

Contractor's General Submission Form (CGS)

Con	tract No.	3/WSD/15	5									
Proj	ect Title:			ning of Sha dvance Wo	a Tin Water ⁻ orks	Treati	ment Wo	orks				
CGS	No.:	3WSD15/0	WSD15/CGS/SEQ/ALL/JV1077				Issue:	-	А	Date:	15/01/2021	
To:		Engineer's	s Repres	entative			Your Re	ef:				
Atte	ntion:	Ms. Derek	Ms. Derek Ng									
Fron	n:	Ming Hing	g – Ming	Hing Civil -	- Vasteam Jo	oint V	/enture					
Title	:	EM & A Impact Monitoring Report (Dec 2020)										
Spec	cification:											
Purp	ose:	🗆 For	r Informa	tion	For Cor	mmer	nt	🗆 For	Appro	oval	✓ For Record	
Desc	cription of Co	ontents:										
Weh	nerewith subn	nit the EM&	A Impact	Monitoring	Report (Dec	2020)) for you	r perusa	al and r	ecord.		
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cc.	JV Partner	-			(w/ encl.)							
	Office Master	copy -			(w/ encl.)	.)						



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Your Ref: Our Ref: 60479142/C/fyw2101151

By Hand & By Email

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

Attn: Mr. Edmund Huen

15 January 2021

Dear Sir,

Contract No.3/WSD/15 In-situ reprovisioning of Sha Tin Water Treatment Works (South Works) Advance Works Submission of 58th Monthly EM&A Report for December 2020

Reference is made to Environmental Team (ET)'s 58th Monthly EM&A Report for December 2020 (Rev. 0) submitted on 15 January 2021.

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



浩科環境工業有限公司

Acumen Environmental Engineering & Technologies Co., Ltd.

Your ref: Our ref: CJ0

CJO-3113

By hand

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

15 January, 2020

Dear Sir,

In-Situ Reprovisioning of Sha Tin Water Treatment Works – South Works Environmental Permit EP-494/2015 Submission of 58th monthly EM&A Report

In accordance with the Condition 3.4 of the Environmental Permit (No. EP-494/2015), we submit herewith 5 hard copies and 2 electronic copies of the 58th 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,

Ir Leung, Jacky, C. H. Environmental Team Leader

c.c. Independent Environmental Checker



Water Supplies Department



MONTHLY ENVIRONMENTAL MONITORING AND AUDIT

(EM&A) REPORT (NO. 58)

FOR

CONTRACT NO. 3/WSD/15 IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS – SOUTH WORKS

(Rev. 0)

Acumen Environmental Engineering & Technologies Company Limited

Project no.: CJO-3113

MONTHLY ENVIRONMENTAL MONITORING AND AUDIT (EM&A) REPORT (NO.58)

FOR

Contract No. 3/WSD/15 In-situ Reprovisioning of Sha Tin Water Treatment Works – South Works

	Name	Signature
Prepared by	Mr. Chong, Terence, K. K.	Atuen
Reviewed by	Mr. Wong, Vega, T. L.	the
Approved & Certified by	Ir Leung, Jacky, C. H. Environmental Team Leader (ETL)	
Verified & Confirmed by	Mr. Fung, Y. W. Independent Environmental Checker (IEC)	2

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Water Supplies Department In-situ Reprovisioning of Sha Tin Water Treatment Works – South Works Monthly EM&A Report (No. 58)

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Acumen Environmental Engineering & Technologies Company Limited

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- 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. 3/WSD/15, Ming Hing Ming Hing Civil Vasteam Joint Venture (MMVJV) is commissioned by WSD to undertake the construction of the advance 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 MMVJV 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 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 58th monthly Environmental Monitoring and Audit Report for Contract No. 3/WSD/15 covering the period from 1 to 31 December 2020 (the Reporting Period). As informed by the Contractor, major activities in the reporting period included:
 - Rectification of site defects or omissions after final completion
- A.5 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	18
Noise	L _{eq(30mins)} Daytime	6
Water Quality	Water Sampling	12
Inspection /	ET Regular Environmental Site Inspection	5
Audit	IEC Monthly Environmental Site Audit	1

- A.6 No exceedance of air quality, noise and water quality monitoring were recorded in this reporting period.
- A.7 No environmental complaint were received via EPD in this reporting period.
- A.8 No notification of any summons and successful prosecutions was received in this reporting period.
- A.9 No reporting change was made in this reporting period.
- A.10 There was no EPD site inspection conducted in the reporting period.
- A.11 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 between January to March 2021 will be:
 - M1-M5 Water Main Diversion
 - Diversion of Existing CLP Cable in Administration building
 - Construction of Temporary DG store
 - Isolation of Clarifier-RC Wall Construction
 - Washwater Equalization Tank (WET)-unforeseen underground utilities clarification
 - Cofferdam of WET- installation of pipe pile & grouting
 - DN1200 drainage work in Administration Building-Excavation & drainage pile laying

A.12 EM&A monitoring for the 58th reporting period for Contract No. 3/WSD/15 has been completed. The 59th monthly EM&A report for Contract 1/WSD/19 will cover the period from 1 to 31 January 2021.

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. 3/WSD/15 and 1/WSD/19, Ming Hing Ming Hing Civil Vasteam Joint Venture (MMVJV) is commissioned by WSD to undertake the construction of the advance 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 MMVJV 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 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:

Table 1-1: Key Personnel Contact for Environmental Works

Party	Position	Name	Telephone
Water Supplies Engineer / Project		Mr. Chiu, Aletta C. M.	2829 5653
Department	Management		
AECOM	Senior Resident Engineer (Civil)	Mr. Ng, Derek, K. H.	9717 1420
	Independent Environmental Checker	Mr. Fung, Y. W.	3922 9366
	Deputy Independent Environmental Checker	Ms. Lam, Lemon, M. C.	3922 9381
Ming Hing - Ming	Project Manager	Mr. Lam, Larry, M. W.	6478 0501
Hing Civil - Vasteam Joint Venture	Site Agent	Mr. To, Eros, W. H.	9223 9590
Acumen Env. Eng. & Tech. Co. Ltd.	Project Director	Ir Dr. Lam, Gabriel, C. K.	2333 6823
	Environmental Team Leader	Ir Leung, Jacky, C. H.	9060 2368
	Ecologist	Mr. Liu, Vincent, W. L.	6505 5827

1.3. SCOPE OF REPORT

- 1.3.1 This is the 58th monthly EM&A Report under the Contract No. 3/WSD/15 In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Advance Works covering the period from 1 December 2020 to 31 December 2020 (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 is 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 between January to March 2021 will be:
 - M1-M5 Water Main Diversion
 - Diversion of Existing CLP Cable in Administration building
 - Construction of Temporary DG store
 - Isolation of Clarifier-RC Wall Construction
 - Washwater Equalization Tank (WET)-unforeseen underground utilities clarification
 - Cofferdam of WET- installation of pipe pile & grouting
 - DN1200 drainage work in Administration Building-Excavation & drainage pile laying
- **1.4.3** 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.

Table 2-1:	Summary	of Impact	Monitoring	Programme
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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

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					
	In-situ measurement					
	★ Dissolved Oxygen (mg/L);					
	★ Dissolved Oxygen Saturation (%);					
	★ Turbidity (NTU);					
Water Quality	★ pH value;					
	\star Water depth (m); and					
	★ Temperature ($^{\circ}$ C)					
	Laboratory analysis					
	★ Suspended Solids (mg/L)					

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- 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	Sensidyne Model 80570	
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

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- 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 six (6) 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/m ³)	
Date	Weather	Start Time	End Time	1 st Measurement	2 nd Measurement	3 rd Measurement
4/12/2020	Sunny	13:24	16:24	98	107	112
9/12/2020	Fine	11:35	14:35	112	142	157
14/12/2020	Cloudy	14:52	17:52	107	115	120
18/12/2020	Fine	15:21	18:21	73	80	79
23/12/2020	Fine	10:48	13:48	89	94	81
28/12/2020	Sunny	09:55	12:55	106	112	98
	Average			104.6		
	Range				73 – 157	

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

Table 2-6: Summary of 1-hour TSP Monitoring Results – AM2

				1-hour TSP				
Date	Weather	Start Time	End Time	1 st Measurement	2 nd Measurement	3 rd Measurement		
4/12/2020	Sunny	13:30	16:30	104	119	106		
9/12/2020	Fine	11:42	14:42	132	145	165		
14/12/2020	Cloudy	14:59	17:59	119	134	132		
18/12/2020	Fine	15:28	18:28	98	85	98		
23/12/2020	Fine	10:56	13:56	93	105	87		
28/12/2020	Sunny	10:02	13:02	116	107	106		
	Average			113.9				
	Range				85 – 165			

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 Leq had been recorded at the specified intervals. The non-project related construction activity Sha Tin to Central Link (SCL) for Hin Keng to Diamond Hill Tunnel, in the vicinity of the monitoring stations during the impact monitoring had been noted and the source and location of this activity had been recorded.
- 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
NM1	НК2	The L Louey (South) (at a platform level of about 5m above road level nearby - free field measurement)
NM2	НК5	Hin Keng Estate – Hin Wan House (at the roof level - facade measurement)
NM3	HK7	C.U.H.K.F.A.A. 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 NL-52	
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 (Leq).
- 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

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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 six (6) 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.

Date	Time		Weather	1 st Leq _{5min}	2 nd Leq _{5min}	3 rd Leq _{5min}	4 th Leq _{5min}	5 th Leq _{5min}	6 th Leq _{5min}	Leq _{30min}
4/12/2020	14:50 - 1	15:20	Sunny	63.2	62.4	62.2	64.2	62.1	61.5	62.7
9/12/2020	13:05 - 1	13:35	Fine	61.1	63.0	64.1	60.5	64.1	63.2	62.9
14/12/2020	16:12 - 1	16:42	Cloudy	62.8	61.0	61.5	61.8	61.6	60.9	61.6
18/12/2020	16:44 - 1	17:14	Fine	64.1	63.2	62.6	63.0	63.0	61.0	62.9
23/12/2020	13:01 - 1	13:31	Fine	62.9	62.4	61.6	62.0	64.1	62.3	62.6
28/12/2020	11:14 - 1	11:44	Sunny	62.9	63.2	63.0	62.6	64.1	62.8	63.1
									Average	62.7
Limit Level	>75dB(A)								Range	61.6 –
										63.1

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

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

Date	Time	e	Weather	1 st Leq _{5min}	2 nd Leq _{5min}	3 rd Leq _{5min}	4 th Leq _{5min}	5 th Leq _{5min}	6 th Leq _{5min}	Leq _{30min}
4/12/2020	13:30 -	14:00	Sunny	63.2	61.2	60.2	62.1	61.4	62.6	61.9
9/12/2020	11:42 -	12:12	Fine	61.8	62.2	60.9	61.8	62.4	63.2	62.1
14/12/2020	14:59 -	15:29	Cloudy	62.3	63.2	64.2	64.2	63.2	63.4	63.5
18/12/2020	15:28 -	15:58	Fine	64.2	63.0	61.5	62.1	64.5	62.1	63.0
23/12/2020	10:56 -	11:26	Fine	61.5	60.9	62.2	64.0	61.6	62.0	62.2
28/12/2020	10:02 -	10:32	Sunny	65.3	64.0	62.3	64.1	63.2	60.6	63.5
									Average	62.7
Limit Level	>75dB(A)							Range	61.9 –
										63.5

Date	ſ	ſim	e	Weather	1 st Leq _{5min}	2 nd Leq _{5min}	3 rd Leq _{5min}	4 th Leq _{5min}	5 th Leq _{5min}	6 th Leq _{5min}	Leq _{30min}
4/12/2020	14:06	-	14:36	Sunny	60.5	58.8	60.5	59.9	62.1	62.0	60.8
9/12/2020	12:18	-	12:48	Fine	58.9	59.0	57.8	60.5	61.0	63.0	60.4
14/12/2020	15:36	-	16:06	Cloudy	62.1	61.1	60.0	57.8	59.5	62.1	60.7
18/12/2020	16:05	-	16:35	Fine	62.2	63.2	60.5	62.1	58.8	59.6	61.3
23/12/2020	11:30	-	12:00	Fine	60.9	61.5	62.6	63.0	61.6	62.1	62.0
28/12/2020	10:36	-	11:06	Sunny	61.7	62.4	61.7	62.1	62.0	63.0	62.2
									Average	61.3	
Limit Level 70dB(A) during normal teaching periods							5. 51	Range	60.4 -		
or 65dB(A) during examination periods										62.2	

Table 2-11: Summary of Noise Monitoring Results - NM3

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		Co-ordinates			
Monitoring Station	Description	Easting	Northing		
C1		835110	824716		
C2	Control Stations	835403	824470		
C3		835642	824386		
M1	-	835215	824827		
M2	Impact	835536	824775		
M3	Monitoring Stations	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 - 20mg/L and 0 - 200% saturation; and a temperature of 0 - 45°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 thirteen (13) 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.

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Table 2-14: Summary of Water Qual	ity Monito	ring Result	S			
Dissolved Oxygen – Mid Depth (mg/L)	C1	C2	C3	M1	M2	M3
Average	8.62	8.67	N/A	9.19	9.18	9.46
Min.	8.36	8.33	N/A	9.02	9.01	9.30
Max.	8.86	8.92	N/A	9.38	9.39	9.65
Turbidity – Mid Depth (NTU)	C1	C2	C3	M1	M2	M3
Average	2.49	2.58	N/A	2.13	1.73	0.62
Min.	2.20	2.40	N/A	1.90	0.80	0.30
Max.	2.70	2.70	N/A	2.30	2.00	0.80
Suspended Solid – Mid depth (mg/L)	C1	C2	C3	M1	M2	M3
Average	3.08	3.46	N/A	2.57	4.94	<1
Min.	2.90	3.00	N/A	2.40	4.50	<1
Max.	3.50	4.00	N/A	2.80	5.60	<1
pH value (unit)	C1	C2	C3	M1	M2	M3
Average	7.41	7.69	N/A	7.68	7.77	7.60
Min.	7.21	7.41	N/A	7.63	7.59	7.49
Max	7.78	7.89	N/A	7.80	7.88	7.75

2.4.10 In this Reporting Month, all monitoring result were below or within the action level. Hence, no Action or Limit Level exceedance was triggered during this month. Detailed monitoring results including insitu measurements, laboratory analysis data are shown in **Appendix R**.

2.5. ECOLOGY

- 2.5.1 Detailed Vegetation Survey Report and Woodland Compensation Plan submitted to EPD and approved on 17 February 2016. To ensure the planting works are properly implemented, bi-weekly monitoring is proposed throughout the planting phase. The frequency of monitoring is proposed to be bi-monthly during the first years of the planting stage, and then reduced to quarterly for the six (6) year post-planting period.
- 2.5.2 A 6 years post-planting review report will be submitted within a month after completion of the at least 6 years post-planting monitoring and maintenance.
- 2.5.3 Monitoring inspections were conducted on 31 December 2020.
- 2.5.4 Three trees TA572, TA326 and TA327 were transplanted to tree compensation area within the Sha Tin Water Treatment Works (STWTW) in 20 June 2016.
- 2.5.5 The condition of TA572 was observed in poor condition due to the damage of two main trunks. TA327 was also 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. Transplanted Lamb of Tartary (Cibotium barometz) seems to be received too much sunlight. Leaves of them were observed yellowish in colour. On the other hand, young foliage was growing out to replace the old one.
- 2.5.6 Since Sha Tin South Fresh Water Service Reservoir (STSFWSR) was still under preparation, Lamb of Tartary was still temporally stored in a nursery garden at Wang Toi Shan, Kam Tin.
- 2.5.7 In general, all transplanted Lamb of Tartary (Cibotium barometz) were in fair condition while Hong Kong Eagle's Claw (Artabotrys hongkongensis) was observed dead during inspection on 20 August 2016. The survival rate for Lamb of Tartary (Cibotium barometz) and Hong Kong Eagle's Claw (Artabotrys hongkongensis) was 96%. The Summary table for health condition and survival rate was shown in Appendix II.
- 2.5.8 All transplanted Lamb of Tartary (Cibotium barometz) have been severely damaged by Typhon Wipha on 30-31 July 2019; the next few monitoring will be critical to assess their survival and recovery progress.
- 2.5.9 It is recommended to retain transplanted Lamb of Tartary (Cibotium barometz) at the nursery garden under proper maintenance during current recovery stage. Once their condition has recovered to acceptable level, they can be moved to the transplantation site at Sha Tin South Fresh Water Service Reservoir (STSFWSR) when the site is ready.

2.5.10 After transplantation, root ball of TA572 and TA327 tree should be kept moisture especially during non-raining day.

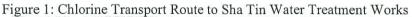
2.6. WASTE MANAGEMENT STATUS

- 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).



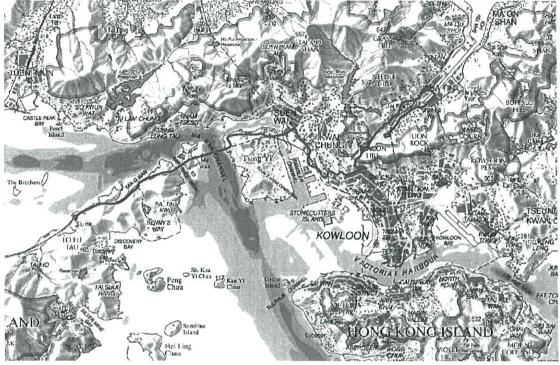
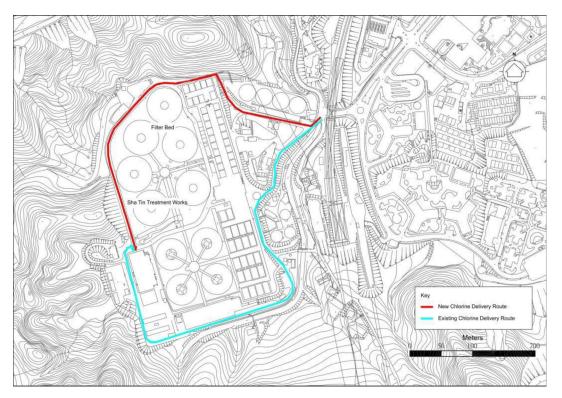


Table 2-15: Chlorine Truck Transport Route

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 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

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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, five (5) site inspections were carried out on 2, 8, 16, 23 and 30 December 2020.
- 2.8.2 One joint site inspection with IEC also undertaken on 16 December 2020. Minor deficiencies were observed during weekly site inspection or joint site inspection. Key observations during the site inspections are summarized in Table 2-16.

