



Our Ref.: CJO-3113

15 February 2022

The EIA Ordinance Register Office, Environmental Protection Department, 27th floor, Southorn Centre, 130 Hennessy Road, Wanchai, Hong Kong

CONTRACT NO. 1/WSD/19 & 6/WSD/21

IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS (SOUTH WORKS) – WATER TREATMENT WORKS AND ANCILLARY FACILITIES Environmental Permit EP-494/2015

We are enclosing the following information for your kind considerations of our application:

- (a) Three hard copies,
- (b) Two copies of the 83rd monthly Environmental Monitoring and Audit (EM&A) Report (Rev.0). (Register No.: AEIAR-187/2015)

Please feel free to contact us should you need further information.

Yours sincerely, Acumen Environmental Engineering and Technologies Co. Ltd.

Mr. Vega Wong 2698 8032

c.c. Water Supplies Department c.c. AECOM





Your ref: Our ref: CJO-3113

<u>By hand</u>

Chief Engineer /Project Management Water Supplies Department 46/F., Immigration Tower 7 Gloucester Road, Wanchai (Attn: Mr. H C Wong, Heinz)

15 February 2022

Dear Sir,

In-Situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Water Treatment Works and Ancillary Facilities Environmental Permit EP-494/2015 Submission of 83rd monthly EM&A Report

In accordance with the Condition 3.4 of the Environmental Permit (No. EP-494/2015), we submit herewith 3 hard copies and 2 electronic copies of the 83rd monthly Environmental Monitoring and Audit (EM&A) Report (Rev.0) for your processing. I certified and confirmed the submission of this monthly EM&A Report had complied with the requirements as set out in the approved Environmental Monitoring and Audit (EM&A) Manual of the EIA Report (Register No.: AEIAR-187/2015).

Yours faithfully,

Mr. Wong, Vega, T. L. Environmental Team Leader

c.c. Independent Environmental Checker



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Your Ref: 60479142/C/fyw2302141

By Email

Chief Engineer/Project Management Water Supplies Department 46/F., Immigration Tower 7 Gloucester Road, Wanchai

Attn: Mr. Edmund Huen

14 February 2023

Dear Sir,

<u>Contract No.1/WSD/19</u> In-situ reprovisioning of Sha Tin Water Treatment Works (South Works) – Water Treatment Works and Ancillary Facilities <u>Contract No.6/WSD/21</u> In-situ reprovisioning of Sha Tin Water Treatment Works (South Works) – Administration Building

Submission of 83rd Monthly EM&A Report for January 2023

Reference is made to Environmental Team (ET)'s 83rd Monthly EM&A Report for January 2023 (Rev. 0) submitted on 10 and 14 February 2023.

In accordance with the Condition 3.4 of the Environmental Permit (No.EP-494/2015), I verified and confirmed the submission of this Monthly EM&A Monitoring Report as compiled with the requirements as set in the approved Environmental Monitoring and Audit (EM&A) Manual of the EIA Report (Register No.: AEIAR-187/2015).

Should you have any queries, please feel free to contact the undersigned at 3922 9366.

Yours faithfully, AECOM Asia Co. Ltd.

Y W Fung Independent Environmental Checker

c.c. Environmental Team Leader (via email)



Water Supplies Department



MONTHLY ENVIRONMENTAL MONITORING AND AUDIT

(EM&A) REPORT (NO. 83)

FOR

CONTRACT NO. 1/WSD/19 & 6/WSD/21 IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS (SOUTH WORKS) – Water Treatment Works and Ancillary Facilities

(Rev. 0)

Acumen Environmental Engineering & Technologies Company Limited

MONTHLY ENVIRONMENTAL MONITORING AND AUDIT (EM&A) REPORT (NO. 83)

FOR

CONTRACT NO. 1/WSD/19 & 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Water Treatment works and Ancillary facilities

	Name	Signature
Prepared by	Mr. Chiu, Oliver, O. C.	Ollin
Reviewed by	Ms. Choy, Yiting, Y. T.	yiting.
Approved & Certified by	Mr. Wong, Vega, T. L. Environmental Team Leader (ETL)	Hop
Verified & Confirmed by	Mr. Fung, Y. W. Independent Environmental Checker (IEC)	8

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EXECUTIVE SUMMARY

- A.1 Pursuant to the Environmental Impact Assessment (EIA) Ordinance, the Director of Environmental Protection (DEP) granted the Environmental Permit (No. EP- 494/2015) to the Water Supplies Department (WSD) to construct and operate the designated project for "In-situ Reprovisioning of Sha Tin Water Treatment Works - South Works" ("The Project").
- A.2 Under Contract No. 1/WSD/19 and 6/WSD/21, ATAL CW MH JV (ACMJV) is commissioned by WSD to undertake the construction of the main works while AECOM Asia Company Limited was appointed by WSD as the Engineer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, Acumen Environmental Engineering & Technologies Company Limited was appointed by ACMJV as the Environmental Team (ET). AECOM Asia Company Limited was also employed by the WSD as the Independent Environmental Checker (IEC).
- A.3 The construction phase of Contract No. 3/WSD/15 commenced on 30 October 2015 for completion by 31 December 2020. The construction phase of Contract No. 1/WSD/19 commenced on 01 January 2021. The construction phase of Contract No. 6/WSD/21 commenced on 16 March 2022. The impact monitoring of the EM&A programme, including air quality, noise, water quality monitoring as well as environmental site inspections, commenced on 17 February 2016.
- A.4 This is the 83rd monthly Environmental Monitoring and Audit Report for the Project which covers the period from 1 to 31 January 2023 (the reporting period) for Contract No. 1/WSD/19 and 6/WSD/21.
- A.5 For Contract No. 1/WSD/19, as informed by the Contractor, major activities in the reporting period included:
 - Wall construction for Washwater Equalization Tank (WET)
 - Demolition works for TWRT.
 - Road reinstatement works.
 - Excavation for Major ELS Work.
 - Soil Nail Installation for Major ELS Work.
 - Lagging wall construction for Major ELS work.
 - Struct and waling installation for Major ELS work.
 - Pumping test for S2F Pipe Pile.
 - Trail Pit at the future main building road
 - Rebar works for S1F, S2F, SWPS, RMF, FST, and Ozone building
 - Formwork and concrete works for S1F, S2F, SWPS, RMF, FST and Ozone Building
- A.6 For Contract No. 6/WSD/21, as informed by the Contractor, major activities in the reporting period included:
 - Waterproofing Works
 - Carry Out Excavation Down to + 18.0mPD
 - Concreting for Raft Slab (LG/F Level)
 - Steel Plate Welding to Sheetpile for Waterproofing Works
 - Excavation to Bottlm Rockfill Level & Rockfill Replacement Work



Water Supplies Department

In-situ Reprovisioning of Sha Tin Water Treatment Works – South Works Monthly EM&A Report (No. 83)

A.7 Environmental monitoring activities under the EM&A program in this reporting period are summarized below

Issues	Environmental Monitoring Parameters / Inspection	Occasions
Air	1-Hour TSP	15
Noise	L _{eq(30mins)} Daytime	5
Water Quality	Water Sampling	12
Inspection /	ET Regular Environmental Site Inspection	4
Audit	IEC Monthly Environmental Site Audit	1

- A.8 No exceedance of air quality and noise monitoring was recorded in this reporting period. There was no exceedance in action level and no exceedance in limit level for water quality monitoring was recorded in this reporting period.
- A.9 No environmental complaint was received via EPD in this reporting period.
- A.10 No notification of any summons and successful prosecutions was received in this reporting period.
- A.11 No reporting change was made in this reporting period.
- A.12 EPD site inspections were conducted on 17 January 2023 in the reporting period.
- A.13 As informed by the Contractor, the major works for Contract No. 1/WSD/19 between February 2023 to April 2023 will be:
 - Demolition works for TWRT.
 - Road reinstatement works.
 - Excavation for Major ELS Work.
 - Soil Nail Installation for Major ELS Work.
 - Lagging wall construction for Major ELS work.
 - Struct and waling installation for Major ELS work.
 - Pumping test for S2F Pipe Pile.
 - Trail Pit at the future main building road
 - Rebar works for S1F, S2F, SWPS, RMF, FST, and Ozone building
 - Formwork and concrete works for S1F, S2F, SWPS, RMF, FST and Ozone Building
 - WET finishing works.
 - WET steel and metal works
 - Dispersion modelling for discharge from VPSA Nitrogen waste gas vents and pressure/Vacuum Relief Valves vents for Ozone off-gas.
 - PV Panel at Ozone Building, S1F and S2F.
 - Centrifugal pumps in LC and Sump Pumps for BS.
 - Supply and delivery of CPVC pipe and Valve.
 - Top slab construction for WET.
 - Lagging wall construction for Major ELS.
 - Pre-loading works for Major ELS.

- A.14 As informed by the Contractor, the major works for Contract No. 6/WSD/21 between February 2023 to April 2023 will be:
 - Waterproofing Works
 - Carry Out Excavation Down to +23.3mPD
 - Concreting for Raft Slab (LG/F Level)
 - Steel Plate Welding to Sheetpile for Waterproofing Works
 - Carry Out Excavation to Final Excavation Level +21.0mPD
 - MIC Installation
 - Excavation to Bottlm Rockfill Level & Rockfill Replacement Work
- A.15 EM&A monitoring for the 83rd reporting period for Contract No. 1/WSD/19 and 6/WSD/21 has been completed. The 84th monthly EM&A report will cover the period from 1 to 28 February 2023.

1. INTRODUCTION

1.1. PROJECT BACKGROUND

- 1.1.1 Pursuant to the Environmental Impact Assessment (EIA) Ordinance, the Director of Environmental Protection (DEP) granted the Environmental Permit (No. EP- 494/2015) on 28 January 2015, subsequent to approval of the EIA Report (Register No. AEIAR-187/2015), to the Water Supplies Department (WSD) to construct and operate the designated project for "In-situ Reprovisioning of Sha Tin Water Treatment Works South Works" ("The Project").
- 1.1.2 Under Contract No. 1/WSD/19 and 6/WSD/21, ATAL CW MH JV (ACMJV) and CW–FWS–JV are commissioned by WSD to undertake the construction of the main works while AECOM Asia Company Limited was appointed by WSD as the Engineer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, Acumen Environmental Engineering & Technologies Company Limited was appointed by ACMJV as the Environmental Team (ET). AECOM Asia Company Limited was also employed by the WSD as the Independent Environmental Checker (IEC).
- 1.1.3 The construction phase of Contract No. 3/WSD/15 commenced on 30 October 2015 for completion by 31 December 2020. The construction phase of Contract No. 1/WSD/19 commenced on 01 January 2021. The construction phase of Contract No. 6/WSD/21 commenced on 16 March 2022. The general layout plan of the Contract components is presented in **Appendix A**.
- 1.1.4 ET conducted below baseline monitoring at designated locations according to the EM&A Manual.
 Air quality and noise: from 21 December 2015 to 3 January 2016.
 Water quality: from 15 December 2015 to 8 January 2016.
- 1.1.5 Baseline Monitoring Report was issued by the ET and verified by the IEC on 27 January 2016 and submitted to the EPD on 2 February 2016.
- 1.1.6 The impact monitoring of the EM&A programme, including air quality, noise, water quality monitoring as well as environmental site inspections, commenced on 17 February 2016.

1.2. ORGANIZATION STRUCTURE

1.2.1 The organization structure of the Contract is shown in **Appendix B**. Contact details of key personnel are summarized in below table:

Party	Position	Name	Telephone
Water Supplies	Senior Engineer	Mr. Ng, Horace, C. K.	2829 5693
Department	_		
AECOM	Chief Resident Engineer	Mr. Ng, Derek, K. H.	9717 1420
	Independent	Mr. Fung, Y. W.	3922 9366
	Environmental Checker		
	Deputy Independent	Ms. Lam, Lemon, M.	3922 9381
	Environmental Checker	С.	
ATAL-CW-MH Joint	Project Manager	Mr. Tam, Wilson, Y. C.	9031 5600
Venture	Site Agent	Ms. Cheung, S. Y.	6323 4716
CW-FWS JV	Construction Manager	Mr. Jacky Lo, J. L.	9400 3717
	Site Agent	Mr. Lo, H. B.	6498 8580
Acumen Env. Eng. &	Project Director	Ir Dr. Lam, Gabriel, C.	2333 6823
Tech. Co. Ltd.		К.	
	Environmental Team	Mr. Wong, Vega, T. L.	6113 2368
	Leader		
	Ecologist	Mr. Wan, Jay, P. H.	2333 6823

Table 1-1: Key Personnel Contact for Environmental Works

1.3. SCOPE OF REPORT

- 1.3.1 This is the 83rd monthly EM&A Report under the Contract No. 1/WSD/19 and 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Water Treatment Works and Ancillary Facilities covering the period from 1 to 31 January 2023 (the reporting period).
- 1.3.2 The EM&A requirements for impact monitoring are set out in the approved EM&A Manual. Environmental aspects such as the construction air quality, noise, water quality and ecology were identified as the key issues during the construction phase of the Project.

1.4. SUMMARY OF CONSTRUCTION WORKS

- 1.4.1 The construction phase of the Contract commenced on 30 October 2015. Latest construction programmes are shown in **Appendix C**.
- 1.4.2 As informed by the Contractor, no major works for Contract No.3/WSD/15 will be conducted. The major works for Contract No. 1/WSD/19 in January 2023 are:
 - Wall construction for Washwater Equalization Tank (WET)
 - Demolition works for TWRT.
 - Road reinstatement works.
 - Excavation for Major ELS Work.
 - Soil Nail Installation for Major ELS Work.
 - Lagging wall construction for Major ELS work.
 - Struct and waling installation for Major ELS work.
 - Pumping test for S2F Pipe Pile.
 - Trail Pit at the future main building road
 - Rebar works for S1F, S2F, SWPS, RMF, FST, and Ozone building
 - Formwork and concrete works for S1F, S2F, SWPS, RMF, FST and Ozone Building

Acumen Environmental Engineering & Technologies Company Limited

- 1.4.3 As informed by the Contractor, no major works for Contract No.3/WSD/15 will be conducted. The major works for Contract No. 6/WSD/21 in January 2023 are:
 - Waterproofing Works
 - Carry Out Excavation Down to +23.3mPD
 - Concreting for Raft Slab (LG/F Level)
 - Steel Plate Welding to Sheetpile for Waterproofing Works
 - Carry Out Excavation to Final Excavation Level +21.0mPD
- 1.4.4 The locations of the construction activities are shown in **Appendix D**. The Environmental Sensitive Receivers in the vicinity of the Project are shown in **Appendix E**.

2. EM&A RESULTS

2.1. EM&A BACKGROUND

2.1.1 The EM&A programme required environmental monitoring for air quality, noise, water quality and ecology as well as environmental site inspections for air quality, noise, water quality, waste management and ecology impacts. The EM&A requirements and related findings for each component are summarized in the following sections. A summary of impact monitoring programme is presented in Table 2-1.

Impact Monitoring	Sampling Parameter	Frequency
Air Quality	1-hour TSP	3 times in every 6 days when documented and valid complaint was received
Noise	$L_{eq 30 min}$, $L_{eq 5 min}$, L_{10} and L_{90} as reference.	 1 time per week: ◆ L_{eq 30 min} for normal weekdays from 0700 - 1900;
Water Quality	Duplicate in-situ measurements: Dissolved Oxygen (DO), Turbidity and pH; HOKLAS-accredited laboratory analysis: Suspended Solids (SS).	3 days per week. The interval between 2 monitoring days will be more than 36 hours.
Ecology	-	A detailed at least 6 years post-planting monitoring and maintenance programme

Table 2-1: Summary of Impact Monitoring Programme

Remark: Sampling Depth for Water Quality:

- (*i*) 3 depths: 1m below water surface, 1m above bottom and at mid-depth when the water depth exceeds 6m.
- (ii) If the water depth is between 3m and 6m, 2 depths: 1m below water surface and 1m above bottom.
- (iii) If the water depth is less than 3m, 1 sample at mid-depth is taken
- 2.1.2 A summary of the monitoring parameters is presented in Table 2-2.

Table 2-2: Summary of the monitoring parameters of EM&A Requirements

Environmental Issue	Parameter			
Air Quality	• 1-hour TSP Monitoring by Real-Time Portable Dust Meter			
Noise	• L _{eq (30min)} during normal working hours			
Water Quality	In-situ measurement Dissolved Oxygen (mg/L); Dissolved Oxygen Saturation (%); Turbidity (NTU); pH value; Water depth (m); and Temperature (°C) Laboratory analysis Suspended Solids (mg/L)			

- 2.1.3 Summary of determination of Action/Limit (A/L) Levels for air quality, noise and water quality are presented in **Appendix F**.
- 2.1.4 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan enclosed in **Appendix G**.
- 2.1.5 The impact monitoring schedules are presented in **Appendix H** and the monitoring results are detailed in the following sub-sections.

2.2. AIR QUALITY MONITORING

- 2.2.1 Impact monitoring for air quality had been carried out in accordance with Sections 2.29 of the approved EM&A Manual to determine the ambient 1-hour total suspended particulates (TSP) levels at the monitoring locations. 1-hour TSP sampling should be undertaken at least 3 times in every six-days at each monitoring station when the highest dust impacts are expected. General meteorological conditions (wind speed, direction and precipitation) and notes regarding any significant adjacent dust producing sources had also been recorded throughout the impact monitoring period.
- 2.2.2 Two (2) designated monitoring stations, AM1 located at the L Louey and AM2 located at Hin Keng Estate Hin Wan House, were recommended in Section 2.18 of the approved EM&A Manual. In order to identify and seek for the access of the air monitoring locations designated in the EM&A Manual, site visit was conducted among ET, IEC and EPD.
- 2.2.3 During the site visit, all designated air monitoring locations were identified. Details of air monitoring stations are described in Table 2-3. The location plan of air quality monitoring stations is shown in **Appendix I**.

Air Quality Monitoring Station	Air Sensitive Receiver (ASR) ID in the approved EIA Report	Dust Monitoring Station
AM1	ASR2	The L Louey (at a platform level of about 5m above road level nearby)
AM2	ASR4	Hin Keng Estate - Hin Wan House (at the roof top)

Table 2-3: Location of the Air Quality Monitoring Stations

2.2.4 The monitoring equipment using for the air quality impact monitoring was proposed by ET and verified by IEC. 1-hour TSP levels had been measured with direct reading dust meter. It has been demonstrated its capability in achieving comparable results with high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50). The details of equipment using for impact monitoring are listed in Table 2-4 as below.

Table 2-4: Air Quality Impact Monitoring Equipment

Equipment	Model
Portable dust meter – 1-hour TSP	Qingdao Jingcheng Model PC-3A (E)
Portable Wind Speed Indicator	The Kestrel Pocket Weather Meter

- 2.2.5 The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:
 - A pump to draw sample aerosol through the optic chamber where TSP is measured;
 - A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum

reliability; and

- A built-in data logger compatible with based program to facilitate data collection, analysis and reporting.
- 2.2.6 The 1-hour TSP meter was calibrated by the manufacturer prior to purchasing. Zero response of the instrument was checked before and after each monitoring event. Operation of the 1-hour TSP meter followed manufacturer's Operation and Service Manual. A valid calibration certificate is attached in **Appendix J**.
- 2.2.7 In this Reporting Period, a total of five (5) sampling days perform air quality monitoring at the two designated locations. The results for 1-hour TSP are summarized in Table 2-5 and Table 2-6.

		1-hour TSP (μg/m³)				
Date	Weather	Start Time	End Time	1 st Measurement	2 nd Measurement	3 rd Measurement
4/1/2023	fine	15:30	18:30	121	116	108
10/1/2023	cloudy	13:00	16:00	30	28	24
16/1/2023	fine	12:51	15:51	47	43	46
21/1/2023	fine	12:50	15:50	62	55	65
27/1/2023	cloudy	13:00	16:00	74	75	77
	Average				64.7	•
	Range				24 - 121	

Table 2-5: Summary of 1-hour TSP Monitoring Results – AM1

Table 2-6: Summar	y of 1-hour TSP Mo	nitoring Results – AM2
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		1-hour TSP (μg/m ³)				
Date	Weather	Start Time	End Time	1 st Measurement	2 nd Measurement	3 rd Measurement
4/1/2023	fine	16:00	18:00	112	119	120
10/1/2023	cloudy	13:04	16:04	27	25	30
16/1/2023	fine	12:55	15:55	50	45	42
21/1/2023	fine	12:54	15:54	68	63	57
27/1/2023	cloudy	13:04	16:04	83	84	73
	Average				66.5	
	Range				25 - 120	

2.2.8 In this Reporting Month, all monitoring result were below the action level. Hence, no Action or Limit Level exceedance was triggered during this month. The impact air quality monitoring results and graphical presentation are shown in **Appendix K**.

2.3. Noise Monitoring

- 2.3.1 Impact monitoring for noise levels had been measured in accordance with Sections 3.13 of approved EM&A Manual on normal weekdays at a frequency of once a week at logging interval of 30 minutes for daytime (between 0700 and 1900 hours of normal weekdays). The L_{eq} had been recorded at the specified intervals.
- 2.3.2 According to Section 3.7 of the approved EM&A Manual, 3 noise sensitive receivers designated for the construction noise monitoring. The designated monitoring stations are identified and successfully granted by the premises. The details of noise monitoring stations are described in Table 2-7 and the location plan of noise monitoring stations is shown in **Appendix L**.

Noise Monitoring Station	Noise Sensitive Receiver (NSR) ID in the approved EIA Report	Identified Noise Monitoring Station
		The L Louey (South)
NM1	HK2	(at a platform level of about 5m above road level nearby
		- free field measurement)
		Hin Keng Estate –
NM2	HK5	Hin Wan House
		(at the roof level - facade measurement)
		C.U.H.K.F.A.A.
NM3	HK7	Thomas Cheung School
		(at the roof level - free field measurement)

Table 2-7: Details of Noise Monitoring Stations

2.3.3 The monitoring equipment using for the noise impact monitoring was proposed by ET and verified by IEC. Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications has been used for carrying out the noise monitoring. The sound level meter has been checked using an acoustic calibrator. The wind speed has been checked with a portable wind speed meter capable of measuring the wind speed in m/s. The details of equipment using for impact monitoring are listed in Table 2-8 as below.

Table 2-8: Noise Impact Monitoring Equipment

Noise	
Sound Level Meter	NTi Audio XL2
Acoustic Calibrator	Rion NC-75
Portable Wind Speed Indicator	The Kestrel Pocket Weather Meter

- 2.3.4 All noise measurements were the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (L_{eq}) .
- 2.3.5 Prior to the impact noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Regular checking

was conducted in impact monitoring period. The calibration level before and after the noise measurement is agreed to within 1.0 dB.

- 2.3.6 An acoustic calibrator and sound level meter using impact monitoring is within the valid period and were calibrated per year. A set of valid calibration certificates is attached in **Appendix M**.
- 2.3.7 Noise measurements should not be made in presence of fog, rain, wind with a steady speed exceeding 5 ms⁻¹ or wind with gusts exceeding 10 ms⁻¹. The wind speed was checked with a portable wind speed meter capable of measuring with speeds in ms⁻¹.
- 2.3.8 In this Reporting Period, a total five (5) occasions noise monitoring was undertaken in Reporting period. The noise monitoring results at the designated locations are summarized in Tables 2-9 to 2-11.

Data	Time	Weather	1 st	2 nd	3 rd	4 th	5 th	6 th	Lag
Date	Time	weather	Leq _{5min}	Leq _{30min}					
4/1/2023	16:46 - 17:16	fine	51.0	52.5	49.2	50.8	53.7	56.4	52.9
10/1/2023	13:00 - 13:30	cloudy	53.1	52.4	51.5	52.7	55.1	54.4	53.4
16/1/2023	13:30 - 14:00	fine	49.7	51.8	55.4	48.2	48.5	49.9	51.4
21/1/2023	12:50 - 13:20	fine	46.9	48.7	51.5	49.1	50.3	45.1	49.1
27/1/2023	13:00 - 13:30	cloudy	53.7	49.4	50.6	49.8	50.1	47.8	50.6
								Average	51.7
Limit Level	>75dB(A)							Range	49.1 –
									53.4

Table 2-9: Summary of Noise Monitoring Results - NM1

Table 2-10: Summary of Noise Monitoring Results - NM2

Date	Time	Weather	1 st	2 nd	3 rd	4 th	5 th	6 th	Logue
Date	Time	weather	Leq _{5min}	Leq _{30min}					
4/1/2023	17:22 - 17:52	fine	47.5	44.7	49.6	47.8	46.0	47.1	47.4
10/1/2023	13:34 - 14:04	cloudy	50.0	48.1	48.6	49.5	50.3	47.7	49.1
16/1/2023	14:06 - 14:36	fine	48.2	49.2	49.7	47.7	50.6	48.4	49.1
21/1/2023	13:24 - 13:54	fine	48.7	49.3	42.1	43.6	46.4	43.0	46.4
27/1/2023	13:34 - 14:04	cloudy	48.5	49.7	46.9	50.2	47.6	46.6	48.5
								Average	48.2
Limit Level	>75dB(A)							Range	46.4 -
									49.1

Data	Time	Weether	1 st	2 nd	3 rd	4 th	5 th	6 th	Law
Date	Time	Weather	Leq _{5min}	Leq _{30min}					
4/1/2023	17:56 - 18:26	fine	49.2	47.8	48.9	46.5	48.4	45.8	47.9
10/1/2023	14:08 - 14:38	cloudy	47.7	49.5	48.6	49.2	46.8	47.4	48.3
16/1/2023	14:40 - 15:10	fine	47.3	44.9	47.8	43.9	46.9	48.0	46.7
21/1/2023	13:58 - 14:28	fine	47.2	47.7	45.9	49.9	46.8	48.3	47.8
27/1/2023	14:08 - 14:38	cloudy	50.1	49.6	44.2	47.3	43.5	42.9	47.2
Limit Level								Average	47.6
70dB(A) during normal teaching periods							Range	46.7 –	
or 65dB(A)	during examination	i periods							48.3

2.3.9 As shown in the results were well below the limit level, also no complaint was received by the RE, WSD, EPD and contractor. Hence, no Action or Limit Level exceedance was triggered during this month. The impact noise quality monitoring results and graphical presentation are shown in **Appendix** N.

2.4. WATER QUALITY MONITORING

- 2.4.1 Water Impact monitoring had been taken three days per week with sampling or measurement in accordance with Sections 4.12 of the approved EM&A Manual at all designated monitoring stations in the 2 water courses. The interval between 2 sets of monitoring had been more than 36 hours. Replicate in-situ measures had been carried out in each sampling event.
- 2.4.2 Three (3) control and two (2) impact stations were recommended in the Section 4.7 of the approved EM&A Manual to carry out water quality monitoring. In order to identify and seek for the access of the water monitoring locations designated in the approved EM&A Manual, site visit was conducted among ET, IEC and Environmental Protection Department (EPD).
- 2.4.3 During the site visit, all designated monitoring locations were identified however one more impact stations (M3) along the same water course was introduced due to the concern on multiple site effect, in particular to address the potential impact to M2 from a source at upstream of the water course. Details and coordinates of the monitoring stations are described in Table 2-12 and the location plan of water quality monitoring stations is shown in **Appendix O**.

Water Quality	Description	Co-ore	dinates	
Monitoring Station	Description	Easting	Northing	
C1	Control Stations Impact Monitoring Stations	835110	824716	
C2		835403	824470	
C3		835642	824386	
M1		835215	824827	
M2		835536	824775	
M3		835501	824648	

Table 2-12: Details of Water Quality Monitoring Station

2.4.4 The water monitoring equipment and analysis using for the water quality monitoring were proposed by ET and verified by IEC. The details of equipment using for impact monitoring are listed in the Table 2-13 below:

Water quality					
Horiba Multi Water Quality Checker U-53					
Thermometer & DO meter	The instrument is a portable and weatherproof dissolved oxygen (DO) measuring instrument complete with cable and sensor, and use a DC power source. The equipment is capable of measuring as included a DO level in the range of $0 - 20 \text{mg/L}$ and $0 - 200\%$ saturation; and a temperature of $0 - 45^{\circ}\text{C}$.				
pH meter	The instrument consists of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It is readable to 0.1 pH in range of 0 to 14.				
Turbidmeter	The instrument is a portable and weatherproof turbidity measuring instrument using a DC power source. It has a photoelectric sensor capable of measuring turbidity between 0 - 1000 NTU.				
Laboratory Analysis					
Suspended Solids	HOKLAS-accredited laboratory (Acumen Laboratory and Testing Limited)				

Table 2-13: Monitoring Equipment Used in Impact Monitoring Program

Remark:

(i) Water samples for suspended solids (SS) have been stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen).

- 2.4.5 Before the commencement of the sampling, general information such as the date and time of sampling as well as the personnel responsible for monitoring were recorded on the monitoring field data sheet.
- 2.4.6 Water temperature, turbidity, DO, pH and water depth were measured in-situ. Since water depths at C1, C2, M1, M2 and M3 were less than 3 m, all in-situ measurements and sampling conducted at one water depth such as mid-depth are performed. Moreover, C3 was recorded dry throughout the sampling period. Therefore, in-situ measurements and sampling could not be conducted at C3 in accordance with the water monitoring requirements in the approved EM&A Manual.
- 2.4.7 At each sampling point, (two) 2 consecutive measurements of temperature, DO, turbidity and pH were measured. The Multi-Parameter Water Quality Monitoring Probe were retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded and further readings were taken. The certification of the Multi-parameter Water Quality Monitoring System is showed in **Appendix P**.
- 2.4.8 All water samples were delivered to the Acumen Laboratory and Testing Limited (HOKLAS registration no.: 241). SS testing was used HOKLAS accredited Analytical method APHA 2540 D. The certification of laboratory with HOKLAS accredited analytical tests are provided in **Appendix Q**.
- 2.4.9 In this reporting period, a total of twelve (12) sampling days perform water monitoring at the six designated locations. Monitoring results of 4 key parameters: dissolved oxygen (DO), turbidity, suspended solids and pH in this Reporting Months, are summarized in Table 2-14.

Dissolved Oxygen – Mid Depth (mg/L)	C 1	C2	C3	M1	M2	M3
Average	10.72	11.17	N/A	12.27	12.98	12.38
Min.	8.25	8.19	N/A	10.36	9.78	9.85
Max.	13.77	14.00	N/A	14.52	18.95	15.99
Turbidity – Mid Depth (NTU)	C1	C2	C3	M1	M2	M3
Average	2.65	1.64	N/A	3.25	3.64	0.80
Min.	1.12	0.75	N/A	0.85	1.12	0.41
Max.	3.97	3.10	N/A	4.33	7.35	1.09
Suspended Solid – Mid depth (mg/L)	C1	C2	C3	M1	M2	M3
Average	1.61	1.00	N/A	1.50	1.56	<1
Min.	<1	<1	N/A	<1	<1	<1
Max.	2.80	1.00	N/A	2.40	3.10	<1
pH value (unit)	C1	C2	C3	M1	M2	M3
I						
Average	7.44	7.86	N/A	7.74	7.92	8.07
	7.44 6.61	7.86 6.90	N/A N/A	7.74 6.86	7.92 6.62	8.07 7.51

Table 2-14: Summary of Water Quality Monitoring Results

Remark 1: Bolded values indicated exceedance of action level. Remark 2: Underlined values indicated exceedance of limit level. Remark 3: Details of exceedance of action level and or limit level, please refer to appendix R.

- 2.4.10 In this Reporting Month, no Exceedance in action or limit level of water quality monitoring was recorded in this reporting period. Detailed monitoring results including in-situ measurements, laboratory analysis data are shown in Appendix R.
- 2.4.11 There are no Investigation reports for the exceedance of water quality in January 2023.

2.5. ECOLOGY

- 2.5.1 The condition of TA572 was observed in fair health despite in poor form. TA327 was also in poor condition; while already dead TA326 collapsed under Signal No. 10 typhoon Mangkhut in September 2018. Tree guying cables have been installed to provide external support to the two remaining transplanted trees.
- 2.5.2 Compensatory planting of TA326 has been completed on 25 March 2020 by planting two Syzygium levinei and one Schefflera heptaphylla. However, the two native Syzygium levinei were mis-planted by two exotic Syzygium jambos, which has been replaced by another native tree species Celtis sinensis on 31 May 2021.
- 2.5.3 *Desmos chinensis* has been finalized as the candidate to compensate the loss of *Artabotrys hongkongensis*. Two individuals were planted at Wall C in STWTW on 1 April 2021.
- 2.5.4 New small sprouts keep emerging from the two *Desmos chinensis* that have been reported dead previously. Construction materials was also found too close to the planter. An eye-catching protective fence shall be set up as a protection zone. No construction materials shall be placed near/ within the protection zone.
- 2.5.5 In order to enhance a sustainable survival during the post-transplantation stage, a shelter (such as shading net) has been installed to reduce intensity of direct sunlight received and avoid direct hit of rainstorm/ typhoon to the 27 nos. *Cibotium barometz* at Portion E of STSFWSR.
- 2.5.6 Regular irrigation, set up of protection zone and weeding by hand held tools within protection zone, shall also be provided to the transplanted/ compensated plants in order to sustain their survival during the post-transplantation (establishment) stage.
- 2.5.7 Root ball of TA572 and TA327 tree should be kept moisture especially during dry and non-raining day.
- 2.5.8 Signs of ploughed soil by wild boar(s) were found at the two groups of transplanted *Cibotium barometz*, making them exposed under sunlight or even uprooted. Installation of robust fencing, such as mesh wire, is recommended to protect the group of *Cibotium barometz* from damage caused by wild boars.
- 2.5.9 Given that leftover was observed nearby, illegal feeding of wild pigs or other wild animals was also suspected to occur. Warning signs of illegal feeding and plant protection zone may be put along the receptor site to remind the hikers. Reporting the case to the relevant government department, i.e. AFCD, is suggested to prevent further aggregation of wild boars in the area.

2.6. WASTE MANAGEMENT STATUS

- 2.6.1 The Contractor has submitted application form for registration as chemical waste producer under the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting. The Waste Producer Number to the Contractor is assigned in respect of the project site.
- 2.6.2 Wastes generated during this reporting period include mainly construction wastes (inert and non-inert). Waste flow table was prepared by the Contractor to record amount of waste generated and disposed (**Appendix T**).
- 2.6.3 The Contractor was advised to properly maintain on site C&D materials and waste collection, sorting and recording system, dispose of C&D materials and wastes at designated ground and maximize reuse/ recycle of C&D materials and wastes.
- 2.6.4 The Contractor was also reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly. For chemical waste containers, the Contractor was reminded to treat properly and store temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

2.7. DELIVERY, STORAGE AND HANDLING OF CHLORINE

2.7.1 Chlorine is delivered to Sha Tin WTW in batches of up to 6×1-tonne drums. The transport route from Sham Shui Kok dock on North Lantau is shown in **Figure 1**. The route passes along the North Lantau Expressway, around the northern edge of Tsing Yi, through Tsuen Wan and along Tai Po Road (Piper's Hill) to Sha Tin (Table 2-15).

Figure 1: Chlorine Transport Route to Sha Tin Water Treatment Works

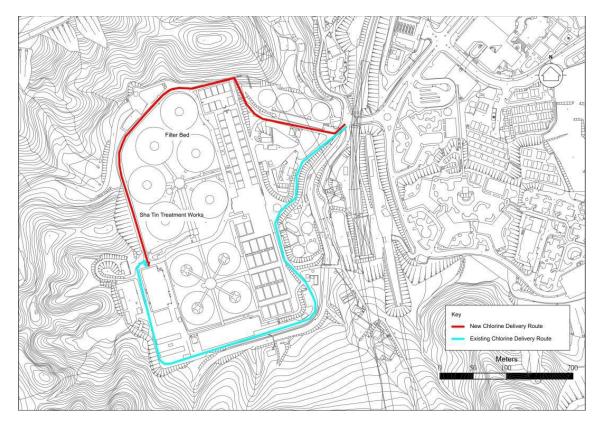


Table 2-15: Chlorine Truck Transport Route

Destination	Route
From SSK	Sham Shui Kok Dock > Cheung Tung Road > Sunny Bay Road > N Lantau Highway
Dock to Sha	> Lantau Link > NW Tsing Yi Interchange > Tsing Yi North Costal road > Tsing
Tin WTW	Tsuen Road > Tsuen Wan Road > Kwai Chung Road > Ching Cheung Road > Tai
	Po Road > Tai Po Road (Piper's Hill) > Tai Po Road (Sha Tin Heights) > Tai Po
	Road > Tsing Sha Highway (Sha Tin) > Tai Po Rd (Sha Tin) > Sha Tin Rural
	Committee Rd > Tai Chung Kiu Rd > Che Kung Miu Road > Sha Tin WTW

- 2.7.2 Unloading takes place inside the Chlorination House, with the doors closed, in a designated truck unloading bay. The movement of drums within the storage area and 'drive-through' unloading bay is carried out using a hoist/monorail system with a purpose-built lifting beam. Prior to usage, the drums are stored on cradles within the chlorine storage area.
- 2.7.3 The on-site chlorine delivery route is shown in **Figure 2**.

Figure 2: Chlorine Delivery Route at Sha Tin WTW



- 2.7.4 An emergency chlorine scrubbing system is installed to remove any leaked chlorine in the chlorine handling and storage areas. The system is a packed tower utilising sodium hydroxide as the neutralising agent. The plant and equipment are installed in a separate scrubber room.
- 2.7.5 On detection of chlorine at a concentration of 3 ppm or above in the chlorine handling or storage areas, the scrubbing system will activate automatically. The air/chlorine mixture in the affected areas is drawn into the scrubber by the scrubber fan via ducting connected to the normal ventilation system. An electrically-operated isolating damper is provided in the scrubber intake which opens automatically when the scrubber fan starts up.
- 2.7.6 The scrubber system is normally set at auto standby mode and is activated if the chlorine concentration rises above 3 ppm. A continuous chlorine monitor is installed at a point downstream of the packed tower

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and upstream of the vent/recycle changeover dampers to monitor the scrubber performance; a "Chlorine concentration high" alarm will be initiated if the concentration of chlorine in the tower exhaust exceeds the preset value.

- 2.7.7 According to the Fire Services Department's fire safety requirements, an emergency repair/stoppage kit for chlorine spillage/leakage is provided and maintained in good working condition at all times for use by the trained persons and stowed adjacent to but outside the store/plant room. Regular drills are conducted to train personnel on the proper use of the breathing apparatus and protective clothing.
- 2.7.8 A Hazard Assessment of the risks associated with the storage, handling and transport of chlorine at Sha Tin WTW and the off-site transport of chlorine for the Construction and Operational Phases of the reprovisioning project has been conducted in the approved EIA Report (Register No. AEIAR-187/2015).
- 2.7.9 This In-situ Reprovisioning of Sha Tin WTW is an improvement project, following its completion the chlorine-related risks levels to the general public will be lowered due to the anticipated reduction of the chlorine storage and usage levels.
- 2.7.10 Implementation of the recommended mitigation measures would be regularly audited. No specific Environmental Monitoring would be required.

2.8. EM&A SITE INSPECTION

- 2.8.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, contract No. 1/WSD/19 were four (4) site inspections carried out on 5, 10, 20 and 27 January 2023. Contract No. 6/WSD/21 were four (4) site inspections carried out on 4, 10, 20 and 27 January 2023.
- 2.8.2 One joint site inspection with IEC also undertaken on 20 January 2023. Minor deficiencies were observed during weekly site inspection or joint site inspection. Key observations during the site inspections are summarized in Table 2-16 (a) and Table 2-16 (b).

Date	Environmental Observations	Follow-up Status
5 January 2023	No environmental issue was observed during	N/A
5 January 2025	the site inspection.	IN/A
10 January 2022	No environmental issue was observed during	N/A
10 January 2023	the site inspection.	IN/A
20 January 2022	No environmental issue was observed during	N/A
20 January 2023	the site inspection.	IN/A
27 January 2022	No environmental issue was observed during	N/A
27 January 2023	the site inspection.	IN/A

Table 2-16 (a): Site Observations (1/WSD/19)

Table 2-16 (b): Site Observations (6/WSD/21)

Date	Environmental Observations	Follow-up Status
4 January 2023	No environmental issue was observed during the site inspection.	N/A
10 January 2023	No environmental issue was observed during the site inspection.	N/A
20 January 2023	No environmental issue was observed during the site inspection.	N/A
27 January 2023	No drip tray was provided for the chemical containers	Drip tray was provided

2.8.3 The Contractor has rectified all the observations identified during environmental site inspections in the reporting period.

2.9. ENVIRONMENTAL LICENSES AND PERMITS

2.9.1 The status of environmental license and permit is summarized in Table 2-17 (a) and Table 2-17 (b) below:

License / Permit	License / Permit No.	Date of Issue	Date of Expiry	License / Permit Holder	Remark
Environmental Permit	EP- 494/2015	28/01/2015	N/A	WSD	
Notification of	Reference No:	10/8/2020	N/A	ACMJV	
Construction Works under	458807				
the Air Pollution Control					
(Construction Dust)					
Regulation (Form NA)					
Registration of Chemical	WPN5296-759-	28/09/2020	N/A	ACMJV	
Waste Producer	A3012-01				
Trip Ticket (Chit) Account	7038091	26/8/2020	N/A	ACMJV	
Waste Water Discharge	WT00037213-	19/1/2021	31/1/2026	ACMJV	
Licence	2020				
Notification of	AX210503	30/8/2021	N/A	ACMJV	
Commencement of					
Asbestos Abatement Work					
Construction Noise Permit	GW-RN1154-22	08/12/2022	7/3/2023	ACMJV	
Special Wastes Permit	16982	17/08/2022	16/02/2023	ACMJV	

Table 2-17(a): Summary of Environmental License and Permit (1/WSD/19)

Table 2-17(b): Summary of Environmental License and Permit (6/WSD/21)

License / Permit	License / Permit No.	Date of Issue	Date of Expiry	License / Permit Holder	Remark
Notification of	Reference No:	24/11/2021	N/A	ACMJV	
Construction Works under	474147				
the Air Pollution Control					
(Construction Dust)					
Regulation (Form NA)					
Registration of Chemical	WPN5218-759-	5/1/2022	N/A	ACMJV	
Waste Producer	C4678-01				
Trip Ticket (Chit) Account	7042460	8/12/2021	N/A	ACMJV	
Waste Water Discharge	WT00040939-	11/5/2022	31/5/2027	ACMJV	
Licence	2022				
Construction Noise Permit	GW-RN1084-22	4/12/2022	3/3/2023	ACMJV	

2.10. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

- 2.10.1 In response to the site audit findings, the Contractors carried out corrective actions. A summary of the environmental mitigation measures implemented by the Contractor in this Reporting Period are summarized in Table 2-18.
- 2.10.2 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (EMIS) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are showed **Appendix U**.

Issues	Environmental Mitigation Measures		
Air Quality	 Tarpaulin covering of any dusty materials on a vehicle leaving the site; Imposition of speed controls for vehicles on site haul roads; Use of regular watering to reduce dust emissions from exposed site surfaces and roads; Side enclosure and covering of any aggregate or stockpiling of dusty materials to reduce emissions; Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs. 		
Noise	 Good site practices to limit noise emissions at the sources; Use of quite plant and working methods; Use of site hoarding or other mass materials as noise barrier to screen noise at ground level of NSRs; Scheduling of construction works outside school examination period in critical area. 		
Water	 Drainage systems were regularly and adequately maintained; Effluent discharged from the construction site should comply with standards stipulated in the TM-DSS; Open stockpiles of construction materials on sites should be covered. 		
General	- The site was generally kept tidy and clean.		

 Table 2-18: Environmental Mitigation Measures

2.10.3 The necessary mitigation measures were implemented properly for this Contract.

2.11. SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

- 2.11.1 Results for 1-hour TSP and noise monitoring complied with the Action/ Limit levels in the reporting period. Results for water quality monitoring mostly complied with the Action/ Limit levels in the reporting period.
- 2.11.2 Cumulative statistics on exceedances is provided in Appendix V.

2.12. SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

2.12.1 The Environmental Complaint Handling Procedure is shown in below table:

Table 2-19: Environmental Complaint Handling Procedure

Complaint Received via Project	Complaint Received via 1823 or				
Hotline	from other government departments				
ACMJV notify ER, ET and IEC	ER notify ACM, ET and IEC				
Register of the complaint. ACMJV and ET to conduct investigation of					
complaint and report to ER and IEC the investigation results					
If complaint is considered not valid	If complaint is found valid				
ET or ER to reply the complainant	ACMJV to implement necessary				
if necessary	improvement measures in				
	consultation with the IEC, ET and				
	ER. ET to check and inspect if the				
	situation is improved. ER to				
	conduct further inspection as				
	necessary.				
	ER to report the follow up actions				
	done to WSD and reply to				
	complainant is necessary.				
	If the complaint is referred by the				
	EPD, the Contractor to prepare				
	interim report on the status of the				
	complaint investigation and follow-				
	up action				
ER prepare complaint report for submission to WSD					
ET to record the complaint case in monthly EM&A report					

- 2.12.2 No environmental complaint was received in the reporting period.
- 2.12.3 No notification of summons and prosecution was received in the reporting period.
- 2.12.4 EPD site inspections were conducted on 17 January 2023 in the reporting period.
- 2.12.5 Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix V.

2.13. DATA MANAGEMENT AND DATA QA/QC CONTROL

- 2.13.1 The impact monitoring data were handled by ET's in-house data recording and management system.
- 2.13.2 The monitoring data recorded in the equipment were downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data were input into computerized database properly. The laboratory results were input directly into the computerized database and checked by personnel other than those who had input the data.
- 2.13.3 For monitoring parameters that require laboratory analysis, the local laboratory had followed the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory testing.

3. FUTURE KEY ISSUES

3.1. CONSTRUCTION PROGRAMME FOR THE COMING MONTHS

- 3.1.1 As informed by the Contractor, the major works for Contract No. 1/WSD/19 between February 2023 to April 2023 will be:
 - Demolition works for TWRT.
 - Road reinstatement works.
 - Excavation for Major ELS Work.
 - Soil Nail Installation for Major ELS Work.
 - Lagging wall construction for Major ELS work.
 - Struct and waling installation for Major ELS work.
 - Pumping test for S2F Pipe Pile.
 - Trail Pit at the future main building road
 - Rebar works for S1F, S2F, SWPS, RMF, FST, and Ozone building
 - Formwork and concrete works for S1F, S2F, SWPS, RMF, FST and Ozone Building
 - WET finishing works.
 - WET steel and metal works
 - Dispersion modelling for discharge from VPSA Nitrogen waste gas vents and pressure/Vacuum Relief Valves vents for Ozone off-gas.
 - PV Panel at Ozone Building, S1F and S2F.
 - Centrifugal pumps in LC and Sump Pumps for BS.
 - Supply and delivery of CPVC pipe and Valve.
 - Top slab construction for WET.
 - Lagging wall construction for Major ELS.
 - Pre-loading works for Major ELS.
- 3.1.2 As informed by the Contractor, the major works for Contract No. 6/WSD/21 between February 2023 to April 2023 will be:
 - Waterproofing Works
 - Carry Out Excavation Down to +23.3mPD
 - Concreting for Raft Slab (LG/F Level)
 - Steel Plate Welding to Sheetpile for Waterproofing Works
 - Carry Out Excavation to Final Excavation Level +21.0mPD
 - MIC Installation
 - Excavation to Bottlm Rockfill Level & Rockfill Replacement Work

3.2. KEY ISSUES FOR COMING MONTH

- 3.2.1 Potential environmental impacts arising from the above upcoming construction activities in January 2023 are mainly associated with dust, noise, water quality issues and waste management issues.
- 3.2.2 The tentative monitoring schedule for February 2023 to April 2023 can be found in Appendix W.

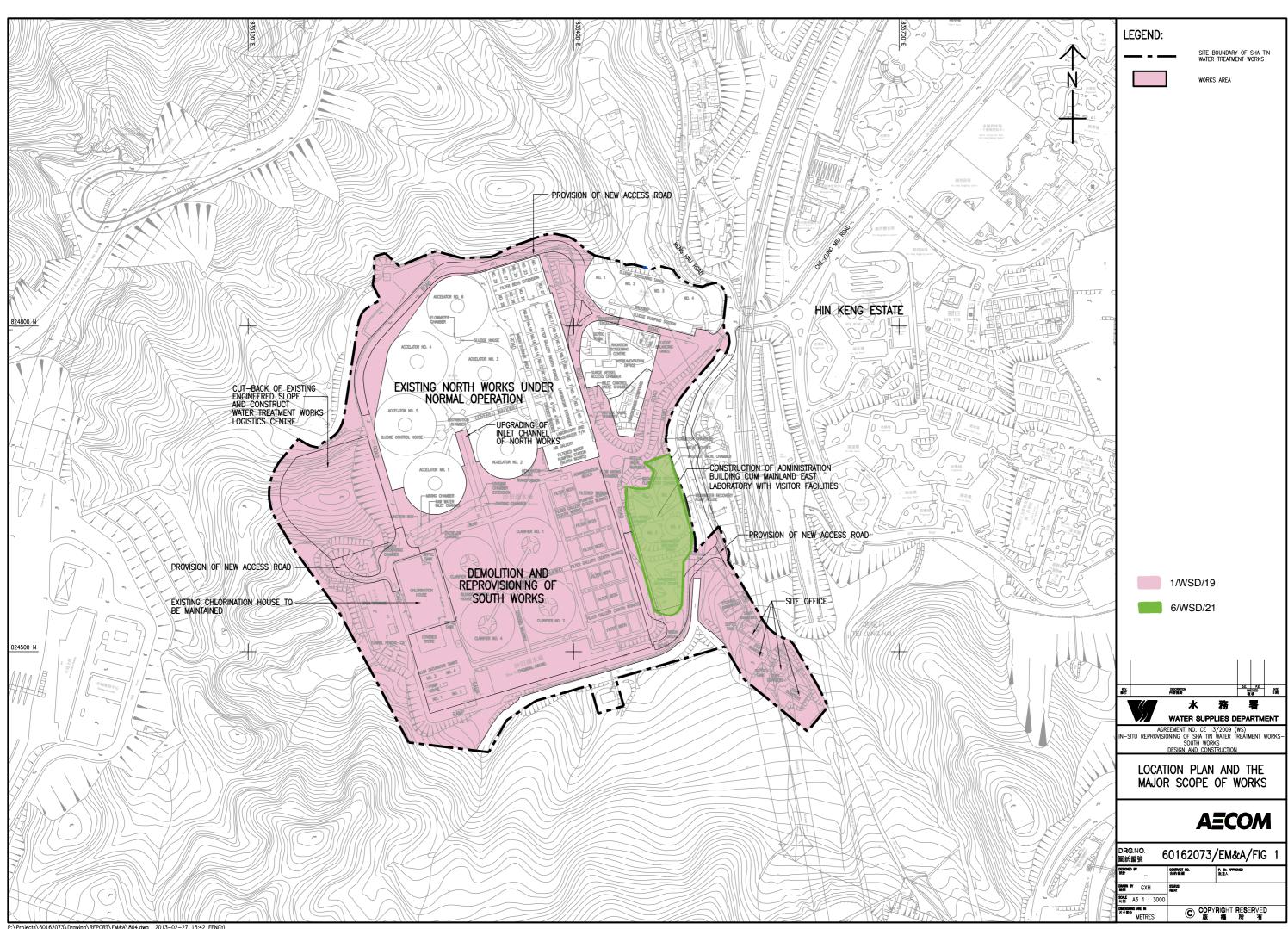
4. CONCLUSIONS AND RECOMMENDATIONS

4.1. SUMMARY

- 4.1.1 Air quality (1-hour TSP), noise, water quality and ecology impact monitoring were carried out in the reporting period. Most of the monitoring results are satisfactory, there were no exceedance of action level and no exceedance of limit level for water monitoring results in the reporting month were found and NOEs and Investigation Reports were therefore issued.
- 4.1.2 Four (4 nos.) environmental site inspections were conducted during the reporting period. Joint site inspection with IEC were carried out on 20 January 2023. Minor deficiencies were observed during site inspection and were rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.
- 4.1.3 To control the site performance on waste management, the contractor shall ensure that all solid and liquid waste management works are fully in compliance with the relevant license/permit requirements, such as the effluent discharge licence and the chemical waste producer registration. Contractor is also reminded to implement the recommended environmental mitigation measures according to the Environmental Monitoring and Audit Manual.
- 4.1.4 No Environmental complaint were received in reporting period.
- 4.1.5 No notification of summons or prosecution was received since commencement of the Contract.
- 4.1.6 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A General Layout Plan

Project no.: CJO-3113



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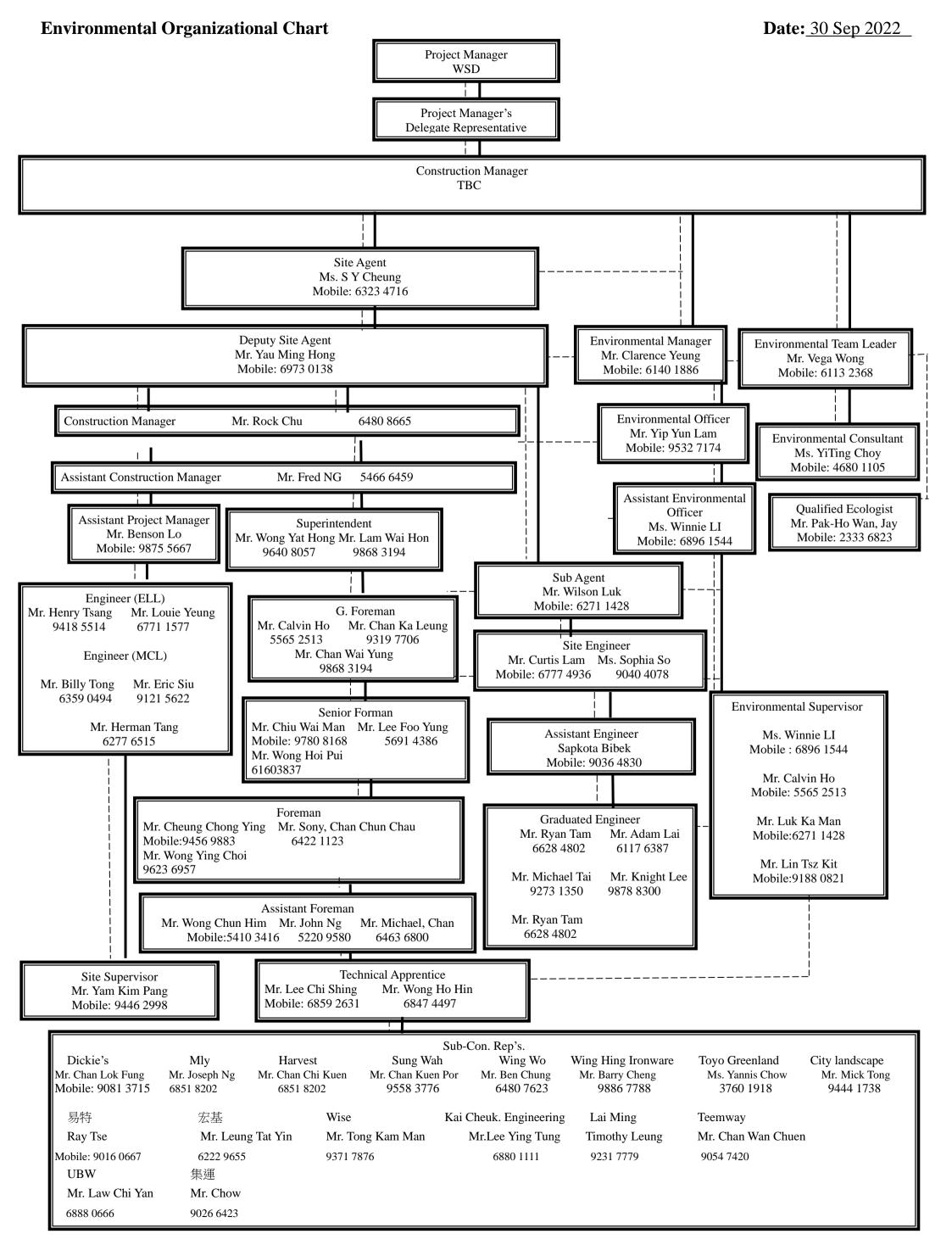
Appendix B Project Organization

