-May-22	S2D1080, S2D1160, S2P1090	S2D1670								
S2D1670	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21	A 11-Jun-21 A	06-May-22	06-May-22	S2D1660	SC21110, S5P1050			•					
S2D1680	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	239 15-Oct-20 A	10-Jun-21 A	16-Aug-22	16-Aug-22		S2D1690	•		•					
	File Name: DE/2018/03 RP R28 Remaining Work	1				C	In DF/2018/0	 1 1	1 1	1 1 1	Date	)	Revision	Checked	Ap

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 19 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
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30-Sep-22	Rev.26	LT	KM
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30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predec	sessors Successors		2020   J J A	2021	2022 J   J   J J A	202	23	2024	2025 26 J   J J A   J J
0004000			44 1 04 4	10.4 00	10.4		05001101000					- 123 5373	31111111	111222222	22 233333333333
S2D1690	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21 A	11-Jun-21 A	16-Aug-22	16-Aug-22	S2D1	S5PSWP1000 SC21110			•					
Surplus Activate	d Sludge Pumping Station (SAS)	440 01-Aug-20 A	11-Jun-21 A	18-Feb-23	16-Apr-25										
S2D1700	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	202 01-Aug-20 A	17-Nov-20 A	16-Apr-25	16-Apr-25	S2P1	100 S2D1710								
S2D1710	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21 18-Nov-20 A	24-Nov-20 A	16-Apr-25	16-Apr-25	S2D1	700 S2D1720		١						
S2D1720	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	198 25-Nov-20 A	10-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	710 S2D1730								
S2D1730	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	720 SC21110								
S2D1740	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	183 16-Aug-20 A	17-Nov-20 A	18-Feb-23	18-Feb-23		S2D1750								
S2D1750	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21 18-Nov-20 A	24-Nov-20 A	18-Feb-23	18-Feb-23	S2D1	740 S2D1760		1						
S2D1760	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	198 25-Nov-20 A	10-Jun-21 A	18-Feb-23	18-Feb-23	S2D1	750 S2D1770								
S2D1770	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21 A	11-Jun-21 A	18-Feb-23	18-Feb-23	S2D1	760 S5SASP1000, SC21110			•					
Control and Mon	itoring System	211 30-Oct-20 A	11-Jun-21 A	16-Apr-25	16-Apr-25										
S2D1780	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	193 30-Oct-20 A	11-May-21 A	16-Apr-25	16-Apr-25		S2D1790		•						
S2D1790	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	30 12-May-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	780 SC21110								
S2D1800	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	148 14-Dec-20 A	11-May-21 A	16-Apr-25	16-Apr-25		S2D1810								
S2D1810	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	30 12-May-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	800 SC21110								
Lifting Appliance	s	358 17-Jul-20 A	11-Jun-21 A	16-Apr-25	16-Apr-25										
S2D1820	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	329 17-Jul-20 A	10-Jun-21 A	16-Apr-25	16-Apr-25		S2D1830								
S2D1830	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21 24-May-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	820 SC21110			•					
S2D1840	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	224 30-Oct-20 A	10-Jun-21 A	16-Apr-25	16-Apr-25		S2D1850		•						
S2D1850	Review & Acceptt on the Schedule, Design Cal. & Fixing Details of Equipment	21 24-May-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	840 SC21110								
Building Service	S	357 02-Jul-20 A	11-Jun-21 A	22-May-22	16-Apr-25										
S2D1860	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	202 21-Nov-20 A	11-Jun-21 A	22-May-22	22-May-22		SC21110, S5S1260, S5S1010, S5S1120								
S2D1870	Submit & Accept BS Works Design & Dwgs for CHP Building	209 14-Nov-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23	S2D1	550 SC21110, S5S1120		ı						
S2D1880	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	202 21-Nov-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23		SC21110, S5S1120								
S2D1890	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	344 02-Jul-20 A	11-Jun-21 A	03-Aug-22	03-Aug-22		SC21110, S5S1030, S5S1120								
S2D1900	Submit & Accept BS Works Design & Dwgs for Other Facilities	194 29-Nov-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23		S2D1920, SC21110, S5S1120								
S2D1910	Submit & Accept BS Works Design & Dwgs for FS Installation	344 02-Jul-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23		SC21110, S5S1120	1							
S2D1920	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	134 28-Jan-21 A	11-Jun-21 A	16-Apr-25	16-Apr-25	S2D1	900 SC21110								
Miscellaneous		264 05-Oct-20 A	11-Jun-21 A	05-Jul-22	16-Apr-25										
S2D1930	Submit & Accept Design & Dwgs for DO System	179 14-Dec-20 A	11-Jun-21 A	03-Nov-22	03-Nov-22	S2P1 <sup>-</sup> PL102									
S2D1940	Submit & Accept Design & Dwgs for Sewage Pumping Station	224 30-Oct-20 A	11-Jun-21 A	13-Nov-22	13-Nov-22	S2P1	S5SPSP1000, SC21110		•		† <u>†</u>	<del></del>			
									<u>; ; ;                                  </u>	<u> </u>	<u>. i i</u>	<u>. [ i _ i</u>	<u>     i    i                          </u>	<u>i i i</u>	<u>. : : : :</u>

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 20 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ctivity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Tota Floa	Predecessors	Successors		J					A I I J				2025 20 1
S2D1950	Submit & Accept Design & Dwgs for Process Water Pumping System	249	05-Oct-20 A	11-Jun-21 A	16-Apr-25	16-Apr-25		S2P1190	SC21110	<u> </u>	<u> </u>	- - - -	- - - - -	- - - - - -	1-1-1-1-1	11231	<u>5  3  7  3  3  1  1</u>	11111111	11123222222	2 2 3 3 3 3 3 3 3 3 3 3
S2D1960	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	209	14-Nov-20 A	11-Jun-21 A	29-Dec-22	29-Dec-22		S2P1200	S2D1970, SC21110											
S2D1970	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	209	14-Nov-20 A	10-Jun-21 A	29-Dec-22	29-Dec-22	:	S2D1340, S2D1960, S2P1210	S5TCWP1000, SC21110					-						
S2D1980	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	209	14-Nov-20 A	11-Jun-21 A	30-Sep-22	30-Sep-22			S5FCDP1000, S5FCDP1010, SC21110											
S2D1990	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	158	04-Jan-21 A	11-Jun-21 A	05-Jul-22	05-Jul-22	!	PL1020	S5ECHP1000, SC21110					-						
S2D2000	Submit & Accept Design & Dwgs for Gas Detection System	194	29-Nov-20 A	24-May-21 A	13-Nov-22	13-Nov-22			SC21110, S5CHPP1040					•						
S2D2010	Submit & Accept Design & Dwgs for CCTV System	194	29-Nov-20 A	26-May-21 A	16-Apr-25	16-Apr-25			SC21110					•						
Outstanding Wo	rks	334	02-Jul-21 A	21-Nov-22	31-Oct-21	16-Apr-25	877													
S2D2020	Certifiate of Completion - Section 2 of the works (Ref: RCYK:ccm:60427128/92-2021004626w)	0	02-Jul-21 A		16-Apr-25									•						
S2D2030	Provide ICE Certificate for all design, calculations, drawings, plans & relevant documents	334	02-Jul-21 A	21-Nov-22*	31-May-22	31-May-22	-174	F F									<del></del>			
S2D2040	Submit finalized design calculations, drawings & material submissions for BS systems (Workshop No.2)	76	02-Jul-21 A	15-Sep-21 A	16-Apr-25	16-Apr-25														
S2D2050	Submit finalized design calculations, drawings & material submissions for BS systems (except Workshop No.2)	303	02-Jul-21 A	21-Nov-22*	30-Apr-22	30-Apr-22	-205	,												
S2D2060	Submit finalized sizing calculations for the actuators and stems for penstocks	91	02-Jul-21 A	30-Sep-21 A	16-Apr-25	16-Apr-25														
S2D2070	Submit finalized cable schedules & sizing calculation (LV System)	294	02-Jul-21 A	21-Nov-22*	31-Dec-21	31-Dec-21	-325													
S2D2080	Submit finalized pumps and associated motor and VSD calculations	294	02-Jul-21 A	21-Nov-22*	31-Dec-21	31-Dec-21	-325	1												
S2D2090	Submit finalized electrical loads to verify the rating of the switchgears, transformers and protective devices	294	02-Jul-21 A	21-Nov-22*	31-Dec-21	31-Dec-21	-325	1												
S2D2100	Submit finalized material submissions of the cables, cable tray, ladder and accessories	294	02-Jul-21 A	31-Dec-21 A	16-Apr-25	16-Apr-25														
S2D2110	Submit finalized cable route drawings	294	02-Jul-21 A	21-Nov-22*	31-Dec-21															
S2D2120	Submit finalized layout and control wiring diagrams for switchboard, MCC, control panel, etc	294	02-Jul-21 A	21-Nov-22*	31-Jan-22	31-Jan-22	-294													
S2D2130	Submit finalized design submissions of the CHP system	294	02-Jul-21 A	31-Jan-22 A	16-Apr-25	16-Apr-25														
S2D2140	Submit finalized interlock devices for electrical equipment and system	303	02-Jul-21 A	21-Nov-22*		30-Apr-22														
S2D2150	Submit finalized calculations for total harmonic distortion, electrical faults and touch voltage		02-Jul-21 A	21-Nov-22*		30-Apr-22														
S2D2160	Submit finalized design calculations, drawings & material submissions for ELV systems		02-Jul-21 A	21-Nov-22*	31-Dec-21															
S2D2170	Submit finalized design submissions of SCADA, PMS, CMMS, IDMS, UPS for FCS		02-Jul-21 A	21-Nov-22*		31-Dec-21				1										
S2D2180	Submit finalized configuration of SCADA / PLC system, CMMS & PMS		02-Jul-21 A	21-Nov-22*		31-Dec-21														
S2D2190	Submit finalized PLC and MCC panel design	294	02-Jul-21 A	21-Nov-22*	28-Feb-22	28-Feb-22	-266	i												
S2D2200	Submit finalized design & philosophy of the process instrument	294	02-Jul-21 A	21-Nov-22*	31-Dec-21															
S2D2210	Submit finalized Process Design Submission		02-Jul-21 A	21-Nov-22*	30-Nov-21															
S2D2220	Submit finalized acoustic and noise calculations for all equipment		02-Jul-21 A	21-Nov-22*		30-Apr-22											<del></del>			
S2D2230	Submit finalized design of THP feeding system		02-Jul-21 A	21-Nov-22*	31-Oct-21															
S2D2240	Submit finalized design of the centrifuge discharge system		02-Jul-21 A	21-Nov-22*	30-Nov-21															
Section 3 - C	omplete Design, Construction & T&C for Sidestream Facilities	1949	20-Nov-19 A	21-Mar-25	16-Jul-22	16-Apr-25	26													
	File Name: DE/2018/03 RP R28						C	ontract No.	DE/2018/03	3					21	Date Jul-22	Rev.24	ision	Checked	Approved KM
	Layout: DE1803 RP (Nov 2022) - Critical Activity				Shak V	A/ U E	ttı	nt Dalichin	σ Plant - Mai	in 14/	arka St	200 1			131-7	Jul-22	1167.24	L	.1	TIVINI

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 21 of 58 Remaining Work
Critical Activity

Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

tivity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 2020 2021 2022 2023 2024 2025
Major Subcontract	or / Supplier Procurement	633 20-Nov-19 A	06-Sep-21 A	01-Sep-22	16-Apr-25			
Design		320 20-Nov-19 A			16-Apr-25			
S3P1000	Procurement & PO for Deammonification Sidestream Treatment Facilities	200 20-Nov-19 A		· ·	01-Sep-22	CD1010,	S3D1000,	
	1 Totalement & 1 O tot Dearminonincation sucestican meatinent racinities	200 20-NOV-19 A	03-3u11-20 A	01-3ep-22	01-3ep-22	PL1010	S3D1000, S3D1440	
S3P1010	E&M (Process) Designer Award	1 05-Jun-20 A	05-Jun-20 A	16-Apr-25	16-Apr-25			
S3P1020	Civil & BS Designer Award	1 26-Jun-20 A	26-Jun-20 A	16-Apr-25	16-Apr-25		S3P1030	
S3P1030	Mobilisation	14 27-Jun-20 A	12-Jul-20 A	16-Apr-25	16-Apr-25	S3P1020		
Civil & Building Co	ontractor	327 05-Aug-20 A	06-Sep-21 A	01-Sep-22	01-Sep-22			
For Site Clearand	ce & Survey	36 05-Aug-20 A	12-Oct-20 A	01-Sep-22	01-Sep-22			
S3P1040	Submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14 05-Aug-20 A	20-Aug-20 A	01-Sep-22	01-Sep-22		S3P1050	
S3P1050	Review & Comment the Tender proprosal of Civil Contractor (Site Clearance & Survey)	14 21-Aug-20 A	01-Sep-20 A	01-Sep-22	01-Sep-22	S3P1040	S3P1060	
S3P1060	Re-submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14 02-Sep-20 A	02-Sep-20 A	01-Sep-22	01-Sep-22	S3P1050	S3P1070	
S3P1070	Review & Accept Tender proprosal of Civil Contractor (Site Clearance & Survey)	14 03-Sep-20 A				S3P1060	S3P1080	
S3P1080	Civil Contractor (Site Clearance & Survey) Award	1 07-Oct-20 A		·	01-Sep-22	S3P1070	S3P1090	
S3P1090	Mobilisation		12-Oct-20 A	·	01-Sep-22	S3P1080	S3C1010	
For Ground Inves	stigation ————————————————————————————————————	98 29-Aug-20 A	08-Dec-20 A	01-Sep-22	01-Sep-22			
S3P1100	Submit Tender proprosal of Civil Contractor (Ground Investigation)	14 29-Aug-20 A	29-Sep-20 A	01-Sep-22	01-Sep-22		S3P1110	
S3P1110	Review & Accept the Tender proprosal of Civil Contractor (Ground Investigation)	21 30-Sep-20 A	27-Oct-20 A	01-Sep-22	01-Sep-22	S3P1100	S3P1120	
S3P1120	Tender Invitation of Civil Contractor (Ground Investigation)	7 02-Nov-20 A	13-Nov-20 A	01-Sep-22	01-Sep-22	S3P1110	S3P1130	
S3P1130	Submission of Tender Report	7 14-Nov-20 A	18-Nov-20 A	01-Sep-22	01-Sep-22	S3P1120	S3P1140	
S3P1140	Review & Accept the Tender Report by PM	21 19-Nov-20 A	19-Nov-20 A	01-Sep-22	01-Sep-22	S3P1130	S3P1150	
S3P1150	Contract Preparation	3 20-Nov-20 A	23-Nov-20 A	01-Sep-22	01-Sep-22	S3P1140	S3P1160	
S3P1160	Civil Contractor (Ground Investigation) Award	1 24-Nov-20 A	24-Nov-20 A	01-Sep-22	01-Sep-22	S3P1150	S3P1170	
S3P1170	Mobilisation	7 25-Nov-20 A	08-Dec-20 A	01-Sep-22	01-Sep-22	S3P1160	S3C1020	
For Pre-drilling &	Post-drilling	116 26-Oct-20 A	21-Feb-21 A	01-Sep-22	01-Sep-22			
S3P1180	Submit Tender proprosal of Civil Contractor (Pre-drilling & Post-drilling)	74 26-Oct-20 A	06-Jan-21 A	01-Sep-22	01-Sep-22	S3D1300, S3D1240	S3P1190	
S3P1190	Review & Accept the Tender proprosal of Civil Contractor (Predrill & Proof drill)	21 07-Jan-21 A	27-Jan-21 A	01-Sep-22	01-Sep-22	S3P1180	S3P1200	
S3P1200	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	14 28-Jan-21 A	04-Feb-21 A	01-Sep-22	01-Sep-22	S3P1190	S3P1210	
S3P1210	Submission of Tender Report	4 05-Feb-21 A	10-Feb-21 A	01-Sep-22	01-Sep-22	S3P1200	S3P1220	
S3P1220	Review & Accept the Tender Report by PM	21 11-Feb-21 A	16-Feb-21 A	01-Sep-22	01-Sep-22	S3P1210	S3P1230	
S3P1230	Contract Preparation	3 17-Feb-21 A	17-Feb-21 A	01-Sep-22	01-Sep-22	S3P1220	S3P1240	
S3P1240	Civil Contractor (Pre-drilling & Post-drilling) Award	1 18-Feb-21 A	18-Feb-21 A	01-Sep-22	01-Sep-22	S3P1230	S3P1250	
S3P1250	Mobilisation	3 19-Feb-21 A	21-Feb-21 A	01-Sep-22	01-Sep-22	S3P1240	S3C1030	
For Piling		90 04-Jan-21 A	01-Apr-21 A	01-Sep-22	01-Sep-22			

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 22 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Section   Sect	
Septiment   Sept	441434344343
Septical   Septical	
SPTING	
Self-lation   Central Programmen   1 2 Mart 21A   2 Mart 21A   1 Septial   1 Septial   2	
Septiment   Sept	
SST1320   Michaeline	
Part   Part	
Self-1840   Submit Enviror proposated Old Cortmatory Main CAM Works)   30   17 Mars 21 A   21 May 91 A   01 Sep 20   15 Sep	
SP1150   Review & Accept the Tender propressed of Cell Contractor (Main Cell Worker)   42 (2244by-21 A 19-July 21 A 01-Sep-22 O1-Sep-22 SP1150 SP1150 SP11570   Sep-130 O1-Sep-24 Submission of Cell Contractor (Main Cell Worker)   14 (21-July 21 A 01-Sep-22 O1-Sep-22 SP1150 SP11570   Sep-130 O1-Sep-24 Submission of Cell Contractor (Main Cell Worker)   14 (21-July 21 A 01-Sep-22 O1-Sep-22 SP11570 SP1150 O1-Sep-23 SP11570   Sep-130 O1-Sep-23 SP11570   Sep-130 O1-Sep-23 SP11570 SP11570   Sep-130 O1-Sep-23 SP11570 SP	
SSP1300   Tender Investion of Civil Contractor (Man Cult Works)   1   21 Jul 21 A   11 Aug 21 A   01 Sep 22   01 Sep 22   03 P1360   SSP1300   S	
SPF1370   Submission of liender Report   1 12-Aug-21A   19-Aug-21A   01-Sep-22   01-Sep-22   SSF1380   SIF1380   SSF1380   S	
SPI 1980   Review & Accept the Tender Report by PM   6   20-Aug 21 A   31-Aug 21 A   01-Sep 22   01-	
SSP1900   Contract Preparation   1   01-Sep-21   A   05-Sep-22   A   01-Sep-22   C1-Sep-22   SSP1930   SSP1400   S	
SSP1400   Old Contractor (Man Cold Works) Award   1 06 Sep-21 A 01-Sep-22   01-Sep-22	
Section   Sect	
Architectural   922   07-Jun-201A   21-Nov-22   16-Nair-23   116   17-Nair-23   116   11	
SSD1000 Propare & Submit Building Layout Plan 60 07-Jun-20A 21-Ozt-20A 7-Nov-20A 16-Mar-23 16-Mar-23 16-Mar-23 SD1000 SD1	
Sab   Sab	
SSD1010   Review & Comment on Building Layout Plan by PM   67   22-Oct-20 A   17-Nov-20 A   16-Mar-23   18-Mar-23   SSD1000   SSD1020	
S3D1030   Review & Accept of Building Layout Plan by PM   214   01-Jan-21 A   16-Sep-21 A   16-Mar-23   16-Mar-23   16-Mar-23   S3D1020   S3D1090	
S3D1040 Coordination Meeting with DSD (Employer) for the Architectural Drawing 0 15-Nov-21 A 16-Mar-23 S3D1090 S3D1090 S3D1050 Prepare & Submit Architectural Design / Drawings by PM 67 22-Oct-20 A 17-Nov-20 A 16-Mar-23 16-Mar-23 S3D1050 S3D1070 S3D1070 Revise & Re-submit Architectural Design / Drawings by PM 28 18-Nov-20 A 24-Dec-20 A 16-Mar-23 16-Mar-23 16-Mar-23 S3D1080	
S3D1050   Prepare & Submit Architectural Design / Drawings   Frequence & Submit Architectural Design / Drawings by PM   Frequence & Submit Architectural Design / Drawings by PM   Frequence & SaD1060   Frequence & SaD10	
S3D1060   Review & Comment on Architectural Design / Drawings by PM   67   22-Oct-20 A   17-Nov-20 A   16-Mar-23   17-Mar-23	
S3D1070 Revise & Re-submit Architectural Design / Drawings 28 18-Nov-20 A 24-Dec-20 A 16-Mar-23 16-Mar-23 16-Mar-23 S3D1080 S3D1080  S3D1080 Review & Accept of Architectural Design / Drawings by PM 483 25-Dec-20 A 21-Nov-22 16-Mar-23 17-Mar-23 116 S3D1070 S3D1090  S3D1090 Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD 300 15-Nov-21 A 21-Nov-22 16-Mar-23 17-Mar-23 116 S3D1080, S3D1130, S3D1130, S3D1130, S3D1080  S3D1100 Prepare & Submit ABWF Works Drawings 68 03-Nov-20 A 24-Dec-20 A 16-Mar-23 16-Mar-23 S3D100 S3D1100  S3D1110 Review & Comment on ABWF Works Drawings by PM 21 25-Dec-20 A 29-Jan-21 A 16-Mar-23 S3D1100 S3D1100	
S3D1080 Review & Accept of Architectural Design / Drawings by PM 483 25-Dec-20 A 21-Nov-22 16-Mar-23 17-Mar-23 116 S3D1090 S3D	
S3D1090 Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD 300 15-Nov-21 A 21-Nov-22 16-Mar-23 17-Mar-23 116 S3D1080, S3D1030, S3D1030, S3D1030, S3D1030 S3D1040 S	
S3D1100 Prepare & Submit ABWF Works Drawings 68 03-Nov-20 A 24-Dec-20 A 16-Mar-23 16-Mar-23 S3D1000 S3D1100 S3D1110 S3D1110 S3D1110 S3D1110 S3D1110 S3D1120 S3D1120	
S3D1110 Review & Comment on ABWF Works Drawings by PM 21 25-Dec-20 A 29-Jan-21 A 16-Mar-23 16-Mar-23 S3D1100 S3D1120	
S3D1120 Revise & Re-submit ABWF Works Drawings 41 30-Jan-21 A 11-Mar-21 A 16-Mar-23 S3D1110 S3D1130	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 23 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

y ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 2020 2021 J S J J J J A J J J J S J J	2022 2023 2024 	2025 
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		171777777143133733711111111111111111444	144444 1439333333
Civil / Structural		639 13-Jul-20 A	18-Feb-22 A	16-Jul-22	16-Apr-25		33D 1030			
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		S3D1210			
S3D1210	Review & Comment on GI Plan by PM	14 27-Aug-20 A			01-Sep-22		S3D1220			
	<u> </u>		'	'	·					
S3D1220	Revise & Re-submit GI Plan	7 11-Sep-20 A			01-Sep-22		S3D1230			
S3D1230	Review & Accept of GI Plan by PM	21 29-Sep-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	<b>-</b>		
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	<del>                                     </del>	+	
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			

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 24 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

rity ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish	Tota Float	Predecessors	Successors	9	2020	111	2021 J       J J   S     J   J	2022	2023		2024		2025	20
COD1 400	Device 9 De substit F9MWada (Dusees) Desirus Dusuinas		00 May 01 A	10 Ama OF	10 Am 05		S3D1410	S3D1430	1				12	3 5 3 7 3 3	111111	111122	22222	2333333	3333
S3D1420	Revise & Re-submit E&M Works (Process) Design Drawings	87 09-Dec-20 A	26-IVIAI-21 A	16-Apr-25	16-Apr-25	'	5301410	5301430			I								
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				11								
E&M Design		715 07-Jun-20 A	21-Nov-22	01-Sep-22	16-Apr-25	877	,												. :
S3D1440	Prepare & Submit General Arrangement Drawings						S3P1000	S3D1450,											
53D1440	Prepare & Submit General Arrangement Drawings	298 07-Jun-20 A	31-Mar-21 A	01-Sep-22	01-Sep-22		5371000	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	-										
											ļļ.								
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 lon 01 A	15 lon 00	15-Jan-23		S3D1480	S3D1500											
53D1490	Review & Comment on BS Works Design & Dwgs for Sidestream freatment Facilities by PM	21 11-Dec-20 A	11-Jan-21 A	15-Jan-23	15-Jan-23		53D1480	5301500											
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 & Mate	erials 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											
0001400		45 04 14 00 1	10.4.00.4	40.1.100	40 1 100			0004000					_						
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											
								1											
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		01-Apr-23			S3C1130							_				
S3P1460	Procurement, Manufacture & Delivery of ABWF Works Material	120 03-May-23	30-Aug-23		16-May-23			S3C1140							-				
E&M Process		354 20-May-22 A			20-Apr-23						ļļ.		<u>-</u>						
S3P1471	Procurement of Diffusers for Phospaq and Anammox Internals	93 21-Aug-22 A	21-Nov-22	27-Aug-22	27-Aug-22	-86	i	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,					•						
S3P1473	Procurement of Heat Exchanger (Plate type)	40 05-Dec-22*	13-Jan-23	25-Aug-22	04-Oct-22	-102		S3C2290 S3P1474											
S3P1474	Manufacture & Delivery of Heat Exchanger (Plate type)	140 28-Jan-23	16-Jun-23	_	04-0ct-22 07-Mar-23			S3C2250											
S3P1475	Procurement of Mixer	22 11-Nov-22 A			08-Nov-22			S3P1476					•						
S3P1476	Manufacture & Delivery of Mixer	140 06-Dec-22	24-Apr-23	23-Nov-22	11-Apr-23	_12	S3P1475	S3C2145											
S3P1476 S3P1477	Procurement of Ancillary Air Blower	96 21-Aug-22 A	· · · · · · · · · · · · · · · · · · ·		31-Oct-22			S3C2145 S3P1478											
0004470	Manufacture 9 Delivery of Applicant	_						0000070											
S3P1478 S3P1479	Manufacture & Delivery of Ancillary air blower  Procurement of Buffer tank Lifting Pump	149 09-Dec-22 38 21-Aug-22 A	06-May-23 27-Sen-22 A		12-Apr-23 14-Nov-22		S3P1477	S3C2270 S3P1481	-										
	1 room of build turn Entiry Lump	50 21-Aug-22A	21 Och-22 M	1-1-1 NOV-22	11NUV-ZZ	1		001 1701			1 !								
001 1470									1	1 1	1 1		1 1 1	1 1	1 1	1 1	1 1	1 1	
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						•					

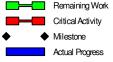
File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 25 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish Total Predecessors Float	Successors 9 2020	2021 2022	2023	2024   JJ J A     J	2025 26
S3P1500	Procurement of Anammox feed pump and Sludge Discharge pump	38 21-Aug-22 A	A 27-Sep-22 A	21-Nov-22	21-Nov-22	S3P1510	123 5	373311111111	1123233232	2333333333
S3P1510	Manufacture & Delivery of Anammox feed pump and Anammox Sludge pump	120 29-Sep-22 A	A 26-Jan-23	21-Nov-22	27-Jan-23 1 S3P1500	S3C2090, S3C2110				
S3P1520	Procurement of Metering Pump	55 21-Aug-22 A	14-Oct-22 A	21-Nov-22	21-Nov-22	S3P1530				
S3P1530	Manufacture & Delivery of Metering Pump	120 31-Oct-22 A	27-Feb-23	21-Nov-22	27-Feb-23 0 S3P1520	S3C2100				
		00 01 4 00 4	100 004	10.0	40 D 00	CODUCTO				
S3P1540	Procurement of 2nd Sludge Pump	30 21-Aug-22 A	19-Sep-22 A	16-Dec-22	16-Dec-22	S3P1550				
S3P1550	Manufacture & Delivery of 2nd Sludge Pump	120 29-Sep-22 A	A 26-Jan-23	16-Dec-22	20-Feb-23 25 S3P1540	S3C2080				
S3P1560	Procurement of Struvite Pump	38 21-Aug-22 A	27-Sep-22 A	30-Dec-22	30-Dec-22	S3P1570				
S3P1570	Manufacture & Delivery of Struvite Pump	120 29-Sep-22 A	26-Jan-23	30-Dec-22	06-Mar-23 39 S3P1560	S3C2120				
	<u> </u>									
S3P1580	Procurement of Primary Sludge Pump	38 21-Aug-22 A	A 27-Sep-22 A	06-Jan-23	06-Jan-23	S3P1590				
S3P1590	Manufacture & Delivery of Primary Sludge Pump	120 29-Sep-22 A	A 26-Jan-23	06-Jan-23	13-Mar-23 46 S3P1580	S3C2140				
S3P1600	Procurement of Drum Thickener Feed Pump	38 21-Aug-22 A	A 27-Sep-22 A	05-Dec-22	05-Dec-22	S3P1610				
S3P1610	Manufacture & Delivery of Drum Thickener Feed Pump	120 29-Sep-22 A	26-Jan-23	05-Dec-22	10-Feb-23 15 S3P1600	S3C2130				
	<u>'</u>									
S3P1611	Procurement of FRP Tanks (NaOH, Micro-Nutrient, Anti-foamer and Polymer)	97 21-Aug-22 A	A 25-Nov-22 A	04-Oct-22	04-Oct-22	S3P1612				
S3P1612	Manufacture & Delivery of FRP Tanks (NaOH, Micro-Nutrient, Anti-foamer and Polymer)	140 05-Dec-22	23-Apr-23	18-Oct-22	07-Mar-23 -48 S3P1611	S3C2210		3		
S3P1613	Procurement of NaOH Dosing Pump	55 21-Aug-22 A	A 14-Oct-22 A	27-Nov-22	27-Nov-22	S3P1614	<b>-</b>			
S3P1614	Manufacture & Delivery of NaOH Dosing pump	120 31-Oct-22 A	27-Feh-23	27-Nov-22	05-Mar-23 6 S3P1613	S3C2200				
	· · · · · · · · · · · · · · · · · · ·									
S3P1624	Procurement of Micro-Nutrient Dosing Pump	55 21-Aug-22 A	A 14-Oct-22 A	27-Nov-22	27-Nov-22	S3P1634				
S3P1634	Manufacture & Delivery of Micro-Nutrient Dosing Pump	120 31-Oct-22 A	27-Feb-23	27-Nov-22	05-Mar-23 6 S3P1624	S3C2200				
S3P1644	Procurement of Anti-foamer Dosing Pump	55 21-Aug-22 A	A 14-Oct-22 A	27-Nov-22	27-Nov-22	S3P1654				
S3P1654	Manufacture & Delivery of Anti-foamer Dosing Pump	120 31-Oct-22 A	27-Feb-23	27-Nov-22	05-Mar-23 6 S3P1644	S3C2200				
S3P1664	Procurement of Polymer Dosing Pump	38 21-Aug-22 A	A 27-Sep-22 A	20-Nov-22	20-Nov-22	S3P1674	•			
S3P1674	Manufacture & Delivery of Polymer Dosing Pump	106 21-Nov-22	06-Mar-23		05-Mar-23 -1 S3P1664	S3C2200				
S3P1684	Procurement of DOU no.4	97 21-Aug-22 A	A 25-Nov-22	07-Sep-22	11-Sep-22 -75	S3P1694				
S3P1694	Manufacture & Delivery of DOU no.4	182 10-Dec-22	09-Jun-23	<u> </u>	26-Mar-23 -75 S3P1684	S3C2230		_		
S3P1695	Procurement of Electric Calorifier	101 01-Nov-22 A	A 20-Jan-23	11-Aug-22	10-Oct-22 -102	S3P1696	<b>—</b>			
S3P1696	Manufacture & Delivery of Electric Calorifier	140 04-Feb-23	23-Jun-23	25-Oct-22		S3C2271				
S3P1699	Procurement of PE pipework	98 15-Oct-22 A	31-Dec-22	08-Sep-22	19-Oct-22 -74	S3P1700	<b>—</b>			
S3P1700	Manufacture & Delivery of PE pipework	140 15-Jan-23	03-Jun-23	02-Nov-22	22-Mar-23 -74 S3P1699	S3C2251, S3C2300,		_		
						S3C2275				
S3P1701	Procurement of SS pipe, Ductile Iron Pipes and Fittings	51 01-Dec-22 A	31-Dec-22	08-Sep-22	19-Oct-22 -74	S3P1702				
S3P1702	Manufacture & Delivery of SS pipe, Ductile Iron Pipes and Fittings	140 15-Jan-23	03-Jun-23	02-Nov-22	22-Mar-23 -74 S3P1701	S3C2300,		-		
						S3C2251, S3C2275				
S3P1703	Procurement of SCADA System	153 21-Aug-22 A	31-Dec-22	03-Sep-22	14-Oct-22 -79	S3P1704				
S3P1704	Manufacture & Delivery of SCADA System	140 15-Jan-23	03-Jun-23	28-Oct-22	17-Mar-23 -79 S3P1703	B1365		_		
S3P1715	Procurement of Local control panel parts for Drum Sludge Thickener	102 21-Aug-22 A			07-Nov-22 -23	S3P1725				
S3P1725	Manufacture & Delivery of Local control panel parts for Drum Sludge Thickener	140 15-Dec-22	03-May-23	22-Nov-22	10-Apr-23 -23 S3P1715	B1363		•		
	File Name: DE/2018/03 RP Remaining Work	<u>'</u>			, , , , , , , , , , , , , , , , , , , ,		Date	Revision	Checked	Approved
	Layout: DE1803 RP (Nov 2022) - Critical Activity			Chale V		o. DE/2018/03	31-Jul-22	Rev.24 L		KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 26 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	LT	KM