Date	Environmental Observations	Follow-up Status
2 December 2020	Stockpiles of dusty materials near the Logistic Centre were not covered properly by impervious sheeting. The contractor was reminded to provide proper sheeting and prevent the dusty materials drop into U- channel.	Covering was provided
8 December 2020	No environmental issue was observed during the site inspection.	N/A
16 December 2020	General refuse was found near North Circular Road. Contractor was reminded to clear the refuse.	Refuse was cleared
23 December 2020	Debris were nor cleared properly inside the U- channel near North Circular Road.	Debris were cleared
30 December 2020	No environmental issue was observed during the site inspection.	N/A

Table 2-16: Site Observations

i. The Contractor has rectified all of 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 below:

Table 2-17: Summary of Environmental License and Permit

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	
Registration of Chemical Waste Producer	WPN5218-759 -M2936-01	31/12/2015	N/A	MMVJV	
Trip Ticket (Chit) Account	7023723	10/12/2015	N/A	MMVJV	
Waste Water Discharge License (Wall C)	WT0023932 -2016	01/04/2016	31/03/2021	MMVJV	
Waste Water Discharge License (Wall D)	WT0024211 -2016	10/06/2016	30/06/2021	MMVJV	

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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**.

Table 2-18: Environmental	Mitigation Measures	
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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;
General	 Open stockpiles of construction materials on sites should be covered. The site was generally kept tidy and clean.

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, noise and water quality monitoring complied with the Action/ Limit levels in the reporting period.
- 2.11.2 Cumulative statistics on exceedances is provided in Appendix V.

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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	
MMVJV notify ER, ET and IEC	ER notify MMVJV, ET and IEC	
Register of the complaint. MMVJV	and ET to conduct investigation of	
complaint and report to ER an	nd IEC the investigation results	
If complaint is considered not valid	If complaint is found valid	
ET or ER to reply the complainant	MMVJV 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 rep	port for submission to WSD	
ET to record the complaint of	case in monthly EM&A report	

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2.12.2 No environmental complaint were received in the reporting period.	

- 2.12.3 No notification of summons and prosecution was received in the reporting period.
- 2.12.4 No visit from EPD 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.

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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 January to March 2021 will be:
 - M1-M5 Water Main Diversion
 - Diversion of Existing CLP Cable in Administration building
 - Construction of Temporary DG store
 - Isolation of Clarifier-RC Wall Construction
 - Washwater Equalization Tank (WET)-unforeseen underground utilities clarification
 - Cofferdam of WET- installation of pipe pile & grouting
 - DN1200 drainage work in Administration Building-Excavation & drainage pile laying

3.2. KEY ISSUES FOR COMING MONTH

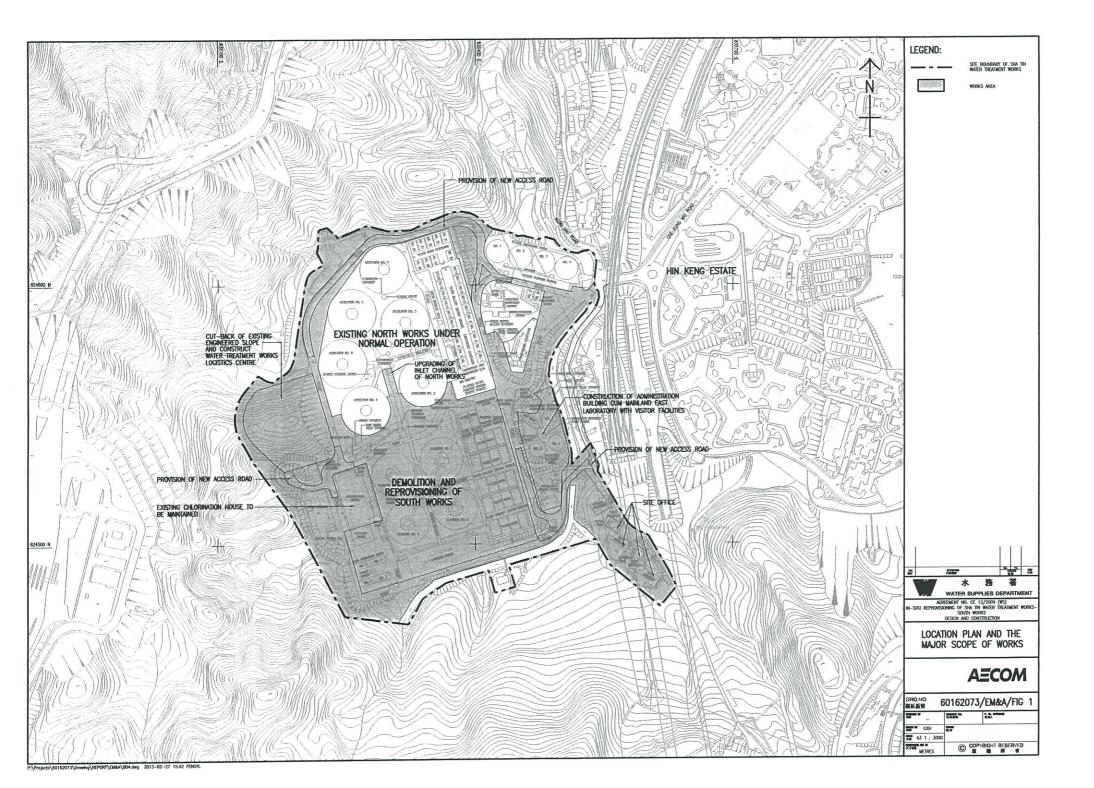
- 3.2.1 Potential environmental impacts arising from the above upcoming construction activities in January 2021 are mainly associated with dust, noise, water quality issues and waste management issues.
- 3.2.2 Particular issues to be considered in the coming month include: - Nil
- 3.2.2 The tentative monitoring schedule for January 2021 to March 2021 can be found in Appendix W.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. SUMMARY

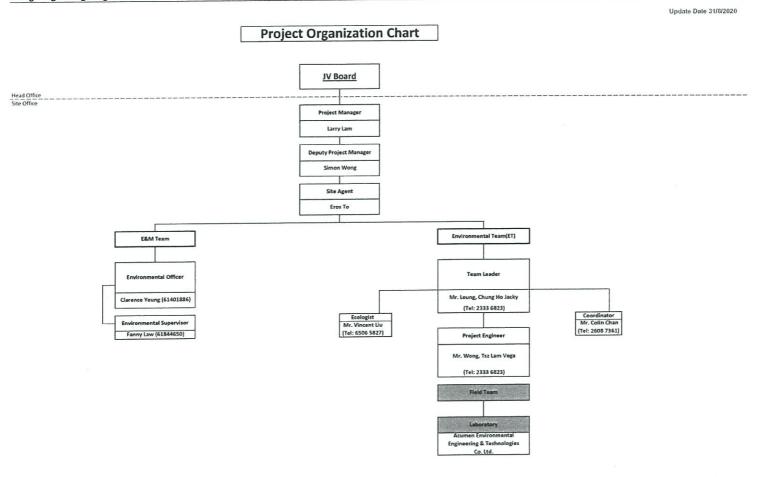
- 4.1.1 Air quality (1-hour TSP), noise, water quality and ecology impact monitoring were carried out in the reporting period. All monitoring results are satisfactory and no NOEs or associated corrective action was therefore issued.
- 4.1.2 Five (5 nos.) environmental site inspection were conducted during the reporting period. Joint site inspection with IEC were carried out on 16 December 2020. 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



Appendix B Project Organization

Contract No. 3/WSD/15 In-Situ Reprovisioning of Sha Tin Water Treatment Works (South Works) - Advance Works Ming Hing - Ming Hing Civil - Vasteam Joint Venture



Appendix C Latest Construction Programme

ID	Task Name	Duration I		Rev 9	in the first	2016	2017	2018 Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	2019 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Ner	2020 [Dec Jan]Feb [Mar] Are [May Jan] Jul [Aug [Sep] Oct [Nev] Dec Nev]
	EWSD 45 Missie Programme	10181	30.10.15	Finish	1	Kc Jan Leeb [Mar] Apr [May] Jan] JpJ [Aug. Sep. (AR) [Nov.] D	or 1 war 10 million 100m 100m 100m 100m 100m 100m 100m 1		31.8	249
P	Preliminary & Design Works		30/10/15		30/10				27/12	
P000	Preliminaries Works		30/10/15		30 10	27/3				
P000a	Office Setup		30/10/15		30 10					
P001	Temporary RE office		30/10/15 30/10/15		30'10	27/3				
P002	Renovation of RE office		30/10/15		30.10	27/3				
P003	Erection of site office Wheels wash facilities		30/10/15		30-10	26/2				
P004 P004a	Survey & Environmental		30/10/15		3010	1 6/2				
P0048	Initial survey	100 d 3	30/10/15		30 10	designation 6/2				
P006	UU detection		30/10/15		30/10	62				
P007	Tree and vegetation survey		30/10/15		30.10	₩15/1			1	
P008	Tree and vegetation survey submission to EPD			15/1/16		101 mm 52		1		
P009	Tree and vegetation survey consent from EPD		16/1/16 30/10/15		3010	62			1	
P010	Environmental Impact baseline monitoring			15/1/16		♦ 151				
P011	Baseline monitoring submission			6/2/16		+ 62				
P012	Baseline monitoring approval		30/10/15		30/10	62			27/12	
P013	Pre-condition survey Tree Protection		30/10/15		3010				2/12	
P013a P014	Tree transplanting works	90 d		6/5/16	1	7/2			27/12	
P015	Tree Protection		30/10/15		3010				31-3	
D000	Contractor's Design Submission		13/11/15						31/8	
D100	General		13/11/15		13/1) (00	54		1	× 1	
D101	Project Design Plan		13/11/15		7/12					
D102	AIP-01 & DDA-01 - Addition GI Plan		7/12/15 4/12/15	1/2/16	1212		1		1	
D104	AIP-02 & DDA-02 - Basis of Design			20/9/16		157 209				
D106	AIP-04 - P&ID		22/11/16			22/11	16/3			
D107	DDA-04-1 - P&ID			9/8/18			192	62		1
D108	DDA-04-2 - Pumping System & Pipework Design DDA-04-3 - Pipe Support Design	170 d	23/9/16	11/3/17		23.9	11/3		112	
D109	DDA.04.4 - Testing & Commissioning	703 d		13/12/18						
DIII	AIP-05 - Intrumentation, Control and Automation (DCS / Control Philosophy)	117 d	18/2/16	13/6/16		18/2 generation 13/6				
			1704	110/17		47	4/10			
D112	DDA-05-1 - DCS (General)			4/10/17 31/8/19		29/7			31/1	
D113	DDA-05-2 - DCS (Functional Design Specification)			31/8/19			174		31/8	
DI14	DDA-05-3 - DCS (Control Loop Diagrams)			26/10/17			14/7 26/1			
D115	AIP-06 - Communication Network DDA-06 - Communication Network		27/10/17				27/10 📷 %	7/11 200	11/7	
D116 D118	DDA-06 - Communication Vetwork			31/8/19						
D119	AIP-08 - Electrical Power Supply System			13/6/16		52 mmmmmmmm 13/6	40		31/8	
D120	DDA-08-1 - Electrical Power Supply System			31/8/19		76.8		305		
D121	DDA-08-2 - Earthing Design			30/5/18		ALL DESCRIPTION	21/3		31/12	
D122	DDA-08-3 - Fault Calculation & Protection Setting for Electrical System			31/12/18			142	14:5		
D123	DDA-08-4 - Harmonic Analysis			21/9/18		15.9 -		21.9		
D124	DDA-08-5 - Electrical Typical Design			25/3/19			162		25'3	
D125	DDA-08-6 - Modification of Existing Administration Building		31/12/15		31	/12 CONTRACTOR 3 /4				
D126	AIP-10A - Process Piping - Civil DDA-10A - Process Piping - Civil			9/1/19				10	T	
D127 D128	AIP-10B - Process Piping - E&M (Pipe Trench E&M Design)	146 d	5/2/16	29/6/16		5/2 29/6 147			27/12	
D128	DDA-10B - Process Piping - E&M (Pipe Trench E&M Design)			27/12/18		192 47				
D130	AIP. 10 - Sitewide F&M Design		19/2/16					24/10 gambita	13/4	
D131	DDA-19-1 - Sitewide E&M Design (General) (including Cable Duct Routes / Cable	172 d	24/10/18	13/4/19						
	Routes) by Main Contractor	1092 d	14/9/16	31/8/19		14.9 114.9			3/4	
D132	DDA-19-2 - Modification of North Works Air Gallery WTW Logistics Centre, Alum Saturation Tank, and Hydro Turbine House		18/1/16			w I			1 105	
D200	WTW Logistics Centre, Alum Saturation Tank, and Hydro Futonic House						10		1	
D201	AIP-11A - Design Concept	27 d	18/1/16	13/2/16		18 1 112 13.2	2.4		10.6	
D201	DDA-11A - Architectural Design Development (DAP stage 2 submission to ASD)	795 d	7/4/17	10/6/19						
	The trading to be provided an an experiment of the second state of the		2611.114	11/8/10		281			318	
D300	WTW Logistics Centre		25/1/16 26/4/16	25/7/16		26/4 25/7				
D301	AIP-12A - Architectural Design including GA, Interior Design and Non-Structural	91 d	20/4/10	23/1/10					11.2	
	Element	983 d	22/12/16	31/8/19		22/1			114	
D302	DDA-12A - Architectural Design including GA, Interior Design and Non-Structural Element									
D303	Element AIP-12B - Foundation & Structural Design		25/1/16			211 808088 4/3	iA 10			
D303	DDA-12B - Foundation & Structural Design	306 d	9/12/16	10/10/17		¥12				
1	······	101	1010-00	24/10/17		14.6	261	0		
D305	AIP-12C - Building Services Design		16/6/16 27/10/17	26/10/17			27/10		31/4	
D306	DDA-12C - Building Services Design		25/2/16			25-2	1 8/2			
D307	AIP-12D - Electrical & Mechanical Design		21/3/17				21/3	1811	318	
D308	DDA-12D - Electrical & Mechanical Design Alum Saturation Tanks	1315 d	25/1/16	31/8/19		201 1				
D400	Alum Saturation Tanks AIP-13A - Architectural Design including GA, Interior Design and Non-Structural		26/4/16			26/4 25/7				
D401			100000000			22/1	2 Contracting and the second sec		31-8	
D402	Element DDA-13A - Architectural Design including GA, Interior Design and Non-Structural	983 d	22/12/16	31/8/19						
	Element		25/1/16			251 0000 43				
D403	AIP-13B - Foundation & Structural Design	40 d 306 d	9/12/16	10/10/17		9/12	10.10			
D404	DDA-13B - Foundation & Structural Design	100 0	11010				24	10		
-	AIP-13C - Building Services Design	498 d	16/6/16	26/10/17		16'6	27/10		313	
D405 D406 D407 D408	AIP-I3C - Building Services Design DDA-I3C - Building Services Design	674 d	27/10/17	31/8/19		11/3 00000000000 9/6				
0406	AIP-13D - Electrical & Mechanical Design	91 d	11/3/16	9/6/16	1	11/3 2000000000 975	152	21/11		
D407	DDA-13D - Electrical & Mechanical Design	280 d	15/2/17						31/8	
D408	Huden Turbing House		31/12/15	31/8/19	1 1 31	12 3/2 mmmm 21/3				1
D501	AIP-14A - Architectural Design including GA, Interior Design and Non-Structural	48 d	3/2/16	21/3/16					J	
	Element (incl. MEICA and BS design)								(1993)	
	Critical Split Task Malestone *	Summa	ary r		Critical					TOTAL CONTRACTOR STORE
	Chucal Spin Them					Contract No.: 3/WS	5D/15			
f 10 lovember 201				1.20		ovisioning of Sha Tin Water Treatment V	Vorks (South Works) - Advance Works			and foreground by