Project no.: CJO-3113

E Contract No. 1/WSD/19

In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works)

- Water Treatment Works and Ancillary Facilities

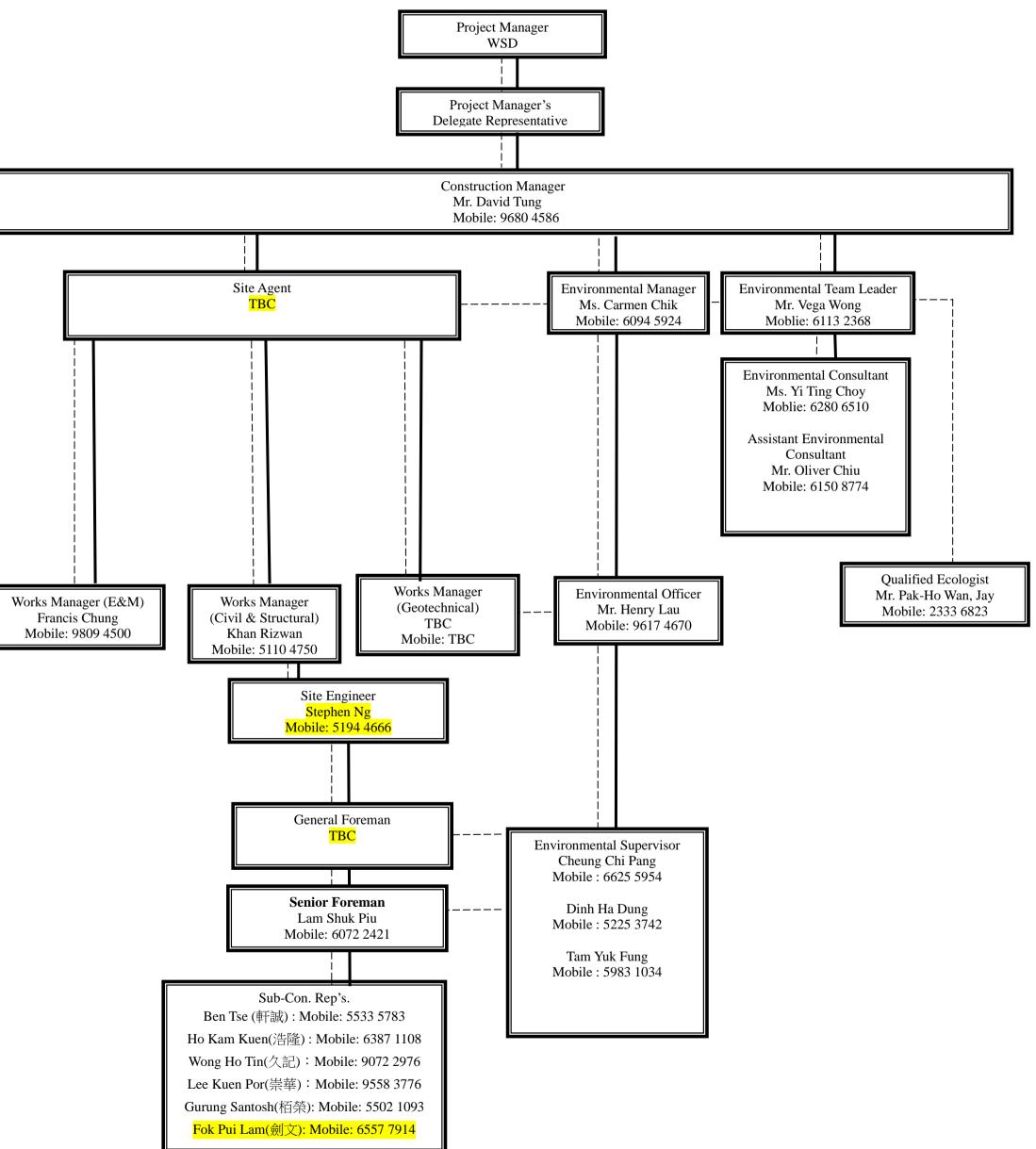


Contract No. 6/WSD/21

In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works)

- Administration Building

Environmental Organizational Chart (2023.01)



Authorization

Communication Line

Appendix C Latest Construction Programme

Activity ID	Activity Name	Original Duration	Start	Finish									2021								2022				
Contract No. 1/WSI	D/19 - Monthly Update	Duration 652	02-Jan-21 A	15-Apr-23	ul A	Aug Sep	Oct	Nov De	∋c Jan	Feb	Mar Apr	May	Jun Jul	Aug	Sep	Oct N	ov Dec	Jan Feb	Mar	Apr May	Jun Jul	Aug Sep	Oct	Nov Dec	c
	ew plant in Portion A&B, E&M in portion H, Pipeline diversion M1 to M5	652	02-Jan-21 A	15-Apr-23					Ļ			_													
		355	07-Jan-21 A	07-Apr-22					[<u></u>							1				,				_	Ī
Shut Down of South V	ut Down & Relocation of Works Except Temporary Washwater Tank	57	22-Jun-21 A	27-Aug-21 A														T							ļ
119.DS.GW.10010	Disconnect Filtered Water Tank	18	22-Jun-21 A	13-Jul-21 A																					
		-																							ļ
119.DS.GW.10020	Disconnect SW air receiver from Air Compressor at NW Pumping Station	24	14-Jul-21 A	10-Aug-21 A																			1		
119.DS.GW.10030	Abandon Washwater Pump inside SW Pumping Station	24	31-Jul-21 A	27-Aug-21 A																			1		
119.DS.GW.10040	Relocate Air Compressors at SW Filter Gallery for NW Surge Vessels	12	11-Aug-21 A	24-Aug-21 A							:														
119.DS.GW.10050	Remove Existing Dosing Pipes from Chemical House	10	17-Aug-21 A	27-Aug-21 A																			1		
119.DS.GW.10060	Disconnect SW Raw Water Channel at Raw Water Dividing Chamber	10	17-Aug-21 A	27-Aug-21 A																			1		
119.DS.GW.10070	Disconnect Sludge Pipe at existing Sludge Collect Chamber	10	17-Aug-21 A	27-Aug-21 A							:														
Demolition of Major Ex	kisting Facilities	142	02-Aug-21 A	07-Apr-22										-				+		,					ļ
119.DS.GW.10150	Demolition of Existing Alum Saturation Tanks to Facilitate Pipe Pile Construction	15	12-Oct-21 A	30-Oct-21 A																			1		ļ
119.DS.GW.10170	Preparation and Demolition of Existing Clarifiers No.3	21	02-Aug-21 A	15-Sep-21 A							1												1		ļ
119.DS.GW.10171	Preparation and Demolition of Existing Clarifiers No.4	21	31-Aug-21 A	28-Sep-21 A																			1		
119.DS.GW.10172	Preparation and Demolition of Existing Clarifiers No. 2	38	15-Sep-21 A	02-Nov-21 A	-																		1		ļ
119.DS.GW.10185	Demolition of Existing South Work Corridor	28	15-Dec-21	19-Jan-22	-]
119.DS.GW.10190	Demolition of Existing Chemical House	45	22-Jan-22	22-Mar-22	-						1												1		-
119.DS.GW.10200	Demolition of Existing Raw Water Channel	24	10-Mar-22	07-Apr-22]
119.DS.GW.10380	Demolish existing South Works Pump Station	40	15-Dec-21	09-Feb-22	_						:												1		ļ
119.DS.GW.10390	Demolish part of existing Main Pump Sump	24	10-Feb-22	09-Mar-22	_																		1		
119.DS.GW.10400	Demolition of Existing Sampling Room	24	21-Jan-22	24-Feb-22	_																				ļ
119.DS.GW.10400	Relocation the equipment and associate item inside existing SWPS and South Work Corridor	30	04-Oct-21 A	31-Oct-21 A															1				1		
											1												1		
	/orkshop & Relocation of Existing Emergency Power Generator for Chlorination House	100	01-Feb-21 A	04-Mar-22																			1		
119.DS.GW.10070a	Handover of M&E WorkShop	100	01-Feb-21 A	14-Dec-21																					
119.DS.GW.10080	Handover existing M&E Workshop area (by Client)	0	15-Dec-21														•						1		
119.DS.GW.10090	Construct New Steel Shed for Emergency Power Generator	16	31-Dec-21	19-Jan-22							1												1		ļ
119.DS.GW.10100	Handover Steel Shed for E&M Installation	0	20-Jan-22															•					1		
119.DS.GW.10110	Installation of Building Services and Electrical Works	16	20-Jan-22	14-Feb-22																			1		ľ
119.DS.GW.10120	Relocation of the Existing Genset to Chlorine Building & Resume operation	6	15-Feb-22	21-Feb-22							:							-					1	,	ľ
119.DS.GW.10210	Demolition of Existing M&E Workshop	12	15-Dec-21	30-Dec-21																			1		ľ
119.DS.GW.10220	Demolition of Existing Emergency Generator for Chlorine House	10	22-Feb-22	04-Mar-22	\neg														–						
Isolation of Clarifiers		288	07-Jan-21 A	11-Jan-22								1					_	+					1		
119.DS.GW.10300	Mass wall construction to close up the void	12	07-Jan-21 A	12-Jan-21 A	4						:														ļ
119.DS.GW.10310	Stage 2 - Construction of RC walls for Settled Water Isolation (Wall 1 & 2) - Stage 2	12	13-Jan-21 A	16-Jan-21 A	-																		1		
119.DS.GW.10320	Stage 4 - Construction of RC walls for Settled Water Isolation (Wal 3)	15	23-Oct-21 A	09-Nov-21 A	-																				
119.DS.GW.10321	Stage 4 - Construction of RC walls for Settled Water Isolation (Wall 4 & Wall 5)	22	10-Nov-21 A	02-Dec-21	-						1												1		ļ
119.DS.GW.10322	Stage 4 - Construction of RC walls for Settled Water Isolation (Wall 8)	18	29-Nov-21 A	18-Dec-21	_																				
119.DS.GW.10323	Stage 4 - Construction of RC walls for Settled Water Isolation (Wall 9)	18	11-Dec-21	04-Jan-22	_						:												1		
119.DS.GW.10320	STWTW request to reinstate opening from 1500x1500mm into 900x900mm with 150mm height kerb with	30	18-Jan-21 A	27-Feb-21 A	_													T							
119.DS.GW.10330	Stage 2 - Defect repairing of wall 1 & 2 and grouting mass wall - Partly Settled Water Channel	12	18-Jan-21 A	06-Feb-21 A																			1		
										1	<u> </u>												1		
119.DS.GW.10350	Stage 3 - Construction of RC walls for Settled Water Isolation (Wall 6 & 7) - Raw Water Channel	18	22-Feb-21 A	13-Mar-21 A																			1		
119.DS.GW.10360	Stage 5- Disconnect SW & NW settled water channel / raw water channel	6	05-Jan-22	11-Jan-22																			1		
Demolition of Temporar		26	11-Mar-22	11-Apr-22																•			1		
119.DEM.100000	Demolition of Temporary Wash Water Tank and Existing Distribution Chamber (Removal of all associate material)) 26	11-Mar-22	11-Apr-22							1												1		ļ
TWET scheme		78	01-Nov-21 A	10-Mar-22												-							1		
Civil Works		66	01-Nov-21 A	24-Feb-22												<u> </u>			•				1		
119.CIV.TWET.09995	Confirmation of TWET Scheme	0	01-Nov-21 A													•							1		
119.CIV.TWET.10000	Shutdown of southwork wall 8 (Interconnection of Sump Tank) ** Same work as Activity ID: 119.DS.GW.10322	18	30-Nov-21	20-Dec-21																			1		
119.CIV.TWET.10005	Documentation Preparation (Design, MS etc.) and Subletting work	18	01-Nov-21 A	29-Nov-21 A																			1		
119.CIV.TWET.10010	Drain down the Sump Tank, Preparation of opening & access	7	30-Nov-21	07-Dec-21	-												 						1		
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 Milestone Critical Work

Actual Work Summary Works

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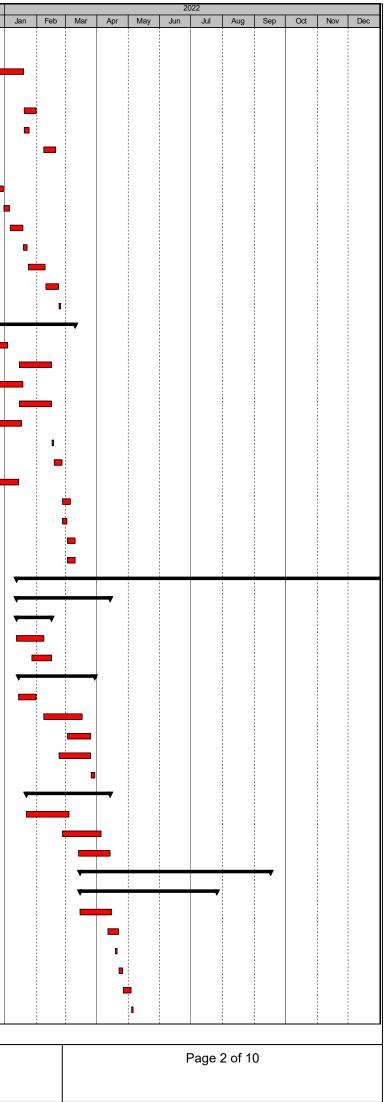
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Activity ID	Activity Name	Original	Start	Finish												20	021					
119.CIV.TWET.10015	Trial pit and UU diversion for alignment of DN400 Pipe	Duration 5	30-Nov-21	04-Dec-21	ul	Aug S	ep O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
119.CIV.TWET.10020	Construction of isolation / disconnection wall (Inside Pump Tank) -(60m3) Indude Dill-in rebar and support	14	08-Dec-21	23-Dec-21	_																[
119.CIV.TWET.10030	Construction of isolation/disconnection wall (Inside Clearwater Tank)-(88m3) Include Drillin rebar and support	20	24-Dec-21	19-Jan-22	_											1						
119.CIV.TWET.10030	Construction of opening at existing overflow weir	1	24-Dec-21	24-Dec-21	_													1 1 1 1				
119.CIV.TWET.10040	DN400- Installation and footing construction of PIpe Supporting Framework	10	20-Jan-22	31-Jan-22	_																	'
119.CIV.TWET.10040		4	20-Jan-22	24-Jan-22	_										-							
	DN400- excavation and opening in existing structure (15m)	11	08-Feb-22	19-Feb-22	_																	
119.CIV.TWET.10042 119.CIV.TWET.10050	DN400- Installation and connection of DN 400 - 50m length (include thrust block)				_																	_
	DN900 - Sheet Pipe Installaiton - 4 pcs (inlcude 1 day each for mobilisation and demobilisation)	4	08-Dec-21	11-Dec-21	_																	
119.CIV.TWET.10051	DN900 - Excavation from level +27.0 to +25.5mPD (32.4m3)	4	11-Dec-21	30-Dec-21	_																	
119.CIV.TWET.10052 119.CIV.TWET.10053	DN900 - Install Wailing and Correr Strut level +25.5mPD (2 nos.)	11	31-Dec-21 06-Jan-22	05-Jan-22 18-Jan-22	_																	
	DN900 - Excavation from level +25.5 to +23.4 PD (22.7m3)		19-Jan-22	22-Jan-22	_																	
119.CIV.TWET.10054	DN900 - Install Wailing and Correr Strut level + 25.5mPD (2 nos.)	4		09-Feb-22	_										-							
119.CIV.TWET.10055	DN900 - Excavation from level +23.4 to +21.69 mPD (18.5m3)	9	24-Jan-22		_																	
119.CIV.TWET.10056	DN900 - Installation of DN900 Pipe (5m length) and bend block construction	11	10-Feb-22	22-Feb-22	_																	
119.CIV.TWET.10060	Caping works for DN900 pipe to existing TWRT and site clearance works	2	23-Feb-22	24-Feb-22																		
E&M Works		78	01-Nov-21 A	10-Mar-22																		
119.MEP.TWET.1000	Procurement and Delivery of E&M Equipment (General Items)	52	01-Nov-21 A	03-Jan-22	_															-		
119.MEP.TWET.1010	Mechanical Installation of the Sump Pump (Spare) (1 set/gang/70 days -2.5 gangs)	21	15-Jan-22	15-Feb-22	_																	
119.MEP.TWET.1012	Procurement and Delivery of Duck Foot and Local Control Panel	65	01-Nov-21 A	18-Jan-22	_										-							
119.MEP.TWET.1020	Electrical Installation of the Sump Pump (Spare) (1 set/gang/70 days -2.5 gangs)	21	15-Jan-22	15-Feb-22												1						
119.MEP.TWET.1027	DDA Submission and Approval	24	17-Dec-21	17-Jan-22											-							
119.MEP.TWET.1030	Trial run test including preparation works of Sump Pump (Spare)	2	16-Feb-22	17-Feb-22											1							
119.MEP.TWET.1040	T&C of the Sump Pump (Spare)	7	18-Feb-22	25-Feb-22																		
119.MEP.TWET.1042	Method Statement and T&C Plan Submission and Approval	22	17-Dec-21	14-Jan-22																		
119.MEP.TWET.1050	Relocation and installation of Sump Pump (Existing)	7	26-Feb-22	05-Mar-22																		
119.MEP.TWET.1060	Relocation of the existing EM Flowmeter and Level Sensor	4	26-Feb-22	02-Mar-22	_										-							
119.MEP.TWET.1070	T&C of the instrumentation and DCS System	7	03-Mar-22	10-Mar-22	_																	
119.MEP.TWET.1080	T&C of the Sump Pump (Existing)	7	03-Mar-22	10-Mar-22																		
Stage 2 Filters		351	12-Jan-22	27-Mar-23											-							
Pipe Pile, Grout Curta		72	12-Jan-22	13-Apr-22												1						
Area 1 - Diagonal Stru		24	12-Jan-22	15-Feb-22											-							
119.CIV.S2F.09980	Area 1 - Pipe Piling Work Including 3 Nos. of Ranking H-Pile PP 001 to PP 023 (28 nos.) Include 5 hos. raking Pipe	17	12-Jan-22	08-Feb-22																		
119.CIV.S2F.09985	Area 1 - Grout Curtain (23 nos.) PP001 to PP023	11	27-Jan-22	15-Feb-22											-							
	er is olation Wall of TWET Scheme has completed)	58	14-Jan-22	29-Mar-22																		
119.CIV.S2F.09995	Backfilling for Pipe Pile Construction on Filter Bed	15	14-Jan-22	31-Jan-22																		
119.CIV.S2F.10005	Area 2 - Pipe Piling Work PP 24 to PP 83 (60 nos.)	33	08-Feb-22	17-Mar-22																		
119.CIV.S2F.10010	King Post Installation (18 nos.) of Area 2 - KPA01 to KPA18	20	03-Mar-22	25-Mar-22																		
119.CIV.S2F.10015	Area 2 - Grout Curtain (60 nos.) PP 24 to PP 83	27	23-Feb-22	25-Mar-22	_										-							
119.CIV.S2F.10025	Pumping Test (only area 2)	3	26-Mar-22	29-Mar-22											1							
	(After Removal of Most of the Asbestos)	63	22-Jan-22	13-Apr-22																		
119.CIV.S2F.09990	Backfilling for Pipe Pile Construction on Filter Bed	30	22-Jan-22	04-Mar-22											-							
119.CIV.S2F.10000	Area 3 -Pipe Piling Work (57 nos.) PP140 to PP084	32	26-Feb-22	04-Apr-22																		
119.CIV.S2F.10020	Area 3 - Grout Curtain PP140 to PP084 (57 nos.)	26	14-Mar-22	13-Apr-22											-							
Excavation and ELS/		151	15-Mar-22	16-Sep-22																		
Area 1 : Diagonal Strut		107	15-Mar-22	26-Jul-22																		
119.CIV.S2F.10411	Soil Slope Excavation From 28mPD To +10.66mPD (40680m3)	26	15-Mar-22	14-Apr-22																		
119.CIV.S2F.10412	Install Steel Kicker	7	11-Apr-22	21-Apr-22																		
119.CIV.S2F.10413	Wailing Installation (31m)	2	19-Apr-22	20-Apr-22																		
119.CIV.S2F.10414	Install Diagonal Strut KSAA1 at +27 mPD (6 nos.)	3	22-Apr-22	25-Apr-22											-							
119.CIV.S2F.10415	Soil Slope Excavation From +27mPD to +23.5 mPD (5988m3)	6	26-Apr-22	03-May-22											- - - - -							
119.CIV.S2F.10416	Wailing Installation (31m)	2	04-May-22	05-May-22																		

 Milestone Critical Work

Actual Work Summary Works

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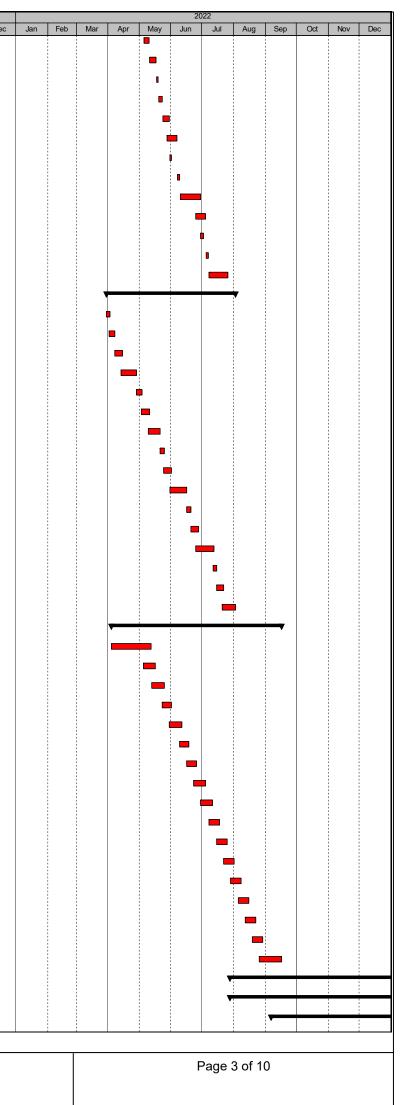


Activ	ity ID	Activity Name	Original Duration	Start	Finish											2	021					
	119.CIV.S2F.10417	Install Diagonal Strut KSAA2 at +23.5 mPD (6 nos.)	3	06-May-22	10-May-22	ul	Aug	Sep	Oct	Nov	Dec	Jan Fe	b Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	119.CIV.S2F.10418	Soil Slope Excavation From +23.5mPD to +20 mPD (5988m3)	6	11-May-22	17-May-22																	
	119.CIV.S2F.10419	Waiing Installation (31m)	2	18-May-22	19-May-22																	
	119.CIV.S2F.10420	Install Diagonal Strut KSAA3 at +20 mPD (6 nos.)	3	20-May-22	23-May-22																	
					-										-							
	119.CIV.S2F.10421	Soil Slope Excavation From +20mPD to +16.5 mPD (5988m3)	6	24-May-22	30-May-22																	
	119.CIV.S2F.10422	Construction of Kicker	7	28-May-22	06-Jun-22																	
	119.CIV.S2F.10423	Wailing Installation (31m)	2	31-May-22	01-Jun-22																	
	119.CIV.S2F.10424	Install Diagonal Strut KSAA4 at +16.5 mPD (6 nos.)	3	07-Jun-22	09-Jun-22																	
	119.CIV.S2F.10425	Rock Slope Excavation From +16.5 mPD to +13 mPD (5988m3)	17	10-Jun-22	29-Jun-22																	
	119.CIV.S2F.10426	Construction of Kicker	7	25-Jun-22	04-Jul-22																	
	119.CIV.S2F.10427	Wailing Installation (31m)	2	30-Jun-22	02-Jul-22																	
	119.CIV.S2F.10428	Install Diagonal Strut KSAA5 at +13 mPD (6 nos.)	3	05-Jul-22	07-Jul-22																	
	119.CIV.S2F.10429	Rock Slope Excavation From +13 mPD to +10.66mPD (4004m3)	16	08-Jul-22	26-Jul-22										-							
l l	Area 2 : Excavation and	i ELS Work Area	100	30-Mar-22	02-Aug-22					1												
	119.CIV.S2F.10290	Excavation from +29.5 mPD to +27 mPD (1687.5m3)	4	30-Mar-22	02-Apr-22																	
	119.CIV.S2F.10291	Wailing Installation (100m)	4	02-Apr-22	07-Apr-22																	
	119.CIV.S2F.10292	Strutting Installation layer 1 (35 nos.)	7	07-Apr-22	14-Apr-22																	
	119.CIV.S2F.10293	Excavation from +27 mPD to +23.5 mPD (5906 m3)	11	13-Apr-22	28-Apr-22																	
	119.CIV.S2F.10294	Wailing Installation (100m)	4	28-Apr-22	03-May-22																	
	119.CIV.S2F.10295	Strutting Installation layer 2 (35 nos.)	7	03-May-22	11-May-22																	
	119.CIV.S2F.10320	Excavation from +23.5 mPD to +20 mPD (5906 m3)	11	10-May-22	21-May-22																	
	119.CIV.S2F.10321	Wailing Installation (100m)	4	21-May-22	25-May-22					1 1 1 1												
			7																			
	119.CIV.S2F.10322	Strutting Installation layer 3 (35 nos.)		25-May-22	01-Jun-22					1												
	119.CIV.S2F.10350	Excavation from +20 mPD to +16.5 mPD (5906 m3)	14	31-May-22	16-Jun-22																	
	119.CIV.S2F.10351	Wailing Installation (100m)	4	16-Jun-22	20-Jun-22																	
	119.CIV.S2F.10352	Strutting Installation layer 4 (35 nos.)	7	20-Jun-22	27-Jun-22																	
	119.CIV.S2F.10353	Excavation from +16.5 mPD to +13 mPD (5906 m3)	14	25-Jun-22	12-Jul-22																	
	119.CIV.S2F.10354	Wailing Installation (100m)	4	12-Jul-22	15-Jul-22																	
	119.CIV.S2F.10355	Strutting Installation layer 5 (35 nos.)	7	15-Jul-22	22-Jul-22																	
	119.CIV.S2F.10410	Excavation from +13 mPD to +10.66mPD (3949 m3)	11	21-Jul-22	02-Aug-22																	
Ľ	Area 3 : Soil Nail Const	ruction Are a	134	04-Apr-22	16-Sep-22																	
	119.CIV.S2F.10040	Excavation from Existing Ground Profile +29.5 mPD to +24.5 mPD (15000m3)	28	04-Apr-22	12-May-22																	
	119.CIV.S2F.10045	Soil Nail Construction : Layer 1 (+25Mpd) (46 nos.)	9	05-May-22	16-May-22																	
	119.CIV.S2F.10060	Excavation from +24.5 mPD to + 22.5 mPD (6000m3)	11	13-May-22	25-May-22																	
	119.CIV.S2F.10065	Soil Nail Construction : Layer 2 (+23 Mpd) (46 nos.)	9	23-May-22	01-Jun-22																	
	119.CIV.S2F.10080	Excavation from +22.5 mPD to + 20.5 mPD (6000m3)	11	30-May-22	11-Jun-22																	
	119.CIV.S2F.10085	Soil Nail Construction : Layer 3 (+21 Mpd) (46 nos.)	9	09-Jun-22	18-Jun-22																	
	119.CIV.S2F.10100	Excavation from +20.5 mPD to + 19 mPD (4500m3)	9	16-Jun-22	25-Jun-22																	
	119.CIV.S2F.10101	Soil Nail Construction : Layer 4 (+19.5 Mpd) (46 nos.)	9	23-Jun-22	04-Jul-22					1 1 1 1												
	119.CIV.S2F.10102	Excavation from +19 mPD to + 17.5mPD (4500m3)	9	30-Jun-22	11-Jul-22																	
	119.CIV.S2F.10103	Soil Nail Construction : Layer 5 (+18 Mpd) (46 nos.)	9	08-Jul-22	18-Jul-22																	
	119.CIV.S2F.10104	Excavation from +17.5 mPD to + 16 mPD (4500m3)	9	15-Jul-22	25-Jul-22																	
			9	22-Jul-22																		
	119.CIV.S2F.10105	Soil Nail Construction : Layer 6 (+16.5 Mpd)(46 nos.)			01-Aug-22																	
	119.CIV.S2F.10120	Excavation from + 16 mPD to + 14.5 mPD (4500m3)	9	29-Jul-22	08-Aug-22																	
	119.CIV.S2F.10121	Soil Nail Construction : Layer 7 (+15 Mpd)(46 nos.)	9	05-Aug-22	15-Aug-22																	
	119.CIV.S2F.10122	Excavation from + 14.5 mPD to + 13 mPD (4500m3)	9	12-Aug-22	22-Aug-22																	
	119.CIV.S2F.10123	Soil Nail Construction : Layer 8 (+13.5 Mpd)(46 nos.)	9	19-Aug-22	29-Aug-22																	
	119.CIV.S2F.10140	Excavation from +13 mPD to +9.91 mPD (9270m3)	18	26-Aug-22	16-Sep-22											-						
	Structure Works & AB	WF Work	161	28-Jul-22	14-Feb-23																	
	East South and North S	ection (East Section)	161	28-Jul-22	14-Feb-23										-	-						
	Structure Work (East S	South Section)	111	06-Sep-22	19-Jan-23																	
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Actual Work Summary Works

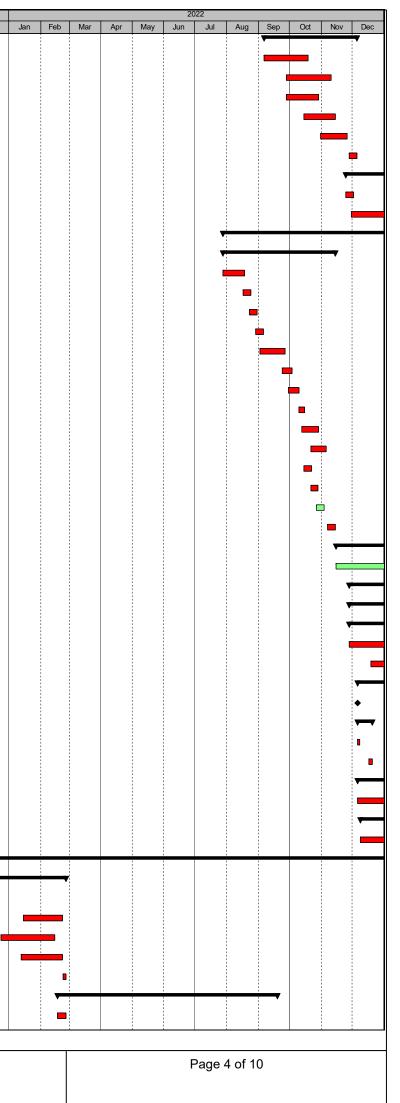


tivity ID	Activity Name	Original	Start	Finish
		Duration		
Substructure		75	06-Sep-22	05-Dec-22
	 Blinding Layer and Base Slab Construction +9.91 mPD to +12.74 mPD (Include Pipe Gallary) (3058m3) 	35	06-Sep-22	19-Oct-22
119.CIV.S2F.10170	Formwork, Rebar Fixing and Concreting of External Wall Construction +12.74mPD to +30.5mPD (1050m3)	36	28-Sep-22	10-Nov-22
119.CIV.S2F.10180	 Formwork, Rebar Fixing and Concreting of Internal Wall and Column +12.74mPD to +19mPD (Include Pipe Gallary) (741.5m3) 	26	28-Sep-22	29-Oct-22
119.CIV.S2F.1018	Formwork, Rebar Fixing and Concreting of Internal Slab and Beam +19 mPD (1143m3)	26	15-Oct-22	14-Nov-22
119.CIV.S2F.10200	 Formwork, Rebar Fixing and Concreting of Internal and Column Wall+19 mPD to +30.5mPD (Include Pipe Gallary) (1362m3) 	24	31-Oct-22	26-Nov-22
119.CIV.S2F.1020		7	28-Nov-22	05-Dec-22
Superstructure		45	25-Nov-22	19-Jan-23
119.CIV.S2F.10220	Formwork, Rebar Fixing and Concreting of Internal Slab and Beam +30.5 mPD (286m3)	7	25-Nov-22	02-Dec-22
119.CIV.S2F.10230		41	30-Nov-22	19-Jan-23
Structure Work (Nor	to+38.65mPD(1222m3) th Section)	161	28-Jul-22	14-Feb-23
Substructure		91	28-Jul-22	14-Nov-22
119.CIV.S2F.10430	Blinding Layer and Base Slab Construction +9.91 mPD to +12.74 mPD (Include Pipe Gallary) (5097m3)	19	28-Jul-22	18-Aug-22
	Da Strutting and Wailing Removal +13mPD	7	17-Aug-22	24-Aug-22
	Formwork, Rebar Fixing and Concreting of External Wall Construction+10.74 mPD to +16.5 mPD (352m3)	7	23-Aug-22	30-Aug-22
	a Strutting and Wailing Removal +16.5mPD	7	23-Aug-22 29-Aug-22	05-Sep-22
	Formwork, Rebar Fixing and Concreting of Internal Wall and Column +10.74 mPD to +19mPD (Include Pipe Gallary)(2921.5m3)	20	02-Sep-22	26-Sep-22
	Formwork, Rebar Fixing and Concreting of External Wall Construction +16.5 mPD to +20 mPD(345m3)	7	24-Sep-22	03-Oct-22
119.CIV.S2F.10450	Da Strutting and Wailing Removal +20mPD	7	30-Sep-22	10-Oct-22
119.CIV.S2F.10470	Formwork, Rebar Fixing and Concreting of External Wall Construction+20 mPD to +23.5mPD((327m3)	6	10-Oct-22	15-Oct-22
119.CIV.S2F.10470	Da Formwork, Rebar Fixing and Concreting of Internal Slab and Beam +19mPD (1904.5m3)	15	13-Oct-22	29-Oct-22
119.CIV.S2F.10470	bb Formwork, Rebar Fixing and Concreting of Internal Wall and Column Construction +19mpd to +27mPD (1461m3)	13	22-Oct-22	05-Nov-22
119.CIV.S2F.10470	Co Strutting and Wailing Removal +23.5mPD	7	15-Oct-22	22-Oct-22
119.CIV.S2F.10480	Formwork, Rebar Fixing and Concreting of External Wall Construction +23.5 mpd to +27mPD (327m3)	6	22-Oct-22	28-Oct-22
119.CIV.S2F.10480	Da Strutting and Wailing Removal +27mPD	7	27-Oct-22	03-Nov-22
119.CIV.S2F.10510	0 Water Test	7	07-Nov-22	14-Nov-22
Stage 2 Filters (2nd	I Half - Eastern Section) - ABWF Works	70	15-Nov-22	14-Feb-23
119.S2.ABWF.100	06 Stage 2 Filter (2nd Half - Eastern) - Wall tiling	70	15-Nov-22	14-Feb-23
West South Section (West Section)	49	28-Nov-22	02-Feb-23
Structure Work (We	st South Section)	49	28-Nov-22	02-Feb-23
Substructure		49	28-Nov-22	02-Feb-23
119.CIV.S2F.10620	Blinding Layer and Base Slab Construction+9.91 mPD to +12.74 mPD (Include Pipe Gallary) (2039m3)	35		
119.CIV.S2F.10660			28-Nov-22	10-Jan-23
	Formwork, Rebar Fixing and Concreting of External Wall Construction +12.74m PD to +30.5m PD(700m3)	31		10-Jan-23 02-Feb-23
Stage 2 Filters M491		31	19-Dec-22	02-Feb-23
Stage 2 Filters - M&I	EWorks	87	19-Dec-22 06-Dec-22	
119.CIV.S2F.10940	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery)	87	19-Dec-22 06-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23
119.CIV.S2F.10940 Stage 2 Filters - Deliv	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area	87 0 13	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6)	87 0 13 3	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3)	87 0 13	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 17-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3)	87 0 13 3	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3)	87 0 13 3 3	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 17-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation	87 0 13 3 3 87	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 17-Dec-22 06-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 20-Dec-22 27-Mar-23
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal 119.MEP.S2F.1010 Lower Floor	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation	87 0 13 3 3 3 87 63	19-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal 119.MEP.S2F.1010 Lower Floor	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days)	87 0 13 3 3 87 63 84	19-Dec-22 06-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23
119.CIV.S2F. 10940 Stage 2 Filters - Deliv 119.MEP.S2F. 1000 119.MEP.S2F. 1030 Stage 2 Filter - Instal 119.MEP.S2F. 1010 Lower Floor 119.MEP.S2F. 1020 South Works Pumpir	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days)	87 0 13 3 3 87 63 87 63 84 84	19-Dec-22 06-Dec-22 09-Dec-22 09-Dec-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23
119.CIV.S2F. 10940 Stage 2 Filters - Deliv 119.MEP.S2F. 1000 119.MEP.S2F. 1030 Stage 2 Filter - Instal 119.MEP.S2F. 1010 Lower Floor 119.MEP.S2F. 1020 South Works Pumpir	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) Arry to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) Intion Stage 2 Filters - Installation of Temporary Ba dxwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) and H-Pile (if any)	87 0 13 3 3 87 63 84 84 84 84 316	19-Dec-22 06-Dec-22 09-Dec-22 09-Dec-21	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Feb-23 27-Mar-23 27-Mar-23
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal 119.MEP.S2F.1010 Lower Floor 119.MEP.S2F.1020 South Works Pumpir Pipe Pile, Grout Cur	Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) g Station tain and H-Pile (if any) Backfilling for Pipe Pile Construction on Filter Bed	87 0 13 3 3 87 63 87 63 84 84 84 316 59	19-Dec-22 06-Dec-22 09-Dec-22 09-Dec-21 09-Dec-21	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23 07-Jan-23 25-Feb-22
119.CIV.S2F. 10940 Stage 2 Filters - Deliv 119.MEP.S2F. 1000 119.MEP.S2F. 1030 Stage 2 Filter - Instal 119.MEP.S2F. 1010 Lower Floor 119.MEP.S2F. 1020 South Works Pumpir Pipe Pile, Grout Cur 119.CIV.SWPS.09990	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) Iation Stage 2 Filters - Installation of Temporary Ba dxwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) ng Station tain and H-Pile (if any) Backfilling for Pipe Pile Construction on Filter Bed King Post Installation KPC 01 to KPC 24(24 nos.)	87 0 13 3 3 87 63 84 84 84 84 316 59 6	19-Dec-22 06-Dec-22 09-Dec-22 09-Dec-21 09-Dec-21 09-Dec-21 09-Dec-21 09-Dec-21 09-Dec-21	02-Feb-23 27-Mar-23 20-Dec-22 20-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23 27-Mar-23 27-Jan-23 25-Feb-22 15-Dec-21
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal 119.MEP.S2F.1010 Lower Floor 119.MEP.S2F.1020 South Works Pumpir Pipe Pile, Grout Cur 119.CIV.SWPS.09900 119.CIV.SWPS.10000 119.CIV.SWPS.10010	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) Ig Station tain and H-Pile (if any) Backfilling for Pipe Pile Construction on Filter Bed King Post Installation RPC 01 to KPC 24(24 nos.) Pipe Pile Installation PP 203 to PP 141 (63 nos.)	87 0 13 3 3 63 84 84 316 59 6 27	19-Dec-22 06-Dec-22 09-Dec-21 09-Dec-21 09-Dec-21 15-Jan-22 24-Dec-21	02-Feb-23 27-Mar-23 20-Dec-22 20-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23 27-Mar-23 25-Feb-22 15-Dec-21 22-Feb-22
119.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal 119.MEP.S2F.1010 Lower Floor 119.MEP.S2F.1020 South Works Pumpir Pipe Pile, Grout Cur 119.CIV.SWPS.10000 119.CIV.SWPS.10010 119.CIV.SWPS.10020	Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) Iation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) Installation Backfilling for Pipe Pile Construction on Filter Bed King Post Installation KPC 01 to KPC 24(24 nos.) Pipe Pile Installation PP 203 to PP 141 (63 nos.) Grout Curtain installation PP 203 to PP 141 (63 nos.)	87 0 13 3 3 63 84 84 316 59 6 27 36 29	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 09-Dec-22 09-Dec-21 09-Dec-21 09-Dec-21 15-Jan-22 24-Dec-21 13-Jan-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23 27-Mar-23 27-Mar-23 27-Mar-23 22-Feb-22 15-Dec-21 22-Feb-22 14-Feb-22 22-Feb-22
119.CIV.S2F. 10940 Stage 2 Filters - Deliv 119.MEP.S2F. 1000 119.MEP.S2F. 1030 Stage 2 Filter - Instal 119.MEP.S2F. 1010 Lower Floor 119.MEP.S2F. 1020 South Works Pumpir Pipe Pile, Grout Cur 119.CIV.SWPS.10000 119.CIV.SWPS.10010 119.CIV.SWPS.10020 119.CIV.SWPS.10020	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) rg Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) rg Station tain and H-Pile (if any) Backfilling for Pipe Pile Construction on Filter Bed King Post Installation KPC 01 to KPC 24(24 nos.) Pipe Pile Installation PP 203 to PP 141 (63 nos.) Pipe Pile Installation PP 203 to PP 141 (63 nos.) Pumping Test	87 0 13 3 3 87 63 84 84 316 59 6 27 36 29 3	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 09-Dec-22 09-Dec-21 09-Dec-21 09-Dec-21 15-Jan-22 24-Dec-21 13-Jan-22 23-Feb-22	02-Feb-23 27-Mar-23 20-Dec-22 20-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23 27-Mar-23 25-Feb-22 15-Dec-21 22-Feb-22 14-Feb-22 22-Feb-22 22-Feb-22
I19.CIV.S2F.10940 Stage 2 Filters - Deliv 119.MEP.S2F.1000 119.MEP.S2F.1030 Stage 2 Filter - Instal 119.MEP.S2F.1010 Lower Floor 119.MEP.S2F.1020 South Works Pumpir Pipe Pile, Grout Cur 119.CIV.SWPS.10000 119.CIV.SWPS.10000 119.CIV.SWPS.10020 119.CIV.SWPS.10020 119.CIV.SWPS.10020 119.CIV.SWPS.10020	E Works Stage 2 Filters - M&E Access and Work Commencement for Eastern of Stage 2 Filter (Include Pipe Gallery) very to Installation Area Stage 2 Filters - Delivery for Installation - LALG PS 0.14.5(6) Stage 2 Filters - Delivery for Installation - Chemical dosing facilities PS 0.14.5(3) lation Stage 2 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days) stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) rg Stage 2 Filters - LG - Installation of LALG (1 set/gang/80 days) rg Station tain and H-Pile (if any) Backfilling for Pipe Pile Construction on Filter Bed King Post Installation KPC 01 to KPC 24(24 nos.) Pipe Pile Installation PP 203 to PP 141 (63 nos.) Pipe Pile Installation PP 203 to PP 141 (63 nos.) Pumping Test	87 0 13 3 3 63 84 84 316 59 6 27 36 29	19-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 06-Dec-22 09-Dec-22 09-Dec-21 09-Dec-21 09-Dec-21 15-Jan-22 24-Dec-21 13-Jan-22	02-Feb-23 27-Mar-23 20-Dec-22 08-Dec-22 20-Dec-22 27-Mar-23 27-Feb-23 27-Mar-23 27-Mar-23 27-Mar-23 27-Mar-23 27-Mar-23 22-Feb-22 15-Dec-21 22-Feb-22 14-Feb-22 22-Feb-22

 Milestone Critical Work

Actual Work Summary Works

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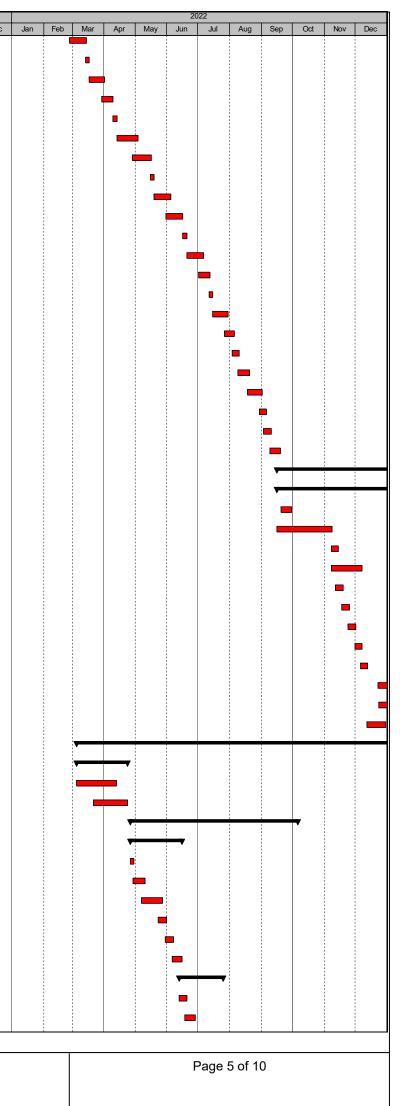


Activity ID	Activity Name	Original	Start	Finish										20	21			
119.CIV.SWPS.10040	Soil Excavation from +30 mPD to + 26.5 mPD (13650m3)	Duration 14	26-Feb-22	14-Mar-22	ul Aug	Sep	Oct	Nov	Dec Jan	Feb	Mar	Apr	May	Jun	Jul Aug	Sep Oct	Nov	Dec
119.CIV.SWPS.10050	Waiing Installation (107 m) (+27 Mpd)	4	14-Mar-22	17-Mar-22														
119.CIV.SWPS.10060	Strutting Installation layer 1 (35 nos.) (+27 Mpd)	14	17-Mar-22	01-Apr-22										1 1 1				
119.CIV.SWPS.10070	Soil Excavation from +26.5 mPD to + 24 mPD (9750m3)	10	29-Mar-22	09-Apr-22														
119.CIV.SWPS.10070	Waiing Installation (107 m) (+24.5 Mpd)	4	09-Apr-22	13-Apr-22										1				
119.CIV.SWPS.10090	Strutting Installation layer 2 (35 nos.) (+24.5 Mpd)	14	13-Apr-22	03-May-22														
119.CIV.SWPS.10100		14	•															
	Soil Excavation from +24 mPD to + 20.5 mPD (13650m3) Wailing Installation (107 m) (+21 Mpd)	4	28-Apr-22	16-May-22														
119.CIV.SWPS.10110	Strutting Installation layer 3 (35 nos.) (+21 Mpd)	14	16-May-22	19-May-22														
119.CIV.SWPS.10120			19-May-22	04-Jun-22														
119.CIV.SWPS.10130	Soil Excavation from +20.5 mPD to + 17.5 mPD (11700m3)	14 4	31-May-22	16-Jun-22										1 1 1 1				
119.CIV.SWPS.10140	Wailing Installation (107 m) +18 mPD		16-Jun-22	20-Jun-22														
119.CIV.SWPS.10150	Strutting Installation layer 4 (35 nos.) (+18 Mpd)	14	20-Jun-22	06-Jul-22										1 1 1 1				
119.CIV.SWPS.10160	Soil Excavation from +17.5 mPD to + 15.5 mPD (7800m3)	9	02-Jul-22	12-Jul-22														
119.CIV.SWPS.10170	Wailing Installation (107 m) +16mPD	4	12-Jul-22	15-Jul-22														
119.CIV.SWPS.10180	Strutting Installation layer 5 (35 nos.) +16 mPD	14	15-Jul-22	30-Jul-22														
119.CIV.SWPS.10190	Soil Excavation from +15.5 mPD to + 13.5 mPD (7800m3)	9	27-Jul-22	05-Aug-22														
119.CIV.SWPS.10191	Soil Nail Construction (31 nos.) +14mPD	7	03-Aug-22	10-Aug-22														
119.CIV.SWPS.10192	Soil Excavation from +13.5 mPD to 11.5MPD (7800m3)	11	09-Aug-22	20-Aug-22														
119.CIV.SWPS.10193	Soil Nail Construction (+12Mpd) - 31nos.	13	18-Aug-22	01-Sep-22														
119.CIV.SWPS.10194	Soil Excavation from +11.5 mPD to +10.5mPD (3900m3)	6	30-Aug-22	05-Sep-22										- - - - - - - - - - - - - - - - - - -				
119.CIV.SWPS.10195	Soil Nail Construction (+10.5Mpd) - 31nos.	7	03-Sep-22	10-Sep-22														
	Soil Excavation from +10.5 mPD to +9.175mPD (5167.5m3)	8	09-Sep-22	19-Sep-22										1				
Structure Work & ABV	VF Works	93	16-Sep-22	07-Jan-23														
Substructure Work		93	16-Sep-22	07-Jan-23														
	Tower Crane Erection	10	20-Sep-22	30-Sep-22	_													
	Blinding Layer and Base Slab Construction +9.175mPD to +12.8mPD (including Slump Pit) (7868m3)	44	16-Sep-22	08-Nov-22														
	Formwork, Rebar Fixing and Concreting For External Wall and Column +12.8mPD to +16mPD(291m3)	6 26	08-Nov-22 08-Nov-22	14-Nov-22 07-Dec-22														
	Formwork, Rebar Fixing and Concreting For Internal Wall and Column +12.8mPD to +21 mPD (745m3) Removal of 5th layer of Strut and Walling +16 mPD	7	12-Nov-22	19-Nov-22														
	Formwork, Rebar Fixing and Concreting For External Wall and Column +16mPD to +18 mPD (182m3)	7	12-Nov-22	25-Nov-22														
119.CIV.SWPS.10250		7	24-Nov-22	01-Dec-22														
119.CIV.SWPS.10260		6	01-Dec-22	07-Dec-22														
	Removal of 3th layer of Strut and Waling +21 mPD	7	06-Dec-22	13-Dec-22										- - - - - - - - -				
	Formwork, Rebar Fixing and Concreting For External Wall and Column +21mPD to +24.5MPD (318m3)	11	23-Dec-22	07-Jan-23														
119.CIV.SWPS.10281		9	24-Dec-22	06-Jan-23														
	Formwork, Rebar Fixing and Concreting For Slab and Beam +21 mPD (1244m3)	15	12-Dec-22	30-Dec-22														
Stage 1 Filters		277	05-Mar-22	14-Feb-23														
Pipe Pile, Grout Curta	in and H-Pile (if any)	39	05-Mar-22	23-Apr-22														
119.CIV.S1F.10000	Pipe Pile Installation (114 nos.) PP 204 to PP318	32	05-Mar-22	12-Apr-22										1 1 1				
119.CIV.S1F.10010	Grout Curtain installation (114 nos.) PP 204 to PP318	26	21-Mar-22	23-Apr-22	_									, , , ,				
Excavation and ELS/S		134	26-Apr-22	06-Oct-22										1 1 1 1			-	
Phase 1 - All Area (No		41	26-Apr-22	15-Jun-22														
119.CIV.S1F.10040	Major Excavation from +30mPD to +29.5mPD (All Area) (3083m3)	4	26-Apr-22	29-Apr-22														
119.CIV.S1F.10041	Soil Nail Construction : Layer 1 (+30Mpd) (58 nos.)	8	29-Apr-22	10-May-22	_													
119.CIV.S1F.10042	Major Excavation from +29.5mPD to +26 mPD (16835m3)	17	07-May-22	27-May-22														
119.CIV.S1F.10043	Soil Nail Construction : Layer 2 (+27.5Mpd)(58 nos.)	8	23-May-22	31-May-22														
119.CIV.S1F.10044	Major Excavation from +26mPD to +24 mPD (6413 m3)	7	30-May-22	07-Jun-22														
119.CIV.S1F.10045	Soil Nail Construction : Layer 3 (+24.5 Mpd)(86 nos.)	9	06-Jun-22	15-Jun-22														
Phase 2 -Area 1 of Sta	ige 1 Filter	36	13-Jun-22	25-Jul-22										1 1 1 1				
119.CIV.S1F.10046	Major Excavation from +24mPD to +22 mPD - Area 1 (6413 m3)	7	13-Jun-22	20-Jun-22														
119.CIV.S1F.10047	Soil Nail Construction : Layer 4 (+22.5 Mpd) (86 nos.)	9	18-Jun-22	28-Jun-22														
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 Milestone Critical Work

Actual Work Summary Works

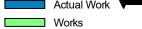
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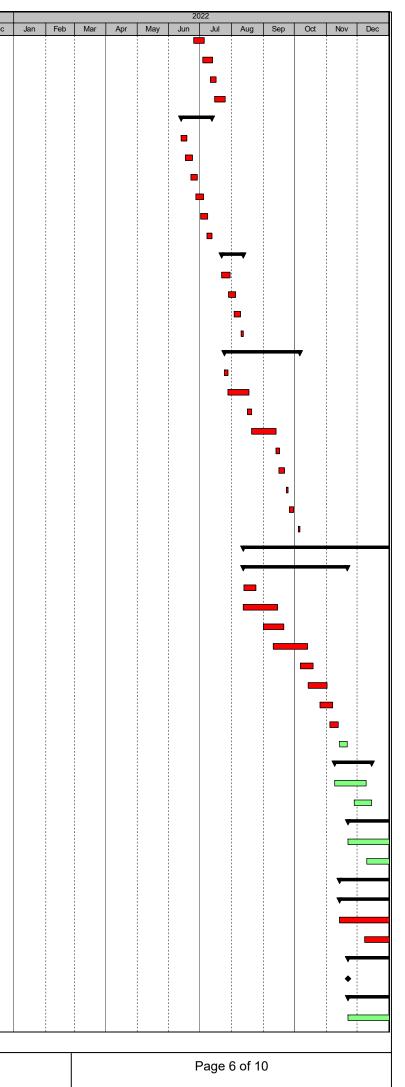