ty ID	Activity Name	Original Early Start Duration	Early Finish	Late Start Late Finish	h Total Predecessors Float	Successors	9 2020 2021 2022 2023 2024
S3P1735	Procurement of uPVC pipe and GRP Pipe	101 21-Aug-22 A	31-Dec-22	22-Sep-22 02-Nov-22	2 -60	S3P1745	<u> </u>
001 1700	Troduction at vo pipe and distribe	101 21-Aug-22A	31-060-22	22-0ep-22 02-110V-22	-00	001 1740	
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	
S3P1755	Procurement of Flushing pump and Hot water pump	97 24-Oct-22 A	24-Dec-22	07-Sep-22 10-Oct-22	2 -75	S3P1765	
				·			
S3P1765	Manufacture & Delivery of Flushing pump and Hot water pump	140 08-Jan-23	27-May-23	25-Oct-22 13-Mar-23		S3C2271	
S3P1766	Procurement of EM Flowmeter	86 21-Aug-22 A	14-Nov-22 A	22-Dec-22 22-Dec-22	2	S3P1767	
S3P1767	Manufacture & Delivery of EM Flowmeter	112 29-Nov-22	20-Mar-23	30-Dec-22 20-Apr-23	31 S3P1766	B1363	
S3P1768	Procurement of Instrument	111 21-Aug-22 A	26-Nov-22	10-Dec-22 15-Dec-22	2 19	S3P1769	
S3P1769	Manufacture & Delivery of Instrument	112 11-Dec-22	01-Apr-23	30-Dec-22 20-Apr-23		B1363	
S3P1772	Procurement of Lifting Applicance	14 23-Aug-22 A	16-Sep-22 A	23-Sep-22 23-Sep-22	2	S3P1773	
S3P1773	Manufacture & Delivery of Lifting Applicance	140 30-Nov-22*	18-Apr-23	23-Sep-22 10-Feb-23	3 -68 S3P1772	S3C2000,	
						S3C2010, S3C2020,	
						S3C2030.	
						S3C2040, S3C2050	
0004774	Durante and at Air Diagram Outland	00 04 14 00 4	00 4 00 4	00 Nov. 00 00 Nov. 00			
S3P1774	Procurement of Air Blower System	36 04-Jul-22 A	08-Aug-22 A	29-Nov-22 29-Nov-22	2	S3P1775	
S3P1775	Manufacture & Delivery of Air Blower System	222 09-Aug-22 A	18-Mar-23	29-Nov-22 26-Mar-23	8 S3P1774	S3C2260	
S3P1778	Procurement of PAM dosing pump	38 21-Aug-22 A	27-Sep-22 A	29-Dec-22 29-Dec-22	2	S3P1779	
S3P1779	Manufacture & Delivery of PAM dosing pump	120 29-Sep-22 A	26-Jan-23	29-Dec-22 05-Mar-23	3 38 S3P1778	S3C2200	
S3P1780	Manufacture & Delivery of Primary and Secondary Clarifiers for Phospaq	257 20-May-22 A	31-Jan-23	14-Jan-23 27-Mar-23	3 55	S3C2160, S3C2170	
S3P1781	Manufacture & Delivery of Tilted Plates for Phospaq and Anammox internals	235 11-Jun-22 A	31- lan-23	17-Jan-23 29-Mar-23	3 57	S3C2180,	
301 1701	Manufacture a Bolletry of filed Flaces for Friedpag and Altaminox members	200 11 0011 227	01 0411 20	17 dan 20 23 war 20	5	S3C2190	
S3P1782	Manufacture & Delivery of Drum sludge thickener	210 31-May-22 A	26-Dec-22	30-Jan-23 07-Mar-23	3 71	S3C2215	
BS		378 12-Aug-22 A	24 Aug 22	06-Aug-22 09-May-23	107		
S3P1480	Procurement, Manufacture & Delivery of BS Works Material	120 27-Apr-23	24-Aug-23	10-Jan-23 09-May-23	3 -107	S3T1080, S3C1250,	
						S3T1020,	
						S3T1000	
S3P1482	Procurement of MVAC System	76 21-Nov-22	04-Feb-23	02-Sep-22 17-Nov-22		S3P1483	
S3P1483	Manufacture & Delivery of MVAC System	90 05-Feb-23	05-May-23	17-Nov-22 15-Feb-23	3 -80 S3P1482	B1353, B1354, B1355	
S3P1770	Procurement of Low Voltage Switchboard and Accessories	80 01-Nov-22 A	19-Jan-23	04-Sep-22 02-Nov-22	2 -78	S3P1771	
0004774	Mary factors and Delicary of Law Valley of Control bearing and Assessment	404 07 F-1- 00*	00 1 00	00 Nov. 00 45 May 00	07 0004 770	D4074	
S3P1771 S3P1783	Manufacture & Delivery of Low Voltage Switchboard and Accessories  Procurement of Transformer	134 07-Feb-23* 75 12-Aug-22 A	20-Jun-23	02-Nov-22 15-Mar-23 06-Aug-22 10-Oct-22		B1374 S3P1784	
331 1703	r rocurement of mansionner	75 12-Aug-22A	25-0a11-25	00-Aug-22 10-Oct-22	-107	331 1704	
S3P1784	Manufacture & Delivery of Transformer	136 26-Jan-23	10-Jun-23	11-Oct-22 23-Feb-23	3 -107 S3P1783	B1373	
Fitting-out		60 22-Nov-22	20-Jan-23	17-Mar-23 16-May-23	3 116		
S3P1490	Procurement, Manufacture & Delivery of Fit-out Works Material	60 22-Nov-22	20-Jan-23	17-Mar-23 16-May-23	3 116 S3D1090	S3C1140	
	ent, Tilting & Utility Monitoring	1184 12-Dec-20 A		29-Dec-23 16-Apr-25			
S3C1000	Ground Settlement, Tilting & Utility Monitoring	1184 12-Dec-20 A	09-Mar-24	29-Dec-23 16-Apr-25	5 403 S3C1010		
2301000	Sissing Somethorn, many & Sang Monnolling	1134 12 000 20 7	JO IVICI LT	25 200 20 10 10120	100 0001010		
Civil Works Cons	struction	1613 30-Sep-20 A	21-Mar-25	16-Jul-22 10-May-24	4 -316		
S3C1010	Site Clearance & Survey	50 30-Sep-20 A	12-Dec-20 A	01-Sep-22 01-Sep-22	2 S3D1240,	S3C1020,	
:= :=	,	33 330 2011		0. 300 22	AD1140,	S3C1000	
					S3P1090		1

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 27 of 58



Date	Revision	Checked	Approved				
31-Jul-22	Rev.24	LT	KM				
31-Aug-22	Rev.25	LT	KM				
30-Sep-22	Rev.26	LT	KM				
31-Oct-22	Rev.27	LT	KM				
30-Nov-22	Rev.28	LT	KM				

activity ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish		Predecessors	Successors	9	2020	2021	2	022	2023	20	024	2025	26
		Duration				Float			J 3 J	J J A	J J J J S		J J A J J J J 1 2 3 5	J J A   1 1 1 5 5 7 3 3 1 1 1 1 1	111111	J J A J J 2 2 2 2 2 2 2 2	2333333	3 3 3 3
S3C1020	Ground Investigation	65 12-Dec-20 A	18-Jan-21 A	01-Sep-22	01-Sep-22		AD1140, S3C1010,	S3C1030										
							S3P1170, S3D1230											
S3C1030	Pre-drilling Works	180 22-Feb-21 A	19-Mar-21 A	01-Sep-22	01-Sep-22		S3C1020, S3P1250,	S3C1040										
							S3P1330											
S3C1040	Minor Civil Works & Preperation Works for Piling	31 20-Mar-21 A	20-May-21 A	01-Sep-22	01-Sep-22		S3C1030, S3P1410	S3C1050										
S3C1050	Piling Works (Impacted by Inclement Weather)	69 21-May-21 A	21-Aug-21 A	01-Sep-22	01-Sep-22		S3C1040	S3C1060										
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,	-		•	ı						
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,	S3C1070 S3C1080				<u></u>		<u> </u>				
S3C1080	Excavation / ELS (Impacted by Inclement Weather)	157 24-Nov-21 A		•	01-Sep-22		S3P1400 S3D1440,	S3C1090										
5301000	Excavation / ELS (impacted by incientent weather)	157 24-NOV-21 A	31-Aug-22 A	01-Sep-22	01-Sep-22		S3D1440, S3P1440, S3D1390,	5501090										. !
							S3C1060, S3C1070											
S3C1090	Pile Caps installation & Basement Slab	89 01-Sep-22 A	06-Jan-23	16-Jul-22	01-Sep-22	-128		S3C1100,	-									
		33 33 4 33 4 3					S3P1420, S3P1430,	S3C1130										
							S3D1190							<u>                                     </u>				
S3C1100	Construction of Basement up to G/F Slab	137 07-Jan-23	23-May-23	01-Sep-22	16-Jan-23	-128	S3D1350,	S3C1110, S3C1130,										
							S3S1010	S3C2070, B1356, B1359										
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,	-									
0001110	Construction of ap to 1/1 Glab	00 27 - Wildi-20	17-0011-25	15-1100-22	10-1 65-25	120	3301100	S3C1120, S3C1130, S3C1999										
S3C1120	Construction of 1/F up to Roof	58 20-May-23	16-Jul-23	15-Jan-23	13-Mar-23	-125	S3C1110	S3C1130,						-	-			
S3C1130	Waterproofing	45 17-Jul-23	30-Aug-23	01-Apr-23	16-May-23	-107	S3P1450,	S3C2049 S3C1140	-					_				
				,			S3C1120, S3C1090,											
							S3C1100, S3C1110											
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,	S3C1150,	-					-				
							S3D1090,	S3C1160										
							S3D1130, S3P1490											
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										
S3C1160	Landscaping Works	120 22-Nov-24	21-Mar-25	11-Jan-24	10-May-24	-316	S3C1140,	SC31110	-							-	_	
E&M Installation		151 24-May-23	21-Oct-23	16-Jan-23	13-Jan-24	84	S3C1150									<del></del>		
Mechanical Ins		122 24-May-23	22-Sep-23	20-Jan-23														
Basement		122 24-May-23	22-Sep-23		25-May-23													
S3C2070	Installation of Buffer Tank Lifting pumps (3 nos.)	7 24-May-23	30-May-23		27-Jan-23			S3C2090,	-									
2002070		1 21 1112	y <b></b> 0		_: 00.120		S3C1100	S3C2300, S3T1032,										
								S3C2080										
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,						1				
S3C2090	Installation of Anammox Feed pumps (3 nos.)	7 31-May-23	06-Jun-23	27- lan-22	03-Feb-23	-104	S3C2070	S3T1032	<b></b>							<del></del>		
JJU2090	installation of Artainhor i eed pullips (3 1105.)	/ 31-IVIay-23	00-00H-23	21-0d11-23	UU-FED-23	-124	S3P1510	S3C2110, S3C2300, S3T1032										
S3C2100	Installation of Metering Pumps (2 nos.)	7 31-May-23	06-Jun-23	28-Feb-23	06-Mar-23	-92	S3C2080,	S3C2120,	1									
	_ , , ,						S3P1530	S3C2300, S3T1032										
	File Name: DF/2018/03 RP R28 Remaining Work	<u> </u>	l.	1						<u>i l</u>	<u>. i i</u>	· : :	Date	Revision	n (	Checked	Approv	ed
	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - Critical Activity			Shale V	M., U.,: F4			DE/2018/03 g Plant - Mai		taga 1			1-Jul-22	Rev.24	LT		КМ	_
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File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 28 of 58 Remaining Work
Critical Activity

Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

S3C2110		Original Early Start Duration	Early Finish	Late Start	Late Finish	lotal Float	Predecessors	Successors			2023	2024	2025 J       J J A
3302110	Installation of Anammox Sludge discharge pumps (2 nos.)	7 07-Jun-23	13-Jun-23	03-Feb-23	10-Feb-23	-124	S3C2090, S3P1510	S3C2130, S3C2300,		123	5373311111111	1111222222	2 2 3 3 3 3 3 3 3
S3C2120	Installation of Struvite Pumps (3 nos.)	7 07-Jun-23	13-Jun-23	07-Mar-23	13-Mar-23	-92	S3C2100, S3P1570	S3T1032 S3C2140, S3C2300, S3T1032			1		
S3C2130	Installation of Thickener feed pumps (2 nos.)	7 14-Jun-23	20-Jun-23	10-Feb-23	17-Feb-23	-124	S3C2110, S3P1610	S3C2142, S3C2300, S3T1032			1		
S3C2140	Installation of Primary Clarifier sludge discharge pump (3 nos.)	7 14-Jun-23	20-Jun-23	14-Mar-23	20-Mar-23	-92	S3C2120, S3P1590	S3C2300, S3T1032					
S3C2142	Installation of Flushing Pump (2 nos.)	7 21-Jun-23	27-Jun-23	17-Feb-23	24-Feb-23	-124	S3C2130	S3C2300, S3C2215, S3T1032			B		
S3C2145	Installation of Mixer for Thickened Sludge Tank, Sludge Mixing Tank, Anammox Effluent Chamber and Filtrate Buffer Tank	14 02-Aug-23	15-Aug-23	12-Apr-23	25-Apr-23	-112	S3P1476, S3C2020	S3C2300, S3T1042					
S3C2170	Installation of Secondary Clarifiers No.1 and 2	21 02-Aug-23	22-Aug-23	30-Mar-23	19-Apr-23	-125	S3P1780, S3C2010	S3C2190, S3C2300, S3T1036					
S3C2180	Installation of Tilted Plates for Phospaq No.1 and 2	21 02-Aug-23	22-Aug-23	30-Mar-23	19-Apr-23	-125	S3C2160, S3P1781	S3C2300, S3C2280, S3T1037					
S3C2190	Installation of Tilted Plates for Anammox No. 1 and 2	21 02-Aug-23	22-Aug-23	30-Mar-23	19-Apr-23	-125	S3C2170, S3P1781, S3C2030, S3C2040	S3C2300, S3C2290, S3T1038					
S3C2280	Installation of Diffusers and pipework for Phospaq	21 23-Aug-23	12-Sep-23	20-Apr-23	10-May-23		S3P1472, S3C2180	S3C2300, S3T1037			•		
S3C2290	Installation of Diffusers and pipework for Anammox	21 23-Aug-23	12-Sep-23	20-Apr-23	10-May-23		S3C2270, S3P1472, S3C2190	S3C2300, S3T1038					
S3C2300	Installation of Pipeworks, Associate Valves and Fittings	30 24-Aug-23	22-Sep-23	26-Apr-23	25-May-23	-120	\$3C2070, \$3C2080, \$3C2080, \$3C2100, \$3C2110, \$3C2120, \$3C2130, \$3C2140, \$3C2145, \$3C2145, \$3C2145, \$3C2190, \$3C2280, \$3C2280, \$3C2280, \$3C290, \$3C290, \$3C290, \$3C290,	S3T1031					
G/F		90 18-Jun-23	15-Sep-23	10-Feb-23	29-Oct-23	44							
S3C1999	Access to Sidestream Treatment Facilities (G/F)	0 18-Jun-23		10-Feb-23		-128	S3C1110	\$3C2200, \$3C2000, \$3C2210, \$3C2215, \$3C2250, \$3C2251, \$3C2255					
S3C2000	Installation of Lifting Appliance (LA-01)	45 18-Jun-23	01-Aug-23	10-Feb-23	27-Mar-23	-128	S3P1773, S3C1999	S3C2010, S3C2160			-		
S3C2010	Installation of Lifting Appliance (LA-02)	45 18-Jun-23	01-Aug-23	13-Feb-23	29-Mar-23	-125		S3C2170, S3C2020, S3C2040			•		
S3C2020	Installation of Lifting Appliance (LA-03)	45 18-Jun-23	01-Aug-23	13-Feb-23	29-Mar-23	-125	S3P1773, S3C2010	S3C2030, S3C2145			-		
S3C2030	Installation of Lifting Appliance (LA-04)	45 02-Aug-23	15-Sep-23	30-Mar-23	13-May-23	-125		S3C2190			-		
	Installation of Lifting Appliance (LA-05)	45 02-Aug-23	15-Sep-23	30-Mar-23	13-May-23	-125	S3P1773,	S3C2190					
S3C2040	, ,						S3C2010						
S3C2040	File Name: DE/2018/03 RP R28					Co		DE/2018/0	703	Date 31-Jul-22	Revision Rev.24	Checked	Approv

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 29 of 58 Hemaining Work

Critical Activity

Milestone

Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	ΙΤ	KM

ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 
S3C2160	Installation of Primary Clarifiers No.1 and 2	15 02-Aug-23	16-Aug-23	27-Mar-23	11-Apr-23	-128	S3P1780, S3C2000	S3C2180, S3C2251, S3T1035	<u></u>
S3C2200	Installation of NaOH Dosing Pumps, Micro-Nutrient Dosing Pumps, Defoamer Dosing Pumps and PAM Dosing Pumps (12 nos.)	15 18-Jun-23	02-Jul-23	06-Mar-23	20-Mar-23	-104	S3P1614, S3P1634, S3P1654, S3P1779, S3C1999, S3P1674	S3C2251, S3T1032, S3T1044	
S3C2210	Installation of PAM Tank, Deformer dissolving Tank, Micro-nutrient tank and NaOH Tank	15 18-Jun-23	02-Jul-23	07-Mar-23	22-Mar-23	-103	S3P1612, S3C1999	S3C2251, S3T1044	
S3C2215	Installation of Drum Sludge Thickener	15 09-Jul-23	23-Jul-23	07-Mar-23	22-Mar-23	-124	S3P1782, S3C2142, S3C1999	S3C2251, S3T1041	
S3C2250	Installation of Heat Exchanger system	15 18-Jun-23	02-Jul-23	07-Mar-23	22-Mar-23	-103	S3P1474, S3C1999	S3C2270, S3C2251, S3T1043	
S3C2251	Installation of Pipeworks, Associate Valves and Fittings	30 28-Jul-23	26-Aug-23	22-Mar-23	21-Apr-23	-128	\$3C2160, \$3C2200, \$3C2210, \$3C2215, \$3C2250, \$3P1700, \$3P1702, \$3P1745, \$3C1999	S3T1031, B1363	
S3C2255	E&M installation of DG Plant Room	45 18-Jun-23	01-Aug-23	14-Sep-23	29-Oct-23	89	S3C1999, S3S1100	S3S1110	
1/F		52 17-Jul-23	06-Sep-23	14-Mar-23	25-May-23	-104			
S3C2049	Access to Sidestream Treatment Facilities (1/F)	0 17-Jul-23		14-Mar-23		-125	S3C1120	\$3C2050, \$3C2230, \$3C2260, \$3C2270, \$3C2271, \$3C2275	
S3C2050	Installation of Lifting Appliance (LA-06)	45 17-Jul-23	30-Aug-23	27-Mar-23	10-May-23	-112	S3P1773, S3C2049	S3C2260	
S3C2230	Installation of Deodorisation System (DOU) No.4	30 17-Jul-23	15-Aug-23	27-Mar-23	25-Apr-23	-112	S3P1694, S3C2260, S3C2049	S3C2275, S3T1046	
S3C2260	Installation of Air Blower System	15 17-Jul-23	31-Jul-23	27-Mar-23	10-Apr-23	-112	S3P1775, S3C2050, S3C2049	S3C2270, S3C2275, S3C2230, S3T1039	
S3C2270	Installation of Ancillary Air Blower	7 01-Aug-23	07-Aug-23	13-Apr-23	19-Apr-23	-110	S3C2250, S3P1478, S3C2260, S3C2049	S3C2290, S3C2275, S3T1039	
S3C2271	Installation of Electric Calorifier and hot water Pumps	7 17-Jul-23	23-Jul-23	14-Mar-23	20-Mar-23	-125	S3P1765, S3P1696, S3C2049	S3C2275, S3T1032	
S3C2275	Installation of Pipeworks, Associate Valves and Fittings	30 08-Aug-23	06-Sep-23	26-Apr-23	25-May-23	-104		S3T1031	
Electrical Install	ations	133 11-Jun-23	21-Oct-23	15-Feb-23	13-Jan-24	84			
B1350	Installation of Electrical system - Cable Containment	60 23-Jun-23	21-Aug-23	15-Feb-23	16-Apr-23	-128	B1353	B1351, S3T1050, B1364, B1365	
B1351	Installation of Electrical system - Wall Mount Equipment, Conduit & Wiring	60 23-Jul-23	20-Sep-23	15-Oct-23	14-Dec-23	85	B1350	B1352, S3T1050	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 30 of 58

Critical Activity

Milestone

Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	lΤ	KM

tivity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Tota Floa	Predecessors	Successors	9 2020 2021	2022	2023	2024	2025 J       J J A
D1000	In the Halling of Online Manifesting in the transport // a cold On the I First instead of		04 0-4 00	04	45 1 00			0004050	1	123	537331111111	1112222222	233333333
B1363	Installation of Online Monitoring instrument / Level Control Equipment	56 26-Aug-23	21-Oct-23	21-Apr-23	15-Jun-23	-128	S3P1769, S3P1767, S3P1725, S3C2251	S3C1250					
B1364	Power Cable laying and Termination	30 01-Aug-23	30-Aug-23	10-May-23	08-Jun-23	-83	B1374, B1350	S3T1010			•		
B1365	Installation of SCADA system	45 23-Jul-23	05-Sep-23	17-Mar-23	01-May-23	-128	B1350, S3P1704	S3T1040			-		
B1373	Installation of Transformer room	55 11-Jun-23	04-Aug-23	24-Feb-23	19-Apr-23	-107	S3P1784	S3T1000, B1374			-		
B1374	Installation of LV Switchroom	55 01-Jul-23	24-Aug-23	16-Mar-23	09-May-23	-107	S3P1771, B1373	B1364, S3T1000			-		
S3C1250	Installation of Gas Detection System	50 26-Aug-23	15-Oct-23	21-Apr-23	09-Jun-23	-128	S3P1480, B1363	S3T1080					
BS Equipment	Installation	120 24-May-23	20-Sep-23	16-Jan-23	13-Jan-24	115	)						
B1353	Installation of MVAC system - Ceiling Mount Equipment, Main Ductwork & Pipework	30 23-Jun-23	22-Jul-23	15-Feb-23	17-Mar-23	-128	B1356, S3P1483	B1354, S3T1048, B1350			•		
B1354	Installation of MVAC system - Wall Mount Equipment, Branch Duct & pipework	50 03-Jul-23	21-Aug-23	25-Oct-23	14-Dec-23	115	B1353, S3P1483	B1355, S3T1048			-		
B1355	Installation of MVAC system - Air Grills & Diffuser	30 22-Aug-23	20-Sep-23	14-Dec-23	13-Jan-24	115	B1354, S3P1483	S3T1048					
B1356	Installation of P&D System - Main Pipework	30 24-May-23	22-Jun-23	16-Jan-23	15-Feb-23	-128	B1359, S3S1020, S3C1100	B1357, B1353, S3T1049					
B1357	Installation of P&D System - Branch Pipework	50 03-Jun-23	22-Jul-23	15-Sep-23	04-Nov-23	105	B1356	B1358, S3T1049			•		
B1358	Installation of P&D System - Sanitary Fitting	30 23-Jul-23	21-Aug-23	04-Nov-23			B1357	S3T1049, S3S1030					
B1359	Installation of FS system - Main Pipework	30 24-May-23	22-Jun-23	16-Jan-23	15-Feb-23	-128	S3S1020, S3C1100	B1360, B1356, S3T1047					
B1360	Installation of FS system - Branch Pipework, Conduit & Wiring	50 03-Jun-23	22-Jul-23	15-Sep-23	04-Nov-23	105	B1359	B1361, S3T1047					
B1361	Installation of FS system - Dropper, Sprinkler Head, Detector & Devices	30 23-Jul-23	21-Aug-23	04-Nov-23	04-Dec-23	105	B1360	S3T1047, S3S1030					
Testing & Comm	nissioning	631 30-Jun-23	21-Mar-25	02-Mar-23	10-May-24	-316	6						
For KD3A - Con	npletion of Phase 1 Commissioning - 15 Jan 2024	274 30-Jun-23	29-Mar-24	02-Mar-23	15-Jan-24	-74							
SAT		108 30-Jun-23	15-Oct-23	02-Mar-23	09-Jun-23	-128	3						
S3T1000	SAT for TX & LV Switch bo ard	30 25-Aug-23	23-Sep-23	10-May-23	08-Jun-23	-107	B1374, B1373, S3P1480	S3T1010					
S3T1031	Pipe Pressure Test	100 30-Jun-23	07-Oct-23	02-Mar-23	09-Jun-23	-120	S3C2300, S3C2251, S3C2275	S3T1080					
S3T1032	Dry Test for Pumps	21 24-Jul-23	13-Aug-23	21-Mar-23	10-Apr-23	-125	S S3C2070, S3C2080, S3C2090, S3C2110, S3C2110, S3C2120, S3C2130, S3C2140, S3C2142, S3C2200, S3C2271	S3T1033					
S3T1033	Wet Test for Pumps	30 14-Aug-23	12-Sep-23	11-Apr-23	10-May-23	-125	S3T1032	S3T1034			•		
S3T1034	Functional Test for Pumps	30 13-Sep-23	12-Oct-23	-	09-Jun-23			S3T1080					
S3T1035	SAT for Primary clarifier	14 17-Aug-23	30-Aug-23	27-May-23			S3C2160	S3T1080	<del>                                     </del>			·}	
S3T1036 S3T1037	SAT for Secondary clarifier SAT for Phospaq Reactor	14 23-Aug-23 30 13-Sep-23	05-Sep-23 12-Oct-23	27-May-23 11-May-23	09-Jun-23 09-Jun-23		S3C2170 S3C2280,	S3T1080 S3T1080			•		
S3T1038	SAT for Anammox Reactor	30 13-Sep-23	12-Oct-23		09-Jun-23		S3C2180	S3T1080	4				
	S. W. S. / WILLIAM S. C. C. C. C. C. C. C. C. C. C. C. C. C.	30 10-0ер-23	12 00 20	11-1vidy-23	00-00H-20	-120	S3C2290, S3C2190	3011000					
	File Name: DE/2018/03 RP R28					C	ontract No.	DE/2018/03		Date	Revision	Checked	Approved
	Layout: DE1803 RP (Nov 2022) - Critical Activity			Shek \	Nu Hui Ff				n Works Stage 1	31-Jul-22	Rev.24	LI	KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 31 of 58

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev28	ΙΤ	KM

ctivity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 2 
S3T1039	SAT for Air blowers	30 08-Aug-23	06-Sep-23	11-May-23	09-Jun-23	-89	S3C2260, S3C2270	S3T1080	
S3T1040	SAT for SCADA System	60 16-Aug-23	15-Oct-23	11-Apr-23	09-Jun-23	-128	B1365	S3T1080	
S3T1041	SAT for Drum Sludge Thickener	14 24-Jul-23	06-Aug-23	27-May-23	09-Jun-23		S3C2215	S3T1080	
S3T1042	SAT for mixer	30 16-Aug-23	14-Sep-23	11-May-23	09-Jun-23	-97	S3C2145	S3T1080	
S3T1043	SAT for Heat Exchanger	14 03-Jul-23	16-Jul-23	27-May-23	09-Jun-23	-37	S3C2250	S3T1080	
S3T1044	SAT for Dosing system	30 03-Jul-23	01-Aug-23	11-May-23	09-Jun-23	-53	S3C2210, S3C2200	S3T1080	
S3T1046	SAT for DOU no.4	45 16-Aug-23	29-Sep-23	26-Apr-23	09-Jun-23	-112	S3C2230	S3T1080	
Process Start	Up & Phase 1 Commissioning Test	188 24-Sep-23	29-Mar-24	09-Jun-23	15-Jan-24	-74			
S3T1010	Power Energization (Power Provision from DE/2018/04 Contract)	1 24-Sep-23	24-Sep-23	09-Jun-23	09-Jun-23	-107	S3T1000, B1364	S3T1020, S3T1080	
S3T1060	Existing sludge dewatering facilities Ready (by DE/2018/04 Contract)	0	15-Oct-23		09-Jun-23	-128		S3T1080	
S3T1070	Plant service water from zone B/C Ready (Zone B by DE/2018/04 Contract)	0	15-Oct-23		09-Jun-23	-128		S3T1080	
S3T1080	Process Start Up	92 15-Oct-23	15-Jan-24	10-Jun-23	09-Sep-23	-128	S3T1070, S3T1060, S3T1060, S3T1010, S3T1010, S3T1034, S3T1035, S3T1039, S3T1041, S3T1042, S3T1044, S3T1044, S3T1046, S3T1038, S3T1037, S3T1031, S3T1040	S3T1090	
S3T1090	Submission & Acceptance of Process Start Up Report	14 15-Jan-24	29-Jan-24	10-Sep-23	23-Sep-23	-128	S3T1080	S3T1100	
S3T1100	Notice for Commencement of Phase 1 Commissioning Tests	7 22-Jan-24	29-Jan-24	17-Sep-23	23-Sep-23	-128	S3T1090	S3T1110	
S3T1110	Phase 1 Commissioning Tests with daily result to PM	60 29-Jan-24	29-Mar-24	24-Sep-23	22-Nov-23	-128	S3T1100	S3T1120, S3T1130, S3T1115	
S3T1115	Completion of KD3A	0	29-Mar-24*		15-Jan-24	-74	S3T1110	KD1050-2	—
L	completion - Remaining Commissioning Works - 05 Jun 2024	578 22-Aug-23	21-Mar-25	23-Nov-23	10-May-24			11000 2	
S3T1020	Essential T&C for FSD Inspection	30 25-Sep-23	24-Oct-23	09-Dec-23	08-Jan-24	76	S3T1010, S3P1480	S3S1150	
S3T1047	SAT for FS system	30 22-Aug-23	20-Sep-23	13-Jan-24	12-Feb-24	145	B1361, B1359, B1360	S3S1170	
S3T1048	SAT for MVAC System	30 21-Sep-23	20-Oct-23	13-Jan-24	12-Feb-24	115	B1355, B1353, B1354	S3S1170	
S3T1049	SAT for P&D system	30 22-Aug-23	20-Sep-23	13-Jan-24	12-Feb-24	145	B1356, B1357, B1358	S3S1170	
S3T1050	SAT for Electrical System (BS)	30 21-Oct-23	19-Nov-23	13-Jan-24	12-Feb-24	85	B1350, B1351, B1352	S3S1170	
S3T1120	Submission & Acceptance of Phase 1 Commissioning Tests Report	30 29-Mar-24	28-Apr-24	19-Jan-24	18-Feb-24	-70	S3T1110	S3T1150	
S3T1130	Phase 1 Post Commissioning with daily result to PM	19 29-Mar-24	17-Apr-24		11-Dec-23			S3T1150, S3T1170, S5T1120	
S3T1140	Ready to Process start up of the first Anaerobic Digester in Zone C	0 30-Jun-24		03-Feb-24		-148	S5T1120	S3T1150, S3T1170	
S3T1150	Submission & Acceptance of Phase 1 Post Commissioning Report	30 30-Jun-24	29-Jul-24	18-Feb-24	19-Mar-24	-133	S3T1140,	S3T1180	
							S3T1120		