		Duration	Day 0	Rev 9			2016	2017	2018	2019	1	2020	I
D ID	Task Name	1	Start	Finish	Sep Oct	Nov Dec	2016 Jan Feb [Mar [Ayr [May] Jon] Jul [Avg Sep] Ort [Nov] Dec] J	an [Feb Mar Apr May Jun] Jul Aug Sep Oct Nov Dec	Jan Fels Mar Apr May Jun Jul Ang Sep Oct Nov De	s Jan Feb Mar Apr May Jan Jul Aug Sep Oct	Nov Dec	Jan Feb Mar Apr Mey Jun Jul Aug Sep Oct Nov Des	Jan Feb Mar
76 D502	DDA-14A - Architectural Design including GA, Interior Design and Non-Structura	il 766 d	31/5/16	5/7/18			31/3						
	Element (incl. MEICA and BS design) AIP-14B - Foundation & Structural Design	95 d	31/12/15	3/4/16		31/12	3/4		0.00				11
77 D503 78 D504	AIP-14B - Foundation & Structural Design DDA-14B - Foundation & Structural Design	642 d	6/5/16	6/2/18			6-5 E		ngun 42				
79 0505	AIP-14C - Building Services Design	408 d	20/4/16	1/6/17			29.4	26		31.8			
80 D506	DDA-14C - Building Services Design	821 d	2/6/17	31/8/19			122	28					
81 D507	AIP-14D - Electrical & Mechanical Design (incl. Hydraulic study)	149 d 766 d	14/9/16	14/1/16			149		16/10				
82 D508 83 D600	DDA-14D - Electrical & Mechanical Design (incl. Hydraulic study) North Works Temporary Power House	1041 d	31/12/15			31/12			5:11				
83 D600 84 D601	AIP-15A - Architectural Design including GA, Interior Design and Non-Structural	26 d	19/2/16	15/3/16	1		19/2 15/3						
	Element			10/3/17			13	10/3					
85 D602	DDA-15A - Architectural Design including GA, Interior Design and Non-Structure	al 309 d	6/5/16	10/3/17	1 1								11
86 D603	Element AIP-15B - Foundation & Structural Design	65 d	31/12/15	4/3/16		31/12	43						
97 0404	DDA-15B - Foundation & Structural Design	330 d	31/5/16	25/4/17			31/5	25.4					
88 D605 89 D606	AIP-15C - Building Services Design	189 d	16/6/16	21/12/16			2410		5/11		1 1		
89 D606	DDA-15C - Building Services Design	743 d 130 d	24/10/16 19/2/16	5/11/18 27/6/16			19/2 10/2 27/6						
90 D607	AIP-15D - Electrical & Mechanical Design DDA-15D - Electrical & Mechanical Design	322 d	26/8/16	13/7/17			268	13/7			1 1		
91 D608 92 D700	Temporary Washwater Recovery Tank	975 d	31/12/15	31/8/18		31/12			31/8				
93 D701	AIP-16A - Galvanized Steel Platforms, Walkways and Footing Design	65 d	31/12/15	4/3/16		31/12	43	10/4					
94 D702	DDA-16A - Galvanized Steel Platforms, Walkways and Footing Design	340 d	6/5/16 20/4/16	10/4/17 9/5/16			20/4 9 93						
95 D703	AIP-16B - Lighting Design	20 d 793 d	30/6/16	31/8/18			30.6		37/8				
96 D704 97 D705 98 D706	DDA-16B - Lighting Design AIP-16C - Electrical & Mechanical Design	134 d	17/2/16	29/6/16	1 1		17/2 manufacture and 29/6						
98 0706	DDA-16C - Electrical & Mechanical Design	265 d	26/8/16	17/5/17			26/8	17/5		318			11
99 D800	Flowmeter House	1312 d	28/1/16	31/8/19		2	19.2 13/3			1.00			
100 D801	AIP-17A - Architectural Design including GA, Interior Design and Non-Structural	26 d	19/2/16	15/3/16			124		1				
	Element DDA-17A - Architectural Design including GA, Interior Design and Non-Structur	al 503 d	27/7/17	11/12/18				27/7		1412			11
101 D802	Element	ai		0000000000									
102 D803	AIP-17B - Foundation & Structural Design	45 d	28/1/16	12/3/16			N/1 mmm 12/3	26/10					
103 D804	DDA-17B - Foundation & Structural Design	484 d 20 d	30/6/16	26/10/17 30/3/16			11/3 2 30/3						
104 D805	AIP-17C - Electrical & Mechanical Design	20 d 928 d	15/2/17	30/3/16 31/8/19				152		Jack Street State Street Stree	1 1		11
105 D806	DDA-17C - Electrical & Mechanical Design AIP-17D - Building Services Design	196 d	16/6/16	28/12/16			165 000000000000000000000000000000000000	8/12		1/2	1 1		
106 D807 107 D808	DDA-17D - Building Services Design	893 d	22/3/17	31/8/19			24/2	22/3		313			
108 D900	Valve Chamber	1284 d	25/2/16 25/2/16	31/8/19 27/4/16			25/2 23/2						
109 D901	AIP-18A - Foundation, Civil & Structural Design	63 d 922 d	30/6/16	7/1/19	1		30.6 (0.000)			7/1			
110 D902	DDA-18A - Foundation, Civil & Structural Design AIP-18B - Electrical & Mechanical Design	27 d	11/3/16	6/4/16			11/3 100 6/4			113			
111 D903 112 D904	DDA-18B - Electrical & Mechanical Design	928 d	15/2/17	31/8/19			164	152		31/8			11
113 D905	AIP-18C - Building Services Design	122 d	16/6/16	15/10/16			1010 11/10	22/3		31/8			
114 D906	DDA-18C - Building Services Design	893 d 1526 d	22/3/17	31/8/19 2/1/20	30/10	-					1	2/1	
115 \$1000	Section 1 Section 1 Commencement	0 d		30/10/15	1	30/10							11
116 S1001 117 S1100	North Works Temporary Power House	958 d	2/4/16	15/11/18	1	1	24	7/12					
118 S1100a	NWTPH - Ground Investigation & foundation	260 d	2/4/16	17/12/16	1		24 10 104						
119 \$1101	Excavation of trial pit for earthing test	18 d 10 d	2/4/16	29/4/16			264 294				1 1		
120 \$1102	Ground Investigation Works Additational drilling for in planting earthing log	30 d	30/4/16	29/5/16			30/4 photo 29/5						
121 S1103	Site Clearance and Preparation Works	10 d	15/8/16	24/8/16		F	15% m 24% 25% mmmm 13/19						
122 S1104 123 S1105	Excavation and installation of ELS	50 d	25/8/16	13/10/16		1	14/10 23/10						
124 S1106	Plate Load Test	10 d 20 d	14/10/16	23/10/16 12/11/16		1	2410 12/11						
125 S1107	Installation of carth mat Foundation	35 d	13/11/16	17/12/16			13/11 mmm 0	/42	15				11
126 S1108 127 S1108a	NWTPH - Structure & Building Service	698 d	18/12/16	15/11/18		1	18/12 (***	197	10	1			
128 \$1109	Structural for North Works Tempoary Power House	210 d		15/7/17			10/12	167	34				
129 S1110	ABWF Works for North Works Tempoary Power House	262 d	16/7/17	3/4/18		1			15/3 15/1	1			
130 S1118	Plumbing and Drainage installation	246 d 246 d	15/3/18	15/11/18			1		153 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm				
131 S1119	MVAC installation Fire Services installation	246 d	15/3/18	15/11/18		1			15/3		1 1		11
132 S1120 133 S1121	Electrical installation	246 d	15/3/18	15/11/18				e 26	.33				
134 S1111	Ready for "laying of cable ducts, construction of draw pits and installation of cab	le 0 d	2/6/17	2/6/17									
Contraction of the second	trans."	83 d	2/6/17	23/8/17				2% provide 10 23/8	1				11
135 \$1112	Laying of cable ducts, construction of draw pits and installation of cable trays	0.0	2011			1			12/10				11
136 \$1185	Finishing works	280 d	6/1/18	12/10/18		1			13:10 13:10				
136 S1185 137 S1185A	Site cleaning	29 d		10/11/18		1			÷ 15	11			
138 \$1186	Completion of architectural finishes and relevant works (both internal and externa	b0 (li	15/11/18	15/11/18							1		11
	AND THE AND A LIKE	791 d	2/6/16	1/8/18			26		1 13				
139 S1112a 140 S1113	NWTPH - 6.6KV & 11KV Confirmation of cable routing with CLP and WSD	0 d	2/6/16	2/6/16		1		28/2			1		11
140 51113	Design 6 6ky / 11ky working platform	120 d	1/11/16	28/2/17		1	in the second se	1/6 100000000000000000000000000000000000					
142 \$1115	Construction of 6.6kv / 11kv working platform incl. cable pit and steel frame at n	oof of 180 d	1/6/17	27/11/17		1			1		1		
	Washwater Pump House Cable tray installation at roof of Washwater Pump House for CLP cable laying	124 d	28/11/17	31/3/18		1		28/11	31/3		1		11
143 S1116	Cable tray installation at root of washwater rump house for CLP cable laying				1	1			14 108				
144 SI117	Laying 6.6kv / 11 kv cable by CLP NWTPH - E&M Works	123 d	1/4/18	1/8/18		1	10			262	1		
145 \$1123		1001 d 760 d	1/6/16	26/2/19 30/6/18		1	1/6		30.6				
146 SH123a	NWTPH - Electrical equipment NWTPH- Electrical Equipment Procurement	760 d 396 d	1/6/16	1/7/17		1	14	1/7	1				11
147 S1124	NWTPH- Electrical Equipment Procurement		20/9/17	30/6/18		1		20.4	30.6	a			
148 S1126 149 S1126A	NWTPH-Electrical Equipment Delivery NWTPH-Whole Set of Equipment (Duo Bins and PCT) Delivered on Sile (Claims N	lo. 141 d	30/6/18	18/11/18		1							11
20533	26A)		30/6/10	10/6/19	1.1	1			¢ 306		1		
150 S1126A		0.0	30/6/18	JUIDITA	Sul	5							
	Critical Solit Task Milestone	Sum	mary -		1 Cnuc	al						transferration 2	-
							Contract No.: 3/WSD/	5					and and the second second
Page 2 of 10 Date 7 November 20	19			I	n-situ R	eprovi	sioning of Sha Tin Water Treatment Wor	ks (South Works) - Advance Works					Verstern
							Master Programme (Ver.09) - (A	(CERT aved)				Manual Action of Concerning	
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	Fask Name		Start	Finish	Sep Oct Nev Dec	and the second se	And the line has been as a second	Jan Feb Mar Apr May Jun Jul Aug Sep Oct New Dec	1	1 1	
S1126AC-2	JV Conducted CLP Joint Inspection & Workshop for Those Units Installation Aspec		1/7/18					7/7 (00000000000000000000000000000000000			
S1126AC-3	The First Unit of DB and PCT installed at NWTPH CLP Final Test and Inspected, Accepted for Further Energization	98 d 30 d	7/7/18					13/10 mmi 11/11 12/11 m 18/1			
S1126AO-4 S1126AO-5	CLP rmar returns imported, recepted or supply 2 & 3 Ready of 6.64V Switchboard Energization - Supply 2 & 3 Additional Cable Support and Cable Bridge outside NWTPH	74	12/11/18	18/11/18				20/11 /	262		
S1126B S1126BC-1	Additional Cable Support and Cable Bridge outside NWTPH Confirm Instruction	99 d 1 d	20/11/18 20/11/18	20/11/18				20/11 20/1 21/11 1000			
SI126BC-2	Design and Shop Drawing	37 d 14 d	21/11/18 28/12/18					28/12	an 10-1		
S1126BO-3 S1126BO-4	Material Ordering, Delivery & Testing Fabrication and Erection for Cable Support	17 d	11/1/19	27/1/19					1 HIN 27/1 HINNERD 26/2		
S1126BC-5	Fabrication and Erection for Cable Bridge NWTPH - Phase 1 to Phase 5 E&M works	47 d 835 d	20/9/17				20.9		31/2	21	
SI127	NWTPH Phase 1 - E & M Works & 6.6 kV Supply 4 Diversion by CLP	711 d	20/9/17	31/8/19							
\$1128	NWTPH - New Ducts, Draw Pits & Openings for 6.6kV (Phase 1) Source 2 CLP	2 d	24/11/17	25/11/17			24/11 25/1				
\$1129	Diversion - H/O by Civil Contractor CLP Inspection of the New ducts, Draw Pits & Openings for 6.6kV	1 d	26/11/17	26/11/17			26/11 26/1	1			
	NWTPH - Defect Rectify after CLP Inspection of the New Ducts, Draw Pits &	1 d	27/11/17	27/11/17			27/11 27/1				
S1130	Openings			28/11/17			28/11 28/1				
\$1131	NWTPH - Second CLP Inspection of the rectified New Ducts, Draw Pits & Openi						29/11 29/1	1			
S1132	NWTPH- T07 New Ducts/Pits/Openings after defect rectification to CLP - H/O by Civil Contractor	, Id	29/11/17	29/11/17							
\$1133	NWTPH- CLP Mobilization for Supply 4 Diversion	1 d 1 d	15/12/17 1/12/17	15/12/17			15/12 1				
S1134 S1135	NWTPH-CLP T&C of the completed HV Cables Re-routing of Incomer 4 Power Cables to North Works Air Gallery (Suspension of		16/12/17				1612	18/2			
	existing Pump No. 9 and Pump No. 14 Operation) NWTPH- Superstructure & ABWF (UP to G/F) - H/O by Civil Contractor	0 d	13/10/17	13/10/17			÷ 13/10				
\$1136				13/10/17			e 13/10				
\$1137	NWTPH- Panel Supporting Frames (G/F) - H/O by Civil Contractor	0 d					¢ 13/10				
S1138	NWTPH- WF & Panel Supporting Frames (1/F to R/F slab) - H/O by Civil Contra	ctor 0 d		13/10/17				-		1	
\$1139	NWTPH- LV Supply Installation Commence at G/F	33 d	13/10/17 20/9/17	14/11/17			13/10 grant 14/11 20/9 grant 14/11	and an			
S1140 S1141	NWTPH- 6.6KV/11kv Switchboard Installation at 1/F (incl. T & C) NWTPH- Installation of 5 nos. of New Cap Bank for Pumps at 1/F	314 d 34 d	13/10/17	15/11/17			13/10 15/11	1/2 000000000000000000000000000000000000	No. 11.		
\$1142	NWTPH - LV Cable Laying and Termination, # Subject to STWTW Operator	365 d	1/9/18	31/8/19					30/12		
S1143	NWTPH - 6.6kV Power and Control Cable Laying and Termination, Existing LV	153 d	31/7/18	30/12/18				31/7	J 912		
S1144	Diversion 12 Nos, # Subject to STWTW Operator NWTPH Phase 2 - Edi M Worka and 6.6kV Supply 2 Diversion		21/9/17				21/9 = 4/10		× [1	
S1145	NWTPH-Installation of Cable Rack at R/F of Admin Building by Civil Contracto	e 14 d	21/9/17	4/10/17							
51146	NWTPH- Installation of Cable Ladder on the Cable Rack at R/F of Admin Buildin	ng 178 d	5/10/17	31/3/18			5/10 (2007)0000000000000000000000000000000000	103			
\$1147	by E&M Contractor NWTPH, Cable Laving by CLP	123 d	23/8/18	23/12/18				23/8 0100000000000000000000000000000000000	123/12 10/6 m 24/6		
S1148	NWTPH- CLP Mobilization for Supply 2 diversion, # Subject to STWTW Operat	lor 15 d	10/6/19	24/6/19					256 🗰 87		
S1149	NWTPH-6.6kV Supply 2 Diversion to NWTPH by CLP	14.8	25/6/19						305 1 26		
S1150 S1151	NWTPH- CLP T&C of the completed HV capies NWTPH- 6.6KV Switchboard T&C incl. CLP Inspection	4d 3d	20/6/19	22/6/19					20/6 22/6 23/6 mil 8/7		
S1152	VIUTDU 4 6FU Switchhoard Parentisation - Spooly 2	16 d		8/7/19 30/9/19					1.9 100 30		
\$1153	NWTPH- Pump No. 12 Diversion to NWTPH including Power and Control Cable Subject to WSD Overhaul Completion (Claim No. 57A)								25'4 🌉 6'5		
\$1154	NW 177-F000 Yestiau Completion (Claim No. 57A) Sobject to WSD Overhaul Completion (Claim No. 57A) NWTPH-Fump No. 11 Diversion to NWTPH Including Power and Control Cable Sobject to WSD Overhaul Completion (Claim No. 57A)	cs, @ 12 d	25/4/19					1512 1	2/6		
\$1155	NWTPH Phase 3 - E&M Works & 6.6KV Supply 3 Diversion	170 d 2 d	15/12/18 28/1/19						261 1 291		
S1156 S1157	NWTPH- CLP Mebilization for Supply 3 Diversion NWTPH- 6.6kV Supply 3 Diversion to NWTPH by CLP	21 d	10/1/19	30/1/19				1 2	30 1 30 1 201 1 23/1		
\$1158	NWTPH- 6.6kV Supply 3 Diversion to NWTPH by CLP NWTPH- CLP T&C of the Completed HV Cables NWTPH- CLP T&C incl. CLP Inspection	4d 2d	23/1/19	23/1/19					25/1 24/1 25/1 28/1		
S1159 S1160	NWTPH - 6 6kV Switchboard Enterisatin - Supply 3	4 d	25/1/19	28/1/19					30/1		
S1161	NWTPH- Pump No. 13 Diversion to NWTPH including Power and Control Cable (Suspension of Pump No. 13 Operation), # Subject to WSD Overhaul Completion	a 4/d	15/12/18	Julity							
	(Claim No. 57A) NW/TBH, Power No. 10 Diversion to NW/TPH including Power and Control Cable	cs 19.d	15/5/19	2/6/19					15:5 mm 2/6		
SI162	(Suspension of Pump No. 10 Opension), # Subject to WSD Overhaul Completion	CHO NOT							117		
\$1164	(Claim No. 37A) NWTPH Phase 4A - Cap Bank for Pump No. 9 & 14	161 d	11/7/19						11/2 11/2 11/2	1 1	
S1164a	Cap Bank No. 9 & 14 - HV cable laying Cap Bank No. 9 Connection (Suspension of Pump No. 9 Operation), # Subject to	21 d 11 d	11/7/19	31/7/19						12 m 11 12	
S1165	WSD Arrangement			18/12/19						12/12 H 19/12	
\$1166	Relocate existing Cap Bank No. 14 to NWTPH (Suspension of Pump No. 14 Operation)	7 d								112 - 23.12	
\$1167	NWTPH Phase 4B - Divert Major LV Loads, Relocate existing Transformer No. 3	23 d		23/12/19						12 (10) 21/12	
\$1168	Divert North Work LV Loads to New LV Switchboard in NWTPH, # Subject to	21 d	1/12/19	21/12/19							
	WSD Arrangement under VO for replacing the existing HV cable for existing									♦ 1/12	
S1169	NWTPH- T06 New Ducts & Draw Pits between Filters & Sludge Treatment Plant									/12 100 23/12	
\$1170	H/O by Civil Contractor Relocate existing Transformer No. 3, and Reconnect to existing 6.6kV Switchboa	rd in 22 d	2/12/19	23/12/19							
\$1171	North Works Air Gallery	22 d	12/12/19	2/1/20						2:12 P-3 2:1 12:12 mm 2:1	
\$1171	NWTPH- Remove Interconnection Cable between Admin. Building and North W	orks 22 d	12/12/19	2/1/20					1		
L	Air Gallery Switchboard (Subject to Engineer's Instruction)										
	Critical Split Task Milestone *	Sum	mary -		Cntical					1	
f 10 lovember 2019						Contract No.: 3/WSD/ risioning of Sha Tin Water Treatment Wor	15			1	