Activity ID	Activity Name	Original	Start	Finish											2	2021					
		Duration	05.1.00		ul Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Ţ
119.CIV.S1F.10048	Major Excavation from +22mPD to +19.5 mPD-Area 1 (8017 m3)	8	25-Jun-22	05-Jul-22															1		I
119.CIV.S1F.10049	Soil Nail Construction : Layer 5 (+20 Mpd) (86 nos.)	9	04-Jul-22	13-Jul-22															1		I
119.CIV.S1F.10051	Major Excavation from +19.5mPD to +17.75 mPD - Area 1 (5611 m3)	6	11-Jul-22	16-Jul-22																1	I
119.CIV.S1F.10052	Soil Nail Construction : Layer 6 (+18.25 Mpd) (86 nos.)	9	15-Jul-22	25-Jul-22																	I
Phase 2 -Area 2 of Sta	ge 1 Filter	25	13-Jun-22	12-Jul-22																	
119.CIV.S1F.10230	Major Excavation from +26mPD to +24.5 mPD (2405 m3)	6	13-Jun-22	18-Jun-22																	I
119.CIV.S1F.10260	Major Excavation from +24.5mPD to +23 mPD(2405 m3)	6	17-Jun-22	23-Jun-22	-																I
119.CIV.S1F.10290	Major Excavation from +23mPD to +21.5 mPD (2405 m3)	6	22-Jun-22	28-Jun-22																	I
119.CIV.S1F.10320	Major Excavation from +21.5mPD to +20 mPD (2405 m3)	6	27-Jun-22	04-Jul-22	-																
119.CIV.S1F.10350	Major Excavation from +20 mPD to +18.5 mPD (2405 m3)	6	02-Jul-22	08-Jul-22	-																
119.CIV.S1F.10351	Major Excavation from +18.5 mPD to +17.75mPD (1203 m3)	4	08-Jul-22	12-Jul-22	_														:		
Phase 3 - North Section	n	19	22-Jul-22	12-Aug-22																	
119.CIV.S1F.10352	Major Excavation from +17.75 mPD to +15.5 mPD (7215 m3)	8	22-Jul-22	30-Jul-22																	
119.CIV.S1F.10353	Major Excavation from +15.5 mPD to +14 mPD (4810 m3)	6	29-Jul-22	04-Aug-22																	I
119.CIV.S1F.10354	Major Excavation from +14 mPD to +12.5 mPD (4810 m3)	6	03-Aug-22	09-Aug-22	_																I
119.CIV.S1F.10355	Major Excavation from +12.5 mPD to +12.5 mPD (volt in 6) Major Excavation from +12.5 mPD to +11.875 mPD(2005 m3)																				l
		3	10-Aug-22	12-Aug-22																	I
Phase 4 - South Sectio		61	25-Jul-22	06-Oct-22															1		I
119.CIV.S1F.10356	Excavation from +17.75 mPD to +16 mPD (1684 m3)	4	25-Jul-22	28-Jul-22																	
119.CIV.S1F.10357	Soil Nail Construction : Layer 7 (+16 Mpd)- (93 nos.)	18	28-Jul-22	17-Aug-22																	I
119.CIV.S1F.10358	Excavation from +16 mPD to +14 mPD (1924 m3)	5	16-Aug-22	20-Aug-22																	
119.CIV.S1F.10359	Soil Nail Construction : Layer 8 (+14 Mpd) -including layer 9 (+13 mPD) (106 nos.)	20	20-Aug-22	13-Sep-22																	I
119.CIV.S1F.10361	Excavation from +14 mPD to +11.875 mPD (Including Sump Pit to 11.5MPD) (1704 m3)	4	13-Sep-22	16-Sep-22																	I
119.CIV.S1F.10362	Soil Nail Construction : Layer 10 (+11.5 Mpd) on Sump Pit Area (10 nos.)	5	16-Sep-22	21-Sep-22																	
119.CIV.S1F.10363	Excavation from +11.875 mPD to +10 mPD (258 m3)	2	23-Sep-22	24-Sep-22																	
119.CIV.S1F.10364	Soil Nail Construction : Layer 11 (+10 Mpd) on Sump Pit Area (10 nos.)	5	26-Sep-22	30-Sep-22																	
119.CIV.S1F.10365	Excavation from +10 mPD to +8.725 mPD (175m3)	2	05-Oct-22	06-Oct-22																	
Structure Work & ABV	VF Work (North Section)	148	12-Aug-22	14-Feb-23																	
Substructure		84	12-Aug-22	21-Nov-22																	
119.CIV.S1F.10050	Tower Crane Erection	10	13-Aug-22	24-Aug-22																	
			-		_																
119.CIV.S1F.10060	Binding Layer and Base Slab Construction (including Slump Pit) (7205m3) +8.725mPD to +14.15mPD	28	12-Aug-22	14-Sep-22																	
119.CIV.S1F.10070	Formwork , rebar fixing and concreting wall and Column construction (1388m3) +14.15mPD to +22.12mPD	16	01-Sep-22	20-Sep-22																-	
119.CIV.S1F.10080	Formwork, rebar fixing and concreting for slab and beam construction (3377m3) +22.12mPD	26	10-Sep-22	13-Oct-22																	
119.CIV.S1F.10090	Formwork , rebar fixing and concreting wall and Column construction (640m3) +22.12 mPD to 25.8mPD	11	07-Oct-22	19-Oct-22																	I
119.CIV.S1F.10100	Formwork, rebar fixing and concreting for slab and beam construction (2026m3) +25.8mPD	16	14-Oct-22	01-Nov-22																	
119.CIV.S1F.10110	Formwork , rebar fixing and concreting wall and Column construction (610m3) +25.8 mPD to 29.3 mPD	11	26-Oct-22	07-Nov-22																	
119.CIV.S1F.10120	Formwork, rebar fixing and concreting for slab and beam construction (678m3) +29.3 mPD	8	04-Nov-22	12-Nov-22																	
119.CIV.S1F.10130	Water Test	7	14-Nov-22	21-Nov-22																	I
Superstructure		32	09-Nov-22	15-Dec-22																	
119.CIV.S1F.10170	Formwork, rebar fixing and concreting wall and Column construction (Inlcuding Roof Level) (1600m3) +29.3	27	09-Nov-22	09-Dec-22																1	
119.CIV.S1F.10180	mPD to +38.5 Formwork, rebar fixing and concreting for slab and beam construction (Inlcuding Roof Level) (675m3) +38.5	16	28-Nov-22	15-Dec-22	-																
ABWF Works	mPD	64	22-Nov-22	14-Feb-23																	
119.S1.ABWF.10000	Stage 1 Filter (1st Half - Northern) - Wall tiling	60	22-Nov-22	09-Feb-23																	I
	Stage 1 Filter (1st Half - Northern) - Steel roofing & Skylight installation	48	10-Dec-22	14-Feb-23	-																
		62	14-Nov-22	03-Feb-23																	
	VF Work (South Section)																				
Substructure		62	14-Nov-22	03-Feb-23																	
119.CIV.S1F.10360	Blinding Layer and Base Slab Construction (including Slump Pit) (4803m3) +8.725mPD to +14.15mPD	41	14-Nov-22	03-Jan-23																	
119.CIV.S1F.10370	Formwork , rebar fixing and concreting wall and Column construction (925m3) +14.15mPD to +22.12mPD	41	08-Dec-22	03-Feb-23																	
Stage 1 Filters - M&E	Works	63	22-Nov-22	13-Feb-23																	
119.CIV.S1F.10640	Stage 1 Filters - M&E Access and Work Commencement for North of Stage 1 Filter (Include Pipe Gallary)	0	22-Nov-22																		
Stage 1 Filters - Install	ation	63	22-Nov-22	13-Feb-23																	
119.MEP.S1F.1000	Stage 1 Filters - Installation of Temporary Backwash Water Treatment Facilities - Stage 1 (1 set/gang/60 days)	63	22-Nov-22	13-Feb-23																	
															1		<u> </u>			<u> </u>	1

1/WSD/19 In-Situ Reprovisioning of Sha Tin Water Treatment Works
(South Works) - Water Treatment Works and Ancillary Facilities
Months Rolling Programme





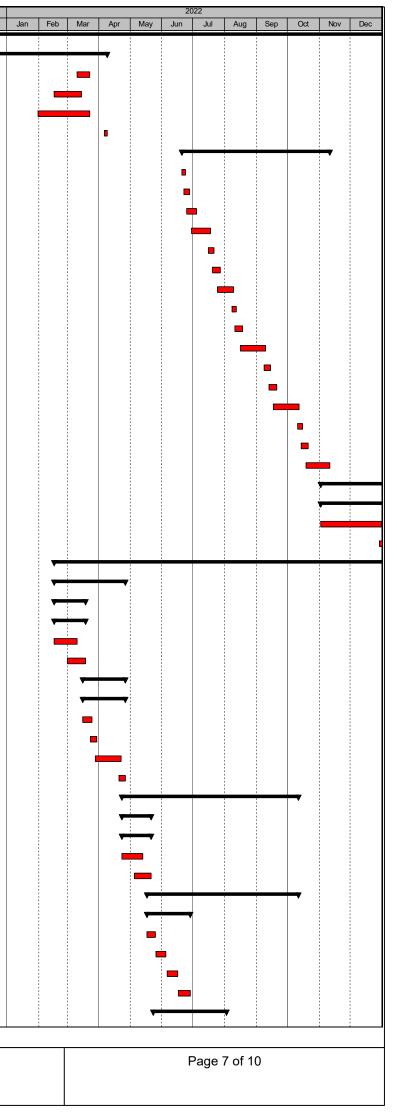


Desite Second A No.	Activity ID	Activity Name	Original Duration	Start	Finish												021		-			
Photom Photom Photom Photom UNDARD CONCENTED UNT STRAND 0	Residuals Management	L Factilities		12-Nov-21 A	06-Jan-23	ul Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Normal Normal Normal Normal 			56	12-Nov-21 A	08-Apr-22																-	
	119.CIV.RMF.10000	King Post Installation KPE 01 to KPE 10(10 nos.)	11	10-Mar-22	22-Mar-22																	
NumberNumberNumberNumberConstructConstru	119.CIV.RMF.10010	Pipe Pile Installation PP403 to PP319 (85 nos.)	48	12-Nov-21 A	14-Mar-22																	
Photom Dis Answer Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2000 March (2000) Valued Samulation 2	119.CIV.RMF.10020	Grout Curtain installation PP403 to PP 319 (85 nos.)	38	31-Jan-22	22-Mar-22																	
	119.CIV.RMF.10030	Pumping Test	3	06-Apr-22	08-Apr-22	-																
NumberNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumberNumberNumberNUMBERNumber <td>Excavation and ELS/S</td> <td>oil Nail Works</td> <td>121</td> <td>20-Jun-22</td> <td>11-Nov-22</td> <td></td>	Excavation and ELS/S	oil Nail Works	121	20-Jun-22	11-Nov-22																	
Non-Non-Non-Non-Non-Non-Non-Non-Non-Non-	119.CIV.RMF.10040	Excavation from +29 mPD to + 28 mPD (1800m3)	4	20-Jun-22	23-Jun-22																	
1223.000000000000000000000000000000000000	119.CIV.RMF.10050	Wailing Installation (125 m) (+28.5 Mpd)	5	22-Jun-22	27-Jun-22	-																
	119.CIV.RMF.10060	Strutting Installation layer 1 (33 nos.) (+28.5 Mpd)	7	25-Jun-22	04-Jul-22	-																
NumberNumberNumberNumberNumberNumberSubschweinigen Binse, ein B	119.CIV.RMF.10070	Excavation from +28 mPD to + 24 mPD (15600m3)	15	30-Jun-22	18-Jul-22	-																
Non-StarNon-StarNon-StarNon-StarNon-Star19.000000000000000000000000000000000000	119.CIV.RMF.10080	Wailing Installation (125 m) (+24.5 Mpd)	5	16-Jul-22	21-Jul-22	-																
	119.CIV.RMF.10090	Strutting Installation layer 2 (33 nos.) (+24.5 Mpd)	7	20-Jul-22	27-Jul-22	-																
1000000000000000000000000000000000000	119.CIV.RMF.10100	Excavation from +24 mPD to + 21 mPD (11700 m3)	14	25-Jul-22	09-Aug-22	-																
Int Overlag (NU)Number of Part I is Add Null J (Sched)AddAdd Add SchedInt Overlag (NU)Null Add Sched (MU)Add Sched (MU)Add Sched (MU)Int Overlag (NU)Exceleration (FSCH) (FSCH)Add Sched (MU)Add Sched (MU)Int Overlag (FSCH) (FSCH)FSCH (FSCH) (FSCH)Add Sched (MU)Add Sched (MU)Int Overlag (FSCH) (FSCH) (FSCH)FSCH (FSCH) (FSCH)FSCH (FSCH) (FSCH)Int Overlag (FSCH) (FSCH) (FSCH) (FSCH) (FSCH) (FSCH)FSCH (FSCH) (FSCH) (FSCH) <td>119.CIV.RMF.10110</td> <td>Wailing Installation (125 m) (+21.5 Mpd)</td> <td>5</td> <td>08-Aug-22</td> <td>12-Aug-22</td> <td></td>	119.CIV.RMF.10110	Wailing Installation (125 m) (+21.5 Mpd)	5	08-Aug-22	12-Aug-22																	
B.G.M.R1N001MultipleAdam(Min-1(11M)ph(MoR))AMikaporWitch MikaporT1040 (1000)T1040 (1000)Witch MikaporC1040 (1000)T1040 (1000)Witch Mikapor (1000) (119.CIV.RMF.10120	Strutting Installation layer 3 (33 nos.) (+21.5 Mpd)	7	11-Aug-22	18-Aug-22																	
111 <th< td=""><td>119.CIV.RMF.10130</td><td>Excavation from +21 mPD to + 18.5 mPD (9750m3)</td><td>22</td><td>16-Aug-22</td><td>09-Sep-22</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	119.CIV.RMF.10130	Excavation from +21 mPD to + 18.5 mPD (9750m3)	22	16-Aug-22	09-Sep-22																	
1000 407 1010meanin 105 101 105 101 105 101 105 101 1001 1001 1001 1001 1001 1001 100 <td>119.CIV.RMF.10140</td> <td>Wailing Installation (125 m) (+19 Mpd)</td> <td>5</td> <td>08-Sep-22</td> <td>14-Sep-22</td> <td>-</td> <td></td>	119.CIV.RMF.10140	Wailing Installation (125 m) (+19 Mpd)	5	08-Sep-22	14-Sep-22	-																
110 01/01 1002 Warp Instantion (955 0) (165 5kpl) 7 16.002 2 10.002 2 110 01/01 1002 Bound Instantion (955 0) (165 5kpl) 7 16.002 2 10.002 2 110 01/01 1002 Bound Instantion (956 0) (165 5kpl) 7 10.002 2 10.002 2 110 01/05 1001 Bound Instantion (956 0) (165 0) (161 0) (161 0) (161 0) (170 0) (1	119.CIV.RMF.10150	Strutting Installation layer 4 (33 nos.) (+19 Mpd)	7	13-Sep-22	20-Sep-22	-																
112.02/00 "1012 Lender her -194"UP +125 PU (162.2m) 2 4 <td< td=""><td>119.CIV.RMF.10160</td><td>Excavation from +18.5 mPD to + 15 mPD (13650m3)</td><td>20</td><td>17-Sep-22</td><td>12-Oct-22</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	119.CIV.RMF.10160	Excavation from +18.5 mPD to + 15 mPD (13650m3)	20	17-Sep-22	12-Oct-22	-																
110.0V07-1010 Russian fam: 115-P0 un 1125 un P0 (4525 ml) 9 9 9.04.02 9.04.02 10.0V074 V010 Russian fam: 115 eP0 un 1125 un P0 (1152 ml P0 un S100) 9 9.04.02 9.04.02 10.0V074 V010 Russian fam: 115 eP0 un 1125 un P0 (1152 ml P0 un S100) 9 9 9 9 9 10.0V074 V010 Russian fam: 115 eP0 un 1125 un P0 (1152 ml P0 un S100) 7 200-22 0.04.02 10.0V074 V010 Russian fam: 115 eP0 (1152 ml P0 un S100) 7 200-22 0.04.02 10.0V074 V010 Russian fam: 115 eP0 (1152 ml P0 un S100) 7 200-22 0.04.02 10.0V05 1020 Russian fam: 115 eP0 (1152 ml P0 un S100) 7 200-22 0.04.02 10.0V05 1020 Russian fam: 200 ml P0 ml P0 un P0 ml P	119.CIV.RMF.10161	Wailing Installation (125 m) (+15.5 Mpd)	5	11-Oct-22	15-Oct-22	-																
Shadura Work, AABWF Work, Field B244607 66.4873 Statuse work, Statuse work, Statuse work, Statuse work, Statuse work, 180.0048.00100 Work, 10000, 10107, 10107, 9000, 10107, 9000, 10107, 9000, 10107, 9000, 10107, 9000, 10107, 9000, 1010, 10107, 9000, 1000,	119.CIV.RMF.10162	Strutting Installation layer 5 (18 nos.) (+15.5 Mpd)	7	14-Oct-22	21-Oct-22	-																
Shuchan Ward, SABAP- Wark Sin. Sin. Butchandword Marting Law Sin. Sin. Butchandword Sin. Sin. Sin. Butchandword	119.CIV.RMF.10163	Excavation from +15mPD to +11.275 mPD (14527.5m3)	21	19-Oct-22	11-Nov-22	-																
Solutional WorkSolutional WorkSolutional WorkSolutional Work1110/VMI 1110000000000000000000000000000000000	Structure Work & ABW		54	02-Nov-22	06-Jan-23																	
118.0f.//dfi1018 Removal of Shizeer d'Suct and Wahing -15.5 mPO 7 259-be-21 06-ban-20 Decreations Decreations Marce 2 Saking2 Baltice Demovation of Barponary Washinater Recovery Bink 3 10-bar-22 10-bar-22 Pare Place Controlition The The Control Dimension of Barponary Washinater Recovery Bink 7 10-bar-22 10-bar-22 Pare Place Controlition The The Control Dimension of Barponary Washinater Recovery Bink 7 10-bar-22 10-bar-22 10.00 Coll Dimension On Good Dimen Probable Probable (PARE) (BS ms) 7 10-bar-22 10-bar-22 10.00 Coll Dimension Dimensin Dimension Dimension Dimensin Dimension Dimension			54	02-Nov-22	06-Jan-23																	
118.0V/RM10103 Remod of Shipeer d'Buit and Wahrg 115.5 mPO 7 25 Cesc 95 Auror Demoddon of Shipeer d'Buit and Wahrg 115.5 mPO 30 116-80-20 35 Auror Detroc Bundon France Auror 30 116-80-20 35 Auror Detroc Bundon Marce Auror 116-90-20 104-90-20 304-90-20 Park Marce Autor 116 Marce Auror 30 116-90-20 104-90-20 104-90-20 110.0000 100 Geo Auror 7 16-60-20 104-90-20 104-90-20 110.0000 100 Geo Auror 7 16-60-20 104-90-20 104-90-20 110.0000 100 Geo Auror 7 16-60-20 104-90-20 104-90-20 110.0000 1000 Geo Auror 7 16-60-20 104-90-20 104-90-20 110.0000 1000 Beodates Interval Marke Interval Biffordin (15-90-100) 60 10 20-40-22 24-40-22 110.0000 1000 Beodates Interval Marke Interval Biffordin (15-90-100) 10 20-40-22 24-40-22 110.0000 10000 Geo Auror (15-90-00) Biffor	119.CIV.RMF.10180	Blinding Layer and Base Slab Construction (8910m3) +11.275mPD to +15mPD	50	02-Nov-22	31-Dec-22																	
Ozne Budrej Data Heres2 Data Before Derrollson of Temporary Washwater Recovery Tank 58 Heres2 34/er-22 Prod. Code Christina of Here Max Streporty Lank 77 HEres2 104/ar-22 Prod. Code Christina of Here Max Streporty Lank 77 HEres2 104/ar-22 Prod. Code Christina of Here Max Streporty Lank Streport	119.CIV.RMF.10185		7	29-Dec-22	06-Jan-23	-																
Before Damoiton of Temporary Washwater Recovery Tank 94 916 Feb20 204 April Tep Ring, Good Carletti and Hifting If any) 27 104 Feb20 104 Marc22 Ten Qivod Vertical Migrometti 20 104 Feb20 104 Marc22 Ten Qivod Vertical Migrometti 20 104 Feb20 104 Marc22 Ten Qivod Ten Pep Verti Peb414 to Peb414 (6 mons) 20 104 Marc22 104 Marc22 Ten Qivod Ten Pep Verti Peb414 to Peb414 (6 mons) 20 104 Marc22 104 Marc22 Ten Qivod Ten Pep Verti Peb414 to Peb414 (6 mons) 20 104 Marc22 104 Marc22 Ten Qivod Ten Pep Verti Peb414 to Peb414 (6 mons) 20 104 Marc22 204 Marc22 Ten Qivod Ten Pep Verti Peb414 (6 mons) 20 104 Marc22 204 Marc22 Ten Qivod Ten March Marc Marca Marc	Ozone Building		328	16-Feb-22	28-Mar-23																	
Ang Wartical Alignmut Q2 19 Fabric 22 19 Fabric 24 11 B.CU C0B.10000 Ripe Farg Wark PFAd to PFABB (55 nos.) 20 19 Fabric 22 10 Marc 22 11 B.CU C0B.10010 Goad Cutum PFABB (55 nos.) 20 19 Fabric 22 10 Marc 22 Pase : 10 Marc 20 10 Marc 20 10 Marc 22 10 Marc 22 Pase : 10 Marc 20 10 Marc 20 10 Marc 22 20 Marc 22 Pase : 10 Marc 20 10 Marc 20 20 Marc 22 20 Marc 22 11 B.CU C0B 10041 Son Hal Construction 728 SimD(10 Sino - 1741 to 1745) 6 20 Marc 22 20 Marc 22 11 B.CU C0B 10041 Son Hal Construction 728 SimD(10 Sino - 1741 to 1745) 6 20 Marc 22 20 Marc 22 11 B.CU C0B 10041 Son Hal Construction 728 SimD(10 Sino - 1741 to 1745) 10 20 Marc 22 20 Marc 22 11 B.CU C0B 10047 Son Hal Construction 728 SimD(10 Sino - 1741 to 1745) 10 20 Marc 22 20 Marc 22 11 B.CU C0B 10047 Son Hal Construction 728 SimD(10 Sino - 1741 to 1745) 10 20 Marc 22 21 Marc 24 11 B.CU C0B 10047 Ropa Namc 20 20 Marc 20 20 Marc 22<	Before Demolition of Te	emporary Washwater Recovery Tank	56	16-Feb-22	26-Apr-22																	
111 SUVC8.1000 Pipe Plang Work PPU01 to PPU38 (Sh na.) 20 19 Freb 22 10 Mar 22 111 SUVC8.1001 Gmu Outain PPU41 to PPU38 (Sh na.) 10 01 Mar 22 18 Mar 22 111 SUVC8.10010 Gmu Outain PPU41 to PPU38 (Sh na.) 10 01 Mar 22 18 Mar 22 111 SUVC8.1004 Bicenetion fram - 20 SmpD to 28.5 mPD (S600 m3) 6 2 18 Mar 22 28 Mar 22 111 SUVC8.1004 Bicenetion fram - 20 SmpD to 28.5 mPD (S600 m3) 6 2 Mar 22 28 Mar 22 111 SUVC8.1004 Bicenetion fram - 20 SmpD to 28.5 mPD (S600 m3) 6 2 Mar 22 28 Mar 22 111 SUVC8.1007 Excention fram - 20 SmpD to 28.5 mPD (S600 m3) 6 2 Mar 22 28 Mar 22 111 SUVC8.1007 Excention fram - 20 SmpD to 28.5 mPD (S600 m3) 6 2 Mar 22 21 Mar 22 111 SUVC8.1007 Excention fram - 20 SmPD (S600 m3) 6 2 Mar 22 21 Mar 22 111 SUVC8.1001 Reg Plang Work (28 nos.) 10 2 Mar 22 11 Mar 22 111 SUVC8.1001 Reg Plang Work (28 nos.) 12 17 Mar 22 11 Mar 22 111 SUVC8.10101 <td>Pipe Pile, Grout Curtain</td> <td>and H-Pile (if any))</td> <td>27</td> <td>16-Feb-22</td> <td>18-Mar-22</td> <td></td>	Pipe Pile, Grout Curtain	and H-Pile (if any))	27	16-Feb-22	18-Mar-22																	
11B_QCV0B_10010 down Qutain PP404 to PP4058 (ds nos) 16 014Mar22 184Mar22 Pase 1: Whole Area Except Temporary Matter Recovery Tank 32 184Mar22 2844er22 11B_QCV0B_10041 Excention from -225 SmP0 (ds on s) 8 164Mar22 2244er22 11B_QCV0B_10070 Excention from -225 SmP0 (ds on s) 6 2344er22 2244er22 11B_QCV0B_10070 Excention from -225 SmP0 (ds on s) 6 234er22 224er22 11B_QCV0B_10070 Excention from -235 SmP0 (ds on s) 6 234er22 234er22 11B_QCV0B_10070 Excention from -255 SmP0 (ds on s) 6 234er22 1104er22 11B_QCV0B_10070 Excention from 255 SmP0 (ds on s) 6 234er22 1104er22 11B_QCV0B_10072 Scd Nat Dominator(+26 SMP0) (fs on s) 16 234er22 1104er22 11B_QCV0B_10072 Scd Nat Dominator(+26 SMP0) (fs on s) 16 234er22 1104er22 11B_QCV0B_1001 Per Hig Viek (28 ons) 12 234er22 1104er22 11B_QCV0B_10101 Per Hig Viek (28 ons) 6 74May22 214M	Along Vertical Alignme	int	27	16-Feb-22	18-Mar-22																	
Execution and ELSS-Buil Work S2 16 Marc2 20 Apric2 Phase 1: Whole Area Except Importry WashWater Recovery Tank S2 16 4Marc2 24 Amarc2 118 GVV 08.10040 Execution from 428 5mp0 to 28 5mF0 (950 m3) 6 32 Marc2 24 Amarc2 118 GVV 08.10070 Execution from 428 5mp0 to 260 mP0 (960 m3) 6 32 Marc2 24 Amarc2 118 GVV 08.10070 Execution from 428 5mP0 to 178 no. TRN to TRN 15 6 23 Adarc2 26 Apric2 118 GVV 08.10070 Execution from 428 5mP0 to 420 do mP0 (960 m3) 6 23 Agrc2 26 Apric2 Parce Teles Grand Charmorany WashWater Recovery Tank 6 23 Agrc2 124 Apric2 Parce Teles Grand Charmorany WashWater Recovery Tank 7 2 24 Apric2 Parce Teles Grand Charmorany WashWater Recovery Tank 7 2 24 Apric2 118 GVV 08 10011 Parce Parling Mark (28 no.s.) 16 23 Agrc22 144 Marc2 118 GVV 08 10012 Grand Charmorany MashWater Recovery Tank 16 24 Adrc22 14 Marc2 118 GVV 08 10012 Grand Charmorany MashWater Recovery Tank 16 17 Adrc22	119.CIV.OB.10000	Pipe Piling Work PP404 to PP438 (35 nos.)	20	16-Feb-22	10-Mar-22																	
Plase 1: Whole Area Except Temporary WashWater Recovery Tank 32 16 4Marc2 28 Appr22 11B CV CB 10040 Excention fom +28.5mpC) (5800 m3) 6 32 44 Marc22 24 Marc22 11B CV CB 10041 Sol Nall Construction (+28.5mpC) (5800 m3) 6 23 44 mc22 28 Amrc22 11B CV CB 10070 Excensition fom -28.5mpC) (58 nos - TFR1 to TFR15) 6 23 44 mc22 28 Amrc22 11B CV CB 10071 Excensition fom -28.5mpC) (58 nos - TFR1 to TFB 15) 6 23 4pc2 28 Amrc22 After Demolision of Excensition for -28.5mpC is x-TFR1 to TFB 15) 10 23 42 xc2 110 cdc2 After Construction (+28.5MpC) (58 nos - TFR1 to TFB 15) 10 23 42 xc2 110 cdc2 After Construction (+28.5mpC) (58 nos - TFR1 to TFB 15) 10 23 42 xc2 110 cdc2 11B cV CB construction (+28.5mpC) (58 nos - TFR1 to TFB 15) 10 23 44 xc2 110 cdc2 11B cV CB construction (+28.5mpC) (58 nos - TFR1 to TFB 15) 10 23 4pc22 114 mc22 11B cV CB 10101 Res Place 2 to thist met the filt ofmay 11 24 Mmc22 14 mc22 11B cV CB 10142 Excensition fom +28 50 m/D (980 m3)	119.CIV.OB.10010	Grout Curtain PP404 to PP438 (35 nos.)	16	01-Mar-22	18-Mar-22	-																
Instruction Scawabon from *28 SmpD to 28.5 mPD (0980 m3) Instruction Instruction Instruction Instruction Sold Nail Construction (*28.5mPD (15 nos. *TArt to TFA15) G 23.4mc+22 29.4mc+22 Instruction Sold Nail Construction (*28.5mPD (05 nos. *TArt to TFA15) G 23.4mc+22 29.4mc+22 Instruction Sold Nail Construction (*28.5mPD (05 nos. *TArt to TFA15) G 20.4pc+22 20.4pc+22 Instruction Sold Nail Construction (*28.5mPD (05 nos. *TArt to TFA15) G 20.4pc+22 20.4pc+22 Instruction Sold Nail Construction (*28.5mPD (05 nos. *TARt to TFA15) G 20.4pc+22 21.4mc+22 After Demolition of Temporary Washwater Recovery Tank Ind 23.4pc+22 11.4mc+22 Instruction of Temporary Washwater Recovery Tank Ind 23.4pc+22 11.4mc+22 Instruction of Temporary Washwater Recovery Tank Ind 23.4pc+22 11.4mc+22 Instruction of Temporary Washwater Recovery Tank Ind 23.4pc+22 11.4mc+22 Instruction of Name (28 nos.) Ind 32.4pc+22 11.4mc+22 InstorVols Intotion Sto 24 not 220	Excavation and ELS/ So	il Nail Work	32	16-Mar-22	26-Apr-22																	
119 CV C08.1004/// Excavation from +28 SmPD 102 8.5 mPD (3980 m3) 6 16 Alar-22 24 Alar-22 119 CV C08.1004/// 6xil Alar Construction (+28 SmPD (15 nos. +TA1 to TFA15) 6 23 Alar-22 24 Alar-22 119 CV C08.1007// Excavation from +28 SmPD (15 nos. +TA1 to TFA15) 6 23 Alar-22 24 Alar-22 119 CV C08.1007// Excavation from +28 SmPD (15 nos. +TA1 to TFA15) 6 20 Alar-22 24 Alar-22 119 CV C08.1007// Suit Construction (+26 SMPD) (15 nos. +TFB1 to TFB1 5) 6 20 Alar-22 24 Alar-22 Pipe Pile, Score Cutattat and HPile (f any) 23 23 Alar-22 21 May-22 119 CV C08.1001// Spec Value (28 nos.) 16 23 Apr-22 21 May-22 119 CV C08.1001// Grout Cutattat (28 nos.) 16 23 Apr-22 21 May-22 119 CV C08.1001// Grout Cutattat (28 nos.) 12 17 May-22 21 May-22 119 CV C08.1001// Grout Cutattat (28 nos.) 12 17 May-22 21 May-22 119 CV C08.1014// Excavation from +26 to 24.00 mPO (3960 m3) 8 17 May-22 25 May-22 119 CV C08.1014/																						
119. CVV.OB. 10041 Soil Nail Construction(-28.5mPD)(15 msTRA1 to TRA15) 6 23.40a-22 29.4ma-22 119. CVV.OB. 10072 Soil Nail Construction(-28.5mPD to -28.00 mPD (9600 m3) 10 2.84/ar-22 2.84/ar-22 119. CVV.OB. 10072 Soil Nail Construction(-28.5MPD () f5 msTIB1 to TB15) 6 2.04/ar-22 2.64/ar-22 After Demotition of Tom-porary Washwater Recovery Tank 140 2.34/ar-22 214/my/22 Along Morizontal JIPming 23 2.34/ar-22 214/my/22 119. CVV.OB. 10071 Pipe Piling (Vork (28 ms.) 16 2.34/ar-22 214/my/22 119. CVV.OB. 10071 Sint Aud Canes.) 14 0.54/my/22 214/my/22 119. CVV.OB. 10071 Sint Aud Canes.) 14 0.54/my/22 214/my/22 119. CVV.OB. 10074 Sint Aud Canes.) 16 2.34/my/22 214/my/22 119. CVV.OB. 10074 Sint Aud Canes.) 174/my/22 254/my/22 214/my/22 119. CVV.OB. 10074 Excavation from +28 to 24.00 mPD (980 m3) 8 174/my/22 254/my/22 119. CVV.OB. 10174 Excavation from +28 to 24.00 mPD (9800 m3)	II																					
119.CUVOB.10070 Excavation from +28.5mPD (b 920.0 mP) (9900 m3) 10 28.4Mar-22 22.4pr-22 119.CUVOB.10072 Sol Nail Construction (+26.5MPD) (15 nos TFB 10 TFB 15) 6 20.4pr-22 28.4pr-22 After Demoltion of Temporary Washwater Recovery Tank 140 23.4pr-22 11-0d-22 And plottonial Alignment 23 23.4pr-22 21.4my-22 Tang Horizontal Alignment 23 23.4pr-22 11-4my-22 119.CUVOB.10012 Grout Curtain (28 nos.) 16 23.4pr-22 11-4my-22 119.CUVOB.10012 Grout Curtain (28 nos.) 140 05.4my-22 21.4my-22 119.CUVOB.10102 Grout Curtain (28 nos.) 122 17.4my-22 11-0d-22 Phase 2: East Side 30 17.4my-22 21-4my-22 11-0d-22 119.CUVOB.10140 Excavation from +24 to 22.00 mPD (3800 m3) 8 17-4my-22 25-4my-22 119.CUVOB.10141 Excavation from +24 to 22.00 mPD (3800 m3) 8 28-4my-22 25-4my-22 119.CUVOB.10142 Excavation from +24 to 22.00 mPD (3800 m3) 10 0-5-4my-22 25-4my-22						-																
119. QUV QB. 10072 Soll Nail Construction(+26. SMPPD) (15 nos TFB 1 to TFB 15) 6 20.4pr-22 28.4pr-22 Aler Demotion of Temporary Washwater Recovery Tank 140 23.4pr-22 21.4lay-22 Pipe Pile, Grout Curtain / HPile (17 any) 23 23.4pr-22 21.4lay-22 Along Horizontal Alignment 23 23.4pr-22 21.4lay-22 119. QUV QB. 10011 Pipe Piling Work (28 nos.) 16 23.4pr-22 21.4lay-22 119. QUV QB. 10012 Grout Ourtain (28 nos.) 14 05.4mg-22 21.4lay-22 119. QUV QB. 10012 Grout Ourtain (28 nos.) 12 17.4Mg-22 28.4ln-22 Phase 2: East Side 12 17.4Mg-22 28.4ln-22 119. QUV QB. 10140 Excavation from +26 to 24.00 mPD (3960 m3) 8 17.4Mg-22 25.4lm-22 119. QUV QB. 10141 Excavation from +26 to 24.00 mPD (3960 m3) 8 26.4lm-22 04.Jn-22 119. QUV QB. 10142 Excavation from +26 to 24.00 mPD (3960 m3) 6 26.4lm-22 16.Jn-22 119. QUV QB. 10141 Excavation from +26 to 24.00 mPD (4960 m3) 10 0.5.Jn-22 15.Jn-22 119. QUV QB. 10143 Excavation from +20 to 19.5 mPD (4950			19			-																
Alter Demolition of Temporary Washwater Recovery Tank 140 23-Apr22 11-05-422 Pipe Pile, Grout Curbin und HPile (fany) 23 23-Apr22 21-Mary22 Along Horizontal Aligument 23 23-Apr22 21-Mary22 119. GV: OB.10011 Pipe Piling Work (28 nos.) 16 23-Apr22 21-Mary22 119. GV: OB.10012 Grout Curtain (28 nos.) 16 23-Apr22 21-Mary22 119. GV: OB.10012 Grout Curtain (28 nos.) 14 05-Mary22 21-Mary22 Phase 2: East Side 122 17-Mary22 28-Jun-22 119. GV: OB.10141 Excavation from +26 to 24.00 mPD (3960 m3) 8 17-Mary22 25-Mary22 119. GV: OB.10141 Excavation from +26 to 22.00 mPD (3960 m3) 8 26-Mary22 04-Jun-22 119. GV: OB.10141 Excavation from +26 to 22.00 mPD (3960 m3) 6 26-Mary22 16-Jun-22 119. GV: OB.10142 Excavation from +26 to 17 mPD (4950 m3) 10 17-Jun-22 28-Jun-22 119. GV: OB.10143 Excavation from +25.10 T/ mPD (4950 m3) 10 17-Jun-22 28-Jun-22			6	20-Apr-22		1																
Pipe Pile, Crout Curtain and HPile (if any) 23 23 Apr/22 21 May-22 Along Horizontal Alignment 23 23 Apr/22 21 May-22 119.CIV.OB.10011 Pipe Piling Work (28 nos.) 16 23 Apr/22 13 May-22 119.CIV.OB.10012 Grout Curtain (28 nos.) 14 05 May-22 14 May-22 Excavation and ELS/Sol Nall Works 12 17 May-22 21 May-22 Phase 2: East Side 36 17 May-22 28 Jun-22 119.CIV.OB.10141 Excavation from +24 to 22.00 mPD (3960 m3) 8 26 May-22 24 Jun-22 119.CIV.OB.10142 Excavation from +24 to 22.00 mPD (3960 m3) 8 26 May-22 24 Jun-22 119.CIV.OB.10142 Excavation from +24 to 22.00 mPD (3960 m3) 10 06 Jun-22 16 Jun-22 119.CIV.OB.10142 Excavation from +24 to 22.00 mPD (3960 m3) 10 06 Jun-22 16 Jun-22 119.CIV.OB.10142 Excavation from +24 to 22.00 mPD (3960 m3) 10 06 Jun-22 26 Jun-22 119.CIV.OB.10142 Excavation from +19.5 to 17 mPD(4950 m3) 10 17 Jun-22 28 Jun-22	After Demolition of Tem	nporary Washwater Recovery Tank	140	23-Apr-22	11-Oct-22																	
Along Horizontal Alignmer 23 23 23 23 21 May 22 119.CIV.OB.10011 Pipe Piling Work (28 nos.) 16 23-Apr-22 13/May-22 119.CIV.OB.10012 Grout Curtain (28 nos.) 14 05-May-22 21/May-22 Excavation and ELS/Sol Vall Works 12 17/May-22 21/May-22 Phase 2: East Side 36 17/May-22 28-Jun-22 119.CIV.OB.10140 Excavation from +28 to 24.00 mPD (3960 m3) 8 17/May-22 25-May-22 119.CIV.OB.10141 Excavation from +22 to 19.5 mPD (4960 m3) 8 26-May-22 16-Jun-22 119.CIV.OB.10143 Excavation from +19.5 to 17 mPD(4950m3) 10 17-Jun-22 28-Jun-22			23	23-Apr-22	21-May-22																	
119.CIV.OB.10011 Ppe Pling Work (28 nos.) 16 23 Apr-22 13 May-22 119.CIV.OB.10012 Grout Curtain (28 nos.) 14 05 May-22 21 May-22 Excavation and ELS/S-Visil Works 122 17 May-22 28 Jun-22 Phase 2: East Side 36 17 May-22 28 Jun-22 119.CIV.OB.10140 Excavation from +26 to 24.00 mPD (3960 m3) 8 17 May-22 25 May-22 119.CIV.OB.10141 Excavation from +22 to 19.5 mPD (4950 m3) 8 26 May-22 16 Jun-22 119.CIV.OB.10142 Excavation from +19.5 to 17 mPD (4950 m3) 10 17 Jun-22 28 Jun-22 119.CIV.OB.10143 Excavation from +19.5 to 17 mPD (4950 m3) 10 10 Jun-22 16 Jun-22	l		23	23-Apr-22																		
Excavation and ELS/Soil Nail Works 122 17-May-22 11-Od-22 Phase 2: East Side 36 17-May-22 28-Jun-22 119.CIV.OB.10140 Excavation from +26 to 24.00 mPD (3960 m3) 8 17-May-22 25-May-22 119.CIV.OB.10141 Excavation from +24 to 22.00 mPD (3960 m3) 8 26-May-22 04-Jun-22 119.CIV.OB.10142 Excavation from +22 to 19.5 mPD (4950 m3) 10 06-Jun-22 16-Jun-22 119.CIV.OB.10143 Excavation from +19.5 to 17 mPD(4950m3) 10 17-Jun-22 28-Jun-22	119.CIV.OB.10011	Pipe Piling Work (28 nos.)	16	23-Apr-22	13-May-22																	
Phase 2: East Side 36 17-May-22 28-Jun-22 119.CIV.OB.10140 Excavation from +26 to 24.00 mPD (3960 m3) 8 17-May-22 25-May-22 119.CIV.OB.10141 Excavation from +24 to 22.00 mPD (3960 m3) 8 26-May-22 04-Jun-22 119.CIV.OB.10142 Excavation from +22 to 19.5 mPD (4950 m3) 10 06-Jun-22 16-Jun-22 119.CIV.OB.10143 Excavation from +19.5 to 17 mPD(4950m3) 10 17-Jun-22 28-Jun-22	119.CIV.OB.10012	Grout Curtain (28 nos.)	14	05-May-22	21-May-22	-																
Phase 2: East Side 36 17-May-22 28-Jun-22 119.CIV.OB.10140 Excavation from +26 to 24.00 mPD (3960 m3) 8 17-May-22 25-May-22 119.CIV.OB.10141 Excavation from +24 to 22.00 mPD (3960 m3) 8 26-May-22 04-Jun-22 119.CIV.OB.10142 Excavation from +22 to 19.5 mPD (4950 m3) 10 06-Jun-22 16-Jun-22 119.CIV.OB.10143 Excavation from +19.5 to 17 mPD(4950m3) 10 17-Jun-22 28-Jun-22				-																		
119.CIV.OB.10140 Excavation from +26 to 24.00 mPD (3960 m3) 8 17.May-22 25.May-22 119.CIV.OB.10141 Excavation from +24 to 22.00 mPD (3960 m3) 8 26.May-22 04.Jun-22 119.CIV.OB.10142 Excavation from +22 to 19.5 mPD (4950 m3) 10 06.Jun-22 16.Jun-22 119.CIV.OB.10143 Excavation from +19.5 to 17 mPD(4950m3) 10 17.Jun-22 28.Jun-22																						
Instruction	II	Excavation from +26 to 24.00 mPD (3960 m3)																				
Instruction						-																
119.CIV.OB.10143 Excavation from +19.5 to 17 mPD(4950m3) 10 17-Jun-22 28-Jun-22						-																
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 Milestone Critical Work

Actual Work Summary Works

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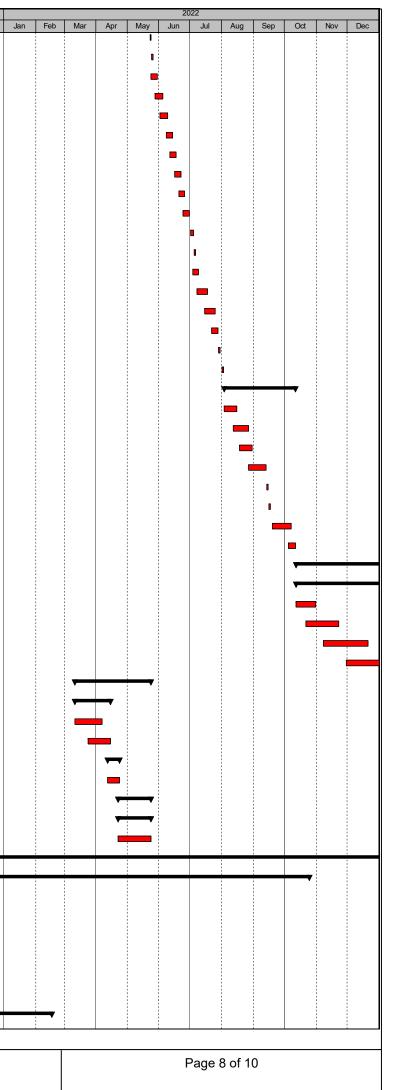


	Activity Name	Original	Start	Finish										20	021			
		Duration			ul Aug	Sep Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Ţ	Sep
119.CIV.OB.10080	Wailing Installation (30 m) +26.00mPD	2	23-May-22	24-May-22														
119.CIV.OB.10090	Strutting Installation layer 1 (3 nos.)+26.00mPD	2	25-May-22	26-May-22														
119.CIV.OB.10144	Excavation from +26mPD to 24.5mPD (2970 m3)	6	24-May-22	30-May-22										- - 				
119.CIV.OB.10145	Soil Nail Construction +25mPD (15 nos TFC1 to TFC15)	6	28-May-22	04-Jun-22]													
119.CIV.OB.10146	Excavation from +24.5mPD to 23mPD (2970 m3)	6	02-Jun-22	09-Jun-22	1													
119.CIV.OB.10147	Soil Nail Construction(+22mPD) (15 nos TFD1 toTFD15)	6	08-Jun-22	14-Jun-22														
119.CIV.OB.10147a	Excavation from +23 mPD to 21.5 mPD (2970 m3)	6	11-Jun-22	17-Jun-22	1													
119.CIV.OB.10147b	Soil Nail Construction +22mPD (15 nos TFE1 toTFE15)	6	16-Jun-22	22-Jun-22														
119.CIV.OB.10148	Excavation from +21.5mPD to 20 mPD (2970 m3)	6	20-Jun-22	25-Jun-22														
119.CIV.OB.10149	Soil Nail Construction +20.5mPD (15 nos TFF1 toTFF15)	6	24-Jun-22	30-Jun-22	-													
119.CIV.OB.10151	Wailing Installation layer 2 +20 MpD (30 m)	2	02-Jul-22	04-Jul-22										1				
119.CIV.OB.10152	Strutting Installation layer 2 +20 MpD (3 nos.)	2	05-Jul-22	06-Jul-22										1 1 1 1				
119.CIV.OB.10153	Excavation from +20mPD to 18.5mPD (2970 m3)	6	04-Jul-22	09-Jul-22	-			1 1 1						- - - - - - - - - - - - - - - - - - -				
119.CIV.OB.10154	Soil Nail Construction +20mpD to 18.5mPD (45 nos T1A1 to T1A13, T1B1 to T1B17, TFG1 to TFG15)	9	08-Jul-22	18-Jul-22				1 1 1 1						1 1 1 1				
119.CIV.OB.10155	Excavation from +19mPD to 17 mPD (4455 m3)	9	15-Jul-22	25-Jul-22	_													
119.CIV.OB.10155		6	22-Jul-22	23-Jul-22	-													
	Soil Nail Construction +17.5 MpD (15 nos TFH1 to TFH14)																	
119.CIV.OB.10157	Wailing Installation layer 3 +17.5 mPD (30 m)	2	29-Jul-22	30-Jul-22														
119.CIV.OB.10158	Strutting Installation layer 3 +17.5 mPD (3 nos.)	2	01-Aug-22	02-Aug-22														
Phase 3 : East and W		57	03-Aug-22	11-Oct-22														
119.CIV.OB.10159	Excavation from +17 mPD to 15.5mPD (5940 m3)	11	03-Aug-22	15-Aug-22														
119.CIV.OB.10161	Soil Nail Construction +16.5 to 16 MpD (34 nos T1C1 to T1C19 and TFI1 to TFI15)	14	12-Aug-22	27-Aug-22										1				
119.CIV.OB.10162	Excavation from +15.5mPD to 14mPD (5940 m3)	11	18-Aug-22	30-Aug-22														
119.CIV.OB.10163	Soil Nail Construction +14.5 MpD (34 nos T1D1 to T1D19 and TFJ1 to TFJ15)	14	27-Aug-22	13-Sep-22				1						1				
119.CIV.OB.10164	Wailing Installation layer 4 (30 m) +14.5 mPD	2	14-Sep-22	15-Sep-22	1													
119.CIV.OB.10165	Strutting Installation layer 4 (3 nos.) +14.5 mPD	2	16-Sep-22	17-Sep-22	1													
119.CIV.OB.10166	Excavation from +14 to 12.5mPD - Including Slope Excavation for East Side to +8.3 mPD (7325 m3)	15	19-Sep-22	07-Oct-22	1													
				44.0.4.00	1									i i	1	1		
119.CIV.OB.10167	Soil Nail Construction +13 mPD(15 nos TFK1 to TFK14)	6	05-Oct-22	11-Oct-22														
119.CIV.OB.10167 Structure Work & AB		6 135	05-Oct-22 12-Oct-22	28-Mar-23														
Structure Work & AB		135	12-Oct-22	28-Mar-23														
Structure Work & AB	WF Work	135 135	12-Oct-22 12-Oct-22	28-Mar-23 28-Mar-23														
Structure Work & AB Substructure 119.CIV.OB.10160	NF Work Blinding Layer and Base Slab Construction(Services Gallary, Inlet Chamber,Contact,and etc.)(1424.5m3)	135 135 17	12-Oct-22 12-Oct-22 12-Oct-22	28-Mar-23 28-Mar-23 31-Oct-22														
Structure Work & ABV Substructure 119.CIV.0B.10160 119.CIV.0B.10170	NF Work Blinding Layer and Base Slab Construction(Services Gallary, Inlet Chamber,Contact,and etc.)(1424.5m3) Formwork, Rebar Fixing and Concreting For Wall (Services Gallary, Inlet Chamber and etc.)(782 m3)	135 135 17 27	12-Oct-22 12-Oct-22 12-Oct-22 22-Oct-22	28-Mar-23 28-Mar-23 31-Oct-22 22-Nov-22														
Structure Work & ABV Substructure 119.CIV.OB.10160 119.CIV.OB.10170 119.CIV.OB.10171 119.CIV.OB.10171 119.CIV.OB.10240	NF Work Blinding Layer and Base Slab Construction(Services Gallary, Inlet Chamber,Contact,and etc.)(1424.5m3) Formwork, Rebar Fixing and Concreting For Wall (Services Gallary, Inlet Chamber and etc.)(782 m3) Blinding Layer and Base Slab Construction (All Area) (3323 m3) +18.25mPD to +19.95 mPD Formwork, Rebar Fixing and Concreting For All Structure (2770 m3) (+19.95mPD to +30.45mPD)	135 135 17 27 38	12-Oct-22 12-Oct-22 12-Oct-22 22-Oct-22 08-Nov-22	28-Mar-23 28-Mar-23 31-Oct-22 22-Nov-22 21-Dec-22														
Structure Work & AB\ Substructure 119.CIV.OB.10160 119.CIV.OB.10170 119.CIV.OB.10171	WF Work Blinding Layer and Base Slab Construction(Services Gallary, Inlet Chamber, Contact, and etc.)(1424.5m3) Formwork, Rebar Fixing and Concreting For Wall (Services Gallary, Inlet Chamber and etc.)(782 m3) Blinding Layer and Base Slab Construction (All Area) (3323 m3) +18.25mPD to +19.95 mPD Formwork, Rebar Fixing and Concreting For All Structure (2770 m3) (+19.95mPD to +30.45mPD) nentation Tanks (FST)	135 135 17 27 38 93	12-Oct-22 12-Oct-22 12-Oct-22 22-Oct-22 08-Nov-22 30-Nov-22	28-Mar-23 28-Mar-23 31-Oct-22 22-Nov-22 21-Dec-22 28-Mar-23														
Structure Work & ABV Substructure 119.CIV.OB.10160 119.CIV.OB.10170 119.CIV.OB.10171 119.CIV.OB.10171 119.CIV.OB.101240 Flocculation and Sedir 119.CIV.OB.10240	WF Work Blinding Layer and Base Slab Construction(Services Gallary, Inlet Chamber, Contact, and etc.)(1424.5m3) Formwork, Rebar Fixing and Concreting For Wall (Services Gallary, Inlet Chamber and etc.)(782 m3) Blinding Layer and Base Slab Construction (All Area) (3323 m3) +18.25mPD to +19.95 mPD Formwork, Rebar Fixing and Concreting For All Structure (2770 m3) (+19.95mPD to +30.45mPD) nentation Tanks (FST)	135 135 17 27 38 93 58	12-Oct-22 12-Oct-22 22-Oct-22 08-Nov-22 30-Nov-22 11-Mar-22	28-Mar-23 28-Mar-23 31-Oct-22 22-Nov-22 21-Dec-22 28-Mar-23 24-May-22														
Structure Work & ABV Substructure 119.CIV.OB.10160 119.CIV.OB.10170 119.CIV.OB.10171 119.CIV.OB.10240 Flocculation and Sedir Pipe Pile, Grout Curte	WF Work Blinding Layer and Base Slab Construction(Services Gallary, Inlet Chamber, Contact, and etc.)(1424.5m3) Formwork, Rebar Fixing and Concreting For Wall (Services Gallary, Inlet Chamber and etc.)(782 m3) Blinding Layer and Base Slab Construction (All Area) (3323 m3) +18.25mPD to +19.95 mPD Formwork, Rebar Fixing and Concreting For All Structure (2770 m3) (+19.95mPD to +30.45mPD) nentation Tanks (FST) in and H-Pile (if any)	135 135 17 27 38 93 58 29	12-Oct-22 12-Oct-22 22-Oct-22 08-Nov-22 30-Nov-22 11-Mar-22 11-Mar-22	28-Mar-23 28-Mar-23 31-Oct-22 22-Nov-22 21-Dec-22 28-Mar-23 24-May-22 14-Apr-22														
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 Milestone Critical Work



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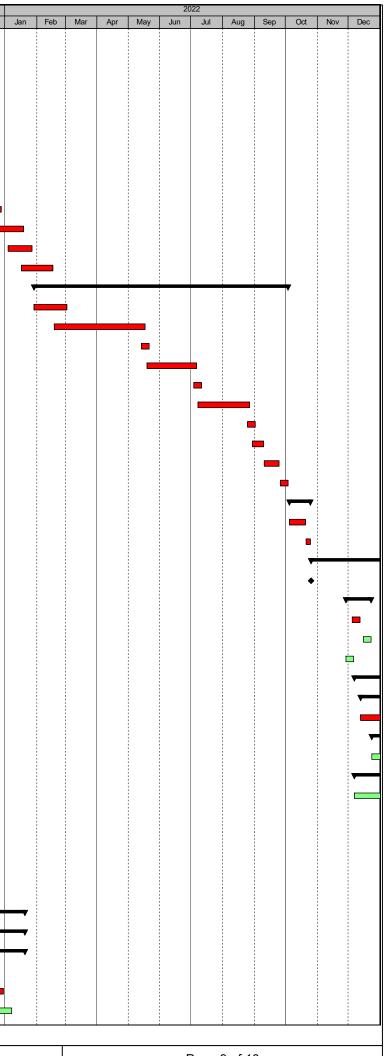