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 32 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Tota Floa	Predecessors	Successors	9 2020 2021	2022	2023	2024	2025 26
0074470	Discount of Table 11 and DM		00.1.04	10.4 04	00 5 1 04	10.14 04			0074400	1	123	537331111111	1112222222	23333333333
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	3 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	6 S3T1190, S3T1170	S3T1210				1	•
S3T1210	Submission & Acceptance of Phase 3 Commissioning Tests Report	22	28-Feb-25	21-Mar-25	18-Apr-24	10-May-24	-316		SC31110					
Statutory Submis	ssion / Inspection (FSD)	1220	12-Jan-21 A	24-May-24	01-Sep-22	10-May-24	-15	5		<b>-</b>				
S3S1000	Prepare & Submit GBP for FSD approval	90	12-Jan-21 A	10-Feb-21 A	01-Sep-22	01-Sep-22			S3S1010	<b>-</b>				
5551000	Tropate a dubitilit des tion to approvai	30	12 0411 2171	10100217	01 OCP 22	01 OCP 22			0001010					
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	5 B1358, B1361	S3S1040			•		
S3S1040	WSD Inspection	7	05-Sep-23	11-Sep-23	18-Dec-23	25-Dec-23	105	5 S3S1030	S3S1060, S3S1050			0		
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	9 S3S1060	S3S1080	-		_		
S3S1080	Issuance of Form WWO46 Part Vb	0		09-Nov-23		26-Apr-24		9 S3S1060, S3S1070	S3S1090			•		
S3S1090	Issuance of Water Certificate	0		23-Nov-23		10-May-24	169	9 S3S1080	SC31110	<del>- </del> <del>        </del>		<del></del>		
S3S1100	Submission & Approval of DG Application to FSD	180	29-Apr-22 A		13-Sep-23	-			S3C2255					
S3S1110	Submit Application to FSD for DG Licence	0	02-Aug-23		29-Oct-23		89	9 S3C2255	S3S1120	1		•		
S3S1120	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	17-Aug-23	06-Sep-23	13-Nov-23	04-Dec-23		S3S1110	S3S1130					
S3S1130	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)		07-Sep-23	27-Sep-23	04-Dec-23	25-Dec-23		9 S3S1120	S3S1140			<u> </u>	ļļļ.	
S3S1140 S3S1150	DG Licence issued Prepare & Submit FS/314, FS/501 & FS/501a	0	25-Oct-23	11-Oct-23 07-Nov-23	09 lon 04	08-Jan-24 22-Jan-24		9 S3S1130 S3S1010,	S3S1150 S3S1160					
3331130	Frepare & Submit F3/314, F3/301 & F3/301a	14	25-06-25	07-INOV-23	00-Jan-24	22-Jan-24		S3S1010, S3S1140, S3S1050, S3T1020	3331100					
S3S1160	FSD Review & Approval of FS/314, FS/501 & FS/501a	21	08-Nov-23	28-Nov-23	22-Jan-24	12-Feb-24		S3S1150	S3S1170			•		
S3S1170	F.S. Inspection, Defects Rectification & Re-inspection	60	27-Feb-24	26-Apr-24	12-Feb-24	12-Apr-24	-15	5 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	5 S3S1170	SC31110				•	
Section 4 - C	omplete 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 & Ma	aterials 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				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	1				
S4P1030	Procurement & PO for FS System	60	02-Jul-20 A	04-Dec-20 A	27-Mar-25	27-Mar-25		S1D1330	S4P1150			<del>    </del>		
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	-				
<u> </u>					<u> </u>	<u> </u>						<u> </u>	<u> </u>	
	File Name: DE/2018/03 RP R28						C	ontract No.	DE/2018/03		Date	Revision	Checked	Approved
	Layout: DE1803 RP (Nov 2022) - Critical Activity				Shek \	Mu Hui Fi				in Works Stage 1	31-Jul-22	Rev.24	LT	KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 33 of 58 Remaining Work
Critical Activity

Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021	2022	2023	2024	2025
												537331111111	1112222222	2 23333333333
S4P1060	Delivery of UV Disinfection System	149	01-Jun-21 A	22-Oct-21 A	15-Feb-23	15-Feb-23		S4P1050	S4C1080					
S4P1070	Fabrication & Delivery of Lift-up Pumps	225	11-Jan-21 A	26-Jul-21 A	15-Feb-23	15-Feb-23		S1P1010, S1D1290	S4C1040					
S4P1080	Fabrication & Delivery of Transfer Pumps	218	26-Feb-21 A	26-Jul-21 A	15-Feb-23	15-Feb-23		S1P1020, S1D1290	S5UVPC1000					
S4P1090	Fabrication & Delivery of FRP Cover	89	01-Nov-21 A	16-Mar-22 A	15-Feb-23	15-Feb-23		S1D1290, S4P1000, S1P1020, PL1010	S4T1010					
S4P1100	Fabrication & Delivery of EOT Cranes (2T & 5T)	170	28-Jan-21 A	27-May-21 A	15-Feb-23	15-Feb-23		S1P1030, S1D1290	S4C1020					
S4P1110	Fabrication & Delivery of Stoplogs	289	16-Dec-20 A	07-Oct-21 A	15-Feb-23	15-Feb-23		S1P1040, S1D1290	S4C1070					
S4P1120	Fabrication & Delivery of Penstocks	256	18-Jan-21 A	07-Oct-21 A	15-Feb-23	15-Feb-23		S1P1050, S1D1290	S4C1070					
S4P1130	Fabrication & Delivery of Pipeworks & Associated Valves	200	11-Jan-21 A	08-Sep-21 A	15-Feb-23	15-Feb-23		S4P1010, S1D1290	S4C1040		† <u>-</u>			
S4P1140	Fabrication & Delivery of Elec. Materials	190	24-Jun-21 A	31-Dec-21 A	27-Mar-25	27-Mar-25		S4P1020, S1D1330	S4C1120					
S4P1150	Fabrication & Delivery of FS System	187	18-Apr-21 A	28-Oct-21 A	27-Mar-25	27-Mar-25		S4P1030, S1D1330	S4C1100					
S4P1160	Fabrication & Delivery of Temp. Switchboard	194	05-May-21 A	15-Dec-21 A	15-Feb-23	15-Feb-23			S4C1000					
E&M Installation		449	25-Apr-21 A	23-Jun-22 A	12-Oct-22	27-Mar-25								
S4C1000	Provision of Temporary Power for UV System No.1 & Effluent Transfer Pumping Station	45	15-Dec-21 A	11-Mar-22 A	15-Feb-23	15-Feb-23		S4C1010, S1D1130, S4P1160	S4T1010, S4C1140					
S4C1010	Mobilisation (Partial Access on 24 Apr 2021, Remaining Access on 12 May 2021)	30	25-Apr-21 A	12-Jun-21 A	12-Oct-22	12-Oct-22		AD1010, S1D1130, AD1020	S4C1020, S5TXRC1030, S4C1090, S4C1000					
S4C1020	E&M Installation of EOT Cranes (2T)	46	25-Jun-21 A	17-Sep-21 A	15-Feb-23	15-Feb-23		S1D1180, S1D1260, S4C1010, S4P1100	S4T1010, S4C1030, S4C1040, S4C1110, S4C1090, S4T1000, S4C1080, S4C1070, PL1200					
S4C1030	E&M Installation of EOT Cranes (5T)	60	20-Oct-21 A	11-Dec-21 A	15-Feb-23	15-Feb-23	,	S4C1020	S5UVPC1000, S4T1000, PL1200	-				
S4C1040	E&M Installation of Transfer Pumps & Associated Pipeworks / Valves	103	21-Oct-21 A	05-Mar-22 A	15-Feb-23	15-Feb-23		S4C1020, S4P1070, S4P1130	S5TXRC1050, S4T1010, PL1200					
S4C1050	Preperation Works for E&M Installation of Penstocks & Stoplogs	3	17-Sep-21 A	19-Sep-21 A	15-Feb-23	15-Feb-23			S4C1070					
S4C1060	CNE-014 Access to and use to Portion C-1A for Installation of EOT, UV Equipment and Effluent Transfer Pump	0	16-Sep-21 A		15-Feb-23				S4C1070	•				
S4C1070	E&M Installation of Penstocks & Stoplogs (Impacted by CNE-014)	66	11-Nov-21 A	15-Jan-22 A	15-Feb-23	15-Feb-23		S4P1110, S4P1120, S4C1020, S4C1050, S4C1060	S4T1010, S5TXRC1050, PL1200					
S4C1080	E&M Installation of UV System	44	11-Nov-21 A	19-Feb-22 A	15-Feb-23	15-Feb-23		S4P1040, S4P1060, S4C1020	S4T1010, S5TXRC1050, PL1200	-				
S4C1090	FS Installation - Conduits, Trunking, & Pipeworks	74	08-Nov-21 A	18-Jan-22 A	27-Mar-25	27-Mar-25		S4C1010, S4C1020	S4C1100, PL1200					
S4C1100	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	67	15-Nov-21 A	18-Jan-22 A	27-Mar-25	27-Mar-25		S4P1150, S4C1090	SC41110, S4S1010, PL1200					
S4C1110	BS Fitting Installation - Conduits, Trunking, & Ductworks	111	15-Nov-21 A	19-Feb-22 A	27-Mar-25	27-Mar-25		S4C1020, S1D1310	S4C1120, PL1200	1				

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 34 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

vity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 202 J 3 J J J J		2021	J J J A	<del></del>		11127277272	Ţ
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					11141441	<u> </u>		1
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								
S4C1140	Ready for Power Energization	0	23-Jun-22 A		15-Feb-23	S4C1000, S4C1130, S4S1000	S4S1030, S4T1010				•				
S4C1150	Installation of CCTV System	37 14-Mar-22 A	19-Apr-22 A	27-Mar-25	27-Mar-25	S4C1120	SC41110, PL1200								
S4C1160	Installation of FS Link	84 17-Nov-21 A	08-Feb-22 A	27-Mar-25	27-Mar-25		S4S1010, PL1200								
Statutory Subm	nission / Inspection	511 17-Apr-21 A	02-Aug-22 A	15-Feb-23	16-Apr-25										
CLP Submission	on	425 17-Apr-21 A	15-Jun-22 A	15-Feb-23	15-Feb-23										
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								
FSD Submission	on & Inspection	176 01-Apr-22 A	02-Aug-22 A	16-Apr-25	16-Apr-25										
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								
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								
S4S1030	F.S. Inspection, Defects Redification & Re-inspection	4 26-Jul-22 A	29-Jul-22 A	16-Apr-25	16-Apr-25	S4S1020, S4C1140	S4S1040								
S4S1040	Issuance of Acceptance Letter	14 30-Jul-22 A	02-Aug-22 A	16-Apr-25	16-Apr-25	S4S1030	SC41110				1				
Testing & Comr	missioning	329 18-Sep-21 A	13-Sep-22 A	15-Feb-23	15-Feb-23										
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			-					
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								
S4T1020	System Commissioning Tests	3 11-Sep-22 A	13-Sep-22 A	15-Feb-23	15-Feb-23	S4T1010	SC41110, PL1290, S5UVPC1000				1				
Section 5 - C	Complete all remaining Works (incl. T&C)	1769 18-May-20 A	21-Mar-25	22-Mar-22	16-Apr-25	26									
Fabrication, FAT	「 & Delivery of Major Plant & Materials	802 18-May-20 A	14-Dec-22	13-Apr-22	16-Apr-25	854									
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								
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	),	•						
S5P1020	Procurement & PO for Lifting Appliances	530 18-May-20 A	29-Oct-21 A	16-Apr-25	16-Apr-25	S2P1020									
S5P1030	Procurement & PO for Ferric Chloride Storage Tank	668 20-Jul-20 A	18-May-22 A	30-Sep-22	30-Sep-22	S2P1000	S5FCDP1000								
S5P1040	Procurement & PO for Ferric Chloride Dosing Pump	726 18-May-20 A	13-May-22 A	24-Nov-22	24-Nov-22	S2P1020	S5FCDP1010					1-1-1	·		

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 35 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

tivity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total P Float	redecessors	Successors	9 2020 2021	2022 J J J A J J J	2023	2024 J   J J A   J 11111122222	2025
S5P1050	Procurement & PO for Electrical Sub-contractor	396	21-Jun-21 A	14-Dec-22	13-Apr-22	06-May-22		S2P1130.	S5SDBC1710, S5SDBC1680, S5SDBC1740, S5CHPC1100, S5CHPC1230, S5CHPC1290, S5TXRC1030, S5TXRC1040, S5DIGC1120, S5DIGC11200, S5DIGC1260, S5DIGC1260, S5EXAC1040, S5EXAC1040, S5EXAC1040, S5EXAC1040, S5EXAC1040, S5EXAC1045					
S5P1070	Procurement & PO for mechanical ventilation system	90	28-Dec-21 A	28-Mar-22 A	16-Apr-25	16-Apr-25								
Sludge Dewatering	Building	1248	11-Aug-21 A	30-Dec-23	22-Mar-22	27-Feb-24	59							
Procurement, Fab	rication, FAT & Delivery of Major Plant & Materials	1213	11-Aug-21 A	11-Oct-23	22-Mar-22	01-Sep-23	-41							
Procurement		942	31-Jul-22 A	31-Jan-23	07-May-22	15-Jan-23	-16							
S5SDBP1190	Procurement & PO for Genset	174	31-Jul-22 A	20-Jan-23	07-May-22	06-Jul-22	-198		S5SDBP1200					
S5SDBP1485	Procurement & PO for DI pipework (G/F and 1/F)	160	24-Aug-22 A	30-Jan-23	24-Jun-22	02-Sep-22	-150		S5SDBP1555					
S5SDBP1575	Procurement & PO for Process Water Pumps	45	17-Dec-22*	30-Jan-23	11-Sep-22	25-Oct-22	-97		S5SDBP1565		•			
S5SDBP1595	Procurement & PO for FRP ductworks	45	31-Oct-22 A	30-Nov-22	06-Jan-23	15-Jan-23	46		S5SDBP1585		•			
S5SDBP1615	Procurement & PO for DI pipework (B/F)	45	17-Aug-22 A	20-Oct-22 A	04-Aug-22	04-Aug-22			S5SDBP1605					
S5SDBP1630	Procurement & PO for Sludge Skip (PS Screen & Dewatering Screen)	75	18-Nov-22 A	31-Jan-23	07-Oct-22	17-Dec-22	-45		S5SDBP1310		<u>-</u>			
Mechanical		612	11-Aug-21 A	14-Jul-23	26-Apr-22	01-Sep-23	48							
Fabrication and FA	NT	603	11-Aug-21 A	14-Jun-23	26-Apr-22	01-Sep-23	78							
S5SDBP1140	Fabrication & FAT of PS Screen Feed Pump	201	11-Apr-22 A	28-Oct-22 A	23-Nov-22	23-Nov-22			S5SDBP1145					
S5SDBP1150	Fabrication & FAT of Sludge Screen	350	11-Aug-21 A	26-Jul-22 A	05-Feb-23	05-Feb-23			S5SDBP1155	<del> </del>				
S5SDBP1170	Fabrication & FAT of External Sludge Transfer Pump	201	11-Apr-22 A	28-Oct-22 A	30-Nov-22	30-Nov-22			S5SDBP1085					
S5SDBP1210	Fabrication & Delivery of Lift	210	18-Dec-21 A	10-Aug-22 A	01-Sep-23	01-Sep-23			S5SDBC1770					
S5SDBP1210  S5SDBP1212  S5SDBP1230  S5SDBP1240  S5SDBP1242	FAT of Sludge Thickening Centrifuges	16	16-May-22 A	31-May-22 A	17-Nov-22	17-Nov-22	S	S5SDBP1260	S5SDBP1215					
S5SDBP1230	Fabrication and FAT of Recirculation Pumps	175	10-Mar-22 A	31-Aug-22 A	19-Sep-22	19-Sep-22			S5SDBP1185					
S5SDBP1240	Fabrication and FAT of Primary Sludge Holding Tank Mixer	191	22-Sep-22 A	31-Mar-23	28-Aug-22	05-Jan-23	-85		S5SDBP1195					
S5SDBP1242	FAT of Sludge Dewatering Centrifuges	62	06-Jul-22 A	05-Sep-22 A	17-Dec-22	17-Dec-22	S	55SDBP1290	S5SDBP1245		-			
S5SDBP1250	Fabrication and FAT of Thickening Centrifuge Feed Pump	201	11-Apr-22 A	28-Oct-22 A	06-Nov-22	06-Nov-22			S5SDBP1205					
S5SDBP1260	Fabrication of Sludge Thickening Centrifuges	206	22-Oct-21 A	15-May-22 A	17-Nov-22	17-Nov-22			S5SDBP1212	<b> </b>				
S5SDBP1270	Fabrication and FAT of Thickening Sludge Silo	98	01-Nov-22 A	06-Feb-23	29-Dec-22	16-Mar-23	38		S5SDBP1225					
S5SDBP1280	Fabrication and FAT of THP Feed Pump	100	31-Aug-22 A	31-Jan-23	14-Oct-22	24-Dec-22	-38		S5SDBP1235					
S5SDBP1290	Fabrication of Sludge Dewatering Centrifuges	238	10-Nov-21 A	05-Jul-22 A	17-Dec-22	17-Dec-22			S5SDBP1242	_				
S5SDBP1300	Fabrication and FAT of Conveyor	135	17-Oct-22 A	28-Feb-23	08-Oct-22	15-Jan-23	-44		S5SDBP1265		<b>+</b>			
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	File Name: DE/2018/03 RP R28 Remaining Work						Con	tract No. I	DE/2018/03	<b>}</b>	Date 31-Jul-22	Revision Rev.24	Checke	ed Approved

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 36 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

y ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Predecesso Float	rs Successors	9 2020 2021 2022 2023 2024 2025       3
S5SDBP1310	Fabrication and FAT of Sludge Skip (PS Screen & Dewatering Screen)	90	17-Mar-23*	14-Jun-23	18-Dec-22	17-Mar-23	-89 S5SDBP1	630 S5SDBP1275	<u> </u>
	Fabrication and FAT of Centrate Transfer Pumps		25-Mar-22 A	-	03-May-22	13-Jul-22		S5SDBP1295	-
	·								
S5SDBP1330	Fabrication and FAT of Thickening Polymer Powder Unit	226	06-Apr-22 A	17-Nov-22 A	26-Apr-22	26-Apr-22		S5SDBP1315, S5SDBP1380	
S5SDBP1340	Fabrication and FAT of Preparation Tank Mixers	310	28-Mar-22 A	31-Jan-23	06-Oct-22	16-Dec-22	-46	S5SDBP1325	
S5SDBP1350	Fabrication and FAT of Storage Tank Mixers	310	28-Mar-22 A	31- lan-23	06-Oct-22	16-Dec-22	-46	S5SDBP1335	-
								00000011000	
S5SDBP1360	Fabrication and FAT of Polymer Transfer Pumps	201	11-Apr-22 A	28-Oct-22 A	17-Sep-22	17-Sep-22		S5SDBP1345	
S5SDBP1370	Fabrication and FAT of FRP Tank (Thickening & Dewatering Polymer Dosing System)	75	28-Nov-22*	10-Feb-23	24-Aug-22	06-Nov-22	-96	S5SDBP1365	
S5SDBP1380	Fabrication and FAT of Dewatering Polymer Powder Unit	226	06-Apr-22 A	17-Nov-22 A	26-Apr-22	26-Anr-22	S5SDBP1	330 S5SDBP1385	<del>                                     </del>
00000011000	Tableaton and 17th of Benatering Folymer Foractionic	220	00 / Ipi 22/	17 NOV ZZ7	20710122	20 7101 22	COODER 1	000 000001 1000	
S5SDBP1390	Fabrication and FAT of Polymer Dosing Pumps	201	11-Apr-22 A	28-Oct-22 A	07-Jan-23	07-Jan-23		S5SDBP1355	
S5SDBP1450	Fabrication and FAT of Dewatering Centrifuge Feed Pumps	201	11-Apr-22 A	28-Oct-22 A	23-Nov-22	23-Nov-22		S5SDBP1455	
S5SDBP1460	Fabrication and FAT of Mixers (Digested Sludge Holding Tank)	90	22-Sep-22 A	31- lan-23	25-Nov-22	M-Feb-23	1	S5SDBP1465	
333DBF 1400	rabilication and ration wixers (Digested Studge Holding Tarry)	90	22-3 <del>6</del> p-22 A	31-Jan-23	25-1100-22	04-1-60-23	4	333DBF 1403	
S5SDBP1470	Fabrication and FAT of Sludge Transfer Pumps (THP By Pass)	201	11-Apr-22 A	28-Oct-22 A	16-Nov-22	16-Nov-22		S5SDBP1475	
S5SDBP1520	Fabrication and FAT of Hoist	197	21-Mar-22 A	30-Nov-22	23-Jul-22	01-Aug-22	-121	S5SDBP1525	
0500004500	Edwinding and EAT of Otra I Ward (Manageria)	00	00 4 00 4	00 D 00	40 Nov. 00	04 N 00	0	0500004505	
S5SDBP1530	Fabrication and FAT of Steel Work (Monorails)	60	29-Aug-22 A	02-Dec-22	13-Nov-22	24-Nov-22	-8	S5SDBP1535	
S5SDBP1540	Fabrication and FAT of Steel Work (EOT)	60	29-Aug-22 A	02-Dec-22	03-Aug-22	14-Aug-22	-110	S5SDBP1545	7
S5SDBP1565	Fabrication and FAT of Process Water Pumps	60	31-Jan-23	31-Mar-23	26-Oct-22	24-Dec-22	-97 S5SDBP1	575 S5SDBP1495	
Delivery			01-Jun-22 A			16-Apr-23			
S5SDBP1085	Delivery of External Sludge Transfer Pump	78	29-Oct-22 A	14-Jan-23	30-Nov-22	23-Jan-23	9 S5SDBP1	170 S5SDBC1135	
0500000445							0.50000		
S5SDBP1145	Delivery of PS Screen Feed Pump	/8	29-Oct-22 A	14-Jan-23	23-Nov-22	16-Jan-23	2 S5SDBP1	140 S5SDBC1790	
S5SDBP1155	Delivery of Sludge Screen Press	76	27-Jul-22 A	31-Oct-22 A	05-Feb-23	05-Feb-23	S5SDBP1	150 S5SDBC1590	
S5SDBP1185	Delivery of Recirculation Pumps	60	01-Sep-22 A	31-Oct-22 A	19-Sep-22	19-Sep-22	S5SDBP1	230 S5SDBC1115,	
								S5SDBC1165	
	Delivery of Primay Sludge Holding Tank Mixer		01-Apr-23	30-May-23			-85 S5SDBP1		
202DBF 1202	Delivery of Thickening Centrifuges Feed Pump	95	29-Oct-22 A	31-Jan-23	06-Nov-22	16-Jan-23	-15 S5SDBP1	250 S5SDBC1175	
S5SDBP1215	Delivery of Sludge Thickening Centrifuges	143	01-Jun-22 A	28-Oct-22 A	17-Nov-22	17-Nov-22	S5SDBP1	212 S5SDBC1570	
S5SDBP1225	Delivery of Thickening Sludge Silo	30	07-Feb-23	08-Mar-23	17-Mar-23	15-Apr-23	38 S5SDBP1	270 S5SDBC1450	
S5SDBP1235	Delivery of THP Feed Pump		01-Feb-23	02-Mar-23		23-Jan-23	-38 S5SDBP1		┪╸╸╸╸╸╸╸╸╸
S5SDBP1245	Delivery of Sludge Dewatering Centrifuges	24	07-Sep-22 A	30-Sep-22 A	17-Dec-22	17-Dec-22	S5SDBP1	242 S5SDBC1580	
S5SDBP1265	Delivery of Conveyor	30	01-Mar-23	30-Mar-23	16-Jan-23	14-Feb-23	-44 S5SDBP1	300 S5SDBC1450	<del>-             -</del>
	Delivery of Sludge Skip (PS Screen & Dewatering Screen)		15-Jun-23	14-Jul-23		16-Apr-23	-89 S5SDBP1		
S5SDBP1295	Delivery of Centrate Transfer Pumps		01-Feb-23	01-Apr-23		· ·	-202 S5SDBP1		
S5SDBP1315	Delivery of Thickening Polymer Powder Unit	75	18-Nov-22 A	31-Jan-23	19-May-22	29-Jul-22	-186 S5SDBP1		
S5SDBP1325	Delivery of Preparation Tank Mixers	60	01-Feb-23	01 Apr 02	17 Dec 22	14-Feb-23	-46 S5SDBP1	S5SDBC1265 340 S5SDBC1600,	
333DBF 1323	Delivery of Preparation Tank Mixers	60	U I-FED-23	01-Apr-23	17-Dec-22	14-Feb-23	-40 333DBF1	S5SDBC1600, S5SDBC1285	
S5SDBP1335	Delivery of Storage Tank Mixers	60	01-Feb-23	01-Apr-23	17-Dec-22	14-Feb-23	-46 S5SDBP1	350 S5SDBC1600, S5SDBC1285	
S5SDBP1345	Delivery of Polymer Transfer Pumps	138	29-Oct-22 A	15-Mar-23	17-Sep-22	09-Jan-23	-65 S5SDBP1	360 S5SDBC1145,	
					·			S5SDBC1810	
S5SDBP1355	Delivery of Polymer Dosing Pumps	78	29-Oct-22 A	14-Jan-23	07-Jan-23	02-Mar-23	47 S5SDBP1	390 S5SDBC1610, S5SDBC1325	
S5SDBP1365	Delivery of FRP Tank (Thickening & Dewatering Polymer Dosing System)	30	11-Feb-23	12-Mar-23	07-Nov-22	06-Dec-22	-96 S5SDBP1		
00022000									

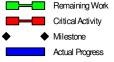
File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 37 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

vity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021				
S5SDBP1385	Delivery of Dewatering Polymer Powder Unit	30 18-Nov-22	A 23-Feb-23	26-Apr-22	29-Jul-22	-209	S5SDBP1380	S5SDBC1265		- - - - 1 23  5 3	<u>//3/3/11/11/11/11</u>	1111444444	144   4 3 3 3 3 3 3 3 3
S5SDBP1455	Delivery of Dewatering Centrifuges Feed Pumps	78 29-Oct-22	A 14-Jan-23	23-Nov-22	16-Jan-23	2	S5SDBP1450	S5SDBC1185		•			
S5SDBP1465	Delivery of Mixers (Digested Sludge Holding Tank)	30 01-Feb-23	02-Mar-23	05-Feb-23	06-Mar-23	4	S5SDBP1460	S5SDBC1312	-				
	Delivery of Nuiscos (Egestee charge Fronting Italia)  Delivery of Sludge Transfer Pumps (THP By Pass)	78 29-Oct-22			09-Jan-23		S5SDBP1470	S5SDBC1165	1				
	Delivery of Process Water Pumps	30 01-Apr-23	30-Apr-23		23-Jan-23		S5SDBP1565	S5SDBC1125	_				
S5SDBP1525	Delivery of Hoist	47 01-Dec-22	16-Jan-23	02-Aug-22	17-Sep-22	-121	S5SDBP1520	S5SDBC1440, S5SDBC1550, S5SDBC1530, S5SDBC1540		T			
S5SDBP1535	Delivery of Steel Work (Monorails)	14 12-Sep-22	A 25-Sep-22 A	25-Nov-22	25-Nov-22		S5SDBP1530	S5SDBC1440, S5SDBC1550					
S5SDBP1545	Delivery of Steel Work (EOT)	40 28-Oct-22	A 06-Dec-22	15-Aug-22	18-Aug-22	-110	S5SDBP1540	S5SDBC1530, S5SDBC1540		•			
S5SDBP1555	Fabrication and delivery of DI pipework (G/F and 1/F)	60 31-Jan-23	31-Mar-23	03-Sep-22	01-Nov-22	-150	S5SDBP1485	S5SDBC1460, S5SDBC1620		-			
S5SDBP1585	Fabrication and delivery of FRP ductworks	60 05-Jan-23	05-Mar-23	16-Jan-23	16-Mar-23	11	S5SDBP1595	S5SDBC1860	1				
S5SDBP1605	Fabrication and delivery of DI pipework (B/F)	60 05-Jan-23		04-Aug-22	02-Oct-22	-154	S5SDBP1615	S5SDBC1400	1	<b>—</b>			
Electrical and Cor	ntrol	360 17-Oct-22	A 11-Oct-23	22-Mar-22	09-Feb-23	-244							
S5SDBP1171	Fabrication & Delivery of Cable	90 21-Jan-23	20-Apr-23	28-Sep-22	26-Dec-22	-115	<b>3</b>	S5SDBC1225	-				
	Fabrication & Delivery of SCADA System	360 17-Oct-22	· ·	<u>'</u>	09-Feb-23		-	S5SDBC1730,	1				
								S5SDBC1760, S5SDBC1700					
S5SDBP1200	Fabrication & Delivery of Genset	134 28-Mar-23	* 08-Aug-23	07. luk22	17-Nov-22	-264	S5SDBP1190	S5SDBC1500					
	Fabrication & Delivery of LV Switchboard for G/F	142 24-Jan-23	14-Jun-23		26-Nov-22			S5SDBC1500	-				
	Fabrication & Delivery of LV Switchboard for 1/F	141 03-Jan-23		08-Jul-22				S5SDBC1375	<del> </del>	·	<u></u>		
S5SDBP1600	Fabrication of 380V Transfomers	120 16-Jan-23	15-May-23	17-May-22	13-Sep-22			S5SDBP1610	1				
S5SDBP1610	FAT for 380V Transfomers	14 02-May-23	15-May-23	31-Aug-22	13-Sep-22	-244	S5SDBP1600	S5SDBP1620			4		
S5SDBP1620	Delivery of 380V Transfomers	60 16-May-23	14-Jul-23	14-Sep-22	12-Nov-22	-244	S5SDBP1610	S5SDBC1510	]				
nstallation		487 06-Jun-22	A 30-Nov-23	27-Mar-22	01-Jan-24	32							
NCE-PMI-0325 - P	Provision of 2 nos of 3 Tons Mobile A-frame with Electrical Hoist in SDB	487 06-Jun-22			01-Jan-24	32							
S5SDBC1650	Access to Sludge Dewatering Building (Impacted by EWN-0314)	1 09-Sep-22	A 09-Sep-22 A	27-Mar-22	27-Mar-22			S5SDBC1670					
S5SDBC1660	Access to Sludge Dewatering Building (Impacted by EWN-0314-1)	1 09-Sep-22	A 09-Sep-22 A	27-Mar-22	27-Mar-22			S5SDBC1670		'			
S5SDBC1670	Mobilisation	15 09-Sep-22	A 23-Sep-22 A	27-Mar-22	27-Mar-22		S5SDBC1650, S5SDBC1660	S5SDBC1430, S5SDBC1480, S5SDBC1520, S5SDBC1410, S5SDBC1500, S5SDBC1115, S5SDBC1265					
E&M Installation		487 06-Jun-22	A 30-Nov-23	06-May-22	16-Oct-23	-45	j.						
Basement		320 15-Jan-23	30-Nov-23	30-Jul-22	16-Oct-23	-45	i						
Mechanical		248 15-Jan-23	19-Sep-23	30-Jul-22	16-Mar-23	-187	'						
S5SDBC1105	Installation of Centrate Transfer Pumps (3 nos.)	7 02-Apr-23	08-Apr-23	12-Sep-22	18-Sep-22	-202	S5SDBP1295	S5SDBC1400,	1				
	Installation of Recirculation Pumps for Centrate Tank, Sludge Blend Tanks & THP by-pass	14 09-Apr-23	22-Apr-23	19-Sep-22	· ·		S5SDBP1185,	S5SDBT1080,	1				
	Sludge Holding Tank (6 nos,)	, , , ,		1-			S5SDBC1670,	S5SDBC1400					
	Installation of Process Water Pumps (3 nos.)	7 01-May-23		_	30-Jan-23		S5SDBP1495,	S5SDBT1080,					
	Installation of External Sludge Transfer Pumps (2 nos.)	7 15-Jan-23	21-Jan-23	24-Jan-23			S5SDBP1085	S5SDBT1080,	4				
	Installation of Sludge Dewatering Polymer Transfer Pumps (2 nos.)	7 16-Mar-23	22-Mar-23	10-Jan-23			S5SDBP1345	S5SDBT1080,					
S5SDBC1165	Installation of THP by-pass Sludge Holding Tank Transfer Pumps (4 nos.)	7 16-Mar-23	22-Mar-23	10-Jan-23	16-Jan-23	-65	S5SDBP1475, S5SDBP1185,	S5SDBT1080, S5SDBC1400,					
S5SDBC1175	Installation of Thickening Centrifuges Feed Pumps (4 nos.)	7 23-Mar-23	29-Mar-23	17-Jan-23	23-Jan-23	-65	000004445	S5SDBT1080,	1				
	Installation of Dewatering Centrifuges Feed Pumps (3 nos.)	7 23-Mar-23	29-Mar-23	17-Jan-23			S5SDBP1455,	S5SDBT1080,	1				
	Installation of Dewatering Polymer Powder Feed Units	45 24-Feb-23	09-Apr-23	30-Jul-22	12-Sep-22	-209	S5SDBP1385,	S5SDBC1710,					
S5SDBC1275	Installation of Dewatering Polymer Preparation Tanks	45 13-Mar-23	26-Apr-23	07-Dec-22	20-Jan-23	-96	S5SDBP1365	S5SDBC1560		•			
S5SDBC1285	Installation of Polymer Mixer	30 02-Apr-23	01-May-23	15-Feb-23	16-Mar-23	-46	S5SDBP1335,	S5SDBT1160					
	File Name: DF/2018/03 RP R28 Remaining Work	T						DE /2015/55	•	Date	Revision	Checked	d Approve
	File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) - Remaining Work Critical Activity			Shak V	M., U., E4			DE/2018/03	s n Works Stage 1	31-Jul-22	Rev24	LT	KM