a line	Task Name	Duration R	lev 9	Rev 9			2016	2017	2018	2019 Ian Feb Mari Are May Jun Jul Ang Sen Oct No	Der	2020 n Feb Mar Apr May Jul Aug Sep Oct Nov De	c Jan Feb Mar
208 \$1173	Task Name NWTPH- Establish a New 6.6kV Interconnection Cable Between North Works Temp	p. 22 d I	itart 2/12/19	Finish 2/1/20	Sep Oct	New Dyc	2016 Jan Teh [Mar] Anr [May] Jun] Jul] Aug Sep [Ort]Nov [Dec	Jan Feb Mer Apr May Jun Jul Aug Sep Oct Nov Dec	Jan (Feb (Mar (Apr (May) Jan (Jal. (Awr (Sep) Oct (Nov) De	2 Januar La construction () Ober Jones V (Jones - 2001) (Aver John (Const) Solo (Const) Aver Jones (Const	12 111	() I fan form fold fan Linn Linn formerede for for for	
208 51175	Power House and existing North Works Air Gallery Switchboard								L				
209 \$1174	NWTPH LVSB, Tx, PLC & Genset Installation at G/F			1/11/18 31/7/18					1/2 1/6 2010 31/7				
210 S1175 211 S1176	NWTPH-6.6KV/11KV to 380V Transformers NWTPH-300KVA ESS. Genset	90 d 2	/4/18	30/6/18					2/4 200710000000 30.6 1/8 millionauto 1/11				
212 \$1177	NWTPH- PLC & Ctrl. (incl. 6.6kV switchboard to existing Admin. Building)			1/11/18					117 000 317				
213 \$1178	NWTPH- Battery Charger System			31/7/18					L2 Manufacture 15/5				
214 S1179 215 S1180	NWTPH- Cable Supports NWTPH- Cable Trays	76 d 1	/3/18	15/5/18					1/3 materialization 15:5 1/4 material 15:5				
216 S1181 217 S1182	NWTPH- Cable Laying NWTPH- Cable Termination	45 d 1	/4/18	15/5/18					14 BARREN 15:5	13			
218 SI183	NWTPH - T&C			1/3/19					2/11	1/3			
219 S1184 220 S1200	NWTPH- Testing Hydro Turbine House	1385 d 1	5/2/16	30/11/19			152	1 11/10					
221 S1200a 222 S1201	HTH - Modification work for High Island Watermain Site survey of existing nineworks and cabling	16 d 1	15/2/16	1/3/16			15/2 10 1/3						
223 \$1202	Site survey of existing pipeworks and cabling Data collection for ITIH design by E&M Contractor Construction of Cable ducting for signal and power cable			21/6/16 22/5/16			2/3 INTERNATION 22/5						
224 S1203 225 S1204	Belanting of semaling pend and cable diversion			21/9/16			23/5 (Contraction of the 21/9 22/9 (Contraction of the 21/9	6'1					
226 S1205 227 S1206	Replacement of existing actuators by WSD (EOT Claim no. 010) Water suspension of High Island Water main pipes	5d 7	7/1/17	11/1/17			7/	g 11/1 a- (1/1					
228 \$1207	Capping of path A (Upstream) Investigation of backflow from downstream (Mixing Chamber) and preparation works			11/1/17 9/5/17			12	Entropy 9.5					
229 \$1208	for V160 valve capping works			10/5/17				÷ 10.5					
230 \$1209	Capping off of V160 valve for facilitating Path A downstream capping works							11/5 1000000000 84					
231 S1210 232 S1211	Demolition of EDH (incl. relocation of existing E & M equipment) Swapping of path B to path A (original)	64 d 9	9/8/17	8/8/17 11/10/17				9-3 magnitum 11/10	10				
233 S1211a	HTH - Structure & Building Service	395 d 1 28 d 1	12/10/17	10/11/18 8/11/17				12/10 mmm #/11					
234 S1212 235 S1213	ELS works (sheetpile or pipe pile installation) ELS works and excavation works	59 d 9	9/11/17	6/1/18 16/1/18					1 16-1				
236 S1214 237 S1215	Plate Load Test for Raft Foundation Foundation & substructure (incl. pipeworks installation inside Hydro Turbine House)			18/3/18				17	741 mmmmmm 13/3				
237 51215	Superstructure for Hydro Turbine House	89 d		15/6/18					19-3 millionaria 15-6 9-15-6				
239 \$1217	Completion of concrete structure of Hydro Turbine House			15/6/18					166				
240 S1218 241 S1219	Finishing works Completion of architectural finishes and relevant works (both internal and external)			10/11/18						1			
242 \$1220	Plumbing and Drainage installation			10/11/18					166 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm				
243 \$1221	MVAC installation Fire Services installation		16/6/18	10/11/18					16% mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm				
244 \$1222 245 \$1223	Electrical installation	148 d	16/6/18	10/11/18 28/10/18					24/10 24/10				
246 S1224 247 S1225	Water resumption of High Island Water main pipes Remove capping of path A and reinstall flow meter at HF1	0 d	30/10/18	30/10/18 30/11/19			28/7		•				
248 S1226 249 S1227	HTH - E&M Works (Section 1) Hydro Turbine House - E&M Equipment Procurement	366 d	28/7/16	28/7/17			28-7 generations and the local sectors and t	911					
250 \$1228	Hydro Turbine House - E&M Equipment Manufacturing & FAT Hydro Turbine House - E&M Equipment Delivery		17/8/16 10/11/17	9/11/17 31/5/18				10/11 gameter 10/11 gameter	31/5				
251 S1229 252 S1230	Hydro Turbine House - E&M Equipment Delivery (Needle Valve & Turbine	280 d	10/11/17	16/8/18					+ 16%				
253 \$1231	Generator) Hydro Turbine House - H/O by Civil Contractor		16/6/18 15/7/18	16/6/18 11/9/18					15.7 #1000000 11/9				
254 S1232 255 S1233	Installation of needle valve and turbine generator Hydro Turbine House - Hydropower Generation System Mechanical Installation		15/7/18						157 BERNARD BERNARD 3/11				
CONTRACT OF CONTRACTOR	T04 - Trench/Cable ducts & Draw Pits H/O by Civil Contractor	0 d	15/6/18	15/6/18					¢ 15% © 15%				
256 S1234 257 S1235	T05 - Trench/Cable ducts & Draw Pits H/O by Civil Contractor		15/6/18	15/6/18 10/11/18					15-9 mmutate 10-1	1.10	-		
258 S1236 259 S1237	Hydro Turbine House - Electrical & ICA Installation Hydro Turbine House - T&C for the BS., FSI, Hydroturbine System	61 d	1/10/19	30/11/19							-	2/1	
260 S1238 261 Stude	Section I Completion (Claims No. 026A, 028A & 051A)	100757 4 100	30/10/15	2/1/20	30.10	30/10		34	rin -				
262 52001	Section 2 Commencement			30/10/15 24/11/17	۳ 1	3610	7/2	24					
263 S2100	Site Formation and Slope Retaining Structures for North Circular Road			22/8/16			7/2 22/8						
264 S2100a 265 S2101	L-shape Retaining Wall D Site Clearance	21 d	7/2/16	27/2/16			7/2 mm 27/2 7/2 mm 27/2						
265 52101 266 52102 267 52103	Temporary works removal Utilities relocation Submission of DI 1038	0 d	1/3/16	27/2/16 1/3/16			+ 1/3 25/2 27/5						
268 \$2104	Excavation for L-shape Retaining wall		28/2/16 13/4/16	27/5/16 10/8/16			13/4 10/8						
269 S2105 270 S2106	Construction of L-shape Retaining wall Permission of DI 1038	0 d	22/8/16	22/8/16 21/7/17			e 22* 22*8	210					
271 S2106a 272 S2107	Bore Pile & Mini Pile for Retaining Wall D Excavation and backfilling for bore piling works area	100 d	22/8/16	29/11/16			22.% proceeding of the 197	air E					
273 \$2108	Installation of temp, soil nail	15 d		19/11/16 14/12/16			36/11 11	14 12					
274 S2109 275 S2110	GI works for bored piles and mini piles Bored piling machine establishment	7 d	15/12/16	21/12/16			22/12	19/4 mm 16/5					
276 S2111 277 S2112	Construction of bored piles (D) (H 5-10m, L 70m, Dia 1.5m) Bored Pile test	28 d	19/4/17	16/5/17				5'4 📰 18'4					
278 \$2113	Excavation for mini pile area Preparation works (Plant mobilization & site set Up)	3 d		21/4/17				19/4 1 21/4 22/4 19/5					
279 S2114 280 S2115	Mini pile load test (Preliminary Pile)	28 d	22/4/17	19/5/17 14/7/17				6.5 manual 147					
281 S2116 282 S2117	Construction of mini piles Mini pile load test (Tension and compression)	7 d	15/7/17	21/7/17				22/7 - 24	4 n				
283 S2117a	Retaining Wall D for Bore Pile & Mini Pile Section Construction of retaining wall above bored pile		22/7/17 22/7/17	24/11/17 9/9/17				22/7 1000000 9.9					1
284 S2118		Summa			1 Critica	al						A MARKED OF A PARTY OF	
Page 4 of 10	(nuca span task						Contract No.: 3/WSE isioning of Sha Tin Water Treatment W	/15 orks (South Works) - Advance Works					Versteps
age 4 of 10 ate 7 November 201	2			I	n-situ R	eprovi	isioning of Sha Tin Water Treatment W Master Programme (Ver.09) -	(Accelerated)				H PARTY I	9446797.00

ID	Task Name	Duration	Rev 9	Rev 9	1		2016 2017	2018 2019 2020	en Oct Nov Der 1
1	Task ivenine		Start 5/8/17	Finish 18/9/17	Sep Oct	Nev Dec	Jan Feb Mar Apr May Jun Jul Jaug Sep Oct New Dec Jan Feb Mar Apr May Jun Jul Jaug Sep Oct New Dec 53	Jan Feb Mar Apr May San Jai Apr Sen Oct Nov. Dec Jan Feb Mar Apr May Jan Jul Apr Sen Oct Nov. Dec Jan Feb Mar Apr May Jan] Jul Apr Sen Oct Nov. Dec Jan Feb Mar Apr May Jan] Jul Apr Sen Sen	- 1941 (Mar 1942 (J
S2119 S2120		45 d 40 d		28/10/17			199 mmm 28/10 31.4 permeteration 24/1		
52121	Backfilling works behind bored pile wall & L-shape retaining wall			24/11/17			4 24 1		
S2002	Section 2 Completion (Certificate of Completion No. 1)	0 d	24/11/17	24/11/17	30/10			123	
\$3001		0 d	30/10/15			30.16		5 4	
\$3002	New North Circular Road	887 d 224 d	1/11/16	6/4/19 12/6/17			1/11 126		
S3002a S3004	Exception for construction of new valve chamber	47 d	1/11/16	17/12/16			1/11 18/12 18/12 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm		
\$3005	Construction of New Valve Chamber	177 d	18/12/16	12/6/17			41		
\$3005a			4/1/18	2/8/18			41	2x	
\$3003 \$3008		299 d	12/3/18	4/1/19				123	
35008	440 to Ch. 557)	37 d	1/3/19	6/4/19				13 - 64	
S3008a	E&M fitting for New Valve Chamber Lighting Installation for New Valve Chamber	6d	1/3/19	6/3/19				13 # 63 2/4 # 6/4	
\$3006 \$3007			2/4/19	6/4/19	1				
	Cove Reservoir	1198 d	1/4/16	12/7/19			1/4 🖉	12/7	
S3100 S3100a	Temporary Washwater Recovery Tank TWRT - DN900 pipe works	516 d	26/4/16	23/9/17			26/4 [239		
IS3100	Trial trench for DN900 washwater pipes	25 d	26/4/16	20/5/16			26/4 20/5 21/5 20/6		
\$3102	ELS works and excavation works of defice pri-	41 d 137 d	21/5/16	30/6/16 28/10/16			14'6 000000000000000000000000000000000000		
S3103 S3104		120 d	28/11/16			1	28/11 provide and a 27.3 28/3 provide and a 25/6		
\$3105	Trial pit, ELS works and excavation works for manhole E	90 d		25/6/17			263 263		
S3108	Installation of Division pipe	60 d 90 d		23/9/17			266 100000000 23.9		
S3106 S3107	Modification of manhole E Hand due tunnel (Tunnel no. 4) for DN900 pipe (Claim No. 27A - Encounter with	370 d	24/9/17	28/9/18			24.9	28.9	
	Honditation of mannov E Hand dag tunnel (Tunnel no. 4) for DN900 pipe (Claim No. 27A - Encounter with Uncharted Concrete Feature; & Sampension of Works due to New Guidance Notes on								
611070 L		75 d	24/9/17				249 manufacture 7/1 8/12	122	
\$3107C-1 \$3107C-4	Claim No. 27A - Delay-1:- Encounter with Unchanted Concrete Feature	67 d	8/12/17	12/2/18			812	13/2 tail 26/2	
\$31070-2	Hand dug tunnel (Tunnel no. 4) for DN900 pipe	14 d 17 d	13/2/18 27/2/18					272 = 153	1
\$31076-5	Claim No. 27A - Delay-2: Suspension of Works due to New Guidance Notes on Safety and Health of Hand Dug Tunnel					ł		163	
\$31070-3	Hand dug tunnel (Tunnel no. 4) for DN900 pipe, including pipe installation	197 d	16/3/18	28/9/18				29.9 1010	
S3108A	Installation of DN900 pipe		29/9/18 11/10/18			Į		11/10 123/6	
S3108B	Connection to Evision Washwater Recovery Culvert (from North Filter Beds & South Filter Beds), (Claims No. 39A)							11/10 25.6	
\$3108BC-1		258 d	11/10/18	25/6/19					
elle train	North Works Filter Beds, Investigation, Additional Works & Final Change Over							22/3	
\$3108BC-2	Claim No. 39A - Delay-2:- Conduct Investigation and Excavate Trial Pits (VO No. 59)	45 d	22/3/19	5/5/19					
Call Standard		361 d	18/1/17	13/1/18	9		IV: 1	וע ר	
S3108B S3109	TWRT - Modification of Tank Construction of Steel Platforms and Walkway	175 d	8/3/17	29/8/17			4/3 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm		
\$3110	Completion of Steel Platforms and Walkway Installation	0 d	29/8/17	29/8/17		1	18 1	E 134	
\$3111	Lay 400mm & 100mm pipes (incl. 3 nos. of steel pipe bridge)	361 d 120 d	28/3/17	25/7/17			28/3 (0.000) 25/7	37	
\$3112 \$3113	External Process Pipe Line installation Electrical installation (Lighting)	127 d	30/8/17	3/1/18			307 00000000000000000000000000000000000	127	
\$3114	Temporary Washwater Recovery Tank - E&M Works	1198 d	1/4/16	12/7/19 30/10/16			1/7 minutesentational 30/10		
\$3115	E&M equipment procurement and Completion of derivery of Lacm equipment on site	e 122 d	1//10	30/10/10					
\$3116	(Lighting) Temp. WRT - Equipment Procurement	168 d	1/4/16	15/9/16			1/4 mm		
\$3117	Temp. WRT - Equipment Manufacturing & FAT	213 d 287 d	1/6/16 2/1/17	30/12/16			2/1 2/1		
\$3118	Temp. WRT - Equipment Delivery Temp. WRT - H/O by Civil Contractor	0 d	30/9/17	30/9/17			\$ 309 \$ 309		
\$3119 \$3120	Temp. WRT - T01 LV/Fibre Cable draw pit & trench H/O by Civil Contractor	0 d	30/9/17	30/9/17					
		64	1/10/17	1/10/17		1	+ 1/10		
\$3121	Temp. WRT - Wall / slab opening inside Admin. Building - H/O by Civil Contractor						2/10 mm 14/10		
\$3122	Temp. WRT - Cable containment installation inside admin. Building	13 d	2/10/17	14/10/17 30/11/17			1510 mmmm 30		
\$3123	Temp. WRT - LV / Fibre Cable Laying Temp. WRT - Panel Support at existing Clarifier Distributing Chamber - H/O by Civi	47 d		30/11/17		1	1/10 1/10		
\$3124	Contractor						13/12 @	12/12	
\$3125	Temp, WRT - LVSB delivery and Installation	8 d	15/12/17 1/3/18	22/12/17 10/3/18		1		13 📷 193	1
\$3127	Temp. WRT - Site Acceptance Test for LVSB Temp. WRT - Modify the existing Power Source and New power cable termination at	10 d	1/3/18	10/5/18		-		1/5 曲 10-5	
\$3128	Temp. WRT - Modify the existing Power Source and New power cache refinitation at Admin. Building LV Switch Room							10110 at 1 at	
\$3129	Temp WRT - LVSB energization	3 d 93 d	1/6/18 30/3/18	3/6/18 30/6/18				303 2000000000 306	
\$3131	Temp. WRT - E&M Installation inside circular Washwater Recovery Tank							10-4 mmanagements 30 %	
\$3132	Temp. WRT - ICA	82 d	10/4/18	30/6/18 15/8/18				157 158	
\$3126	Temp. WRT - DCS Panel delivery and Installation	32 d 3 d	15/7/18 4/4/19	15/8/18 6/4/19				44 264	
\$3130 \$3133	Temp. WRT - Modification of existing switchboard at Clarifier Chamber Temp. WRT - T&C	17 d	26/6/19	12/7/19		1	10	2931	
\$3300	Site Formation + Flow Meter House + Valve Chamber @ Future Administration Building	1185 d	1/9/16	29/11/19	1 8	1			
	and the second sec	1139 d	1/9/16	14/10/19			19	1 \$4.10	
\$3300a \$3301	Future Administration Building Ahead Works Planning & coordination with WSD for re-arrangement of raw watermains from High	235 d	1/9/16	23/4/17		1	19		
33301	Island Reservoir and construction of Flowmeter House and Valve Chamber								
-	Technical Submission for Cable diversion & Pipe Capings	90 d	24/1/17		1		28-1 manufacture 23-4 34-4 menunum 22-6		
\$3301a \$3302	Trial nit: underground utilities and cable diversion	60 d	24/4/17		1		23/6 20/0 20/0		
\$3302	ELS works and excavation works for flow meter house and valve chamber	110 d	23/6/17	10/10/17		1			
	Relocating existing Flow Meter	3 d	4/8/17	6/8/17		1	47 63		
\$3307	Relocating existing row meet								
	Critical Split Task Mulestone *	Sum	nary		Critic	ai	Contraction 1991SD/16		
							contract No.: 3/WSD/15 sioning of Sha Tin Water Treatment Works (South Works) - Advance Works		