	Activity Name	Original	Start	Finish											20	21					
119.CIV.WET.10030	1st layer of excavation from +28.5 to +27mPD (Soil) - S1 (925 m3)	Duration 3	14-Jul-21 A	04-Aug-21 A	ul Aug	Sep	Oct	Nov E	lec J	Jan F	eb Ma	ır ,	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
119.CIV.WET.10040		6																			
	1st layer of waling installation at +28mPD - S1 (145 m)		28-Jul-21 A	06-Aug-21 A																	
119.CIV.WET.10050	1st layer of strut and tie beam installation at +28mPD - S1 (37 nos.)	15	02-Aug-21 A	23-Aug-21 A																	
	2nd layer of excavation from +27.5 to 22.5mPD (Soil) - S2 (5088m3)	10	23-Aug-21 A	15-Sep-21 A																	
	2nd layer of waling installation at +23mPD - S2 (145 m)	6	20-Sep-21 A	27-Sep-21 A																	
119.CIV.WET.10080	2nd layer of strut and tie beam installation at +23mPD - S2 (37 nos.)	15	27-Sep-21 A	11-Oct-21 A																	
119.CIV.WET.10090	3rd layer of excavation from +22 to 17.5 mPD (Soil) - S3 (4163m3)	10	12-Oct-21 A	12-Nov-21 A																•	
119.CIV.WET.10100	3rd layer of waling installation at +18.7 mPD - S3 (145 m)	6	13-Nov-21 A	25-Nov-21 A																	
119.CIV.WET.10110	3rd layer of strut and tie beam installation at +17.5mPD - S3 (37 nos.)	15	23-Nov-21 A	15-Dec-21																-	
119.CIV.WET.10120	4th layer of excavation from +18.7 to +16.5mPD (Rock) - S4 (1850m3)	21	02-Dec-21	28-Dec-21																ſ	-
119.CIV.WET.10130	5th layer of excavation from +16.5 to +14.35PD (Rock) - S5 (1850m3)	28	15-Dec-21	19-Jan-22																	•
119.CIV.WET.10140	6th layer of excavation from +14.3 to +12.1PD (Rock) - S6 (1850m3)	21	04-Jan-22	27-Jan-22																	
119.CIV.WET.10150	7th layer of excavation from +12.1 to +9.925mPD (Rock) - S7 (1850m3)	21	17-Jan-22	16-Feb-22																	
Substructure Work		196	29-Jan-22	03-Oct-22																	
119.CIV.WET.10160	Blinding Layer and Base Slab Construction (Tank Room + Pump Room + Staircase (2000m3))	22	29-Jan-22	02-Mar-22																	
119.CIV.WET.10170	Formwork, rebar fixing and concreting 1st pour +12mPD to +17 mPD (Tank Room + Pump Room +	70	18-Feb-22	17-May-22																	
119.CIV.WET.10180	Staircase(1050m3)) Removal of 3rd layer of Strut and Waling	7	14-May-22	21-May-22																	
119.CIV.WET.10190	Formwork, rebar fixing and concreting 2nd pour wall +17mPD to +22 mPD (Tank Room + Pump	40	19-May-22	06-Jul-22																	
119.CIV.WET.10200	Room+Staircase(600m3)) Removal of 2nd layer of Strut and Waling	7	04-Jul-22	11-Jul-22																	
119.CIV.WET.10200	Formwork, rebar fixing and concreting 3rd pour wall +22mPD to +27.5 mPD(Tank Room + Pump Room+	44	04-Jul-22																		
	Staircase(660m3))			27-Aug-22																	
119.CIV.WET.10220	Removal of 1st layer of Strut and Waling	7	25-Aug-22	01-Sep-22																	
	Formwork, rebar fixing and concreting for Ground Floor Slab (416m3)	10	30-Aug-22	09-Sep-22																	
119.CIV.WET.10240	Formwork removal & defects repair	12	10-Sep-22	24-Sep-22																	
119.CIV.WET.10270	Watertest	6	26-Sep-22	03-Oct-22																	
Superstructure Work		18	05-Oct-22	25-Oct-22																	
119.CIV.WET.10280	Formwork, rebar fixing and concrete for walls +27.325mPD to +33.135mPD (Up to Roof level)- (400m3)	14	05-Oct-22	20-Oct-22																	
119.CIV.WET.10290	Formwork,rebar fixing and concrete for Roof slab (+33.135mPD level)- (120 m3)	4	21-Oct-22	25-Oct-22																	
Washwater Equalization	n Tanks - M&E Works	135	26-Oct-22	15-Apr-23																	
119.CIV.WET.10320	Washwater Equilization Tank - Access and Work Commencement for Permanant E&M Provision Work	0	26-Oct-22																		
Washwater Equalization	Tanks - Delivery to Installation Area	22	29-Nov-22	23-Dec-22																	
119.MEP.WET.1020	Washwater Equilization Tank - Delivery for Installation - LALG	7	05-Dec-22	12-Dec-22																	
119.MEP.WET.1050	Washwater Equilization Tank - Delivery for Installation - Other Plants and Materials for BS Works (EM 4)	7	16-Dec-22	23-Dec-22																	
119.MEP.WET.1070	Washwater Equilization Tank - Delivery for Installation - Other Plants and Materials for Electrical Works (EM 3.1.1)	7	29-Nov-22	06-Dec-22																	
Washwater Equalization	n Tanks - Installation	99	07-Dec-22	15-Apr-23																	
Washwater Equalization	n Tanks - Installation - Mechanical	84	13-Dec-22	30-Mar-23																	
119.MEP.WET.1030	Washwater Equilization Tank - Installation of LALG (1 set/gang/ 80 days)	84	13-Dec-22	30-Mar-23																	
	on Tanks - Installation - BS	84	24-Dec-22	15-Apr-23																	
	Washwater Equilization Tank - Installation of BS Electrical (1 set/gang/ 80 days)	84	24-Dec-22	15-Apr-23																	
	n Tanks - Installation - Electrical	63	07-Dec-22	28-Feb-23																	
	Washwater Equilization Tank - Installation of Cable Containments - Stage 1 (1 set/gang/ 60 days)	63	07-Dec-22	28-Feb-23																	
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	r New Administration Building (ADB) Area	185	25-Jan-21 A	10-Dec-21																	Γ
	PMI0012/CE16 - Modification of Stormwater Drainage from SMH39 to SMH40	29	14-Apr-21 A	18-May-21 A										_							
119.DN1200.10000	Drainage Works near ADB (DN1200) - Excavation for 1st Section (Outfall headwall to SMH40) (160m3 @ 6.5 m3/d/team)	24	25-Jan-21 A	02-Mar-21 A																	
119.DN1200.10002	Drainage Works near ADB (DN1200) - 1st Section drainage pipe laying (Outfall headwall to SMH40) (10m @ 0.5 m/d/team)	35	03-Mar-21 A	16-Apr-21 A																	
119.DN1200.10004	Drainage Works near ADB (DN1200) - Trenchless Excavation and Pipe laying for 2 nd Section (SMH40 to SMH39)	118	20-May-21 A	10-Dec-21															:	-	-
Sitewide, Utilities & Road	d Works	29	15-Nov-21 A	20-Jan-22																	
Remaining M1-M5 Dive	ersion	29	15-Nov-21 A	20-Jan-22																	-
Phase 6		29	15-Nov-21 A	20-Jan-22																	-
119.CIV.M1M5.10180	Phase 6 - ELS for for Chambers Work and Pipe Instilation	16	15-Nov-21 A	20-Dec-21																	
119.CIV.M1M5.10190	Phase 6 - Remaining Work - Remove M4 & M5 existing pipes / Install M4 & M5 from V02 to V01	16	29-Nov-21 A	30-Dec-21																	-
110 ON/MANAS 40000	Phase 6 - Removal of Pump 1 - 8	18	15-Dec-21	07-Jan-22																	
119.CIV.IVI1N5.10200					1 1	1	i	i	1			1	÷						- i -		4

 Milestone Critical Work



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Activity ID	Activity Name	Original	Start	Finish											202	!1										202	2				
		Duration			ul A	ug Sep	0 0	ct No	v Dec	c Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct N	ov E	Dec Ja	n Feb	Mar	Apr	May	Jun	Jul	Aug Se	o Oct	Nov	Dec
119.CIV.M1M5.10210	Phase 6 - Chamber 1 Construction	17	31-Dec-21	20-Jan-22																											
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Contract No. 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Administration Be

P6. ID Activity Name Total Late Start Late Finish Working 2024 N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D . Total 1633 10-Nov-21 30-Apr-26 0 10-Nov-21 30-Apr-26 In-situ Reprovisioning of Sha Tin WTW (South Works) - Admin. Bldg. (1st Programme) 30-Apr-26 1633 Nov-21 0 10-Nov-21 30-Apr-26 Contract Date 1633 10-Nov-21 30-Apr-26 10-Nov-21 30-Apr-26 7d/w x1 Key Dates 1268 10-Nov-21 30-Apr-25 0 10-Nov-21 30-Apr-25 7d/w x10 Contract Date WSD-CD-01 Contract Date 0 10-Nov-21 0 10-Nov-21 7d/w x10 starting date WSD-CD-02 starting date 0 17-Nov-21 0 17-Nov-21 7d/w x10 WSD-CD-03 Completion of Date 0 30-Apr-25* 0 30-Apr-25 7d/w x10 Sectional Completion 30-Apr-26 7d/w x10 365 0 30-Apr-25 30-Apr-26 30-Apr-25 Section 1 - All Works except the Works in Section 2 & 2A 30-Apr-25 30-Apr-25 0 30-Apr-25 0 30-Apr-25 7d/w x10 WSD-SC-1-01 Contractual Completion Date according to CDP1 (1260d after starting date) 30-Apr-25* 30-Apr-25 7d/w x10 0 0 30-Apr-25* WSD-SC-1-02 Planned Completion Date 0 0 30-Apr-25 7d/w x10 0 30-Apr-25 30-Apr-25 0 30-Apr-25 30-Apr-25 7d/w x10 Section 2 - Landscaping Softworks within Portion A Contractual Completion Date according to CDP1 (1260d after starting date) 7d/w x10 WSD-SC-2-01 0 30-Apr-25* 0 30-Apr-25 WSD-SC-2-02 Planned Completion Date 0 30-Apr-25* 30-Apr-25 7d/w x10 0 Section 2A - Establishment Works wihin Portion A 0 30-Apr-26 30-Apr-26 0 30-Apr-26 30-Apr-26 7d/w x10 Contractual Completion Date according to CDP1 (1625d after starting date) WSD-SC-3-01 0 30-Apr-26* 0 30-Apr-26 7d/w x10 WSD-SC-3-02 Planned Completion Date 0 30-Apr-26* 0 30-Apr-26 7d/w x10 Key Dates-1 265 21-Oct-23 12-Jul-24 0 21-Oct-23 12-Jul-24 7d/w x10 KD1 - Completion of the Works as specified in Clause PS 0.21 0 21-Oct-23 21-Oct-23 0 21-Oct-23 21-Oct-23 7d/w x10 Contractual Completion Date acco WSD-KD-1-01 Contractual Completion Date according to CDP1 (703d after starting date) 21-Oct-23* 0 21-Oct-23 7d/w x10 0 Planned Completion Date WSD-KD-1-02 0 21-Oct-23* 21-Oct-23 Planned Completion Date 0 7d/w x10 KD2 - Completion of the Works as specified in Clause PS 0.22 0 12-Jul-24 12-Jul-24 0 12-Jul-24 12-Jul-24 7d/w x10 Contractual WSD-KD-2-01 Contractual Completion Date according to CDP1 (968d after starting date) 0 12-Jul-24* 0 12-Jul-24 7d/w x10 Planned Com WSD-KD-2-02 Planned Completion Date 0 12-Jul-24* 0 12-Jul-24 7d/w x10 Access Date 0 17-Nov-21 118 15-Mar-22 15-Mar-22 17-Nov-21 7d/w x10 Portion A & Portion B WSD-PS-01 Portion A & Portion B 0 17-Nov-2 118 15-Mar-22 7d/w x10 Major Submission / Procurement 452)4-Feb-23 | 684 | 1 9-Dec-24 7d/w x' Major Submission 44 17-Nov-21 30-Dec-21 132 15-Dec-21 11-May-22 7d/w x10 Sub-contract Management Plan & Subletting Procedure - Submission & Approval by PM WSD-MS-01 Sub-contract Management Plan & Subletting Procedure - Submission & Approval by PM 30 17-Nov-21 16-Dec-21 28 15-Dec-21 13-Jan-22 7d/w x10 Safety Plan - Submission & Approval by PM WSD-MS-02 Safety Plan - Submission & Approval by PM 30 24-Nov-21 23-Dec-21 139 12-Apr-22 11-May-22 7d/w x10 Environmental Management Plan - Submission & Approval by PM WSD-MS-03 Environmental Management Plan - Submission & Approval by PM 30 01-Dec-21 30-Dec-21 132 12-Apr-22 11-May-22 7d/w x10 Subletting Package 452 10-Nov-21 04-Feb-23 684 10-Nov-21 19-Dec-24 7d/w x10 Independent Checking Engineer/ AP/ RSE WSD-P-00 Independent Checking Engineer/ AP/ RSE 30 15-Jan-22 118 14-Apr-22 13-May-22 7d/w x10 17-Dec-21 Design Consultant for Foundation and ELS 09-Dec-21 7d/w x10 WSD-P-01 Design Consultant for Foundation and ELS 30 10-Nov-21 09-Dec-21 0 10-Nov-21 Design Consultant for MiC WSD-P-02 Design Consultant for MiC 30 17-Dec-21 15-Jan-22 118 14-Apr-22 13-May-22 7d/w x10 Design Consultant for Administration Building WSD-P-03 Design Consultant for Administration Building 30 15-Jan-22 145 11-May-22 09-Jun-22 7d/w x10 17-Dec-21 Design Consultant for Other Permanent Structure incl. Elevated Walkways, Drainage WSD-P-04 Design Consultant for Other Permanent Structure incl. Elevated Walkways, Drainage 30 16-Jan-22 14-Feb-22 725 11-Jan-24 09-Feb-24 7d/w x10 Sub-Contract for Prefabrication and Installation of MiC WSD-P-05 Sub-Contract for Prefabrication and Installation of MiC 60 15-Jul-22 12-Sep-22 88 11-Oct-22 09-Dec-22 7d/w x10 Sub-Contract for Ground Investigation WSD-P-06 Sub-Contract for Ground Investigation 45 28-Feb-22 28 12-Feb-22 28-Mar-22 7d/w x10 15-Jan-22 Sub-Contract for Surveying & Setting-Out Works (by small work order) WSD-P-07 Sub-Contract for Surveying & Setting-Out Works (by small work order) 30 13-Feb-22 53 09-Mar-22 07-Apr-22 7d/w x10 15-Jan-22 Sub-Contract for Condition Survey Works (by small work prder WSD-P-08 Sub-Contract for Condition Survey Works (by small work order) 30 13-Feb-22 53 09-Mar-22 07-Apr-22 7d/w x10 15-Jan-22 Sub-Contract for Refurblishment Works of PM's Site Office (by small work order) Sub-Contract for Refurblishment Works of PM's Site Office (by small work order) WSD-P-09 30 15-Jan-22 13-Feb-22 1040 20-Nov-24 19-Dec-24 7d/w x10 Sub-Contract for Provision of Material Hoist WSD-P-12 60 14-Feb-22 412 02-Feb-23 02-Apr-23 Sub-Contract for Provision of Material Hoist 17-Dec-21 7d/w x10 WSD-P-13 Sub-Contract for Waterproofing Works of Administration Building 60 15-Apr-22 287 29-Nov-22 27-Jan-23 7d/w x10 Sub-Contract for Waterproofing Works of Administration Building 15-Feb-22 Sub-Contract for Provision of Furniture of Administration Building WSD-P-14 Sub-Contract for Provision of Furniture of Administration Building 60 7d/w x10 16-Apr-22 14-Jun-22 729 14-Apr-24 12-Jun-24 Sub-Contract for ELS Works WSD-P-15 Sub-Contract for ELS Works 60 14-Feb-22 129 25-Apr-22 23-Jun-22 7d/w x10 17-Dec-21 ----Sub-Contract for Foundation Works of Administration Building WSD-P-16 Sub-Contract for Foundation Works of Administration Building 60 14-Feb-22 77 04-Mar-22 02-May-22 7d/w x10 17-Dec-21 Sub-Contract for Superstructure Works of Administration Building WSD-P-17 Sub-Contract for Superstructure Works of Administration Building 60 14-Feb-22 222 27-Jul-22 24-Sen-22 7d/w x10 17-Dec-21 Sub-Contract for Mainland East Regional Lab for MIC Works WSD-P-18 Sub-Contract for Mainland East Regional Lab for MIC Works 60 26-Sep-22 478 19-Nov-23 7d/w x10 29-Jul-22 17-Jan-24 Sub-Contract for BS Installation Works of Administration Building WSD-P-19 Sub-Contract for BS Installation Works of Administration Building 60 15-Feb-22 15-Apr-22 361 11-Feb-23 11-Apr-23 7d/w x10 Date Milestone Non-Critical Task FIRST PROGRAMME REV. 1 03-Nov-21 Near Critical Task Finished Task 19-Jan-22 Critical Task Tasks Summary 俊和

ALL ACTIVITIES

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2025	2026	2027	2028
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Revision 2 First Issue

	Norks) - Admin. Bldg.	act No. 6/WSD/2	I In-situ	u Repro	visioning	of Sha	Tin Wa	ater Treatment Works (South Works) Administration Building Page 2 of Date prepared : 11-Feb-22 at 1
P6. ID	Activity Name	Du	: Start	Finish	Total Late Star Float	t Late Finish	Working Calendars	2022 2023 2024 2025 2026 2027
	Out-Operation FO lock-line Wester of Administration Duilding		45 5-1-00	45 Are 00		2 44 4== 02		<u>INDJFMAMJJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASO</u>
WSD-P-20	Sub-Contract for FS Installation Works of Administration Building		15-Feb-22		361 11-Feb-2			
WSD-P-21	Sub-Contract for ABWF & Fit-out Works of Administration Building		15-Feb-22		112 07-Jun-22	-		
WSD-P-22	Sub-Contract for Cladding Installation Works of Administration Building	60	15-Feb-22		112 07-Jun-22			
WSD-P-23	Sub-Contract for Green Roof & Landscaping Works	60	16-Apr-22	14-Jun-22	112 06-Aug-2	2 04-Oct-22	7d/w x10	Sub-Contract for Green Roof & Landscaping Works
WSD-P-24	Sub-Contract for Irrigation System	60	16-Apr-22	14-Jun-22	748 03-May-2	4 01-Jul-24	7d/w x10	Sub-Contract for Irngation System
WSD-P-25	Sub-Contract for Lift Installation	60	15-Feb-22	15-Apr-22	557 26-Aug-2	3 24-Oct-23	7d/w x10	Sub-Contract for Lift Installation
WSD-P-26	Sub-Contract for Structure Works of Elevated Walkway	60	08-Apr-22	06-Jun-22	63 10-Jun-22	2 08-Aug-22	7d/w x10	Sub-Contract for Structure Works of Elevated Walkway
WSD-P-27	Sub-Contract for ABWF, Fitting Out, E&M Works of Elevated Walkway	60	05-Oct-22	03-Dec-22	63 07-Dec-2	2 04-Feb-23	7d/w x10	Sub-Contract for ABWF, Fitting Dut, E&M Works of Elevated Walkway
Material Proce	urement	35	6 14-Feb-22	04-Feb-23	557 11-Mar-22	2 14-Aug-24	7d/w x10	
Curtain Wall/		25	3 16-Apr-22	29-Dec-22	271 12-Jan-23	3 26-Sep-23	7d/w x10	
WSD-P-M-03	Submission & Approval for Curtain Wall Material Sample & Shop Drawing	90	16-Apr-22	14-Jul-22	271 12-Jan-23	3 11-Apr-23	7d/w x10	Submission & Approval for Curtain Wall Material Sample & Shop Drawing
WSD-P-M-04	Glass Fabrication & Delivery for Prototype Demo	90	15-Jul-22	12-Oct-22	271 12-Apr-23	3 10-Jul-23	7d/w x10	Glass Fabrication & Delivery for Prototype Demo
WSD-P-M-05	Visual Prototype Installation	50	13-Oct-22	01-Dec-22	271 11-Jul-23	29-Aug-23	7d/w x10	Visual Prototype Installation
WSD-P-M-06	Performance Test of Prototype	28	02-Dec-22	29-Dec-22	271 30-Aug-2	3 26-Sep-23	7d/w x10	🔲 Pefformance Teșt of Prototype
Lift E1, E2 &			5 16-Apr-22		557 25-Oct-23	•		
WSD-P-M-07	Drawing Submission & Approval for Lift (E1, E2 & E3)	90			557 25-Oct-23	0		Drawing Submission & Approval for Lift (E1, E2 & E3)
WSD-P-M-08	Material Submission & Approval for Lift (E1, E2 & E3)	45			557 23-Jan-24			
				-				
WSD-P-M-09	Material Procurement & Delivery (E1, E2 & E3)				557 08-Mar-24	, , , , , , , , , , , , , , , , , , ,		
Sheetpile	Material Outerianian 9. American	88	14-Feb-22		25 11-Mar-22			
WSD-P-M-10	Material Submission & Approval	28	14-Feb-22		25 11-Mar-22			
WSD-P-M-11	Material Procurement & Delivery	60	14-Mar-22	12-May-22	25 08-Apr-22	2 06-Jun-22	7d/w x10	Material Procurement & Delivery
ELS Steel Me		88	14-Feb-22		71 26-Apr-22			
WSD-P-M-12	Material Submission & Approval	28	14-Feb-22	13-Mar-22	71 26-Apr-22	2 23-May-22	7d/w x10	
WSD-P-M-13	Material Procurement & Delivery	60	14-Mar-22	12-May-22	71 24-May-2	2 22-Jul-22	7d/w x10	Material Procurement & Delivery
Concrete		88	14-Feb-22		209 11-Sep-2			
WSD-P-M-14	Material Submission & Approval	28	14-Feb-22	13-Mar-22	209 11-Sep-2	2 08-Oct-22	7d/w x10	🗖 Material Submission & Approval
WSD-P-M-15	Material Procurement & Delivery	60	14-Mar-22	12-May-22	209 09-Oct-22	2 07-Dec-22	7d/w x10	Material Procurement & Delivery
Rebar		88	14-Feb-22	12-May-22	209 11-Sep-2	2 07-Dec-22	7d/w x10	
WSD-P-M-16	Material Submission & Approval	28	14-Feb-22	13-Mar-22	209 11-Sep-2	2 08-Oct-22	7d/w x10	🛱 Material Submission & Approval
WSD-P-M-17	Material Procurement & Delivery	60	14-Mar-22	12-May-22	209 09-Oct-22	2 07-Dec-22	7d/w x10	Material Procurement & Delivery
Contractor's De	esign	66	08-Dec-21	29-Sep-23	944 07-Feb-22	2 30-Apr-26	7d/w x10	
WSD-S-01	Submission & Approval for Project Design Plan	60	08-Dec-21	05-Feb-22	97 15-Mar-22	2 13-May-22	7d/w x10	Submission & Approval for Project Design Plan
Design for MiC		21) 15-Feb-22	12-Sep-22	88 14-May-2	2 09-Dec-22	7d/w x10	
WSD-D-M01	Submission & Approval for MiC Layouts Proposal (AIP)	60	15-Feb-22*		88 14-May-2			
WSD-D-M02	Submission & Approval for MiC Layouts Proposal (DDA)	90	16-Apr-22	14-Jul-22	88 13-Jul-22	10-Oct-22	7d/w x10	Submission & Approval for MiC Layouts Proposal (DDA)
WSD-D-M03	Submission & Approval for MiC Details (AIP)	90	16-Apr-22	14-Jul-22	88 13-Jul-22	10-Oct-22	7d/w x10	Submission & Approval for MiC Details (AIP)
WSD-D-M04	Submission & Approval for MiC Details (DDA)	60	· ·		88 11-Oct-22			
	ninistration Building		0 07-Feb-22		954 07-Feb-22			
WSD-D-AB00A	Submission & Approval for ELS Works Deisgn (AIP)		07-Feb-22		0 07-Feb-22			Submission & Approval for ELS Works Deisgn (AIP)
		60		· ·				
WSD-D-AB00B	Submission & Approval for ELS Works Deisgn (DDA)		08-Apr-22		0 08-Apr-22			
WSD-D-AB01A	Submission & Approval for Foundation Deisgn (AIP)		07-Feb-22		25 04-Mar-22	,		
WSD-D-AB01B	Submission & Approval for Foundation Deisgn (DDA)	60	08-Apr-22	06-Jun-22	25 03-May-2	2 01-Jul-22	7d/w x10	
WSD-D-AB02A	Submission & Approval for Permanent Work Structure Deisgn of Administration E	Building (AIP) 60	08-Apr-22	06-Jun-22	63 10-Jun-22	2 08-Aug-22	7d/w x10	
WSD-D-AB02B	Submission & Approval for Permanent Work Structure Deisgn of Administration E	Building (DDA) 90	07-Jun-22	04-Sep-22	110 25-Sep-2	2 23-Dec-22	7d/w x10	Submission & Approval for Permanent Work Structure Deisgn of Administration Building (DDA)
WSD-D-AB03A	Submission & Approval for BS/ FS/ Security' Design of Administration Building (A	AIP) 60	07-Jun-22	05-Aug-22	249 11-Feb-23	3 11-Apr-23	7d/w x10	Submission & Approval for BS/ FS/ Security Design of Administration Building (AIP)
WSD-D-AB03B	Submission & Approval for BS/ FS/ Security' Design of Administration Building (I	DDA) 90	06-Aug-22	03-Nov-22	249 12-Apr-23	3 10-Jul-23	7d/w x10	Submission & Approval for B\$/ FS/ Security Design of Administration Building (DDA)
WSD-D-AB04A	Submission & Approval for Dangerous Goods Stores (AIP)	60	05-Sep-22	03-Nov-22	583 10-Apr-24	08-Jun-24	7d/w x10	Submission & Approval for Dangerous Goods Stores (AIP)
WSD-D-AB04B	Submission & Approval for Dangerous Goods Stores (DDA)		04-Nov-22		583 09-Jun-24			
WSD-D-AB05A	Submission & Approval for Mainland East Regional Laboratory (AIP)				470 20-Sep-2	· ·		
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WBD-D0128 Butmaton Is Agrown for Permanent Water, Structure Design of Elevated Watery No.1 (DOA) 10 2.9 Sape 2 8 0.4 Aug 2		<u> </u>	ant Weder Otersteine Design of Eleverted Wellevers No. 4 (AID)						-		·····	Submi		Permanent Works S	tructure Design of FI	lovatod Walk
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WSD-W-PY-07 Fabrication of MiC Unit for First Floor Level (46nos, PR=24no/wk) 35 20-Feb-23 26-Mar-23 88 19-May-23 22-Jun-23 7/d/w x10 Image: Fabrication of MiC Unit for First Floor Level (46nos, PR=24no/wk) PR=24no/wk) WSD-W-PY-08 Delivery of MiC Unit to Site - Batch 3 (for 1/F only) 88 18-Mar-23 27-Mar-23 94 14-Jul-23 22-Jul-23 6d/w x10 Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 3 (for 1/F only) Image: Fabrication of MiC Unit to Site - Batch 4 (for 2/F only) Image: Fabrication of MiC Unit to Site - Batch 4 (for 2/F only) Image: Fabrication of MiC Unit to Site - Batch 4 (for 2/F only) Image: Fabrication of MiC Unit to Site - Batch 5 (for Car Park only) Image: Fabrication of MiC Unit to Site - Batch 5 (for Car Park only) Image: Fabrication of MiC Unit to Site - Batch 5 (for Car Park only) Image: Fabrication of MiC Unit to Site - Batch 5 (for Car Park only) Image: Fabrication of MiC Unit to Site - Batch 5 (for Car Park only) Ima	WSD-W-PY-05	Fabrication of MiC Unit for Ground I	Level (46nos, PR= 24no/wk)	35	16-Jan-23	19-Feb-23	88	14-Apr-23	18-May-23	7d/w x10					lno/wk)	
WSD-W-PY-08 Delivery of MiC Unit to Site - Batch 3 (for 1/F only) 8 18-Mar-23 27-Mar-23 94 14-Jul-23 22-Jul-23 6d/w x10 III Delivery of MiC Unit to Site - Batch 3 (for 1/F only) WSD-W-PY-09 Fabrication of MiC Unit for Second Floor Level & Car Park (41nos, PR= 24no/wk) 35 27-Mar-23 30-Apr-23 88 23-Jun-23 27-Jul-23 7d/w x10 III Delivery of MiC Unit to Site - Batch 4 (for 2/F only) Fabrication of MiC Unit to Site - Batch 4 (for 2/F only) 7 22-Apr-23 02-Mar-23 28-Jul-23 6d/w x10 IIII Delivery of MiC Unit to Site - Batch 4 (for 2/F only) To Site - Batch 4 (for 2/F only) To Site - Batch 4 (for 2/F only) IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	WSD-W-PY-06	Delivery of MiC Unit to Site - Batch	2 (for G/F only)	8	11-Feb-23	20-Feb-23	116	05-Jul-23	13-Jul-23	6d/w x10						
WSD-W-PY-09 Fabrication of Mic Unit for Second Floor Level & Car Park (41nos, PR= 24no/wk) 35 27-Mar-23 30-Apr-23 88 23-Jun-23 7d/w x10 Image: Car Park (41nos, PR= 24no/wk) WSD-W-PY-10 Delivery of Mic Unit to Site - Batch 4 (for 2/F only) 7 22-Apr-23 02-May-23 73 21-Jul-23 28-Jul-23 6d/w x10 Image: Car Park (41nos, PR= 24no/wk) WSD-W-PY-10 Delivery of Mic Unit to Site - Batch 4 (for 2/F only) 7 22-Apr-23 02-May-23 73 21-Jul-23 28-Jul-23 6d/w x10 Image: Car Park (41nos, PR= 24no/wk) WSD-W-PY-11 Delivery of Mic Unit to Site - Batch 5 (for Car Park only) 1 26-Apr-23 27 77 29-Jul-23 29-Jul-23 6d/w x10 Image: Car Park only) Image: Car Park only)	WSD-W-PY-07	Fabrication of MiC Unit for First Floo	or Level (46nos, PR= 24no/wk)	35	20-Feb-23	26-Mar-23	88	19-May-23	22-Jun-23	7d/w x10		Fabrication (of MiC Unit for First F	loor Level (46nos, P	'R=24no/wk)	
WSD-W-PY-10 Delivery of MiC Unit to Site - Batch 4 (for 2/F only) 7 22-Apr-23 02-May-23 73 21-Jul-23 28-Jul-23 6d/w x10 III Delivery of MiC Unit to Site - Batch 4 (for 2/F only) WSD-W-PY-11 Delivery of MiC Unit to Site - Batch 5 (for Car Park only) 1 26-Apr-23 77 29-Jul-23 6d/w x10 IIII Delivery of MiC Unit to Site - Batch 5 (for Car Park only)	WSD-W-PY-08	Delivery of MiC Unit to Site - Batch	3 (for 1/F only)	8	18-Mar-23	27-Mar-23	94	14-Jul-23	22-Jul-23	6d/w x10		Delivery of N	liC Unit to Site - Bate	sh 3 (for 1/F only)		
WSD-W-PY-11 Delivery of MiC Unit to Site - Batch 5 (for Car Park only) 1 26-Apr-23 27 29-Jul-23 6d/w x10	WSD-W-PY-09	Fabrication of MiC Unit for Second I	Floor Level & Car Park (41nos, PR= 24no/wk)	35	27-Mar-23	30-Apr-23	88	23-Jun-23	27-Jul-23	7d/w x10		💻 Fabricatio	n of MiC Unit for Sec	cond Floor Level & C	2ar Park (41nos, PR=	= 24no/wk)
	WSD-W-PY-10	Delivery of MiC Unit to Site - Batch	4 (for 2/F only)	7	22-Apr-23	02-May-23	73	21-Jul-23	28-Jul-23	6d/w x10		Delivery o	of MiC Unit to Site - F	3atch 4 (for 2/F only)	/	
WSD-W-PY-13 Fabrication of MIC for Elevated Walkway No.2 Incl. ABWF, fit-out, drainage system & conceal ducts 75 01-Mav-23 14-Jul-23 542 24-Oct-24 06-Jan-25 7d/w x10	WSD-W-PY-11	Delivery of MiC Unit to Site - Batch	5 (for Car Park only)	1	26-Apr-23	26-Apr-23	77	29-Jul-23	29-Jul-23	6d/w x10		l Delivery o	f MiC Unit to Site - P	atch 5 (for Car Park	only)	
	WSD-W-PY-13	Fabrication of MIC for Elevated Wal	kway No.2 Incl. ABWF, fit-out, drainage system & conceal ducts	75	01-May-23	14-Jul-23	542	24-Oct-24	06-Jan-25	7d/w x10		Fal	prication of MIC for E	levated Walkway No	o 2 Incl. ABWF, fit-ou	ut, drainage
WSD-W-PY-14 Delivery of MiC Unit to Site - Batch 6 (MiC Bridge) 60 15-Jul-23 12-Sep-23 542 07-Jan-25 7d/w x10	WSD-W-PY-14	Delivery of MiC Unit to Site - Batch	6 (MiC Bridge)	60	15-Jul-23	12-Sep-23	542	07-Jan-25	07-Mar-25	7d/w x10			Delivery of MiC Ur	it to Site - Batch 6 (MiC Bridge)	
Construction of Administration Building 1072 17-Nov-21 23-Oct-24 554 15-Mar-22 30-Apr-26	Construction of	Administration Building		1072	17-Nov-21	23-Oct-24	554	15-Mar-22	30-Apr-26							
♦ ♦ Milestone Non-Critical Task	Milestone	Non-Critical	Task											Date		Re
Near Critical Task Finished Task O3-Nov-21 Revision 0 First Is					FIRS	T PRC)Gl	RAM	ME R	EV. 3						
Critical Task Tasks Summary ALL ACTIVITIES 19-Jan-22 Revision 1 First Is 19-Jan-22 Revision 2 F	Critical Tas	sk Tasks Summ	ary				٨٢	`TI\/I	TIEC				俊和			
Time RiskAl. P6 Hammock 08-Feb-22 Revision 2 First Is	Time Risk	A. P6 Hammool	k l			ALL			IILJ					U8-Feb-22	Kevision 2 Firs	SI ISSUE

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2025	2026	2027 [M A M J J A	2028 SONDJF
(DDA)			
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tent Training Venue (DDA) NRoom, Server Rooms (A(P)			· · · · · · · · · · · · · · · · · · ·
y Control Room, Server Rooms (DI	ÞA)		
Vehicle Charging Facilities (AIP)			
Electric Vehicle Charging Facilities	(DDA)		
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1 Courtyard incl. Irrigation System (DŲA)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
vay Np.2 (AIP)			
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d Walkway No.2 (AIP) of Elevated Walkway No.2 (DDA)		· · · · · · · · · · · · · · · · · · ·	
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cture Design of Elevated Walkway			
Vorks Structure Design of Elevated) Walkway No.1 (DDA)		
ty Control Room/ Server Rooms			
No,1			
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24no/wk)			
Park (41nos, PR= 24no/wk)			
ly)			
ind. ABWF, fit-out, drainage syste	m & conceal ducts		
3 Bridge)			
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Revision		Checked	Approved
Revision 0 First Issue Revision 1 First Issue		AH PF	WJ AH

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In-situ Reprovisioning of Sha Tin WTW (South Works) - Admin, Bldg

Contract No. 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Administration Building

(South Works) - Admin. Bldg.					Date prepared : 11-Feb-22 a
Activity Name	Dur. Start	Finish	Total Late Start	Late Finish Working Calendars	2022 2023 2024 2025 2026 2027
undation	556 17 Nov 2	1 26 May 23	1070 15-Mar-22	30 Apr 26	<u>NDJFMAMJJJASONDJFMAMJJASONDJFMAMJJJASONDJFMAMJJASONDJFMAMJJJASONDJFMAMJJJASONDJFMAMJJJAS</u>
eparation Works		,	48 15-Mar-22	· ·	
/SD-W-F01 Fdn Surveying, Trial Pit, UU Detection, Installation of Monitoring Strumentation, Site Haul Road	80 21-Jan-2			23-Jun-22 6d/w x10	Fdn Surveying, Tinal Pit, UU Detection, Installation of Monitoring Strumentation, Site Haul Road
/SD-W-F02 Fdn G.I. & Instrumentation			24 31-Mar-22	14-Apr-22 6d/w x10	10 (Fdn.) - G.I; & Instrumentation
/SD-W-F03 Fdh Conduct Laboratory Test & Issue Preliminary Report				16-May-22 7d/w x10	🛱 Fdh Conduct Laboratory Test & Issue Preliminary Report
					📮 Fdn Design Review
SD-W-F04 Fdn Design Review	· ·			06-Jun-22 7d/w x10	
ase 1 (Grid J-Q/1-7)			84 07-Jun-22		◆ Temporary Retaining Structure (Grid J-Q/1-7), 120m long, to be constructed by Contract 1/WSD/19
3D-W-F-101 Temporary Retaining Structure (Grid J-Q/1-7), 120m long, to be constructed by Contract 1/WSD/19	0 17-Nov-2		202 07-Jun-22		Install Strutland Excavation at Portion 1 from 23.3mPD to 21.5mPD (2400m ³ , PR=100m ³ /d)
iD-W-F-102 Install Strut and Excavation at Portion 1 from 23.3mPD to 21.5mPD (2400m ³ , PR=100m ³ /d)				22-Jul-22 6d/w x10	
D-W-F-103 Carry Out Plate Load Test at Portion 1	14 23-Jul-22	2 05-Aug-22	86 17-Oct-22	30-Oct-22 7d/w x10	Carry Out Plate Load Test at Portion 1
D-W-F-104 Footing - 1m thk Footing @ +21.5mPD incl. blinding layer (7 batches @ 6d/batch)	42 06-Aug-2	2 24-Sep-22	70 31-Oct-22	17-Dec-22 6d/w x10	Footing - 1m thk;Footing:@ +21.5mPD incl; blinding layer (7 batches @ 6d/batch)
D-W-F-105 Time Risk Allowance for Phase 1 Foundation	6 25-Sep-2	2 30-Sep-22	84 18-Dec-22	23-Dec-22 7d/w x10	I Time Risk Allowance for Phase 1 Foundation
se 2 (Grid A'-J/1-9)	556 17-Nov-2	1 26-May-23	1070 07-Jun-22		
D-W-F-201 Temporary Retaining Structure (Grid A'-C/1), 48m long, to be constructed by Contract 1/WSD/19	0 17-Nov-2	1	1626 30-Apr-26	7d/w x10	Temporary Retaining Structure (Grid A'-C/1), 48m long, to be constructed by Contract 1/WSD/19
D-W-F-201.5 Temporary Retaining Structure (Grid F-J/7-9), 30m long, to be constructed by Contract 1/WSD/19	0 17-Nov-2	1	1626 30-Apr-26	7d/w x10	Temporary Retaining Structure (Grid F-J/7-9), 30m long, to be constructed by Contract 1/WSD/19
D-W-F-202 B.Footing - Sheet Piling (GL C-J/ 1), 50m on plan/ 12m deep, PR = 12sheet/d	12 07-Jun-2	2 20-Jun-22	0 07-Jun-22	20-Jun-22 6d/w x10	■ B.Footing - Sheet Piling (GL C-J/1), 50m on plan/ 12m deep, PR =12sheet/d
D-W-F-202.5 B.Footing - Sheet Piling (GL A1-F/9), 60m on plan/ 16m deep, PR =10sheet/d				23-Jun-22 6d/w x10	■ B.Footing - Sheet Piling (GL A1-F/9), 60m on plan/ 16m deep; PR ≠10sheet/d
D-W-F-203 Forming of Slope and Carry Out Excavation to + 20 mPD (11500m ³ , PR=100m ³ /d)				07-Dec-22 6d/w x10	Forming of Slope and Carty Dut Excavation to + 20 mPD (11500m³; PR=100m³/d)
					Construct Partial Raft (10 batches @ 6d/batch)
D-W-F-204 Construct Partial Raft (10 batches @ 6d/batch)				22-Feb-23 6d/w x10	
D-W-F-205 Install Raking Struts for Further Excavation	5 23-Feb-2	3 28-Feb-23	0 23-Feb-23	28-Feb-23 6d/w x10	Install Raking Struts for Further Excavation
D-W-F-206 Excavate Slope in front of Sheetpile to +20 mPD (500m ³ , PR=100m ³ /d)	5 01-Mar-2	3 06-Mar-23	0 01-Mar-23	06-Mar-23 6d/w x10	Excavate Slope in front of Sheetpile to +20 mPD (500m ³ , PR=100m ³ /d)
D-W-F-207 Construct Remaining Raft (10 batches @ 6d/batch)	60 07-Mar-2	3 19-May-23	0 07-Mar-23	19-May-23 6d/w x10	Construct Remaining Raft (10 batches;@ 6d/batch)
D-W-F-208 Time Risk Allowance for Phase 2 Foundation	7 20-May-2	23 26-May-23	0 20-May-23	26-May-23 7d/w x10	II: Time Risk Allowance for Phase 2 Foundation
cture	478 03-Oct-22	2 23-Jan-24	828 24-Dec-22	30-Apr-26	
se 1 (Grid J-Q/1-7)	241 03-Oct-22	2 31-May-23	104 24-Dec-22	12-Sep-23	
derground	12 03-Oct-22			10-Jan-23 6d/w x10	U/G R.C Beam/ Column Cohstruction
SD-W-UG1(U/G R.C Beam / Column Construction	12 03-Oct-22	2 17-Oct-22	70 24-Dec-22	10-Jan-23 6d/w x10	■ U/GIR.C Beam/ Column Construction
sement Level	61 03-Oct-22		89 11-Jan-23		B/F R.C Suspended Slab
D-W-SB101 B/F R.C Suspended Slab	12 18-Oct-2	2 31-Oct-22	70 11-Jan-23	27-Jan-23 6d/w x10	
D-W-SB102 B/F R.C Formwork and Rebar to RC Column	12 01-Nov-2	2 14-Nov-22	70 28-Jan-23	10-Feb-23 6d/w x10	□ B/F R.C. + Formwork and Rebar to RC Column
3D-W-SB103 B/F R.C Formwork and Rebar RC Wall	12 01-Nov-2	2 14-Nov-22	70 28-Jan-23	10-Feb-23 6d/w x10	□ B/F R.C. + Formwork and Rebar RC:Wall
D-W-SB104 B/F R.C Formwork and Rebar RC Concrete Beam/Slab (Ground Slab) incl. Erect Scaffold	12 12-Nov-2	2 25-Nov-22	70 09-Feb-23	22-Feb-23 6d/w x10	B/F;R;C:- Formwork and Rebar RC Concrete;Beam/Slab (Ground Slab) incl. Erect Scaffold
D-W-SB105 B/F R.C Concreting	1 26-Nov-2	2 26-Nov-22	70 23-Feb-23	23-Feb-23 6d/w x10	I: B/F;RC:- Concreting
D-W-SB106 B/F R.C Haul Road Preparation for Mobilization Mobile Crane	10 03-Oct-22	2 14-Oct-22	107 13-Feb-23	23-Feb-23 6d/w x10	D B/F R.C Haul Road Preparation for Mobilization Mobile Crane
D-W-SB107 B/F MiC - Installation of MiC Module (16 units) by Mobile Crane @ Basement level < <pr=6no d="">></pr=6no>	3 28-Nov-2	2 30-Nov-22	70 24-Feb-23	27-Feb-23 6d/w x10	B/F, MiC; - Installation of ;MiC Module (16 units) by Mobile Crane @ Basement level < <pr=6np d="">></pr=6np>
D-W-SB108 Time Risk Allowance for Structural Works @ Basement Level Phase 1	2 01-Dec-2			01-Mar-23 7d/w x10	I Time Risk Allowance for Structural Works @ Basement Level Phase 1
und Floor Level 5D-W-SG101 G/F R.C Formwork and Rebar to RC Column	36 03-Dec-2 12 03-Dec-2		85 02-Mar-23 70 02-Mar-23	02-Apr-23 15-Mar-23 6d/w x10	G/F IR.C. – Formwork and Rebar to RC Column
D-W-SG102 G/F R.C Formwork and Rebar to RC Wall	12 03-Dec-2			15-Mar-23 6d/w x10	G/F R.C Formwork and Rebar to RC Wall
					G/F R.C Formwork and Retar: to:RC Concrete Stab (First Floor Stab) Incl. Erect Scattfold
SD-W-SG103 G/F R.C Formwork and Rebar to RC Concrete Slab (First Floor Slab) incl. Erect Scaffold	12 15-Dec-2			27-Mar-23 6d/w x10	
SD-W-SG104 G/F R.C Concreting	1 31-Dec-2	2 31-Dec-22	70 28-Mar-23	28-Mar-23 6d/w x10	G/F R.CConcreting
SD-W-SG105 G/F MiC - Installation of MiC Module (18 units) by Mobile Crane @ Ground Floor level < <pr=6no d="">></pr=6no>	3 03-Jan-2	3 05-Jan-23	70 29-Mar-23	31-Mar-23 6d/w x10	G/F MiC - Installation of MiC Module (18 units) by Mobile Crane @ Ground Floor level < <pr=6no d=""></pr=6no>
SD-W-SG106 Time Risk Allowance for Structural Works @ Ground Level Phase 1	2 06-Jan-2	3 07-Jan-23	85 01-Apr-23	02-Apr-23 7d/w x10	Time Risk Allowarice for Structural Works @ Ground Level Phase 1
st Floor Level			86 03-Apr-23		
SD-W-S1101 1/F R.C Formwork and Rebar to RC Column	12 09-Jan-2	3 21-Jan-23	69 03-Apr-23	19-Apr-23 6d/w x10	I/F R.C Formwork and Rebar to RC Column
SD-W-S1102 1/F R.C Formwork and Rebar to RC Wall	12 09-Jan-2	3 21-Jan-23	69 03-Apr-23	19-Apr-23 6d/w x10	11/F R.C Formwork and Rebar to RC Wall
D-W-S1103 1/F R.C Formwork and Rebar to RC Concrete Slab (Secound Floor Slab) incl. Erect Scaffold	12 20-Jan-2	3 06-Feb-23	69 18-Apr-23	02-May-23 6d/w x10	1/F R.C Formwork and Rebar to RC Concrete Slab (Secound Floor Slab) incl. Erect Scaffold
SD-W-S1104 1/F R.C Concreting	1 07-Feb-2	3 07-Feb-23	69 03-May-23	03-May-23 6d/w x10	I 11/F R.C Concreting
SD-W-S1105 1/F MiC - Installation of MiC Module (24 units) by Mobile Crane @ First Floor level < <pr=6no d=""></pr=6no>	4 08-Feb-2	3 11-Feb-23	69 04-May-23	08-May-23 6d/w x10	I 1/F MiC - Installation of MiC Module (24 units) by Mobile Crane @ First Floor level < <pr=6no d=""></pr=6no>

Milestone
 Near Critical Task
 Critical Task
 Time Risk Al.

Finished Task Tasks Summary P6 Hammock

FIRST PROGRAMME REV. 1 ALL ACTIVITIES



Revision 0 First Issue

Revision 1 First Issue

Revision 2 First Issue

03-Nov-21

19-Jan-22

08-Feb-22

Page 4 of 10 Date prepared : 11-Feb-22 at 13:13

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Milestone

Near Critical Task

Critical Task

Time Risk Al.

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WSD-W-SB306 B/F MiC - Installation of MiC Module (8 units) by Mobile Crane @ Basement Floor level <<PR=6no/d>>

WSD-W-SB307 Time Risk Allowance for Structural Works @ Basement Level Phase 3

Non-Critical Task

Finished Task

P6 Hammock

Tasks Summary

P6. ID

Contract No. 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Administration Be

WTW (South Works) - Admin. Bldg.

IW (South Works) - Admin. Bldg.	Dur.	Start	Finish	Total	Late Start	Late Finish	Working		
				Float			Calendars	2022 2023 FMAMJJASONDJFMAMJJASONDJF	
WSD-W-S1106 Time Risk Allowance for Structural Works @ First Floor Level Phase 1	2	12-Feb-23	13-Feb-23	86	09-May-23	10-May-23	7d/w x10	I Time Risk Allowance for Struc	tural Works @ First Floor Level
Second Floor Level	31	14-Feb-23	16-Mar-23	88	11-May-23	12-Jun-23			
WSD-W-S2101 2/F R.C Formwork and Rebar to RC Column	12	14-Feb-23	27-Feb-23	70	11-May-23	24-May-23	6d/w x10	2/F.R.C Formwork and Ret	
WSD-W-S2102 2/F R.C Formwork and Rebar to RC Wall	12	14-Feb-23	27-Feb-23	70	11-May-23	24-May-23	6d/w x10	D 2/FR.C Formwork and Ret	par to RC Wall
WSD-W-S2103 2/F R.C Formwork and Rebar to RC Concrete Slab (Third Floor Slab) incl. Erect Scaffold	12	25-Feb-23	10-Mar-23	70	23-May-23	06-Jun-23	6d/w x10	2/F R.C Formwork and Re	bar to RC Concrete Slab (Third
WSD-W-S2104 2/F R.C Concreting	1	11-Mar-23	11-Mar-23	70	07-Jun-23	07-Jun-23	6d/w x10	I 2/F R.C Concreting	
WSD-W-S2105 2/F MiC - Installation of MiC Module (16 units) by Mobile Crane @ Second Floor level < <pr=6no d="">>></pr=6no>	3	13-Mar-23	15-Mar-23	70	08-Jun-23	10-Jun-23	6d/w x10	I 2/F MiC - Installation of MiC	C Module (16 units) by Mobile Cr
WSD-W-S2106 Time Risk Allowance for Structural Works @ Second Floor Level Phase 1	1	16-Mar-23	16-Mar-23	88	12-Jun-23	12-Jun-23	7d/w x10	 I Tîme Risk Allowance for Str	ructural Works @ Second Floor I
Third Floor Level	76	17-Mar-23	31-May-23	104	13-Jun-23	12-Sep-23			
WSD-W-S3101 3/F R.C Formwork and Rebar to RC Column	12	17-Mar-23	30-Mar-23	70	13-Jun-23	27-Jun-23	6d/w x10	D 3/FR:C Formwork and F	Rebar to RC Column
WSD-W-S3102 3/F R.C Formwork and Rebar to RC Wall	12	17-Mar-23	30-Mar-23	70	13-Jun-23	27-Jun-23	6d/w x10	 II 3/F R.C Formwork and F	Rebar to RC Wall
WSD-W-S3103 3/F R.C Formwork and Rebar to RC Concrete Slab (Third Floor Slab) incl. Erect Scaffold	12	29-Mar-23	14-Apr-23	70	26-Jun-23	10-Jul-23	6d/w x10	 □ 3/F R.C Formwork and	Rebar to RC Concrete Slab (Th
WSD-W-S3104 3/F R.C Concreting	1	15-Apr-23	15-Apr-23	70	11-Jul-23	11-Jul-23	6d/w x10	I 3/F R.C Concreting	
WSD-W-S3105 3/F R.C Roof Construction	24	17-Apr-23	15-May-23	70	12-Jul-23	08-Aug-23	6d/w x10	 📮 3/F R.C Root Constr	ruction
WSD-W-S3106 Time Risk Allowance for Structural Works @ Third Floor Level Phase 1	4	16-May-23	19-May-23	85	09-Aug-23	12-Aug-23	7d/w x10	 D Time Risk Allowance f	for Structural Works @ Third Flo
WSD-W-S3107 Erect Material Hoist	12	20-May-23	31-May-23		01-Sep-23	12-Sep-23		 Erect Material Hpist	
Phase 2 (Grid C-J/1-4)	125		28-Sep-23			•			
Underground	24	27-May-23		_	27-May-23		6d/w x10		
WSD-W-UG2C U/G R.C Beam / Column Construction	24	27-May-23	24-Jun-23	0	27-May-23	24-Jun-23	6d/w x10	U/G R:C - Beam /	Column Construction
Basement Level	15	26-Jun-23	10-Jul-23	1025	26-Jun-23	30-Apr-26		.	
WSD-W-SB201 B/F R.C Suspended Slab	12	26-Jun-23	10-Jul-23	846	17-Apr-26	30-Apr-26	6d/w x10	B/F R.C Swsper	
WSD-W-SB203 B/F MiC - Installation of MiC Module (34 units) by Mobile Crane @ Basement level < <pr=6no d=""></pr=6no>	6	26-Jun-23	03-Jul-23	0	26-Jun-23	03-Jul-23	6d/w x10	B/F MiC - Installati	tion of MiC Module (34 units) by
WSD-W-SB204 Time Risk Allowance for MiC Installation @Basement Level	2	04-Jul-23	05-Jul-23	0	04-Jul-23	05-Jul-23	7d/w x10	I Time Risk Allowar	nce for MiC Installation @Basem
Ground Floor Level	9	06-Jul-23	14-Jul-23	_	06-Jul-23	14-Jul-23			
WSD-W-SG05 G/F MiC - Installation of MiC Module (40 units) by Mobile Crane @ Ground level << PR=6no/d>>	7	06-Jul-23	13-Jul-23		06-Jul-23	13-Jul-23		 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ation of MiC Module (40 units) by
WSD-W-SG06 Time Risk Allowance for MiC Installation @ Ground Level	1	14-Jul-23	14-Jul-23	0	14-Jul-23	14-Jul-23	7d/w x10	I i lime Risk Allowa	ance for MiC Installation @ Grou
	11	15-Jul-23	25-Jul-23		15-Jul-23	25-Jul-23	0.11		ation of MiC Module (46 units) b
WSD-W-S1201 1/F MiC - Installation of MiC Module (46 units) by Mobile Crane @ First Floor level < <pr=6no d=""></pr=6no>	8	15-Jul-23	24-Jul-23	0	15-Jul-23	24-Jul-23			
WSD-W-S1202 Time Risk Allowance for MiC Installation @ First Floor Level	1	25-Jul-23	25-Jul-23		25-Jul-23	25-Jul-23	7d/w x10		ance for MiC Installation @ First
Second Floor Level WSD-W-S2201 2/F MiC - Installation of MiC Module (18 units) by Mobile Crane @ Second Floor level < <pr=6no d="">></pr=6no>	4	26-Jul-23 26-Jul-23	29-Jul-23 28-Jul-23	0	26-Jul-23 26-Jul-23	29-Jul-23 28-Jul-23	6d/w x10	 2/F MtC - Install	lation of MiC Module (18 units) b
WSD-W-S2201 Zin with instantation of MiC Installation @ Second Floor Level	1	29-Jul-23	29-Jul-23		29-Jul-23	29-Jul-23			vance for MiC Installation @ Sec
	· ·	29-Jui-23			29-30-23				bilization of Mobile Crane
WSD-W-S2203 2/F MiC - Demobilization of Mobile Crane	0	04 1 1 00	29-Jul-23	0	04 1 1 00	29-Jul-23	60/W X10		
Third Floor Level WSD-W-S3201 3/F R.C Formwork and Rebar to RC Column	60 12	31-Jul-23 31-Jul-23	28-Sep-23 12-Aug-23		31-Jul-23 31-Jul-23	18-Jun-24 12-Aug-23	6d/w x10	 	nwork and Rebar to RC Column
WSD-W-S3202 3/F R.C Formwork and Rebar to RC Wall	12		12-Aug-23		31-Jul-23	12-Aug-23		 ■ 3/F R.C Fom	nwork and Rebar to RC Wall
WSD-W-S3203 3/F R.C Formwork and Rebar to RC Concrete Slab (Third Floor Slab) incl. Erect Scaffold	12	11-Aug-23			11-Aug-23	24-Aug-23			rmwork and Rebar to RC Concre
WSD-W-S3204 3/F R.C Concreting	1	-	25-Aug-23		25-Aug-23	25-Aug-23		 I 3/FR.C C	
									tallation of MiC Module (14 units
WSD-W-S3205 3/F MiC - Installation of MiC Module (14 units) by Mobile Crane @ Second Floor level << PR=6no/d>	3	26-Aug-23	-		26-Aug-23	29-Aug-23			lowance for Structural Works @
WSD-W-S3206 Time Risk Allowance for Structural Works @ Third Floor Level Phase 2	2		31-Aug-23		30-Aug-23	-			Roof Construction
WSD-W-S3207 3/F R.C Roof Construction	24	01-Sep-23	-		21-May-24	18-Jun-24	6d/w x10	→ 3/F;K.u	
Phase 3 (Grid A'-C/1-4)	167	06-Jul-23	19-Dec-23		07-Jul-23	17-Sep-24			
Basement Floor Level WSD-W-SB301 B/F R.C Suspended Slab	45 12	06-Jul-23 06-Jul-23	19-Aug-23 19-Jul-23	1	07-Jul-23 07-Jul-23	20-Aug-23 20-Jul-23	6d/w x10	 ₩ B/F R.C Suspe	anded Slab
WSD-W-SB302 B/F R.C Formwork and Rebar to RC Column	12	20-Jul-23	02-Aug-23	1	21-Jul-23	03-Aug-23			nwork and Rebar to RC Column
WSD-W-SB303 B/F R.C Formwork and Rebar RC Wall	12	20-Jul-23	02-Aug-23		21-Jul-23	03-Aug-23		 · · · · · · · · · · · · · · · · · · ·	work and Rebar RC Wall
WSD-W-SB304 B/F R.C Formwork and Rebar RC Concrete Beam/Slab (Ground Slab) incl. Erect Scaffold	12	01-Aug-23	-		02-Aug-23	15-Aug-23		 · · · · · · · · · · · · · · · · · · ·	mwork and Rebar RC Concrete
WSD-W-SB304 B/F R.C Formwork and Rebail RC Condete Beam/Stab (Ground Stab) incl. Erect Scanold WSD-W-SB305 B/F R.C Concreting	12		-			16-Aug-23			
		15-Aug-23	15-Aug-23		16-Aug-23	10-Aug-23	JU/W XIU	 I B∤F R.C Cor	iciemiA





Revision 2 First Issue

FIRST PROGRAMME REV. 1 ALL ACTIVITIES

2 16-Aug-23 17-Aug-23 1 17-Aug-23 18-Aug-23 6d/w x10

2 18-Aug-23 19-Aug-23 1 19-Aug-23 20-Aug-23 7d/w x10

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	2024		2025	2026			2027				202	8
	SONDJFMAMJJA vance for Structural Works @ F			MAMJJ	ASOND	JFM	AMJJ	AS		ND	JI	-
ŕ	nwork and Rebar to RC Colum	in l										
ŕ	nwork and Rebar to RC Wall											
Ì	miwork and Rebait to RC Conc	rete Slab (Tr	nird Floor Slab) incl. Erect Scaffold									
i	ncreting											- 4
i		its) by Mobile	e Crane @ Second Floor level < <pr:< td=""><td>=6no/d>></td><td></td><td></td><td>L</td><td></td><td></td><td></td><td></td><td></td></pr:<>	=6no/d>>			L					
i	lowance for Structural Works @			-0110/077								
-										-		
	ormwork and Rebar to RC Col	umn										-
	ormwork and Rebar to RC Wa	¢ i i										• •
	Formwork and Rebar to RC C	oncrete Slab	(Third Floor Stab) incl. Erect Scaffol	d								
	Concreting											
5	- Roof Construction											
Ś	isk Allowance for Structural W	orks @ Third	Floor Level Phase 1					h	+-+-			
1	Material Hoist											
	T									-		-
	R.C Beam / Column Constru	liction										
	F.C Suspended Slab											
i		I.o. (3/t unite)	by Mobile Crane @ Basement level	<>DD-6mo/								
i	ne Risk Allowance for MiC Inst											
									+ +			
ļ	F MiC - Installation of MiC Mod	ule (40 units	;) by Mobile Crane @ Ground level <	<pr=6no d=""></pr=6no>	>							
r	ne Risk Allowance for MiC Ins	tallation @ G	round Level									
-			1 1							-		_
ļ	/F MiC - Installation of MiC Mo	dule (46 unit	s) by Mobile Crane @ First Floor leve	el < <pr=6n< td=""><td>o/d>></td><td></td><td></td><td></td><td></td><td></td><td></td><td>• •</td></pr=6n<>	o/d>>							• •
	ime Risk Allowance for MiC In	stallation @ I	First Floor Level									• •
												_
1			s) by Mobile Crane @ Second Floor	level < <pr< td=""><td>=6no/d>></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pr<>	=6no/d>>							
1	ime Risk Allowance for MiC In		Second Floor Level									
2	/F MiC - Demobilization of Mo	bile Crane										
	3/F R.C Formwork and Reba	r to BC Colu	mn									
i	3/F R.C Formwork and Reba											
-			nçrete Slab (Third Floor Slab) incl. Ei	roct Scoffold								
	3/F R.C Concreting								+-+			
1		Modulo (14	inits) by Mobile Crane @ Second Flo	or loval tr								
i	Time Risk Allowance for Str.											
i									÷-+			
	3/F R.C Roof Constructi		1 1 1 1 1 1 1 1 1 1 1 1 1 2 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
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l	FR.C Suspended Slab											
Ē	B/F R.C Formwork and Reba	r to RC Colu	mn									
Ē	B/F R.C Formwork and Reba	r RC Wall					• • • • • • • • • • • •					
ļ			ete Beam/Slab (Ground Slab) incl. Ei	rect Scaffold								
1	B/F R.C Concreting											
Ļ		/lodule (8 umi	ts) by Mobile Crane @ Basement Flo	oorlevel <<	PR=6no/d>>							
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		Date lov-21	Revisio Revision 0 First Issue	n		(A⊢	Checked	_	App NJ	orov	ed	_
		an-22	Revision 1 First Issue			PF		_	AH			-
	1747 711					_				_	_	

In-situ Reprovisioning	of Sha ⁻	Гin
$\Lambda/T \Lambda / (Couth \Lambda / order)$	مرا معرام ۸	

Contract No. 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Administration Bu

Late Finish

Total Late Start

Float

Finish

Dur.