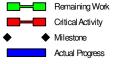
Layout: DE1803 RP (Nov 2022) -WBS Page 38 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	IT	KM

activity ID	Activity Name	Original Early Start	Early Finish	Late Start		oat Predecessors	Successors	9 2020 2021	2022	2023	2024	2025 [2
0500004001		00 00 1100	10.0	04 1 00	01.14 00 0	05000001100	0500074404	<u> </u>				
	5 Installation of Instruments	60 22-Jul-23	19-Sep-23	01-Jan-23		02 S5SDBC1400	S5SDBT1181	-				
S5SDBC1400	D Installation of Process Pipe	120 23-Apr-23	20-Aug-23			02 S5SDBC1115,	S5SDB11100,	<del>-</del>				
Electrical		235 10-Apr-23	30-Nov-23	13-Sep-22	16-Oct-23 -	45						
S5SDBC1072	2 Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	50 20-Apr-23	08-Jun-23	29-Jul-23	16-Sep-23 1	00 S5SDBC1710	S5SDBC1074			-		
S5SDBC1074	Installation of Electrical System - Lighting and Small Power Accessories	30 09-Jun-23	08-Jul-23	17-Sep-23	16-Oct-23 1	00 S5SDBC1072	S5SDBT1120			-		
\$5\$DBC100F	5 Installation of Control Cable Laying	40 29-Jul-23	06-Sep-23	01-Jan-23	09 Fob 23 - 2	09 S5SDBC1710	\$5\$DBC1730			_		
	D Installation of Electrical System - Cable Containment	30 10-Apr-23	09-May-23	13-Sep-22		09 S5SDBC1710	-			_   _		
	D Installation of SCADA System / Control Monitoring System	50 10-Apr-23	30-Nov-23	10-Feb-23		44 S5SDBC1265,						
Ground Floor	installation of SOADA System / Control Monitoring System	445 06-Jun-22 A		06-May-22		-3	3330011100	-				
		440 00 0dil 2270	10 001 20	00 May 22	10 001 20	o e						
Mechanical		363 06-Jun-22 A	29-Jul-23	18-Sep-22	30-Apr-23 -	90						
S5SDBC1430	Installation of A-Frame (Effected by NCE-PMI-0325)	3 06-Jun-22 A	06-Jun-22 A	18-Sep-22	18-Sep-22	S5SDBC1670	S5SDBC1560,	<del> </del>				
	O Installation of Monorail LA-01-01	60 25-Dec-22*	22-Feb-23	· ·			S5SDBC1810	1				
	O Installation of Silo & Conveyor	60 31-Mar-23	29-May-23	15-Feb-23			S5SDBT1068	<del>          -</del>				
	Installation of Process Pipe	90 01-Apr-23	29-Jun-23		- 1 -		S5SDBT1100.	1				
	Installation of Sludge Thickening Polymer Preparation Tanks	45 01-Feb-23	17-Mar-23	17-Dec-22			S5SDBT1058.	1				
	Installation of THP Feed Pumps (4 nos.)	7 03-Mar-23	09-Mar-23	24-Jan-23		38 S5SDBP1235	S5SDBT1080,	1				
	D Installation of PS Screen Feed Pumps (3 nos.)	7 15-Jan-23	21-Jan-23	17-Jan-23		2 S5SDBP1145	S5SDBT1080,	1				
	Installation of Sludge Thickening Polymer Transfer Pumps (2 nos.)	7 16-Mar-23	22-Mar-23	24-Jan-23			S5SDBT1080,	<del> </del>				
	Installation of Instruments	60 31-May-23	29-Jul-23	01-Jan-23		50 S5SDBC1460	S5SDBT1181	1		<u> </u>		
	D Installation of DOU Ductworks	45 06-Mar-23	19-Apr-23	17-Mar-23		11 S5SDBP1585	S5T1060	1		,		
	Position of Sludge Skips and Installation of Hydraulic System	14 15-Jul-23	28-Jul-23	17-Apr-23	· .		S5T1060	1				
Electrical	- Contain the Change on the area in State and Contain the Change of the	310 14-Dec-22	19-Oct-23	06-May-22	·	-3	0011000	<mark> </mark>				
				-		-		<u> </u>				
S5SDBC1172	2 Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	50 23-Dec-22	10-Feb-23	29-Jul-23	16-Sep-23 2	18 S5SDBC1680	S5SDBC1174					
959DBC117/	Installation of Electrical System - Lighting and Small Power Accessories	30 11-Feb-23	12-Mar-23	17-Sep-23	16 Oct 22 2	18 S5SDBC1172	CECUPT1120	-				
3330001174	installation of Electrical System - Eighting and Small Tower Accessories	30 11-1 60-23	12-IVIA1-23	17-0ep-20	10-001-23 2	3330001172	333DB11120					
S5SDBC1195	Installation of Control Cable Laying	30 12-Jun-23	11-Jul-23	21-Jan-23	19-Feb-23 -1	42 S5SDBC1680	S5SDBC1700	1		•		
	5 Installation of Power Cable Laying and Termination	60 24-Jun-23	22-Aug-23	27-Dec-22			S5SDBT1060	1		<b>—</b>		
	TX Room Installation	90 15-Jul-23	12-Oct-23	13-Nov-22		44 S5SDBP1620	S5SDBT1190	1				
	LV Switchroom Installation	60 16-May-23	14-Jul-23	28-Oct-22		00 S5SDBC1670,		<del> </del>          -				
	Installation of Electrical System - Cable Containment	30 14-Dec-22	12-Jan-23			22 S5SDBC1480,		1				
	Installation of SCADA System / Control Monitoring System	40 10-Sep-23	19-Oct-23	-		02 S5SDBP1180,		1		•		
First Floor	, , , , , , , , , , , , , , , , , , , ,	359 07-Dec-22	30-Nov-23		16-Oct-23 -							
Mechanical		00F 07 Dec 00	00 Ave 00	10 10 00	15 Amy 00 1	0.5						
Mechanical		265 07-Dec-22	28-Aug-23	19-Aug-22	15-Apr-23 -1	35						
S5SDBC1312	2 Installation of Mixer for Digested Sludge Holding Tank	10 10-Apr-23	19-Apr-23	07-Mar-23	16-Mar-23 -	34 S5SDBP1465,	S5SDBT1160			1		
S5SDBC1314	Installation of Mixer for PS holding tank	10 31-May-23	09-Jun-23	07-Mar-23	16-Mar-23 -	85 S5SDBP1195,	S5SDBT1160			•		
S5SDBC1325	Installation of Sludge Thickening Polymer Dosing Pumps (5 nos.)	7 22-Jan-23	28-Jan-23	10-Mar-23		47 S5SDBP1355,	S5SDBT1080,					
S5SDBC1530	Installation of EOT Crane LA-01-03	60 17-Jan-23*	17-Mar-23	18-Sep-22	16-Nov-22 -1	21 S5SDBC1430,	S5SDBC1570					
S5SDBC1540	Installation of EOT Crane LA-01-02	60 07-Dec-22*	04-Feb-23	19-Aug-22	17-Oct-22 -1	10 S5SDBP1545,	S5SDBC1580,					
	O Installation of Monorail LA-01-04	30 25-Dec-22*	23-Jan-23	25-Nov-22			S5SDBC1440					
	Installation of Sludge Dewatering / Thickening Polymer Dilution Tanks	45 27-Apr-23	10-Jun-23	21-Jan-23		96 S5SDBC1430,	S5SDBT1058,					
	Installation of Sludge Thickening Centrifuges (4 nos.)	90 18-Mar-23	15-Jun-23	17-Nov-22			S5SDBT1032,			-		
	Installation of Sludge Dewatering Centrifuges (3 nos)	90 05-Feb-23	05-May-23	17-Dec-22		· ·	S5SDBT1070,			•		
	Installation of Screen Press	30 05-Feb-23	06-Mar-23	05-Feb-23		0 S5SDBC1430,	S5SDBT1170,	1				
	Installation of Mixer for Polymer Tank	10 11-Jun-23	20-Jun-23	07-Mar-23		96 S5SDBP1335,	S5SDBT1160	_		I		
	Installation of Sludge Dewatering Polymer Dosing Pumps (4 nos.)	7 15-Jan-23	21-Jan-23	03-Mar-23		47 S5SDBP1355	S5SDBT1080,	_				
	Installation of Process Pipe	120 01-Apr-23	29-Jul-23	17-Nov-22		35 S5SDBP1555,	S5SDBT1100,	1				
	0 Installation of Instruments	45 15-Jul-23	28-Aug-23	02-Mar-23		35 S5SDBC1620	S5SDBT1181	_		-		
Electrical		305 30-Jan-23	30-Nov-23	05-Jun-22	16-Oct-23 -	45						
S5SDBC1372	2 Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	45 01-Mar-23	14-Apr-23	03-Aug-23	16-Sep-23 1	55 S5SDBC1740	S5SDBC1374					
S5SDBC1374	4 Installation of Electrical System - Lighting and Small Power Accessories	30 15-Apr-23	14-May-23	17-Sep-23	16-Oct-23 1	55 S5SDBC1372	S5SDBT1120					
200550107-	Eginary and Citatin Citot / Nococonico	00 10 / 101 20					3003511120					
S5SDBC1375	5 LV Switchroom Installation	60 24-May-23	22-Jul-23	26-Nov-22	24-Jan-23 -1	79 S5SDBP1223	S5SDBC1225			<u> </u>		
		ı							Data	Dourisia.	Checked	Approved
	File Name: DE/2018/03 RP R28 Remaining Work					Contract No	DE /2019 /02	•	Date	Revision	Checked	Approved

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 39 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish	Total Predecessors	Successors	9 2020 2021	2022	2023	2024	2025
		Duration				Float		J S J J J J A J J J J S	J J J J J A J J A J 5	3733111111	J J A J J J J J J J J J J J J J J J J J	JJ4 23333333
S5SDBC1740	Installation of Electrical System - Cable Containment	30 30-Jan-23	28-Feb-23	05-Jun-22	04-Jul-22	-239 S5SDBC1680	. S5SDBT1060.		<del>                                      </del>	<del>1444444444</del>	<u> </u>	114444444
	Installation of SCADA System / Control Monitoring System	50 12-Oct-23	30-Nov-23	10-Feb-23		-244 S5SDBC1740	, , , , , , , , , , , , , , , , , , , ,					
	Installation of Control Cable Laying	30 07-Sep-23	06-Oct-23	11-Jan-23		-239 S5SDBC1740	·	<del> </del>	<del></del>	├ <del> </del> <del> </del>		
BS Installation	Installation of control cable Eaying	351 21-Nov-22	06-Nov-23	27-Mar-22		56	0000001700					
DO INSTANCTON		331 21-1104-22	00-1100-23	27-IVIQ1-22	01-Jai1-24	30						
Basement		150 11-Dec-22	09-May-23	16-Apr-22	01-Jan-24	237						
S5SDBC1052	Installation of FS System - Branch Pipework, Conduit & Wiring	40 31-Dec-22	08-Feb-23	13-Aug-23	21-Sep-23	225 S5SDBC1410	S5SDBC1054, S5S1130					
S5SDBC1054	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	30 09-Feb-23	10-Mar-23	02-Oct-23	31-Oct-23	235 S5SDBC1052						
	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	40 30-Jan-23	10-Mar-23	08-Aug-23		190 S5SDBC1420		<del> </del> iiiiii		<del>    </del>		
0000001002	The analysis of the second sec	40 00 001 20	10 Wai 20	00 / lug 20	10 OCP 20	130 0000001420	0000001004					
S5SDBC1064	Installation of MVAC System - Air Grills & Diffuser	30 11-Mar-23	09-Apr-23	17-Sep-23	16-Oct-23	190 S5SDBC1062	S5SDBT1140					
S5SDBC1082	Installation of Plumbing System - Branch Pipework	40 01-Mar-23	09-Apr-23	24-Oct-23	02-Dec-23	237 S5SDBC1720	S5SDBC1084			•		
S5SDBC1084	Installation of Plumbing System - Sanitary Fitting	30 10-Apr-23	09-May-23	03-Dec-23	01-Jan-24	237 S5SDBC1082	S5SDBT1150					
S5SDBC1410	Installation of FS System - Main Pipework	30 11-Dec-22	09-Jan-23	16-Apr-22	15-May-22	-239 S5SDBC1670	, S5SDBC1420,					
				·		S5SDBC1480	S5SDBC1052, S5SDBC1710, S5SDBC1630					
S5SDBC1420	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	30 10-Jan-23	08-Feb-23	19-Jun-23	18-Jul-23	160 S5SDBC1410 S5SDBC1490						
							S5SDBC1720					
S5SDBC1720	Installation of Plumbing System - Main Pipework	30 09-Feb-23	10-Mar-23	04-Sep-23	03-Oct-23	207 S5SDBC1690						
round Floor		351 21-Nov-22	06-Nov-23	27-Mar-22	01-Jan-24	S5SDBC1420	S5SDBC1750					
S5SDBC1152	Installation of FS System - Branch Pipework, Conduit & Wiring	30 01-Dec-22	30-Dec-22	23-Aug-23	21-Sep-23	265 S5SDBC1480	S5SDBC1154, S5S1130					
S5SDRC1154	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	20 31-Dec-22	19-Jan-23	12-Oct-23	31-Oct-23	285 S5SDBC1152	S5SDBT1130					
	The state of the s								<u> </u>	<del></del>		
DUOUBU1162	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	40 31-Dec-22	08-Feb-23	08-Aug-23	16-Sep-23	220 S5SDBC1490	S5SDBC1164					
S5SDBC1164	Installation of MVAC System - Air Grills & Diffuser	30 09-Feb-23	10-Mar-23	17-Sep-23	16-Oct-23	220 S5SDBC1162	S5SDBT1140	1				
	Installation of Plumbing System - Branch Pipework	40 30-Jan-23	10-Mar-23	24-Oct-23	02-Dec-23	267 S5SDBC1690	S5SDBC1184	1				
	Installation of Plumbing System - Sanitary Fitting	30 11-Mar-23	09-Apr-23	03-Dec-23		267 S5SDBC1182				•		
	Installation of FS System - Main Pipework	20 21-Nov-22	10-Dec-22	27-Mar-22		-239 S5SDBC1670				T I I I		
0002201100	modulation of a system main perioric	20 21 1107 22	10 200 22	27 War 22	1074.22	250 333251070	S5SDBC1680, S5SDBC1690, S5SDBC1152, S5SDBC1410					
S5SDBC1490	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	30 11-Dec-22	09-Jan-23	20-May-23	18-Jun-23	160 S5SDBC1480	S5SDBC1162, S5SDBC1690, S5SDBC1420					
35SDBC1500	Generator & Fuel Room Installation	90 09-Aug-23	06-Nov-23	18-Nov-22	15-Feb-23	-264 S5SDBP1200 S5SDBC1670 S5S1010	S5SDBT1078			-		
S5SDBC1690	Installation of Plumbing System - Main Pipework	30 10-Jan-23	08-Feb-23	05-Aug-23	03-Sep-23	207 S5SDBC1480 S5SDBC1490						
S5SDBC1770	Installation of Lift	120 13-Mar-23	10-Jul-23	01-Sep-23	29-Dec-23	172 S5SDBP1210	S5SDBT1110					
st Floor		150 10-Jan-23	08-Jun-23	16-May-22	01-Jan-24	S5WS2C1190						
65SDBC1352	Installation of FS System - Branch Pipework, Conduit & Wiring	30 20-Jan-23	18-Feb-23	23-Aug-23	21-Sep-23	215 S5SDBC1630	S5SDBC1354,		<u> </u>			
	, , , , , , , , , , , , , , , , , , , ,			3 -3	= =		S5S1130					
5SDBC1354	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	20 19-Feb-23	10-Mar-23	12-Oct-23	31-Oct-23	235 S5SDBC1352	S5SDBT1130	1				
	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	40 01-Mar-23	09-Apr-23	08-Aug-23								
NEODDO4004	Installation of MI/AC Customs Air C. 11- 0 Diff.	00 40 4 00	00.14-: 00	17.0- 00	10.0-1.00	100 0500001000	OFODDT44.40					
	Installation of MVAC System - Air Grills & Diffuser	30 10-Apr-23	09-May-23	17-Sep-23		160 S5SDBC1362						
POSDRC1630	Installation of FS System - Main Pipework	20 10-Jan-23	29-Jan-23	16-May-22	04-Jun-22	-239 S5SDBC1410	S5SDBC1352, S5SDBC1740,					
							S5SDBC1640					
S5SDBC1640	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	30 09-Feb-23	10-Mar-23	19-Jul-23	17-Aug-23	160 S5SDBC1420						
S5SDBC1750	Installation of Plumbing System - Main Pipework	30 11-Mar-23	09-Apr-23	04-Oct-23	02-Nov-23	S5SDBC1630 207 S5SDBC1640				•		
				1. 55( 25	25	S5SDBC1720						
	Installation of Plumbing System - Branch Pipework	40 31-Mar-23	09-May-23		02-Dec-23					<b>-</b>		
S5SDBC1830	Installation of Plumbing System - Sanitary Fitting	30 10-May-23	08-Jun-23	03-Dec-23	01-Jan-24	207 S5SDBC1820	S5SDBT1150					
	File Name: DF/2018/03 RP R28 Remaining Work					0	DE /2040 /20	·	Date	Revision	Checked	Appro
	The Name: 5E/2010/03 NT 1320			_			. DE/2018/03		31-Jul-22	Rev.24	LT	KM
	Layout: DE1803 RP (Nov 2022) - Critical Activity			Shek V	Vu Hui Efi	fluent Polishin	g Plant - Maii	n Works Stage 1	31-Aug-22	Rev25	l <sub>I</sub> T	KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 40 of 58 Remaining Work
Critical Activity

Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 26 1 3 1 J J J J J J J J J J J J J J J J J
Testing and Co	nmissioning	244 01-May-23	30-Dec-23	27-Dec-22	27-Feb-24	- 59			
S5SDBT1032	SAT for Sludge Thickening Cnetrifuge	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, S5SDBT1010, S5SDBT1032, S5SDBT1047, S5SDBT1047, S5SDBT1058, S5SDBT11068, S5SDBT1120, S5SDBT1120, S5SDBT1140, S5SDBT1140, S5SDBT1140, S5SDBT1150, S5SDBT1180, S5SDBT1181, S5SDBT1181, S5SDBT1044, S5SDBT1044, S5SDBT1045, S5SDBT1045, S5SDBT1045,	
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		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, S5SDBC1115, S5SDBC1125, S5SDBC1145, S5SDBC1145, S5SDBC1165, S5SDBC1175, S5SDBC1185, S5SDBC1180, S5SDBC1610, S5SDBC1610, S5SDBC1105, S5SDBC1105, S5SDBC1105,	S5SDBT1044, S5SDBT1047	
S5SDBT1090	SAT for Switchboard	60 15-Jul-23	12-Sep-23	27-Dec-22	24-Feb-23	-200	S5SDBC1520	S5SDBT1060	<del> </del>
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	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 41 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9 2020 2021   3   J   JJA   J   JJ   3   J	2022	2023	2024 J   J J A	2025 J   J J A
S5SDBT1130	SAT of FS System	30	01-Nov-23	30-Nov-23	01-Nov-23	30-Nov-23	0 S5SDBC1354,	S5S1220	<u> </u>		5373311111	1111112323322	2 233333333
3332211130	OAI UIT O GYSIEITI	30	01-1101-23	30-1107-23	01-1101-23	30-1101-23	S5SDBC1354, S5SDBC1154, S5SDBC1054, S5SDBT1060	3331220					
S5SDBT1140	SAT of MVAC System	45	01-Nov-23	15-Dec-23	17-Oct-23	30-Nov-23	-15 S5SDBC1364,	S5S1220	1		_		
							S5SDBC1164, S5SDBC1064, S5SDBT1060						
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 Tranformer	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 8	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			1			
S5CHPP1030	Delivery of CHP Generators		02-May-22 A			15-Sep-22		S5CHPC1050					
S5CHPP1040	Fabrication & Delivery of Gas Detection System		30-Jul-23	26-Dec-23		•	-259 S2D2000, PL1020	S5CHPC1120, S5CHPC1250					
S5CHPP1050	Fabrication & Delivery of LV Switchboard for G/F		07-Mar-23*	25-Jul-23		13-Dec-22		S5CHPC1145	_				
S5CHPP1055 S5CHPP1060	Fabrication & Delivery of LV Switchboard for 1/F Fabrication & Delivery of Lifting Appliances		21-Feb-23* 24-Aug-22 A	04-Jul-23	-	13-Dec-22 16-Jun-22		S5CHPC1260 S5CHPC1030,		_   <u>_                                 </u>			
33CHFF 1000	Padrication & Delivery of Litting Appliances	90	24-Aug-22 A	31-Dec-22	07-iviay-22	10-Juli-22	-190	S5CHPC1160, S5CHPC1040					
S5CHPP1070	Fabrication & Delivery of Pipeworks & Associated Valves		21-Nov-22	04-Jan-23		,	-109 S5P1010	S5CHPC1070, S5CHPC1200					
S5CHPP1080	Delivery of Control & Monitoring System / SCADA System		01-Jan-23*	26-Dec-23	•	11-Apr-23		S5CHPC1120, S5CHPC1250				1	
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						
E&M Installation		390	01-Jan-23	25-Jan-24	17-Jun-22	11-May-23	-259				1 1		<u> </u>
Ground Floor		390	01-Jan-23	25-Jan-24	17-Jun-22	11-May-23	-259						
	File Name: DE/2018/03 RP R28 Remaining Work		I							Date	Revision	n Checked	Appro
	File Name: DE/2018/03 RP R28  Layout: DE1803 RP (Nov 2022) - Critical Activity						Contract No.	DE/2018/03		31-Jul-22	Rev.24	LT	KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 42 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ctivity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9
S5CHPC1030	Installation of EOT Crane LA-04-01	90 01-Jan-23	31-Mar-23	17-Jun-22	14-Sep-22	-198	S5CHPC1020,	S5CHPC1050	<u>-  </u>
SECUDO1040	Installation of Monorail LA-04-02 (total 3nos.)	60 01-Jan-23	01-Mar-23	15 Jul 22	10 Can 00	170	S5CHPP1060 S5CHPC1020,	SECUDO1160	
S5CHPC1040	Installation of Monoral LA-04-02 (total 3nos.)	60 01-Jan-23	U1-IVIAT-23	15-Jul-22	12-5ep-22	-170	S5CHPC1020, S5CHPP1060	S5CHPC1060, S5CHPC1060	
S5CHPC1050	Installation of CHP System - Mechanical Work	150 01-Apr-23	28-Aug-23	15-Sep-22	11-Feb-23	-198		S5CHPC1100, S5CHPT1030, S5CHPC1270	
S5CHPC1060	Installation of Steam Boiler System - Mechanical Work	90 22-Jan-23	21-Apr-23	05-Aug-22	02-Nov-22	-170	S5CHPC1040	S5CHPC1070, S5CHPC1150, S5CHPC1170, S5CHPT1050	
S5CHPC1070	Installation of pipework	180 22-Jan-23	20-Jul-23	18-Sep-22	16-Mar-23	-126	S5CHPC1060, S5CHPP1070	S5CHPT1000	
S5CHPC1100	Installation of Electrical System	120 15-Jul-23	11-Nov-23	01-Jan-23	30-Apr-23	-195	S5CHPC1090, S5CHPC1050, S5P1050	S5CHPC1120, S5CHPT1050, S5CHPT1030	
S5CHPC1120	Installation of SCADA System / Control Monitoring System / Gas Detection System / CCTV	90 28-Oct-23	25-Jan-24	11-Feb-23	11-May-23	-259	S5CHPC1100, S5CHPP1040, S5CHPP1080	S5T1100, S5T1000, S5T1010, S5T1020, S5T1030	
S5CHPC1130	Transfomers Room Installation	120 12-Apr-23	09-Aug-23	15-Oct-22	11-Feb-23	-179	S5WS2P1020, S5CHPC1020	S5CHPT1020, S5CHPC1260, S5CHPT1010	
S5CHPC1140	HV Switchroom Installation	120 29-Jan-23	28-May-23	14-Nov-22	13-Mar-23	-76	S5CHPC1020, S5WS2P1080	S5CHPT1020, S5CHPT1010	
S5CHPC1145	LV Switchroom Installation	90 26-Jul-23	23-Oct-23	14-Dec-22	13-Mar-23	-224		S5CHPT1010, S5CHPT1020	
S5CHPC1150	Diesel Storage & Pump Room Installation	150 23-Mar-23	19-Aug-23	04-Oct-22	02-Mar-23	-170	S5CHPC1060	S5S1280	<del> </del>
First Floor		355 05-Feb-23	25-Jan-24	18-Sep-22	11-May-23	-259			
S5CHPC1160	Installation of Monorail / Davit LA-04-03 to LA-04-10 (total 8nos.)	90 02-Mar-23	30-May-23	17-Nov-22	14-Feb-23	-105	S5CHPC1040, S5CHPP1060	S5CHPC1170	
S5CHPC1170	Installation of Biogas Pre-treatment System - Mechanical Work	150 05-Feb-23	04-Jul-23	18-Sep-22	14-Feb-23	-140	S5CHPC1160,	S5CHPC1200, S5CHPC1230, S5CHPT1040	
S5CHPC1200	Installation of pipework	180 05-Feb-23	03-Aug-23	18-Sep-22	16-Mar-23	-140	S5CHPC1170, S5CHPP1070	S5CHPT1000	
S5CHPC1230	Installation of Electrical System	120 06-May-23	02-Sep-23	12-Jan-23	11-May-23	-114	S5CHPC1170, S5P1050	S5CHPC1250, S5CHPT1040	
	Installation of SCADA System / Control Monitoring System / Gas Detection System / CCTV	90 28-Oct-23	25-Jan-24	11-Feb-23	11-May-23	-259	S5CHPC1230, S5CHPP1040, S5CHPP1080	S5T1000.	
S5CHPC1260  Roof  S5CHPC1270	LV Switchroom Installation	90 05-Jul-23	02-Oct-23	14-Dec-22	13-Mar-23	-203	S5WS2P1110, S5CHPC1130, S5CHPP1055	S5CHPT1020, S5CHPT1010	
Roof		210 01-Apr-23	27-Oct-23	15-Sep-22	12-Apr-23	-198			
S5CHPC1270	Installation of CHP System - Mechanical Work	180 01-Apr-23	27-Sep-23	15-Sep-22	13-Mar-23	-198	S5CHPC1050	S5CHPT1030, S5CHPC1280, S5CHPC1290	
S5CHPC1280	Installation of Steam Boiler System - Mechanical Work	120 31-May-23	27-Sep-23	14-Nov-22	13-Mar-23	-198	S5CHPC1270	S5CHPT1050, S5CHPC1290	
S5CHPC1290	Installation of Electrical System	60 29-Aug-23	27-Oct-23	12-Feb-23	12-Apr-23	-198	S5CHPC1270, S5CHPC1280, S5P1050	S5CHPT1040, S5CHPT1020	
BS Installation		330 04-Dec-22	29-Oct-23	03-Oct-22	31-Jan-24	94			
Ground Floor		210 04-Dec-22	01-Jul-23	03-Oct-22	31-Jan-24	214			
S5CHPC1080	Installation of FS System	90 04-Dec-22	03-Mar-23	03-Oct-22	31-Dec-22	-62	S5CHPC1020	S5CHPC1090, S5CHPC1110, S5CHPC1210, S5S1220	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 43 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9
S5CHPC1000	Installation of MVAC System	120 04-Mar-23	01-Jul-23	01- lan-23	30-Apr-23	-62	S5CHPC1080	S5CHPC1100,	<del>[</del>
030111 01030	Installation of MAAO System	120 04-Wai-20	01-0ui-20	01-0411-25	30-Api-20	-02	030111 01000	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	
esting and Comn	missioning	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	S5BIOT1010, S5THPT1010, S5CHPT1040,	
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		S5CHPC1060, S5CHPC1100, S5CHPT1020, S5CHPC1280, S5CHPT1000	S5T1100	
Rm & LV Switch	hroom (for UV)	389 21-Nov-22	14-Dec-23	31-May-22	11-May-23	-217			
abrication, FAT &	k Delivery of Major Plant & Materials	296 21-Nov-22	12-Sep-23	31-May-22	25-Feb-23	-199			
S5TXRP1000	Fabrication & Delivery of Transfomers -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	
nstallation		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			S5TXRC1020	
S5TXRC1010	Access to TX Rm & LV Switchroom (Impacted by EWN-0314-1)	1 21-Nov-22*	21-Nov-22	-	12-Aug-22			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 Transfomers in Tx Rm	60 04-Apr-23	02-Jun-23	12-Oct-22	10-Dec-22	-174	S5TXRC1020, S4C1010, S5TXRP1000,	S5TXRC1040, S5TXRT1000	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 44 of 58 Hemaning Work
Critical Activity
Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total   Float	Predecessors	Successors	9		2023	2024	2025 .[ ] [ ] [ ] [ ] [ ]
057/201010	FOM locatellating of LVOD		44 Nov. 00	44 D 00	00 5-1- 00		DET/DO4000	OFTVDT1010		123	3733111111	11112222222	2 233333333
S5TXRC1040	E&M Installation of LVSB	60 13-Sep-23	11-Nov-23	11-Dec-22	08-Feb-23	:	S5TXRC1030, S5TXRP1010, S5P1050	S5TXRT1010, S5TXRT1000					
S5TXRC1050	Installation of Control & Monitoring System - UV	75 22-Mar-23	04-Jun-23	26-Feb-23	11-May-23	:	54C1040, 55TXRP1020, 54C1070, 54C1080	\$5T1200, \$5T1120, \$5T1000, \$5T1010, \$5T1020, \$5T1030, \$5T1000, \$5T1010, \$5T1020, \$5T1030, PL1210					
Testing and Comm	nissioning	33 12-Nov-23	14-Dec-23	09-Feb-23	13-Mar-23	-276							
S5TXRT1000	SAT for Transformer & Switchboard	30 12-Nov-23	11-Dec-23	09-Feb-23	10-Mar-23			S5TXRT1010			-		
S5TXRT1010	Ready for Power Energisation	3 12-Dec-23	14-Dec-23	11-Mar-23	13-Mar-23		S5TXRC1030 S5TXRC1020,	SC51110,	-				
						:	S5TXRC1040, S5WS2C1060, S5WS2C1040, S5WS2C1130, S5TXRT1000	S5SHPT1000, S5DOUT1000,					
Sludge Digesters &	k Distribution Chamber	798 06-Nov-21 A	27-Jan-24	17-Apr-22	31-Jan-24	4							
Fabrication, FAT &	Delivery of Major Plant & Materials	766 06-Nov-21 A	26-Dec-23	17-Apr-22	11-Apr-23	-259							
S5DIGP1000	Fabrication & Delivery of Sludge Digestion System	180 06-Nov-21 A	30-Dec-22	22-Jul-22	30-Aug-22	-122	S2P1020, S2D1450	S5DIGC1210	'				
S5DIGP1010	Fabrication & Delivery of FRP Walkway / Cover	90 01-Mar-22 A	14-Dec-22	24-Jul-22	16-Aug-22	-120	S2P1020	S5DIGC1040					
S5DIGP1020	Fabrication & Delivery of Pipeworks & Associated Valves	60 27-Nov-22	25-Jan-23	05-Aug-22	03-Oct-22	-114	S5P1010	S5DIGC1110, S5DIGC1150, S5DIGC1190, S5DIGC1250					
S5DIGP1050	Delivery of Control & Monitoring System / SCADA System	360 01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5DIGC1270					
Installation		431 21-Nov-22	25-Jan-24	02-Aug-22	31-Jan-24	6							
S5DIGC1000	Access to Sludge Digesters & Distribution Chamber (Impacted by EWN-0314)	1 21-Nov-22*	21-Nov-22	02-Aug-22	02-Aug-22	-111		S5DIGC1030					
S5DIGC1010	Access to Sludge Digester No.1 & Distribution Chamber (Impacted by EWN-0314-1)	1 21-Nov-22*	21-Nov-22	02-Aug-22	02-Aug-22	-111		S5DIGC1030					
S5DIGC1020	Access to Sludge Digesters - Remaining (Impacted by EWN-0314-1)	1 21-Nov-22*	21-Nov-22	03-Nov-22	03-Nov-22	-18		S5DIGC1050					
S5DIGC1030	Mobilisation	14 22-Nov-22	05-Dec-22	03-Aug-22	16-Aug-22		AD1080, S5DIGC1000, S5DIGC1010	S5DIGC1210, S5DIGC1040					
E&M Installation		407 15-Dec-22	25-Jan-24	17-Aug-22	11-May-23	-259							
FRP Walkway / Cov	ver Installation	166 15-Dec-22	29-May-23	17-Aug-22	15-Apr-23	-44							
S5DIGC1040	Installation of Working Platform for Digester 1 (Roof)	14 15-Dec-22	28-Dec-22	17-Aug-22	30-Aug-22		S5DIGP1010,	SC51110, PL1210, PL1310, S5DIGC1050, S5DIGC1090, S5DIGC1210		C.			
S5DIGC1050	Installation of Working Platform for Digester 3 (Roof)	14 29-Dec-22	11-Jan-23	04-Nov-22	17-Nov-22	-55	S5DIGC1040, S5DIGC1020	S5DIGC1060, S5DIGC1130					
S5DIGC1060	Installation of Working Platform for Digester 4 (Roof)	14 12-Jan-23	25-Jan-23	29-Nov-22	12-Dec-22	-44	S5DIGC1050	S5DIGC1070, S5DIGC1170					
S5DIGC1070	Installation of Working Platform for Distribution Chamber & Overflow Chamber	110 26-Jan-23	15-May-23	13-Dec-22	01-Apr-23	-44	S5DIGC1060	S5DIGC1080	1	_	-		
S5DIGC1080	Installation of Working Platform for Digester 2 (Roof)	14 16-May-23	29-May-23	02-Apr-23	-		S5DIGC1070	S5DIGT1020			•		
Sludge Digester 1		73 29-Dec-22	11-Mar-23	06-Sep-22	17-Nov-22	-114							
S5DIGC1090	Installation of Sludge Mixer (4 nos.)	14 29-Dec-22	11-Jan-23		•		S5DIGC1040	S5DIGC1100	]		ļ		
S5DIGC1100	Installation of Motor with Belt adjustment	14 12-Jan-23	25-Jan-23		03-Oct-22			S5DIGC1110	4	<u> </u>			
S5DIGC1110	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45 26-Jan-23	11-Mar-23	04-Oct-22	1/-Nov-22	-114	S5DIGC1100, S5DIGP1020	S5DIGC1120, S5DIGC1130					
											_		
	File Name: DE/2018/03 RP R28 Remaining Work					Car	stract No.	DE/2018/03		Date	Revision	Checked	Approve