ID	Task Name	Duration	Start	Rev 9 Finish	Sep Oct Nov D	2016 2017 2018 2019 2020 10 c
\$3304	Partial removal of existing flow meter house and valve chamber Re-construction of flow meter house and valve chamber (incl. Steel Platform		17/8/17 6/1/19	13/1/18		60 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm
\$3305	Installation)					15
S3306	ABWF Finishing Works for Flow Meter House and Valve Chamber		15/1/19	24/4/19		165 <u>minute</u> 1/10
S3308	Plumbing and Drainage Installation for Flow Meter House and Valve Chamber	000	10.0.12			157
\$3309	MVAC installation for Flow Meter House and Valve Chamber	60 d	16/8/19	14/10/19		169 Banaras 14 10
\$3310	Electrical installation for Flow Meter House and Valve Chamber Valve Chamber - E&M Works		16/8/19 30/11/17	14/10/19		3011 F
S3311 S3312	Valve Chamber - Equipment Procurement	62 d	30/11/17	30/1/18		3011 and 301
\$3313	Valve Chamber - Equipment Manufacturing & FAT	122 d 93 d	30/10/18 1/3/19	28/2/19 1/6/19		13 16
\$3314	Valve Chamber - Equipment Delivery Valve Chamber - Equipment Site Works Duration*		1/3/19	30/6/19		13 meter 36 h
S3316 S3315	Valve Chamber - Equipment She works Duration Valve Chamber - H/O by Civil Contractor		31/7/19	31/7/19		• 307 17 m 383
\$3317	Valve Chamber - E&M Installation		1/8/19	30/8/19		LA BREAMBER 51)
53318	Valve Chamber - Modifying the actuator to suit new level Valve Chamber - T&C		15/10/19	15/11/19		19/1
S3319 S3320	Flowmeter House - E&M Works	868 d	1/7/17	15/11/19		
\$3321	Flowmeter House - Equipment Procurement		1/7/17 2/10/17	1/10/17 25/2/19		2/10 25-2
\$3322	Flowmeter House - Equipment Manufacturing & FAT Flowmeter House - Equipment Delivery	157 d	26/2/19	1/8/19		202 Beneral State
53323 53324	Flowmeter House - H/O by Civil Contractor	0 d	11/1/19	11/1/19		14 2000 105
\$3325	Flowmeter House - E&M Installation of new mono rails	40 d 15 d	1/4/19	10/5/19		15 m 153
53326 53327	Flowmeter House - Power Supply Flowmeter House - T&C	32 d	15/10/19	15/11/19		1510 2011 5111
53328	Site Formation @ Future Administration Building		16/4/19	29/11/19		÷ 127
53329	Abandon of 3 Nos Existing Washwater Recovery Tanks		12/7/19	12/7/19		164
\$3330	Isolation of 9 Yoon Extension of Existing DN600 Fresh Water Main, # Subject to WSD Supply and Planning Division Schedule (Called off). (Contractor's NOC No. 22)			Stell St		
		1 14	30/5/19	10/1/19		3051305
53330A	Re-Isolation of DN600 Fresh Water Main into Two Stages, as per request - Stage (Location B near South Bridge)	14	- a sitt			58.54
33330B	Re-Isolation of DN600 Fresh Water Main into Two Stages, as per request - Stage .	2 1d	5/6/19	5/6/19		
	(Location A near Main Gate)		66/19	18/9/19		65 mmentering 189 137 mmente
S3330C S3331	Removal and Disposal of Isolated Existing DN600 Fresh Water Main Investigation and Termination of Existing Utilities Connection	60 d	13/7/19	10/9/19	1	107 mmm 107 107 107 107 107 107 107 107 107 107
\$3331 \$3332	Demolishing existing structure for future administration building		11/9/19	30/10/19		21.7 mminungungan \$V10
53333	Temporary Works & Demolition of 3 Nos. Existing Washwater Recovery Tanks	90 d	21/7/19	18/10/19		31.10 - 22.11
53334	Site formation (Backfilling) for future adminstration building	30 d	31/10/19	29/11/19		6.291
53335	Completion of Site Formation + Flow Meter House + Valve Chamber @ Future	0 d	29/11/19	29/11/19		
	Administration Building Box Culvert at Tin Sum Nullah	1242 d	1/10/16	24/2/20		202
S3400 S3400a	Box Culvert at 1 in Sum Pullan Box Cilvert Bay 5 to Bay 8 Construction Works	261 d	1/10/16	18/6/17		1/10
\$3401	Temporary drainage diversion and form access	45 d 60 d	1/10/16	14/11/16 13/1/17		15/11 13/1
\$3402	Excavation for Box culvert (Bay 5) Construction for Box Culvert (Bay 5)	60 d	14/1/17	4/3/17		14 mm 43 43 44 44 44 44 44 44 44 44 44 44 44
S3403 S3404	Excavation for Box culvert (Bay 6)	30 d	14/1/17	12/2/17		14 mm 122 143 mm 154
\$3405	Construction for Box Culvert (Bay 6)	28 d 25 d	19/3/17	15/4/17 9/3/17		132 2 93
\$3406	Excavation for Box culvert (Bay 7) Construction for Box Culvert (Bay 7)	18 d	30/4/17	17/5/17		304 m 125 103 m 34
S3407 S3408 S3409	Excavation for Box culvert (Bay 8)	25 d	10/3/17	3/4/17		1.6 📰 18.6
\$3409	Construction for Box Culvert (Bay 8)	18 d 876 d	1/6/17 2/10/17	24/2/20		310
S3409a S3410	Box Cilvert Bay 4 to Bay 1 Construction Works Drainage diversion and form access	25 d	2/10/17	26/10/17		2/10 mm 26/10 2710 mm 30 (1
\$3411	Excavation for Box culvert (Bay 4)	35 d 35 d	27/10/17	30/11/17 4/1/18		1/12 - 4/1
\$3412	Construction for Box Culvert (Bay 4) Excavation for Box culvert (Bay 3)	35 d	1/12/17	25/12/17		1/07 mm 26/2 191 mm 26/2
\$3413 \$3414	Construction for Box Culvert (Bay 3)	41 d	19/1/18	28/2/18		25/12 20/
\$3415	Excavation for Box culvert (Bay 2)	30 d	26/12/17	24/1/18 30/3/18		13 10 10 10 10 10 10 10 10 10 10 10 10 10
\$3416	Construction for Box Culvert (Bay 2) Excavation for Box culvert (Bay 1)		25/1/18	23/2/18		291 202 103 201 104
S3417 S3418	Construction for Box Culvert (Bay 1)	30 d	17/3/18	15/4/18		2/10 31/1
\$3419	Deal-Gline Works and Existing Utilities Connection		2/10/18 1/12/19	31/1/19 24/2/20		/12 262
\$3420	Demolition of Temporary Steel South Bridge and Backfilling works to form Acce Road (Subject to approval from STWTW operator for using main gate as site entr	ance				
	during construction of entrance above new box culvert.)					
	Storm Drain for Decking at Tin Sum Nullah, Drainage & Master Meter Room @ Keng H	au 1532 d	2/1/16	12/3/20	2	21
\$3500	Road			2/3/18	,	21
\$3500a	Storm Drain for Tin Sam Nullah	791 d 15 d	2/1/16 2/1/16	2/3/18		21 101
\$3501	Temporary drainage diversion Modification of existing inlet structure	40 d	21/2/16	31/3/16		2//2 MINING 3//3 3//0 MINING 16/11
S3502 S3503	Temporary drainage diversion	45 d	3/10/16	16/11/16		17(1) manual 31/12
\$3504	ELS works and excavation works (Section 1)	45 d 25 d	17/11/16	31/12/16 25/1/17		10 mm 250
\$3505 \$3506	Installation for Storm Drain (Section 1) Construction of manhole (Section 1)	30 d	26/1/17	24/2/17		201
\$3507	ELS works and excavation works (Section 2)	45 d	1/1/17	14/2/17		152
\$3508	Installation for Storm Drain (Section 2)	25 d 30 d	15/2/17 12/3/17	10/4/17		120 114 144 144
\$3509 \$3510	Construction of inlet structure (Section 2) Concrete surround to storm drain pipe and backfilling	60 d	11/4/17	9/6/17		24 1000000 23
\$3510	Modification of STWTW main entrance	60 d	2/1/18 3/7/17	2/3/18 24/12/18		37
\$3512	Water Mains Connection & Master Meter Room	540 d 60 d	3/7/17	31/8/17		37 mm 314
\$3513	Application and obtain of excavation permit from Lands Department Pipe laying and connection to existing watermains at Keng Hau Road	150 d	1/9/17	28/1/18		1/9 2412
\$3514 \$3515	Construction of Valve Chamber at Keng Hau Road	330 d	29/1/18	24/12/18	1	
	Critical Split Task Milestone *	Summ	uary r		Critical	
in rember 2019					- site Danza	servicioning of Sha Tin Water Treatment Works (South Works) - Advance Works
10000000000						Master Programme (Ver.09) - (Accelerated)

	ask Name	[Rev 9 Start	Rev 9 Finish	See Oct Nev De	2016	2017 Las Feb Mar Apr Mes Jun Jul Aug :Sep Oct Nov Dec	2018 Jan Feb Mar Apr May Jan Jal Ang Sep Oct Nov Dec	2019 Jan Feb Mar Apr May Juo Jul Aug Sep Oct	Nov Der	Jan [Feb [Mar] Apr [May] Jun Jul Ang [Sep	Oct Nov Der Jan
\$3516	Construction of Master Meter Room & Associated Water Mains (Claim No. 43A)	527 d	28/6/18	6/12/19						11		
	Claim No. 43A - Delay-1:- Delayed Starting of Master Meter Room	127 d	28/6/18	1/11/18				28-6 personal sector 1/11				
\$3516C-3 \$3516C-1	Construction of Master Meter Room & Associated Water Mains	19 d	2/11/18	20/11/18				2/11 20/11 20/11 21/11 20/11	152			
\$35160-4	Claim No. 43A - Delay-2:- Awaiting Design & Construction Details	87 d	21/11/18	15/2/19	1				162 1000 56			
S3516C-5	Claim No. 43A - Delay-3- Addition Works under VO No. 11	110 d	16/2/19	5/6/19					66 -	61	2	
S3516D-2	Construction of Master Meter Room & Associated Water Mains, affected by Additional Washout Chamber Details and Associated Pipeworks	184 d	6/6/19	01219							12/3	
\$3517	Drainage Connection @ Keng Hau Road	1381 d		12/3/20		1/6			266		1 125	
\$3518	Application and obtain of excavation permit from HyD & RMO (Claim No. 42A)	1121 4	1/6/16	26/6/19		1/6 100000000000000000000000000000000000						
S PROVIDE	and the second se	180 d	27/6/19	23/12/19					27/6 manufacture for standard	and the second	23/12	
\$3519	ELS Works and Tunnelling Works for Manhole and Drainage Pipe Installation	180 0	2//0/19							24/12	12/3	
\$3520	Manhole and Drainage Pipe Installation		24/12/19	12/3/20					2.9			
\$3600	Site Formation and Bored Pile Wall for Logistics Center cum Alum Saturation Tank		6/2/16	7/9/19		62	126					
	Bore Pile Stage 1 for Logistics Centre		6/2/16	27/2/16		6/2 300 27/2						
\$36001 \$36002	Site Clearance Learing curve and resolution of early teething problems	30 d	28/2/16	28/3/16		28/2 28/3						
\$36002	Excavation for slope slope behind the bored pile wall C and reduce the level to	90 d	28/2/16	27/5/16		28/2 Employments 27.5						
	+45.0mPD (Stage 1)	20.4	18/5/16	16/6/16		18/5 18/6						
S36004	Installation of temp soil nails (60 deg. Temp slope above Haul Road)	30 d 50 d	28/5/16	16/7/16		28:3 1000000 16/7						
S36005 S36006	Pre-drill for bored piles Bored piling machine establishment	21 d	17/7/16	6/8/16		12/7 📷 6-8						
\$36006	Construction of bored piles (Pile no. CB2 ~ CB13) (Stage 1)		7/8/16	4/11/16		7/3 mmm10000000 4/11 5/11 mm 24	a					
\$36008	Excavation to reduce the level to +40mPD		5/11/16 25/11/16	24/11/16		25/11	t2%					
\$36023	Construction of bored piles capping beam & lagging wall (CB2 ~ CB13) above +40mPD	200 a	22/11/10	.2/0/17								
S36023a	ELS & Excavation for State 2 & State 3		28/5/16	29/9/17		28/5 100000 58	1 29.9					
\$36014	Excavation at logistics center and Alum saturation tank location to level +33mPD	70 d	28/5/16	5/8/16		28/5 10000000 51						
	(Stage 2)	70 d	28/5/16	5/8/16		28.5 WWWWWWWWWW 5%						
\$36015 \$36017	Installation of temp soil nails (60 deg. Temp slope above Haul Road) Excavation at the open area between bored pile wall C and Logistics Center to	65 d	6/8/16	9/10/16		63 mmmmm 910						
	formation +23.5mPD (Stage 3)					61 20000000 4/10						
\$36018	Installation of sheet piles/pipe pile at level +33mPD	60 d 60 d	6/8/16 5/10/16	4/10/16 3/12/16		S/10 gamman :						
\$36019	Installation of sheet piles/pipe pile at level +27.5mPD	60 d 45 d	5/10/16	18/11/16		5/10 (00000) 18/						
\$36020 \$36021	Installation of the back for level +33mPD sheet piles/pipe piles Excavation at logistics center and Alum saturation tank location to formation level		24/12/16	29/9/17		24/12	PARAMETERS IN CONTRACTOR 299			1 1		
550021	+20mPD (Stage 4)					4/12 8	9.9 Barriston (1997) 1997					
\$36022	Temp. shoring (waling & strut) installation	280 d 130 d	4/12/16 13/6/17	9/9/17 20/10/17			13.6 - 20/10					
S36022a	Bore Pile Stage 2 for Logistics Centre Construction of bored piles (Pile no. CA4, CB1, CB14, CC1) (Stage 2)	70 d	13/6/17	21/8/17			13:6 Michael 21/k					
\$36009 \$36010	Excavation to reduce the level to +35mPD	60 d	22/8/17	20/10/17			22/8 MINISTER 29/10	1.4	27/2			
S36010a	Bore Pile Stage 3 for Logistics Centre	211 d	1/8/18	27/2/19				1/3 100000000 9/10				
\$36011	Construction of bored piles (Pile no. CA2, CA3, CC2, CC3) (Stage 3)	70 d 72 d	1/8/18 10/12/18	9/10/18				16-12	192			
\$36012	Excavation to reduce the level to +33mPD & formation level for installation of earth	12 0							20/2 27/2			11
\$ \$36013	mat Installation of earth mat	8 d	20/2/19	27/2/19				1	202 7/9			
\$36013a	Bore Pile Lagging Wall & Capping Beam		20/2/19	7/9/19					20-2			
5 \$36024	Construction of bored piles lagging walls	200 d 30 d	20/2/19	8/8/19					10-7 ppm 1/8	1 1		
5 \$36025 7 \$36025a	Constrution of bored pile capping beam Foundation Works	182 d	26/9/17	26/3/18			26-9 F	263		1 /		
3360258	Foundation for grid 1-6	45 d	26/9/17	9/11/17			30.9	26/3				
\$36027	Foundation for reminding portion	178 d 818 d	30/9/17 5/10/17	26/3/18			510				31/12	
\$36028	Superstructure for Logistic Center	217 d	5/10/17				10:11	14%				
S36028a S36029	Structure for WTW Logistics Centre CH-1 to CH-5 Completion of concrete structure of G.L. CH-1 to 5 Basement Level +22.5mpd to	52 d		31/12/17			1011	31/12				
2 \$36029	+28 Smod of WTW Logistics Centre						1/1	Building B/3				
\$ \$36030	Completion of concrete structure of G.L. CH-1 to 5 Ground Level +28.5mpd to	67 d	1/1/18	8/3/18						1 /		
	+34.5mpd of WTW Logistics Centre Completion of concrete structure of G.L. CH-1 to 5 Frist Level 34.5mpd to 40.5mpd	21 d	9/3/18	29/3/18				9/3 100 29/3				
\$ \$36031	of WTW Logistics Centre							30/3 million 14%				
5 \$36031A	Removal of formwork & falsework at Basement Level & Site Clearance for Lime	77 d	30/3/18	14/6/18						1		
	Saturator Installation Works	467 d	5/10/17	14/1/19			5/10	243	(*)			
6 S36031B 7 S36032	Structure for WTW Logistics Centre Completion of concrete structure of Basement Level of WTW Logistics Centre	173 d		26/3/18			3/10 20100200	A13				
				44.000		-		27/3 generativentin 4%		1		
8 \$36033	Completion of concrete structure of Ground Level of WTW Logistics Centre	70 d	27/3/18	4/6/18								
	Completion of concrete structure of First Level of WTW Logistics Centre	64 d	5/6/18	7/8/18				5% generating 7/8 8/8 generating 10/9				
9 S36034 0 S36035	Completion of concrete structure of First Level of WTW Logistics Centre Completion of concrete structure of Second Level of WTW Logistics Centre	34 d	8/8/18	10/9/18				252.73.227.		1		
		10 4	11/9/18	10/10/18				11/9 10000 10.10		1		
S36036	Completion of concrete structure of Third Level of WTW Logistics Centre	30 d 64 d	11/10/18	13/12/18				13/10 2000000	13/12			
2 S36037 3 S36038	Completion of concrete structure of Roof Level of WTW Logistics Centre Cast Temporary Opening at +40.5mPD & +45.0mPD @ Grid 1-2 / B-C	60 d	16/11/18	14/1/19				30-10		4		
3 S36038 4 S36038a		336 d	30/10/18	30/9/19				30-10	30	1		
5 \$36039	B.S., Plumbing and Drainage installation-starting from basement G.L 1-9	336 d	30/10/18 30/10/18	30/9/19				30/10 0000000		1		
6 S36040	B.S MVAC installation-starting from basement G.L 1-9	387 d		20/11/19				36/10	101	1		
7 S36041 8 S36041a	B.S Fire Services installation B.S Fire Services installation - FS Sprinkler & Hose Wheel at B/F & G/F	305 d	30/10/18	30/8/19					1/3 1/3 308			
8 536041a 9 536041b	B.S Individual Test - FS Sprinkler & Hose Wheel at B/F & O/F	183 d	1/3/19	30/8/19					12/4 (1997)	20/11	1	
0 \$36041c	B.S Fire Services installation - Remaining Works	223 d 322 d	12/4/19 3/1/19	20/11/19 20/11/19				У	14	7 201		
1 \$36042	B.S Electrical installation B.S Electrical installation - Public Lighting at B/F & G/F	322 d	3/1/19	3/9/19				3.	176 000000000000000000000000000000000000			
2 \$36042a	B.S Electrical installation - Public Lighting at B/F & G/F B.S Individual Test - Public Lighting at B/F & G/F	89 d	17/6/19	13/9/19					21/4	20/11	1	
3 \$36042b 4 \$36042c	B.S Individual Test - Public Lighting at B/F & O/F B.S Electrical installation - Remaining Works	214 d		20/11/19				10.10	and the second sec	-	9 31/12	
5 \$36042c	Alum Satuation Tanks	448 d		31/12/19				16.10 Manual M Manual Manual Ma	5 27/12	1		
6 \$36044	Foundation	79 d	10/10/18	27/12/18	1							
	Critical Solit Task Malestone *	Summ	nary r		Critical							
	Critical Split Task Malestone *		.,			Contract No.: 3/WS	D/15 /orks (South Works) - Advance Works				1 6324	-
of 10 November 2019												