Working Calendars

WTW (South Works) - Admin. Bldg P6. ID Activity Name

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	Ground Floor Level WSD-W-SG301 G/F R.C Formwork and Rebar to RC Column		21-Aug-23 21-Aug-23	17-Sep-23 02-Sep-23	0	21-Aug-23 21-Aug-23	17-Sep-23 02-Sep-23	6d/w x10	.		G/FR.C	Formwork and Rebar to RC Colu
┞	WSD-W-SG302 G/F R.C Formwork and Rebar to RC Wall	12	21-Aug-23	02-Sep-23		21-Aug-23	02-Sep-23					Formwork and Rebar to RC Wall
				•								- Formwork and Rebar to RC Con
	WSD-W-SG303 G/F R.C Formwork and Rebar to RC Concrete Slab (First Floor Slab) incl. Erect Scaffold	12	01-Sep-23	14-Sep-23		01-Sep-23	14-Sep-23					- Concreting
	WSD-W-SG304 G/F R.C Concreting		15-Sep-23	15-Sep-23	0	15-Sep-23	15-Sep-23		.			Installation of MiC Module (3 uni
	WSD-W-SG305 G/F MiC - Installation of MiC Module (3 units) by Mobile Crane @ Ground Floor level < <pr=6no d=""></pr=6no>	1	16-Sep-23	16-Sep-23	0	16-Sep-23	16-Sep-23					
	WSD-W-SG306 Time Risk Allowance for Structural Works @ Ground Level Phase 3	1	17-Sep-23	17-Sep-23	0	17-Sep-23	17-Sep-23	7d/w x10				k Allowance for Structural Works (
	First Floor Level WSD-W-S1301 1/F R.C Formwork and Rebar to RC Column	93 12	18-Sep-23 18-Sep-23	19-Dec-23 03-Oct-23	273 0	18-Sep-23 18-Sep-23	17-Sep-24 03-Oct-23	6d/w x10			∀ 1/F R.C	- Formwork and Rebar to RC Co
┢	WSD-W-S1302 1/F R.C Formwork and Rebar to RC Wall	12	18-Sep-23	03-Oct-23	0	18-Sep-23	03-Oct-23					- Formwork and Rebar to RC W
				14-Oct-23			14-Oct-23					Formwork and Rebar to RC C
	WSD-W-S1303 1/F R.C Formwork and Rebar to RC Concrete Slab (Secound Floor Slab) incl. Erect Scaffold	12	29-Sep-23		0	29-Sep-23						C Concreting
	WSD-W-S1304 1/F R.C Concreting	1	16-Oct-23	16-Oct-23		16-Oct-23	16-Oct-23					C - Installation of MiC Module(3 u
	WSD-W-S1305 1/F MiC - Installation of MiC Module (3 units) by Mobile Crane @ First Floor level < <pr=6no d="">></pr=6no>	1	17-Oct-23	17-Oct-23	0	17-Oct-23	17-Oct-23		.			
	WSD-W-S1306 Time Risk Allowance for Structural Works @ First Floor Level Phase 3	1	18-Oct-23	18-Oct-23	0	18-Oct-23	18-Oct-23					Risk Allowance for Structural Work
	WSD-W-S1307 1/F R.C RC Roof Construction (Lower Roof, GL A'-E/1-4)	2	19-Oct-23	20-Oct-23	37	02-Dec-23	04-Dec-23					C. + RC Roof Construction (Lower
	WSD-W-S1308 1/F R.C Architectural Facade/ Concrete Plinth/ Drainage System/ Balustrade on Roof Terrace @ Secon	50	21-Oct-23	19-Dec-23	220	22-Jul-24	17-Sep-24	6d/w x10				/FR.C. Architectural Facade/ Co
_	Phase 4 (Car Park and Ramp)	138	31-Jul-23	15-Dec-23		31-Jul-23	03-Jun-24	0.11 40	.			p - Installation of MiC Module (5 u
	WSD-W-CP01 Carpark/Ramp - Installation of MiC Module (5 units) by Mobile Crane @ Car Park < <pr=6no d=""></pr=6no>	1	31-Jul-23	31-Jul-23		31-Jul-23	31-Jul-23					
	WSD-W-CP02 Carpark/Ramp - RC Column 5.7m x 19nos @ Basement Level (GL A'-J/ 5-7)< <pr= 7="" 7d="" column,="" mould="">></pr=>	21	01-Aug-23	24-Aug-23		01-Aug-23	24-Aug-23					mp - RC Column 5 7m x 19nøs @
	WSD-W-CP03 Carpark/Ramp - RC Concrete Slab (Ground Slab) incl. Erect Scaffold	20	25-Aug-23	16-Sep-23	0	25-Aug-23	16-Sep-23	6d/w x10				Ramp - RC Concrete Slab (Ground
	WSD-W-CP04 Carpark/Ramp - RC Column fr 4.7m to 9.4m x 9nos @ Ground Level (GL A'-J/ 5-7)< <pr= 14d="" 5<="" column,="" td=""><td>28</td><td>18-Sep-23</td><td>21-Oct-23</td><td>0</td><td>18-Sep-23</td><td>21-Oct-23</td><td>6d/w x10</td><td></td><td></td><td></td><td>rk/Ramp - RC Column fr 4.7m to 9</td></pr=>	28	18-Sep-23	21-Oct-23	0	18-Sep-23	21-Oct-23	6d/w x10				rk/Ramp - RC Column fr 4.7m to 9
	WSD-W-CP05 Carpark/Ramp - Concrete Structure for Ramp between G/F & 1/F including landing	18	24-Oct-23	13-Nov-23	0	24-Oct-23	13-Nov-23	6d/w x10				ark/Ramp - Concrete Structure fo
	WSD-W-CP06 Carpark/Ramp - Concrete Structure for Ramp between 1/F & 2/F including	22	14-Nov-23	08-Dec-23	0	14-Nov-23	08-Dec-23	6d/w x10				arpark/Ramp - Concrete Structure
	WSD-W-CP07 Carpark/Ramp - Construction of Roadworks for Emergency Vehicle Access heading to Administration Buile	45	18-Sep-23	11-Nov-23	163	10-Apr-24	03-Jun-24	6d/w x10			Carp	ark/Ramp - Construction of Road
	WSD-W-CP08 Carpark/Ramp - Completion of Structure for Car Park	0		11-Nov-23	163		03-Jun-24	6d/w x10			◆ Carp	ark/Ramp - Completion of Structu
	WSD-W-CP09 Time Risk Allowance for Activities WSD-D-CP01 to WSD-D-CP-06	7	09-Dec-23	15-Dec-23	0	09-Dec-23	15-Dec-23	7d/w x10			D T	ime Risk Allowance for Activities V
	Glazing/ Curtain Wall	118	01-Sep-23	23-Jan-24	0	27-Sep-23	23-Jan-24	6d/w x10			V	
	WSD-W-GL01 Glazing/Curtain Wall - Bracket Installation for Building < <pr=4d storey="">></pr=4d>	24	01-Sep-23	28-Sep-23	22	27-Sep-23	27-Oct-23	6d/w x10			Glazing/	Curtain Wall - Bracket Installation
	WSD-W-GL02 Glazing/Curtain Wall - Curtain Wall Panel Installation for Building < <pr=5d storey="">></pr=5d>	48	29-Sep-23	27-Nov-23	22	28-Oct-23	22-Dec-23	6d/w x10			Gla	izing/Curtain Wall - Curtain Wall P
	WSD-W-GL03 Glazing/Curtain Wall - Bracket Installation for Ramp < <pr=4d storey="">></pr=4d>	6	16-Dec-23	22-Dec-23	0	16-Dec-23	22-Dec-23	6d/w x10			0 0	alazing/Curtain Wall - Bracket Inst
F	WSD-W-GL04 Glazing/Curtain Wall - Curtain Wall Panel Installation for Ramp << PR=5d/storey>>	24	23-Dec-23	23-Jan-24	0	23-Dec-23	23-Jan-24	6d/w x10				Glazing/Curtain Wall - Curtain N
F	WSD-W-GL05 Glazing/Curtain Wall - Steel Frame Installation @ Ground Floor Entrance Lobby	6	24-Nov-23	30-Nov-23	37	10-Jan-24	16-Jan-24	6d/w x10			I Gla	azing/Curtain Wall - Steel Frame Ir
F	WSD-W-GL06 Glazing/Curtain Wall - Glazing Panel Installation	6	01-Dec-23	07-Dec-23	37	17-Jan-24	23-Jan-24	6d/w x10			D GI	azing/Curtain Wall - Glazing Pane
F	WSD-W-GL07 Glazing/Curtain Wall - Completion of Building Envelope	0		23-Jan-24	0		23-Jan-24	6d/w x10				Glazing/Curtain Wall - Completion
	ABWF/ MEP/ FS/ Fitout Works	421	31-Jul-23	23-Sep-24	110	14-Aug-23	11-Jan-25					
	Basement - Transformer Room/ LV Switch Room/ Utility Riser Room/ ServiceTunnel & Yard	246	01-Aug-23			14-Aug-23	04-Jul-24	6d/w x10			v	· · · · ·
	WSD-B-TR01 Tx & LVSB Rooms - MiC Connection Works/ Falsework Removal/ Preparation for ABWF & MEP Works	24	01-Aug-23	28-Aug-23	11	14-Aug-23	09-Sep-23	6d/w x10			📒 Tx & LV\$B	Rooms - MIC Connection Works/
	WSD-B-TR02 Tx & LVSB Rooms - ABWF Deg1 - Deg3	48	29-Aug-23	26-Oct-23	11	11-Sep-23	08-Nov-23	6d/w x10			Tx & I	V\$B Rooms - ABWF Deg1 - Deg
	WSD-B-TR03 Tx & LVSB Rooms - BS 1st Fix - 3rd Fix	72	27-Oct-23	22-Jan-24	11	09-Nov-23	03-Feb-24	6d/w x10				Tx & LVSB Rooms - BS 1st Fix
	WSD-B-TR05 Tx & LVSB Rooms - CLP Inspection & Defect Rectification	12	23-Jan-24	05-Feb-24	28	28-Feb-24	12-Mar-24	6d/w x10				Tx & LVSB Rooms - CLP Inspe
F	WSD-B-TR06 Tx & LVSB Rooms - Installation of Tx & Testing by CLP	90	06-Feb-24	30-May-24	28	13-Mar-24	04-Jul-24	6d/w x10	t t			Tx & LVSB Rooms -
F	WSD-B-TR06.5 Construction of Riser/Shaft/Tunnel for Cable Containment	46	23-Jan-24	19-Mar-24	79	03-May-24	27-Jun-24	6d/w x10	1		1	Construction of Riser/Shaft
F	WSD-B-TR07 Tx & LVSB Rooms - Completion of CLP Cable Laying Leading to Administration Building (to be constructe	0	25-May-24	25-May-24	28	27-Jun-24	27-Jun-24	6d/w x10				I Tx & LVSB Rooms - (
F	WSD-B-TR08 Tx & LVSB Rooms - CLP Power-on Date	0	-	30-May-24	28		04-Jul-24	6d/w x10				◆ Tx & LVSB Rooms -
L	Basement - Emergency Generator Room	132	23-Jan-24	-		05-Feb-24	24-Aug-24					
		10	22 Jan 24	00 5 1 04		055104	40 5 1 04	0.1/ 40				

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23-Jan-24

11 03-Feb-24

EGM - MiC Connection Wor EGM - Concrete Plinth, Wa EGM - Floor Screeding,

Date

03-Nov-21

19-Jan-22

08-Feb-22

٠ Milestone Near Critical Task Critical Task Time Risk Al.

WSD-B-EG01

Non-Critical Task Finished Task Tasks Summary 🔻 P6 Hammock

WSD-B-EG03 EGM - Floor Screeding, Wall Plastering & Doors & Wall Lining

WSD-B-EG02 EGM - Concrete Plinth, Waterproofing & Test

EGM - MiC Connection Works/ Falsework Removal/ Preparation for ABWF & MEP Works

FIRST PROGRAMME REV. 1 ALL ACTIVITIES

28 20-Feb-24 22-Mar-24 11 04-Mar-24 09-Apr-24 6d/w x10

02-Feb-24 11 05-Feb-24 19-Feb-24 6d/w x10

19-Feb-24 11 20-Feb-24 02-Mar-24 6d/w x10



2022 2023 2024 NDJJFMAMJJJASONDJFMAMJJJASONDJFMAMJJASOND

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	Date prepare	d :	11.	-Feb)-22 a	at 13:	13
2025 J F M A M J J A S O N D J F				20			2028 J F
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blumin							
all							
Concrete Slab (First Floor Slab) incl.	Erect Scaffold						
units) by Mobile Crane @ Ground F	loor level < <pr=6no d="">></pr=6no>						
s @ Ground Level Phase 3							
1 1							
Column							
Wall							
Concrete Slab (Secound Floor Sla	b) incl. Erect Scaffold						
3 units) by Mobile Crane @ First Fl	por level < <pr∓6no d="">></pr∓6no>						
orks @ First Floor Level Phase 3							
ver Roof, GL A'-E/1-4)							
Concrete Plinth/ Drainage System/	Balustrade on Roof Terrac	e @	Seco	nd Le	vel		
1 1							
5 units) by Mobile Crane @ Car Pa	k < <pr=6no d="">></pr=6no>						
@ Basement Level (GL A'+J/ 5-7)<	<pr∓ 7="" 7d="" column,="" moulo<="" th=""><th> >></th><th></th><th></th><th></th><th></th><th></th></pr∓>	>>					
und Stab) incl. Erect Scaffold							
a 9.4m x 9nos @ Ground Level (G	L A'-J/ 5-7)< <pr= 14d="" col<="" th=""><th>umn,</th><th>5 m</th><th>ould>></th><th>></th><th></th><th></th></pr=>	umn,	5 m	ould>>	>		
for Ramp between G/F & 1/F inclu	ding landing						
re for Ramp between 1/F & 2/F inc	luding						
adworks for Emergency Vehicle Ac	cess heading to Administra	tion I	Buildi	ing			
cture for Car Park							
s WSD-D-CP01 to WSD-D-CP-06	· · · · · · · · · · · · · · · · · · ·						
on for Building < <pr=4d storey="">></pr=4d>							
Il Panel Installation for Building < <f< th=""><th>R≖5d/storey>></th><th></th><th></th><th></th><th></th><th></th><th></th></f<>	R≖5d/storey>>						
nstallation for Ramp < <pr=4d store<="" th=""><th>ey>></th><th></th><th></th><th></th><th></th><th></th><th></th></pr=4d>	ey>>						
n:Wall:Panel Installation for:Ramp <	<pr=5d storey="">></pr=5d>						
e Installation @ Ground Floor Entra	ince Lobby						
nel Installation	· · · · · · · · · · · · · · · · · · ·						
etion of Building Envelope							
J							
ks/ Falsework Removal/ Preparation	h for ABWF & MEP Works						
leg3							
ix - 3rd Fix							
spection & Defect Rectification							
s - Installation of Tx & Testing by C	ĹP						
aft/Tunnel for Cable Containment							
+ Completion of CLP Cable Laying	Leading to Administration	Build	ling (to be o	construc	ted by C	Others
s - CLP Power-on Date							
1 3 3 3 3 3 4 1							
s/ Falsework Removal/ Preparation	h for ABWF & MEP Works						
terproofing & Test							
Wall Plastering & Doors & Wall Lin	ing						
						1 1	

Revision	Checked	Approved
Revision 0 First Issue	AH	WJ
Revision 1 First Issue	PF	AH
Revision 2 First Issue		

	orks) - Admin. Bldg.	Contract	No. 6/WSD/21	I In-situ	l Repro	visi	oning o	of Sha	Tin Wa	ter -	Trea	tme	nt W	orks ((So	uth W	orks	s) A	dmir	iistra	tion	Buil
P6. ID	Activity Name	•	Dur	: Start	Finish	Total Float	Late Start	Late Finish	Working Calendars			202	2			2023				2024		
WSD-B-EG04	EGM - MEP Works		28	23-Mar-24	29-Apr-24	42	18-May-24	20-Jun-24	6d/w x10	NDJ	FM	AMJ	JASO	NDJF	MA	MJJA	SON	DJF		1 J J A EGM - M		
	EGM - Move-In Generator Equipment	nts	6	30-Apr-24	· ·		21-Jun-24	27-Jun-24											0	EGM - N	love-In	Genera
	EGM - Final Coat to Wall & Sealer t		18	· ·	29-May-24		28-Jun-24		6d/w x10											EGM		
	EGM - Install Generator Equipments		28	,			20-Jul-24	21-Aug-24												1 1 1 1	M - Insta	
	EGM - Install Doors & Ironmoderv		3	04-Jul-24	05-Jul-24		20-Jul-24 22-Aug-24	21-Aug-24			÷								· · · · · ·		M - Inst	
	inkler/FS Water Tank		114				10-Apr-24	24-Aug-24 24-Aug-24														
	Sprinkler Tank/ FS Tank Room - Wa	aterproofing & Testing	12		-	-	10-Apr-24	23-Apr-24											S	prinkler T	ank/ FS	Tank F
	Sprinkler Tank/ FS Tank Room - Pla		12				24-Apr-24	08-May-24												Sprinkler		
	Sprinkler Tank/ FS Tank Room - Wa	.	24	· ·	· ·			06-Jun-24												Sprinkl		
	Sprinkler Tank/ FS Tank Room - Ins		60	· ·			07-Jun-24	17-Aug-24												<u></u>	Sprinkler	
	Sprinkler Tank/ FS Tank Room - Ins		6	06-Aug-24	-		19-Aug-24	24-Aug-24													Sprinkle	
Basement - Offi			92				11-Jan-24	06-May-24													Opiniae	
		nce/ Preparation for ABWF & MEP Works	6	27-Oct-23		-	11-Jan-24		6d/w x10									B/F Inte	erior Dec	oration -	Site Cle	arance
WSD-B-BA-02	B/F Interior Decoration - ABWF Wor	ks incl. block wall, plastering & paint, ceiling pan	el, raised floor, door 48	03-Nov-23	30-Dec-23	62	18-Jan-24	16-Mar-24	6d/w x10									B /	F Interio	r Decorat	ion - AB	WFW
		s incl. 1st fix. 2nd fix & final fix installation	48	20-Nov-23	17-Jan-24	62	03-Feb-24	06-Apr-24	6d/w x10										3/F Inter	ior Decor	ation - N	NEP W
WSD-B-BA-04	B/F Interior Decoration - Inspection/	Testing/ Defect Rectification	24	18-Jan-24			08-Apr-24	06-May-24										💼	B/F In	terior De	coration	- Inspe
	ngerous Goods Store Fitting O	.	121				07-Sep-24	05-Jan-25														
	0 0	Clearance/ Preparation for ABWF & MEP Works	6	27-Oct-23		-		13-Sep-24	6d/w x10		÷						•	Basem	ent Inter	ior Decor	ation - S	Site Cle
WSD-B-DG02	Basement Interior Decoration - ABW	/F Works incl. block wall, plastering & paint, ceilin	ng panel, raised floor, 48	03-Nov-23	30-Dec-23	257	14-Sep-24	12-Nov-24	6d/w x10									🗖 Ba	isement	Interior C	ecoratio	on - AB
WSD-B-DG03	Basement Interior Decoration - MEF	Works incl. 1st fix, 2nd fix & final fix installation	48	20-Nov-23	17-Jan-24	257	03-Oct-24	28-Nov-24	6d/w x10										Basemei	nt Interior	Decora	tion - N
WSD-B-DG04	Basement Interior Decoration - Insp	ection/ Testing/ Defect Rectification	24	18-Jan-24	17-Feb-24	257	29-Nov-24	28-Dec-24	6d/w x10									- 🛑	Baser	nent Inter	ior Deco	oration
	Time Risk Allowance for Activities fr	om WSD-B-L1-01 to WSD-B-L1-04	7	18-Feb-24	24-Feb-24	316	30-Dec-24	05-Jan-25	7d/w x10			- + + -							I Time	Risk Allo	wance f	or Activ
Ground Floor La	aboratory/Vistory Reception F	acility/ Water Treatment Training Venue	92	24-Oct-23			05-Jun-24	23-Sep-24														
		ance/ Preparation for ABWF & MEP Works	6	24-Oct-23		-	05-Jun-24		6d/w x10								Ŭ (G/F Inte	erior De	coration -	Site Cle	arance
WSD-B-LG-02	G/F Interior Decoration - ABWF Wo	rks incl. block wall, plastering & paint, ceiling pan	el, raised floor, door 48	31-Oct-23	27-Dec-23	181	13-Jun-24	08-Aug-24	6d/w x10									G /	F Interio	r Decorat	ion - AB	WFW
WSD-B-LG-03	G/F Interior Decoration - MEP Work	s incl. 1st fix, 2nd fix & final fix installation	48	16-Nov-23	13-Jan-24	181	29-Jun-24	24-Aug-24	6d/w x10										/F Inter	or Decor	ation - N	/EP Wo
WSD-B-LG-04	G/F Interior Decoration - Inspection/	/ Testing/ Defect Rectification	24	15-Jan-24	14-Feb-24	181	26-Aug-24	23-Sep-24	6d/w x10									💼	G/F In	terior Dec	coration	- Inspe
First Floor Labo	ratory Fitting-Out		121	24-Nov-23															_			
WSD-B-L1-01	1/F Interior Decoration - Site Cleara	nce/ Preparation for ABWF & MEP Works	6	24-Nov-23	30-Nov-23	0	24-Nov-23	30-Nov-23	6d/w x10			- + + -						1/F I	nterior D	ecoration	i - Site C	learan
WSD-B-L1-02	1/F Interior Decoration - ABWF Wor	ks incl. block wall, plastering & paint, ceiling pane	el, raised floor, door 48	01-Dec-23	29-Jan-24	61	17-Feb-24	17-Apr-24	6d/w x10			- + + - + -							1/F Inte	rior Deco	ration -	ABWF
WSD-B-L1-03	1/F Interior Decoration - MEP Works	s incl. 1st fix, 2nd fix & final fix installation	48	18-Dec-23	17-Feb-24	61	05-Mar-24	04-May-24	6d/w x10									-	1/F In	terior Dec	oration	- MEP
WSD-B-L1-04	1/F Interior Decoration - Inspection/	Testing/ Defect Rectification	24	19-Feb-24	16-Mar-24	61	06-May-24	03-Jun-24	6d/w x10										🗖 1/F	Interior C	ecoratic	on - Ins
WSD1	Time Risk Allowance for Activities fr	om WSD-B-L1-01 to WSD-B-L1-04	7	17-Mar-24	23-Mar-24	79	04-Jun-24	10-Jun-24	7d/w x10										0 Tin	ne Risk A	llowano	e for Ad
Second Floor Of	ffice Fitting-Out		92	01-Dec-23	23-Mar-24	148	01-Dec-23	23-Sep-24	6d/w x10													
	•	nce/ Preparation for ABWF & MEP Works	6		07-Dec-23	0	01-Dec-23	07-Dec-23										2/F I	nterior I	Decoratio	n - Site I	Clearar
WSD-B-L2-02 2	2/F Interior Decoration - ABWF Wor	ks incl. block wall, plastering & paint, ceiling pane	el, raised floor, door 48	08-Dec-23	05-Feb-24	0	08-Dec-23	05-Feb-24	6d/w x10									-	2/F Inte	erior Deco	oration -	ABWF
WSD-B-L2-03 2	2/F Interior Decoration - MEP Works	s incl. 1st fix, 2nd fix & final fix installation	48	27-Dec-23	24-Feb-24	56	06-Mar-24	06-May-24	6d/w x10			- + + -							1 2/Flr	terior De	coration	- MEP
WSD-B-L2-04 2	2/F Interior Decoration - Inspection/	Testing/ Defect Rectification	24	26-Feb-24	23-Mar-24	148	26-Aug-24	23-Sep-24	6d/w x10										🗖 2/F	Interior	Decorati	on - Ins
Third Floor Offic	ce Fitting-Out		186	08-Dec-23	10-Jun-24	0	30-Jan-24	10-Jun-24												-		
WSD-B-L3-01 3	3/F Interior Decoration - Site Cleara	nce/ Preparation for ABWF & MEP Works	6	08-Dec-23	14-Dec-23	42	30-Jan-24	05-Feb-24	6d/w x10									0 3/F		Decoratic		
WSD-B-L3-02 3	3/F Interior Decoration - ABWF Wor	ks incl. block wall, plastering & paint, ceiling pane	el, raised floor, door 48	06-Feb-24	09-Apr-24	0	06-Feb-24	09-Apr-24	6d/w x10										3	/F Interior	Decora	tion - A
WSD-B-L3-03 3	3/F Interior Decoration - MEP Works	s incl. 1st fix, 2nd fix & final fix installation	48	26-Feb-24	25-Apr-24	0	26-Feb-24	25-Apr-24	6d/w x10										-	3/FInterio	or Decor	ation -
WSD-B-L3-04 3	3/F Interior Decoration - Inspection/	Testing/ Defect Rectification	33	26-Apr-24	05-Jun-24	0	26-Apr-24	05-Jun-24	6d/w x10										-	📕 3/Fln	terior De	ecoratio
WSD-B-L3-05	Time Risk Allowance for Third Floor	Office Fitting Out	5	06-Jun-24	10-Jun-24	0	06-Jun-24	10-Jun-24	7d/w x10											I Time	Risk All	owance
MEP Lift Installa	tion (E1)		173	8 24-Jan-24	14-Jul-24	181	25-Jul-24	11-Jan-25										-				
WSD-B-LT1-01	Lift E1 - Erect Falsework & Builders	Works inside Lift Shaft	48	24-Jan-24	22-Mar-24	146	25-Jul-24	19-Sep-24	6d/w x10										1 1 1	E1 - Ere		
WSD-B-LT1-02	Lift E1 - Install Lift including Fitting-0	Dut	60	23-Mar-24	21-May-24	181	20-Sep-24	18-Nov-24	7d/w x10											Lift E1		
WSD-B-LT1-03	Lift E1 - Testing after Power Energiz	zation	12	22-May-24	02-Jun-24	181	19-Nov-24	30-Nov-24	7d/w x10											LiftE	- Testir	ng after
WSD-B-LT1-04	Lift E1 - Submit Form LE5 & Wait fo	r EMSD Inspection	14	03-Jun-24	16-Jun-24	181	01-Dec-24	14-Dec-24	7d/w x10											🗖 Lift E	1 - Sub	mit For
♦ ♦ Milestone	Non-Critical	Task	I							<u>u · l</u>		1									Date	
Near Critical	Task Finished Task	<		FIRS	T PRO	JG	KAIVI	IVIE R	EV. 1	_										03-No		Re
Critical Task					ΔΠ	Δ	τινι	TIFS										发:		19-Ja 08-Fe		Re Re
Time Risk Al.	P6 Hammock	ζ															C	HUN	Wo		J-22	

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	Date prepared	: 11-Feb-22	2 at 13:13
2025 F M A M J J A S O N D J F	2026 MAMJJASONDJ	2027 F M A M J J A	2028 SONDJF
erator Equipments			
to Wall & Sealer to Floor			
enerator Equipments & Testing			
ioors & Ironmogery	I I		
k Room - Waterproofing & Testing			
ank Room - Plastering Works Insid			
Tank Room - Wall & Floor Tiling V			
nk/ FS Tank Room - Install Equipm			
nk/ F\$ Tank Room - Install Cat La			
I I	I I		
nce/ Preparation for ABWF & MEP	Works		
Works incl. block wall, plastering &	& paint, ceiling panel, raised flo	or, door	
Works incl, 1st fix, 2nd fix & final f	ix installation		
spection/Testing/DefectRectficat	ion		
Clearance/ Preparation for ABWF &			
ABWF Works incl. block wall, plast		sea noor, aqor	
on - Inspection/ Testing/ Defect Re			
ctivities from WSD-B-L1-01 to WSI	· · · · · · · · · · · · · ·		
nce/ Preparation for ABWF & MEP	Works		
Works incl; block wall, plastering 8	& paint, ceiling panel, raised flo	or, door	
Works incl. 1st fix, 2nd fix & final f	ix installation		
pection/ Testing/ Defect Rectificat	ion		
I I	I I		
ance/ Preparation for ABWF & ME			
VF Works incl. block wall, plasterin		floor, door	
P Works incl, 1st fix, 2nd fix & fina			
Inspection/ Testing/ Defect Rectific			
Activities from WSD-B-L1-01 to W	/SU-B-L1-04		
rance/ Preparation for ABWF & MI	EP Works		
WF Works incl. block wall, plasterin		floor. door	
EP Works incl. 1st fix, 2nd fix & fin			
Inspection/ Testing/ Defect Rectifi	cation		
arance/ Preparation for ABWF & M	EP Works		
- ABWF Works incl. block wall, pla	stering & paint, ceiling panel, i	aised floor, door	
n - MEP Works incl. 1st fix, 2nd fix	& final fix installation		
ation - Inspection/ Testing/ Defect	Rectification		
nce for Third Floor Office Fitting O	Út		
			· · · · · · · · · · · · · · · · · · ·
& Builders Works inside Lift Shaft			
including Fitting-Out	· · · · · · · · · · · · · · · · · · ·		
fter Power Energization	tion		
Revisi Revision 0 First Issue	on	Checked AH	Approved WJ
Revision 1 First Issue		PF	AH
Revision 2 First Issue			

In-situ Reprovisioning of Sha Tin	
MTM (O a still M a size) A size in Dist	_

Contract No. 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Administration Bu

	Activity Name	Du	r. Start	Finish	Total Float	Late Start	Late Finish	Working Calendars	T			2022				202	3					2024		
								-	N D	JFN	I A M		A S O	NDJ	FMA	MJ	JAS	0 N	DJ	FΜ	AM	JJ/	AISIO	N
	Lift E1 - Inspection for Lift Fitout & Issue Lift Certification LE6	28				15-Dec-24	11-Jan-25	7d/w x10															Lift E 1	- In
	lation (E2 & E3) Lift E2 & E3 (FS) - Erect Falsework & Builders Works inside Lift Shaft		3 24-Jan-24				11-Jan-25 14-Aug-24	6d/w v10														2.8 ⊨	3 (FS))- F
		48		22-Mar-24			Ű														1.1	1.1	2 & E3	1.1
	Lift E2 & E3 (FS) - Install Lift including Fitting-Out	60		21-May-24			13-Oct-24														: :	: :	E2 & E	1
	Lift E2 & E3 (FS) - Testing after Power Energization		31-May-24				25-Oct-24														1.1	1.1	Ε2 & Γ	1 1
	Lift E2 & E3 (FS) - Submit Form LE5 & Wait for EMSD Inspection	14					08-Nov-24																	1
	Lift E2 & E3 (FS) - Inspection for Lift Fitout & Issue Lift Certification LE6	28				09-Nov-24	06-Dec-24															1 1	Lift E2	:
WSD-B-LT2-06	Dismantle Material Hoist	12			136	07-Dec-24	18-Dec-24	7d/w x10															Dism	1
WSD-B-LT2-07	Remaining Works at Hosit Area	24	05-Aug-24	28-Aug-24	136	19-Dec-24	11-Jan-25	7d/w x10															Rei	ma
Other Facilities	-	88			-	11-Jun-24	23-Sep-24																_	Fit
	Fit-out & Plumber Works - Water Closet Rooms	88				11-Jun-24	23-Sep-24					÷											1 1	1
	FS Sprinkler Pump Room - E&M Installation of pumping system & BS Works	64					24-Aug-24																■ FS	1
	Hot Water Plant/ Lab Waste Tank/ Water Sump Tank & Pump/ Foul Water Sump Pump	88				11-Jun-24	23-Sep-24																	Ho
Car Park - ME		16			-	04-Jun-24	23-Sep-24												Car	Dark	Ē	7 ct Eale	sework	-
	Car Park - Erect Falseworks for Builders & MEP Works	12				04-Jun-24	18-Jun-24														11		/F/ MEI	÷
	Car Park - ABWF/ MEP/ FS Works	45				19-Jun-24	10-Aug-24					÷			·							11	lectric	÷
	Car Park - Electric Vehicle Charging Facilities	30				-	14-Sep-24													(i
	Car Park - Testing & Commissioning for Electric Vehicle Charging Facilities	6	31-May-24				23-Sep-24															Car	Park -	
Works for KD-		70		21-Oct-23	-	13-Sep-23	21-Oct-23										-			S WA	rke fo	r Sorv	/er Roo	-
	ABWF & FS Works for Server Rooms/ Security Control Room	32				13-Sep-23	21-Oct-23										1 1				1.1	1.1	1.1	
WSD-KD1-02	Complete the Civil, Structure Works, ABWF & FS for Server Rooms/ Security Control Room	0		05-Sep-23			21-Oct-23						-++				: :						re Worl	;
WSD-KD1-03	ABWF & FS Works for Main Control Room	32	· ·			13-Sep-23	21-Oct-23											1 1 1			1.1	1.1	Main C	1
WSD-KD1-04	Complete the Civil, Structure Works, ABWF & FS for Main Control Room	0		21-Oct-23			21-Oct-23	6d/w x10										• (ompl	ete th		II, Stru	icture V	1
Works for KD-		14		12-Jul-24	-	26-Apr-24	12-Jul-24	0.1/ 40												V	n' ei		al Powe	-
WSD-KD2-01	Electrical Power System incl. testing for Basement	48				07-May-24	04-Jul-24															1.1	al Pow	÷
WSD-KD2-02	Electrical Power System incl. testing for Second Floor	48		· ·		07-May-24																	11	
WSD-KD2-03	Electrical Power System incl. testing for Third Floor	56	26-Apr-24			26-Apr-24	04-Jul-24														1.1	1 1	lectrica	1
WSD-KD2-04	Termination of Cable to Tx after Cable Laying by 1/WSD/19	0		30-May-24			04-Jul-24																ninatio	
WSD-KD2-05	Time Risk Allowance for Activities WSD-KD2-01 to WSD-KD2-04	8	05-Jul-24	12-Jul-24	0	05-Jul-24	12-Jul-24	7d/w x10															Time R	j
WSD-KD2-06	Completion of CLP Power Supply to Main Control Room, Main Security Room and Server Room	sind.tes 0		12-Jul-24	0		12-Jul-24	6d/w x10														• (Comple	9
External Works			1 24-Jan-24	-	-	31-May-24																	◄	
WSD-W-X-01	Ext. Works - Underground Utilities Works, Drainage Works & Testing	72		· ·		31-May-24	24-Aug-24														1.1	1 1	orks - U	÷
WSD-W-X-02	Ext. Works - Backfilling to Ground Level	24	25-Apr-24	24-May-24	108	03-Sep-24	02-Oct-24	6d/w x10														: :	Works	1
WSD-W-X-03	Ext. Works - Construction of Remaining Concrete Pavement	48	25-May-24	22-Jul-24	108	03-Oct-24	28-Nov-24	6d/w x10														1.1	Ext. W	ł
WSD-W-X-04	Ext. Works - Construction of Staircase, ABWF	48	28-Jun-24	23-Aug-24	108	06-Nov-24	03-Jan-25	6d/w x10															∎ Ext.	
NSD-W-X-05	Time Risk Allowance for External Works	8	24-Aug-24	31-Aug-24	133	04-Jan-25	11-Jan-25	7d/w x10															¶ Tin	ŗ
esting & Comr		48	-		-	26-Aug-24	23-Oct-24																-	/
WSD-B-TC-01	Testing & Commissioning & fixing defects (FS - Related)	24				26-Aug-24	23-Sep-24																— 1	
WSD-B-TC-02	Testing & Commissioning & fixing defects (Non- FS - Related)	24				24-Sep-24	23-Oct-24																-	
			7 05-Oct-22	27-Oct-23		08-Feb-25	23-Apr-25							W No.2	Com	olotion	of St			nort s	t Sou	ith Wo	orke Di	
VSD-W-W2-01	EW No.2 - Completion of Structural Support at South Works Pumping Station (to be constructed			40.0.100		08-Feb-25		6d/w x10					1 1 1	EW No	1 1 1		1.1					1 1	1.1	1
VSD-W-W2-02	EW No.2 - Preparation Works on Structural Support at SWPS for Mic Bridge Erection		05-Oct-22	18-Oct-22		08-Feb-25		6d/w x10				÷			.2;- רופ	1 1								
VSD-W-W2-03	EW No.2 - Completion of Structural Support at Administration Building (integrated in MiC unit)	0	31-Jul-23			22-Feb-25		6d/w x10									1.1				1.1	1 1	tural S	1
/SD-W-W2-04	EW No.2 - Preparation Works on Structural Support at Administration Building for Mic Bridge Ere	ction 12	31-Jul-23	12-Aug-23		22-Feb-25	07-Mar-25	6d/w x10									1.1.						on Str	
VSD-W-W2-11	EW No.2 - MiC Bridge Installation & Associated Connection Works	6	13-Sep-23	19-Sep-23	439	08-Mar-25	14-Mar-25	6d/w x10									: :	: : :			1.1		tallatio	1
WSD-W-W2-12	EW No.2 - Remaining ABWF, Fitout, BS Works along Mic Bridge	30	20-Sep-23	27-Oct-23	439	15-Mar-25	23-Apr-25	6d/w x10											WN	p.2 - F	Rema	ining A	ABWF,	,]
levated Walkw	ay No.1 (Structural Support only)	0		21-Oct-23	-	24-Apr-25	24-Apr-25											V						
WSD-W-W1-01	Completion of Structural Support at Administration Building (integrated in Structural Element, RC	Slab on : 0	21-Oct-23		444	24-Apr-25		6d/w x10										• 0	ompl	etion	or Str	uctura	al Supp)Q

Near Critical Task Finished Task Critical Task Tasks Summary Time Risk Al. P6 Hammock

FIRST PROGRAMME REV. 1 **ALL ACTIVITIES**



03-Nov-21 19-Jan-22 後和 CHUN Wo 08-Feb-22

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Building		44 5	Pag			
	Date prepared	: 11-F	eb-22	at	13:	13
2025 J F M A M J J A S O N D J F	2026 MAMJJASONDJ	FMAM	2027 JIJIA		ND	2028 J F
ection for Lift Fitout & Issue Lift Certi	fication LE6		<u> </u>	50		51
ct Falsework & Builders Works inside	Lift Şhaft					
- Install Lift including Fitting-Out						
 Festing after Power Energization 						
S) - Submit Form LE5 & Wait for EM	SD Inspection					
(FS) - Inspection for Lift Fitout & Iss	ue Lift Certification LE6					
Material Hoist						
ig Works at Hosit Area						
& Plumber Works - Water Closet Ro	oms					
kler Pump Room - E&M Installation o	f pumping system & BS Work	s				
ater Plant/ Lab Waste Tank/ Water S			lumn			
Builders & MEP Works						
Works						
le Charging Facilities						
ng & Commissioning for Electric Veh	icle Charging Facilities					
ecurity Control Room						
WF & FS for Server Rooms/ Security	y Control Room					
Room						
ABWF & FS for Main Control Room						
tem incl. testing for Basement						
stem incl. testing for Second Floor						
ver System incl. testing for Third Floo						
able to Tx after Cable Laying by 1/W	SD/19					
owance for Activities WSD-KD2-01 t	o WSD-KD2-04					
f CLP Power Supply to Main Control	Room, Main Security Room a	and Serve	Rooms	incl.	testir	g
round Utilities Works, Drainage Wor	ks & Testing					
tfilling to Ground Level						
Construction of Remaining Concrete	Pavement					
s - Construction of Staircase, ABWF						
k Allowance for External Works						
g & Commissioning & fixing defects (FS - Related)					
ting & Commissioning & fixing defect						
Station (to be constructed by Other	under 1/WSD/19)					
c Bridge Erection						
t at Administration Building (integrate	d in MiC unit)					
al Support at Administration Building						
sociated Connection Works						
t, BS Works along Mic Bridge						
Administration Building (integrated in	i Structural Element, RC Slab	on Secon	d Level)			
Revisio	on	Chec	ked	Ap	prov	ed
Revision 0 First Issue		AH		WJ	<u> </u>	
Revision 1 First Issue		PF		AH		
Revision 2 First Issue						

	Activity Name	Dur.	Start	Finish	Total Float	Late Start	Late Finish	Working Calendars	2022 2023	2024
FSD - DG Lice		004	47.0 00	00 hrs 04		02 4 04	44 1 05	7d/w x10	NDJFMAMJJJASONDJFMAMJJASONDJFMA	
WSD-IA-F01	FSD - DG Drawings First Submission	264 60	17-Sep-23 17-Sep-23	06-Jun-24 15-Nov-23	_		21-Jun-24		F\$D- DG Dr	rawings First Submission
WSD-IA-F02	FSD - DG Drawings Second Amendment	60	16-Nov-23	14-Jan-24			20-Aug-24			OG Drawings Second Am
WSD-IA-F03	FSD - DG Drawings Third Amendment	60	15-Jan-24	14-Mar-24				7d/w x10		SD - DG Drawings Third A
WSD-IA-F04	FSD - DG Inspection & Rectification	30	15-Mar-24	13-Apr-24				7d/w x10		F\$D - DG Inspection & F
WSD-IA-F05	FSD - VD Review & Inspection/ Rectification Works	42	14-Apr-24	25-May-24			30-Dec-24			FSD - VD Review & I
WSD-IA-F06	FSD - VD issue letter of compliance	6	26-May-24					7d/w x10		FSD - VD issue lette
WSD-IA-F07	FSD - Issue of DG License	6	01-Jun-24	-				7d/w x10		FSD - Issue of DG L
		-								
WSD-IA-E01	ncy Generator EPD - EPD Drawing Submission & Approval	96 60	08-May-24 08-May-24		_	08-Oct-24 08-Oct-24	06-Dec-24	7d/w x10 7d/w x10		EPD - EPD Draw
WSD-IA-E02	EPD - Site Inspection & Rectification Works	30	07-Jul-24	05-Aug-24		07-Dec-24		7d/w x10		EPD - Site Insp
WSD-IA-E03	EPD - Approval Issue	6	06-Aug-24			06-Jan-25		7d/w x10		I EPD - Approva
WSD-IA-205				-		24-Oct-24		7d/w x10		
WSD-IA-W01	WSD - Submit WWO 46 Part IV (PD) & Arrange Inspection by WSD	21	24-Sep-24 24-Oct-24	11-Jan-25 13-Nov-24	-	24-Oct-24 24-Oct-24		7d/w x10 7d/w x10		WSD
WSD-IA-W02	WSD - Site Inspection & Rectification Works by WSD (PD)	45	14-Nov-24			14-Nov-24	28-Dec-24			·····
WSD-IA-W03	WSD - Issue WWO 46 Part V (PD)	14	29-Dec-24	11-Jan-25		29-Dec-24		7d/w x10		
						23-Dec-24 24-Oct-24				📮 WSD - S
WSD-IA-W04	WSD - Submit WWO 46 Part IV (FS) & Arrange Inspection by WSD	21	· ·	14-Oct-24				7d/w x10		
WSD-IA-W05	WSD - Site Inspection & Rectification Works by WSD (FS)	45	15-Oct-24	28-Nov-24		14-Nov-24	28-Dec-24			
WSD-IA-W06	WSD - Issue WWO 46 Part V (FS)	14	29-Nov-24			29-Dec-24		7d/w x10		
FSD / OP Inspe WSD-IA-OP01	SD - Submit Form FS251/314/501	109	11-Jan-25	30-Apr-25 11-Jan-25		11-Jan-25	30-Apr-25	7d/w x10 7d/w x10		
		-	10 Jan 25			10 Jan 05	25-Jan-25			
	FSD - FSD processes Form 215/314/501 & arranging for Inspection	14	12-Jan-25			12-Jan-25				
	FSD - FS Inspection, Rectification and Reinspection	28	26-Jan-25			26-Jan-25	22-Feb-25			
	FSD - FSD processes FS Certificate Form 172	14	23-Feb-25	08-Mar-25		23-Feb-25	08-Mar-25			
	FSD - Issued Form 172 Issued by FSD (Fire Certificate)	0		08-Mar-25			08-Mar-25	7d/w x10		
WSD-IA-OP02	BD - Submit Form BA13	0	27-Feb-25			27-Feb-25		7d/w x10		
WSD-IA-OP03	BD - BD processes Form BA13 & Arranging for Inspection	14				27-Feb-25	12-Mar-25			
WSD-IA-OP04	BD - Inspection & Rectification Works	28	13-Mar-25	09-Apr-25	0	13-Mar-25	09-Apr-25	7d/w x10		
WSD-IA-OP05	BD - Issue OP Certificate	14	10-Apr-25	23-Apr-25	0	10-Apr-25	23-Apr-25	7d/w x10		
WSD-IA-OP06	Final Inspection & Handover to Client	7	24-Apr-25	30-Apr-25	0	24-Apr-25	30-Apr-25	7d/w x10		
te Works for S			24-Jan-24	· ·		24-Jan-24	30-Apr-25			
	Roof Terrace (Second Level)						23-Apr-25		n cPa	of 2/F Level - Constructio
NSD-W2-RT01	G.Roof 2/F Level - Construction of Planter Separation	12		06-Feb-24		19-Sep-24	03-Oct-24			Roof 2/F Level - Installat
NSD-W2-RT02	G.Roof 2/F Level - Installation of Irrigation Pipeworks & Irrigation Point	30		15-Mar-24			02-Dec-24			
NSD-W2-RT03	G.Roof 2/F Level - Laying of Waterproof Membrane with Protection Screeding & Root Barrier	20	16-Mar-24	12-Apr-24				6d/w x10		G Roof 2/F Level - Layin
NSD-W2-RT04	G.Roof 2/F Level - Laying of Drainage, Filter, Moisture Retention Membrane, Erosion Protection Mat	20	13-Apr-24	07-May-24			28-Jan-25	6d/w x10		GRoof 2/FLevel - Lay
NSD-W2-RT05	G.Roof 2/F Level - Filling of Soil Layer	18	08-May-24	29-May-24	219	01-Feb-25	21-Feb-25	6d/w x10		G.Roof 2/F Leve - F
NSD-W2-RT06	G.Roof 2/F Level - Vegetation/ Planting	24	30-May-24	27-Jun-24	219	22-Feb-25	21-Mar-25	6d/w x10		G.Roof 2/F Level
NSD-W2-RT07	G.Roof 2/F Level - Installation of Paving Stones on Walkway	60	24-Feb-24	09-May-24	193	19-Oct-24	30-Dec-24	6d/w x10		GRoof 2/F Level Ins
NSD-W2-RT08	G.Roof 2/F Level - Installation Lighting	30	10-May-24	08-Jun-24	319	25-Mar-25	23-Apr-25	7d/w x10		G.Roof 2/F Level - I
ireen Roof at l	Roof Level	162	07-Feb-24	26-Aug-24	193	04-Oct-24	23-Apr-25	6d/w x10		
WSD-W2-RL01	G.Roof R/F Level - Construction of Planter Separation	12	07-Feb-24	23-Feb-24	193	04-Oct-24	18-Oct-24	6d/w x10		oof R/F Leve) - Construct
NSD-W2-RL02	G.Roof R/F Level - Installation of Irrigation Pipeworks & Irrigation Point	30	16-Mar-24	24-Apr-24	213	03-Dec-24	09-Jan-25	6d/w x10		G.Roof R/F Level - Insta
WSD-W2-RL03	G.Roof R/F Level - Laying of Waterproof Membrane with Protection Screeding & Root Barrier	20	25-Apr-24	20-May-24	213	10-Jan-25	05-Feb-25	6d/w x10		G.Roof R/F Level - La
WSD-W2-RL04	G.Roof R/F Level - Laying of Drainage, Filter, Moisture Retention Membrane, Erosion Protection Mat	20	21-May-24	13-Jun-24	213	06-Feb-25	28-Feb-25	6d/w x10		GRoof R/F Level -
NSD-W2-RL05	G.Roof R/F Level - Filling of Soil Layer	18	14-Jun-24	05-Jul-24	213	01-Mar-25	21-Mar-25	6d/w x10		G.Roof R/F Level
NSD-W2-RL06	G.Roof R/F Level - Turf Laying on Roof	24	06-Jul-24	02-Aug-24	213	22-Mar-25	23-Apr-25	6d/w x10		G.Roof R/F Lev
NSD-W2-RL07	G.Roof R/F Level - Installation of Paving Stones on Walkway	60	10-May-24			31-Dec-24		6d/w x10		G.Roof R/F Leve

•	•	Milestone
		Near Critical Task
		Critical Task
		Time Risk Al.

Finished Task Tasks Summary P6 Hammock

Non-Critical Task

FIRST PROGRAMME REV. 1 ALL ACTIVITIES



Date

03-Nov-21

19-Jan-22

08-Feb-22

uilding Date prepared : 11-Feb-22 at 13:13 2025 2026 2027 20 J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J mendment Amendment Rectification Inspection/ Rectification Works ter of compliance License awing Submission & Approva spection & Rectification Work oval Issue D - Submit WWO 46 Part IV (PD) & Arrange Inspection by W\$D WSD - Site Inspection & Rectification Works by WSD (PD) WSD - Issue WWO 46 Part V (PD) - Submit WWO 46 Part IV (FS) & Arrange Inspection by WSD SD - Site Inspection & Rectification Works by WSD (FS) VSD - Issue WWO 46 Part V (FS) FSD - Submit Form FS251/314/501 FSD - FSD processes Form 215/314/501 & arranging for Inspection FSD - FS Inspection, Rectification and Reinspection FSD - FSD processes FS Certificate Form 172 FSD - Issued Form 172 Issued by FSD (Fire Certificate ♦ BD - Submit Form BA13 BD - BD processes Form BA13 & Arranging for Inspection BD - Inspection & Rectification Works BD - Issue OP Certificate Final Inspection & Handover to Client **---**tion of Planter Separation lation of Irrigation Pipeworks & Irrigation Point ing of Waterproof Membrane with Protection Screeding & Root Barrier aying of Drainage, Filter, Moisture Retention Membrane, Erosion Protection Mat Filling of Soil Layer el - Vegetation/ Planting stallation of Paving Stones on Walkway Installation Lighting

Page 9 of 10

uction of Planter Separation stallation of Irrigation Pipeworks & Irrigation Point Laying of Waterproof Memorane with Protection Screeding & Root Barrier - Laying of Drainage, Filter, Moisture Retention Membrane, Erosion Protection Mat vel + Filling of Soil Layer evel - Turf Laying on Roof evel - Installation of Paving Stones on Walkway

Revision Checked Approved Revision 0 First Issue AH WJ Revision 1 First Issue IPF AH Revision 2 First Issue

In-situ Reprovisioning of Sha Tin
WTW (South Works) - Admin Bldg

Contract No. 6/WSD/21 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) Administration Bu

	ioning of ond thi	
WTW (South W	orks) - Admin. Bldg.	
P6. ID	Activity Name	

	Activity Name	Dur.	Start	Finish		Late Start	Late Finish		-	_					 	 		 				
					Float			Calendars					2022			2023				2024		
WSD-W2-RL08	G.Roof R/F Level - Installation Lighting	30	23-Jul-24	26-Aug-24	193	15-Mar-25	23-Apr-25	6d/w x10	IN	DJ	FIM	AM	JJJ	490	FIM	JJF	190	JIFIN	A M		G.Roof	
Courtyard at G	Ground Level	463	24-Jan-24	30-Apr-25	0	24-Jan-24	30-Apr-25			+												
WSD-W2-CY01		48	24-Jan-24	22-Mar-24	0	24-Jan-24	22-Mar-24	6d/w x10						- + +	 	 		 -	G.Rc	of G/F	Level - F	ormaite
WSD-W2-CY02	G.Roof G/F Level - Hydroseeding on Slope	30	23-Mar-24	02-May-24	0	23-Mar-24	02-May-24	6d/w x10								 		 t t	— C	Roof	G/F Leve	I - Hydr
WSD-W2-CY03	G.Roof G/F Level - Concrete Structure incl. Planter/ Bearing Wall/ Bench	48	03-May-24	29-Jun-24	0	03-May-24	29-Jun-24	6d/w x10							 	 		 	-	📕 G.I	Roof G/F	Level -
WSD-W2-CY04	G.Roof G/F Level - Installation of Drainage System at Courtyard	48	02-Jul-24	26-Aug-24	0	02-Jul-24	26-Aug-24	6d/w x10							 	 		 		-	G.Roof	i G/F Le
WSD-W2-CY05	G.Roof G/F Level - Installation of Irrigation Pipeworks & Irrigation Point	48	02-Jul-24	26-Aug-24	0	02-Jul-24	26-Aug-24	6d/w x10							 	 				-	G.Roof	i G/F L
WSD-W2-CY06	G.Roof G/F Level - Laying of Waterproof Membrane with Protection Screeding	36	27-Aug-24	09-Oct-24	0	27-Aug-24	09-Oct-24	6d/w x10							 	 		 			🛑 G.F	₹oof G/
WSD-W2-CY07	G.Roof G/F Level - Soil Placement in Planter (2m depth)	36	10-Oct-24	21-Nov-24	0	10-Oct-24	21-Nov-24	6d/w x10								 		 			-	G.Roo
WSD-W2-CY08	G.Roof G/F Level - Tree Transplant (39nos)	40	22-Nov-24	10-Jan-25	0	22-Nov-24	10-Jan-25	6d/w x10							 	 		 				— G.
WSD-W2-CY09	G.Roof G/F Level - G.Roof G/F Level - Shrub Planting	48	11-Jan-25	11-Mar-25	0	11-Jan-25	11-Mar-25	6d/w x10							 	 		 				
WSD-W2-CY10	G.Roof G/F Level - Hydroseeding on Lawn	28	12-Mar-25	17-Apr-25	0	12-Mar-25	17-Apr-25	6d/w x10								 		 				
WSD-W2-CY10.	5 Time Risk Allowance for Activities from WSD-W2-CY01 to WSD-WC-CY-10	6	18-Apr-25	23-Apr-25	0	18-Apr-25	23-Apr-25	7d/w x10						-++	 	 		 				
WSD-W2-CY11	G.Roof G/F Level - Architechural Works/ Balustrade Installation	65	02-Jul-24	14-Sep-24	56	05-Sep-24	22-Nov-24	6d/w x10								 		 		-	🗖 G Ro	of G/F
WSD-W2-CY12	G.Roof G/F Level - Installation of Lighting	30	16-Sep-24	23-Oct-24	56	23-Nov-24	30-Dec-24	6d/w x10							 	 		 			🗖 G	Roof G
WSD-W2-CY13	G.Roof G/F Level - Installation of Paving Stones on Walkway	90	24-Oct-24	12-Feb-25	56	31-Dec-24	23-Apr-25	6d/w x10						- + + - +	 	 		 				-
WSD-W2-CY14	G.Roof G/F Level - Waterproof, External Plaster applied to Retaining Wall	12	02-Jul-24	15-Jul-24	205	08-Mar-25	21-Mar-25	6d/w x10							 	 		 		🛛 G	Roof G/F	- Level
WSD-W2-CY15	G.Roof G/F Level - Installation of Green Climber System on Retaining Wall	12	16-Jul-24	29-Jul-24	205	22-Mar-25	05-Apr-25	6d/w x10						- + +	 	 		 			G.Roof G	/F Leve
WSD-W2-CY16	G.Roof G/F Level - Soil Placement around Retaining Wall	6	30-Jul-24	05-Aug-24	205	07-Apr-25	16-Apr-25	6d/w x10						- + +	 	 		 		p	G.Roof C	3/F Lev
WSD-W2-CY17	G.Roof G/F Level - Vertical Planting on Climber System	6	06-Aug-24	12-Aug-24	205	17-Apr-25	23-Apr-25	6d/w x10							 	 		 		0	G.Roof	G/F Le
WSD-W2-CY18	G.Roof G/F Level - Final Inspection & Handover to Client	7	24-Apr-25	30-Apr-25	0	24-Apr-25	30-Apr-25	7d/w x10						- + + - +	 	 		 				
WSD-W2-CY19	Planned Project Completion	0		30-Apr-25	0		30-Apr-25	7d/w x10							 	 		 				
Site Works for S	Section 2A	365	01-May-25	30-Apr- <u>26</u>	0	01-May-25	30-Apr-26	7d/w x10		+								1 1 1 1 1 1				
WSD-W2A-01	Establishment Works		01-May-25	· ·		01-May-25									 	 		 				
WSD-W2A-02	Final Inspection & Handover to Client	6	25-Apr-26	30-Apr-26	0	25-Apr-26	30-Apr-26	7d/w x10					-+	-++	 	 		 				

Milestone ٠ Near Critical Task Critical Task Time Risk Al.