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 45 of 58

Critical Activity

Milestone

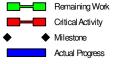
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

' ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	l Predecessors	Successors	9   2020   2021   2022   2023 	2024 2025
S5DIGC1120	Installation of Electrical System	45 26-Jan-23	11-Mar-23	04-Oct-22	17-Nov-22	-114	\$ S5DIGC1110,	S5DIGC1130,	<u>-1123 5573371111</u>	111111122222222233333
Sludge Digester 3		73 12-Mar-23	23-May-23	19 Nov 22	29-Jan-23	11.4	S5P1050	S5DIGT1010		
S5DIGC1130	Installation of Sludge Mixer (4 nos.)	14 12-Mar-23	25-Mar-23	18-Nov-22	01-Dec-22	-114	S5DIGC1120, S5DIGC1110, S5DIGC1050	S5DIGC1140		
S5DIGC1140	Installation of Motor with Belt adjustment	14 26-Mar-23	08-Apr-23	02-Dec-22	15-Dec-22	-114	\$5DIGC1130	S5DIGC1150		
S5DIGC1150	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45 09-Apr-23	23-May-23	16-Dec-22	29-Jan-23	-114	S5DIGC1140, S5DIGP1020	S5DIGC1160, S5DIGC1170		
S5DIGC1160	Installation of Electrical System	45 09-Apr-23	23-May-23	16-Dec-22	29-Jan-23	-114	S5DIGC1150, S5P1050	S5DIGC1170, S5DIGT1010		
Sludge Digester 4		73 24-May-23	04-Aug-23	30-Jan-23	12-Apr-23	-114	1			
S5DIGC1170	Installation of Sludge Mixer (4 nos.)	14 24-May-23	06-Jun-23	30-Jan-23	12-Feb-23	-114	S5DIGC1150, S5DIGC1160, S5DIGC1060	S5DIGC1180	•	
S5DIGC1180	Installation of Motor with Belt adjustment	14 07-Jun-23	20-Jun-23	13-Feb-23	26-Feb-23	-114	\$5DIGC1170	S5DIGC1190		
S5DIGC1190	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45 21-Jun-23	04-Aug-23	27-Feb-23	'		S5DIGC1180, S5DIGP1020	S5DIGC1200		
S5DIGC1200	Installation of Electrical System	45 21-Jun-23	04-Aug-23	27-Feb-23	12-Apr-23	-114	S5DIGC1190, S5P1050	S5DIGT1010	]	
Distribution Chambe	er	271 30-Apr-23	25-Jan-24	31-Aug-22	11-May-23	-259	9			
S5DIGC1210	Installation of Sludge Recirculation Pumps (5 nos.)	40 30-Apr-23*	08-Jun-23	31-Aug-22	09-Oct-22	-242	AD1080, S5DIGP1000, S5DIGC1030, S5DIGC1040	S5DIGC1220, S5DIGC1280	-	
S5DIGC1220	Installation of Heat Exchanger (3 nos.)	14 09-Jun-23	22-Jun-23	10-Oct-22	23-Oct-22	-242	S5DIGC1210	S5DIGC1230		
	Installation of Sludge Transfer Pump (2 nos.)	14 23-Jun-23	06-Jul-23	24-Oct-22			S5DIGC1220	S5DIGC1240		
	Installation of Vertical Mixer at Sludge Buffer Tank (2 nos.)	7 07-Jul-23	13-Jul-23	07-Nov-22			S5DIGC1230	S5DIGC1250	<u> </u>	
S5DIGC1250	Installation of Pipework, Valve & Instruments	150 14-Jul-23	10-Dec-23	14-Nov-22			S5DIGC1240, S5DIGP1020	S5DIGC1260, S5DIGT1000		
S5DIGC1260	Installation of Electrical System	150 14-Jul-23	10-Dec-23	14-Nov-22	12-Apr-23	-242	S5DIGC1250, S5P1050	S5DIGC1270, S5DIGT1010		
S5DIGC1270	Installation of SCADA & PLC System	90 28-Oct-23	25-Jan-24	11-Feb-23	11-May-23	-259	9 S5DIGC1260, S5DIGP1050	S5T1080, S5T1000, S5T1010, S5T1020, S5T1030, PL1210		
BS Installation		240 30-Apr-23	25-Dec-23	04-Jun-23	31-Jan-24	37	7			
Distribution Chambe	er	240 30-Apr-23	25-Dec-23	04-Jun-23	31-Jan-24	37	7			
S5DIGC1280	Installation of FS System	90 30-Apr-23	28-Jul-23	04-Jun-23	01-Sep-23	35	S5DIGC1210	S5DIGC1290, S5S1220		
S5DIGC1290	Installation of MVAC System	90 29-Jul-23	26-Oct-23	02-Sep-23	30-Nov-23	35	S5DIGC1280	S5DIGC1300, S5S1220		
S5DIGC1300	Installation of Plumbing System	60 27-Oct-23	25-Dec-23	03-Dec-23	31-Jan-24	37	7 S5S1120, S5DIGC1290	S5S1160	•	
Testing and Commi	issioning	123 27-Sep-23	27-Jan-24	31-Jan-23	30-May-23	-242	2			
S5DIGT1000	Pipe Pressure Test	75 27-Sep-23	10-Dec-23	31-Jan-23	· ·		S5DIGC1250	S5DIGT1020		
S5DIGT1010	Ready for Power Energisation	3 11-Dec-23	13-Dec-23	13-Apr-23	15-Apr-23	-242	2 S5DIGC1260, S5DIGC1200, S5DIGC1160, S5DIGC1120, S5WS2C1110, S5EXAC1030	S5DIGT1020		1
								S5T1080		
S5DIGT1020	SAT for Sludge Digestion System	45 14-Dec-23	27-Jan-24	16-Apr-23	30-May-23	-242	S5DIGC1080, S5DIGT1010, S5DIGT1000	5511080		
	SAT for Sludge Digestion System	45 14-Dec-23 735 29-Nov-21 A		16-Apr-23 26-May-22			S5DIGT1010, S5DIGT1000	5511080		
Workshop No. 2	SAT for Sludge Digestion System  Delivery of Major Plant & Materials		25-Jan-24		16-Apr-25	447	S5DIGT1010, S5DIGT1000	S511080		
Workshop No. 2 Fabrication, FAT & [		735 29-Nov-21 A	25-Jan-24	26-May-22	16-Apr-25 08-Sep-23	447 -109	S5DIGT1010, S5DIGT1000	S5WS2P1010		
Workshop No. 2 Fabrication, FAT & [	Delivery of Major Plant & Materials  Fabrication of 11kV to 380V Transfomers	735 29-Nov-21 A 705 29-Nov-21 A	25-Jan-24 26-Dec-23	26-May-22 26-May-22	16-Apr-25 08-Sep-23	-109 -179	S5DIGT1010, S5DIGT1000	S5WS2P1010		
Workshop No. 2 Fabrication, FAT & [	Delivery of Major Plant & Materials  Fabrication of 11kV to 380V Transfomers  File Name: DE/2018/03 RP R28	735 29-Nov-21 A 705 29-Nov-21 A	25-Jan-24 26-Dec-23	26-May-22 26-May-22 26-May-22	16-Apr-25 08-Sep-23 18-Jul-22	-109 -179	S5DIGT1010, S5DIGT1000	S5WS2P1010  DE/2018/03	31-Jul-22 Rev24	on Checked Appro
Workshop No. 2 Fabrication, FAT & [	Pelivery of Major Plant & Materials  Fabrication of 11kV to 380V Transfomers  File Name: DE/2018/03 RP R28	735 29-Nov-21 A 705 29-Nov-21 A	25-Jan-24 26-Dec-23 13-Jan-23	26-May-22 26-May-22 26-May-22	16-Apr-25 08-Sep-23 18-Jul-22 Vu Hui Ef	-109 -179 Co	S5DIGT1010, S5DIGT1000  S2P1110  Contract No.	S5WS2P1010  DE/2018/03 g Plant - Mai	31-Jul-22 Rev24 31-Aug-22 Rev25	on Checked Appro LT KM LT KM
Workshop No. 2 Fabrication, FAT & [	Pelivery of Major Plant & Materials  Fabrication of 11kV to 380V Transfomers  File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -	735 29-Nov-21 A 705 29-Nov-21 A	25-Jan-24 26-Dec-23 13-Jan-23	26-May-22 26-May-22 26-May-22	16-Apr-25 08-Sep-23 18-Jul-22 Vu Hui Ef ment Fac	-109 -179  Cofflue	S5DIGT1010, S5DIGT1000  S2P1110  Ontract No. Int Polishing es and E&N	S5WS2P1010  DE/2018/03 g Plant - Mai	31-Jul-22 Rev24 31-Aug-22 Rev25 Sludge Treatment Facilities 30-Sep-22 Rev26	on Checked Appro

Activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Tota Floa	al Predecessors	Successors	9 2020 2021 					
S5WS2P1010	FAT for 11kV to 380V Transformers	14 14-Jan-23	27-Jan-23	19-Jul-22	01-Aug-22	-179	9 S5WS2P1000	S5WS2P1020	<del>_</del>	1	3 5 3 7 3 3 1 1	111111	1123233232	23333333333
S5WS2P1020	Delivery of 11kV to 380V Transformers	60 28-Jan-23			-		9 S5WS2P1010	S5CHPC1130,	1					
	,				·			S5WS2C1070						
S5WS2P1060	Fabrication of 11 kV Switchboard	210 29-Nov-21	A 26-Jun-22 A	06-Sep-22	06-Sep-22		S2P1120	S5WS2P1070						
S5WS2P1070	FAT for 11 kV Switchboard	14 21-Nov-22	* 04-Dec-22	06-Sep-22	19-Sep-22	-76	6 S5WS2P1060	S5WS2P1080						
S5WS2P1080	Delivery of 11kV Switchboard	55 05-Dec-22		· ·	13-Nov-22		6 S5WS2P1070	S5WS2C1060,	1	•	<b>=</b>			
								S5CHPC1140						
S5WS2P1090	Fabrication of LV Switchboard	100 04-Dec-22	* 13-Mar-23	08-Aug-22	15-Nov-22	-118	S2D1250,	S5WS2P1100						
							S2D1190, S2D1270							
S5WS2P1100	FAT for LV Switchboard	14 28-Feb-23	13-Mar-23	02-Nov-22	15-Nov-22	-118	8 S5WS2P1090	S5WS2P1110						
S5WS2P1110	Delivery of LV Switchboard	14 14-Mar-23	27-Mar-23	16-Nov-22	29-Nov-22	-118	8 S5WS2P1100	S5CHPC1260,	<del> </del>			1		
								S5WS2C1080	<u> </u>					
S5WS2P1120	Fabrication & Delivery of Lift	210 18-Dec-21	A 10-Aug-22 A	12-May-23	12-May-23			S5WS2C1190						
S5WS2P1130	Delivery of Control & Monitoring System / SCADA System	360 01-Jan-23	* 26-Dec-23	14-Sep-22	08-Sep-23	-109	9	S5WS2C1180	1			<b>—</b>		
Installation		735 31-Dec-21	A 25-Jan-24	03-Aug-22	16-Apr-25	447	7							
S5WS2C1000	Mobilisation	14 31-Dec-21	A 12-Mar-22 A	03-Aug-22	03-Aug-22		AD1120,	S5WS2C1010,	7					
				-			S5S1030	S5WS2C1050	<u> </u>		ļļļ	ļļļ		
CLP Substation		468 14-Mar-22	A 01-Jul-23	03-Aug-22	13-Mar-23	-110	0							
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		S5WS2C1000,	KD1060,						
							AD1120	S5WS2C1020, S5WS2C1050,						
								KD1060-1						
S5WS2C1020	Inspections, Rectification & H/O to CLP	60 03-Sep-22	A 01-Jan-23	03-Aug-22	13-Sep-22	-110	0 S5WS2C1010	S5WS2C1030	]		1			
S5WS2C1030	E&M Installation of HV Transformer (By CLP)	180 02-Jan-23	30-Jun-23	14-Sep-22	12-Mar-23	-110	0 S5WS2C1020	\$5W\$2C1040						
S5WS2C1030	Energisation (By CLP)	1 01-Jul-23	01-Jul-23				0 S5WS2C1020 0 S5WS2C1030,							
							S5WS2C1060, S5S1000							
HV Switchroom /	/ Transformer Room / LV Switchroom	571 11-Apr-22	A 14-Nov-23	16-Sep-22	16-Apr-25	519			<u> </u>			<del></del>		
S5WS2C1050	BS Fitting Intallation	60 11-Apr-22	A 02-Dec-22	15-Oct-22	26-Oct-22	-37	7 S5WS2C1000,	S5WS2C1060	-					
00000201000	DO Figure 9 microcon	00 11 701 22	02 500 22	10 001 22	20 001 22	0,	S5WS2C1010	65776251666						
S5WS2C1060	HV Switchroom Installation	60 30-Dec-22	27-Feb-23	27-Oct-22	25-Dec-22	-64	4 S5WS2C1050, S5WS2P1080	S5WS2C1130, S5TXRT1010,	7		<b>—</b>			
							35VV32F 1060	S5WS2C1040,						
								S5WS2C1070, S5WS2T1000						
S5WS2C1070	TX Room Installation	60 28-Feb-23	28-Apr-23	30-, lul-23	27-Sen-23	152	2 S5WS2C1060,	S5WS2C1080						
33443231070	TATIOUTI III Suiduoti	00 20 1 05 20	20 7 (0) 20	00 001 20	27 OCP 20	102	S5WS2P1020	S5WS2T1000						
S5WS2C1080	LV Switchroom Installation	60 29-Apr-23	27-Jun-23	28-Sep-23	26-Nov-23	152	2 S5WS2C1070,	S5WS2T1000						
S5WS2C1090	Access to Other Peripheral Systems (Impacted by EWN-0314)	1 14-Mar-23	* 14-Mar-23	16-Sep-22	16-Sep-22	-170	S5WS2P1110	S5WS2C1110						
S5WS2C1100	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1 31-Jul-23*	31-Jul-23	16-Apr-25	· ·	_		55.75251110	1					
S5WS2C1105	Access to Stage 1 External Area	0 15-Apr-23		17-Sep-22	· ·	-210		S5WS2C1110			•			
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	0 S5WS2C1090,	S5CHPT1020,	7		_			
							S5WS2C1105	S5DIGT1010, S5WS2C1120,						
								S5WS2T1010, S5BIOT1000,						
								S5THPT1000,						
								S5H2ST1000, S5WGBT1000,						
								S5DOUT1010, S5SPST1000,						
								S5TCWT1000,						
								S5FCDT1000, PL1210						
S5WS2C1120	HV Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg and	70 15-May-23	23-Jul-23	17-Oct-22	25-Dec-22	-210	0 S5WS2C1110	S5WS2C1130,	]		-			
	Termination							PL1210, S5SDBT1191						
S5WS2C1125	Access to Stage 3 External Area	0 01-Sep-23	*	26-Dec-22		-249	9	S5WS2C1130	<del> </del>		•	1		
	·	, , , , , , , , , , , , , , , , , , , ,	J.	1	,	'	,	,						
	File Name: DE/2018/03 RP R28 Remaining Work					C	ontract No	DF/2018/03	2	Date	Rev	vision	Checked	Approved

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 47 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 20 
S5WS2C1130	HV Cables Laying between Workshop No.2 & Tx Rm for UV System No.1 and Termination	75 01-Sep-23*	14-Nov-23	26-Dec-22	10-Mar-23	-249	S5WS2C1060, S5WS2C1120,	S5TXRT1010, S5PSWT1000,	
ı							S5WS2C1125	S5DOUT1000,	
								S5SHPT1000, PL1210	
Building Service		492 11-Apr-22 A	25- lan-24	12-Doc-22	31-Jan-24	6			
		· ·							
S5WS2C1140	Installation of FS System	204 11-Apr-22 A	31-Dec-22	24-May-23	03-Jul-23	184	S5S1120	S5WS2C1150, S5S1130	
S5WS2C1150	Installation of MVAC System	150 01-Jan-23	30-May-23	04-Jul-23	30-Nov-23	184	S5WS2C1140	S5S1220	
S5WS2C1160	Installation of Electrical System	150 21-Nov-22*	19-Apr-23		11-May-23			S5WS2C1180	
S5WS2C1170	Installation of Plumbing System	90 21-Nov-22*	18-Feb-23		31-Jan-24			S5S1160	
S5WS2C1180	Installation of SCADA Sys. / Control Monitoring Sys. / Gas Detection Sys. / CCTV Sys. /	150 29-Aug-23	25-Jan-24	12-May-23	08-Oct-23	-109	S5WS2C1160,	S5T1200,	1 i i i i i i i i i i i i i i i i i i i
	IT&PABX Sys. / ACS Sys.						S5WS2P1130	S5T1000, S5T1010,	
								S5T1020,	
								S5T1030, S5S0990,	
								PL1210	
S5WS2C1190	Installation of Lift	120 13-Sep-22 A	12-Mar-23	12-May-23	31-Aug-23	172	S5WS2P1120	S5WS2T1020,	
				,				S5SDBC1770	
Testing and Comr	missioning	169 28-Jun-23	13-Dec-23	27-Nov-23	27-Feb-24	76			
S5WS2T1000	SAT for Transformer & Switchboard	30 28-Jun-23	27-Jul-23	27-Nov-23	26-Dec-23	152	S5WS2C1080,	S5WS2T1010	
							S5WS2C1070, S5WS2C1060		
S5WS2T1010	Ready for Power Energisation	3 12-Oct-23	14-Oct-23	27-Dec-23	29-Dec-23	76	S5WS2T1000,	S5WS2T1020	
03000211010	Tready for Fower Energisation	3 12-001-23	14-001-20	27-060-23	25-060-25	70	S5WS2C1110.	0300211020	
							S5EXAC1030		
S5WS2T1020	SAT for Lift	60 15-Oct-23	13-Dec-23	30-Dec-23	27-Feb-24	76	S5WS2C1190, S5WS2T1010	S5S1090	
Biogas Storage		772 29-Nov-21 A	31-Jan-24	17-Apr-22	29-Jun-23	-216			
	Delines of Main Plant C Mataiala	700 00 New 01 A	00 Dec 00						
rabrication, FAI &	& Delivery of Major Plant & Materials	736 29-Nov-21 A	26-Dec-23	17-Apr-22	11-Apr-23	-259			
S5BIOP1000	Fabrication & Delivery of Biogas Booster and Transfer Pumps	180 22-Nov-22	20-May-23		26-Jan-23	-114		S5BIOC1020	
S5BIOP1010	Fabrication & Delivery of Biogas Storage	180 29-Nov-21 A	30-Jul-22 A	01-Jun-22	01-Jun-22		S2P1050, S2D1530	S5BIOC1020, S5BIOC1030,	
								S5BIOC1040	
S5BIOP1020	Delivery of Control & Monitoring System / SCADA System	360 01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5BIOC1050	
Installation		492 13-Sep-22 A	25-Jan-24	01-Jun-22	11-May-23	-259			
S5BIOC1000	Access to Biogas Holding Tanks (Impacted by EWN-0314-1)	1 13-Sep-22 A	13-Sep-22 A	01-Jun-22	01-Jun-22			S5BIOC1010	
S5BIOC1010	Mobilisation	30 13-Sep-22 A	12-Dec-22	01-Jun-22	21-Jun-22	-174	AD1100, S5BIOC1000	S5BIOC1020	
E&M Installation	1	430 22-Nov-22	25-Jan-24	01-Jun-22	11-May-23	-259			
CEDIOC1000	FOM Installation of Disease Charges Truly 1	040 00 New 00	10 1.1.00	01 hus 00	00 Jan 00	174	AD1100	S5BIOC1030.	
S5BIOC1020	E&M Installation of Biogas Storage Tank 1	240 22-Nov-22	19-Jul-23	01-Jun-22	26-Jan-23	-1/4	S5BIOP1010,	S5BIOC1030, S5BIOT1000	
							S5S1060, S5BIOP1000,		
							S5BIOC1010		
S5BIOC1030	E&M Installation of Biogas Storage Tank 2	240 07-Dec-22	03-Aug-23	16-Jun-22	10-Feb-23	-174	AD1100.	S5BIOC1040,	
							S5BIOC1020,	S5WGBC1020,	
0501004040	FOM Installation of Disease Charges Truly O	010 07 M- :: 00	00 0** 00	14.0 00	11	474	S5BIOP1010	S5BIOT1000	
S5BIOC1040	E&M Installation of Biogas Storage Tank 3	210 07-Mar-23	02-Oct-23	14-Sep-22	11-Apr-23	-1/4	S5BIOC1030,	S5BIOT1010, S5BIOC1060,	
							S5BIOP1010	S5BIOT1000, PL1210,	
								S5BIOC1050	
S5BIOC1050	Installation of SCADA System / Control Monitoring System	150 29-Aug-23	25-Jan-24	13-Dec-22	11-Mav-23	-259	S5BIOC1040,	S5T1000,	
		, , , , , , , , , , , , , , , , , , ,		3 = 30 ==	, 20	_55	S5BIOP1020	S5T1010,	
								S5T1020, S5T1030	
BS Installation		60 03-Sep-23	01-Nov-23	13-Mar-23	11-May-23	-174			
		33 00 00p 20							

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 48 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ity ID	Activity Name	Original Early S Duration	tart Early Finish	Late Star	t Late Finish	Tota Floa	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 [ ] 3   J   J   J   J   J   J   J   J   J
S5BIOC1060	BS Installation for Biogas Holding Tanks	60 03-Se	p-23 01-Nov-23	13-Mar-23	3 11-May-23	3 -174	S5THPC1050, S5BIOC1040	S5S1160, S5T1000, S5T1010, S5T1020, S5T1030	
Testing and Comn	nissioning	33 30-De	c-23 31-Jan-24	28-May-23	3 29-Jun-23	3 -216	3		
S5BIOT1000	Ready for Power Energisation	3 30-De	c-23 01-Jan-24	28-May-23	30-May-23	3 -216	S S5BIOC1040, S5BIOC1030, S5BIOC1020, S5WS2C1110, S5EXAC1033	S5BIOT1010	
S5BIOT1010	SAT for Biogas Storage System	30 02-Jai	n-24 31-Jan-24	31-May-23	3 29-Jun-23	3 -216	S5BIOC1040, S5CHPT1020, S5BIOT1000	S5T1070	
THP Area		905 29-Jul	n-21 A 31-Jan-24	17-Apr-22	2 15-May-23	-261			
Fabrication, FAT &	Delivery of Major Plant & Materials	869 29-Jul	n-21 A 26-Dec-23	17-Apr-22	2 11-Apr-23	3 -259	)		
S5THPP1000	Fabrication of THP System	300 29-Jui	n-21 A 18-Mar-22	A 02-Nov-22	2 02-Nov-22	2	S2P1040, S2D1410, S2D1370	S5THPP1010	
S5THPP1010	FAT for THP System	14 03-Jai	n-22 A 17-May-22	A 02-Nov-22	02-Nov-22	2	S5THPP1000	S5THPP1020	
S5THPP1020	Delivery of THP System	60 29-Ma	r-22 A 23-May-22	A 02-Nov-22	2 02-Nov-22	2	S5THPP1010	S5THPC1020	
S5THPP1030	Delivery of Control & Monitoring System / SCADA System	360 01-Jai			2 11-Apr-23			S5THPC1040	
Installation		431 21-No			2 11-May-23				
S5THPC1000 S5THPC1010	Access to THP Area (Impacted by EWN-0314) Access to THP Area (Impacted by EWN-0314-1)	1 21-No			2 01-Nov-22 2 01-Nov-22			S5THPC1020 S5THPC1020	
E&M Installation	Access to THE Area (IIII) packed by EVVIV-0514-1)	430 22-No			2 11-May-23			331HFG1020	
S5THPC1020	E&M Installation of THP System	120 22-No	v-22 21-Mar-23	02-Nov-22	2 01-Mar-23	3 -20	AD1100, S5THPP1020, S5S1020, S5THPC1000, S5THPC1010	S5THPC1030, S5THPT1010, S5THPC1050, S5WGBC1020, S5THPT1000, S5THPC1040	
S5THPC1030	E&M Installation of Thickened Sludge Feed Pipe to THP System	75 20-Fe	o-23 05-May-23	31-Jan-23	3 15-Apr-23	3 -20	S5THPC1020	S5THPT1010, PL1210	
S5THPC1040	Installation of SCADA System / Control Monitoring System	60 27-No	v-23 25-Jan-24	13-Mar-23	3 11-May-23	3 -259	S5THPC1020, S5THPP1030	S5T1000, S5T1010, S5T1020, S5T1030	
BS Installation		30 22-Ma	r-23 20-Apr-23	12-Apr-23	11-May-23	3 21			
S5THPC1050	BS Installation for THP Facilities	30 22-Ma	r-23 20-Apr-23	12-Apr-23	3 11-May-23	3 21	S5THPC1020	S5BIOC1060, S5S1160, S5T1000, S5T1010, S5T1020, S5T1030	
Testing and Comn	nissioning	33 30-De	c-23 31-Jan-24	13-Apr-23	3 15-May-23	-261			
S5THPT1000	Ready for Power Energisation	3 30-De	c-23 01-Jan-24	13-Apr-23	3 15-Apr-23	3 -261	S5THPC1020, S5WS2C1110, S5EXAC1033	S5THPT1010	
S5THPT1010	SAT of THP System	30 02-Jai					S5THPC1030, S5CHPT1020, S5THPT1000	S5T1050	
H2S Removal Area			1-22 A 31-Jan-24		2 30-May-23				
	Delivery of Major Plant & Materials		n-22 A 26-Dec-23	·	2 11-Apr-23				
S5H2SP1000	Fabrication & Delivery of H2S Removal System	150 23-Jui	n-22 A 19-Jan-23	25-Nov-22	23-Jan-23	3	S2P1060, S2D1530	S5H2SC1020	
S5H2SP1010	Delivery of Control & Monitoring System / SCADA System	360 01-Ja	1-23* 26-Dec-23	17-Apr-22	2 11-Apr-23	-259	)	S5H2SC1030	
	File Name: DE/2018/03 RP R28		1				- unture at NI a	DE/2018/03	Date Revision Checked Approve