	Task Name	Duradon	Rev 9 Start	Rev 9 Finish	Sep Oct	Nov Dec	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov De	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Der	2018 Jan Feb Mar Apr Mey Jun Jul Aug Sep Oct Nov De 26/12	C Jan Feb Mar Apr May Jon Jul Aug Sep Oct Nov Dec Jan Feb	Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Fr
\$36045	Superstructure for Alum Satuation Tanks	34 d	28/12/18	30/1/19		- Sect	a general service in the service of		2012	15% (149	
\$36046	Steel Canopy at Alum Saturation Tanks Roof	31 d 62 d	15/8/19	14/9/19						15-9 mmmmm 15-11	
S36046a	Tank coating & other in tank works B.S Plumbing and Drainage installation for Alum Satuation Tank	62 d	31/5/19	29/7/19						31/5 mmmmm 297 15/6 mmmmm 13/8	11
S36046b S36046c	B.S Plumbing and Drainage installation for Alum Satuation Tank B.S MVAC installation for Alum Satuation Tank	60 d	15/6/19	13/8/19						30% minimum 28'8	
\$36046c	B.S Fire Services installation for Alum Satuation Tank	60 d		28/8/19						15/7 10/10/11/29	
\$36046c	B.S Electrical installation for Alum Satuation Tank	60 d	15/7/19	12/9/19						30'E MERENE 25'10	11
\$36046f	Lifting appliances for Alum Satuation Tank	52 d 92 d	30/8/19	20/10/19						309 manufacture 30/12 20/10 manufacture 31/12	
S36046g	Automatic Irrigation system	73 d	20/10/19	31/12/19						20/10 20/10 31/12	
\$36046h \$36047	Canopy installation Completion of structure including canopy above Alum Saturation Tanks	0 d	31/12/19							4 1012	152
\$36047	WTW Logistic Centre - Internal E&M Site Works	1410 d	7/4/16	15/2/20			2/4 p 9/12 p		10.10		
\$36049	WTW Logistics Centre - Silo Installation B/F	671 d	9/12/16	10/10/18			912	232			
\$36050	WTWLC - Lime System - Silo Procurement	77 d 480 d	9/12/16 24/3/17	23/2/17 16/7/18				243	16/7		11
\$36051	WTWLC - Lime System - Silo Manufacturing & FAT	480 d 179 d	15/4/18	10/10/18				-	15/4 million and a 10/10		
\$36052	WTWLC - Lime System - Silo Delivery WTWLC - Second 2/F Slab G.L. CH-1~CH-5 - H/O by Civil Contractor (i.e. Area	0 d	14/6/18	14/6/18					\$ 145		
\$36053	available from Level +22.5 to +40.5)									36/12	
\$36054	WTW Logistics Centre - Saturators Installation B/F	864 d	19/8/16	30/12/18			19.5				
\$36055	WTWLC - Lime System - Saturators Procurement	94 d	19/8/16 21/11/16	20/11/16 30/9/17		[21/11	30.4			
\$36056	WTWLC - Lime System - Saturators Manufacturing & FAT	314 d 199 d	15/6/18	30/9/17					156 100	30'12	1
\$36057	WTWLC - Lime System - Saturators Delivery WTWLC - Second 2/F Slab G.L. CH-1~CH-5 - H/O by Civil Contractor (i.e. Area	0 d	14/6/18	14/6/18					÷ 14%		
\$36058	available from Level +22.5 to +40.5)								156	151	
\$36059	WTWLC - Lime System - Saturators Site Works Duration	215 d	15/6/18	15/1/19					15% (
\$36060	WTWLC - Lime System - Saturators No.1 at G.L. CH-4/CH-B	77 d	15/6/18	30/8/18 30/9/18					157 100000000 309		
\$36060 \$36062	WTWLC - Lime System - Saturators No.2 at G.L. CH-3/CH-B	78 d 46 d	15/7/18	30/9/18 15/11/18					1/10 1000000 15/1		
\$36061	WTWLC - Lime System - Saturators No.4 at G.L. CH-4/CH-D WTWLC - Lime System - Saturators No.3 at G.L. CH-3/CH-D	40 d	16/11/18						1611 181	15/1	
\$36063 \$36064	WTWLC - Lime System - Silo Site Works Duration*	464 d	15/9/18	22/12/19					159		
\$36064	WTWLC - Lime System - Silo No.4 at G.L. CH-2/CH-D to E	72 d	15/9/18	25/11/18					26/11	142	
\$36065	WTWLC - Lime System - Silo No.3 at G.L. CH-2/CH-C to D	81 d	26/11/18							15.2 mmmmmm 30/4	
\$36067	WTWLC - Lime System - Silo No.2 at G.L. CJ-2/CH-B to C (Late commencement	so 75 d	15/2/19	30/4/19							
	as to allow access for Saturators delivery and installation)									15 0000 307	
\$36068	WTWLC - Lime System - Silo No.1 at G.L. CH-2/CH-A to B	91 d	1/5/19	30/7/19						25/10 10000000 22/12	
S36068a	WTWLC - Lime System - Silo T&C	59 d	25/10/19	22/12/19			24		1 10.9		
\$36069	WTW Logistics Centre - Various Dosing System & Pipeworks G/F	887 d 329 d	7/4/16	10/9/18			7/4 1000000000000000000000000000000000000	1/3			11
\$36070	WTWLC - Chemcial Dosing System & pipeworks Procurement	329 d 228 d	2/3/17	15/10/17				2/3 15/10			
\$36071	WTWLC - Chemcial Dosing System & pipeworks Manufacturing & FAT WTWLC - Chemcial Dosing System & pipeworks Delivery	272 d	1/11/17	30/7/18				1/11 (2002)	307 + 109		11
\$36072 \$36073	WTWLC - Second 2/F Stab G.L. CH-5-CH-9 - H/O by Civil Contractor (i.e. Area	0 d	10/9/18	10/9/18	1 1				e lur		
5300/3	available from Level +22.5 to +40.5)					1				107 30/12	
\$36074	WTWLC - Various Dosing System & Pipeworks Site Works Duration*	174 d	10/7/19	30/12/19		1				249 MINIMU 14/31	
\$36075	WTWLC - Lime System - Pre-Lime Dosing - South Works	52 d 52 d	24/9/19 2/9/19	14/11/19 23/10/19		1				2'9 201000 3/10	11
\$36076	WTWLC - Lime System - Sludge Recycling System WTWLC - Lime System - Solution Tank	52 d		12/12/19						24/10 parameter 12/12 24/10 parameter 12/12	
\$36077	WTWLC - Lime System - Solution Tank WTWLC - Lime System - Post Lime Dosing - South Work	50 d		12/12/19						2410 12/12	
\$36078 \$36079	WTWLC - Line System - Depacking Unit	50 d		12/12/19		1		1		15/8 millin 13/9	
\$36080	WTWLC - Waste Chemical Storage Tank	30 d	15/8/19	13/9/19						15/8 (000) 13/9	
\$36081	WTWLC - Floc-Aid Polymer Dosing - South Works	30 d	15/8/19	13/9/19				1		147 202 9.0	11
\$36082	WTWLC - Floc-Aid Polymer Transfer - North Works	26 d 26 d		4/11/19						10/10 200 4/11	
\$36083	WTWLC - Residuals Polymer Dosing - South Work WTWLC - Polymer Preparation System	26 d	10/10/19	4/11/19		1				5/11	
5 S36084 S36085	WTWLC - Polymer Dilution System	26 d	5/11/19	30/11/19						511	
5 536085	WTWLC - Filter-Aid Polymer Dosing System	26 d	5/11/19	30/11/19		1				10/7 gattang 26/8	
\$ \$36087	WTWLC - Flouride Preparation System	48 d 48 d	10/7/19 27/8/19	26/8/19 13/10/19						27/K WHIMMEN 12/10	
\$36088	WTWLC - Flouride Dosing System	48 d 60 d	1/11/19	30/12/19						1/11 mmmm 30/12 5/11 mmmm 24/12	
\$36089	WTWLC - All interconnecting fittings & pipeworks WTWLC - Central Dust Collection System at 1/F Storage Area	50 d	5/11/19	24/12/19						5/11 22/12	
\$36089A \$36089B	WTWLC - Air Compression system for Workshop at 3/F	50 d	5/11/19	24/12/19	1	1	21/4		169		1
3 \$36089B	WTW Logistics Centre - Auxiliary System & field pipeworks	873 d	21/4/16	10/9/18			21/4	24/2			
\$36091	WTWLC - Aux, Sys. & Field nineworks Procurement	310 d	21/4/16	24/2/17				25/2 12/9			
5 \$36092	WTWLC - Aux. Sys. & Field pipeworks Manufacturing & FAT	200 d 60 d	25/2/17 13/9/17	12/9/17				13.9 (0000000 11/1)			
5 \$36093	WTWLC - Aux, Sys. & Field pipeworks Delivery WTWLC - Second 2/F Slab G.L. CH-5~CH-9 - H/O by Civil Contractor (i.e. Area		10/9/18	10/9/18					+ 10.9		
7 \$36094	wTWLC - Second 2/F Slab G.L. CH-5-CH-9 - H/O by Civil Contractor (i.e. Alea available from Level +22.5 to +40.5)					1	1			15%	152
S36095	WTWLC - Aux Sys & Field pipeworks Site Works Duration*	246 d	15/6/19			1				159 gammai 15/11	
\$ \$36095	WTWLC - Instrument Air Compressor System (First Level slab completed as ceiling	g) 62 d	15/9/19	15/11/19		1					
		68 d	10/12/19	15/2/20			1			15.9 mmmmmm 15.11	
\$36097	WTWLC - Central Dust Collection System WTWLC - Powdered Activated Carbon Preparation and Dosing System	62 d	15/9/19	15/11/19						8.9 mmmmm 1/1	
S36098	WTWLC - F&M Works new dosing & service water pipework	62 d	8/9/19	8/11/19		1	1			0.2.9	
2 \$36099 3 \$36100	WTWLC - All trenches for new dosing & service water pipework - H/O by Civil	0 d	8/9/19	8/9/19		1					
1	Contractor	77 d	8/9/19	23/11/19		1				8.9 mmmmm 23/18 23/9 mmmmm 23/18	
4 \$36101	WTWLC - Chem Dosing Pipeworks to TWPS	77 d	23/0/10	23/11/19		1	1		1	23/9 0000000 23/11	
5 \$36102	WTWLC - Chem Dosing pipeworks to Raw Water Inlet WTWLC - Plant services water line from TWPS to WTW Logistics Centre	162 d			8	1	1			1.00	
6 \$36103	WTWLC - Plant services water line from TWPS to WTW Logitudes Centre				8	1	1	13		1 22/12	
7 536104	WTW Logistics Centre - Elect. Works Cabling/MCC/LCP/ALCP/DC	1055 d	1/2/17	22/12/19		1	1	12		15/12	1
8 \$36105	WTWLC - Electrical Equipment Procurement	684 d	1/2/17	16/12/18 30/12/18				20		30/12	
9 \$36106	WTWLC - Electrical Equipment Manufacturing & FAT	363 d 302 d	2/1/18 2/10/18			1	1		2/10 0000000	307	
0 \$36107	WTWLC - Electrical Equipment Delivery	302 d 0 d	3/12/18	3/12/18		1			•	3/2	1
\$36110	WTWLC - First 1/F Slab G.L. CH-5-CH-9 - H/O by Civil Contractor (i.e. Area					1			22/12	1944	
5 816113	available from Level +22.5 to +34.5) WTWLC - Electrical LVSB Installation		22/12/18	19/4/19	1	1			1	1/3	
2 \$36113 3 \$36108	WTWLC - Electrical Battery Room Installation	31 d	1/3/19	31/3/19	1	1		J			
3 330104		Sum	mary r		Critic	al I					
	Critical Split Task Malestone *	oditi					Contract No.: 3/WSI	0/15			
				L	a alta D	annovi	islaning of Sha Tin Water Treatment W	orks (South Works) - Advance Works			Verst
of 10 November 2019					n-site r	cepton	Master Programme (Ver.09) -	() Juntally			III President III manufact

			Rev 9			2016 2				
WENT COLL T. LO. W. P. Lat. MUTBIL & WTWLC, WOLL, Cod	0 d		Finish 10/3/19	Sep Oct	Nev Dec	an Feb Mar A pr May I an I Al Aug Sep [Det New Dec Jan Feb Mar Apr May May] Jan	n 1 hil [Aug Sep [Oct Nov [Dec	The President April 2007 (200 (200 (200 (200 (200 (200)	↓ 10.3	2020 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nev Dec Ju
WTWLC-Cable Trough / Ducts / Pits between NWTPH & WTWLC - H/O by Civil Contractor	Va	10/3/19	10/3/19						10-3 mmmmm 10-5	
WTWLC - Installation of HV Cables from NWTPH to WTWLC	62 d	10/3/19	10/5/19						103 106	
WTWLC - Tx Room Installation			10/6/19						29/10 000000 12	12
WTWLC - Cable & Termination for Lime System			12/12/19						2/10 2010 30/1	
WTWLC - Cable & Termination for Polymer System			30/11/19 13/10/19						158 0000000 1310	
WTWLC - Cable & Termination for Flouride System			13/10/19						17/9 2000000 15/11	
WTWLC - Cable & Termination for PAC System			22/12/19						158	2/12
WTWLC - DCS		1/10/18	16/9/19					r10 1	1 16.9	
TW Logistics Centre - HV Works			15/11/18					1/10 10/10/10/10		
WTWLC/NWTPH - HV-11kV Panel Final Fixing & SAT WTWLC/NWTPH - HV Cable and Switchboard Final Inspection by CLP & Meterin			25/2/19						242 25/2	
Unit									19/3 # 15/3	
WTWLC/NWTPH - HV-11kV Cable Laying from NWTPH to WTWLC	6 d	10/3/19	15/3/19						163 100 154	
WTWLC/NWTPH - HV Cable Termination and Insulation Test	31 d		15/4/19	1 1					29/4 000000000000000000000000000000000000	
WTWLC/NWTPH - HV 11kV/ LVSB Power Energization			16/9/19	1 1					15/10	102
W Logistics Centre - T&C		15/10/19							15/10 10 2/11	
WTWLC - T&C Individual Test for Flouride		15/10/19							2/11 10/11	
WTWLC - T&C Precommissioning Test for Flouride		2/11/19							14/1 1 16/11	
WTWLC - T&C Preliminary Test for Flouride	3 d	14/11/19		1					17/10 2000 14	
WTWLC - T&C Commissioning Test for Flouride	28 d 21 d	15/11/19							15/1 == 5.1	
WTWLC - T&C Individual Test for Pre Lime		6/12/19							5/12 H 12 13/12 f 15	
WTWLC - T&C Precommissioning Test for Pre Lime WTWLC - T&C Preliminary Test for Pre Lime		13/12/19		1 1				1	15/12 # 15	
WTWLC - T&C Preliminary Test for Pre Lime WTWLC - T&C Commissioning Test for Pre Lime	28 d	16/12/19		1					15/12 mm	
WTWLC - T&C Individual Test for Post Lime	20 d	15/12/19	3/1/20						41	
WTWLC - T&C Precommissioning Test for Post Lime	7 d	4/1/20	10/1/20	1 1						104
WTWLC - T&C Preliminary Test for Post Lime			13/1/20	1 1				1	14	MINI 10.2
WTWLC - T&C Commissioning Test for Post Lime			10/2/20						12 000 2	1/12
WTWLC - T&C Individual Test for Polymer			21/12/19	1				1	22/12 8	
WTWLC - T&C Precommissioning Test for Polymer		22/12/19		1					29/12	
WTWLC - T&C Preliminary Test for Polymer	3 d		31/12/19	1						NUM 28/1
WTWLC - T&C Commissioning Test for Polymer	28 d 20 d		28/1/20 31/12/19	1					12/12	
WTWLC - T&C Individual Test for PAC	7 d	1/1/20	7/1/20							1 10-1
WTWLC - T&C Precommissioning Test for PAC	3 d	8/1/20	10/1/20							7/2
WTWLC - T&C Preliminary Test for PAC WTWLC - T&C Commissioning Test for Lime, Polymer & PAC	28 d	11/1/20	7/2/20							÷ 192
Completion of T&C of all E&M system in WTWLC	0 d	10/2/20	10/2/20					29.3	30	
TW Logistic Centre - External E&M Site Works	611 d	29/3/18	30/11/19					0 293		
WTWLC - T02 Trench/Civil Works - H/O by Civil Contractor	0 d		29/3/18	1				+ 293	1	
WTWLC - T03 Trench/Civil Works - H/O by Civil Contractor	0 d	29/3/18	29/3/18						15.5 generalization and 30.1	
WTWLC - PSW From Existing treated water pump house	200 d	15/5/19	30/11/19	1				1	15/4 10/10/10/10/10/10/10/10/10/10/10/10/10/1	
WTWLC - Installation of new Process pipeline to existing dosing points	230 d		30/11/19 13/12/18	1 3					13/12	
WTWLC - Up to R/F - H/O by Civil Contractor	b 0		13/12/18	1				1	28/4 13/11	
WTWLC - Plant Service Water System	200 d 108 d	28/4/19	30/11/19		1				154 ####################################	
WTWLC - Plant Service Water System High Pressure System (M4)	108 d 694 d		30/11/19	1 1		22/5			154	
uration Tanks - E&M Works	694 d 55 d	22/5/17	15/4/19				15/7			
Saturation Tanks - Alum System Procurement Saturation Tanks - Alum System Manufacturing & FAT	120 d	16/7/17	12/11/17				16-7 20100000000000000000000000000000000000		ST amanufacture 15/4	
Saturation Tanks - Alum System Manufacturing of PAT Saturation Tanks - Alum System Delivery	91 d	15/1/19	15/4/19					1	♦ 27/2	
Saturation Tanks - Alum System Derivery Saturation Tanks - First 1/F Slab G.L. AS-4~CH-1 - H/O by Civil Contractor	6 O		27/2/19							
								1	164 [] 6/10	
turation Tanks - Alum System Site Works Duration*	184 d	16/4/19	16/10/19	1	1				164 million 129	
Saturation Tanks - Alum System - Saturation Tanks Mixers & Accessories	150 d	16/4/19	12/9/19 19/9/19	1	1				5% generative 19.9	
Saturation Tanks - Alum System - Process pumps & Solution tank	107 d	5/6/19	19/9/19						307 100001 149	
Saturation Tanks - Alum System - Electrical & ICA Installation	47 d	30/7/19	14/9/19	1					17/9 10/10	24/1
Saturation Tanks - Alum System - Energisation	30 d 433 d	18/11/18						INIT	26/10 22//13	1.4.
sturation Tanks - Alum System - T&C	433 d 27 d	26/10/19							26/10 22/11 22/1 22/1	
Saturation Tanks - T&C Individual Test for lateral & nozzle pipe	7 d	22/11/19							2201 8 280	
Saturation Tanks - T&C Precommissioning Test for lateral & nozzle pipe Saturation Tanks - T&C Preliminary Test for lateral & nozzle pipe	3 d	29/11/19							112	29:12
Saturation Tanks - T&C Pretiminary Test for lateral & nozzle pipe Saturation Tanks - T&C Commissioning Test for lateral & nozzle pipe	28 d	2/12/19	29/12/19	1	1				26/10 20/10 21/11	
Saturation Tanks - T&C Commissioning Test for Java a house pipe Saturation Tanks - T&C Individual Test for Alum solution tank	27 d		21/11/19		1				22/1 28/1	
Saturation Tanks - T&C Precommissioning Test for Alum solution tank	7 d	22/11/19	28/11/19						2911 1 12	
Saturation Tanks - T&C Preliminary Test for Alum solution tank	3 d		1/12/19		1				/12 888	2912
Saturation Tanks - T&C Commissioning Test for Alum solution tank	28 d		29/12/19						 12/11 	
EMSD inspection of passenger lift	1 d		12/11/19		1					÷ 24'1
EMSD inspection of Cargo lift	1 d		24/1/20 31/10/19	1	1			1	• 31/10 + 27/	
WSD inspection	1 d 3 d		27/11/19		1				¢ 2%	21
FSD inspection	3 d 411 d	18/11/19						18:11 (17/12)	31/10	
Finishing works, subject to window wall installation	319 d		31/10/19	s					3010	1
ditional Giass Canopy on Window Wall at WTWLC (Claim No. 50A) AECOM Request MMVJV to Provide the Proposal of Additional Glass Canopy on			17/12/18		1					
AECOM Request MMVJV to Provide the Proposal of Additional Glass Categy of Window Wall at WTWLC					ł.			17/12	23/2	
MMVJV Provide the Proposal and the Cost Estimate to AECOM		17/12/18	27/2/19	100	1				♦ 113	
AECOM Confirmed Variation Order	od	11/3/19			1				12/3 200000000000000000000000000000000000	
Design & Shop Drawing Submission and Approval	122 d	12/3/19	11/1/19	121					12/7 minimum 26/8	
Material Ordering, Delivery & Testing	46 d	12/7/19			1				27/8 00000000 31/10	21
Installation of Window Wall & Glass Canopy	06 d	2/1/20	2/1/20							
empletion of architectural finishes and relevant building works (both internal and	0 d	2/1/20	2/1/20	1	1				10	
iernal)	560 d	11/5/18	30/11/19		1			11/5		
Works day to Process Pipelines and Related Works Due to Replacement Works of Existing	1814	11/5/18	9/11/18	21	1			100 1		
lay to Process Pipelines and Related Works Due to Replacement works of Existing	0.	Harsty and		22	1					
mp Posta, Uncharted Obstructions and Realignment of Process Pipeworks (Claim No.			机的表面		1			11.5 00000000000000000000000000000000000		
A)	aley 177 d	11/5/18	3/11/18		l			112 manufacture and a Sti		
chain No. 36A - Delay-1- Obstruction by USD Term Contractor			744.448	Ø	1 -	and the second		I	.1	A
	THE STATE OF THE OWNER					tarter bitteren follow				
	e									
on 7 Nos. of Lamp Post Actionation by Hoar Annu Company field Split Task Milestone *	Summ	nary r				Contract No.: 3/WSD/15 ioning of Sha Tin Water Treatment Works (South Works)				
A) Claim Nr		184 - Delay-1 - Obstruction to Commencement of Excavation due to Daley 177 d	384 - Delay-1- Obstruction to Commencement of Excavation due to Daley 177 d 11/5/18	38A - Delay-1: Obstruction to Commencement of Excavation due to Dalay 127.4 17/5/18 3/11/18 of Lamp Post Relocation by WSD. Term Contractor	S8A - Delay-1: Obstruction to Commencement of Excavation due to Daley 177.4 11/5/18 3/11/18 of Lamp Post Relocation by WSD Term Constructor	38A - Delay-1 - Obstruction to Commencement of Excavation due to Dalay 177.4 17/5/18 3/11/18 of Lamp Post Relocation by WSD. Term Contractor	38A - Delay-Li- Obstruction to Commencement of Excavation due to Daley 127.4 11/5/18 3/11/18 of Lamp Post Relocation by WSD Term Contractor	38A - Delay-Li- Obstruction to Commencement of Excavation due to Dalay 177 d 11/5/18 3/11/18 of Lamp Post Relocation by WSD Term Contractor	38A - Delay-Li- Obstruction to Commencement of Excavation due to Daley 177 d 11/5/18 2/11/18 of Larup Post Relocation by WSD Term Contractor	S8A - Delay-Li- Obstruction to Commencement of Excession due to Dalay 177 d 11/5/18 2/11/18 of Lamp Post Relocation by WSD Term Contractor