Non-Critical Task Finished Task Tasks Summary P6 Hammock

FIRST PROGRAMME REV. 1 ALL ACTIVITIES



Date

03-Nov-21

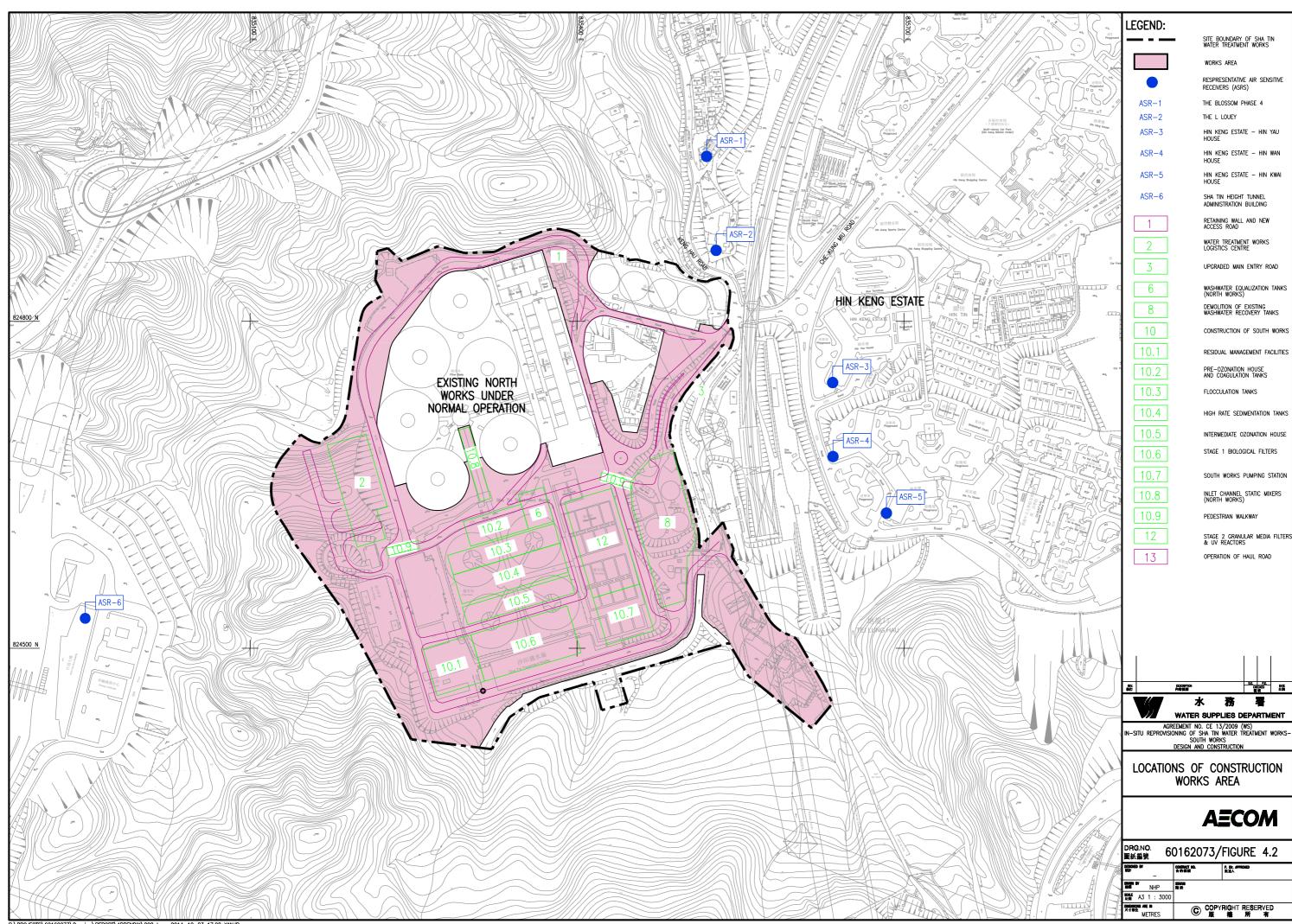
19-Jan-22

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uilding	, °	e 10 of 10
	Date prepared : 11-Feb-22	2 at 13:13
2025	2026 2027	2028
J F M A M J J A S O N D J F F Level - Installation Lighting	FMAMJJASONDJFMAMJJA	SONDJF
	1 5	
naiton of Slope profile (Grid H-M/ 5	9)	
lydroseeding on Sløpe		
/el - Concrete Structure incl. Plante	et/Bearing Wall/Bench	
F Level - Installation of Drainage S	System at Courtyard	
F Level - Installation of Irrigation Pi	ipeworks & Irrigation Point	
f G/F Level - Laying of Waterproof	Membrane with Protection Screeding	
Roof G/F Level - Soil Placement in	Planter (2m depth)	
G Roof G/F Level - Tree Transpla	ant (39nos)	
G.Roof G/F Level - G.Roof (G/F Level - Shrub Planting	
📕 G Roof G/F Level - Hydro	oseeding on Lawn	
Time Risk Allowance for	r Activities from WSD-W2-CY01 to WSD-WC-CY	-10
6/F Level - Architechural Works/ Ba	alustrade Installation	
of G/F Level - Installation of Lightin	ng	
GRoof G/F Level - Installation	n of Paving Stones on Walkway	
evel - Waterproof, External Plaster	applied to Retaining Wall	
evel - Installation of Green Climbe		
Level - Soil Placement around Ret		
Level - Vertical Planting on Climbe		
	al Inspection & Handover to Client	
Planned Project Comple	etion	
	Establishment Works	
	Final Inspection & Handover to Client	

Revision	Checked	Approved
Revision 0 First Issue	AH	WJ
Revision 1 First Issue	PF	AH
Revision 2 First Issue		

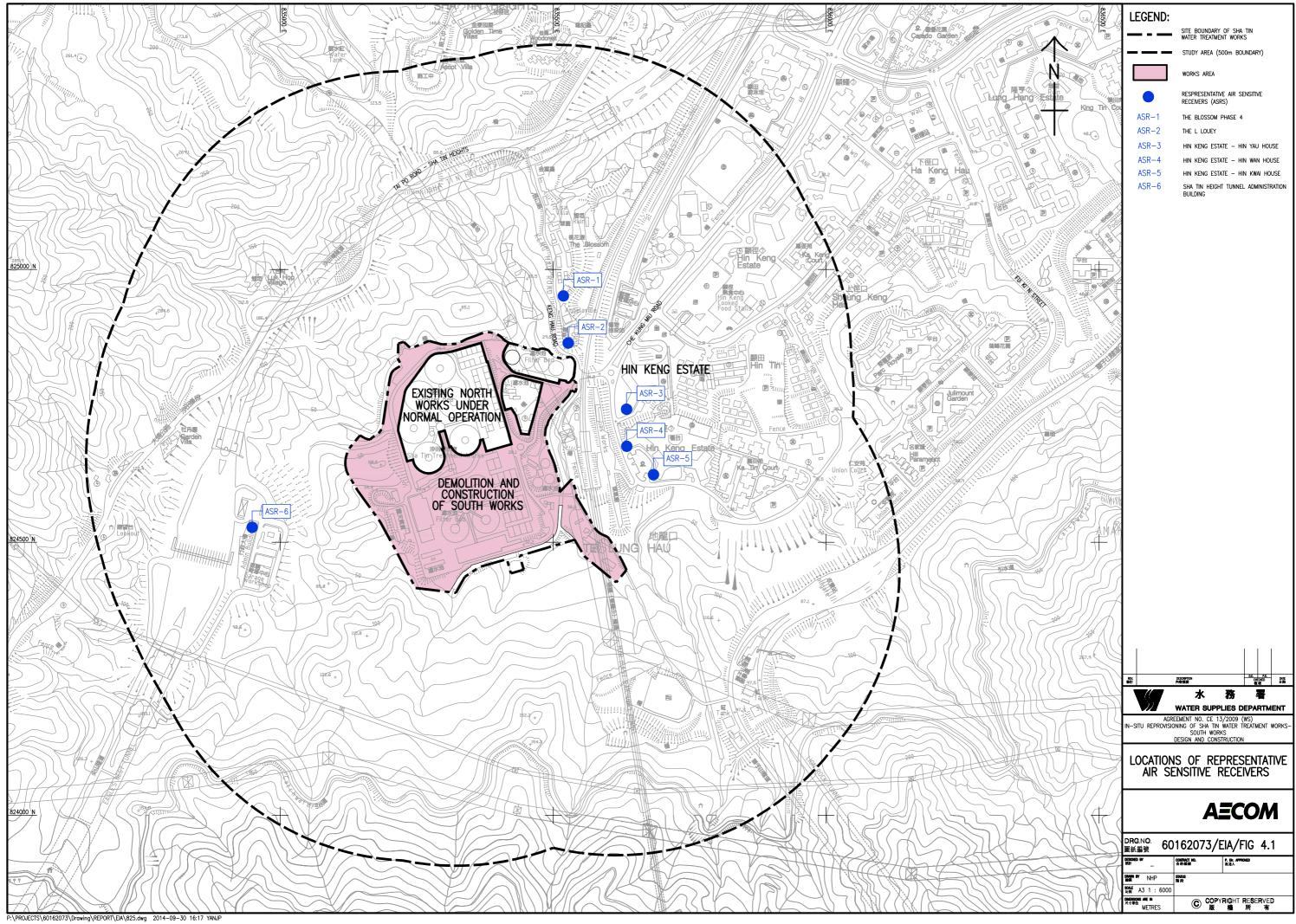
Appendix D Location of Construction Activities

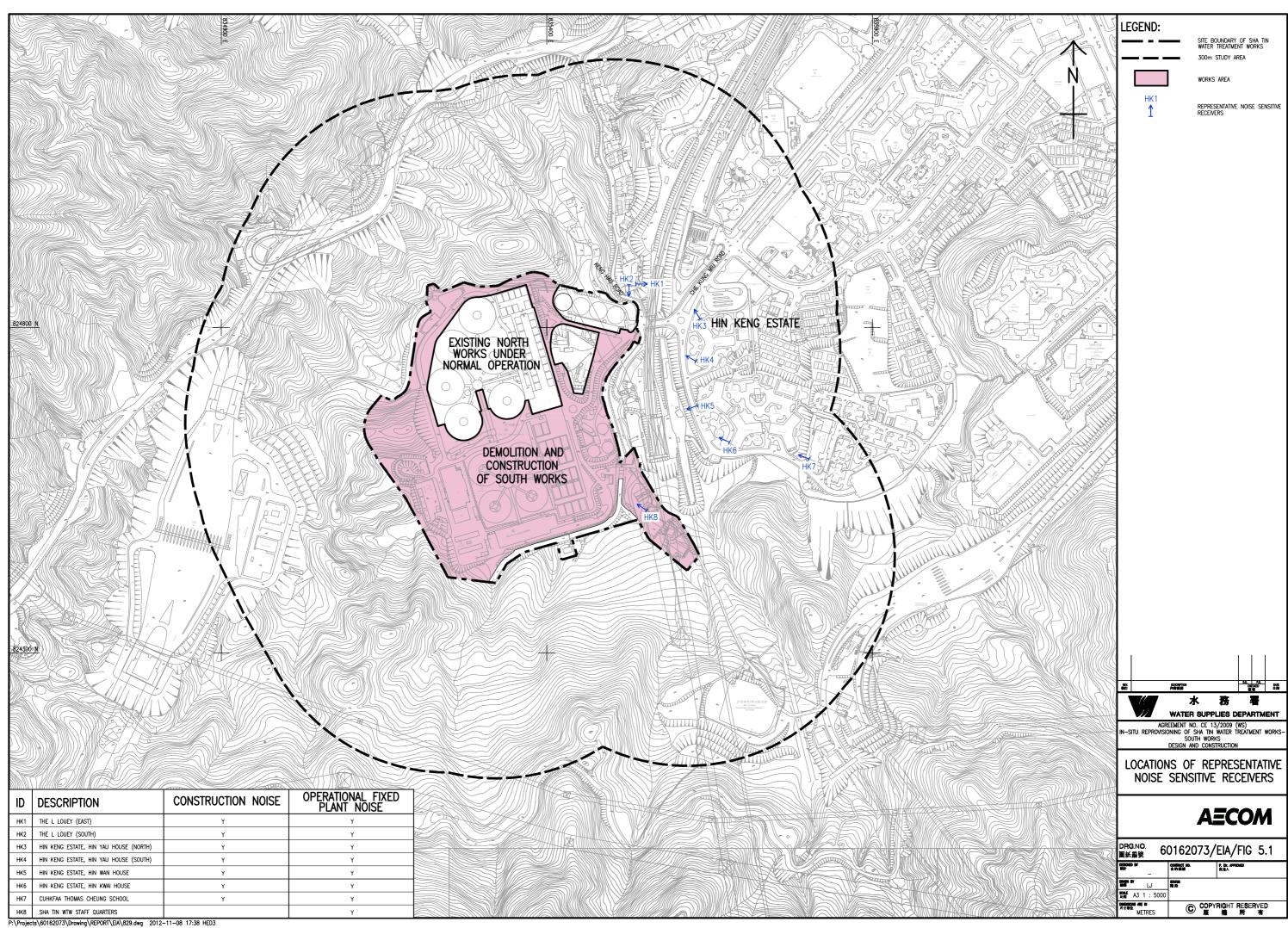


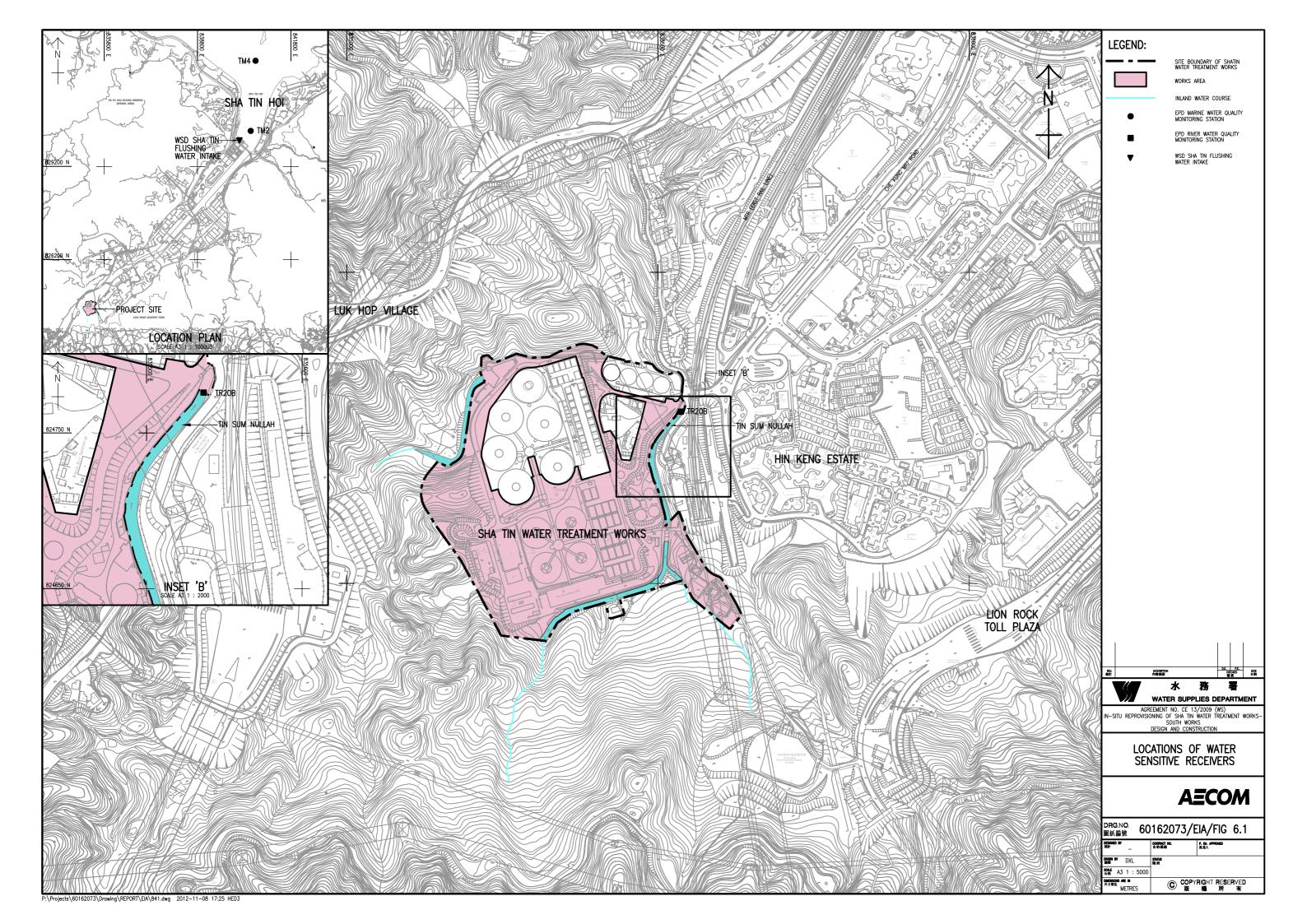
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DRG.NO. 60162073/FIGURE 4.2						
DESIGNED BY 1821- —	confinct HD. 合約網號	P. Dir. APPROVED 我注意人				
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Appendix E Environmental Sensitive Receivers in the Vicinity of the Projects







Appendix F Summary of Action and Limit Levels

Monitoring Locations	Action Level 1-hour TSP, (µg/m³)	Limit Level 1-hour TSP, (µg/m ³)		
AM1	357	500		
AM2	334	500		

Determination of Action and Limit Levels for Air Quality

Determination of Action and Limit Levels for Noise

Monitoring	Action Level	Limit Level in dB(A)			
Location	0700-1900 hours on normal weekdays				
NM1	When one documented complaint is received	For domestic premises: 75 dB(A) for NM1 & NM2			
NM2					
NM3		For schools: 70dB(A) during normal teaching periods and 65 dB(A) during examination periods for NM3			

Determination of Action and Limit Levels for Water Quality

Water	Water (mg/L)		Suspended Solids (mg/L)		Turbidity (NTU)		рН	
stations	Action	Limit	Action	Limit	Action	Limit	Action	Limit
stations	Level	Level	Level	Level	Level	Level	Level	Level
C1	7.51	7.44	4.19	6.73	3.99	4.00	Beyond the range 6.6 to 7.9	Beyond the range 6.5 to 8.0
C2	8.10	7.98	4.33	8.16	3.13	3.28	Beyond the range 6.6 to 8.8	Beyond the range 6.5 to 8.9
C3*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
M1	8.90	8.89	3.30	3.56	4.36	4.48	Beyond the range 6.6 to 8.2	Beyond the range 6.6 to 8.3
M2	8.92	8.91	18.84	26.80	12.64	13.72	Beyond the range 6.6 to 11.0	Beyond the range 6.6 to 11.0
M3	9.16	9.15	1.00	1.00	1.10	1.18	Beyond the range 6.6 to 8.6	Beyond the range 6.6 to 8.7

Remark: For DO, action should be taken when monitoring result of either one of the surface, middle or bottom DO is lower than the proposed Action/Limit Levels.

Appendix G Event/Action Plan

Air Quality

EVENT	ACTION					
EVENT	ET	IEC	ER	CONTRACTOR		
ACTION LEVEL						
1. Exceedance for one	1. Inform the Contractor, IEC	1. Check monitoring data	1. Confirm receipt of	1. Identify source(s),		
sample	and ER;	submitted by the ET;	notification of exceedance	investigate the causes of		
	2. Discuss with the	2. Check Contractor's	in writing.	exceedance and propose		
	Contractor on the remedial	working method; and		remedial measures;		
	measures required;	3. Review and advise the ET		2. Implement remedial		
	3. Repeat measurement to	and ER on the effectiveness		measures; and		
	confirm findings; and	of the proposed remedial		3. Amend working methods		
	4. Increase monitoring	measures.		agreed with the ER as		
	frequency.			appropriate.		
2. Exceedance for two or	1. Inform the Contractor, IEC	1. Check monitoring data	1. Confirm receipt of	1. Identify source and		
more consecutive samples	and ER;	submitted by the ET;	notification of exceedance	investigate the causes		
	2. Discuss with the ER and	2. Check Contractor's	in writing;	of exceedance;		
	Contractor on the remedial	working method; and	2. Review and agree on the	2. Submit proposals for		
measures required;		3. Review and advise the ET	remedial measures proposed	remedial measures to		
3. Repeat measurements to		and ER on the effectiveness	by the Contractor; and	the ER with a copy to		
confirm findings;		of the proposed remedial	3. Supervise implementation	ET and IEC within three		
	4. Increase monitoring		of remedial measures.	working days of notification;		
	frequency to daily;			3. Implement the agreed		
	5. If exceedance continues,			proposals; and		

	arrange meeting with the			4. Amend proposal as
	IEC, ER and Contractor; and			appropriate.
	6. If exceedance stops,			
	cease additional monitoring.			
LIMIT LEVEL				
Event	ET	IEC	ER	CONTRACTOR
1. Exceedance for one	1. Inform the Contractor,	1. Check monitoring data	1. Confirm receipt of	1. Identify source(s) and
sample	IEC, EPD and ER;	submitted by the ET;	notification of exceedance	investigate the causes
	2. Repeat measurement to	2. Check the Contractor's	in writing;	of exceedance;
	confirm findings;	working method;	2. Review and agree on the	2. Take immediate action to
	3. Increase monitoring	3. Discuss with the ET, ER	remedial measures proposed	avoid further exceedance;
	frequency to daily; and	and Contractor on possible	by the Contractor; and	3. Submit proposals for
	4. Discuss with the ER, IEC	remedial measures; and	3. Supervise implementation	remedial measures to ER
	and contractor on the	4. Review and advise the ER	of remedial measures.	with a copy to ET and IEC
	remedial measures and	and ET on the effectiveness		within three working days of
	assess the effectiveness.	of Contractor's remedial		notification;
		measures.		4. Implement the agreed
				proposals; and
				5. Amend proposal if
				appropriate.

	ET	IEC	ER	CONTRACTOR
2. Exceedance for two or	1. Notify Contractor, IEC, EPD	1. Check monitoring data	1. Confirm receipt of	1. Identify source(s) and
more consecutive samples	and ER;	submitted by the ET;	notification of exceedance	investigate the causes of
	2. Repeat measurement to	2. Check the Contractor's	in writing;	exceedance;
	confirm findings;	working method;	2. In consultation with the ET	2. Take immediate action
	3. Increase monitoring	3. Discuss with ET, ER, and	and IEC, agree with the	to avoid further exceedance;
	frequency to daily;	Contractor on the potential	Contractor on the remedial	3. Submit proposals for
	4. Carry out analysis of the	remedial measures; and	measures to be	remedial measures to the ER
	Contractor's working procedures	4. Review and advise the ER	implemented;	with a copy to the IEC and
	with the ER to determine	and ET on the effectiveness	3. Supervise the	ET within three working days
	possible mitigation to be	of Contractor's remedial	implementation of remedial	of notification;
	implemented;	measures.	measures; and	4. Implement the agreed
	5. Arrange meeting with the IEC		4. If exceedance continues,	proposals;
	and ER to discuss the remedial		consider what portion of the	5. Revise and resubmit
	measures to be taken;		work is responsible and	proposals if problem still not
	6. Review the effectiveness of		instruct the Contractor to	under control; and
	the Contractor's remedial		stop that portion of work	6. Stop the relevant portion
	measures and keep IEC, EPD		until the exceedance is	of works as determined by
	and ER informed of the results;		abated.	the ER until the exceedance
	and			is abated.
	7. If exceedance stops, cease			
	additional monitoring.			

Noise

Project no.: CJO-3113

		ACI	ΓΙΟΝ	
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEVEL	1. Notify the Contractor, IEC	1. Review the investigation	1. Confirm receipt of	1. Investigate the complaint
	and ER;	results submitted by the	notification of complaint in	and propose remedial
	2. Discuss with the ER and	Contractor; and	writing;	measures;
	Contractor on the remedial	2. Review and advise the ET	2. Review and agree on the	2. Report the results of
	measures required; and	and ER on the effectiveness	remedial measures proposed	investigation to the IEC, ET
	3. Increase monitoring	of the remedial measures	by the Contractor; and	and ER;
	frequency to check mitigation	proposed by the Contractor.	3. Supervise implementation	3. Submit noise mitigation
	effectiveness.		of remedial measures.	proposals to the ER with
				copy to the IEC and ET
				within three working days of
				notification; and
				4. Implement noise mitigation
				proposals.
LIMIT LEVEL	1. Notify the Contractor, IEC,	1. Check monitoring data	1. Confirm receipt of	1. Identify source and
	EPD and ER;	submitted by the ET;	notification of failure in	investigate the causes of
	2. Repeat measurement to	2. Check the Contractor's	writing;	exceedance;
	confirm findings;	working method;	2. In consultation with the ET	2. Take immediate action to
	3. Increase monitoring	3. Discuss with the ER, ET	and IEC, agree with the	avoid further exceedance;
	frequency;	and Contractor on the	Contractor on the remedial	3. Submit proposals for
	4. Carry out analysis of	potential remedial measures;	measures to be	remedial measures to the ER

Contractor's working	and	implemented;	with copy to the IEC and ET
procedures to determine	4. Review and advise the ET	3. Supervise the	within three working days of
possible mitigation to be	and ER on the effectiveness	implementation of remedial	notification;
implemented;	of the remedial measures	measures; and	4. Implement the agreed
5. Arrange meeting with the	proposed by the Contractor.	4. If exceedance continues,	proposals;
IEC and ER to discuss the		consider what portion of the	5. Revise and resubmit
remedial measures to be		work is responsible and	proposals if problem still not
taken;		instruct the Contractor to	under control; and
6. Review the effectiveness		stop that portion of work until	6. Stop the relevant portion
of Contractor's remedial		the exceedance is abated.	of works as determined by
measures and keep IEC,			the ER until the exceedance
EPD and ER informed of the			is abated.
results; and			
7. If exceedance stops,			
cease			

Water Quality

				AC	ΓΙΟΝ			
EVENT		ET Leader		IEC		ER		CONTRACTOR
Action level being exceeded	•	Repeat in situ	•	Discuss with ET and	•	Discuss with IEC on the	•	Inform the ER and
by one sampling day		measurement to		Contractor on the		proposed mitigation		confirm notification of
		confirm findings;		mitigation measures;		measures;		the non-compliance in
	•	Identify reasons for	•	Review proposals on	•	Make agreement on the		writing;
		non-compliance and		mitigation measures		mitigation measures to	•	Rectify unacceptable
		source(s) of impact;		submitted by		be implemented.		practice;
	•	Inform IEC and		Contractor and advise	•	Assess the	•	Check all plant and
		Contractor;		the ER accordingly;		effectiveness of the		equipment;
	•	Check monitoring data,	•	Assess the		implemented mitigation	•	Consider changes of
		all plant, equipment		effectiveness of the		measures.		working methods;
		and Contractor's		Implemented mitigation			•	Discuss with ET and
		working methods;		measures.				IEC and propose
	•	Discuss mitigation						mitigation measures to
		measures with IEC and						IEC and ER;
		Contractor;					•	Implement the agreed
	•	Repeat measurement						mitigation measures.
		on next day of						
		exceedance.						

		ET Leader		IEC		ER		CONTRACTOR
Action level being exceeded	•	Repeat in situ	•	Discuss with ET and	•	Discuss with IEC on the	•	Inform the ER and
by more than one		measurement to		Contractor on the		proposed mitigation		confirm notification of
consecutive sampling day		confirm findings;		mitigation measures;		measures;		the non-compliance in
	•	Identify reasons for	•	Review proposals on	•	Make agreement on the		writing;
		non-compliance and		mitigation measures		mitigation measures to	•	Rectify unacceptable
		source(s) of impact;		submitted by		be implemented;		practice;
	•	Inform IEC and		Contractor and advise	•	Assess the	•	Check all plant and
		Contractor;		the ER accordingly;		effectiveness of the		equipment;
	•	Check monitoring data,	•	Assess the		implemented mitigation	•	Consider changes of
		all plant, equipment		effectiveness of the		measures.		working methods;
		and Contractor's		implemented mitigation			•	Discuss with ET and
		working methods;		measures.				IEC and propose
	•	Discuss mitigation						mitigation measures to
		measures with IEC and						IEC and ER within
		Contractor;						three working days;
	•	Ensure mitigation					•	Implement the agreed
		measures are						mitigation measures.
		implemented;						
	•	Prepare to increase the						
		monitoring frequency to						
		daily;						

	•	Repeat measurement on next day of exceedance.						
		ET Leader		IEC		ER		CONTRACTOR
Limit level being	•	Repeat in situ	•	Discuss with ET and	•	Discuss with IEC, ET	•	Inform the ER and
exceeded by one		measurement to		Contractor on the		and Contractor on the		confirm notification of
sampling day		confirm findings;		mitigation measures;		proposed mitigation		the non-compliance in
	•	Identify reasons for	•	Review proposals on		measures;		writing;
		non-compliance and		mitigation measures	•	Request Contractor to	•	Rectify unacceptable
		source(s) of impact;		submitted by		critically review the		practice;
	•	Inform IEC Contractor		Contractor and advise		working methods;	•	Check all plant and
		and EPD;		the ER accordingly;	•	Make agreement on the		equipment;
	•	Check monitoring data,	•	Assess the		mitigation measures to	•	Consider changes of
		all plant, equipment		effectiveness of the		be implemented;		working methods;
		and Contractor's		implemented mitigation	•	Assess the	•	Discuss with ET, IEC
		working methods;		measures.		effectiveness of the		and ER and propose
	•	Discuss mitigation				implemented mitigation		mitigation measures to
		measures with IEC, ER				measures.		IEC and ER within
		and Contractor;						three working days;
	•	Ensure mitigation					•	Implement the agreed
		measures are						mitigation measures.
		implemented;						

	•	Increase the monitoring frequency to daily until						
		no exceedance of Limit level.						
		ET Leader		IEC		ER		CONTRACTOR
Limit level being	•	Repeat in situ	•	Discuss with ET and	•	Discuss with IEC, ET	•	Inform the ER and
exceeded by more		measurement to		Contractor on the		and Contractor on the		confirm notification of
than one		confirm findings;		mitigation measures;		proposed mitigation		the non-compliance in
consecutive	•	Identify reasons for	•	Review proposals on		measures;		writing;
sampling day		non-compliance and		mitigation measures	•	Request Contractor to	•	Rectify unacceptable
		source(s) of impact;		submitted by		critically review the		practice;
	•	Inform IEC Contractor		Contractor and advise		working methods;	•	Check all plant and
		and EPD;		the ER accordingly;	•	Make agreement on the		equipment;
	•	Check monitoring data,	•	Assess the		mitigation measures to	•	Consider changes of
		all plant, equipment		effectiveness of the		be implemented;		working methods;
		and Contractor's		implemented mitigation	•	Assess the	•	Discuss with ET, IEC
		working methods;		measures.		effectiveness of the		and ER and propose
	•	Discuss mitigation				implemented mitigation		mitigation measures to
		measures with IEC, ER				measures;		IEC and ER within
		and Contractor;			•	Consider and instruct, if		three working days;
	•	Ensure mitigation				necessary, the	•	Implement the agreed
		measures are				Contractor to slow		mitigation measures;

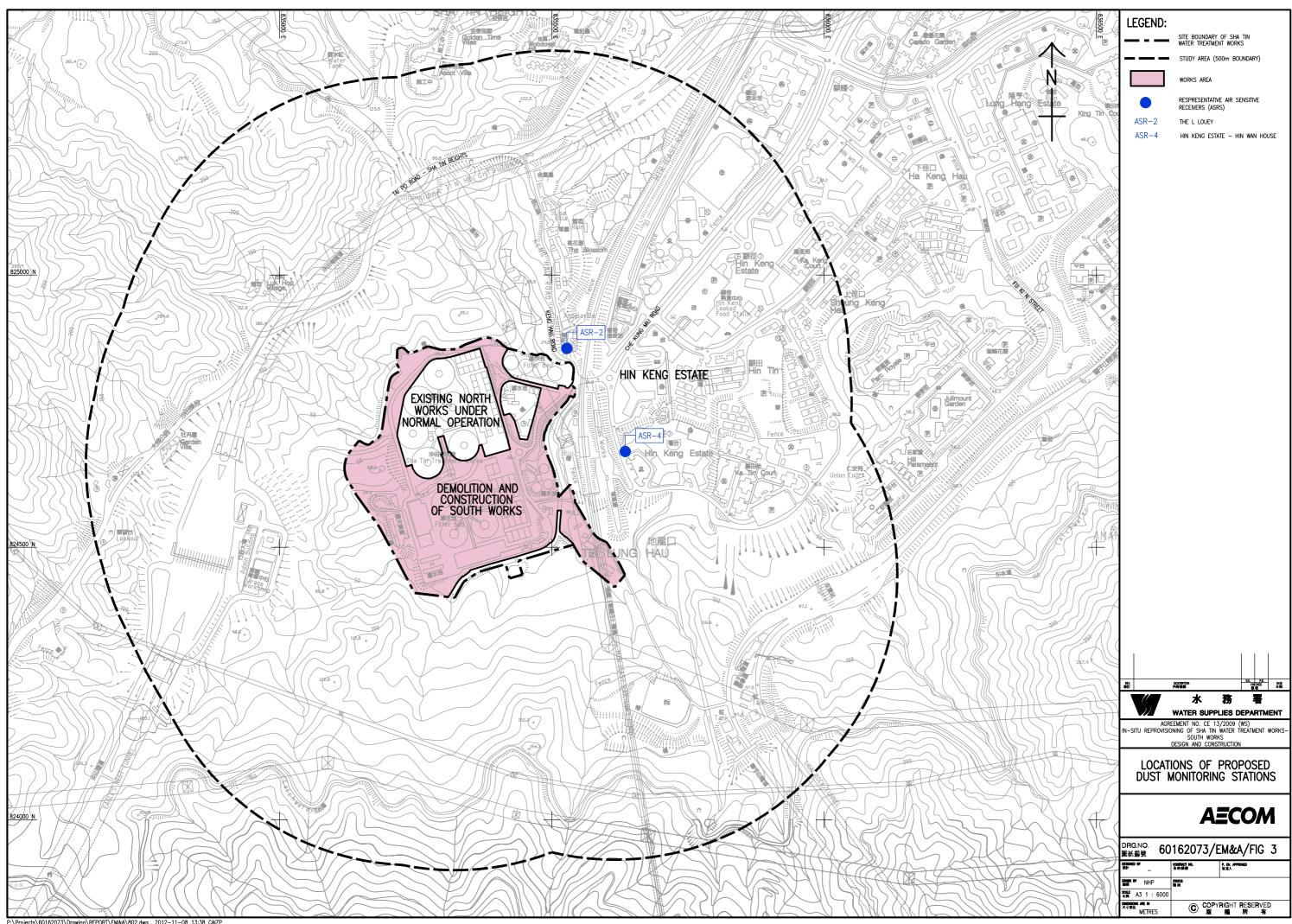
implemented; Increase	down or to stop all or	• As directed by the ER,
the monitoring	part of the construction	to slow down or to stop
frequency to daily until	activities until no	all or part of the
no exceedance of Limit	exceedance of Limit	construction activities.
level for two	level.	
consecutive days.		

Appendix H Impact Monitoring Schedules

Impact Monitoring Schedule for STWTW

			Feb-23			
Sun	Mon	Tue	Wed	Thur	Fri	Sat
			1	2		4
			Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	
5	6	7	8	9	10	11
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	
12	13	14	15	16	17	18
	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	
9	20	21	22	23	24	25
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Air monitoring for AM1 & A Noise monitoring for NM1, N & NM3
26	27	28				
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3					

Appendix I Location Plan of Air Quality Monitoring Station



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Appendix J Calibration Certificates (Air Monitoring)

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This instrument was produced under rigorous factory production control and documented standard procedures. It was individually visually inspected, leak tested and function tested for display, backlight, button and software performance. The accuracy of each of its primary measurements was individually calibrated and/or tested against standards traceable to the National Institute of Standards and Technology ("NIST") or calibrated intermediary standards. This instrument is certified to have performed at the time of manufacture in compliance with the following specifications as they apply to this meter's specific model, measurements and features.

Methods Used in Calibration and Testing

Wind Speed:

The Kestrel Pocket Weather Meter impeller installed in this unit was individually tested in a subsonic wind tunnel operating at approximately 300 fpm (1.5 m/s) and 1200 fpm (6.1 m/s) monitored by a Gill Instruments Model 1350 ultrasonic time-of-flight anemometer. The Standard's maximum combined uncertainty is +/-1.04%within the airspeed range 706.6 to 3923.9 fpm (3.59 to 19.93 m/s), and +/-1.66% within the airspeed range 166.6 to 706.6 fpm (0.85 to 3.59 m/s).

Temperature:

Temperature response is verified in comparison with a Eutechnics 4600 Precision Thermometer or a standard Kestrel 4000 Weather and Environmental Meter calibrated weekly against the Eutechnics 4600. The Eutechnics 4600 is calibrated annually and is traceable to NIST with a system accuracy of +/-0.05 °C.

Direction / Heading

The sensitivity of the magnetic directional sensor is verfied at the component level by applying a magnetic field to the sensor and measuring the signal output at 4 points, as well as after assembly by orienting the unit to the cardinal directions and measuring the magnetic field output. In both cases the compass output must be accurate to within ± -5 degrees.

Relative Humidity:

Relative humidity receives a two-point calibration in humidity and temperature controlled chambers at 75.3% RH and 32.8% RH at 25° C. The calibration tanks are monitored with an Edgetech Model 2002 DewPrime II Standard Chilled Mirror Hygrometer. Following calibration, performance is further verified at an RH of approximately 43.2% against the Edgetech Hygrometer. The Edgetech Hygrometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of +/- 0.2% RH.

Barometric Pressure:

Pressure response is verified against a Mensor Series 6000 Digital Barometer or a standard Kestrel 4000 Weather and Environmental Meter calibrated weekly against the Mensor Barometer. The Mensor Barometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of +/- 0.02% F.S.

Approved By:

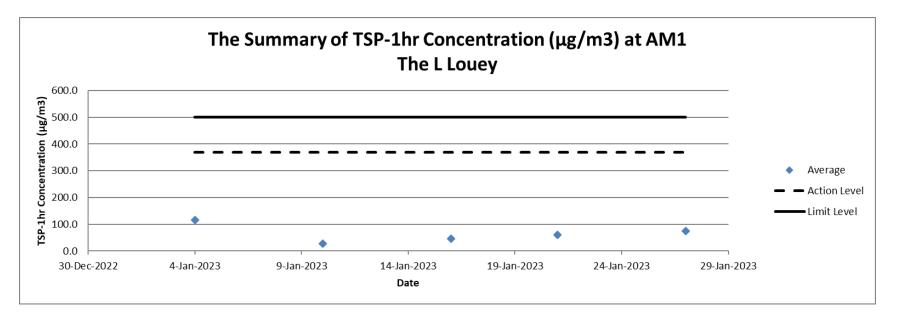
Michael Naughton, Engineering Manager

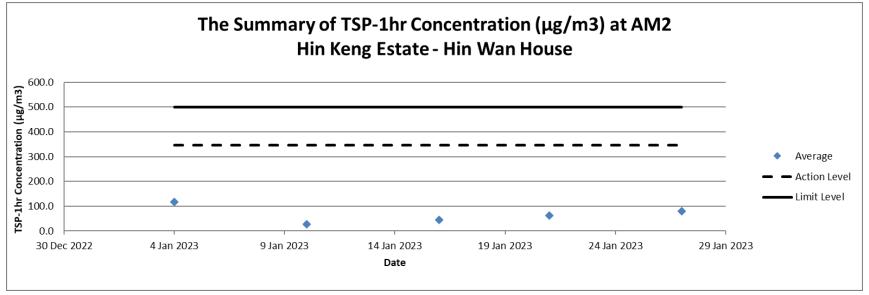
The enclosed Kestrel Weather and Environmental Meter was manufactured by Nielsen-Kellerman Co. at its facilities located at 21 Creek Circle, Boothwyn, PA 19061 USA.

															SENSO	RS		
SENSOR	1000	2000	2500	3000	3500	3500	4000	4200	4250	4300	4400	4500	4500	ACCURACY (+/-)*	RESOLUTION	SPECIFICATION RANGE	OPERATIONAL RANGE	NOTES
Wind Speed Air Flow	•	•	•	•	•	•	•	•	•	•	•	•	•	Larger of 3% of reading, least significant digit or 20 ft/min	0.1 m/s 1 ft/min 0.1 km/h 0.1 kmots 1 B	0.6 to 40.0 m/s 118 to 7,874 ft/min 2.2 to 144.0 km/h 1.3 to 89.5 mph 1.2 to 77.8 knots 0 to 12 B	0.6 to 60.0 m/s 118 to 11,811 ft/min 2.2 to 216.0 km/h 1.3 to 134.2 mph 1.2 to 116.6 kmots 0 to 12 B	1 inch/25 mm diameter impeler with precision axie and low-friction Zytel8 bearings. Startup s statud as sover imit, readings may be taken down to 04 mm (7 Britmin 11 Shrmh 1 Bryth). Effort impeler statud as 04 mm (2 Britmin 11 Shrmh 1 Bryth). Effort and the regiment statud (2 Britmin 12 Bryth 12
Ambient Temperature	V	•	•	•	•	•	•	•	•	•		•	•	0.9 *F 0.5 *C	0.1 *F 0.1 *C	-20.0 to 158.0 *F -29.0 to 70.0 *C	14.0.0 to 131.0 "F -10.0 to 55.0 "C	Hermelically-seaked, precision thermitor mounted externally and thermally licelated (US Paik 5.936.645) for rapidr response. Altificior 0.2 mpc/1 mm or greater provide fattest response exaction of molecular offset. C alternal on thregidging. Thermater may also be used to may be used to make the second seco
Globe Temperature - Tg								-			•			*F 1.4 *C	0.1 *F 0.1 *C	-20.0 to 140.0 °F -29.0 to 60.0 °C	14.0 to 131.0 *F -10.0 to 55.0 *C	Temperature inside 1in 25 mm black powder coated copper globe converted to Tg equivalent standard 6 in 150 mm globe. Closest equivalence obtained with airflow greater than 2.2 mph m/s.
Relative Humidity				•	•	•	•	•	•	•	•	•	•	3.0 %RH	0.1 %RH	5 to 95% non-condensing	0 to 100%	Polymer capacitive humidity sensor mounted in thin-walled chamber external to case for rapic accurate response (US Plante 6.257 2074). To achieve stated accuracy, unit mat be permit equilibrate to activate la Imprature wall en exposed to large, rapid temperature damps and b out of direct sunight. California of the -2% over 24 months. Humidity sensor may be recall at factory or in fault using Kastel Humiding California for (MR PH-0602).
Pressure	1	-01	•	14	•	•	•		•	•		•	•	0.03 inHg 1.0 hPaImbar 0.01 PSI	0.01 inHg 0.1 hPajmbar 0.01 PSI	8.86 to 32.49 inHg 300.0 to 1100.0 hPajmbar 4.35 to 15.95 PSI and 32.0 to 185.0 *F 0.0 to 85.0 *C	0.30 to 48.87 in Hg 10.0 to 1654.7 h Palmbar 0.14 to 24.00 PSI and 14.0 to 131.0 °F -10.0 to 55.0 °C	Monothics sillion piecewsitely pressure sensor with second order temperature controllon- Pressure sensor may be nearbitrated at tochyo in field. Adjustable reference attubus also display of tation pressure on anometric pressure connected to MSL. Kestini 4.200 display attation pressure on addicated screen. Restriet 2000 and 3000 display continuously update three-hour barometric pressure trend indicator: main graphy, ning, steady, falling, falling na kestitel 4000 estes displays on sexite tend frough graphing function. PSI display on Kestite
Compass		153	NEL A					1919 1-1-1-1				•	•	5*	1* 1/16th Cardinal Scale	0 to 360*	0 to 360°	400 series only. 2-axis sole-state magnetoresistive sensor mounted perpendicular to unit plane. Accuracy of sensor dependent upon unit's vertical populion. Self-aultication routine eliminates imagnetic en from bittines or unit anomato te un after every full power-down (bittiney removal or change increation). Declarationariation advatable for Time North read-unit.
						18								CALCUL		SUREMENTS		
MEASUREMENT	1000	2000	2500	3000	3500	3500 DT	4000	4200	4250	4300	4400	4500	4500 HOR	ACCURACY (+/-)*	RESOLUTION	SPECIFICATION RANGE	SENSORS EMPLOYED	NOTES
Air Density	1	-	1		123	Y	1	•	•		13	31	3.23	0.0002 lb/tt ³ 0.0033 kg/m ³	0.001 lbs/ft ³ 0.001 kg/m ³	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Mass of air per unit volume
Air Flow								•	-					6.71%	1 cfm 1 m ³ /hr 1 m ³ /m 0.1m ³ /s 1 L/s	Refer to Ranges for Sensors Employed	Air Flow User Input (Duct Shape & Size)	Volume of air flowing through an opening. Automatically calculated from Air Velocity measure and user-specified duct shape (circle or rectangle) and dimensions (units, in ft, cm or m). Maximum duct dimension input: 258.0 in 21.5 ft 655.3 cm 6.35 m.
Altitude			•		•	•	•	•	•	•	•	•	•	typical: 23.6 ft 7.2 m max: 48.2 ft 14.7 m	1 ft 1 m	typical: 750 to 1100 mBar max: 300 to 750 mBar	Pressure User Input (Reference Pressure)	Height above Mean Sea Level ("MSL"). Temperature compensated pressure (barometric) altimeter requires accurate reference barometric pressure to produce maximum absolute accuracy. Both accuracy specs corresponds to a reference pressure anywhere from 850 to mBar.
Barometric Pressure			•		•	•	•	•	•	•	•	•	•	0.07 inHg 2.4 hPa mbar 0.03 PSI	0.01 inHg 0.1 hPa mbar 0.01 PSI	Refer to Ranges for Sensors Employed	Pressure User Input (Reference Altitude)	Air pressure that would be present in identical conditions at MSL. Station pressure compensation local elevation provided by reference abitude. Requires accurate reference abitude to pro maximum absolute accuracy.
Crosswind & Headwind/Tailwind											rin		•	7.1%	1 mph 1 ft/min 0.1 km/h 0.1 m/s 0.1 knots	Refer to Ranges for Sensors Employed	Wind Speed Compass	Effective wind relative to a target or travel direction. Auto-switching headwindtailwind indicate
Delta T	18		20		an	•							ins	3.2 *F 1.8 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Difference between dry bulb temperature and wet bulb temperature. When spraying, indicate evaporation rate and droplet lifetime. Safe range for pesticide spraying is 4 to 16 $^{\circ}$ / 2 to 9 $^{\circ}$
Density Altitude							•	•	•	•	•	•	•	226 ft 69 m	1 ft 1 m	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Local air density converted to equivalent elevation above sea level in a uniform layer consisti the International Standard Atmosphere.
Dewpoint				•	•	•	•	•	•		•	•	•	3.4 *F 1.9 *C	0.1 *F 0.1 *C	15 to 95 % RH Refer to Range for Temperature Sensor	Temperature Relative Humidity	Temperature that a volume of air must be cooled to at constant pressure for the water vapor present to condense into dew and form on a solid surface. Can also be considered to be the water-to-air saturation temperature.
Evaporation Rate										•				0.01 lb/ft ² /hr 0.06 kg/m2/hr	0.01 b/ft²/hr 0.01 kg/m²/hr	Refer to Ranges for Sensors Employed	Wind Speed Temperature Relative Humidity Pressure User Input (Concrete Temperature)	The rate at which moleture is lost from the surface of curing concrete. Requires user measurement and entry of concrete temperature obtained with an accurate IR or probe thermometer ("F or "C, not included). Readings should be taken 20 inches above pour surfac with the thermiser braked, and averaged for 5-10 seconds using built-in waveraging function.
Heat Index		121	•	1.	•	1231	•	•	•	•	•	•	•	7.1 *F 4.0 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity	Perceived temperature resulting from the combined effect of temperature and relative humidit Calculated based on NVNS Heat Index (HI) tables. Measurement range limited by extent of published tables.
Moisture Content Humidity Ratio ("Grains")								•	•					.3 gpp .04 g/kg	0.1 gpp 0.01 g/kg	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Mass of water vapor in a mass of air.
Relative Air Density									•					0.3%	0.1%	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	The ratio, expressed as a percentage, of measured air density to the air density of a standard atmosphere as defined by the ICAO.
Thermal Work Limit (TWL)														10.9 W/m ²	0.1 W/m ²	Refer to Ranges for Sensors Employed	Wind Speed Temperature Giobe Temperature Relative Humidity Pressure	Estimated safe maximum continuously sustainable human metabolic rate (Wim2) for the conditions and clothing factors. Based off of estimated metabolic output of typical human. On screen zone warnings.
Outdoor Wet Bulb Globe Temperature (WBGT)											•			1.3 °F 0.7 °C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Wind Speed Temperature Globe Temperature Relative Humidity Pressure	Measure of human heat stress defined as the combination of effects due to radiation, convec and conduction. Outdoor WBGT is calculated from a weighted sum of natural wet bub (Triwb) globe temperature (Tg), and dry bub temperature (Td). User settable on-screen warning zone
Wet Bulb Temperature - aturally Aspirated (Tnwb)					23	112	18	3. "F) 11		•	101		1.4 *F 0.8 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Wind Speed Temperature Globe Temperature Relative Humidity Pressure	Similar to psychrometric web-bub temperature (see below). However, Trub only undergoes for convection from the ambient air velocity. Trub is a measure of the evaporative cooling that th will allow. This is accounted for by combining the effects of, mainly, relative humidity and windspeed.
Wet Bulb Temperature - Psychrometric					•	•	•		•	•	•	•	•	3.2 °F 1.8 °C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Temperature indicated by a sling psychrometer. Due to nature of the psychrometric ratio for water-air system, this approximates the thermodynamic wei-bub temperature. The thermodyn wei-bub temperature is the temperature a parcel of air would have if cooled adiabatically to saturation temperature via water evaporating into it.
Wind Chill		•			•		•	•		•	•	•	•	1.6 *F 0.9 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Wind Speed Temperature	Perceived temperature resulting from combined effect of wind speed and temperature. Calcul based on the NWS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed adju by a factor of 1.5 to yield equivalent results to wind speed measured at 10 m above ground. Measurement range limited by extern of published tables.
																CIFICATIONS		
Display & Backlight		•	•								AND CONTRACTOR	CONT.		Reflective 5 digit LCD. D	Digit height 0.36 in / 9 r	nm. Choice of aviation green of	iuminescent backlight. Manual activation or visible red (NV models only) electrol	uminescent backlight. Manual activation with auto-off.
Response Time & Display Update	•	•	•	•	•	•	•	•	•	•	•	•		All measurements except equilibrate to a large cha	ot those based on relations in the measurements of		ly within 1 second. Relative humidity a tes every 1 second.	viectroluminescent backlight. Automatic or manual activation. nd all measurements which include RH in their calculation may require as long as 1 minute to ful
Max/Avg Wind			-				•	•	•	•	•	•	•					with all other wind-related functions: air velocity, crosswind, headwind/tailwind, wind chill, WBGT
Data Storage & Graphical Display, Min/Max/Avg History										• 3600 points			• 2500	Minimum, maximum, ave				ta logger with graphical display. Mariual and auto data storage. Min/Max/Avg history may be res y off except for 2 and 5 second intervals (code version 4.18 and later). Data capacity shown.
ata Upload & Bluetooth® Data Connect Option								•	•	•	•	•		Bluetooth Data Trans pairing and transmitting.	fer Option: Adjustabl Employs Bluetooth Se	32) or Bluetooth data transfer e power consumption and radi rial Port Protocol for data tran 32) or Bluetooth data transfer	io range from up to 30 ft 9 meters. In smission.	sividual unit ID and 4-digit PIN code preprogrammed for easy identification and data security whe
Clock / Calendar					•		•	•			•	•		Requires optional PC int	erface (USB or RS-23	 or Bluetooth data transfer or Bluetooth data transfer or Bluetooth data transfer 	option and provided software.	Western refer to the transfer of
Auto Shutdown Languages							•	•	*	*	•	•		Requires optional PC int English, French, German	erface (USB or RS-23 n, Italian, Spanish.	32) or Bluetooth data transfer	option and provided software.	
Certifications Origin	•	*	*	*	*	•	*	•	•		•	•		CE certified, RoHS and Designed and manufact	WEEE compliant. Inde ured in the USA from U	JS and imported components.		ts available at additional charge). t and Tariff Code Transformation requirements for NAFTA Preference Criterion B.
Battery Life	•	•	•	•	•	•	•				•	•		Standard Models: AA	A Alkaline, two, include	d. Average life, 400 hours of u	klight use in 2000 to 3500 models. use, reduced by backlight or Bluetooth	radio transmission use.
Shock Resistance Sealing	•	•	•	•	•	•	•	•	•	•	•	•		Waterproof (IP67 and N	EMA-6).		t may damage replaceable impeller.	nge of the display and batteries by maintaining the unit within the operational range and exposin
Operational Temperature Limits Storage Temperature	*	•	•	•	*	*	*	*	*	•	•	*		14" F to 131" F -10 "C to the more extreme env -22.0 "F to 140.0 "F -3	ironment for the minim	nts may be taken beyond the li num time necessary to take rea	ading.	nge or one weavery and batteries by maintaining, the unit within the operational range and exposin
atorage remperature		•	•				-		-		-	-		4.8 x 1.9 x 1.1 in / 12.2 >	4.8 x 2.8 cm, 3.6 oz /	102 g (including slip-on cover)).	
Size & Weight														5.0 x 1.8 x 1.1 in / 12.7 x	45x28 m 20	102 g		

Please note, these specifications are valid for all Kestrel 4400 products and all other Kestrel 4000 series with a serial number higher than 659340. If your product has a lower serial number, please reference the previous version of the specifications.