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 49 of 58

Remaining Work
Critical Activity

Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Bev28	lΤ	KM

ity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 
Installation		431 21-Nov-22	25-Jan-24	06-Feb-23	11-May-23	-259			
S5H2SC1000	Access to H2S Removal Area (Impacted by EWN-0314)	1 21-Nov-22*	21-Nov-22	06-Feb-23	06-Feb-23	77		S5H2SC1020	
S5H2SC1010	Access to H2S Removal Area (Impacted by EWN-0314-1)	1 31-Dec-22*	31-Dec-22	06-Feb-23	06-Feb-23	37		S5H2SC1020	
S5H2SC1020	E&M Installation of H2S Removal System	80 03-Feb-23	23-Apr-23	07-Feb-23	27-Apr-23	4		S5H2ST1000, PL1210, S5H2SC1030	
S5H2SC1030	Installation of SCADA System / Control Monitoring System	30 27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5H2SC1020, S5H2SP1010	S5T1000, S5T1010, S5T1020, S5T1030	
Testing and Comn	nissioning	33 30-Dec-23	31-Jan-24	28-Apr-23	30-May-23	-246			
S5H2ST1000	Ready for Power Energisation	3 30-Dec-23	01-Jan-24	28-Apr-23	30-Apr-23	-246	S5H2SC1020, S5WS2C1110, S5EXAC1033	S5H2ST1010	
S5H2ST1010	SAT of H2S Removal System	30 02-Jan-24	31-Jan-24	01-May-23	30-May-23	-246	S5H2ST1000	S5T1080	
Waste Gas Burning	g Area	635 29-Mar-22 A	16-Mar-24	17-Apr-22	14-Jul-23	-246			
Fabrication, FAT &	Delivery of Major Plant & Materials	554 29-Mar-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259			
S5WGBP1000	Fabrication of Waste Gas Burning System	210 29-Mar-22 A	24-Jan-23	09-Sep-22	12-Nov-22	-73	S2P1080, S2D1650	S5WGBP1010	
S5WGBP1010	FAT for Waste Gas Burning System	14 11-Jan-23	24-Jan-23	30-Oct-22	12-Nov-22	-73	S5WGBP1000	S5WGBP1020	
S5WGBP1020	Delivery of Waste Gas Burning System	60 25-Jan-23	25-Mar-23	13-Nov-22	11-Jan-23	-73	S5WGBP1010	S5WGBC1020	
S5WGBP1030	Delivery of Control & Monitoring System / SCADA System	360 01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5WGBC1030	
Installation		431 21-Nov-22	25-Jan-24	11-Jan-23	11-May-23	-259			
S5WGBC1000	Access to Waste Gas Burning Area (Impacted by EWN-0314)	1 21-Nov-22*	21-Nov-22	11-Jan-23	11-Jan-23	51		S5WGBC1020	
S5WGBC1010	Access to Waste Gas Burning Area (Impacted by EWN-0314-1)	1 21-Nov-22*	21-Nov-22	11-Jan-23	11-Jan-23	51		S5WGBC1020	
S5WGBC1020	E&M Installation of Waste Gas Burning System	120 13-Apr-23	10-Aug-23	12-Jan-23	11-May-23	-91		S5WGBT1010, S5WGBT1000, PL1210, S5WGBC1030	
S5WGBC1030	Installation of SCADA System / Control Monitoring System	60 27-Nov-23	25-Jan-24	13-Mar-23	11-May-23	-259	S5WGBP1030, S5WGBC1020	S5T1000, S5T1010, S5T1020, S5T1030	
Testing and Comn	nissioning	18 28-Feb-24	16-Mar-24	27-Jun-23	14-Jul-23	-246			
S5WGBT1000	Ready for Power Energisation	3 28-Feb-24	01-Mar-24	27-Jun-23	29-Jun-23	-246	S5WGBC1020, S5WS2C1110, S5EXAC1036	S5WGBT1010	
S5WGBT1010	SAT for Gas Burning System	15 02-Mar-24	16-Mar-24	30-Jun-23	14-Jul-23	-246	S5WGBC1020, S5WGBT1000	S5T1090	
Plant Service Wate	er Area	482 21-Nov-22	16-Mar-24	17-Apr-22	11-May-23	-310			
Fabrication, FAT &	Delivery of Major Plant & Materials	360 21-Nov-22	15-Nov-23	17-Apr-22	11-Apr-23	-218			
S5PSWP1000	Fabrication & Delivery of Plant Service Water System	120 21-Nov-22	20-Mar-23	16-Aug-22	13-Dec-22	-97	S2P1090, S2D1690	S5PSWC1000	
S5PSWP1010	Delivery of SCADA System	360 21-Nov-22*	15-Nov-23	17-Apr-22	11-Apr-23	-218		S5PSWC1010	1
Installation		270 21-Mar-23	15-Dec-23	14-Dec-22	11-May-23	-218			
S5PSWC1000	E&M Installation of Plant Service Water System	90 21-Mar-23	18-Jun-23	14-Dec-22	13-Mar-23	-97	AD1100, S5PSWP1000	S5PSWT1000, PL1210, S5PSWC1010	
S5PSWC1010	Installation of SCADA System / Control Monitoring System	30 16-Nov-23	15-Dec-23	12-Apr-23	11-May-23	-218	S5PSWP1010, S5PSWC1000	S5T1000, S5T1010, S5T1020, S5T1030	
Testing and Comn	nissioning	48 29-Jan-24	16-Mar-24	14-Mar-23	30-Apr-23	-321			
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File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 50 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Original Early Start Duration		Early Finish	Late Start	Late Finish	Total Predecessors Float	Successors	9   2020   2021   2022   2023   2024   2025   26 
3 29-Jan-24	ver Energisation 3	31-Jan-24	14-Mar-23	16-Mar-23	-321 S5PSWC1000	, S5PSWT1010	177777777777777777777777777777777777777
					S5WS2C1130, S5EXAC1040, S5TXRT1010		
System 45 01-Feb-24	Commissioning Tests for Plant Services Water System 45	16-Mar-24	17-Mar-23	30-Apr-23	-321 S5PSWT1000, S5UVPC1000	S5T1060	
666 10-Mar-22 A	666	16-Mar-24	17-Apr-22	29-Jun-23	-261		
585 10-Mar-22 A	jor Plant & Materials 585	26-Dec-23	17-Apr-22	11-Apr-23	-259		
150 10-Mar-22 A	Delivery of DO System 150	30-Jan-23	03-Nov-22	12-Jan-23	-18 S2P1150, S2D1930	S5DOUC1030, S5DOUC1040	
360 01-Jan-23*	ntrol & Monitoring System / SCADA System 360	26-Dec-23	17-Apr-22	11-Apr-23	-259	S5DOUC1050	
431 21-Nov-22	431	25-Jan-24	12-Jan-23	11-May-23	-259		
1 21-Nov-22*	Area (Impacted by EWN-0314)	21-Nov-22	12-Jan-23	12-Jan-23	52	S5DOUC1030, S5DOUC1040	
1 21-Nov-22*	, , , , , , , , , , , , , , , , , , , ,	21-Nov-22	12-Jan-23	12-Jan-23	52	S5DOUC1030	
1 31-Dec-22*	· · · · · · · · · · · · · · · · · · ·	31-Dec-22	10-Feb-23	10-Feb-23	41	S5DOUC1040	
90 31-Jan-23	on of DO System No.11 90	30-Apr-23	13-Jan-23	12-Apr-23	-18 AD1100, S5DOUP1000, S5DOUC1000 S5DOUC1010	S5DOUT1000	
90 31-Jan-23	on of DO System No.12 90	30-Apr-23	11-Feb-23	11-May-23	11 AD1100, S5DOUP1000, S5DOUC1000 S5DOUC1020	S5DOUT1010, PL1210, S5DOUC1050	
60 27-Nov-23	SCADA System / Control Monitoring System 60	25-Jan-24	13-Mar-23	11-May-23	-259 S5DOUP1010, S5DOUC1040		
78 30-Dec-23	78	16-Mar-24	13-Apr-23	29-Jun-23	-261		
3 29-Jan-24	ver Energisation of DO No.11 3	31-Jan-24	13-Apr-23	15-Apr-23	-291 S5DOUC1030 S5WS2C1130, S5EXAC1040, S5TXRT1010	S5DOUT1020	
3 30-Dec-23	wer Energisation of DO No.12 3	01-Jan-24	13-May-23	15-May-23	-231 S5DOUC1040 S5WS2C1110, S5EXAC1033	S5DOUT1030	
45 01-Feb-24	Commissioning Tests for DO System No.11 45	16-Mar-24	16-Apr-23	30-May-23	-291 S5DOUT1000	S5T1060	
45 02-Jan-24	,	15-Feb-24			-231 S5DOUT1010		
635 23-May-22 A	635	16-Mar-24	17-Apr-22	16-Apr-25	396		
513 23-May-22 A	jor Plant & Materials 513	15-Nov-23	17-Apr-22	11-Apr-23	-218		
150 23-May-22 A	Delivery of Sewage Pump 150	19-Jan-23	13-Nov-22	11-Jan-23	-8 S2P1180, S2D1940	S5SPSC1000	
134 16-May-23*	Delivery of LV Switchboard 134	26-Sep-23	30-Sep-22	10-Feb-23	-228	S5SPSC1000, S5SPSC1001, S5SPST0990	
360 21-Nov-22*	÷ , ,	15-Nov-23		11-Apr-23		S5SPSC1010	
120 28-Aug-23	120	25-Dec-23	12-Jan-23	16-Apr-25	478		
110 28-Aug-23	110	15-Dec-23	12-Jan-23	16-Apr-25	488		
60 28-Aug-23	on of Sewage Pump 60	26-Oct-23	12-Jan-23	12-Mar-23	-228 AD1100, S5SPSP1000, S5SPSP1010	S5SPSC1020, S5SPST1000, PL1210, S5SPSC1010	
60 27-Sep-23	rd Installation 60	25-Nov-23	16-Feb-25	16-Apr-25	508 S5SPSP1010		
30 16-Nov-23	SCADA System / Control Monitoring System 30	15-Dec-23	12-Apr-23	11-May-23	-218 S5SPSP1020, S5SPSC1000	S5T1000, S5T1010, S5T1020, S5T1030	
60 27-Oct-23	60	25-Dec-23	13-Mar-23	11-May-23	-228		
		60 27-Oct-23	60 27-Oct-23 25-Dec-23	60 27-Oct-23 25-Dec-23 13-Mar-23	60 27-Oct-23 25-Dec-23 13-Mar-23 11-May-23		S5T1020, S5T1030

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 51 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

vity ID	Activity Name	Original Early Start	Early Finish	Late Start	Late Finish	Tota Float	Predecessors	Successors	9 2020 2021	2022	2023	2024	2025
		Duration									5 3 7 3 3 1 1 1 1 1 1	1112222222	2 23333333
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					
esting and Com	nmissioning	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,	S5SPST1010					
S5SPST1010	SAT & System Commissioning Tests for Sewage Pumping Station	15 02-Mar-24	16-Mar-24	16-May-23	30-May-23	-201	S5EXAC1045 S5SPST1000	S5T1060	-				
	er Transfer Pumping Station	584 23-May-22 A		-	15-May-23			3311000					
	<u> </u>												
abrication, FAI &	& Delivery of Major Plant & Materials	554 23-May-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-258							
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		S5TCWC1030	<del> </del>		<del></del>		
nstallation		431 21-Nov-22	25-Jan-24	26-Feb-23	•								
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		S5TCWC1020					
S5TCWC1010	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314-1)	1 21-Nov-22*	21-Nov-22	26-Feb-23				S5TCWC1020	1				
S5TCWC1020	E&M Installation of THP Cooling Pump	60 20-Jan-23	20-Mar-23	27-Feb-23	27-Apr-23	38	AD1100,	S5TCWT1000,			1		
							S5TCWP1000, S5TCWC1000, S5TCWC1010	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 Com	nmissioning	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-Anr-23	30-Anr-23	-167	S5TCWC1020,	S5TCWT1010	-				
00101111000	Today to 1 ono Enorgication	0 12 00(20	11 000 20	2070120	00 / pi 20	107	S5WS2C1110, S5EXAC1030	GOTOTTION					
S5TCWT1010	2 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	15 15-Oct-23	29-Oct-23	,	,		S5TCWT1000	S5T1050			•		
erric Chloride Do	osing Facility	606 14-May-22 A	15-Apr-24	17-Apr-22	30-May-23	-321							
abrication, FAT 8	& 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			13-Jan-23		S5P1040, S2D1980	S5FCDC1030					
S5FCDP1020	Fabrication & Delivery of LV Switchboard	120 15-Dec-22*	13-Apr-23	· · · · · · · · · · · · · · · · · · ·	27-Jan-23			S5FCDC1030	4		1		
S5FCDP1030	Delivery of Control & Monitoring System / SCADA System	360 01-Jan-23* 431 21-Nov-22	26-Dec-23 25-Jan-24	17-Apr-22 28-Dec-22	11-Apr-23 11-May-23			S5FCDP1040	<b>-</b>				
nstallation													
S5FCDC1000	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314)	1 21-Nov-22*	21-Nov-22	28-Dec-22				S5FCDC1020	4				
S5FCDC1010	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314-1)	1 21-Nov-22*	21-Nov-22	28-Dec-22				S5FCDC1020	1	_			
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 Com	nmissioning	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			•		
	File Name: DE/2018/03 RP R28							DE /2040 /00		Date	Revision	Checked	Approve
	Layout: DE1803 RP (Nov 2022) -			al ! ·				DE/2018/03		31-Jul-22	Rev.24	LT	KM
	Layout. DL 1000 RF (1907 2022) -			Shek \	∧u Hui Ef	rtlue	nt Polishing	; Plant - Mai:	n Works Stage 1	31-Aug-22	Rev.25	ΙΤ	KM

Layout: DE1803 RP (Nov 2022) -WBS Page 52 of 58 Critical Activity

Milestone

Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

	Activity Name	Original Fasts Start	Fork Cipiels	Lata Ctart	Lata Finish	Total	Dradasasasa	Cuppagaga	9 2020 2021 2022 2023 2024 2025
vity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Float	Predecessors	Successors	13 4 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
S5FCDT1000	Ready for Power Energisation	3 28-Feb-24	01-Mar-24	13-Apr-23	15-∆nr-23	-321	S5FCDC1030,	S5FCDT1010	<u>H1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1</u>
331 CD11000	Heady for Fower Energisation	3 20-1 60-24	01-War-24	13-Αμι-23	13-Api-23	-021	S5WS2C1110,	331 0011010	
							S5FCDT0990,		
							S5EXAC1036		
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 B	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-Anr-22	11-Apr-23	-259			
<u></u>		101 21 1107 22		17 701 LL	11740120	200			
S5SHPP1000	Fabrication & Delivery of Fire Hydrant and Booster Pump	60 21-Nov-22*	19-Jan-23		10-Feb-23			S5SHPC1020	
S5SHPP1010	Delivery of Control & Monitoring System / SCADA System	360 01-Jan-23*	26-Dec-23		11-Apr-23			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				S5SHPC1020	
S5SHPC1020	Fire Hydrant and Booster Pump Room Installation	90 20-Jan-23	19-Apr-23	11-Feb-23			S5S1120,	S5S1130,	
000 0.020	The Hydra Rana Boosto Famp Footh Indianation	20 20 00 20	10740.20				AD1100,	S5SHPT1000,	
							S5SHPC1000, S5SHPC1010,	PL1210, S5SHPC1030	
							S5SHPP1000	333NFC1030	
05011004000		00 07 D 00	05.1.04	10.4.00	44.14.00	050	05011001010	0574000	
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,	
							000111 01020	S5T1020,	
								S5T1030	
Testing and Comr	missioning	33 29-Jan-24	01-Mar-24	29-Oct-23	30-Nov-23	-92			
S5SHPT1000	Doody for Dougr Energiation	2 20 lon 24	21 lon 24	20 Oct 22	21 Oct 22	00	SESUDO1000	CECUPT1010	
SSSHP11000	Ready for Power Energisation	3 29-Jan-24	31-Jan-24	29-Oct-23	31-Oct-23	-92	S5SHPC1020, S5WS2C1130,	S5SHP11010	
							S5EXAC1040,		
							S5TXRT1010		
S5SHPT1010	SAT for Fire Hydrant and Booster Pump	30 01-Feb-24	01-Mar-24	01-Nov-23	30-Nov-23	-92	S5SHPT1000	S5S1220	7
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			
iristaliation		331 14-Wai-23	27-1 60-24	13-001-22	00-1107-23	-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,	
	Access to Orner Peripheral Systems (impacted by EWN-0314-1)	1 31-Jul-23*	31-Jul-23	30-Jan-23	30-Jan-23	-182		S5EXAC1050, S5EXAC1060, S5EXAC1030	
\$5EYAC1020							AD1100	S5EXAC1060, S5EXAC1030	
S5EXAC1020	E&M Installation of Pipe Trench No.1, No.2	1 31-Jul-23* 100 03-Jul-23	31-Jul-23 10-Oct-23	30-Jan-23 05-Feb-23			AD1100, S5EXAC1031	S5EXAC1060,	
S5EXAC1020 S5EXAC1025							AD1100, S5EXAC1031	S5EXAC1060, S5EXAC1030 S5T1050,	
	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120)	100 03-Jul-23		05-Feb-23 15-Oct-22	15-May-23	-148 -182	S5EXAC1031	S5EXAC1060, S5EXAC1030 S5T1050, PL1210	
S5EXAC1025	E&M Installation of Pipe Trench No.1, No.2	100 03-Jul-23 0 15-Apr-23*	10-Oct-23	05-Feb-23 15-Oct-22	15-May-23	-148 -182	S5EXAC1031 S5EXAC1010, S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010,	
S5EXAC1025	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120)	100 03-Jul-23 0 15-Apr-23*	10-Oct-23	05-Feb-23 15-Oct-22	15-May-23	-148 -182	S5EXAC1031 S5EXAC1010, S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, S5DIGT1010,	
S5EXAC1025 S5EXAC1030	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22	15-May-23	-148 -182 -182	S5EXAC1031 S5EXAC1010, S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210	
S5EXAC1025	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120)	100 03-Jul-23 0 15-Apr-23*	10-Oct-23	05-Feb-23 15-Oct-22	15-May-23	-148 -182	S5EXAC1031 S5EXAC1010, S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210 S5EXAC1033.	
S5EXAC1025 S5EXAC1030 S5EXAC1031	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23*	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23	-148 -182 -182	S5EXAC1031 S5EXAC1010, S5P1050, S5EXAC1025	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210 S5EXAC1033, S5EXAC1020	
S5EXAC1025 S5EXAC1030	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23	-148 -182 -182	S5EXAC1031 S5EXAC1010, S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, PL1210 S5EXAC1033, S5EXAC1020 S5BIOT1000, S5THPT1000,	
S5EXAC1025 S5EXAC1030 S5EXAC1031	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) &	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23*	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23	-148 -182 -182	S5EXAC1031 S5EXAC1010, S5P1050, S5EXAC1025	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, PL1210 S5EXAC1033, S5EXAC1020 S5BIOT1000, S5THPT1000, S5THPT1000, S5DOUT1010,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23* 180 03-Jul-23	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23	-148 -182 -182 -261	S5EXAC1031 S5EXAC1010, S5P1050, S5EXAC1025	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5TCWT1000, S5WS2T1010, PL1210  S5EXAC1033, S5EXAC1020  S5BIOT1000, S5THPT1000, S5DOUT1010, S5H2ST1000	
S5EXAC1025 S5EXAC1030 S5EXAC1031	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) &	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23*	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23	-148 -182 -182	S5EXAC1031 S5EXAC1010, S5P1050, S5EXAC1025	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5EXAC1030 S5TCWT1000, S5WS2T1010, PL1210 S5EXAC1033, S5EXAC1020 S5BIOT1000, S5HPT1000, S5DOUT1010, S5H2ST1000 S5EXAC1036,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23* 180 03-Jul-23	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23	-148 -182 -182 -261	S5EXAC1031 S5EXAC1010, S5P1050, S5EXAC1025	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5EXAC1030  S5TCWT1000, S5WS2T1010, PL1210  S5EXAC1033, S5EXAC1020  S5BIOT1000, S5HPT1000, S5DOUT1010, S5H2ST1000  S5EXAC1036, S5EXAC1036, S5EXAC1040,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*	10-Oct-23 11-Oct-23 29-Dec-23	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5TCWT1000, S5WS2T1010, PL1210  S5EXAC1033, S5EXAC1020  S5BIOT1000, S5THPT1000, S5DOUT1010, S5H2ST1000  S5EXAC1036, S5EXAC1040, S5EXAC1045	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23* 180 03-Jul-23	10-Oct-23	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261	S5EXAC1031 S5EXAC1010, S5P1050, S5EXAC1025	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5EXAC1030  S5TCWT1000, S5WS2T1010, PL1210  S5EXAC1033, S5EXAC1020  S5BIOT1000, S5HPT1000, S5DOUT1010, S5H2ST1000  S5EXAC1036, S5EXAC1040, S5EXAC1045  S5SPST1000, S5WGBT1000, S5WGBT1000,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days)	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*	10-Oct-23 11-Oct-23 29-Dec-23	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5TCWT1000, S5WS2T1010, PL1210  S5EXAC1033, S5EXAC1020  S5BIOT1000, S5HPT1000, S5DOUT1010, S5H2ST1000  S5EXAC1036, S5EXAC1040, S5EXAC1045  S5SPST1000,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*  60 30-Dec-23	10-Oct-23 11-Oct-23 29-Dec-23 27-Feb-24	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261 -321	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031  S5EXAC1034, S5EXAC1040	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5TCWT1000, S5WS2T1010, PL1210  S5EXAC1033, S5EXAC1033, S5EXAC1020  S5BIOT1000, S5HPT1000, S5DOUT1010, S5H2ST1000  S5EXAC1040, S5EXAC1045  S5SPST1000, S5WGBT1000, S5WGBT1000, S5WGBT1000,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days)	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*	10-Oct-23 11-Oct-23 29-Dec-23	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261 -321	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031  S5EXAC1034, S5EXAC1040	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, PL1210 S5EXAC1033, S5EXAC1020 S5BIOT1000, S5THPT1000, S5DOUT1010, S5EXAC1045, S5EXAC1045 S5SPST1000, S5WGBT1000, S5HPT1000, S5HPT1000, S5HPT1000, S5HPT1000, S5HPT1000, S5DOUT10100,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)  LV Cable Laying from TX & SW Room to DOU no. 11, Street Hydrant Pump room and PSWS	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*  60 30-Dec-23	10-Oct-23 11-Oct-23 29-Dec-23 27-Feb-24	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261 -321	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031  S5EXAC1034, S5EXAC1040  S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210 S5EXAC1033, S5EXAC1020 S5BIOT1000, S5DOUT1010, S5DOUT1010, S5EXAC1040, S5EXAC1040, S5EXAC1040, S5EXAC1040, S5EXAC1040, S5EXAC1000, S5PST1000, S5PST1000, S5PST1000, S5PST1000, S5PST1000, S5PST1000, S5PST1000, S5PST1000, S5PSWGBT1000, S5PSWGBT1000, S5PSWT1000, S5PSWT1000, S5PSWT1000, S5PSWT1000,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)  LV Cable Laying from TX & SW Room to DOU no. 11, Street Hydrant Pump room and PSWS	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*  60 30-Dec-23	10-Oct-23 11-Oct-23 29-Dec-23 27-Feb-24	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23	-148 -182 -182 -261 -261 -321	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031  S5EXAC1034, S5EXAC1040  S5P1050,	S5EXAC1060, S5EXAC1030 S5T1050, PL1210 S5EXAC1030 S5TCWT1000, S5WS2T1010, PL1210 S5EXAC1033, S5EXAC1020 S5BIOT1000, S5THPT1000, S5DOUT1010, S5EXAC1045, S5EXAC1045 S5SPST1000, S5WGBT1000, S5HPT1000, S5HPT1000, S5HPT1000, S5HPT1000, S5HPT1000, S5DOUT10100,	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034 S5EXAC1036 S5EXAC1040	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)  LV Cable Laying from TX & SW Room to DOU no. 11, Street Hydrant Pump room and PSWS (90 days) & Termination (60 days)	100 03-Jul-23 0 15-Apr-23* 180 15-Apr-23 0 03-Jul-23* 180 03-Jul-23 0 01-Sep-23* 60 30-Dec-23 150 01-Sep-23	10-Oct-23  11-Oct-23  29-Dec-23  27-Feb-24  28-Jan-24	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23 13-Mar-23	-148 -182 -182 -261 -261 -321 -321	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031  S5EXAC1034, S5EXAC1040  S5P1050, S5EXAC1034	\$5EXAC1060, \$5EXAC1030 \$5T1050, PL1210 \$5EXAC1030 \$5TCWT1000, \$5W\$2T1010, \$5DIGT1010, PL1210 \$5EXAC1033, \$5EXAC1020 \$5BIOT1000, \$5THPT1000, \$5DOUT1010, \$5DOUT1010, \$5EXAC1045 \$5EXAC1045 \$5SP\$T1000, \$5FCDT1000, \$5P\$WT1000, \$5DOUT1000, \$5P\$WT1000, \$5P\$WT1000, \$5P\$WT1000, \$5P\$WT1000, \$5P\$WT1000, \$5EXAC1036	
S5EXAC1025 S5EXAC1030 S5EXAC1031 S5EXAC1033 S5EXAC1034	E&M Installation of Pipe Trench No.1, No.2  Access to Stage 1 External Area  LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (120 days) & Termination (60 days)  Access to Stage 2 External Area  LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (120 days) & Termination (60 days)  Access to Stage 3 External Area  LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)  LV Cable Laying from TX & SW Room to DOU no. 11, Street Hydrant Pump room and PSWS	100 03-Jul-23  0 15-Apr-23* 180 15-Apr-23  0 03-Jul-23* 180 03-Jul-23  0 01-Sep-23*  60 30-Dec-23	10-Oct-23 11-Oct-23 29-Dec-23 27-Feb-24	05-Feb-23 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22 15-Oct-22	15-May-23 12-Apr-23 12-Apr-23 13-Mar-23	-148 -182 -182 -261 -261 -321 -321	S5EXAC1031  S5EXAC1010, S5P1050, S5EXAC1025  S5EXAC1031  S5EXAC1034, S5EXAC1040  S5P1050, S5EXAC1034	S5EXAC1060, S5EXAC1030  S5T1050, PL1210  S5EXAC1030  S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210  S5EXAC1033, S5EXAC1020  S5BIOT1000, S5THPT1000, S5DOUT1010, S5EXAC1036, S5EXAC1045  S5SPST1000, S5EXAC1045  S5SPST1000, S5WGBT1000, S5HPT1000, S5DOUT1000, S5DOUT1000, S5DOUT1000, S5DOUT1000, S5SHPT1000, S5DOUT1000, S5PSWT1000, S1SPSWT1000,	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 53 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025
Road Lighting Installation	180 01-Aug-23	27-Jan-24	11-May-23	06-Nov-23	-82	AD1100, S5EXAC1000, S5EXAC1010, S5P1050	S5S1220, PL1210	<u></u>
Landscape Lighting Installation	120 01-Aug-23*	28-Nov-23	10-Jul-23	06-Nov-23	-22	S5EXAC1000, S5EXAC1010, S5P1050		
on	816 04-Jul-21 A	15-Dec-23	17-Apr-22	16-Apr-25	488			
Delivery of Major Plant & Materials	786 04-Jul-21 A	15-Nov-23	17-Apr-22	16-Apr-25	518			
Fabrication & Delivery of SAS Pumping System	120 16-Mar-22 A	13-Dec-22	18-Feb-23	12-Mar-23	89	S2P1100, S2D1770	S5SASC1010	
Fabrication & Delivery of Stoplog	270 04-Jul-21 A	27-Jan-22 A	12-Mar-23	12-Mar-23		S2P1160	S5SASC1010	
Fabrication & Delivery of Penstock	270 04-Jul-21 A	27-Jan-22 A	12-Mar-23	12-Mar-23		S2P1170	S5SASC1010	
Fabrication & Delivery of Lifting Appliances	309 30-Oct-21 A	04-Jan-23	03-Mar-25	16-Apr-25	833			
Delivery of Control & Monitoring System / SCADA System	360 21-Nov-22*	15-Nov-23					S5SASC1020	
Fabrication & Delivery of LV Switchboard		-	-				S5SASC1030	<del> </del>
Access to CAC Discretize Outline (house stad by NOT NOT OUT)					210		0504004040	
Access to SAS Pumping Station (Impacted by NCE-NCE-219)	1 23-Mar-22 A	23-War-22 A	03-Dec-22	03-Dec-22		ADT160	S5SASC1010	
E&M Installation of SAS Pumping System	210 23-Mar-22 A	28-Feb-23	03-Dec-22	12-Mar-23	12		S5SAST1000, PL1210, S5SASC1020	
Installation of SCADA System / Control Monitoring System	60 17-Oct-23	15-Dec-23	13-Mar-23	11-May-23	-218	S5SASP1040, S5SASC1010	S5T1000, S5T1010, S5T1020, S5T1030	
LV Switchboard Installation	90 03-May-23	31-Jul-23	14-Dec-22	13-Mar-23	-140	S5SASP1050	S5SAST1010	
nissioning	78 01-Aug-23	17-Oct-23	14-Mar-23	30-May-23	-140			
SAT & System Commissioning Tests for SAS Pumping Station	45 03-Sep-23	17-Oct-23	16-Apr-23	30-May-23	-140	S5SASC1010, S5SAST1020	S5T1110, S5T1120, S5T1060	
SAT of Switchboard	30 01-Aug-23	30-Aug-23	14-Mar-23	12-Apr-23	-140	S5SASC1030	S5SAST1020	
							S5SAST1000	
		· ·						
Delivery of Major Plant & Materials	150 21-Nov-22	19-Apr-23	05-Jul-22	01-Dec-22	-139			
Fabrication & Delivery of Temporary Primary Sludge Pump	150 21-Nov-22	19-Apr-23				S2D1990	S5ECHC1000	
	120 20-Apr-23	17-Aug-23	02-Dec-22	31-Mar-23	-139			
E&M Installation of Existing Consolidation House	120 20-Apr-23	17-Aug-23	02-Dec-22	31-Mar-23	-139	CE0219d, S5ECHP1000	S5T1060, S5ECHT1000, PL1210	
nissioning	30 18-Aug-23	16-Sep-23						
SAT for Temporary Primary Sludge Pump	30 18-Aug-23	16-Sep-23					S5T1060	
E&M Installation of Lift-up Pumps & Associated Pipeworks / Valves	30 21-Nov-22	20-Dec-22	15-Feb-23	16-Mar-23	86	S4C1030, S4P1080, S4T1020	S5PSWT1010, PL1210	
sioning	421 26-Jan-24	21-Mar-25	01-May-23	04-May-24	-321			
n ti	Road Lighting Installation  Landscape Lighting Installation  Delivery of Major Plant & Materials  Fabrication & Delivery of SAS Pumping System  Fabrication & Delivery of Stoplog  Fabrication & Delivery of Penstock  Fabrication & Delivery of Lifting Appliances  Delivery of Control & Monitoring System / SCADA System  Fabrication & Delivery of LV Switchboard  Access to SAS Pumping Station (Impacted by NCE-NCE-219)  E&M Installation of SAS Pumping System  Installation of SCADA System / Control Monitoring System  LV Switchboard Installation  ilssioning  SAT & System Commissioning Tests for SAS Pumping Station  SAT of Switchboard  Ready for Power Energisation  ion House  Delivery of Major Plant & Materials  Fabrication & Delivery of Temporary Primary Sludge Pump  E&M Installation of Existing Consolidation House	Road Lighting Installation	Road Lighting Installation	Read Lighting Installation   180   01-Aug 23   27-Jan 24   11-May-23   11-May-23   27-Jan 24   11-May-23   11-May-23   28-Nov-23   10-Jul-23   10-Jul-23   10-Jul-23   10-Jul-23   10-Jul-23   17-Apr-22   10-Jul-23   17-Apr-22   17-Apr-22   16-May-23   17-Apr-22   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   16-May-23   17-Apr-22   17-Apr-22   17-Apr-22   17-Apr-23   17-Apr-23   17-Apr-24   17-Apr-24   17-Apr-24   17-Apr-24   17-Apr-24   17-Apr-24   17-Apr-24   17-Apr-24   17-Apr-25   17-Apr-26   17-Apr-26   17-Apr-26   17-Apr-26   17-Apr-26   17-Apr-26   17-Apr-27   17-Ap	Read Lighting Installation   180   01-Aug 23   27-Jan 24   11-May-23   06-Nov-23	Read Lighting Installation   180   01-Aug-23   27-Jam-24   11-May-23   06-Nov-23   82	Proof Lighting Installation   180 01 Aug 23   27-Jan 24   11-May 23   06 Nov 23   82 AD1100, SEEAC/1010   S	Rade Lighting Institution

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 54 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start Late Finish	Total Predecessors Float	Successors	9 2020	2021	2022	2023   J   J   J   A         1   2   3   5   5   7   3   3   1   1   1   1	2024	2025 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
S5T1000	SAT of SCADA System	180 26-Jan-24	23-Jul-24	12-May-23 07-Nov-23	-259 S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC11250, S5TXRC1050, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5HPC1030, S5HPC1030, S5PSWC1010, S5DOUC1050, S5PSWC1010, S5PSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SHPC1030, S5SHPC1030, S5SHPC1030, S5SHPC1030, S5SHPC1030,	S5T1040						
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, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SHPC1030, S5SHPC1030,	S5T1040						
\$5T1020	SAT of CMMS	180 26-Jan-24	23-Jul-24	12-May-23 07-Nov-23	-259 S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5PSWC1010, S5PSWC1010, S5PSWC1010, S5PSWC1010, S5FCUC1030, S5FCDP1040, S5SHPC1030, S5SHPC1030, S5SHPC1030, S5SASC1020	S5T1040						