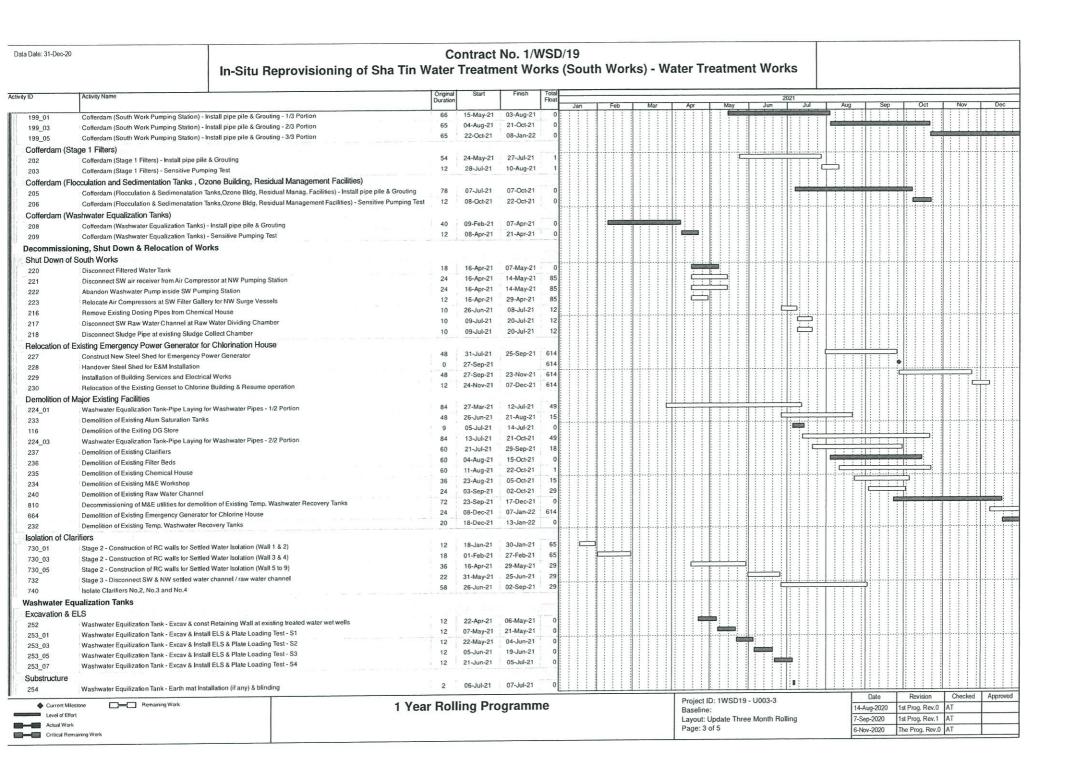
tim No. 38A - Delay-2- Change of Alignment. Depth, and Position of Pro- belies. as Pipe Trench ocess Pipe Trench C1 ocess Pipe Trench C2 ocess Pipe Trench C4 ocess Pipe Trench C5 ocess Pipe Trench C4 ocess Pipe Trench C5 ocess Pipe Trench C4 ocess Pipe Trench C5 ocess Pipe Trench C4 ocess Pipe Tr	yd 249 d 246 d 246 d 246 d 246 d 246 d 14 d 177 d 77 d 37 d 37 d 150 d 150 d 150 d 255 d 31 d 0 d 150 d 256 d 266 d 238 d	12/11/18 12/11/18 12/11/18 15/11/18 12/11/18 12/11/18 12/11/18 13/3/19 29/3/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 11/10/19 30/4/19 11/10/19 30/4/19	9/11/18 18/7/19 15/7/19 15/7/19 15/7/19 28/11/18 24/10/19 24/10/19 24/10/19 30/11/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19		No De A	han [Tab] Mar Apr Muy (he i be (Are See (Sa Kin)	Der <u>An it it New i An It An Star I An</u> Den <u>Den Den Den Star I On</u> De	2018 50 00 Jan [Tel:]Meri [Arr Meri]Jan [Meri]Arr Meri]Jan [Meri]Arr Meri] 278 500 100 100 100 100 100 100 100 100 100	187 157 159 167	וופי ד	
Tens No. 34. A Delay-3- Finalize the Diversion of Existing PE Chlorine Pr a Pipe Trench seess Pipe Trench C1 seess Pipe Trench C2 seess Pipe Trench F socess Pipe Trench F socess Pipe Trench I socess Pipe Trench I, subject to diversion of existing chlorine pipe schedule ine Installation and testing (Trench C1 + F) pe line installation and testing (Trench C2) pe line installation and testing (Trench C3) sortituction of all site testing and operation commissioning dx (Clama No 45, 33, 58 & 59) P Hard Road onstruction for new road and associated Utility Installation, G06 Plase 2 (Cl 0 to Ch. 240) on testion.	ipe 9d 249 d 246 d 246 d 246 d 246 d 246 d 14 d 177 d 226 d 16 d 215 d 77 d 47 d 150 d 150 d Read 150 d 256 d 238 d	1/11/18 12/11/18 12/11/18 12/11/18 12/11/18 12/11/18 12/11/18 12/11/18 12/11/18 13/3/19 29/3/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19/16	9/11/18 18/7/19 15/7/19 15/7/19 18/7/19 18/7/19 28/11/18 7/5/19 24/10/19 24/10/19 20/11/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 15/7/19 20/11/19 20/11/19 20/11/19 20/11/19						1231 (1231) 1231 1231 1231 1331	1157 157 157 157 157 157 153 153 263 263 263 264 304 157 304 157 304 157 157 157 157 158 265 265 265 265 265 265 265 265	10 19 19 30911	
um No. 38A - Delay 3- Finalize the Diversion of Existing PE Chlorine Pit a Pipe Trench Cocess Pipe Trench C1 Socess Pipe Trench C2 Socess Pipe Trench C Socess Pipe Trench F Socess Pipe Trench G Socess Pipe Trench G Socess Pipe Trench G Socess Pipe Trench H, subject to diversion of existing chlorine pipe schedule ine Installation and Itesting (Trench C1 + F) pe line installation and Itesting (Trench G + 1) pe line installation and Itesting (Trench G + 1) Set Clam No 4 S S J S & S S S) P Jan Road softmeticion for new road and associated Utility Installation, G06 Plase 2 (G Di o Ch. 240) Softwork SD.	249 d 246 d 246 d 246 d 14 d 177 d 226 d 226 d 77 d 77 d 77 d 47 d 150 d 150 d 8 Read 150 d 256 d 266 ch. 238 d	12/11/18 12/11/18 12/11/18 12/11/18 15/11/18 15/11/18 13/3/19 29/3/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 30/4/19 11/10/19 30/11/19 11/2/16	18/7/19 15/7/19 15/7/19 15/7/19 28/11/18 7/5/19 24/10/19 24/10/19 24/10/19 30/11/19 15/7/19 15/7/19 15/7/19 15/7/19 20/11/19 20/11/19 20/11/19						1231 (1231) 1231 1231 1231 1331	1157 157 157 157 157 157 153 153 263 263 263 264 304 157 304 157 304 157 157 157 157 158 265 265 265 265 265 265 265 265	10 10	
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ine Installation & Testing pe line installation and testing (Trench C1 + F) pe line installation and testing (Trench C2) pe line installation and testing (Trench C3) pe line installation and testing (Trench H) on pelicin of all site testing and operation commissioning fx (Cam Ne 4.5, 31, 58 & 59) P flan Road onstruction for new road and associated Utility Installation al Sludge Plant I al Road - G06 (North Circular Road) onstruction for new road and associated Utility Installation, G06 Plase 2 (G 0 to Ch. 240) On to Ch. 250)	215 d 77 d 77 d 47 d 51 d 0 d 1207 d 150 d Road 150 d 256 d G05 Ch. 238 d	30/4/19 30/4/19 30/4/19 30/6/19 11/10/19 30/11/19 11/2/16 1/8/16 1/8/16	30/11/19 15/7/19 15/7/19 15/8/19 30/11/19 30/11/19 20/11/19 28/12/16							30.4 15.7 30.4 15.7 30.6 15.7	-, xoli	
pe line installation and testing (Trench C1 + F) pe line installation and testing (Trench C2) pe line installation and testing (Trench G + I) pe line installation and testing (Trench H) mpletion of all site testing and operation commissioning the (Caram Ne 4.53, 1.53, 8.59) P Ban Road Instruction for new road and associated Utility Installation at Sludge Plant I at Read - G06 (North Circular Road) onstruction for new road and associated Utility Installation, G06 Plase 2 (G IO to Ch. 240) On to Ch. 250)	77 d 77 d 47 d 51 d 0 d 1207 d 150 d Road 150 d 256 d G06 Ch. 238 d	30/4/19 30/4/19 30/6/19 11/10/19 30/11/19 10/11/19 11/8/16 1/8/16	15/7/19 15/7/19 15/8/19 30/11/19 30/11/19 20/11/19 28/12/16							30.4 15.7 30.4 15.7 30.6 15.7		
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pe line installation and testing (Trench C2) pe line installation and testing (Trench G + 1) pe line installation and testing (Trench G + 1) pe line installation and testing (Trench H) Sections Net 45, 53, 58 a, 59) P flant Road sistification for new road and associated Utility Installation, G06 Plass 2 (G nontruction for new road and associated Utility Installation, G06 Plass 2 (G 0 to Ch. 240) notruction for new road and associated Utility Installation, G06 Plass 2 (G 0 to Ch. 240)	47 d 51 d 0 d 1207 d 150 d Road 150 d 256 d G06 Ch. 238 d	30/6/19 11/10/19 30/11/19 11/8/16 1/8/16 1/8/16	15/8/19 30/11/19 30/11/19 20/11/19 28/12/16							30-6 mmmm 15-8		E 3
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al Read - G06 (North Circular Road) onstruction for new road and associated Utility Installation, G06 Phase 2 (G Io c Ch. 240) on troccision for new road and associated Utility Installation, G06 Phase 4 & - 240 r CH. 350	256 d G06 Ch. 238 d		20112110				1/2 Manufacture	28/12				
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onstruction for new road and associated Utility Installation, G06 Phase 2 (G 10 to Ch. 240) onstruction for new road and associated Utility Installation, G06 Phase 4 & > 240 to Ch. 350)		1111210	29/8/19						17/12			
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anetmetion for new road and associated Utility Installation. G06 Phase 3 (G										2/1 29/8		
	G06 Ch. 240 d	2/1/19	29/8/19	1 1								
io to Ch. 440)			20/11/19					1	210 1		1 2011	
al Road - G10 (North Filter Loop) & G01 (Logistics Branch)	415 d								2/10	109		
onstruction for new road and associated Utility Installation, G10 (G10 Ch.										11.9	20/11	
onstruction for new road and associated Utility Installation, G01 (G01 Ch.	100 to Ch. 71 d	11/9/19	20/11/19									
(0)	133 d	11/7/19	20/11/19							117	1 2011	
al Road - Road Surface	133 d		20/11/19							11/7	¢ 12/3	
onstruction of road surface Completion	0 d		12/3/20					21		611		
O No. 360 Deletion of Landscape Works in Portion D1	b KAG	2117	1611.18					2/1				
Commencement	0 d	2/1/17	2/1/17 28/6/18	1					\$ 25/6			
ing Softworks & Establishment Works		28/6/18	28/6/18	1 1					\$ 28%			
caping Soft works (Deletion of Landscape Works in Portion D under Varia b)								1	♦ 28/6			
ishment works (Deletion of Landscape Works in Portion D under Variatio	ion Order 0 d	28/6/18	28/6/18									
a)	0 d	16/11/10	16/11/18						61	611		26.92
Completion (Certificate of Completion No. 2)	U a	10/11/18	28 12.200	28/1	-							11
Commencement	bo	30/10/15		19	30/10 N1							
ing Softworks & Establishment Works	1848 d		15/12/20 14/8/17		81			14%				11
Translanting	585 d 20 d	8/1/16	27/1/16			27/1						
reparation of site area for planting works	200 d	28/1/16	14/8/16		1 4	n) 1999	14.8	143				
stablishment for transplanting works	365 d	15/8/16					15/8			19		
ape & Establishment	516 d	1/9/19								1/9 MARINE 12/9	0	
lant Material - Submission & approval	45 d	16/10/19								16/10 111	1912 mmmm 201	
lant Material - Preparation andscape Works - Wall C	45 d	15/12/19	28/1/20							113	V12 minute 28-1	
andscape Works - Wall D	45 d	15/12/19	28/1/20								V12 mmm 26/1	
andscane Works - Portion E											169 11 29/1	
andscape Works - HPP Surround Area										1	163 m 29/1	
andscape Works - along NCR		16/1/20	29/1/20								301	ENGINE I
andscape Works - Along Filter Bed stablishment works	320 d	30/1/20	15/12/20						1			15/12
Completion (Claims in related to Access of Planting Area)	60	28/12/20	28/12/20	ii		l						
ransplanting w stablishment fc ape & Establis lant Material - andscape Worl andscape Worl andscape Worl andscape Worl andscape Worl andscape Worl andscape Worl	orks wranglanting works hment Submission & approval Preparation ks - Wall D ks - Portion E ks - Horp Surround Area ks - Along NCR ks - Along Filter Bed orks	orbs 200 o v ramplanting works 365 d hment 516 d Submission & approval 45 d Preparation 60 d is - Wall C 45 d is - Wall D 45 d is - Nortion E 45 d is - Portion E 45 d is - Protion E 45 d is - HOP Surround Area 14 d is - Along NCR 45 d is - shong NCR 14 d is - shong NCR 14 d is - Nortic Files 14 d	orks 200 a 261/16 v ramplanting works 363 6 158/16 hment 516 d 19/19 Submission & approval 60 d 16/10/15 submission & approval 60 d 16/10/15 is - Wall C 45 d 151/21/15 is - Wall D 45 d 151/21/15 is - Portion E 45 d 151/21/15 is - Portion E 14 d 161/120 is - HOP Surround Area 14 d 161/120 is - Along NCR 14 d 161/120 is - Along Filter Bed 12 d 161/120 orks 320 d 301/20	orbs 200 di 20/1/16 14/0/10 v ramplanting works 365 di 35/1/16 14/0/10 hment 516 di 19/19 15/1/2/0 Submission & approval 60 di 16/0/19 14/0/19 Submission & approval 60 di 16/10/19 14/0/19 s. Wall C 45 di 15/12/19 28/1/20 is. Wall D 45 di 15/12/19 28/1/20 is. Wall D 45 di 15/12/19 28/1/20 is Portion E 45 di 15/12/19 28/1/20 is Rong NCR 45 di 16/12/19 29/1/20 is Along Filter Bed 14 di 16/12/10 29/1/20 ords 32/1 30/1/20 15/1/20 15/1/20	orbs 200 d 28/176 1/4/010 wranplanting works 356 d 15/8716 1/4/917 hment 516 d 19/919 15/12/20 Submission & approval 60 d 16/10/19 15/12/19 Submission & approval 60 d 16/10/19 14/12/19 s.will C 45 d 15/12/19 28/17/20 is. Wall D 45 d 15/12/19 28/17/20 is. Wall D 45 d 15/12/19 28/17/20 is. Fortion E 45 d 16/12/19 29/17/20 is Rong NCR 45 d 16/12/19 29/17/20 is Along Filter Bed 14 d 16/12/20 29/17/20 is.s. Along Filter Bed 12 d 16/12/20 15/12/20	orks 2004 a 281/16 14/8/17 breamplanting works 363 15/8/16 14/8/17 hment 5164 19/19 15/12/20 Submission & approval 604 16/10/19 15/12/19 Preparation 604 16/10/19 14/12/19 45 4 15/12/19 28/1/20 45 4 15/12/19 28/1/20 45 4 15/12/19 28/1/20 45 - Portion E 45 4 15/12/19 28/1/20 45 - Portion E 14 4 16/12/19 28/1/20 45 - HOPT Surround Area 45 4 16/12/19 29/1/20 45 - Along Filter Bed 14 4 16/12/19 29/1/20 torks 320 4 30/1/20 15/12/20	orks 200 d 201 d	orks 200 d 201 d 201 d 201 d 201 d 201 d 201 d 153 wranglanting works 365 d 158/16 1478/17 157	orbs 200 d 28/17/0 14/87/0 15% 15% 15% wranplaning works 356 d 15/87/1 14/87/0 15/87/0 15/87/0 14% hment 516 d 19/19 15/12/20 15/87/0 15%	orks 200 a 201 b 14/8 b 15% 14% wr ramplaning works 365 15/8/b 14/8/17 14% 14% 14% 14% 15% <td< td=""><td>ords 200 d 201/16 1/4/17 1/4/16 1/3 wranglaning works 356 d 15/0/19 1/1/2/20 1/1/2 1/1/2/20 1/1/2<</td><td>ords 2004 2011/16 160/10 160/10 160/10 transplanting works 516 160/10 14/817 hment 516 17/10 15/12/10 Submission & approval 60 16/10/19 15/12/19 Gub 60 16/10/19 14/12/19 s - Wall C 45 15/12/19 sa - Wall C 45 15/12/19 sa - Wall C 51/12/19 sa - Wall C 51/12/19 sa - Vall C 51/12/19</td></td<>	ords 200 d 201/16 1/4/17 1/4/16 1/3 wranglaning works 356 d 15/0/19 1/1/2/20 1/1/2 1/1/2/20 1/1/2<	ords 2004 2011/16 160/10 160/10 160/10 transplanting works 516 160/10 14/817 hment 516 17/10 15/12/10 Submission & approval 60 16/10/19 15/12/19 Gub 60 16/10/19 14/12/19 s - Wall C 45 15/12/19 sa - Wall C 45 15/12/19 sa - Wall C 51/12/19 sa - Wall C 51/12/19 sa - Vall C 51/12/19