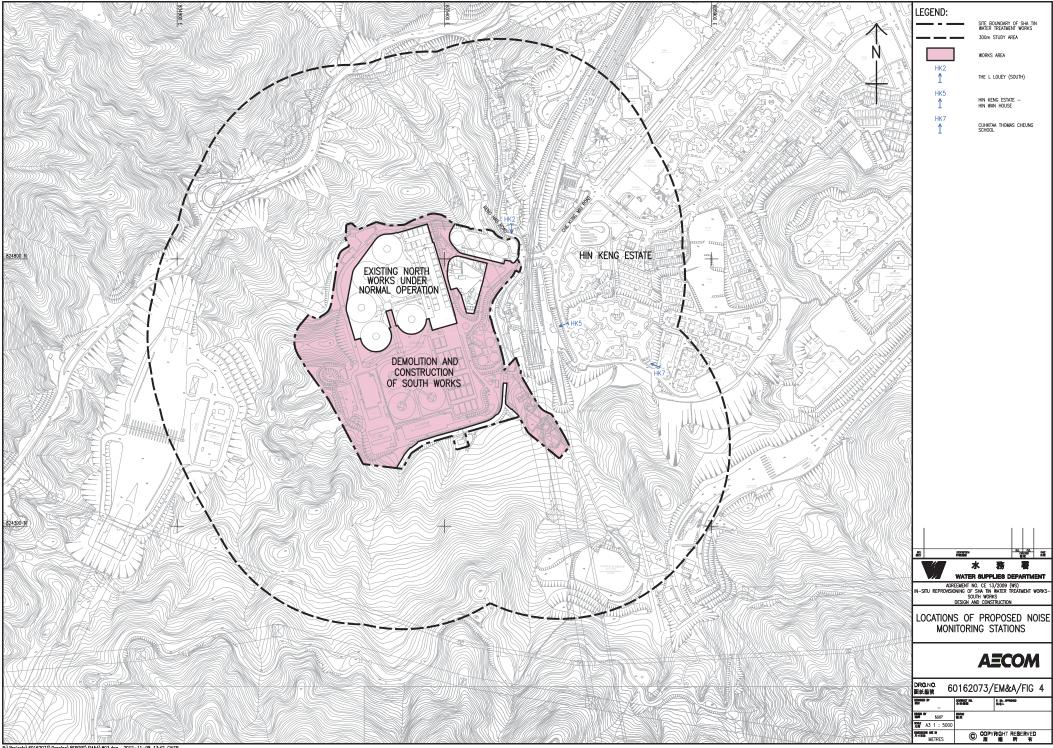
Appendix K Impact Air Quality Monitoring Results and Graphical Presentation





Appendix L

Location Plan of Noise Monitoring Station



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Appendix M Calibration Certificates (Noise)

Certificate No. D224349E



CALIBRATION CERTIFICATE

Product	:	SOUND CALIBRATOR
Туре	:	NC-75
Serial number	:	34724243
Manufacturer	:	RION CO., LTD.
Calibration quantities	:	Sound pressure level (with reference standard microphone)
Calibration method	:	Measured by specified secondary standard microphone
		according to JCSS calibration procedure specified by RION.
Ambient conditions	:	Temperature 23.9 °C, Relative humidity 49 %,
		Static pressure 99.9 kPa
Calibration date	:	05/07/2022 (DD/MM/YYYY)
Calibration location	:	3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan
		RION CO., LTD. Calibration Room

We hereby certify that the results of this calibration were as follows.

Issue date : 11/07/2022 (DD/MM/YYYY)

Junichi Kawamura Manager Quality Assurance Section, Quality Assurance Department, Environmental Instrument Division, RION CO., LTD. 3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan

This certificate is based on article 144 of the Measurement Law and indicates the result of calibration in accordance with measurement standards traceable to Primary Measurement Standards (National Standards) which realizes the physical units of measurement according to the International System of Units (SI).

The accreditation symbol is attestation of which the result of calibration is traceable to Primary Measurement Standards (National Standards).

The certificate shall not be reproduced except in full, without the written approval of the issuing laboratory.

The calibration laboratory who issued this calibration certificate conforms to ISO/IEC 17025:2017.

This calibration certificate was issued by the calibration laboratory accredited by IAJapan who is a signatory to the Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC). This (These) calibration result(s) may be accepted internationally through ILAC/APAC MRA.



Certificate No. D224349E

CALIBRATION RESULT

1. Sound pressure level (with reference standard microphone)

Measured	Expanded
value	uncertainty *1
93.99 dB	0.09 dB

*1 Defines an interval estimated to have a level of confidence of approximately 95 %. Coverage factor *k*=2

Calibration result is the calibration value in ambient conditions during calibration.

BE OUT OF JCSS CALIBRATION

1. Frequency

	Measurement
Measured value	uncertainty (k=2)
1000.0 Hz	$3.9 imes 10^{\cdot 4} \mathrm{Hz}$

Working measurement standard universal counter: Type : 53132A Serial number : MY40005574 (JCSS Calibration Certificate No. 21081499079575510)

2. Total distortion

Measured	
value	
0.2 %	

Working measurement standard distortion meter: Type : VA-2230A Serial number : 11076061 (A2LA Calibration Certificate No. 1501-03080)

· closing ·





Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	NTi Audio
Type No.:	XL2 (Serial No.: A2A-09696-E0)
Microphone:	ACO 7052 (Serial No.:68840)
Preamplifier:	NTi Audio M2211 MA220 (Serial No.:5287)
	Submitted by:
Customer:	Acumen Environmental Engineering and Technologies Co.
	Ltd.
Address:	Unit D, 12/F, Ford Glory Plaza,
	Nos. 37-39 Wing Hong Street,
	Cheung Sha Wan, Kowloon, Hong Kong
	Nos. 37-39 Wing Hong Street,

Upon receipt for calibration, the instrument was found to be:

\checkmark	Within
	Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 24 March 2022

Date of calibration: 26 March 2022

le Calibrated by:

Calibration Technician

Date of issue: 26 March 2022

Certified by:

Mr. Ng Yan Wa Laboratory Manager

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Certificate No.: APJ21-161-CC001

Room 422, Leader Industrial Centre, 57-59 Au Pui Wan Street, F	o Tan, Shatin, N.T., Hong Kong
Tel: (852) 2668 3423	Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com	E-mail:inquiry@aa-lab.com

1. Calibration Precaution:

ø

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature:	22.6 °C		
Air Pressure:	1006 hPa		
Relative Humidity:	74.5 %		

3. Calibration Equipment:

	Туре	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV200041	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Sett	ing of Uni	it-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.1	±0.4

Linearity

Sett	ing of Uni	it-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.1	Ref
30-130	dBA	SPL	Fast	104	1000	104.1	±0.3
	-			114		114.1	±0.3

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq.	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.1	Ref
50150	uDA		Slow	94		94.1	±0.3

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Certificate No.: APJ21-161-CC001





Frequency Response

Linear Response

Setti	ing of Unit	t-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. We	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	94.0	±2.0
					63	94.1	±1.5
					125	94.1	±1.5
					250	94.0	±1.4
30-130	dB	SPL	Fast	94	500	94.1	±1.4
					1000	94.1	Ref
					2000	94.3	±1.6
					4000	94.9	±1.6
					8000	93.6	+2.1; -3.1

A-weighting

Sett	ing of U	nit-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq.	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	54.7	-39.4 ±2.0
					63	67.9	-26.2±1.5
					125	78.0	-16.1±1.5
					250	85.4	-8.6±1.4
30-130	dBA	SPL	Fast	94	500	90.9	-3.2±1.4
					1000	94.1	Ref
					2000	95.5	+1.2±1.6
					4000	95.9	$+1.0 \pm 1.6$
					8000	92.5	-1.1+2.1; -3.1

C-weighting

Sett	ing of Uni	t-under-t	est (UUT)	Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	91.0	-3.0 ±2.0
					63	93.2	-0.8±1.5
					125	93.9	-0.2 ±1.5
					250	94.0	-0.0±1.4
30-130	dBC	SPL	Fast	94	500	94.1	-0.0±1.4
					1000	94.1	Ref
					2000	94.1	-0.2 ±1.6
					4000	94.1	-0.8±1.6
					8000	90.6	-3.0 + 2.1: -3.1

Certificate No.: APJ21-161-CC001



Page 3 of 4

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com



5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.05
	63 Hz	± 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



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Certificate No.: APJ21-161-CC001





This instrument was produced under rigorous factory production control and documented standard procedures. It was individually visually inspected, leak tested and function tested for display, backlight, button and software performance. The accuracy of each of its primary measurements was individually calibrated and/or tested against standards traceable to the National Institute of Standards and Technology ("NIST") or calibrated intermediary standards. This instrument is certified to have performed at the time of manufacture in compliance with the following specifications as they apply to this meter's specific model, measurements and features.

Methods Used in Calibration and Testing

Wind Speed:

The Kestrel Pocket Weather Meter impeller installed in this unit was individually tested in a subsonic wind tunnel operating at approximately 300 fpm (1.5 m/s) and 1200 fpm (6.1 m/s) monitored by a Gill Instruments Model 1350 ultrasonic time-of-flight anemometer. The Standard's maximum combined uncertainty is +/-1.04%within the airspeed range 706.6 to 3923.9 fpm (3.59 to 19.93 m/s), and +/-1.66% within the airspeed range 166.6 to 706.6 fpm (0.85 to 3.59 m/s).

Temperature:

Temperature response is verified in comparison with a Eutechnics 4600 Precision Thermometer or a standard Kestrel 4000 Weather and Environmental Meter calibrated weekly against the Eutechnics 4600. The Eutechnics 4600 is calibrated annually and is traceable to NIST with a system accuracy of +/-0.05 °C.

Direction / Heading

The sensitivity of the magnetic directional sensor is verfied at the component level by applying a magnetic field to the sensor and measuring the signal output at 4 points, as well as after assembly by orienting the unit to the cardinal directions and measuring the magnetic field output. In both cases the compass output must be accurate to within ± -5 degrees.

Relative Humidity:

Relative humidity receives a two-point calibration in humidity and temperature controlled chambers at 75.3% RH and 32.8% RH at 25° C. The calibration tanks are monitored with an Edgetech Model 2002 DewPrime II Standard Chilled Mirror Hygrometer. Following calibration, performance is further verified at an RH of approximately 43.2% against the Edgetech Hygrometer. The Edgetech Hygrometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of +/- 0.2% RH.

Barometric Pressure:

Pressure response is verified against a Mensor Series 6000 Digital Barometer or a standard Kestrel 4000 Weather and Environmental Meter calibrated weekly against the Mensor Barometer. The Mensor Barometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of +/- 0.02% F.S.

Approved By:

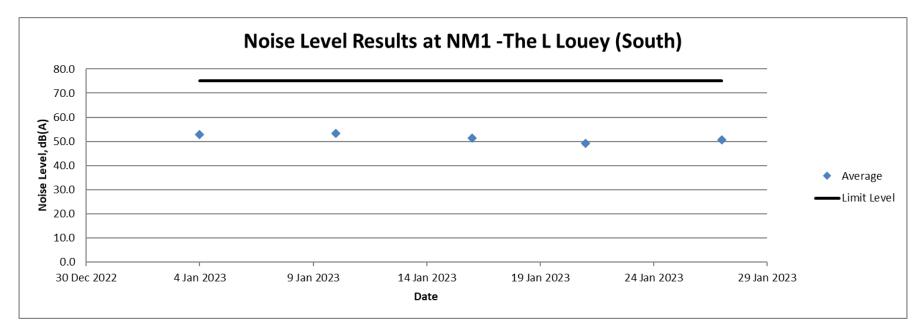
Michael Naughton, Engineering Manager

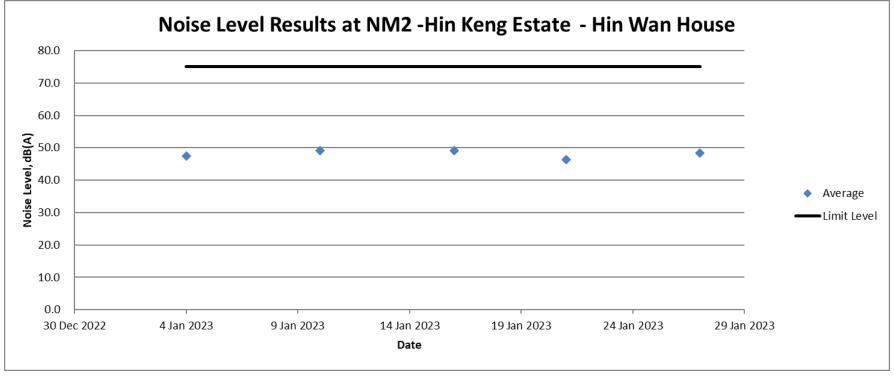
The enclosed Kestrel Weather and Environmental Meter was manufactured by Nielsen-Kellerman Co. at its facilities located at 21 Creek Circle, Boothwyn, PA 19061 USA.

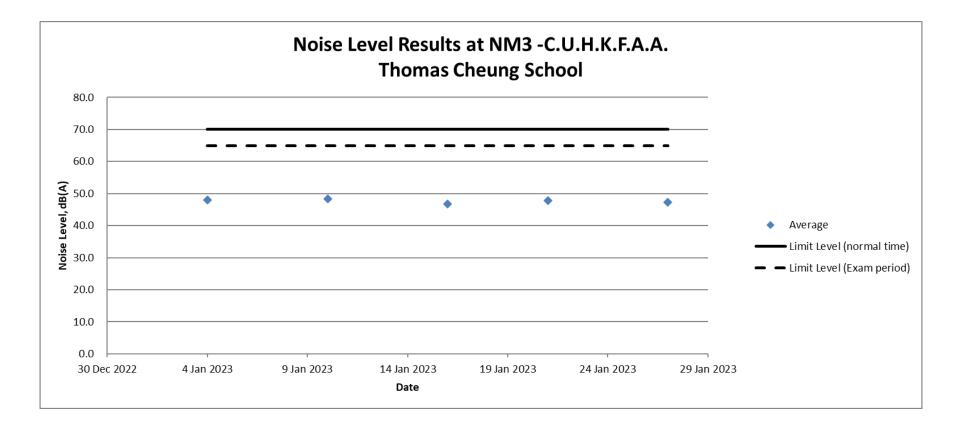
															SENSO	RS		
SENSOR	1000	2000	2500	3000	3500	3500	4000	4200	4250	4300	4400	4500	4500	ACCURACY (+/-)*	RESOLUTION	SPECIFICATION RANGE	OPERATIONAL RANGE	NOTES
Wind Speed Air Flow	•	•	•	•	•	•	•	•	•	•	•	•	•	Larger of 3% of reading, least significant digit or 20 ft/min	0.1 m/s 1 ft/min 0.1 km/h 0.1 kmots 1 B	0.6 to 40.0 m/s 118 to 7,874 ft/min 2.2 to 144.0 km/h 1.3 to 89.5 mph 1.2 to 77.8 knots 0 to 12 B	0.6 to 60.0 m/s 118 to 11,811 ft/min 2.2 to 216.0 km/h 1.3 to 134.2 mph 1.2 to 116.6 kmots 0 to 12 B	1 inch/25 mm diameter impeler with precision axie and low-friction Zytel8 bearings. Startup s statud as sover imit, readings may be taken down to 04 mm (7 Britmin 11 Shrmh 1 Bryth). Effort impeler statud as 04 mm (2 Britmin 11 Shrmh 1 Bryth). Effort and the regimeter statud of the down to 04 mm (2 Britmin 11 Shrmh 1 Bryth). Effort and the regimeter statud are been down to 04 mm (2 Britmin 11 Shrmh 1 Bryth). The reading statud are shown to 04 mm (2 Britmin 11 Shrmh 1 Bryth). The reading statud are shown to 04 mm (2 Britmin 11 Shrmh 1 Bryth). The reading statud are been down to 04 mm (2 Britmin 15 7 Shrmh 25 7 Shrmh 1 Bryth).
Ambient Temperature	V	•	•	•	•	•	•	•	•	•		•	•	0.9 *F 0.5 *C	0.1 *F 0.1 *C	-20.0 to 158.0 *F -29.0 to 70.0 *C	14.0.0 to 131.0 "F -10.0 to 55.0 "C	Hermelically-seaked, precision thermitor mounted externally and thermally licelated (US Paik 5.936.645) for rapidr response. Altificior 0.2 mpc/1 mm or greater provide fattest response exaction of molecular offset. C alternal on thregidging. Thermater may also be used to may be used to make the second seco
Globe Temperature - Tg								-			•			*F 1.4 *C	0.1 *F 0.1 *C	-20.0 to 140.0 °F -29.0 to 60.0 °C	14.0 to 131.0 *F -10.0 to 55.0 *C	Temperature inside 1in 25 mm black powder coated copper globe converted to Tg equivalent standard 6 in 150 mm globe. Closest equivalence obtained with airflow greater than 2.2 mph m/s.
Relative Humidity				•	•	•	•	•	•	•	•	•	•	3.0 %RH	0.1 %RH	5 to 95% non-condensing	0 to 100%	Polymer capacitive humidity sensor mounted in thin-walled chamber external to case for rapic accurate response (US Plante 6.257 2074). To achieve stated accuracy, unit mat be permit equilibrate to activate la Imprature wall en exposed to large, rapid temperature damps and b out of direct sunight. California of the -2% over 24 months. Humidity sensor may be recall at factory or in fault using Kastel Humiding California for (MR PH-0602).
Pressure	1	-01	•	14	•	•	•		•	•		•	•	0.03 inHg 1.0 hPaImbar 0.01 PSI	0.01 inHg 0.1 hPajmbar 0.01 PSI	8.86 to 32.49 inHg 300.0 to 1100.0 hPajmbar 4.35 to 15.95 PSI and 32.0 to 185.0 *F 0.0 to 85.0 *C	0.30 to 48.87 in Hg 10.0 to 1654.7 h Palmbar 0.14 to 24.00 PSI and 14.0 to 131.0 °F -10.0 to 55.0 °C	Monothics sillion piecewsitely pressure sensor with second order temperature controllon- Pressure sensor may be nearbitrated at tochyo in field. Adjustable reference attubus also display of tation pressure on anometric pressure connected to MSL. Kestini 4.200 display attation pressure on addicated screen. Restriet 2000 and 3000 display continuously update three-hour barometric pressure trend indicator: main graphy, ning, steady, falling, falling na kestitel 4000 estes displays on sexite tend frough graphing function. PSI display on Kestite
Compass		153						1919 1-1-1-1				•	•	5*	1* 1/16th Cardinal Scale	0 to 360*	0 to 360°	400 series only. 2-axis sole-state magnetoresistive sensor mounted perpendicular to unit plane. Accuracy of sensor dependent upon unit's vertical populion. Self-aultication routine eliminates imagnetic en from bittines or unit anomato te un after every full power-down (bittiney removal or change increation). Declarationariation advatable for Time North read-unit.
						18								CALCUL		SUREMENTS		
MEASUREMENT	1000	2000	2500	3000	3500	3500 DT	4000	4200	4250	4300	4400	4500	4500 HOR	ACCURACY (+/-)*	RESOLUTION	SPECIFICATION RANGE	SENSORS EMPLOYED	NOTES
Air Density	1	-	1		123	Y	1	•	•		13	31	3.23	0.0002 lb/tt ³ 0.0033 kg/m ³	0.001 lbs/ft ³ 0.001 kg/m ³	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Mass of air per unit volume
Air Flow								•	-					6.71%	1 cfm 1 m ³ /hr 1 m ³ /m 0.1m ³ /s 1 L/s	Refer to Ranges for Sensors Employed	Air Flow User Input (Duct Shape & Size)	Volume of air flowing through an opening. Automatically calculated from Air Velocity measure and user-specified duct shape (circle or rectangle) and dimensions (units, in ft, cm or m). Maximum duct dimension input: 258.0 in 21.5 ft 655.3 cm 6.35 m.
Altitude			•		•	•	•	•	•	•	•	•	•	typical: 23.6 ft 7.2 m max: 48.2 ft 14.7 m	1 ft 1 m	typical: 750 to 1100 mBar max: 300 to 750 mBar	Pressure User Input (Reference Pressure)	Height above Mean Sea Level ("MSL"). Temperature compensated pressure (barometric) altimeter requires accurate reference barometric pressure to produce maximum absolute accuracy. Both accuracy specs corresponds to a reference pressure anywhere from 850 to mBar.
Barometric Pressure			•		•	•	•	•	•	•	•	•	•	0.07 inHg 2.4 hPa mbar 0.03 PSI	0.01 inHg 0.1 hPa mbar 0.01 PSI	Refer to Ranges for Sensors Employed	Pressure User Input (Reference Altitude)	Air pressure that would be present in identical conditions at MSL. Station pressure compensation local elevation provided by reference abitude. Requires accurate reference abitude to pro maximum absolute accuracy.
Crosswind & Headwind/Tailwind											rin		•	7.1%	1 mph 1 ft/min 0.1 km/h 0.1 m/s 0.1 knots	Refer to Ranges for Sensors Employed	Wind Speed Compass	Effective wind relative to a target or travel direction. Auto-switching headwindtailwind indicate
Delta T	18		an		an	•							ins	3.2 *F 1.8 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Difference between dry bulb temperature and wet bulb temperature. When spraying, indicate evaporation rate and droplet lifetime. Safe range for pesticide spraying is 4 to 16 $^{\circ}$ / 2 to 9 $^{\circ}$
Density Altitude							•	•	•	•	•	•	•	226 ft 69 m	1 ft 1 m	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Local air density converted to equivalent elevation above sea level in a uniform layer consisti the International Standard Atmosphere.
Dewpoint				•	•	•	•	•	•		•	•	•	3.4 *F 1.9 *C	0.1 *F 0.1 *C	15 to 95 % RH Refer to Range for Temperature Sensor	Temperature Relative Humidity	Temperature that a volume of air must be cooled to at constant pressure for the water vapor present to condense into dew and form on a solid surface. Can also be considered to be the water-to-air saturation temperature.
Evaporation Rate										•				0.01 lb/ft ² /hr 0.06 kg/m2/hr	0.01 b/ft²/hr 0.01 kg/m²/hr	Refer to Ranges for Sensors Employed	Wind Speed Temperature Relative Humidity Pressure User Input (Concrete Temperature)	The rate at which moleture is lost from the surface of curing concrete. Requires user measurement and entry of concrete temperature obtained with an accurate IR or probe thermometer ("F or "C, not included). Readings should be taken 20 inches above pour surfac with the thermiser braked, and averaged for 5-10 seconds using built-in waveraging function.
Heat Index		121	•	1.	•	1231	•	•	•	•	•	•	•	7.1 *F 4.0 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity	Perceived temperature resulting from the combined effect of temperature and relative humidit Calculated based on NVNS Heat Index (HI) tables. Measurement range limited by extent of published tables.
Moisture Content Humidity Ratio ("Grains")								•	•					.3 gpp .04 g/kg	0.1 gpp 0.01 g/kg	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Mass of water vapor in a mass of air.
Relative Air Density									•					0.3%	0.1%	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	The ratio, expressed as a percentage, of measured air density to the air density of a standard atmosphere as defined by the ICAO.
Thermal Work Limit (TWL)														10.9 W/m ²	0.1 W/m ²	Refer to Ranges for Sensors Employed	Wind Speed Temperature Giobe Temperature Relative Humidity Pressure	Estimated safe maximum continuously sustainable human metabolic rate (Wim2) for the conditions and clothing factors. Based off of estimated metabolic output of typical human. On screen zone warnings.
Outdoor Wet Bulb Globe Temperature (WBGT)											•			1.3 °F 0.7 °C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Wind Speed Temperature Globe Temperature Relative Humidity Pressure	Measure of human heat stress defined as the combination of effects due to radiation, convec and conduction. Outdoor WBGT is calculated from a weighted sum of natural wet bub (Triwb) globe temperature (Tg), and dry bub temperature (Td). User settable on-screen warning zone
Wet Bulb Temperature - aturally Aspirated (Tnwb)					23	112	18	3. "F) 11		•	101		1.4 *F 0.8 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Wind Speed Temperature Globe Temperature Relative Humidity Pressure	Similar to psychrometric web-bub temperature (see below). However, Trub only undergoes for convection from the ambient air velocity. Trub is a measure of the evaporative cooling that th will allow. This is accounted for by combining the effects of, mainly, relative humidity and windspeed.
Wet Bulb Temperature - Psychrometric					•	•	•		•	•	•	•	•	3.2 °F 1.8 °C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity Pressure	Temperature indicated by a sling psychrometer. Due to nature of the psychrometric ratio for water-air system, this approximates the thermodynamic wei-bub temperature. The thermodyn wei-bub temperature is the temperature a parcel of air would have if cooled adiabatically to saturation temperature via water evaporating into it.
Wind Chill		•			•		•	•		•	•	•	•	1.6 *F 0.9 *C	0.1 *F 0.1 *C	Refer to Ranges for Sensors Employed	Wind Speed Temperature	Perceived temperature resulting from combined effect of wind speed and temperature. Calcul based on the NWS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed adju by a factor of 1.5 to yield equivalent results to wind speed measured at 10 m above ground. Measurement range limited by extern of published tables.
																CIFICATIONS		
Display & Backlight		•	•								AND CONTRACTOR	CONT.		Reflective 5 digit LCD. D	Digit height 0.36 in / 9 r	nm. Choice of aviation green of	iuminescent backlight. Manual activation or visible red (NV models only) electrol	uminescent backlight. Manual activation with auto-off.
Response Time & Display Update	•	•	•	•	•	•	•	•	•	•	•	•		All measurements except equilibrate to a large cha	ot those based on relations in the measurements of		ly within 1 second. Relative humidity a tes every 1 second.	viectroluminescent backlight. Automatic or manual activation. nd all measurements which include RH in their calculation may require as long as 1 minute to ful
Max/Avg Wind			-				•	•	•	•	•	•	•					with all other wind-related functions: air velocity, crosswind, headwind/tailwind, wind chill, WBGT
Data Storage & Graphical Display, Min/Max/Avg History										• 3600 points			• 2500	Minimum, maximum, ave				ta logger with graphical display. Mariual and auto data storage. Min/Max/Avg history may be res y off except for 2 and 5 second intervals (code version 4.18 and later). Data capacity shown.
ata Upload & Bluetooth® Data Connect Option								•	•	•	•	•		Bluetooth Data Trans pairing and transmitting.	fer Option: Adjustabl Employs Bluetooth Se	32) or Bluetooth data transfer e power consumption and radi rial Port Protocol for data tran 32) or Bluetooth data transfer	io range from up to 30 ft 9 meters. In smission.	sividual unit ID and 4-digit PIN code preprogrammed for easy identification and data security whe
Clock / Calendar					•		•	•			•	•		Requires optional PC int	erface (USB or RS-23	 or Bluetooth data transfer or Bluetooth data transfer or Bluetooth data transfer 	option and provided software.	Western refer to the transfer of
Auto Shutdown Languages							•	•	*	*	•	•		Requires optional PC int English, French, German	erface (USB or RS-23 n, Italian, Spanish.	32) or Bluetooth data transfer	option and provided software.	
Certifications Origin	•	*	*	*	*	•	*	•	•		•	•		CE certified, RoHS and Designed and manufact	WEEE compliant. Inde ured in the USA from U	JS and imported components.		ts available at additional charge). t and Tariff Code Transformation requirements for NAFTA Preference Criterion B.
Battery Life	•	•	•	•	•	•	•				•	•		Standard Models: AA	A Alkaline, two, include	d. Average life, 400 hours of u	klight use in 2000 to 3500 models. use, reduced by backlight or Bluetooth	radio transmission use.
Shock Resistance Sealing	•	•	•		•	•	•	•	•	•	•	•		Waterproof (IP67 and N	EMA-6).		t may damage replaceable impeller.	nge of the display and batteries by maintaining the unit within the operational range and exposin
Operational Temperature Limits Storage Temperature	*	•	•	•	*	*	*	*	*	•	•	*		14" F to 131" F -10 "C to the more extreme env -22.0 "F to 140.0 "F -3	ironment for the minim	nts may be taken beyond the li num time necessary to take rea	ading.	nge or one weavery and batteries by maintaining, the unit within the operational range and exposin
atorage remperature		•	•				-		-		-	-		4.8 x 1.9 x 1.1 in / 12.2 >	4.8 x 2.8 cm, 3.6 oz /	102 g (including slip-on cover)).	
Size & Weight														5.0 x 1.8 x 1.1 in / 12.7 x	45x28 m 20	102 g		

Please note, these specifications are valid for all Kestrel 4400 products and all other Kestrel 4000 series with a serial number higher than 659340. If your product has a lower serial number, please reference the previous version of the specifications.

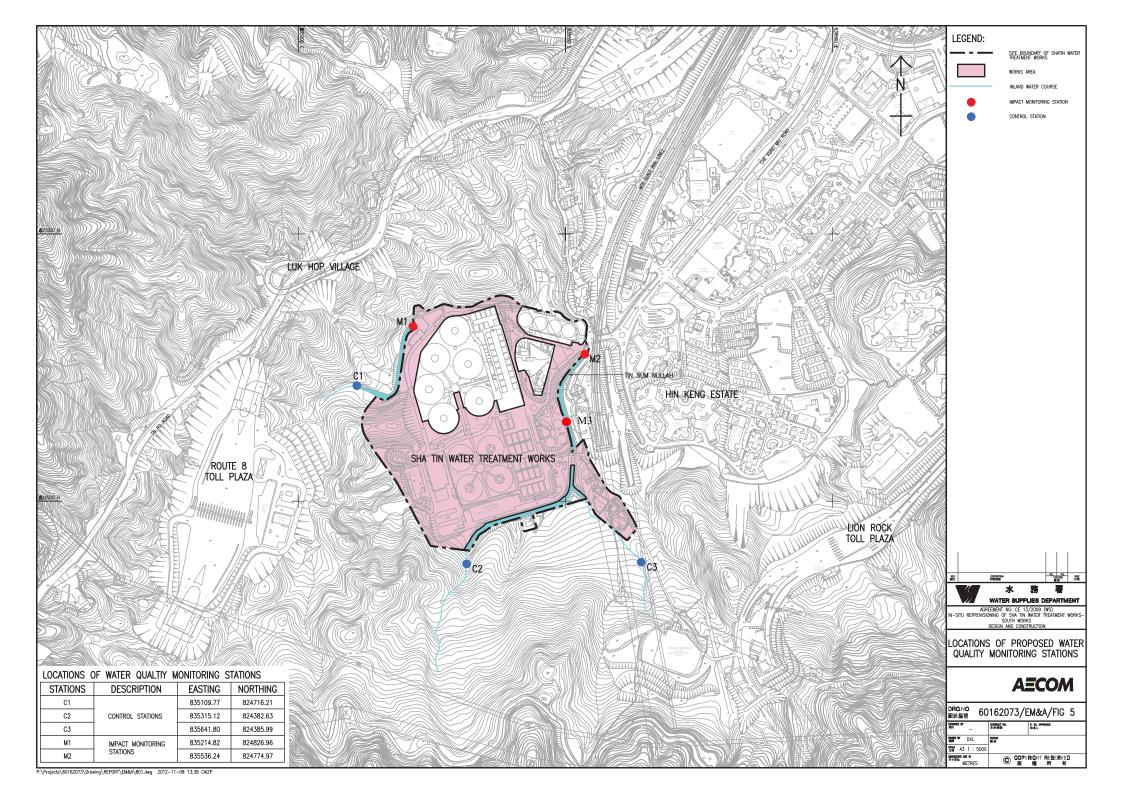
Appendix N Impact Noise Monitoring Results and Graphical Presentation







Appendix O Location Plan of Water Quality Monitoring Station



Appendix P Calibration Certificate (Water Quality)



專業化驗有限公司 QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. Date of Issue Page No. : R-BB110013 : 17 November 2022 : 1 of 2

PART A - CUSTOMER INFORMATION

Acumen Environmental Engineering and Technologies Company Limited Unit D, 12/F Ford Glory Plaza No. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	HORIBA U-53
Manufacturer :	HORIBA
Serial Number :	TY4X3U54
Date of Received :	07 November 2022
Date of Calibration :	16 November 2022
Date of Next Calibration :	16 February 2023
Request No. :	D-BB110013

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21e 2130 B
Oxidation-Reduction Potential	APHA 22e 2580 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result	
4.00	3.87	-0.13	Satisfactory	
7.42	7.39	-0.03	Satisfactory	
10.01	9.97	-0.04	Satisfactory	

Tolerance of pH value should be less than \pm 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
10	10.63	0.63	Satisfactory
20	20.28	0.28	Satisfactory
31	31.08	0.08	Satisfactory

Tolerance of Temperature should be less than $\pm\,2.0$ ($^{\circ}C$)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.51	-4.90	Satisfactory
20	19.03	-4.85	Satisfactory

--- CONTINUED ON NEXT PAGE ----

AUTHORIZED SIGNATORY:

LEE Chun-ning

Assistant Manager (Chemical Testing)

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專業化驗有限公司 QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

	Test Report	No. : R-BB1	10013
	Date of Issue	: 17 Nov	vember 2022
	Page No.	: 2 of 2	
 Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
30	29.10	-3.00	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.88 ,	7.54	-0.34	Satisfactory
4.52	4.09	-0.43	Satisfactory
1.43	1.00	-0.43	Satisfactory
0.00	0.00	0.00	Satisfactory

Tolerance of Dissolved oxygen should be less than $\pm\,0.5$ (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result Satisfactory	
0	0.00			
10	10.6	6.0	Satisfactory	
20	21.2	6.0	Satisfactory	
100	108	8.0	Satisfactory	
800	816	2.0	Satisfactory	

Tolerance of Turbidity should be less than \pm 10.0 (%)

(6) Oxidation-Reduction Potential

Expected Reading	Display Reading	Tolerance	Result
229	227	-2	Satisfactory

Tolerance of Oxidation-Reduction Potential should be less than \pm 10.0 (mV)

Remark(s)

. The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.

The results relate only to the calibrated equipment as received

•The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

· "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

•The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

--- END OF REPORT ---

Appendix Q The Certification of Laboratory with HOKLAS accredited Analytical Tests

Project no.: CJO-3113



Hong Kong Accreditation Service 香港認可處

Certificate of Accreditation 認可證書

This is to certify that 特此證明

ACUMEN LABORATORY AND TESTING LIMITED 浩科檢測中心有限公司

Lot 12, Tam Kon Shan Road, North Tsing Yi, New Territories, Hong Kong 香港新界青衣北担杆山路12路段

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a 在認可諮詢委員會的建議下獲香港認可處執行機關接受為

HOKLAS Accredited Laboratory 「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO/IEC 17025:2005 and it has been accredited for performing specific tests or calibrations as listed in the scope of accreditation within the test category of

Environmental Testing

此實驗所符合ISO/IEC 17025:2005所訂的要求 並獲認可進行載於認可範圍內下述測試類別中的指定測試或校正工作

環境測試

This accreditation to ISO/IEC 17025:2005 demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (see joint IAF-ILAC-ISO Communiqué). 此页 ISO/IEC 17025:2005 的認可資格證明此實驗所認可合作組織及國際標準化組織的聯合公報)。 實施一套實驗所質量管理體系(見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive 現經香港認可處執行機關授權在此蓋上香港認可處的印章

Chor

WONG Wang-wan, Executive Administrator 執行幹事 黄宏華 Issue Date:16 July 2014 簽發日期:二零一四年七月十六日

Registration Number : HOKLAS 241 註冊號碼:

This certificate is issued subject to the terms and conditions laid down by HKAS 本證書按照香港認可處訂立的條款及條件發出



Date of First Registration : 16 July 2014 首次註冊日期:二零一四年七月十六日

∟001195

Appendix R Impact Water Quality Monitoring Results

Date	Time	Weather	Location	Co-ord	linates	Water Depth	Sample Depth	Te	mp.	DO	con.	Turb	oidity	р	н	SS
				East	North	m	m	c	с	m	g/L	N	TU	u	nit	mg/L
	12:36	Fine	C1	835110	824716	0.04	0.02	22.99	22.91	8.25	8.94	1.12	1.24	7.32	7.38	<1
	12:58	Fine	C2	835403	824470	0.02	0.01	22.97	22.75	13.29	14	1.86	1.78	7.67	7.76	<1
3/1/2023	N/A	Fine	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5/ 1/ 2025	12:06	Fine	M1	835215	824827	0.8	0.4	23.21	23.22	12.4	12.53	4.33	4.31	7.18	7.06	2.0
	11:18	Fine	M2	835536	824775	0.05	0.025	23.09	23.13	12.92	13.05	5.43	5.38	6.71	6.85	1.9
	11:30	Fine	M3	835501	824648	0.02	0.01	22.83	22.78	13.58	12.71	0.63	0.56	7.62	7.52	<1
					_											
	9:35	Sunny	C1	835110	824716	0.04	0.02	22.6	22.52	13.77	12.39	-	2.05		6.79	1.5
	9:59	Sunny	C2	835403	824470	0.02	0.01	22.47	22.25	11.28	11.4		1.34		7.41	<1
5/1/2023	N/A	Sunny	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5, 1, 2025	9:40	Sunny	M1	835215	824827	0.8	0.4	22.21	22.35	11.9	12.09		0.85	7.68	7.75	<1
	9:55	Sunny	M2	835536	824775	0.05	0.025	22.64	22.64	12.73	12.14		4.73		6.7	2.1
	9:56	Sunny	M3	835501	824648	0.02	0.01	22.49	22.4	13.62	12.62	0.74	0.66	7.82	7.86	<1
	9:26	Fine	C1	835110	824716	0.04	0.02	23.09	23.03	13.69	12.45		3.13			2.3
	9:55	Fine	C2	835403	824470	0.02	0.01	20.23	20.49	12.59	12.24		0.93			<1
7/1/2023	N/A	Fine	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
.,_,	9:31	Fine	M1	835215	824827	0.8	0.4	22.03	21.79	12.61	11.84		3.79		8.06	1.7
	9:50	Fine	M2	835536	824775	0.05	0.025	21.1	21.15	18.34	11.23	-	1.31	8.4	8.43	<1
	9:52	Fine	M3	835501	824648	0.02	0.01	20.03	20.37	13.01	13.02	0.41	0.53	8.28	8.23	<1
		_														
	9:22	Fine	C1	835110	824716	0.04	0.02	23.32	23.3	11.93	11.19		3.97	-	7.47	2.8
	10:05	Fine	C2	835403	824470	0.02	0.01	20.04	19.71	10.59	13.92		1.26		8.34	<1
9/1/2023	N/A	Fine	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10:39	Fine	M1	835215	824827	0.8	0.4	23.11	23.08	10.59	10.36	-	3.19		8.04	1.9
	9:27	Fine	M2	835536	824775	0.05		20.55	20.02	13.4 9.85	14.05		1.39 0.57	-	8.37 8.26	<1 <1
	10:03	Fine	M3	835501	824648	0.02	0.01	20.57	19.76	9.85	15.99	0.52	0.57	8.27	8.26	<1
	9:32	cloudy	C1	835110	824716	0.04	0.02	23.17	23.16	11.13	11.28	2.81	2.74	7.82	7.87	1.9
	9:32	cloudy	C1 C2	835403	824716	0.04	0.02	23.17	23.16	9.72	9.75	-	2.74	7.82	8.09	<1
	10.05 N/A	cloudy	C2 C3	835642	824386	0.02 N/A	0.01 N/A	22.33 N/A	22.30 N/A	9.72 N/A	9.75 N/A	N/A	N/A	7.97 N/A	8.09 N/A	N/A
11/1/2023	9:37	cloudy	M1	835215	824827	0.8	0.4	22.18	22.17	12.45	11.81	1.66	1.61	7.99	7.92	<1
	9:57	cloudy	M2	835536	824827	0.8	0.025	22.18	22.17	12.45	11.81		5.4		8.16	3.1
	9:58	cloudy	M3	835501	824648	0.05	0.025	22.98	-	12.4	11.63	-	0.85	-		<1
	10.00	ciouuy	CIVI	100000	024040	0.02	0.01	22.30	22.5	10.48	10.03	0.81	0.85	0.34	6.5	×1
	12:18	Cloudy	C1	835110	824716	0.04	0.02	23.56	23.6	10.43	10.06	2.91	2.75	7.74	7.56	2.2
	12:40	Cloudy	C2	835403	824470	0.04	0.02	23.53	23.51	8.99	9.96	-	0.77	6.99		<1
	N/A	Cloudy	C2 C3	835642	824386	0.02 N/A	N/A	23.33 N/A	N/A	N/A	N/A	N/A	N/A	0.55 N/A	0.3 N/A	N/A
13/1/2023	11:39	Cloudy	M1	835215	824827	0.8	0.4	23.88	23.88	13.64	12.2		3.55	8.14	8.1	2.4
	10:55	Cloudy	M2	835536	824775	0.05	0.025	23.12	23.14	15.04	18.95	1.12	1.2	7.8	7.85	1.4
	10:55	Cloudy	M3	835501	824648	0.03	0.025	23.12	-	11.92	13.46		0.55	-		<1
	11.07	cioudy	1415	555501	52-10-10	0.02	0.01	25.55	23.0	11.52	13.40	5.47	0.00	0.10	0.21	

	12:26	Fine	C1	835110	824716	0.04		22.79		10.61	10.64		2.41		7.22	1.7
	12:42	Fine	C2	835403	824470	0.02	0.01			10.05			0.81	8.02	8	<1
16/1/2023	N/A	Fine	C3	835642		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A
	11:48	Fine	M1	835215	824827	0.8	0.4	22.07	22.05	11.53	11.78		3.39		7.57	1.6
	11:02	Fine	M2	835536	824775	0.05	0.025	21.55	21.54	13.49		-	1.33			<1
	11:17	Fine	M3	835501	824648	0.02	0.01	21.72	21.71	11.82	11.64	0.69	0.85	8.01	8	<1
	0.54	El a c	64	025440	024746	0.04	0.00	24.02	24.02	10.01	40.50	4.22	4.42	7.70	7.0	.4
	9:54	Fine	C1	835110	824716	0.04	0.02	21.83		10.91	10.58		1.42			<1
	9:39	Fine	C2	835403	824470	0.02	0.01	21.74		13.71	13.81		1.46			<1
18/1/2023	N/A	Fine	C3	835642		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A 7.02	N/A
	9:59	Fine	M1	835215	824827	0.8		22.26		11.32	11.06		4.29	7.95	7.93	1
	9:34	Fine	M2	835536	824775	0.05	0.025	22.24	21.91	10.2	10.57	4.4	4.52	7.4	7.42	<1
	9:36	Fine	M3	835501	824648	0.02	0.01	21.72	21.67	11.94	11.46	1.04	0.99	7.6	7.51	<1
	12:02	Fine	C1	835110	824716	0.04	0.02	22.19	22.21	10.19	10.37	2.25	2.34	6.74	6.84	1.3
	12:02	Fine Fine	C1 C2	835403	824716	0.04	0.02	22.19	22.21	8.33	8.19	-	2.34	-		<1
		Fine	C2 C3	835642	824386	0.02 N/A	0.01 N/A	21.87 N/A	21.00 N/A	8.33 N/A	8.19 N/A	1.00 N/A	1.75 N/A	8.20 N/A	0.10 N/A	N/A
20/1/2023	N/A 11:21	Fine	M1	835215	824827	0.8	0.4	22.05	22.05	13.2	12.99		2.68		7.29	1.8
		-						22.05								-
	10:30 10:43	Fine Fine	M2 M3	835536 835501	824775 824648	0.05	0.025	21.77	21.82 21.92	10.42 12.9	9.78 13.74		1.8 1.09		8.39 7.61	<1 <1
	10:43	Fine	1713	835501	824048	0.02	0.01	21.93	21.92	12.9	13.74	1.05	1.09	7.51	7.01	٤1
	10:35	Fine	C1	835110	824716	0.04	0.02	21.34	21.34	9.82	9.81	2.77	2.8	7.76	7.68	<1
	10:50	Fine	C2	835403	824470	0.02	0.01	21.35	21.34	9.95			2.32			<1
26/4/2022	N/A	Fine	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26/1/2023	10:15	Fine	M1	835215	824827	0.8	0.4	20.71	20.78	13.33	12.25	4.25	4.32	7.92	7.98	1.2
	9:31	Fine	M2	835536	824775	0.05	0.025	22.52	22.52	13.53	13.13	5.31	5.11	8.12	8.24	1.3
	9:34	Fine	M3	835501	824648	0.02	0.01	21.16	21.21	11.78	11.91	1.06	1.09	8.27	8.32	<1
	10:16	Sunny	C1	835110	824716	0.04	0.02	19.02	18.99	9.27	8.48	3.45	3.34	7.89	7.87	1.6
	10:28	Sunny	C2	835403	824470	0.02	0.01	18.41	18.42	12.17	12.46	2.96	2.92	8.27	8.31	<1
28/1/2023	N/A	Sunny	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20/ 1/ 2023	10:02	Sunny	M1	835215	824827	0.8	0.4	19.4	19.48	14.52	14.22	2.86	3.03	8.15	8.14	<1
	9:40	Sunny	M2	835536	824775	0.05	0.025	18.06	18.23	12.33	11.93	7.35	6.68	8.52	8.44	2.5
	9:43	Sunny	M3	835501	824648	0.02	0.01	19.22	19.2	14.11	14.76	1.04	1.07	8.37	8.43	<1
	10:56	Fine	C1	835110	824716	0.04	0.02	20.77	20.75	10.13	10.87	3.61	3.55	7.48	7.56	<1
	11:08	Fine	C2	835403	824470	0.02	0.01	19.38	20.75	10.8	10.65	3.09	3.1	8.4	8.41	<1
30/1/2023	N/A	Fine	C3	835642	824386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50/ 1/ 2025	10:36	Fine	M1	835215	824827	0.8	0.4	21.12	21.11	12.02	11.72	4.02	4.18	6.86	6.96	1.4
	10.00	Fine	M2	835536	824775	0.05	0.025	20.86	20.97	10.85	11.79	4.49	4.5	8.17	8.11	1.4
	10:09	THE	IVIZ	033330	024775	0.05	0.025	20.00	20.57	10:05			-	-		

Remark 1: Values that are <1 is assumed to be 1 during calculation.

There were 0 exceedances of Action Level and 0 exceedance of Limit Level.

Acumen Laboratory and Testing Limited

Flat/Rm D, 12/F, Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong Tel: (852) 2333 6823 Fax: (852) 2333 1316

		<u>Test Report</u>	
Report Number	:	Q220002aR230001	Page 1 of
Job Number	:	R230001	
Issue Date	:	05/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies	s Co, Ltd.
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong S	Street,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1096	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	03/01/2023	
Date Samples Received	•	03/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230001/1-5	
Test Period	:	03/01/2023 – 04/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	6

2

Test Result

: Refer to the results on page 2

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

•

Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Report Number	:	Q220002aR230001	
Job Number	:	R230001	

05/01/2023 : Issue Date

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230001/1	03/01/2023	C1	<1
R230001/2	03/01/2023	C2	<1
R230001/3	03/01/2023	M1	2.0
R230001/4	03/01/2023	M2	1.9
R230001/5	03/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1.

< indicates less than. 2.

Reporting limit is 2.5mg/L for 1L sample 3.

Reporting limit is 1 mg/L for 2.5L sample 4.

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant. 5.

The result(s) relate only to the item(s) tested. 6.

The result(s) are applied only to the sample(s) received. 7

End of Report

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Test Report

Report Number	:	Q230002aR230022 Page 1 of 2	
Job Number	:	R230022	
Issue Date	:	11/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies Co, Ltd.	
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong Street,	
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1097	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	05/01/2023	
Date Samples Received	:	05/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230022/1-5	
Test Period	:	05/01/2023 – 06/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	

Test Result

: Refer to the results on page 2

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Page 2 of 2

Report Number:Q230002aR230022Job Number:R230022Issue Date:11/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230022/1	05/01/2023	C1	1.5
R230022/2	05/01/2023	C2	<1
R230022/3	05/01/2023	M1	<1
R230022/4	05/01/2023	M2	2.1
R230022/5	05/01/2023	М3	<1

Note:

1. mg/L indicates milligram per liter

2. < indicates less than.

3. Reporting limit is 2.5mg/L for 1L sample

4. Reporting limit is 1 mg/L for 2.5L sample

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.

The result(s) relate only to the item(s) tested.

7. The result(s) are applied only to the sample(s) received.

End of Report

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Test Report

		Test Report	
Report Number	:	Q230002aR230023	age 1 of 2
Job Number	:	R230023	
Issue Date	:	11/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies Co,	, Ltd.
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong Stree	et,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1098	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	07/01/2023	
Date Samples Received	:	07/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230023/1-5	
Test Period	:	07/01/2023 – 08/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	

Test Result

Refer to the results on page 2

:

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

Flat/Rm D, 12/F, Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong Tel: (852) 2333 6823 Fax: (852) 2333 1316

Test Report

Report Number	:	Q230002aR230023
Job Number	:	R230023
Issue Date	:	11/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230023/1	07/01/2023	C1	2.3
R230023/2	07/01/2023	C2	<1
R230023/3	07/01/2023	M1	1.7
R230023/4	07/01/2023	M2	<1
R230023/5	07/01/2023	М3	<1

Note:

1. mg/L indicates milligram per liter

2. < indicates less than.

3. Reporting limit is 2.5mg/L for 1L sample

4. Reporting limit is 1 mg/L for 2.5L sample

5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.

6. The result(s) relate only to the item(s) tested.

7. The result(s) are applied only to the sample(s) received.

End of Report

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Test Report

Report Number	:	Q230002aR230026 Page 1 of 2	
Job Number	:	R230026	
Issue Date	:	13/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies Co, Ltd.	
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong Street,	
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1099	
Test Required	÷	Total Suspended Solids (TSS)	
Sampling Date	:	09/01/2023	
Date Samples Received	:	09/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230026/1-5	
Test Period	:	09/01/2023 – 10/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	

Test Result

Refer to the results on page 2 :

> For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntingtor

Laboratory Manager

:

Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Page 2 of 2

Report Number	•	Q230002aR230026
Job Number	:	R230026
Issue Date	:	13/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230026/1	09/01/2023	C1	2.8
R230026/2	09/01/2023	C2	<1
R230026/3	09/01/2023	M1	1.9
R230026/4	09/01/2023	M2	<1
R230026/5	09/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1.

< indicates less than. 2.

Reporting limit is 2.5mg/L for 1L sample Reporting limit is 1 mg/L for 2.5L sample 3.

4.

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant. 5.

The result(s) relate only to the item(s) tested. 6.

The result(s) are applied only to the sample(s) received. 7

End of Report

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Test Report

		Test Report	Dogo 1 of 2
Report Number	:	Q230002aR230033	Page 1 of 2
Job Number	:	R230033	
Issue Date	:	14/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologie	s Co, Ltd.
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong	Street,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1100	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	11/01/2023	
Date Samples Received	:	11/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230033/1-5	
Test Period	:	11/01/2023 – 12/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solid	ls

Test Result

Refer to the results on page 2

:

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager

Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Report Number	:	Q230002aR230033
Job Number	:	R230033
Issue Date	:	14/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230033/1	11/01/2023	C1	1.9
R230033/2	11/01/2023	C2	<1
R230033/3	11/01/2023	M1	<1
R230033/4	11/01/2023	M2	3.1
R230033/5	11/01/2023	М3	<1

Note:

1. mg/L indicates milligram per liter

2. < indicates less than.

3. Reporting limit is 2.5mg/L for 1L sample

4. Reporting limit is 1 mg/L for 2.5L sample

5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.

6. The result(s) relate only to the item(s) tested.

The result(s) are applied only to the sample(s) received.

End of Report

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			0.1493
Report Number	:	Q230002aR230056 Page 1 o	of 2
Job Number	:	R230056	
Issue Date	:	19/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies Co, Ltd.	
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong Street,	
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1101	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	13/01/2023	
Date Samples Received	•	13/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	•	HDPE Plastic Bottles	
Laboratory ID	:	R230056/1-5	
Test Period	:	13/01/2023 – 14/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	

Test Result

Refer to the results on page 2

1

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Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

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Test Report

Report Number	:	Q230002aR230056
Job Number	:	R230056

19/01/2023 Issue Date :

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230056/1	13/01/2023	C1	2.2
R230056/2	13/01/2023	C2	<1
R230056/3	13/01/2023	M1	2.4
R230056/4	13/01/2023	M2	1.4
R230056/5	13/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1.

< indicates less than. 2.

Reporting limit is 2.5mg/L for 1L sample 3.

Reporting limit is 1 mg/L for 2.5L sample 4.

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant. 5.

The result(s) relate only to the item(s) tested. 6.

The result(s) are applied only to the sample(s) received. 7

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Report Number	:	Q230002aR230059	Page 1 of 2
Job Number	:	R230059	
Issue Date	:	26/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies	Co, Ltd.
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong S	treet,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1102	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	16/01/2023	
Date Samples Received	:	16/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230059/1-5	
Test Period	:	16/01/2023 – 17/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	

Test Result

Refer to the results on page 2

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Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

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Test Report

Report Number	:	Q230002aR230059
Job Number	:	R230059
Issue Date	:	26/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230059/1	16/01/2023	C1	1.7
R230059/2	16/01/2023	C2	<1
R230059/3	16/01/2023	M1	1.6
R230059/4	16/01/2023	M2	<1
R230059/5	16/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1.

< indicates less than. 2.

Reporting limit is 2.5mg/L for 1L sample 3

Reporting limit is 1 mg/L for 2.5L sample 4.

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant. 5.

The result(s) relate only to the item(s) tested. 6.

The result(s) are applied only to the sample(s) received. 7

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Test Report

		rest Report	
Report Number	;	Q230002aR230063	Page 1 of 2
Job Number	÷	R230063	
Issue Date	:	26/01/2023	
Applicant Name	:	Acumen Environmental Engineering and Technologies	
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong S	treet,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1103	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	18/01/2023	
Date Samples Received	:	18/01/2023	
Sample Nature	:	Water	
Number of Samples Received		5	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230063/1-5	
Test Period	:	18/01/2023 – 19/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	

Test Result

Refer to the results on page 2 :

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Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager

Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Report Number	:	Q230002aR230063
Job Number	:	R230063
Issue Date	:	26/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230063/1	18/01/2023	C1	<1
R230063/2	18/01/2023	C2	<1
R230063/3	18/01/2023	M1	1.0
R230063/4	18/01/2023	M2	<1
R230063/5	18/01/2023	М3	<1

Note:

1. mg/L indicates milligram per liter

2. < indicates less than.

3. Reporting limit is 2.5mg/L for 1L sample

Reporting limit is 1 mg/L for 2.5L sample

5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.

6. The result(s) relate only to the item(s) tested.

7. The result(s) are applied only to the sample(s) received.

End of Report

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Test Report

				_
	Report Number	:	Q230002aR230096	Page 1 of 2
	Job Number	:	R230096	
	Issue Date	:	27/01/2023	
	Applicant Name Applicant Address	:	Acumen Environmental Engineering and Technologies	
	Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong S Cheung Sha Wan, Kowloon, Hong Kong	itreet,
	Project Name	:	CJO-3113-1104	
	Test Required	•	Total Suspended Solids (TSS)	
	Sampling Date	:	20/01/2023	
Date Samples Received :		:	20/01/2023	
	Sample Nature	:	Water	
	Number of Samples Received	2000 1997	5	
	Condition Received	:	Sample(s) arrived laboratory in chilled condition	
	Type of Container	:	HDPE Plastic Bottles	
	Laboratory ID	:	R230096/1-5	
	Test Period	•	20/01/2023 – 21/01/2023	
	Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	3

Test Result

Refer to the results on page 2

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

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Fax: (852) 2333 1316 Tel: (852) 2333 6823

Test Report

Report Number	:	Q230002aR230096
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Job Number R230096 :

Issue Date	:	27/01/2023
10040 10410		

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230096/1	20/01/2023	C1	1.3
R230096/2	20/01/2023	C2	<1
R230096/3	20/01/2023	M1	1.8
R230096/4	20/01/2023	M2	<1
R230096/5	20/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1

2. < indicates less than.

Reporting limit is 2.5mg/L for 1L sample 3.

Reporting limit is 1 mg/L for 2.5L sample 4.

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant. 5.

The result(s) relate only to the item(s) tested. 6.