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 55 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

ctivity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	9
S5T1030	SAT of IDMS	180 26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5HPC1030, S5H2SC1030, S5WGBC1030, S5WGBC1030, S5PSWC1010, S5SPSWC1010, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040	
S5T1040	Overall Testing for Whole System	90 24-Jul-24	21-Oct-24	08-Nov-23	05-Feb-24	-259	S5T1000, S5T1010, S5T1020, S5T1030	SC51110, S5T1140	
T&C of E&M Pro	ocess	370 17-Mar-24	21-Mar-25	01-May-23	04-May-24	-321			
S5T1050	System Commissioning Tests for THP System	30 01-Apr-24	30-Apr-24	16-May-23	14-Jun-23	-321	S5EXAC1020,	S5T1120, S5T1080, S5T1110	
S5T1060	System Commissioning Tests for Sludge Dewatering System	30 17-Mar-24	15-Apr-24	01-May-23	30-May-23	-321	S5ECHC1000, S5DOUT1020, S5SPST1010, S5SAST1000, S5ECHT1000, S5SDBT1180, S5SDBT1181, S5SDBT1160, S5SDBT1058, S5SDBT1058, S5SDBT1058, S5SDBT1068, S5SDBT1068, S5SDBT1000, S5SDBT1000, S5SDBC1870, S5SDBC1870, S5SDBC1870, S5SDBC1870, S5SDBC1870,	S5T1110, PL1520,	
S5T1070	System Commissioning Tests for Biogas Storage System	30 01-May-24	30-May-24	15-Jun-23	14-Jul-23	-321	S5BIOT1010, S5T1080	S5T1120, S5T1110, S5S1070, S5T1100	
S5T1080	System Commissioning Tests for Sludge Digestion System	30 16-Apr-24	15-May-24	31-May-23	29-Jun-23	-321	S5T1050.	S5T1120, S5T1110, S5T1070	
S5T1090	System Commissioning Tests for Gas Burning System	30 31-May-24	29-Jun-24	15-Jul-23	13-Aug-23	-321	S5WGBT1010, S5T1100	S5T1120,	
S5T1100	System Commissioning Tests for CHP System	30 16-May-24	14-Jun-24	30-Jun-23	29-Jul-23			S5T1110 S5T1120, S5T1110, PL1560, S5T1090	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 56 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

rity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Tota Float	Predecessors	Successors	9 2020 2021	2022	2023	2024	2025
										123	537331111111	1112222222	2333333333
S5T1110	Seeding	14 16-Jun-24	29-Jun-24	31-Jul-23	13-Aug-23	-321	S5T1090, S5T1070, S5T1080, S5T1100, S5T1060, S5T1050, S5SAST1000	S5T1120					
S5T1120	Process Start Up - Digester 1	120 30-Jun-24	27-Oct-24	14-Aug-23	11-Dec-23	-321	S5T1090, S5T1070, S5T1080, S5T1100, S5T1050, S5T1050, S5T1110, S5S1080, S5TXRC1050, S5SAST1000, S3T1130	S5T1150, S5T1130, S3T1140					
S5T1130	Notice to Commence Phase 1 System Commissioning - Digester 1	3 28-Oct-24	30-Oct-24	03-Feb-24	05-Feb-24	-268	3 S5T1120	S5T1140				<sub> </sub>	
S5T1140	Phase 1 System Commissioning - Digester 1	30 31-Oct-24	29-Nov-24		06-Mar-24		3 S5T1130,	S5T1180	<del>          -</del>				
							S5T1040						
S5T1150 S5T1160	Process Start Up - Digester 2	120 22-Aug-24 3 20-Dec-24	19-Dec-24 22-Dec-24	06-Oct-23 03-Feb-24				S5T1160 S5T1170					
S5T1160	Notice to Commence Phase 1 System Commissioning - Digester 2  Phase 1 System Commissioning - Digester 2	30 23-Dec-24	21-Jan-25	05-Feb-24 06-Feb-24				S5T1170					
S5T1180	Phase 2 System Commissioning - Digester 1 & 2	7 22-Jan-25	28-Jan-25		13-Mar-24			S5T1190,					
							S5T1140	PL1310, S3T1190					
S5T1190	Notice to Commence Plant Commissioning	7 29-Jan-25	04-Feb-25	14-Mar-24	20-Mar-24	-321	I S5T1180	S5T1200				ļļļ.	
S5T1200	Plant Commissioning Tests	45 05-Feb-25	21-Mar-25		04-May-24			SC51110					
Statutory Submiss	sion / Inspection	1245 03-Oct-20 A	03-Oct-24	22-May-22	16-May-24	-140							
HKT Submission		180 26-Jan-24	23-Jul-24	07-Nov-23	04-May-24	-80	)						
S5S0990	Application of Telemetry Lines for Workshop No. 2.	180 26-Jan-24	23-Jul-24		04-May-24		) S5WS2C1180	SCE1110			_		
CLP Submission	Application of relementy Lines for Workshop No. 2.	275 30-May-21 A			12-Dec-22			3631110	<del> </del>		<del></del>		
S5S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP	275 30-May-21 A		12-Dec-22	12-Dec-22	21	1	S5WS2C1040	<del> </del>				
EPD Submission	/ Inspection	711 28-Aug-21 A	08-Aug-23	22-May-22	17-Nov-22	-264	1						
S5S1010	EPD Submission & Approval for Air Pollution Control - Genset	180 10-Feb-23	08-Aug-23	22-May-22	17-Nov-22	-264	1 5201860	S5SDBC1500					
S5S1020	EPD Submission & Approval for Air Pollution Control - CHP & Bumer	180 28-Aug-21 A		-	04-Jun-22			S5T1200,					
								S5THPC1020, S5CHPC1020					
EMSD Submission	on / Inspection	1245 03-Oct-20 A	03-Oct-24	01-Jun-22	16-May-24	-140	)	333 3.323	<b></b>				
_					,			S5WS2C1000					
S5S1030	BEEO Stage one: Submit EE1 & EE-SU to EMSD	60 03-Oct-20 A	02-Dec-20 A	03-Aug-22	03-Aug-22		S2D1890	55VV52C1000					
S5S1040	BEEO Stage two: Submit EE2 & EE-SU to EMSD	60 05-Aug-24	03-Oct-24	18-Mar-24	16-May-24	-140	S5S1250	SC51120					
S5S1050	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	180 15-Nov-21 A	30-Aug-22 A	01-Jun-22	01-Jun-22		S2D1070	S5S1070, S5S1060					
S5S1060	Application for Construction Approval of Notifiable Gas Installation (Form 104)	180 15-Nov-21 A	30-Aug-22 A	01-Jun-22	01-Jun-22		S2D1070, S5S1050	S5S1000 S5S1070, S5BIOC1020					
S5S1070	Application for Approval of Use of Notifiable Gas Installation (Form 105)	28 17-May-24	13-Jun-24	03-Jul-23	30-Jul-23	-319	9 S5S1060,	S5S1080	<del>                                     </del>		+	┼┼┼	
	, ,						S5T1070, S5S1050						
S5S1080	EMSD Inspection - Gas Holding Tanks	14 14-Jun-24	27-Jun-24	31-Jul-23	13-Aug-23	-319		S5T1120					
S5S1090	Form 5 Submission to EMSD - Lift Installation	0 31-Dec-23		28-Feb-24			9 S5WS2T1020,	S5S1100			•		
QEQ1100	EMCD Inspection. Lift Installation	7 00 lan 04	05 Fab 04	20 Mar 04	04 45= 04	FO	S5SDBT1110	QEQ1110					
S5S1100 S5S1110	EMSD Inspection - Lift Installation  Issuance of Form 6 - Lift Installation	7 30-Jan-24 0	05-Feb-24 06-Mar-24	29-iviar-24	04-Apr-24 04-May-24		9 S5S1090 9 S5S1100	S5S1110 SC51110	-		' <sub>*</sub>		
WSD Submission		1002 01-Jul-21 A		11-Feb-23	04-May-24			5550	<b> </b>             -				
	File Name: DF/2018/03 RP R28 Remaining Work							DE /0040 /0-		Date	Revision	Checked	Approved
	File Name: DE/2018/03 RP R28  Lavout: DE1803 RP (Nov 2022) - Critical Activity					Co	ontract No.	DE/2018/03		31-Jul-22	Rev.24	ΙΤ	KM

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 57 of 58 Remaining Work
Critical Activity
Milestone
Actual Progress

Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM
31-Oct-22	Rev.27	LT	KM
30-Nov-22	Rev.28	LT	KM

Activity ID	Activity Name	Original Early Start Duration	Early Finish	Late Start	Late Finish	Tota Float	Predecessors	Successors	9 2020 2021 2022 2023 2024 2025 26
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	<u>- </u>
S5S1130	Submit WWO46 Part IV to WSD (FS)	0 20-Apr-23		22-Sep-23		155	S5S1120, S5WS2C1140, S5SHPC1020, S5SDBC1352, S5SDBC1152, S5SDBC1052	S5S1140, S5S1150	
S5S1140	WSD Inspection (FS)	28 04-May-23	31-May-23	06-Oct-23	02-Nov-23	155	S5S1130	S5S1250, S5S1150	
S5S1150	Issuance of FS Water Certificate	0	28-Jun-23		30-Nov-23	155	S5S1130, S5S1140	S5T1200, S5S1220	
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	
S5S1170	WSD Inspection	7 09-Jan-24	15-Jan-24	15-Feb-24	21-Feb-24	37	S5S1160	S5S1180	
S5S1180	Issuance of Form WWO46 Part Va	0	29-Jan-24		06-Mar-24		S5S1170	S5S1200, S5S1190	
S5S1190	System Flushing / Sampling	45 30-Jan-24	14-Mar-24	07-Mar-24	20-Apr-24	37	S5S1180	S5S1200	
S5S1200	Issuance of Form WWO46 Part Vb	0	14-Mar-24		20-Apr-24	37	S5S1180, S5S1190	S5S1210	
S5S1210	Issuance of Water Certificate	0	28-Mar-24		04-May-24		S5S1200	SC51110	
FSD Submissio	n/Inspection	437 26-May-23	04-Aug-24	04-Sep-22	17-Mar-24	-140			
S5S1220	Prepare & Submit FSI/314 & FSI/501	14 19-Apr-24	02-May-24	01-Dec-23	14-Dec-23	-140	\$5W\$2C1150, \$5\$1310, \$5\$1150, \$5\$2XAC1050, \$5EXAC1060, \$5CHPC1080, \$5CHPC1210, \$5CHPC1220, \$5DIGC1280,	S5S1230	
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	
S5S1240	F.S. Inspection, Defects Redification & Re-inspection	45 24-May-24	07-Jul-24	05-Jan-24			S5S1230	S5S1250	
S5S1250	Issuance of Acceptance Letter	28 08-Jul-24	04-Aug-24	19-Feb-24	17-Mar-24		S5S1140	SC51110, S5S1040	
S5S1260	Application of D.G. Licence	0 26-May-23		04-Sep-22			S2D1860	S5S1270	
S5S1270	Processing of D.G. Licence Application	180 26-May-23	21-Nov-23		02-Mar-23			S5S1280	
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	
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	
S5S1300	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	45 20-Feb-24	04-Apr-24	01-Jun-23				S5S1310	
S5S1310	Issue D.G. Licence	14 05-Apr-24	18-Apr-24	16-Jul-23	29-Jul-23	-264	S5S1290, S5S1300, S5S1280	S5S1220, S5T1100	

File Name: DE/2018/03 RP R28 Layout: DE1803 RP (Nov 2022) -WBS Page 58 of 58



Date	Revision	Checked	Approved
31-Jul-22	Rev.24	LT	KM
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30-Nov-22	Rev.28	LT	KM

T	1						Progress		Updated on:	20-Dec-22		
Item	Major Activities & Submission in coming 3 months		Tiı	me					ogress I contract)		Action	Remarks / Status
		Contract Planned Commencem ent Date	Anticipated / Actual Commencem ent Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
Drawing Submisssion for Key Dates KD1A: Submission of civil and dimensional	WD1A C.L											
requirement drawing, electrical schematic drawings, etc. from formation level up to +8mPD in accordance	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%		
1	KD1A: Submission of Electrical Schematic Drawing											
DC/2018/07 to carry out civil works construction	(Final)	7/15/2020	7/15/2020	11/5/2020	11/5/2020	Task Completed	no.	11	11	100%		
	KD1A: 6 November 2020											
VDID Cubminion of annothing similar d	VD1D, Culturing of Civil Description of Description (First							-				
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	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%		
carry out civil works construction	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) Acceptance of tender award (C9)	4/15/2020	5/22/2020	4/29/2020	5/26/2020 6/6/2020	Task Completed Task Completed		+		100% 100%	-	Bestwise submitted tender report on 26 May 2020 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%		The Contract tender report on 2 value 2020, Extrem of receptance was issued on a value
	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 Comissioning	7/1/2020	7/3/2020	7/29/2020	7/29/2020	Task Completed				100%		First test was conducted on 3 July 2020. Remaining test would be subjected to completion of civil works.  KD3A - 29 July 2020.  Joint Site Inspection was conducted on 24 July 2020 and Notice of completion of work was submitted on 28 July 2020
	KD3A: 29 July 2020							<del>                                     </del>				
	-											
	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
KD3B: 6B.2.15 Operation Restoration of Existing Primary Sedimentation Tank (PST) No. 4 and 6	Acceptance of submission of onsite survey plan  KD3B: Submission of onsite survey report	3/1/2020 7/11/2020	7/20/2020	7/16/2020	7/30/2021	Task Completed  Task Completed				100%	Bestwise	AECOM accepted the onsite survey plan on 22 May 2020. Onsite coordination with ST1  - Onsite survey conducted from 20 July 2020 to 22 July 2020. Bestwise submitted survey report on 5 August 2020. AECOM commented on 19 Aug 2020. Bestwise to resubmit upon conducting the remaining onsite survey. (Done)  - Bestwise revised survey plan for remaining onsite checking of PST No. 6 on 1 Sep 2020. After discussion with plant operator, the remaining survey would be conducted after the dismantling work of PSTs. Formal survey record for PST No.4 was submitted on 24 May 2021.  - Remaining survey (level of bridge & scraper) for PST 6 completed.  - Formal survey report shall be submitted on 30 Jul 2021.
	KD3B: Acceptancce 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) KD3B: Tender invitation - Clarifier (C11)	12/2/2019 12/2/2019	8/1/2020 8/14/2020	4/13/2020 4/13/2020	8/7/2020 8/26/2020	Task Completed Task Completed		-	-	100% 100%		
	KD3B: Tender Invitation - Clarifier (C11)  KD3B: Tender Award - Clarifier (C11)	12/2/2019	8/26/2020	4/13/2020	9/25/2020	Task Completed 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) KD3B: Tender Award - LCP (C11)	12/2/2019 12/2/2019	2/3/2021 2/6/2021	4/13/2020 4/13/2020	2/5/2021 2/8/2021	Task Completed Task Completed		+		100%		
KD wor KD	KD3B: Tender Award - LCP (CTT)  KD3B: Preparation of subletting package for dismantling work (C9)	12/2/2019	9/21/2020	4/13/2020	10/21/2020	Task Completed 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) KD3B: Acceptance of tender award for dismantling	12/2/2019	11/20/2020	4/13/2020	11/22/2020	Task Completed				100%		
	work (C9)	12/2/2019	11/23/2020	4/13/2020	12/1/2020	Task Completed				100%		

KD3B: Preparation and Acceptance of sub package for installation work (C9)  KD3B: Tender invitation for installation work (KD3B: Acceptance of tender award for installation work (KD3B: Acceptance of tender award for in (C9)  Submission and Acceptance of P&M Sub Submission and Acceptance of P&M Sub Submission and Acceptance of P&M Sub Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M I PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M I PST No. 4  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (D1) pipes and fi KD3B: Material Delivery (D1) pipes and fi KD3B: Material Delivery (D1) pipes and fi KD3B: Material Delivery (D1) pipes and fi KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Retrofiting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comissioning for PS  Flow Diversion from PST No. 6 to Tempor Equalization Tank  Removal of Acceptance of SeM Equipment at KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD										
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KD3B: Acceptance of tender award for in (C9) Submission and Acceptance of Drawing S Submission and Acceptance of P&M Subinsion and Acceptance of P&M Subinsion and Acceptance of P&M Subinsion and Acceptance of SAT Plan Submission and Acceptance of SAT Plan Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of F KD3B: Dismantle and Removal of E&M I PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M I PST No. 4  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (IPR Cover)  KD3B: Material Delivery (IPR Cover)  KD3B: Material Delivery (IPR Cover)  KD3B: Material Delivery (IPR Cover)  KD3B: Material Delivery (IPR Cover)  KD3B: Material Manufacturing (IP)  KD3B: Material Delivery (IPR Cover)  KD3B: Material Delivery (IPR Cover)  KD3B: Material Manufacturing (IPR)										
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Submission and Acceptance of Pram Submission and Acceptance of Pram Submission and Acceptance of Pram Submission and Acceptance of SAT Plan Submission and Acceptance of SAT Plan Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M I PST No. 6  Flow Diversion and drain out PST No. 6  Flow Diversion and drain out PST No. 4  KD3B: Material Delivery (Clarifier)  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (IPP)  KD3B: Material Delivery (IPP)  KD3B: Material Delivery (IPP)  KD3B: Material Delivery (IPP)  KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comissioning for PS  Flow Diversion from PST No. 6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting C	ork (C9)	12/2/2019	3/12/2021	4/13/2020	3/15/2021	Task Completed		100	%	
Submission and Acceptance of Prawing Submission and Acceptance of Praw Submission and Acceptance of SAT Plan Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M 1 PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M 1 PST No. 4  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Opipes and fi KD3B: Material Delivery (IP) pipes and fi KD3B: Material Delivery (IP) pipes Material Delivery (IP)  KD3B: Material Delivery (IP)  KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comissioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of	ıstallation work	12/2/2019	3/15/2021	4/13/2020	3/19/2021	Task Completed		100	%	
Submission and Acceptance of P&M Submission and Acceptance of SAT Plan Submission and Acceptance of SAT Plan Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M 1 PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M 1 PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Material Delivery (Clarifier)  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Dippes and fi KD3B: Material Delivery (Dippes KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Raterial Installation of E&M Equipment at KD3B: Testing and Comissioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M EpST No. 6  KD3B: Electrical Installation of E&M Eq No. 6	Submission	4/14/2020	8/5/2020	9/10/2020	1/11/2021	Task Completed	_	100	%	
Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M I PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M I PST No. 4  KD3B: Material Delivery (Clarifier)  KD3B: Material Deliver to Site (Clarifier)  KD3B: Material Manufacturing (DI pipes RD3B: Material Delivery (DI pipes and fi RD3B: Material Delivery (DI pipes AD3B: Material Delivery (FRP Cover)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Delivery (FRP Cover)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Manufacturing (LCP)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Retrofitting Concrete Structure of KD3B: Installation of F&M Equipment at KD3B: Testing and Comissioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Acceumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M Eq No. 6  KD3B: Electrical Installation of E&M Eq No. 6			0.0.20	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1				Formal resubmission of P&M for Rotating Bridge Scraper P&M-0024 (Rev.1) was
Submission and Acceptance of Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M I PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M I PST No. 4  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery to Site (Clarifier)  KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (UP)  KD3B: Material Delivery (PRP Cover)  KD3B: Material Delivery (PRP Cover)  KD3B: Material Delivery (CPP)  KD3		4/14/2020	8/5/2020	9/10/2020	6/30/2021	Task Completed				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 Design Su (Support to DN700 Feed Pipe)  Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M I PST No. 6  Flow Diversion and drain out PST No.4  KD3B: Dismantle and Removal of E&M I PST No. 4  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (To pipes and fi KD3B: Material Delivery (ID pipes KD3B: Material Delivery (ID pipes MD3B: Material Delivery (ID pipes MD3B: Material Delivery (ICP)  KD3B: Material Delivery (ICP)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Retrofitting Concrete Structure of KD3B: Itstiling of Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M EqN No. 6		12/1/2020	1/27/2021	12/15/2020	2/16/2021	Task Completed		100		
Submission and Acceptance of Design Su (Stainless steel support to FRP Cover of E KD3B: Dismantle and Removal of E&M I PST No. 6 Flow Diversion and drain out PST No. 4 KD3B: Dismantle and Removal of E&M I PST No. 4 KD3B: Material Manufacturing (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Delivery to Site (Clarifier) KD3B: Material Delivery (DI pipes KD3B: Material Delivery (DI pipes KD3B: Material Delivery (I Pipes and fi KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Raterial Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P KD3B: Retrofitting Concrete Structure of RD3B: Retrofitti		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.
(Stainless steel support to FRP Cover of E RD3B: Dismantle and Removal of E&M I PST No. 6 Flow Diversion and drain out PST No. 4 KD3B: Dismantle and Removal of E&M I PST No. 4 KD3B: Material Manufacturing (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Delivery (D pipes and fi KD3B: Material Delivery (D pipes and fi KD3B: Material Delivery (D pipes and fi KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of CAD3B: Retrofitting CAD3B: Retrofitting CAD3B: Retrofitting CAD3B: R	Tomission	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.
FST No. 6 Flow Diversion and drain out PST No. 4 KD3B: Dismantle and Removal of E&M1 PST No. 4 KD3B: Material Manufacturing (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Deliver to Site (Clarifier) KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (PRP Cover) KD3B: Material Delivery (PRP Cover) KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M EPST No. 6 KD3B: Retrofitting Concrete Structure 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 I PST No. 4  KD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Delivery (Sarifier)  KD3B: Material Deliver to Site (Clarifier)  KD3B: Material Delivery (DI pipes and fi  KD3B: Material Delivery (FRP Cover)  KD3B: Material Delivery (FRP Cover)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of  KD3B: Retrofitting Concrete Structure of  KD3B: Retrofitting Concrete Structure of  KD3B: Retrofitting Concrete Structure of  KD3B: Retrofitting Concrete Structure of  KD3B: Retrofitting Concrete Structure of  KD3B: Retrofitting Concrete Structure of	Equipment at	2/9/2021	12/21/2020	2/19/2021	1/15/2021	Task Completed		100	%	
RD3B: Material Manufacturing (Clarifier)  KD3B: Material Delivery (Clarifier)  KD3B: Material Deliver to Site (Clarifier)  KD3B: Material Delivery (DI pipes and fi  KD3B: Material Delivery (DI pipes and fi  KD3B: Material Delivery (TRP Cover)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Retrofitting Concrete Structure of  KD3B: Installation of E&M Equipment at  KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor  Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of  KD3B: Mechanical Installation of E&M Eq  No. 6  KD3B: Electrical Installation of E&M Eq  No. 6										
PST No. 4 KD3B: Material Manufacturing (Clarifier) KD3B: Material Delivery (Clarifier) KD3B: Material Deliver to Site (Clarifier) KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (TRP Cover) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS Flow Diversion from PST No. 6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Eq. No. 6  KD3B: Testing and Comisssioning for PS		N/A	1/25/2021	N/A	3/26/2021	Task Completed		100	%	
KD3B: FAT of the Clarifier  KD3B: Material Delivery (Clarifier)  KD3B: Material Deliver to Site (Clarifier)  KD3B: Material Manufacturing (DI pipes KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (FRP Cover)  KD3B: Material Delivery (FRP Cover)  KD3B: Material Delivery (LCP)  KD3B: Material Delivery (LCP)  KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M EPST No. 6  KD3B: Belectrical Installation of E&M EQNO. 6  KD3B: Electrical Installation of E&M EQNO. 6		2/9/2021	3/5/2021	2/19/2021	4/1/2021	Task Completed		100	%	
KD3B: Material Delivery (Clarifier) KD3B: Material Deliver to Site (Clarifier) KD3B: Material Manufacturing (DI pipes and fit KD3B: Material Delivery (DI pipes and fit KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (FRP Cover) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M EPST No. 6  KD3B: Electrical Installation of E&M EQNO. 6  KD3B: Testing and Comisssioning for PS	,,	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). Manufaturing 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 thie moment due to second surge of COVID-19 in india)
KD3B: Material Deliver to Site (Clarifier) KD3B: Material Manufacturing (DI pipes KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (FRP Cover) KD3B: Material Manufacturing (LCP) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Equipment of E&M Eq		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 Manufacturing (DI pipes KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (FRP Cover) KD3B: Material Manufacturing (LCP) KD3B: Material Delivery (LCP) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M EPST No. 6  KD3B: Electrical Installation of E&M EPST No. 6		12/13/2020		1/18/2021	4/6/2021	Task Completed		100		
KD3B: Material Delivery (DI pipes and fi KD3B: Material Delivery (FRP Cover) KD3B: Material Manufacturing (LCP) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Eq No. 6  KD3B: Testing and Comisssioning for PS		N/A 9/11/2020	4/6/2021 1/26/2021	N/A 1/18/2021	4/8/2021 3/15/2021	Task Completed Task Completed		100		Extracted from C9 package to C11 package to suit the installation programme
KD3B: Material Delivery (FRP Cover) KD3B: Material Manufacturing (LCP) KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Eq No. 6  KD3B: Testing and Comisssioning for PS		9/11/2020	3/16/2021	1/18/2021	3/24/2021	Task Completed Task Completed	_	100		Extracted from C9 package to C11 package to suit the histanation programme
KD3B: Material Delivery (LCP) KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Equipment No. 6  KD3B: Testing and Comisssioning for PS		N/A	3/26/2021	N/A	6/21/2021	Task Completed		100		All the FRP covers were delivered to site.
KD3B: Retrofitting Concrete Structure of KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Equipment No. 6  KD3B: Testing and Comisssioning for PS		9/11/2020	3/4/2021	1/18/2021	4/16/2021	Task Completed		100	_	
KD3B: Installation of E&M Equipment at KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of KD3B: Mechanical Installation of E&M E PST No. 6  KD3B: Electrical Installation of E&M Equipment Accumulated Sludge Inside PST No. 6	FDST No. 4	9/11/2020 N/A	4/17/2021 4/2/2021	1/18/2021 N/A	4/30/2021 4/22/2021	Task Completed Task Completed		100		
KD3B: Testing and Comisssioning for PS  Flow Diversion from PST No.6 to Tempor Equalization Tank  Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of  KD3B: Mechanical Installation of E&M E  PST No. 6  KD3B: Electrical Installation of E&M Equality No. 6  KD3B: Testing and Comisssioning for PS		2/27/2021	4/5/2021	5/10/2021	5/17/2021	Task Completed Task Completed		100	770	
Equalization Tank Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of  KD3B: Mechanical Installation of E&M E  PST No. 6  KD3B: Electrical Installation of E&M Equation No. 6  KD3B: Testing and Comisssioning for PS		5/11/2021	4/19/2021	6/9/2021	7/26/2021	Task Completed				Wet test for PST 4 completed on 26 July 2021.
Removal of Accumulated Sludge Inside P  KD3B: Retrofitting Concrete Structure of  KD3B: Mechanical Installation of E&M E  PST No. 6  KD3B: Electrical Installation of E&M Equation No. 6  KD3B: Testing and Comisssioning for PS		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.
KD3B: Mechanical Installation of E&M EPST No. 6  KD3B: Electrical Installation of E&M Equ No. 6  KD3B: Testing and Comisssioning for PS	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
PST No. 6  KD3B: Electrical Installation of E&M Equ No. 6  KD3B: Testing and Comisssioning for PS	f PST No. 6	N/A	5/28/2021	N/A	6/24/2021	Task Completed		100	%	
No. 6  KD3B: Testing and Comisssioning for PS	Equipment at	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, vnotched weir plate, scum baffle plate, scum collection box and FRP cover.
	juipment at PST	2/27/2021	6/9/2021	5/10/2021	7/21/2021	Task Completed		100	%	This includes installation of LCP, cable laying & terminations.
	ST 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 N	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)										

CD 0.10 D			2/25/2020	1 2/20/2020	1/21/2020	T 10 1.1	 	1000/		In
	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%		D : 1
	Tender Award (C11) Material Submission	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 issused 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.
							<b> </b>			
							<del>                                     </del>			
6D 2 16 T Files to F I' c' G	Culmining of mails are the E035						<del>                                     </del>			
(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
	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	<ul> <li>* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 2020.</li> <li>- 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.</li> <li>- AECOM provide consent for the ELS temporary works on 9 Feb 2021. AECOM accepted on 9 Feb 2021.</li> </ul>
	Submission and Acceptance of Design for Filtrate									* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System
	Lifting Well Construction	15/06/2020 -> 17/08/2020*	9/2/2020	30/07/2020 - > 30/11/2020*	1/15/2021	Task Completed		100%		reveiced 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 - >	1/15/2021	Task Completed		100%		- *= PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System reveiced on 17 Aug 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	30/11/2020* 30/07/2020 - > 30/11/2020*	7/30/2021	Task Completed		-	Bestwise	- Bestwise submitted Rev.0 on 12 Jan 2020.  *** = 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 Au 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 reveiced 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									
	Theorial Dublinsholl	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	Tender invitation (C11) (EQT-002 & EQT-004)	4/17/2020	4/17/2020	5/7/2020	5/7/2020	Task Completed		100%		
Equalization System	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.
	Accompany of tandar (C11) (EOT 002 0 EOT	4/25/2020	4/25/2020	5/21/2020	5/21/2020	Tools Committee 1	<del>                                     </del>	1000/	D	Bestwise submitted tender report of instrument on 13 May 2020, AECOM noted on 26 Ma
	Acceptance of tender award (C11) (EQT-002 & EQT-	4/25/2020	4/25/2020	5/21/2020	5/21/2020	Task Completed	<b>  </b>	100%	Bestwise	** 01 6
	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

Minimum   Market								 			
Control of College (College		Submission of subletting package for acceptance (C9)	3/1/2020	7/13/2020	3/14/2020	7/13/2020	Task Completed		100%		
Extraction   Company   C		6 11 (00)					*				
Contract of Part   Contract of Contract											
Company   Comp		( /									
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10   10   10   10   10   10   10   10		1	26/04/2020	8/14/2020	5/5/2020	9/2/2020	Task Completed		100%		
Processor   Commence		Preparation of subletting package for mech work (C9)		1/25/2021		3/1/2021	Task Completed		100%		reveiced on 17 Aug 2020.
Each Acoust Face of the Control (1987)   1988   1989   1		T		2/2/2021		2/0/2021	Task Canadatad		1000/		
Secretary of store early from the part of the part o											
Property of an information of the control of the		( - /									
March   Marc				0,10,2021		0/19/2021			10070		
Prince Accord Configuration (1)   Configurat			01/12/2020*		08/12/2020*		•				reveiced on 17 Aug 2020. Subletting package resubmitted on 26 Feb 2021 and AECOM accepted on 1 Mar 2021.
Contaction of Frameway Filted Equitions of Contaction of Frameway Filted Equitions of Contaction of Frameway Filted Equitions of Contaction of Frameway Filted Equitions of Contaction											
Production of Targetony Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pillack Pagiliation   Contraction of Ministry and Pagiliation   Contraction of Ministry and Pagiliation   Contraction of Ministry and Pagiliation   Contraction of Ministry and Pagiliation   Contraction of Ministry and Pagiliation   Contraction of Ministry and Pagiliation   Contraction   Contraction of Ministry and Pagiliation   Contraction   Co		( ' )	08/08/20 ->	3/10/2021		3/15/2021	Task Completed		100%		Tender report was submitted on 15 Mar 2021
Contraction of Taylorsey Flicker Equilibrium   Contraction of Co		Acceptance of tender award for elect work (C9)		3/15/2021	>	3/19/2021	Task Completed		100%		Tender award on 19 Mar 2021.
Control of the Control of Contr	1 2 2	Construction of minor civil works under PMI 014		10/5/2020		3/31/2021	Task Completed		100%	Bestwise	
Utilities for terminance of the companies of Exercision (Control Control Con			11/7/2020								
Principle   Prin											
Machanical foundations   Machanical foundati							<del></del>				First batch of filtrate EQ tank panel was delivered on 4 Mar 2021.
Particular   Par		, ,							100%		
3172/001   329-2021   415-2021   1210-2021   1210-2021   1210-2021   1210-2021   1210-2021   1210-2021   1210-2021   1210-2022   1210-2021   1210-2022   1210-20	6B.2.16 Temporary Filtrate Equalisation System	-	3/17/2021	3/30/2021	4/12/2021	5/14/2021	Task Completed		-		
Authority   Auth		Electrical Installation	3/13/2021	3/29/2021	4/15/2021	12/10/2021	Task Completed		-		
Process Specialists		Testing and Comissioning	4/15/2021	4/22/2021	5/1/2021	11/30/2022	Completed		-		
Process Specialists											
Process Specialists											D. F. J. D. O. J. J. J. J. J. J. J. J. J. J. J. J. J.
Acceptance of submission for further design  6 (14/2000 7/3/2000 7/17/2000 7		_	6/1/2020	6/1/2020	6/30/2020	7/2/2020	Task Completed		-	Bestwise	
Acceptance of submission for further detail design   6/14/2020   7/3/2020   6/30/2020   7/17/2020   Task Completed   -	Treatment Process Specialist		6/14/2020	7/3/2020	6/30/2020	7/17/2020	Task Completed		-		process design evaluation was submitted on 20 May 2020. Design calculation submitted on
Acceptance of submission for further detail design   6/14/2020   7/3/2020   6/30/2020   7/17/2020   Task Completed   -											
Submission of Contractor's Design for Inlet Works No. 1   96/2020   1/10/2020   1/10/2020   1/10/2022   99%   . Bestwise All finalized design calculations for Inlet Works no. 1 shall be submitted by 30 Dec 2022.	6B Overall plant process equipment sizing review								-	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial
96/2020   11/16/2020   5/14/2021   12/30/2022   99%   - Bestwise   All finalized design calculations for Intel Works no.1 shall be submitted by 30 Dec 2022.		Acceptance of submission for further detail design	6/14/2020	7/3/2020	6/30/2020	7/17/2020	Task Completed		-		
96/2020   11/16/2020   5/14/2021   12/30/2022   99%   - Bestwise   All finalized design calculations for Intel Works no.1 shall be submitted by 30 Dec 2022.											
PRAMOUS   SILVAN   PRAMOUS   SILVAN   PRAMOUS   SILVAN   PRAMOUS   SILVAN   PRAMOUS   Course Screens & Fine Screens (status: B)	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 GA Drawing   1/5/2021   1/5/2022   1/5/2021   1/5/2021   1/5/2021   1/5/2021   1/5/2021   1/5/2022   1/5/2021   1/5/			9/6/2020	9/7/2020	5/14/2021	12/30/2022	99%				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)
EAM GA submission DWG0082 resubmitted on 3 µJy 2021. AECOM commented on 19		Submission of P&ID Drawing	9/6/2020	9/6/2020	5/14/2021	12/29/2020	Task Completed				
9/6/2020 1/15/2021 5/14/2021 12/30/2022 99% resultmit. 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 Submission of detaile		Submission of GA Drawing	9/6/2020	1/5/2021	5/14/2021	12/30/2022	99%				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
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 Submission of detailed design for LV Switchboard		Submission of Electrical Drawing	9/6/2020	1/15/2021	5/14/2021	12/30/2022	99%				resubmit.
for Inlet Works No. 1 (CDS021)  9/6/2020  9/6/2020  5/14/2021  Task Completed  Submission of detailed design for LV Switchboards for  0//2020  0//2020  5/14/2021  Task Completed		Acceptance of submission	5/15/2021	5/15/2021	5/29/2021	12/30/2022	98%		-		and managed drawings for finer works no.1 shall be submitted by 30 Dec 2022.
		for Inlet Works No. 1 (CDS021)	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed				
			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	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.
	Inlet Works No. 1 up to +8.0 mPD (Final) KD1A: Submission of electrical schematic drawings for					*					Destribe	` '
	Inlet Works No. 1 (First Draft) KD1A: Submission of electrical schematic drawings for	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
	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											Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to
		9/6/2020	1/15/2021	5/14/2021	12/30/2022	99%						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	0/57-										PID resubmitted under DWG0053 (rev.1) on 28 Jun 2021, DWG0057 (rev.1) on 29 Jun
		9/6/2020	12/11/2020	5/14/2021	6/29/2021	Task Completed						2021 and DWG0058 (rev.1) on 29 Jun 2021.

	Submission of Electrical Drawing	9/6/2020	2/8/2021	5/14/2021	12/30/2022	99%						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 Submission of detailed design for electrical installations	9/6/2020 9/6/2020	9/6/2020 9/6/2020	5/14/2021 5/14/2021	5/14/2021 5/14/2021	Task Completed 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 KD1A: Submission of electrical schematic drawings for	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed		<del>                                     </del>				1st draft of drawing to be submitted by 16 September 2020
	Chemical System No. 1 and No. 2 (Final)  KD1A: Submission of civil requirement drawing for	9/7/2020	9/16/2020	11/5/2020	11/5/2020	Task Completed				1000/		
	Temporary Chemical System up to +8.0 mPD (First KD1A: Submission of civil requirement drawing for	7/15/2020 9/7/2020	7/15/2020 9/16/2020	8/15/2020 11/5/2020	9/15/2020	Task Completed Task Completed	no.	1	1	100%		1st draft of drawing submitted on 15 September 2020  Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	Temporary Chemical System up to +8.0 mPD (Final)  KD1A: Submission of electrical schematic drawings for						110.	1	1	10070		` '
	Temporary Chemical System (First Draft)	7/15/2020	7/15/2020	8/15/2020	9/15/2020	Task Completed Task Completed				-		1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for KD1A: 6 November 2020	9/7/2020	9/16/2020	11/5/2020	11/5/2020	rask Completed						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		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%				-	<u></u>	Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".
	Submission of detailed design for electrical installation 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 Task Completed						
	Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed	1					
	Submission of civil work requirements for BR 2A and	9/1/2020	9/1/2020	10/30/2020	10/30/2020	Task Completed						
	2B up to +8.0 mPD (CDS080-3) KD1A: Submission of civil requirement drawing for BR	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
	2A and 2B up to +8.0 mPD (First Draft)  KD1A: Submission of civil requirement drawing for BR							-	1 2		D	
	2A and 2B up to +8.0 mPD (Final)  KD1A: Submission of electrical schematic drawings for	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.
	BR 2A and 2B (First Draft)  KD1A: Submission of electrical schematic drawings for	7/15/2020 9/7/2020	7/15/2020 10/1/2020	8/15/2020 11/5/2020	9/30/2020 11/5/2020	Task Completed Task Completed				-		1st draft of drawing was sent to AECOM via email on 15 September 2020
	KD1A: Submission of electrical schematic drawings for KD1A: 6 November 2020	71 11 ZUZU	10/1/2020	11/3/2020	11/3/2020	1 ask Completed						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											P&M0072 - Membrane Module (status: B)
												P&M0069 - Permeate Pump (status: B)
												P&M0047 - RAS Pump (status: B)
												P&M0050 - Drain Pump (status: B)
		9/6/2020	11/19/2020	5/14/2021	12/30/2022	99%						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	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				1						DWG0121 (rev.1) was resubmitted to AECOM on 17 Jul 2021
												Finalized drawings shall be submitted by 30 June 2022.
		3/31/2021	2/18/2021	5/14/2021	12/30/2022	99%						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											Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to
		4/15/2021	1/15/2021	5/14/2021	12/30/2022	99%						resubmit.
		4/13/2021	1/15/2021	3/14/2021	12/30/2022	7770						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  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 LV Switchboards for Submission of detailed design for electrical installation	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed						
	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	9/7/2020	10/1/2020	11/5/2020	10/20/2020	Tools Commissed		2	3	100%	Destroise	Bestwise submitted (Rev.1) on 20 Oct 2020
	MFB No. 2 (Final)	9/7/2020	10/1/2020	11/3/2020	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	Tender invitation (C11)											
(EQT-001 - Deodorization Unit)		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					*						D. C. L. C. D. O. L. C. L. CAN 2000 AFGOM
	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.
		7/0/2020	7/0/2020	3/14/2021	12/31/2021	rask completed				-		Finalized design was completed.
	Submission of P&ID Drawing of DOU No. 1											Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13
	Submission of Fair Drawing of Doc No. 1	9/6/2020	8/5/2020	5/14/2021	7/2/2021	Task Completed				-	Bestwise	Apr 2021.
	Submission of GA Drawing of DOU No. 1											GA submitted on 21 Jun 2021
		9/6/2020	9/6/2020	5/14/2021	12/30/2022	99%						Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is
		7.0.2020	7.0.2020	0/1//2021	12/30/2022	,,,,						scheduled on 11, 18, 25/5/2022.
	Submission of Electrical Drawing of DOU No. 1											
	Submission of Electrical Drawing of DOC No. 1	2/21/2021	1/20/2021	5/14/2021	12/20/2022	99%						Control wiring diagrams was resubmitted on 1 April 2021. AECOM commented on 23 Apr
		3/21/2021	1/30/2021	5/14/2021	12/30/2022	99%						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%				-		I manzed drawings shall be submitted by 50 Dec 2022.
	KD1A: Submission of civil requirement drawing for	3/13/2021	3/13/2021	3/29/2021	12/30/2022	7070				-		
	Deodorisation System, DOU No. 1 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
	(First Draft)					•						
	KD1A: Submission of civil requirement drawing for											
	Deodorisation System , DOU No. 1 up to +8.0 mPD	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.
	(Final) 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)
	,	71012020	21012020	3/14/2021	12/10/2021	rask Completed				-		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
			5.5.2520	2021		completed					_ 550150	Apr 2021.
	Submission of GA Drawing of DOU No. 2A											Bestwise submitted (rev.1) on 30 Nov 2020. AECOM commented on 16 Dec 2020.
		0/6/2020	8/2/2020	5/14/2021	12/20/2022	99%					Dootwine	Bestwise to resubmit.
		9/6/2020	8/3/2020	5/14/2021	12/30/2022	<del>99</del> 70				-	Bestwise	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				1000							Bestwise submitted (rev.0) on 26 Jan 2021, AECOM commented on 4 Feb 2021. Bestwise
		3/21/2021	1/26/2021	5/14/2021	12/30/2022	99%						to resubmit. Finalized drawing shall be submitted by 30 Dec 2022.
							I		I	I		i manzed 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 commeneted on 16 Dec 2020. Bestwise resubmitted on 24 June 2021. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 27/4/2022, 4, 11/5/2022.
	Submission of Electrical Drawing of DOU No. 3A	3/21/2021	2/26/2021	5/14/2021	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	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
	Deodorisation System, DOU No. 3A up to +8.0 mPD KD1A: Submission of civil requirement drawing for	8/28/2020	9/29/2020	11/2/2020	11/5/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 3B (CDS0019 & CDS0049)	9/6/2020	9/6/2020	5/14/2021	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 commeneted on 12 Mar 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA revew meeting is scheduled on 16, 23, 30/6/2022.
	Submission of Electrical Drawing of DOU No. 3B	3/21/2021	2/22/2021	5/14/2021	12/30/2022	99%						GA submitted on 24 Jun 2021 Finalized drawing shall be submitted by 30 Dec 2022.
	Acceptance of submission Submission of detailed design for electrical installation	5/15/2021 9/6/2020	5/15/2021 9/6/2020	5/29/2021 5/14/2021	12/30/2022 5/14/2021	98% Task Completed			-	-		
	Submission of detailed design for electrical installation Submission of detailed design for LV Switchboards for	9/6/2020	9/6/2020	5/14/2021	5/14/2021	Task Completed 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 KD1A: Submission of electrical schematic drawings for	8/28/2020 7/15/2020	8/28/2020 7/15/2020	11/2/2020 8/15/2020	11/2/2020 9/30/2020	Task Completed 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						1st didn't of didwing to be submitted by 50 September 2020
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
04SC008 - Design, Supply and Installation of detailed	A				7/6/2020	Task Completed				1000/		AECOM accepted tender report on 6 July 2020.
design for lifting appliances	Submission of detailed design for lifting appliances for	-	-	-	7/6/2020	rask Completed				100%	-	
	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											Design calculations and drawings for inlet works was submitted on 16 Dec 2020. AECOM
<i>g</i> -y		N/A	12/10/2020	N/A	12/30/2022	99%						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 Hydrent Dump Doom	KD1A: Submission of civil requirement Jamin of	7/15/2020	7/15/2020	8/15/2020	9/17/2020	Task Completed		1	1	100%	1st draft of drawing submitted on 17 September 2020
Street Fire Hydrant Pump Room	KD1A: Submission of civil requirement drawing for KD1A: Submission of civil requirement drawing for	8/28/2020	9/18/2020	8/15/2020 11/2/2020	9/17/2020 11/5/2020	Task Completed Task Completed	no.	1	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	110.			10070	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
To the optimizer Funity Room	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	9/7/2020	10/1/2020	11/5/2020	11/5/2020						
	Street Fire Hydrant Pump Room (Final) 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					Notice of completion works was submitted on 17 Nov 2020
	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			-							onderground works subject to site coordination with 3 v.
	,gg	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 Acceptancee of onsite survey report	5/21/2020 5/30/2020	5/21/2020 5/30/2020	5/29/2020 6/15/2020	5/29/2020 6/15/2020	Task Completed Task Completed				100%	
	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
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%	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.
Sludge Press House		0/21/2020	0/21/2020	0/20/2020	12///2020	rusk completed				10070	Material submission (Rev. 2) resubmitted on 12 Jan 2021. AECOM accepted subject to comment on 22 Jan 2021.

for Existing Membrane Filter Presses at Existing Sludge Press House	·	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								
	Competion 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 <i>Contractor</i> '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.
WATE	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 Clearence 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 clearence work started on 20 July 2020
	Submission of method statement with ICE certificate Submission of design calculation with ICE certificate	8/1/2020 8/1/2020	8/1/2020 8/1/2020	8/7/2020 8/7/2020	10/8/2020 10/8/2020	Task Completed Task Completed	100%		CV of ICE was submitted on 4 August 2020 and accepted on 25 August 2020  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	10/8/2020	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  Excavation work	8/8/2020 8/17/2020	11/24/2020 10/21/2020	8/14/2020 8/18/2020	11/27/2020 10/21/2020	Task Completed Task Completed	100%		
	Installation of septic tank	8/19/2020	10/21/2020	8/20/2020	10/21/2020	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)								
o is every Building information incubing (Bills)	Succession of successing pursuage for uncopumet (67)	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) Tender award (C9)	4/1/2020	4/1/2020	4/8/2020	4/9/2020 4/15/2020	Task Completed Task Completed	100%	-	Bestwise submitted tender report on 15 April 2020
	Submission of subletting package for acceptance	-	-	-	4/13/2020	Task Completed	100%	<u>-</u>	Destwise submitted tender report on 13 April 2020
		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		5/13/2020		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 Acceptance of tender award	4/25/2020	6/27/2020	5/11/2020	7/4/2020 7/18/2020	Task Completed			Bestwise submitted tender report on 30 June 2020
04SC007 - Independent Beam Plus Consultant	Submission of subletting package for acceptance	3/1/2020	3/30/2020	3/14/2020	3/30/2020	Task Completed	100%	_	
	A					Task Completed			
	Acceptance of subletting package Tender invitation	3/14/2020	4/3/2020	3/30/2020	4/3/2020	•	100%	-	
	Tender award	3/30/2020	3/30/2020	4/9/2020	4/9/2020	Task Completed	100%	-	
	Acceptance of tender award	-	-	-	4/15/2020	Task Completed	100%	-	Bestwise submitted tender report on 15 April 2020
	•	-	-	-	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
Temporary Primary Sludge Thickener and its	Tender award (C9) Submission of subletting package (C9) for acceptance	5/14/2020 15/05/2020 ->	5/29/2020 8/14/2020	5/30/2020 15/05/2020 -	6/9/2020 8/27/2020	Task Completed Task Completed	100%	Bestwise	Bestwise submitted tender report on 9 June 2020.  - *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020.
Temporary Primary Sludge Thickener and its  Sul Ac	Acceptance of subletting package (C9) (Mech)	30/05/2020 -> 30/7/2020*	8/15/2020	15/06/2020- > 15/8/2020*	0/16/2020	Task Completed	100%	Destribe	- *=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,

238-270   27-280	(m. 1.400) 0.5.10	1							1	T C
100   100	Tender award (C9) (Mech)		9/17/2020		10/22/2020	Task Completed		100%		- 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
Section   Sect	Acceptance of tender award (C9) (Mech)	-	-	-	11/16/2020	Task Completed		100%		
According to Application   1979   1	Submission of subletting package (C9) for acceptance (Elect)	1	12/9/2020	>	1/28/2021			100%		CE was implemented on 15 July 2020.
	Acceptance of subletting package (C9) (Elect)	30/05/2020 ->	1/29/2021	15/06/2020-	2/1/2021	Task Completed		100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020.
Table record (Pty (Place)   2010/0000   2010/000   2010/000   2010/000   2010/000   2010/000   2010/000   2010/000   2010/000   20	Tender invitation (C9) (Elect)		2/1/2021	22/06/2020-	2/11/2021	Task Completed		100%		CE was implemented on 15 July 2020.
1809-2020   1809	Tender award (C9) (Elect)	1	2/11/2021	1	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.
Tools a residence (CT)	A	+			2/26/2021	Tools Completed		1000/		- 1 ender report target submitted on 23 Feb 2021 and accepted on 24 Feb 2021
1809-1006   1809-2006   1809	•	<del>  -</del>	-	-	2/20/2021	rask Completed		100%		- *-Corresponding PIVII NO.009 and CE NO.009 were issued by AECONI on 14 July 2020.
29/07/2020 - 27/1/			4/30/2020	>	11/18/2020	Task Completed		100%	Bestwise	-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.
Acceptance of lender award (C11) 9/18/2020 - 03/07/2020 - 15/07/2020 - 15/07/2020 - 15/07/2020 - 21/0222 - 21/	Tender award (C11)	15/05/2020->	5/20/2020	15/07/2020-	11/20/2020	Task Completed		1000/		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020.
Design Submission  100% Bestwise  10	· , ,	29/07/2020*	3/30/2020	>		rask Completed		100%		CE was implemented on 15 July 2020.
Plant and Material Submission  21,097020 2	Acceptance of tender award (C11)	-	-	-	9/18/2020			-		
- **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 15 Agust 2020.   Plant and Material submission (Rev.) of process purpose was submitted on 5 Agust 2020.   Plant and Material submission (Rev.) of process purpose was submitted on 5 Agust 2020 and AECOM commented on 26 Aug 2020, Bestwise to re-submitted to AECOM.   Plant and Material submission (Rev.) for valves was submitted on 16 Nov 2020. AECOM accepted on 14 Dec 2020 subject to comments on 25 Feb 2021.   Plant and Material submission (Rev.) for primary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for primary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 3 Feb 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 28 Jan 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 28 Jan 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 28 Jan 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 28 Jan 2021.   Plant and Material submission (Rev.) for frimary sludge equalization tank was submitted on 28 Jan 2021.   Plant and Material submission (Rev.) for frimary sludge equalizati		1	8/5/2020	>	5/10/2021	Task Completed		100%	Bestwise	CE was implemented on 15 July 2020.  -Design submission of Process Pumps (Rev.3) resubmitted on14 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
03/07/2020 -> 30/07/2020* 8/3/2020    8/3/2020   8/3/2020    8/3/2020    8/3/2020    8/3/2020    8/3/2020    8	Plant and Material Submission	1	7/21/2020	>	6/30/2021	Task Completed			Bestwise	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.0) for instruments was resubmitted on 13 Mar 2021.
	Drawing Submission	1	8/3/2020	>	2/10/2021	Task Completed		100%	Bestwise	CE was implemented on 15 July 2020.  - PFD, P&ID, Schematic GA (Rev.3) resubmitted on 22 Jan 2021 according to the finallized control philosophy. AECOM accepted subject to comment on 29 Jan 2021.  - Electrical drawing - Bestwise resubmitted electrical drawing (Rev.5) on 22 Mar 2021.

Mechanical Installation		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 202 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
18-97-70   19-97   1		Material Delivery	05/09/2020 ->	11/4/2020	16/11/2020 -	6/21/2021	Task Completed		
Part   Part		Mechanical Installation		2/2/2021	>	5/17/2021	Task Completed	-	
Second Second Company   Company				1/16/2021		4/7/2021	Task Completed	100%	First batch to be delivered on 23 Mar 2021
Second Communication   Second Communication		Onsite Installation of FRP Tank		4/7/2021		7/30/2021	Task Completed		Water filling to tank completed; Tank hydraulic test completed.
1312-2001   1312		Electrical Installation		3/19/2021	>	7/19/2021	Task Completed	-	Energize of all LCPs on 24 May 2021 and isolated prior to system commissioning.
11/1/10/2016   16/10/2016   1	Temporary Primary Sludge Thickener and its	Testing and Comissioning							
Accordance of pilothing probate (FO)   177-2000   177				5/8/2021	>	9/30/2022	Completed	-	
Tender invitation (CV)									
Finister award (CF)	lectrical Works								
Accordance of Series's reposit (CF)   128-2000   128-2001   128-2000   128-2001   128-2000   128-2001   128-2000   128-2001   128-2000   128-2001   128-2000   128-									
Despt Sephate   Temperatum of continue distance of process as a superature of continue distance of process as a superature of continue distance of process as a superature of continue distance of continue of process as a superature of continue of cont									Tender report was submitted on 18 Feb 2021 and accepted on 26 Feb 2021
Transportation of coloring claiment and gament on 2 (Claims No. 2) to short control (Claims A) to 2 (April 2014)   2-50.000   2-50									
Examing (MWA) A Genes Continued   442,500.1   442,501.1   493,001   150,000   100%   100%		Transportation of existing dismantled genset no. 2					•		DWG-0100 was submitted on 23 Apr 2021. AECOM accepted with comments on 30 A
(ec)   \$14211   \$2,000   \$2,00			4/23/2021	4/23/2021	4/30/2021	4/30/2021	Task Completed	100%	
PATE   PASS		etc)	5/14/2021	5/28/2021	5/21/2021	5 July 2021	Task Completed	100%	
Container deliver to HK   Factory   File   St   20,001   St   20,001   St   20,001   Task Completed   100%   100		P431 P&M-0087					1		
Off site modifications work at HK fictory   Tel.   816/2021   824/2021   Task Completed   100%				21 June 2021		8/12/2021			
FAT plan of modified Gemet No.2   71/22021   71/22021   820/2021									
PA1 MS-036			TBC	8/16/2021	8/24/2021	8/24/2021	Task Completed	100%	
Installation Work of Feetan Support   Section of Genet Cape Cape Cape Cape Cape Cape Cape Cape		P431 MS-036							
Transportation of Genuet No. 2 to esting power house in SWHSTW and completion of the Genuet No. 2 to provide the Completion of the Genuet No. 1 to provide the Completion of the Genuet No. 1 to provide the Completion of Compl									
Provision of one (1) can of 160L diesel and a dised hand pump placed at diesel daily tank of Genset No. I for standify top up (PPM-102 lenn.) Laceation to be coordinated and advised by SW18TW operator		Transportation of Genset No. 2 to existing power house in SWHSTW and completion of the Genset No.2					•		
Modification works of existing switchboard   91/2021   91/2021   91/2021   98/2021   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		7/27/2021	8/31/2021				Location to be further coordinated with DSD.
Cables (including control cable and power cables) laying and installation of cable containment, bushar chamber   7/21/2021   7/30/2021   9/8/2021   7/30/2021		Modification works of existing switchboard	9/1/2021	9/1/2021	9/8/2021	9/8/2021	Task Completed	100%	
Second   S		Cables (including control cable and power cables) laying					•		
work to existing power house in SWHSTW after the completion of Genset No. 2 installation work  Delivery of dummy load and self-test  9/1/2021  9/1/2021  9/1/2021  9/1/2021  9/1/2021  1 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  9/15/2021  9/15/2021  1 Task Completed  100%  100%  100%  48C009 - Design, Supply and Installation of HVSB  Submission of subletting package for acceptance Acceptance of subletting package 5/21/2020  Task Completed  100%  100%  100%		Supply of busbar chamber/ connection box	8/10/2021	8/10/2021	9/3/2021	9/3/2021	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.)  SSOUP - Design, Supply and Installation of HVSB  Submission of subletting package for acceptance A21/2020 5/30/2020 -  Acceptance of subletting package 5/21/2020 5/30/2020 -  Tender invitation 6/1/2020 6/14/2020 -  Tender invitation 6/1/2020 6/14/2020 -  SOUP - Design, Supply and Installation of HVSB -  Submission of subletting package for acceptance A21/2020 5/30/2020 -  Tender invitation 6/1/2020 6/14/2020 -  SOUP - Design, Supply and Installation of HVSB -  Submission of subletting package for acceptance A21/2020 5/30/2020 -  Tender invitation 6/1/2020 6/14/2020 6/14/2020 -  Tender invitation 6/1/2020 6/14/2020 6/14/2020 -  Tender invitation 6/1/2020 6/14/2020 6/		work to existing power house in SWHSTW after the	9/1/2021	9/1/2021	9/8/2021	9/8/2021	Task Completed	100%	
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   100%   100%		Delivery of dummy load and self-test	9/9/2021	9/9/2021	9/14/2021	9/15/2021	Task Completed	100%	
Acceptance of subletting package         5/21/2020         5/30/2020         -		Please allow 1 week advance notice for coordination	9/15/2021	9/15/2021	9/15/2021	9/16/2021	Task Completed	100%	
Acceptance of subletting package         5/21/2020         5/30/2020         -	199000 P : 6 : 17 :		4/01/0000	-	F/1 /0 000				
Tender invitation 6/1/2020 6/14/2020 -	SC009 - Design, Supply and Installation of HVSB			-					
				1					
Tender award //1/2020 //14/2020 -				1					
		1 enuer award	//1/2020	-	//14/2020		-		
			-	-	+			<del></del>	

	Acceptance of subletting package	6/1/2020		6/14/2020		-				
	Tender invitation	6/14/2020		6/30/2020		-				
	Tender award	7/1/2020		7/14/2020		-				
04SC011 - Design and Installation of Building	Submission of subletting package for acceptance	4/14/2020		4/30/2020						
045C011 - Design and Installation of Building	Acceptance of subletting package for acceptance	5/14/2020		5/30/2020		-				
	Tender invitation	5/30/2020		6/14/2020		_				
	Tender award	6/21/2020		6/30/2020		-				
04SC012 - Facility Computerized Systems	Submission of subletting package for acceptance	5/14/2020		5/30/2020		-				
	Acceptance of subletting package	6/14/2020		6/30/2020		-				
	Tender invitation	7/1/2020		7/14/2020		-				
	Tender award	7/21/2020		8/14/2020		-				
District and Materials (Modified Caleman)										
Plant and Materials (Marking Scheme)										
PS Clause no. 6B.2.1	Submission of marking scheme for PM's acceptance	5/1/2020	5/1/2020	9/1/2020	8/19/2020	Task Completed			100%	AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020.
Inlet Pump	(fourth draft)	0,1,2020	5/1/2020	3112020	0/19/2020	Tuon compressed			10070	The control commented on 11 Magast 2020, Bestwise restainment on 17 Mag 2020.
	Submission of marking scheme for PM's acceptance	5/1/2020	5/1/2020	9/1/2020	8/19/2020	Task Completed			100%	Bestwise resubmitted on 19 Aug 2020.
	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed			100%	AECOM accepted on 1 Sep 2020
	Tender invitation	5/29/2020	9/9/2020	9/29/2020	9/18/2020	Task Completed			100%	Tender invitation was conducted on 9 Sept 2020 and returned on 18 Sept 2020.
PS Clause no. 6B.2.1	Tender award	6/5/2020	9/19/2020	10/5/2020	10/7/2020	Task Completed			100%	Technical Submission Evaluation Report was submitted on 5 Oct 2020, Tender report was
Inlet Pump	A counteness of tender	6/19/2020	10/17/2020	10/19/2020	11/15/2020	*				submitted on 7 Oct 2020. AECOM noted on 8 Oct 2020.
	Acceptance of tender award	0/19/2020	10/1//2020	10/19/2020	11/13/2020	Task Completed			-	
		1		1						
	Submission of marking scheme for PM's acceptance			0.000	0.44.7.17				10	
	(third draft)	5/1/2020	5/14/2020	9/1/2020	8/19/2020	Task Completed			100%	AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	5/1/2020	5/14/2020	9/1/2020	8/19/2020	Task Completed			100%	Bestwise resubmitted on 19 Aug 2020
PS Clause no. 6B.2.4	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed			100%	AECOM accepted on 1 Sep 2020
MBR Pre-treatment Screen	Tender invitation	5/29/2020	11/20/2020	9/29/2020	12/11/2020	Task Completed			100%	Tender invitation was conducted on 20 Nov 2020 and returned on 11 Dec 2020. Tender
	Tender award									Technical Submission Evaluation Report was submitted on 12 Jan 2021. AECOM noted on
		6/5/2020	12/13/2020	10/5/2020	3/3/2021	Task Completed			100%	22 Jan 2021.
						1				Tender Report was submitted on 4 Feb 2021, AECOM commented on 19 Feb 2021,
										Bestwise submitted supplementary information on 26 Feb 2021. AECOM noted on 3 Mar
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/1/2020	5/14/2020	9/1/2020	9/2/2020	Task Completed			100%	AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020
1 3 Clause IIO. OB.2.4	Submission of marking scheme for PM's acceptance	5/1/2020	9/3/2020	9/1/2020	9/2/2020	Task Completed Task Completed			100%	Bestwise resubmitted on 2 Sep 2020
PS Clause no. 6B.2.4	Acceptance of marking scheme by the PM	5/15/2020	8/20/2020	9/15/2020	9/1/2020	Task Completed Task Completed			100%	AECOM accepted on 1 Sep 2020, subject to conditions.
Air Diffusion System	Tender invitation				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				10070	Procurement package would follow the approved format (i.e. aeration blower)
		5/20/2020	0/17/0001	0/20/2020	2/12/2021	T 1 0 1 1			1000/	Tender invitation was conducted on 17 Feb 2021. Addendum No. 1 was issued on 18 Feb
		5/29/2020	2/17/2021	9/29/2020	3/12/2021	Task Completed			100%	2021. Tender return date was extended from 26 Feb 2021 to 12 Mar 2021. Tender returned
										on 12 Mar 2021
	Tender award									Technical Submission Evaluation Report was submitted on 18 Mar 2021. AECOM noted on
		6/5/2020	3/18/2021	10/5/2020	4/20/2021	Task Completed			-	30 Mar 2021. Tender Report was submitted on 8 Apr 2021. LOI was issued to supplier.
		6/10/2020	2/20/2021	10/10/2020	2/12/2021	T. 1.C. 11				
	Acceptance of tender award	6/19/2020	2/20/2021	10/19/2020	3/12/2021	Task Completed		-	-	
	+									
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed		1	100%	AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
1 5 Clause no. Ob.2.4	Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed			100%	Bestwise resubmitted on 19 Aug 2020
PS Clause no. 6B.2.4	Acceptance of marking scheme by the PM	5/28/2020	8/20/2020	9/28/2020	9/1/2020	Task Completed			100%	AECOM accepted on 1 Sep 2020
BR Aeration Blower	Tender invitation	5:20:2020	5. 20. 2020		J. 1. 2020					·
		6/11/2020	2/2/2021	10/12/2020	2/2/2021	Tarle Committee			1000/	Procurement package was submitted to AECOM under CGS-066. AECOM replied on 29
		6/11/2020	2/3/2021	10/12/2020	3/3/2021	Task Completed			100%	Jan 2021.
										Tender invitation was conducted on 3 Feb 2021. Tender returned on 3 Mar 2021
	Tender award									Technical Submission Evaluation Report was submitted on 10 Mar 2021. AECOM noted
		6/18/2020	3/4/2021	10/19/2020	4/12/2021	Task Completed			-	on 19 Mar 2021. Tender Report was submitted on 24 Mar 2021. LOI was issued to supplier.
	A	7/2/2022	2/4/2021	11/0/0000	2/25/2021	T. 1 C. 1 : 1		1		
	Acceptance of tender award	7/2/2020	3/4/2021	11/2/2020	3/25/2021	Task Completed			-	AECOM accepted on 1 Sep 2020, subject to conditions.
		1		1						
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	5/14/2020	5/1/2020	9/14/2020	9/2/2020	Task Completed			100%	AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020
1 5 Clause no. UD.2.T	Submission of marking scheme for PM's acceptance  Submission of marking scheme for PM's acceptance	5/14/2020	9/3/2020	9/14/2020	9/2/2020	Task Completed		1	100%	Bestwise resubmitted on 2 Sep 2020
	Acceptance of marking scheme by the PM	5/28/2020	9/3/2020	9/28/2020	9/5/2020	Task Completed			100%	AECOM accepted on 5 Sep 2020 subject to conditions.
	Tender invitation	6/11/2020	9/14/2020	10/12/2020	10/5/2020	Task Completed			100%	Tender invitation was conducted on 14 Sept 2020 and returned on 5 Oct 2020.
PS Clause no. 6B.2.4	Tender award					1				Technical Submission Evaluation Report was submitted on 14 Oct 2020, Tender report was
Membrane Modules, Cassettes / Racks		6/18/2020	10/6/2020	10/19/2020	11/2/2020	Task Completed			100%	submitted on 2 Nov 2020. AECOM noted on 4 Nov 2020.
	Acceptance of tender award	7/2/2020	11/3/2020	11/2/2020	11/24/2020	Task Completed			-	
	Colorinia Continua Continua Control	-		1						
	Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed			100%	AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	(second draft) Submission of marking scheme for PM's acceptance	5/14/2020	5/14/2020	9/14/2020	8/19/2020	Task Completed			100%	Bestwise resubmitted on 19 Aug 2020
	Acceptance of marking scheme by the PM	5/28/2020	8/20/2020	9/14/2020	9/1/2020	Task Completed Task Completed			100%	AECOM accepeted on 1 Sep 2020
	Tender invitation	6/11/2020	9/25/2020	10/12/2020	10/29/2020	Task Completed Task Completed			100%	Tender invitation was conducted on 25 Sept 2020 and returned on 29 Oct 2020.
PS Clause no. 6B.2.4	Tender invitation Tender award									Technical Submission Evaluation Report was submitted on 6 Nov 2020. Tender report was
RAS Pump		6/18/2020	10/30/2020	10/19/2020	12/2/2020	Task Completed			100%	submitted on 24 Nov 2020, AECOM noted on 2 Dec 2020.
<u> </u>	Acceptance of tender award	7/2/2020	11/21/2020	11/2/2020	12/12/2020	Task Completed		1	-	,
				1				1		

1	sage of WA2-A	-	2/21/2020	2/21/2020	Task Completed		-	Site works including fencing and site clearnace works to be completed by DC/2018/06 by 30/4/2020 WA2C handovered to Bestwise on 21 February 2020
Γ								