7. The result(s) are applied only to the sample(s) received.

End of Report

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Test Report

		Teernepon	
Report Number	:	Q230002aR230097	Page 1 of 2
Job Number	:	R230097	
Issue Date	:	27/01/2023	
Applicant Name Applicant Address	:	Acumen Environmental Engineering and Technologies Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong S	
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	CJO-3113-1105	
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	26/01/2023	
Date Samples Received	:	26/01/2023	
Sample Nature	:	Water	
Number of Samples Received	:	5	
Condition Received	•	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R230097/1-5	
Test Period	:	26/01/2023 – 27/01/2023	
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids	\$

Test Result

Refer to the results on page 2

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Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Report Number	:	Q230002aR230097
Job Number	:	R230097
Issue Date	:	27/01/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230097/1	26/01/2023	C1	<1
R230097/2	26/01/2023	C2	<1
R230097/3	26/01/2023	M1	1.2
R230097/4	26/01/2023	M2	1.2
R230097/5	26/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1.

< indicates less than. 2.

Reporting limit is 2.5mg/L for 1L sample Reporting limit is 1 mg/L for 2.5L sample 3.

4.

5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.

The result(s) relate only to the item(s) tested. 6.

The result(s) are applied only to the sample(s) received. 7

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Test Report

2

:	Q230002aR230128 Page 1 of 2
:	R230128
:	06/02/2023
:	Acumen Environmental Engineering and Technologies Co, Ltd. Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong Street,
:	Cheung Sha Wan, Kowloon, Hong Kong CJO-3113-1106
:	Total Suspended Solids (TSS)
:	28/01/2023
:	28/01/2023
:	Water
:	5
:	Sample(s) arrived laboratory in chilled condition
:	HDPE Plastic Bottles
:	R230128/1-5
:	28/01/2023 – 30/01/2023
:	In-house Method, QPL-15e for Total Suspended Solids
	::

Test Result

Refer to the results on page 2 :

> For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

•

Chemical and Microbiological Division

Acumen Laboratory and Testing Limited

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Test Report

Page 2 of 2

Report Number	: Q230002aR230128		
Job Number	:	R230128	
Issue Date	:	06/02/2023	

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230128/1	28/01/2023	C1	1.6
R230128/2	28/01/2023	C2	<1
R230128/3	28/01/2023	M1	<1
R230128/4	28/01/2023	M2	2.5
R230128/5	28/01/2023	М3	<1

Note:

mg/L indicates milligram per liter 1.

2. 3. < indicates less than.

Reporting limit is 2.5mg/L for 1L sample

4. Reporting limit is 1 mg/L for 2.5L sample

Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant. 5.

6. The result(s) relate only to the item(s) tested.

7. The result(s) are applied only to the sample(s) received.

End of Report

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Test Report

		Page 1 of 2
Report Number	:	Q230002aR230129
Job Number	:	R230129
Issue Date	ł	06/02/2023
Applicant Name	:	Acumen Environmental Engineering and Technologies Co, Ltd.
Applicant Address	:	Unit D, 12/F, Ford Glory Plaza, No.37-39 Wing Hong Street,
		Cheung Sha Wan, Kowloon, Hong Kong
Project Name	:	CJO-3113-1107
Test Required	:	Total Suspended Solids (TSS)
Sampling Date	:	30/01/2023
Date Samples Received	:	30/01/2023
Sample Nature	•	Water
Number of Samples Received	:	5
Condition Received	:	Sample(s) arrived laboratory in chilled condition
Type of Container	:	HDPE Plastic Bottles
Laboratory ID	:	R230129/1-5
Test Period	:	30/01/2023 – 31/01/2023
Method Used	:	In-house Method, QPL-15e for Total Suspended Solids

Test Result

Refer to the results on page 2

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

Chemical and Microbiological Division

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Test Report

Page 2 of 2

Report Number	:	Q230002aR230129
Job Number	:	R230129
Issue Date	:	06/02/2023

Test Result:

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R230129/1	30/01/2023	C1	<1
R230129/2	30/01/2023	C2	<1
R230129/3	30/01/2023	M1	1.4
R230129/4	30/01/2023	M2	1.4
R230129/5	30/01/2023	М3	<1

Note:

1. mg/L indicates milligram per liter

- 2. < indicates less than.
- 3. Reporting limit is 2.5mg/L for 1L sample

4. Reporting limit is 1 mg/L for 2.5L sample

- Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.
- 6. The result(s) relate only to the item(s) tested.
- 7. The result(s) are applied only to the sample(s) received.

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Appendix S

Impact Monitoring report for Ecology

Post-Transplantation Monitoring Report

for Agreement No. CE 13/2009 (WS)

IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS – SOUTH WORKS

Report No.101

January 2023

<u>IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS – SOUTH WORKS</u> – Post-Transplantation Monitoring Report

TABLE OF CONTENTS

1.	INTRODUCTION	3
2.	DESCRIPTION OF TREE MONITORING SITE	.4
3.	MONITORING METHODOLOGY	4
4.	RESULT	4
5.	MITIGATION MEASURE	5
6.	SUMMARY	10

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ANNEX II- Table for condition of transplanted plant	17

1. INTRODUCTION

- 1.1 Pursuant to the Environmental Impact Assessment (EIA) Ordinance, the Director of Environmental Protection (DEP) granted the Environmental Permit (No. EP- 494/2015) to the Water Supplies Department (WSD) to construct and operate the designated project for "In-situ Reprovisioning of Sha Tin Water Treatment Works South Works" ("The Project").
- 1.2 Upon the requirement of the Environmental Permit, a detailed vegetation report presenting the baseline vegetation condition for flora species with conservation interest, transplanting and monitoring programme for the Project has been prepared and approved by DEP in February 2016.
- 1.3 There were 4 flora species of conservation importance were recorded in the woodland habitat within project site including Ailanthus (*Ailanthus fordii*), Incense Tree (*Aquilaria sinensis*), Lamb of Tartary (*Cibotium barometz*) and Hong Kong Eagle's Claw (*Artabotrys hongkongensis*). In total, 2 nos. of Incense Tree (*Aquilaria sinensis*), 1 no. of Ailanthus (*Ailanthus fordii*) tree, 5 colonies of Lamb of Tartary (*Cibotium barometz*) and 1 no. Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) were recommended to be transplanted in the approved detailed vegetation survey report.
- 1.4 As planned in the detailed vegetation report, Incense Tree (*Aquilaria sinensis*) and Ailanthus (*Ailanthus fordii*) trees would be transplanted within existing Sha Tin Water Treatment Works (STWTW). All other shrubs including Lamb of Tartary (*Cibotium barometz*) and Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) would be transplanted to the hillside slope at Sha Tin South Fresh Water Service Reservoir (STSFWSR).
- 1.5 Upon the requirement of the Environmental Permit, a qualified Ecologist was commissioned to prepare a post-transplantation monitoring report to present the status (health condition and survival rate) of transplanted vegetation and submitted to the DEP.
- 1.6 Monitoring of transplanted flora was conducted after the transplantation. The monitoring will be conducted at twice per month during the first year and once per month during the course of planting works. The parameters to be monitoring will include the health condition and survival rate of the transplanted flora. Any observations and recommendations will be reported in monthly EM&A reports.
- 1.7 This Report presents survey findings on 21 January 2023. It contains the following information:
 - Introduction (Section 1);
 - Description of Tree Monitoring Area (Section 2);
 - Monitoring Methodology (Section 3);
 - Result (Section 4);

- Mitigation Measures (Section 5);
- Summary (Section 6);
- Photos (Annex I);
- Summary table (Annex II); and
- Typhoon information (Annex III).

2. DESCRIPTION OF TREE MONITORING SITE

- 2.1 Incense Tree (*Aquilaria sinensis*) and Ailanthus tree (*Ailanthus fordii*) were transplanted to the extended compensatory plantation area within existing Sha Tin Water Treatment Works (STWTW). The area was flat and without covering with concrete.
- 2.2 Lamb of Tartary (*Cibotium barometz*) will be transplanted to the Sha Tin South Fresh Water Service Reservoir (STSFWSR). Ploughing is required before planting on to this open corner of short grassland.
- 2.3 Other compensatory trees have been planted at STWTW and STSFWSR.

3. MONITORING METHODOLOGY

- 3.1 Site inspection will be carried out by walking through the transplanting area. Health condition and survival rate will be observed during inspection.
- 3.2 Health condition of all transplanted vegetation including trees/shrubs surveyed was evaluated according to the following criteria:
 - Transplanted vegetation with good health is classified as **good**;
 - Transplanted vegetation with few or no visible defects or health problems is classified as being **fair**; and
 - Transplanted vegetation that was badly damaged or clearly suffering from decay die back or the effects of very heavy vine growth is classified as **poor**.
- 3.3 Survival rate for each of transplanted vegetation species will be calculated based on site observation.

4. **RESULT**

- 4.1 The monthly monitoring inspection was conducted on 21 January 2023.
- 4.2 Three trees TA572, TA326 and TA327 were transplanted to tree compensation area within the Sha Tin Water Treatment Works (STWTW) on 20 June 2016.
- 4.3 The condition of TA572 was observed in fair health despite in poor form due to the damage of the two main trunks. TA327 was in poor condition. The already dead tree TA326 collapsed due to big hit by the Signal No.10 typhoon Mangkhut on 16 September 2018.

Tree guying cables have been installed to provide external support to the remaining two transplanted trees.

- 4.4 The joint site meeting with our ecologist, Project Manager, Contractor and Landscape Contractor on 20 October 2020 revealed that the designated recipient site at STSFWSR was under excessive exposure of direct sunlight, strong winds, far from riparian zone/ moist valley and low in soil moisture. This was not a favourable microhabitat for *Cibotium barometz* to be transplanted back. Two best portions within this recipient site would be a corner with shading canopy from trees on a man-made feature nearby; as well as understory zone of an existing tree. Mitigation measures are proposed in Section 5 to enhance a sustainable survival of *Cibotium barometz* during the post-transplantation stage.
- 4.5 All 27 nos. of *Cibotium barometz* transplanted from the nursery at Shui Mei Tsuen, Kam Tin were generally in fair condition at their current location at STSFWSR.
- 4.6 The Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) was observed dead during inspection on 20 August 2016.
- 4.7 The transplantation of the 27 nos. of *Cibotium barometz* and the compensatory planting of TA326 and the climber *Artabotrys hongkongensis* have been conducted as detailed in **Section 5**.

5. MITIGATION MEASURE

5.1 In order to compensate for the loss of the transplanted *Artabotrys hongkongensis* which is in climber growing form, it is recommended to plant an individual of native climber species at the compensatory planting site together with compensatory tree planting. Recommended list of species is given in the **Table 1** below. It was suggested that at least 1 species of climber would be selected from the following list according to availability of the nursery source. The recommended plant species have been recorded from adjacent secondary woodland in an approved EIA Report (AEIAR-187/2015). These species would have certain ecological value in terms of plant ecology and the associated wildlife including birds.

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Common Name	Scientific Name	Chinese Name	Growing Form
Climbing Bauhinia	Bauhinia glauca	粉葉羊蹄甲	Climber
Spiny-fruited Vine	Byttneria aspera	刺果藤	Climber
Bentham's Rose-wood	Dalbergia benthamii	兩廣黃檀	Climber
Desmos	Desmos chinensis	假鷹爪	Climber
Glaucescent Diploclisia	Diploclisia glaucescens	蒼白秤鈎風	Climber
Luofushan Joint-fir	Gnetum luofuense	羅浮買麻藤	Climber
Australian Cow-plant	Gymnema sylvestre	匙羹藤	Climber
Shining Hypserpa	Hypserpa nitida	夜花藤	Climber
Large-flowered Honeysuckle	Lonicera macrantha	大花忍冬	Climber
Splash-of-white	Mussaenda pubescen	玉葉金花	Climber
Rusty-haired Raspberry	Rubus reflexus	鏽毛莓	Climber
Sandpaper Vine	Tetracera asiatica	錫葉藤	Climber
Hong Kong Eagle's Claw	Artabotrys hongkongensis	鷹爪花	Climber

- 5.2 *Desmos chinensis* was finalized as the candidate. Two individuals were planted at Wall C in STWTW on 1 April 2021 (Annex I).
- 5.3 New small sprouts keep emerging from the two *Desmos chinensis* that have been reported dead previously. Construction materials was also found too close to the planter. An eye-catching protective fence shall be set up as a protection zone. No construction materials shall be placed near/ within the protection zone.
- 5.4 All 27 nos. Lamb of Tartary (*Cibotium barometz*) were transplanted successfully back to Portion E of STSFWSR on 23 April 2021 (Annex I). In order to enhance a sustainable survival during the post-transplantation stage, a shelter (such as 遮光網) has been installed to reduce intensity of direct sunlight received and avoid direct hit of rainstorm/ typhoon.
- 5.5 Transplanted *Cibotium barometz* shall be watered at least once in the morning and once in the afternoon; before irrigation spray head has been installed to facilitate watering frequency whenever necessary.
- 5.6 An eye-catching protective net has been set up to enclose the 27 nos. transplanted *Cibotium barometz* (in groups when planted together) to avoid disturbance/ damage from works activities. Any collapsed shelter and fencing shall be rectified promptly.
- 5.7 However, signs of ploughed soil by wild boar(s) were found at the two groups of transplanted *Cibotium barometz*, making them exposed under sunlight or even uprooted. Installation of robust fencing, such as mesh wire, is recommended to protect the group of *Cibotium barometz* from damage caused by wild boars.
- 5.8 Given that leftover/ garbage was observed nearby, illegal feeding of wild pigs or other wild animals was also suspected to occur. Warning signs of illegal feeding and plant protection zone may be put along the receptor site to remind the hikers. Reporting the case to the relevant government department, i.e. AFCD, is suggested to prevent further aggregation of wild boars in the area.
- 5.9 Weeding within the two protection zones of *Cibotium barometz* shall only be conducted by hand-held tools rather than grass cutting machine. No fire/ chemical weeding shall be allowed.
- 5.10 The 27 nos. transplanted *Cibotium barometz* shall be maintained with proposed mitigated measures mentioned for 12 months for establishment. A 12-month post-transplantation monitoring period helps to assess their survival during the establishment period.
- 5.11 Any dead individuals/ those in poor condition before transplant back to STSFWSR or during the post-transplantation period shall be replaced by planting healthy individuals of *Cibotium*

barometz. Other possible fern candidate such as *Brainea insignis*, which is more adaptive to more exposed habitat under direct sunlight, can be sourced for compensatory planting.

- 5.12 Root ball of TA572 and TA327 tree should be kept moisture especially during non-raining day.
- 5.13 The Incense Tree (*Aquilaria sinensis*) tagged as TA326 was observed dead during inspection on 10 August 2017. Its DBH was measured as 346mm. In accordance with the Tree Preservation, Development Bureau Technical Circular (Works) No. 7/2015, the compensatory planting aimed to achieve the compensatory planting ratio of 1:1 in terms of aggregated DBH.
- 5.14 In total, 3 individual of native tree species with heavy standard size were planted with 2.5 3 meters (center to center) spacing at compensatory planting site. Recommended list of species was given in the **Table 2** below. It was suggested that at least 1 tree species would be selected from the following list according to availability of the nursery source. The recommended plant species was recorded from adjacent secondary woodland in an approved EIA Report (AEIAR-187/2015). These species would have certain ecological value in terms of plant ecology and the associated wildlife including birds.

Common Name	Latin Name	Chinese Name	Growing Form
Ivy Tree	Schefflera heptaphylla	鴨腳木	Tree
Levine's Syzygium	Syzygium levinei	山蒲桃	Tree
Chekiang Machilus	Machilus chekiangensis	浙江潤楠	Tree
Aporusa	Aporusa dioica	銀柴	Tree
Mountain Tallow Tree	Sapium discolor	山烏桕	Tree
Fragrant Litsea	Litsea cubeba	山蒼樹	Tree
Chinese Apea Ear-ring	Archidendron lucidum	亮葉猴耳環	Tree
Chinese Hackberry	Celtis sinensis	朴樹	Tree
Turn-in-the-wind	Mallotus paniculatus	白楸	Tree
Acronychia	Acronychia pedunculata	降真香	Tree

 Table 2. Table for recommended native tree species list to be planted

- 5.15 Based on the Tree Survey Report, the following trees transplanted under Contract No.
 3/WSD/15 were found dead. In accordance with GS 3.97 (3), replacement planting of TB0054, B0056, TB0101 and TC0138 was completed on 25 March 2021 (Annex I).
- 5.16 Two *Syzygium levinei* and one *Schefflera heptaphylla* were chosen from Table 2 as compensation for the loss of TA0326.
- 5.17 However, the two native *Syzygium levinei* (山蒲桃) were mis-planted by two exotic *Syzygium jambos* (蒲桃), of which both of their Chinese names and Scientific names are different by one word.
- 5.18 The two mis-planted *Syzygium jambos* were then replaced by another native tree species *Celtis sinensis* chosen from **Table 2** due to market availability at that time. Replacement work was conducted on 31 May 2021.

Table 3. Summary table compensatory planting.

Tree No.	Species	Compensatory/ Replacement Planting
TA0326	Aquilaria sinensis 土沉香	Compensated by 1 no. of Schefflera heptaphylla and
	Aquitaria sinensis 上几百	2 nos. of Celtis sinensis

- 5.19 With completion of compensatory planting for the loss of *Artabotrys hongkongensis* and TA0326 (*Aquilaria sinensis*), the survival of the replaced species has been monitored since then (i.e. 2 nos. of *Desmos chinensis*; 1 no. of *Schefflera heptaphylla* and 2 nos. of *Celtis sinensis*).
- 5.20 Survival of the 27 nos. of Lamb of Tartary (*Cibotium barometz*) transplanted back to STSFWSR has also been monitored too. No more individual was stored at the nursery.
- 5.21 Health condition and survival rate are shown in **Annex II**.

6. SUMMARY

- 6.1 The condition of TA572 was observed in fair health despite in poor form. TA327 was in poor condition; while already dead TA326 collapsed under Signal No. 10 typhoon Mangkhut in September 2018. Tree guying cables have been installed to provide external support to the two remaining transplanted trees.
- 6.2 Compensatory planting of TA326 has been completed on 25 March 2020 by planting two *Syzygium levinei* and one *Schefflera heptaphylla*. However, the two native *Syzygium levinei* were mis-planted by two exotic *Syzygium jambos*, which have been replaced by another native tree species *Celtis sinensis* on 31 May 2021.
- 6.3 *Desmos chinensis* was finalized as the candidate to compensate for the loss of *Artabotrys hongkongensis*. Two individuals were planted at Wall C in STWTW on 1 April 2021.
- 6.4 New small sprouts keep emerging from the two *Desmos chinensis* that have been reported dead previously. Construction materials was also found too close to the planter. An eye-catching protective fence shall be set up as a protection zone. No construction materials shall be placed near/ within the protection zone.
- 6.5 In order to enhance a sustainable survival during the post-transplantation stage, a shelter (such as 遮光網) has been installed to reduce intensity of direct sunlight received and avoid direct hit of rainstorm/ typhoon to the 27 nos. of transplanted *Cibotium barometz* at Portion E of STSFWSR.
- 6.6 Regular irrigation, set up of protection zone and weeding by hand held tools within protection zone, shall also be provided to the transplanted/ compensated plants in order to sustain their survival during the post-transplantation (establishment) stage.
- 6.7 Root ball of TA572 and TA327 tree should be kept moisture especially during dry and non-raining day.
- 6.8 Signs of ploughed soil by wild boar(s) were found at the two groups of transplanted *Cibotium barometz*, making them exposed under sunlight or even uprooted. Installation of robust fencing, such as mesh wire, is recommended to protect the group of *Cibotium barometz* from damage caused by wild boars.
- 6.9 Given that leftover/ garbage was observed nearby, illegal feeding of wild pigs or other wild animals was also suspected to occur. Warning signs of illegal feeding and plant protection zone may be put along the receptor site to remind the hikers. Reporting the case to the relevant government department, i.e. AFCD, is suggested to prevent further aggregation of wild boars in the area.

ANNEX I Photo



Photo 5 & 6. The shelter was totally lost and pending renovation. *Cibotium barometz* were exposed under direct sunlight and are vulnerable to disturbance

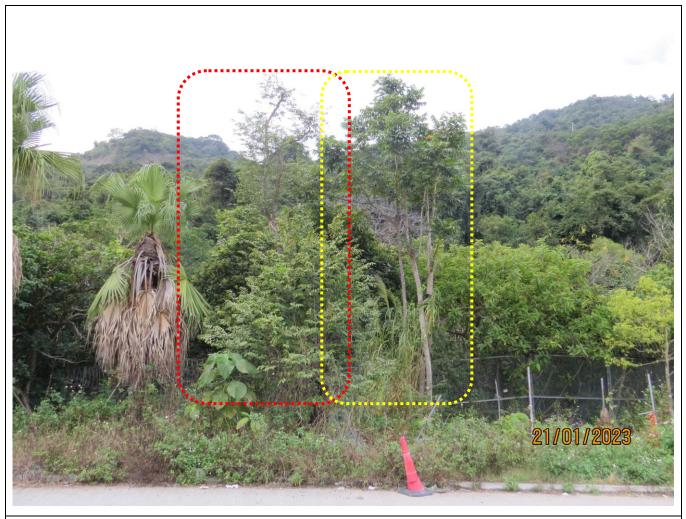
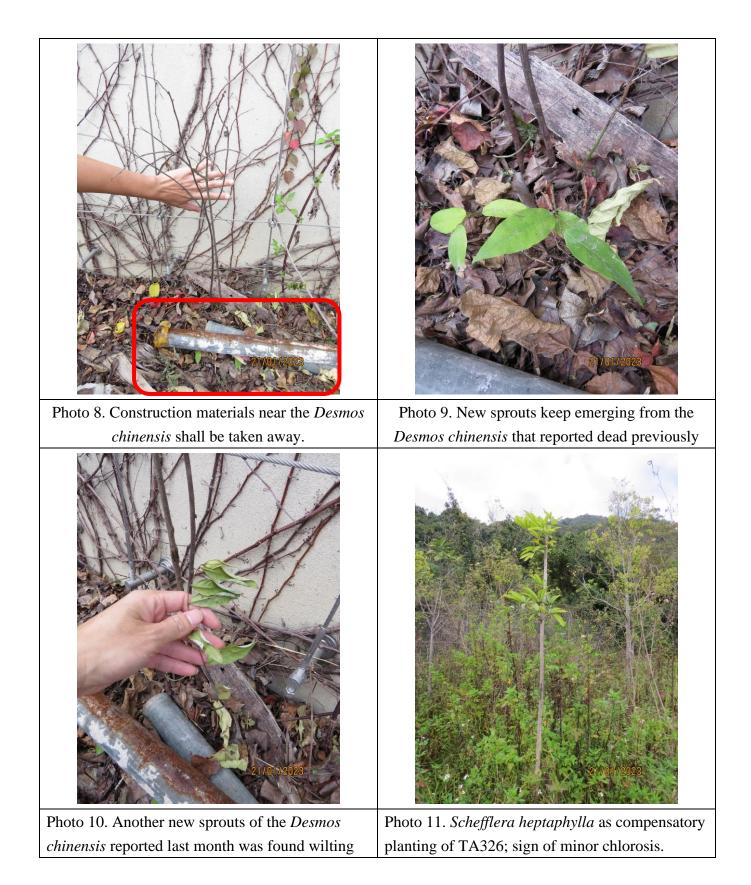


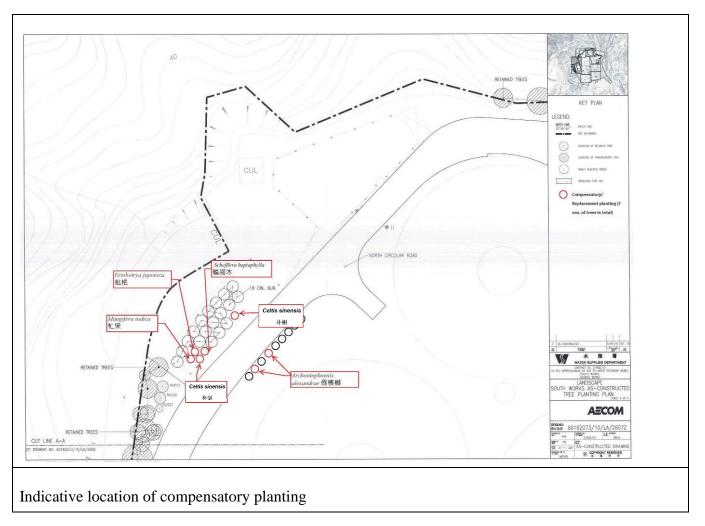
Photo 7. Transplanted Incense Tree (*Aquilaria sinensis*) – TA327 (left); and Ailanthus (*Ailanthus fordii*) – TA572 (right); weeding around the two trees shall be conducted.



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Photo 12 and 13. The two exotic *Syzygium jambos* (mis-treated as the native *Syzygium levine*i) are replaced by another native tree *Celtis sinensis* (due to market availability) as compensatory planting of TA326. *Celtis sinensis* is a deciduous species. Weeding shall be carried out during routine maintenance work



<u>ANNEX II</u> Table for condition of transplanted plant

No.	Species	Condition	Alive/Dead	Remark
1	Cibotium barometz	Fair	Alive	
2	Cibotium barometz	Fair	Alive	_
3	Cibotium barometz	Fair	Alive	
4	Cibotium barometz	Fair	Alive	
5	Cibotium barometz	Fair	Alive	27 individuals were
6	Cibotium barometz	Fair	Alive	transplanted back to
7	Cibotium barometz	Fair	Alive	STSFWSR on 23 April
8	Cibotium barometz	Fair	Alive	2021.
9	Cibotium barometz	Fair	Alive	
10	Cibotium barometz	Fair	Alive	The shelter has been
11	Cibotium barometz	Fair	Alive	repeatedly damaged by
12	Cibotium barometz	Fair	Alive	wild boars, resulting the
13	Cibotium barometz	Fair	Alive	plants vulnerable to
14	Cibotium barometz	Fair	Alive	uprooting. Some
15	Cibotium barometz	Fair	Alive	- individuals were exposed
16	Cibotium barometz	Fair	Alive	- under direct sunlight due
17	Cibotium barometz	Fair	Alive	 to the damage of shelter. A robust wire mesh
18	Cibotium barometz	Fair	Alive	protection zone shall be
19	Cibotium barometz	Fair	Alive	considered. Any illegal
20	Cibotium barometz	Fair	Alive	feeding by hikers shall be
21	Cibotium barometz	Fair	Alive	reported to AFCD/ hotline
22	Cibotium barometz	Fair	Alive	1823.
23	Cibotium barometz	Fair	Alive	
24	Cibotium barometz	Fair	Alive	
25	Cibotium barometz	Fair	Alive	
26	Cibotium barometz	Fair	Alive	
27	Cibotium barometz	Fair	Alive	
The	e shelter (such as 遮光網) has	been set up to provi typhoon on the		inst direct hit of rainstorm/
28	Desmos chinensis	Poor-Fair	Alive	Two individuals were
				planted at Wall C in
				STWTW on 1 April 2021;
				Resprouted since
				monitoring made on 30
				November 2022
		Survival rate (%)	100	

Fern Cibotium barometz and climber Desmos chinensis

No.	Species	Condition	Alive/Dead	Remark
TA572	Ailanthus fordii	Fair	Alive	Two main trunks were
				broken during typhoon
				on 23 August 2017.
				Cracks and wounds
				observed in one of the
				trunks. Canopy formed
				by sprouts.
TA327	Aquilaria sinensis	Fair	Alive	Tree crown of TA327
				was thinner after
				transplantation. Water
				sprouts, cracks on tree
				bark and would at trunk
				base observed.
N/A	Celtis sinensis	Fair	Alive	Compensate for TA326;
				Syzygium jambos
				replaced by Celtis
				sinensis on 31 May 2021.
N/A	Celtis sinensis	Fair	Alive	Compensate for TA326;
				Syzygium jambos
				replaced by Celtis
				sinensis on 31 May 2021.
N/A	Schefflera	Fair	Alive	Compensate for TA326;
	heptaphylla			old leaved replaced by
				new leaf buds
		Survival rate (%)	100%	

Transplanted/ compensatory Trees

Appendix T Monthly Summary of Waste Flow Table



Name of Department: WSD

Contract No.: 6/WSD/21

Monthly Summary Waste Flow Table for 2023 (year)

	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly					
Month	Total Quantity Generated	li arde Broken	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical	Others, e.g. general refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2022	12970.60	0.00	0.00	10000.00	2695.72	207.15	31.63	0.19	0.01	0.00	35.90
Jan-23	981.69	0.00	0.00	971.74	0.00	0.00	2.73	0.02	0.00	0.00	7.20
Feb-23											
Mar-23											
Apr-23											
May-23											
Jun-23											
Sub-total	981.69	0	0	971.74	0.00	0	2.731	0.022	0.0019	0	7.20
Jul-23											
Aug-23											
Sep-23											
Oct-23											
Nov-23											
Dec-23											
Total	13952.29	0.00	0.00	10971.74	2695.72	207.15	34.36	0.21	0.01	0.00	43.10

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

(3) All recyclable materials, including metals, paper / carboard packaging, plastics, etc. will be collected by registered collector for recycling.

(4) Conversion factors for reporting purpose:

in-situ: rock = 2.5 tonnes/m3; soil = 2.0 tonnes/m3

excavated: rock = 2.0 tonnes/m3; soil = 1.8 tonnes/m3; broken concrete and bitumen = 2.4 tonnes/m3

C&D Waste = 0.9 tonnes/m3; bentonite slurry = 2.8 tonnes/m3

Monthly Summary Waste Flow Table for 2023

Contract No.: 1/WSD/19

Contract Title: In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) -Water Treatment Works and Ancillary Facilities

		Actual Quantities of Iner	t C&D Materials G	enerated / Imported	(in '000m3)			Actual Qua	ntities of C&D Wastes (Generated	
		Broken Concrete							Plastics		
Manth		(including rock for				Imported		Paper/	(bottles/containers,plas		Others, e.g.
Month	Total Quantity	recycling into	Reused in the	Reused in other	Disposed as	C&D		cardboard	tic sheets/foam	Chemical	general
	Generated	aggregates)	Contract	Projects	Public Fill	Material	Metals	packaging	package material)	Waste	refuse
	(a+b+c+d)	(a)	(b)	(c)	(d)		(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)	(in '000m ³)
Jan	29.36820	0.14400	0.00000	28.88693	0.33727	0.45650	0.0000	0.00000	0.00000	0.00000	0.01788
Feb											
Mar											
Apr											
May											
Jun											
Sub-total	29.36820	0.14400	0.00000	28.88693	0.33727	0.45650	0.0000	0.00000	0.00000	0.00000	0.01788
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	29.36820	0.14400	0.00000	28.88693	0.33727	0.45650	0.00000	0.00000	0.00000	0.00000	0.01788

Appendix U Implementation Schedule of Environmental Mitigation Measures (EMIS)

Environmental Mitigation and Enhancement Measure Implementation Schedule at Construction Stage

EIA Ref.	Recommended Mitigation Measures	Location of the	Implementation		Implementation Phase			Status
		Measures	Agent	and Guidelines	D	с	0	
Air Quality								
4.7.1	Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.	All works areas	Contractor	Air Pollution Control		\checkmark		Y
4.7.1	Side enclosure and covering of any aggregate or stockpiling of dusty material to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.	All works areas	Contractor	Ordinance and Air Pollution Control (Construction		\checkmark		Y
4.7.1	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	All works areas	Contractor	Dust) Regulation		\checkmark		Y
4.7.1	Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.	All works areas	Contractor	EIVIQA Manual		\checkmark		Y
4.7.1	Imposition of speed controls for vehicles on site haul roads.	All works areas	Contractor	-		\checkmark		Y
4.7.1	Implement EM&A program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	All works areas / Monitoring points	Contractor					Y
Noise					1		I	
5.6.4	Implement good site practices to reduce noise level	All works areas	Contractor	Noise Control Ordinance		\checkmark		Y
5.6.5	Adoption of Quiet PME	All works areas	Contractor			\checkmark		N/A
5.6.6	Use of Movable Noise Barrier	All works areas	Contractor	-		\checkmark		N/A
5.8	Noise monitoring	Monitoring points	Contractor			\checkmark		Y
Water Quality								
6.8.1	Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand	All works areas	Contractor	ProPECC PN 1/94 Construction		\checkmark		Y

	traps, silt traps and sedimentation basins. Channels or earth bunds or			Site Drainage		
	sand bag barriers should be provided on site to properly direct					
	stormwater to such silt removal facilities. Perimeter channels at site			TM-DSS		
	boundaries should be provided where necessary to intercept storm					
	run-off from outside the site so that it will not wash across the site.			Water Pollution		
	Catchpits and perimeter channels should be constructed in advance of			Control		
	site formation works and earthworks.			Ordinance		
6.8.2	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to prevent local flooding.	All works areas	Contractor		\checkmark	Y
6.8.3	Temporary exposed slope surfaces should be covered and temporary	All works area	Contractor	_		
0.8.5	access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided to prevent storm run-off from washing across exposed soil surfaces.	All WORKS area	Contractor		\checkmark	Y
6.8.4	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	All works areas	Contractor		\checkmark	N/A
6.8.5	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	All works areas	Contractor	-	\checkmark	Y
6.8.6	Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms.	All works areas	Contractor		\checkmark	Y
6.8.7	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system.	All works areas	Contractor	-	\checkmark	Y
6.8.8	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area.	All works areas	Contractor		\checkmark	Y
6.8.9	All vehicles and plant should be cleaned before they leave a construction site to minimize the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains.	All works areas	Contractor			Y
6.8.10	Before commencing any demolition works, all drainage connections should be sealed to prevent building debris, soil, sand etc. from entering	All works areas	Contractor		\checkmark	N/A

	drains.		
6.8.11	Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be tankered off site for disposal into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary.	All works areas	Contractor
6.8.12	Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10. The neutralized wastewater should be tankered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters.	All works areas	Contractor
6.8.13	All surface run-off must proper collected and discharge at designated location. The discharge quality must meet the requirements specified in the discharge license.	All works areas	Contractor
6.8.15	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	All works areas	Contractor
6.8.16	Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges	All works areas	Contractor
6.8.17	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance.	All works areas	Contractor
6.8.18	Sewage generated from the workforce should be properly treated by interim treatment facilities, such as chemical toilets which are properly maintained with the employment of licensed collectors for the collection and disposal on a regular basis.	All works areas	Contractor
6.8.19	Adopt relevant measures stated in ETWB TC (Works) No. 5/2005 "Protection of Natural Streams/rivers from Adverse Impacts arising from Construction Works" to minimize the potential water quality impacts from the construction works near any water courses.	All works areas	Contractor
6.10	Water quality monitoring	Monitoring points	Contractor

7.6.1	Appropriate waste handling, transportation and disposal methods for all	All works areas	Contractor	Waste Disposal		
	waste arisings generated during the construction works for the Project			Ordinance	\checkmark	Y
	should be implemented to ensure that construction wastes do not enter					
	the nearby streams or drainage channel.			DEVB TCW No.		
7.6.2	Implementation of good site practices for waste management	All works areas	Contractor	6/2010,	\checkmark	Y
7.6.3	Implementation of trip ticket system to control waste disposal	All works areas	Contractor	ETWB TCW No. 19/2005	\checkmark	Y
7.6.4	Implementation of good site practices to reduce waste generations	All works areas	Contractor	Land	\checkmark	Y
7.6.5	Re-use of excavated C&D materials on site as far as practical. A suitable area should be designated within the site for temporary stockpiling of	All works areas	Contractor	(Miscellaneous Provisions)	\checkmark	Y
7.0	C&D material and to facilitate the sorting process.			Ordinance		
7.6.8	General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	All works areas	Contractor	Code of Practice on the Packaging, Labelling and	\checkmark	Y
7.6.9	All storage of asbestos waste should be carried out properly in a secure place isolated from other substances so as to prevent any possible release of asbestos fibres into the atmosphere and contamination of other substances. The storage area should bear warning panels to alert people of the presence of asbestos waste.	All works areas	Contractor	Storage of Chemical Wastes	N	N/A
7.6.10	A licensed asbestos waste collector will be appointed to collect the asbestos waste and deliver to the designated landfill for disposal. Application should be submitted to EPD.	All works areas	Contractor		\checkmark	N/A
7.6.11	If chemical wastes were to be produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer, and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport the chemical wastes. The licensed collector shall deliver the waste to the Chemical Waste Treatment Centre at Tsing Yi, or other licenced facility, in accordance with	All works areas	Contractor		\checkmark	Y

	the Waste Disposal (Chemical Waste) (General) Regulation.					
Ecology		•	·		· · · ·	
8.8.1	Ecological impacts on important habitats and the associated wildfile caused by the proposed development should be mitigated and compensation approaches to the maximum practical extent	All works areas in particular important	The Engineer/ Contractor	EIAO-TM EM&A Manual	\checkmark	Y
8.8.2	Reduce the amount of vegetation removal required and thereby minimize the footprint of the slope at the woodland habitat	habitats All works areas	The Engineer/ Contractor		\checkmark	Y
8.8.3	Conduct detailed vegetation survey and implement suggested measures for species of conservation importance.		The Engineer/ Contractor	-	\checkmark	Y
8.8.4	The affected Incense Tree and Ailanthus as mentioned in the detailed vegetation survey report within the works area will be transplanted		The Engineer/ Contractor	-	\checkmark	Y
8.8.5	To avoid impacts on Short-nosed Fruit Bat, the tree with records of an active roost and trees showing evidence of roosting activity should be retained where possible. Where Chinese Fan-palm (Livistona chinensis) removal is required, these should be checked by suitably qualified ecologist with over 7 years relevant experience for roosting bats prior to their removal. If roosting bats are observed, a strategy for passive removal will be agreed with the AFCD and implemented. This could include undertaking the works just after the bats have left the roost (i.e. dusk).		The Engineer/ Contractor		~	N/A
8.8.6	The inclusion of Chinese Fan-palm of similar size as the affected plant within the areas of compensatory planting or other suitable areas is recommended to replace affected specimens, and compensate for the impact to roosting opportunities for this bat species		The Engineer/ Contractor		\checkmark	N/A
8.8.7	Implement good site measures to minimize the disturbance impacts to terrestrial habitat and associated wildlife arising from the land-based construction activities.		The Engineer/ Contractor		√	Y
8.8.8	To minimize the contamination of wastewater discharge, accidental chemical spillage and construction site run-off to the receiving water bodies, mitigation measures such as diverting the site runoff to silt trap facilities before discharging into storm drain, proper waste and dumping management and standard good site practice for land-based construction.		The Engineer/ Contractor		~	Y
8.8.9-8.8.11	Implement woodland compensation		The Engineer/ Contractor		\checkmark	N/A

Landscape and	d Visual					
9.8.1	Existing tress to be retained on site shall be carefully protected during construction. Trees unavoidably affected by the works shall be transplanted as far as possible.	All works areas	Contractor	DEVB TCW No. 10/2013	\checkmark	Y
	Compensatory Planting shall be provided in accordance with DEVB TCW No. 10/2013 – Tree Preservation.	All works areas	Contractor	EIAO TM	\checkmark	Y
	Control of night-time lighting glare.	All works areas	Contractor		\checkmark	Y
	Erection of decorative screen hoarding compatible with the surrounding setting.	All works areas	Contractor		\checkmark	Y
	Management of facilities on work sites which give control on the height and disposition/arrangement of all facilities on the works site to minimize visual impact to adjacent VSRs.	All works areas	Contractor		\checkmark	Y
Cultural Herita	age					
10.6.2	Vibration monitoring at Ex KCR Beacon Hill Tunnel during piling works of Administration Building	Work site	The Engineer /Contractor		\checkmark	N/A
Land Contami	nation	•			I	
11.7	Identify contamination and implement appropriate remedial measures on site. Provide relevant submission and obtain approval from EPD if necessary.	All works areas	Contractor	Guidance Note for Contaminated Land Assessment and Remediation Guidance Manual for Use of Risk based Remediation Goals for Contaminated Land Management (Guidance Manual)	\checkmark	N/A
Hazard to Life						
Table 12.22	Ensure speed limit enforcement is specified in the contractor's Method Statement to limit the speed of construction vehicles on site	All works areas	The Engineer	EIAO-TM	\checkmark	Y
	Develop an audit procedure to ensure enforcement of speed limits and to ensure adequate site access control	All works areas	The Engineer		\checkmark	Y
	Ensure construction method statement is endorsed by the Engineer (AECOM)	All works areas	The Engineer	1	\checkmark	Y

		1		
Ensure designated manoeuvring area for the new access road construction is away from the Chlorination House	New access road area	Contractor/ The Engineer	\checkmark	Y
Ensure that the emergency response plan and procedures (including drills) cover the reprovisioning activities	All works areas	Contractor/ The Engineer	\checkmark	Y
Safety training to be provided to construction workers and WSD/Engineer staff regarding evacuation procedures	All works area	Contractor/ The Engineer	\checkmark	Y
Ensure communication protocol is in place between construction and operation staff with regard to the change of chlorine delivery route and the switchover from the existing to new chlorinated water piping;	All works areas	Contractor/ The Engineer	\checkmark	N/A
Ensure temporary suspension of crane operation and construction truck movements during chlorine delivery	All works areas	Contractor/ The Engineer	\checkmark	Y
Provide a crash barrier between the construction site and the north side of the Chlorination House.	Chlorination House area	Contractor	\checkmark	Y
Conduct vibration monitoring at the Chlorination House during piling activities to ensure vibration levels are acceptable and will not lead to any damage of the Chlorination House	Chlorination House area	Contractor	√	Y
Civil engineering calculation to be performed to confirm differential settlement from excavation work is within acceptable limits for the Chlorination House	Chlorination House area	Contractor	\checkmark	Y
Provide settlement monitoring for the Chlorination House to ensure no subsidence occurs from nearby excavation works.	Chlorination House area	Contractor	\checkmark	Y
Confirm the chlorine concentration for the chlorinated water before the switchover from the existing to new piping. This is to avoid the potential for chlorine gas vapours being released if the concentration is too high and there is spillage during switchover	Chlorinated water piping	WSD	\checkmark	N/A
Develop an operating procedure for performing the chlorinated water switchover from the existing piping to new piping.	All works areas	Contractor/ The Engineer / WSD	\checkmark	N/A
Ensure the location/height of the lifting equipment is such there is no impact on Chlorination House/chlorine delivery route in case of falling, swinging or dropped load.	Chlorination House area	Contractor/ The Engineer	\checkmark	Y
Implement the controlled demolition of the existing E&M workshop to ensure that any steel structural elements can only fall away from the Chlorination House	Existing E&M Workshop and Chlorination House	Contractor/ The Engineer	\checkmark	N/A

	areas				
	areas				
Stop any construction activities which may lead to vibrations and potential slope/boulder disturbance during the chlorine deliveries	All works areas	Contractor			Y
Installation of Chlorine gas monitors with audible alarms in the relevant	Reprovisioning	Contractor/			k.
reprovisioning works area	works areas	The Engineer		•	
Provision of an accompanying vehicle for the chlorine truck on the WTW site and ensuring that during the chlorine drums delivery construction works are stopped and the construction workers moved away from Chlorination House	All works areas	Contractor		\checkmark	Y
Establish a liaison between the contractor and HKCG and develop a	Beacon Hill	The Engineer /			
chlorine/town gas emergency plan to ensure gas safety during the	North Gas	Contractor /			
Construction Phase	Offtake Station	HKCG		,	
	and Gas			\checkmark	k
	Pipelines in Old Beacon Hill				
	Tunnel				
Temporary suspend chlorine delivery during the short period of		The Engineer /			
construction of the concerned section of elevated walkway to avoid		Contractor		\checkmark	N
mobile crane impact on the chlorine truck					
Provide clear road signs for site vehicles	Chlorine	The Engineer /			
	delivery route	Contractor			
	and			\checkmark	Y
	reprovisioning works access				
	roads				
Large equipment/plant movement should be controlled by	All works areas	The Engineer /			
'Permit-to-move' system		Contractor /		\checkmark	Y
		WSD			
Define restricted zone for the equipment (i.e. keep the equipment from	Chlorination	The Engineer /		,	
the Chlorination House at a safe distance). The extent of the restricted zone would be determined by the size of the equipment	House area	Contractor		\checkmark	Y
Locate the construction site office at or near property boundary away	Construction	The Engineer /			Y
from the Chlorination House as far as possible	Office area	Contractor		N	Y
Entry of non-authorized personnel to the construction site to be prohibited	All works areas	Contractor		\checkmark	Y

12.15.4, 12.18.1, 12.22.9	GPS fleet management system with driver training to help enforce truck speeds	Chlorine delivery trucks, fleet management centre	WSD / Chlorine Supply Contractor	EIAO-TM	\checkmark	k.i.v.
	Improved clamps with independent checks to prevent load shedding	Chlorine	-		√	F
	Installation of fire screen and larger fire extinguishers to prevent engine and wheel fires from spreading to the cargo area	delivery trucks			√	F
	Adoption of the chlorine delivery route from Sham Shui Kok Dock to Sha Tin WTW	-			\checkmark	F
	Provision of emergency repair kit				\checkmark	F
12.34.3 Table 12.37	Ban the use of retreaded tyres and perform regular visual checks on the tyres.				\checkmark	F
& 12.38	A vehicle accompanying chlorine truck along critical road sections in Sha Tin. The truck should be equipped with emergency kit, fire extinguisher, radio set for communication. The accompanying vehicle will be ahead of the chlorine truck after the vehicles entering the water treatment works site – An accompanying vehicle may provide rapid response to an incident but any action would be limited to containing a small leak. Limit fuel tanks capacity at the beginning of the Project (Item 2.3 of Table				√	F
	12.37 – advance measure).				\checkmark	F
	Review the practicality of reducing combustible materials or use of fire retardant materials in the cab. (Item 2.3 of Table 12.37 – further measure)				\checkmark	k.i.v.
	Annual periodic radiography or ultrasonic test inspections of the chlorine drums should be considered for implementation as soon as feasible (Item 3.8 of Table 12.37).	Chlorine drums			~	k.i.v.
	Implement side, front and rear crash guards with high energy absorption in coordination and accordance with the relevant authorities.	Chlorine delivery trucks	1		\checkmark	k.i.v.
	Implement a sturdy steel frame to minimize the potential for chlorine release due to truck rollover				\checkmark	k.i.v.
12.34.4	WSD will continue to keep under review the latest development of use of alternative disinfectants in water supply industry to aim at minimising on-site chlorine storage.4	Chlorine delivery Route	WSD		\checkmark	k.i.v.

Ensured that independent checks are performed to ensure proper chlorine drum latching and clamping. Image: Chlorine druck drivers or driver attendants should be further trained to check and detect potential chlorine leaks during transport. This should include the timely application of the emergency kit. Image: Chlorine truck drivers or driver attendant should be further trained to check and detect potential chlorine leaks during transport. This should include the timely application of the emergency kit. Image: Chlorine truck drivers or driver attendant for the emergency use of the new 2 × 9L AFFF extinguishers. Induction training for new drivers and driver attendant should include familiarisation with the route, familiarisation with chlorine risks, defensive driving, application of emergency kits, use of fire extinguishers and emergency response Image: Chlorine truck should be planed and provided Provision of a fire screen between the cab and cargo as well as fire retardant materials for the wheel arches on the chlorine truck should be planned and provided Image: Chlorine delivery to STWTW. Legend To keep under review alternate chlorine receiving dock in Sha Tin/Tai Po area for chlorine delivery to STWTW. Image: Chlorine truck should be planed and provided D - Design Phase C - Construction Phase C - Construction Phase Image: Chlorine truck should be the should in the sures V - Compliance of Mitigation Measures N/A - Not Applicable in Reporting Period Image: Chlorine truck should be the should be the should be V - Compliance of Mitigatin		Training should be provided for the use of the GPS fleet management and improved safe driving.		\checkmark	k.i.v.
check and detect potential chlorine leaks during transport. This should include the timely application of the emergency kit. Image: Check and detect potential chlorine leaks during transport. This should include the timely application of the emergency kit. Image: Check and detect potential chlorine leaks during transport. This should include the timely application of the emergency kit. Image: Check and detect potential chlorine resks, detensive drivers and driver attendant should include familiarisation with the route, familiarisation with chlorine risks, defensive driving, application of emergency kits, use of fire extinguishers and emergency response Image: Check and driver attendant should be planned and provided Image: Check and driver attendant should be planned and provided Image: Check and driver attendant should be planned and provided Image: Check and driver attendant should be planned and provided Image: Check and provide			-		F
Training should be provided to driver and driver attendant for the emergency use of the new 2 × 9L AFFF extinguishers. Induction training for new drivers and driver attendant should include familiarisation with the route, familiarisation with chlorine risks, defensive driving, application of emergency kits, use of fire extinguishers and emergency response V Provision of a fire screen between the cab and cargo as well as fire retardant materials for the wheel arches on the chlorine truck should be planned and provided V To keep under review alternate chlorine receiving dock in Sha Tin/Tai Po area for chlorine delivery to STWTW. V Legend D - Design Phase C - Construction Phase Q - Operation Phase Y - Compliance of Mitigation Measures N/A – Not Applicable in Reporting Period k.i.v – Keep In View		check and detect potential chlorine leaks during transport. This should		\checkmark	k.i.v.
familiarisation with the route, familiarisation with chlorine risks, defensive driving, application of emergency kits, use of fire extinguishers and emergency response Image: Complement of the extension of the extension of the extension of a fire screen between the cab and cargo as well as fire retardant materials for the wheel arches on the chlorine truck should be planned and provided Image: Complement of the extension of the extens		Training should be provided to driver and driver attendant for the			F
retardant materials for the wheel arches on the chlorine truck should be planned and provided Image: Complex Com		familiarisation with the route, familiarisation with chlorine risks, defensive driving, application of emergency kits, use of fire extinguishers		\checkmark	k.i.v.
area for chlorine delivery to STWTW. √ Legend D – Design Phase C – Construction Phase C – Construction Phase O – Operation Phase V Y - Compliance of Mitigation Measures V N/A – Not Applicable in Reporting Period k.i.v – Keep In View		retardant materials for the wheel arches on the chlorine truck should be		\checkmark	F
D – Design Phase C – Construction Phase O – Operation Phase Y - Compliance of Mitigation Measures N/A – Not Applicable in Reporting Period k.i.v – Keep In View				\checkmark	k.i.v.
C – Construction Phase O – Operation Phase Y - Compliance of Mitigation Measures N/A – Not Applicable in Reporting Period k.i.v – Keep In View	.egend				
O – Operation Phase Y - Compliance of Mitigation Measures N/A – Not Applicable in Reporting Period k.i.v – Keep In View) – Design F	Phase			
Y - Compliance of Mitigation Measures N/A – Not Applicable in Reporting Period k.i.v – Keep In View	C – Constru	ction Phase			
N/A – Not Applicable in Reporting Period k.i.v – Keep In View	0 – Operati	on Phase			
k.i.v – Keep In View	′ - Compliar	nce of Mitigation Measures			
	N/A – Not A	pplicable in Reporting Period			
F. Completed	.i.v – Keep	In View			
r - completed	- Complete	ed			

Appendix V Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

	Air Quality										
Location	A	ction Lev	el		I		Total				
AM1		0					0				
AM2		0 0					0				
					Noise						
Location	A	Action Level			Ι	imit Lev	el		Total		
NM1		0				0			0		
NM2		0				0			0		
NM3		0				0					
				Wat	ter Qualit	у					
Location		Action	n Level			Limit	t Level		Total		
Location	DO	Turbidity	SS	рН	DO	Turbidity	SS	рН	10tai		
C1	0	0	0	0	0	0	0	0	0		
C2	0	0	0	0	0	0	0	0	0		
C3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0		
M1	0	0	0	0	0	0	0	0	0		
M2	0	0	0	0	0	0	0	0	0		
M3	0	0	0	0	0	0	0	0	0		

Statistical Summary of Exceedances (January 2023)

There were 0 exceedance of Action Level and 0 exceedances of Limit Level in January 2023

Statistical Summary of Exceedances (Cumulative)

				Ai	r Quality	r			
Location	A	ction Lev	el		Ī	imit Levo	el		Total
AM1		0				0			0
AM2		0				0			0
					Noise				
Location	A	ction Lev	el		Ι	imit Levo	el		Total
NM1		0				0			0
NM2	0			0					0
NM3	0 0					0			
				Wat	ter Qualit	у			
Location	Action Level			Limit Level				Total	
Location	DO	Turbidity	SS	pH	DO	Turbidity	SS	pH	Iotai
C1	0	0	17	4	1	10	7	3	42
C2	0	1	11	1	5	9	6	1	34
C3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
M1	0	1	6	1	7	6	24	7	52
M2	0	0	0	0	9	3	2	0	14
M3	0	0	0	2	10	21	36	0	69

Statistical Summary of Environmental Complaints

Reporting	Environmental Complaint Statistics					
Period	Frequency	Complaint Nature	Cumulative			
1 January - 31 January 2023	0	N/A	4			

Statistical Summary of Environmental Summons

Reporting	Environmental Summons Statistics					
Period	Frequency	Details	Cumulative			
1 January - 31 January 2023	0	N/A	0			

Statistical Summary of Environmental Prosecution

Reporting	Environmental Prosecution Statistics					
Period	Frequency	Details	Cumulative			
1 January - 31 January 2023	0	N/A	0			

Appendix W Tentative Schedule of Impact Monitoring

Tentative Impact Monitoring Schedule for STWTW

Tentative Impact Monitoring Schedule for STWTW								
-	Feb-23							
Sun	Mon	Tue	Wed	Thur	Fri 3	Sat		
			1	2	3	4		
			Impact	Impact	Impact			
			Water Quality monitoring for C1,	Air monitoring for AM1 & AM2	Water Quality monitoring for C1,			
			C2, C3, M1, M2 & M3	Noise monitoring for NM1, NM2 &	C2, C3, M1, M2 & M3			
				NM3				
5	6	7	8	9	10	11		
			0		10			
	Impact		Impact		Impact			
	Water Quality monitoring for C1,		Mater Quality of a literate for C1					
			Water Quality monitoring for C1,		Water Quality monitoring for C1,			
	C2, C3, M1, M2 & M3		C2, C3, M1, M2 & M3		C2, C3, M1, M2 & M3			
			Air monitoring for AM1 & AM2					
			Noise monitoring for NM1, NM2 &					
12	13	14	15	16	17	18		
	lunnant	Impact	Impact		Impact			
	Impact	impace	inipaot		inpact			
	Air monitoring for AM1 & AM2	Air monitoring for AM1 & AM2	Water Quality monitoring for C1,		Water Quality monitoring for C1,			
	Noise monitoring for NM1, NM2	Noise monitoring for NM1, NM2	C2, C3, M1, M2 & M3		C2, C3, M1, M2 & M3			
	& NM3	& NM3						
19	20	21	22	23	24	25		
	Impact		Impact		Impact	Impact		
	Water Quality monitoring for C1,		Water Quality monitoring for C1,		Air monitoring for AM1 & AM2	Air monitoring for AM1 & AM2		
	C2, C3, M1, M2 & M3		C2, C3, M1, M2 & M3		Noise monitoring for NM1, NM2	Noise monitoring for NM1, NM2		
	Air monitoring for AM1 & AM2				& NM3	& NM3		
	Noise monitoring for NM1, NM2 &							
26	27	28						
20								
	Impact							
	Water Quality monitoring for C1,							
	C2, C3, M1, M2 & M3							

Tentative Impact Monitoring Schedule for STWTW

		16	ntative Impact Monitoring Schedule for STW Mar-23	1 VV		
Sun	Mon	Tue	Wed	Thur	Fri	Sat
5011			1	2	3 4	
			Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3
5	6	7	8	9	10	11
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &	
12	13	14	15	16	17	18
	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	
19	20	21	22	23	24	25
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &		Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3
26	27	28	29	30	31	
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	

Tentative Impact Monitoring Schedule for STWTW

Tentative Impact Monitoring Schedule for STWTW								
	Apr-23							
Sun	Mon	Tue	Wed	Thur	Fri	Sat		
						1		
2	3	<u> </u>	5	6	7	8		
-	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	5	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &				
9	10	11	12	13	14	15		
		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3				
16	17	18	19	20	21	22		
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3			
23	24	25	26	27	28	29		
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 &		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	Impact Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3		
30								