Data Date: 31-Dec-20	In-Situ	Co Reprovisioning of Sha Tin Water	ontract Treatm				Worł	(s) - V	/ater 1	Freati	ment	Works	s					
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float							202	L					
					i wall	Jan	Feb	Mar	Apr	M	ay	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The second	/WSD/19 - Monthly Update (Dec-20) - Detail Work	ks Programme Rev.1_DT																
Preliminaries		가지 한다. 이번에 가지 않는 것이 다 가지 않는 것이 같은 것이 없는 것이 같은 것이 없다. 것이 같은 것이 같은 것이 같은 것이 없는 것이 없 것이 없	1. 1. Carl 10.20															
Contractal Da																		
C-Sec1	pletion Date - Contract Section 1 - relocate DG Stores, Site formation for new Administra	tion Building - (365 Days after Project Start) 0		10-Aug-21*	0									•				
C-Sec1	Key Date - diversion of Pipelines M1, M2, M3, M4 and M5 - (365			10-Aug-21*	0									•				
C-Sec3	Section 3 - Landscape Softworks within Portion D - (365 Days af			10-Aug-21*	0									•				
Sectional Con	npletion Date - Planned																	
KD	Key Date - diversion of Pipelines M1, M2, M3, M4 and M5	0		10-Aug-21*	0													
Sec1	Section 1 - relocate DG Stores, Site formation for new Administra	tion Building 0		10-Aug-21* 10-Aug-21*	0		÷			····		++++		•			· · · · · · · · · · · · · · · · · · ·	
Sec3	Section 3 - Landscape Softworks within Portion D	0		10-A0g-21								111						
Design Subm		and Eastany Tast					: : : :	- i - i - r		: : : :		: : : : :						
	nd Equipment - Submission, Procurement, Fabricatio	in and Factory lest											111					
Pre-construct																		
Initial Set Up 8	Ground Investigation Work & Geotechnical Assessment	60	19-Nov-20 A	30-Jan-21	0							1111						
1188	Hoarding Erection (whole site area)	60	31-Dec-20	18-Mar-21	24													
1198	Stage 1 Fencing for DN1200 pipe laying and ADB Site Formation	n works (include Type 2 Fence to SMH37 66	01-Feb-21	29-Apr-21	24	F	1 1 1 1		:] : : :	7								
	- DN200 and DN300 Plant Service Watermain Diversion																	
85	Procurement & Delivery of Temp. Pipework	48	22-Oct-20 A	02-Feb-21	14												·	$\left\{ \left $
84	Method Statement (Incl. Risk & Safety requirement) for Existing I	DN200 & DN300 Watermains diversion 48	22-Oct-20 A	02-Feb-21	14	TTT.			Ц									
86_01	Excavation for temp pipework	42	05-Feb-21	01-Apr-21 27-May-21	12	· · · · ·					<u> </u>		111					
86_02	Install temp. pipework for diversion		07-Apr-21 28-May-21	25-Jun-21	12													
87	Hydraulic Tests for the Temp. Pipework for Diversion and swappi	ng 2-4	26-Jun-21	20 001 21	12													
88	Diversion completed and Operational	and the second					1111	1111										
	- Existing Chlorine Pipe / MEP utilities (WET Area) Diversion of MEP Utilities (WET Area)	33	31-Dec-20	08-Feb-21	0													
1224	Diversion of MEP Outlies (WET Area) Diversion and Reprovision of Existing Chlorine Pipe	33	31-Dec-20	08-Feb-21	0		•											
	version of Pipelines M1, M2, M3, M4 and M5																	
	n Existing South Works Pumping Station																	
	M4 and M5 Diversion												111					
100_01	Stage 1 - Excavation for existing M2 & M3 (Include demolition of	canopy) 49	25-Nov-20 A	23-Jan-21	0													
102_01	Stage 1 - Installation DN1200 and DN1400 pipiline at M5 and va	live chamber No.2 49	25-Nov-20 A	23-Jan-21	0													
100_11	Stage 2ii - Remove M3 pump pipe & existing utilities / Install tem	p. surge vessel for M3 / Remove Pump 4,5,6 48	25-Jan-21	27-Mar-21	0													
100_17	Stage 1 - Suspend & Remove Pump 7 & 8	31	25-Jan-21	08-Mar-21	0		·					.÷						+
100_03	Stage 2i - Cap off existing M3 / Connect V01 & V02 to M5 & V02	to M3 6	25-Jan-21 22-Mar-21	30-Jan-21 27-Mar-21	0		1111											
102_03	Stage 2iii - Connection M3 of surge vessel and installation of res	erve tee on M3 6	22-Mar-21	08-Apr-21	0													
099_11	Stage 3i - Cap off existing M4	6	09-Apr-21	15-Apr-21	0													
100_09 100_13	Stage 4 - Cap off existing M2 Stage 4 - Remove M2 pump pipe / Remove Pump 1,2,3	24	09-Apr-21	07-May-21	0													
099 05	Stage 3ii - Remove M4 & M5 existing pipes / Install M4 & M5 from	n V02 to V01 78	16-Apr-21	20-Jul-21	0							1 1 1 1						
098_01	Stage 6 - Valve (V908) (MBV) replacement and test for Lion Roc	k Service Reservoir 24	23-Apr-21	22-May-21	0													
100_15	Stage 4 - Construct temp, serge vessel for M2 and connect to M2	? / Installation of reserve tee on M2 12	08-May-21	22-May-21	0													
102_09	Installation of twin DN1200 watermain and valve chamber No.1	(include installing DN1200 blank flange) 60	08-May-21	20-Jul-21	0							1411						
101_01	Demolish existing South Works Pump Hall	24	24-May-21	21-Jun-21 20-Jul-21	0		·			÷		1144					$\uparrow \uparrow \uparrow \uparrow \uparrow$	
101_03	Demolish part of existing Main Pump Sump	24	22-Jun-21 21-Jul-21	10-Aug-21	0													
101_05	Demolish remaining of existing Main Pump Sump	K Service Beservoir 24	09-Sep-21	08-Oct-21	418											÷		
098_02	Stage 6 - Valve (V909) (MBV) replacement and test for Lion Roc	Contract Heserveir																
et anna anna anna anna anna anna anna an	elocation of DG Stores, Site formation for new Ad	Initiation building																
Statuory Sub					1			111				TTİİ						
	SD Submission prior to Fire Services Installation Temp. DG Store - FSD - Submission of FSI/314 with VAC Layout	Plan 7	31-Dec-20	08-Jan-21	32													
1170	SD Submission prior to DG Installation	(1.2.1) (1.2.1) (1.2.1) (1.2.1) (1.2.1) (1.2.1)		here														
1									Projec	ct ID: 1W	SD19 - U	003-3			Date	Revision	Checked	Approved
Current Mile		1 Year Roll	ling Pro	gramm	ie				Basel					14	-Aug-2020	1st Prog. Rev.0	_	
Level of Effe											Three M	onth Rollin	g		Sep-2020	1st Prog. Rev. 1	AT	
Critical Rer									Page	: 1 of 5				6-1	vov-2020	The Prog. Rev.	TAL	

Data Date	: 31-Dec	-20
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Contract No. 1/WSD/19 In-Situ Reprovisioning of Sha Tin Water Treatment Works (South Works) - Water Treatment Works

		1000	Charl	Einist	Total													_									
Activity ID	Activity Name	Original Duration	Start	Finish	Float	Ja	n	Feb		Mar		Apr		lay	Ju		021	Jul	A	ug	Sep		Oct		Nov	1	Dec
54_03	Temp, DG Store - FSD - Submission for DG Installation	7	31-Dec-20	08-Jan-21	32									Í		11											
A CONTROLLARS AND AND AND AND AND AND AND AND AND AND	ocation of DG Stores																										ĻЦ
	of New Temp. DG Store																										
Structure Cor	nstruction																										
107_09	Temp. DG Stores - Blinding and Earth mat installation	4	19-Dec-20 A		0	P										11					111		11		11		111
107_11	Temp. DG Stores - G/F slab upto +27.8mPD	12	05-Jan-21	18-Jan-21	0																						
107_13	Temp, DG Stores - Scaffolding erection	12	19-Jan-21 26-Jan-21	25-Jan-21 08-Feb-21	0					·	+++		······	·			÷				·					÷	+++
107_15	Temp. DG Stores - Construct walls and slab up to R/F	2	09-Feb-21	10-Feb-21	. 0			D																			
107_17 107_19	Temp, DG Stores - Laying of Waterproofing Temp, DG Stores - Leakage test	2	11-Feb-21	19-Feb-21	0			-																			111
107_19	Temp. DG Stores - Dismantle Scaffolding	2	20-Feb-21	22-Feb-21	0					111																	
ABWF & E&M																											
109	Temp. DG Stores - ABWF works	24	23-Feb-21	22-Mar-21	0																						
	aterial Inspection and Testing on Delivery to Site																										
TDG.0630	SWPS - Delivery for Installation - Other Plants and Materials for BS Works (EM 4)	7	08-Feb-21	22-Feb-21	0				7							11					111		11		11	1	111
Temp DG - E8	M Works	285								111						11											
TDG.108	Temp. DG Stores - Handover for E&M Installation	0	23-Feb-21		0	·				<u></u>	1.						÷				·					· · · · ·	<u>}</u> }+
TDG.110_01	Temp, DG Stores - BS Electrical Installation	33 32	23-Feb-21 07-Apr-21	01-Apr-21 14-May-21	0				T				1			11		11			111						
TDG.110_03	Temp. DG Stores - FS Installation	32	07-Apr-21	14-Way-21																							
DG Inspection		1	15-May-21	15-May-21	0																111		11		11	1	111
A20640 A20650	Temp, DG Stores - Report to FSD for DG Inspection Temp, DG Stores - DG Inspection	16	17-May-21	04-Jun-21	0																						
A20650	Temp. DG Stores - DG inspection Temp. DG Stores - Issuance of DG License by FSD	1	25-Jun-21	25-Jun-21	0						11					E	1				111				11	1	111
	A Dealer of the second se															11	1	11									
FSI Inspection 1130	Temp. DG Stores - Submit FSI/314 and FSI/501	1	15-May-21	15-May-21	0																						111
1150	Temp, DG Stores - Fire Service Inspection	16	17-May-21	04-Jun-21	0											11	1	11			111						
1160	Temp, DG Stores - Issue Fire Cert 172	1	25-Jun-21	25-Jun-21	0												ļ									· · · · · ·	↓
Relocate the I	DG Store															11		11									
114	Relocate DG store material to new temp. DG store	6	26-Jun-21	03-Jul-21	0												T i										
Site formation	for new Administration Building																				111		11				
1182	CLP / HKT / Other utilities diversion for Administration Building area site formation	72	25-Jan-21	29-Apr-21	24			1 : :	: :	: : :	: : :	11	1		111	11	11										
118	Site Formation for future Administration Buillding Area (Except existing DG Stores area)	60	06-May-21	17-Jul-21	20												+				++++		· † · † · ·			: 	+
103	Remaining site formation at future Administration Buillding Area (Existing DG Stores area)	23	15-Jul-21	10-Aug-21	0											11		11			111						
DN1200 Drain		~	00 E-h 01	15-Mar-21	35					4						11		11			111						
117_23	Drainage Works near Administration Building (DN1200) - Excavation for 1st Section (Outfall headwall to SMH40)	24 24	09-Feb-21 16-Mar-21	16-Apr-21	35		1	11		ΠĻ																	
117_25	Drainage Works near Administration Building (DN1200) - 1st Section drainage pipe laying (Outfall headwall to SMH40)	36	30-Apr-21	12-Jun-21	24								<u> </u>												11		111
117_01	Drainage Works near Administration Building (DN1200) - Excavation for 2nd Section (SMH40 to SMH39) Drainage Works near Administration Building (DN1200) - 2nd Section drainage pipe laying (SMH40 to SMH39)	24	15-Jun-21	13-Jul-21	24						111		111	1.1.1	110			111		11	111		111		1	1	111
117_05 117_07	Drainage Works near Administration Building (DN1200) - Excavation for 3rd Section (SMH39 to SMH37)	36	11-Aug-21	21-Sep-21	136		1													: :1	1 1 1				11		111
117_07	Drainage Works near Administration Building (DN1200) - 3rd Section drainage pipe laying (SMH39 to SMH37)	30	23-Sep-21	29-Oct-21	136																111	-	1 1 1				
Section 2 - Co	onst new plant in Portion A&B, E&M in portion H, Pipeline diversion M1 to M5	A.L.					11																				
Statuory Sub																											
	- FSD Submission prior to Fire Services Installation																				111						
SUB.1020	FSD - Submission of FSI/314 with VAC Layout Plan	90	28-Sep-21	15-Jan-22	217																111	1 T	1 1 1	111	: :	: :	1 1 1
	Construction											11				11		11			111						111
ELS Design	ourse donor																										111
192	pipe pile wall - Prepare design & drawing	12	19-Nov-20 A	04-Jan-21	0												1	<u></u>									<u> </u>
193	pipe pile wall - Submit to RE for comment	12	05-Jan-21	18-Jan-21	0							11				11											
194	pipe pile wall - Revise, Resubmit & approval	18	19-Jan-21	08-Feb-21	0		: :														111				111		
Cofferdam (St	tage 2 Filters)															11	11	11		11	111						
196	Cofferdam (Stage 2 Filters) - Install pipe pile & Grouting	60	08-May-21	20-Jul-21	0							11				1 1					111						
197	Cofferdam (Stage 2 Filters) - Sensitive Pumping Test	12	21-Jul-21	03-Aug-21	0	·						-++-								-++-			+-+				+++
Cofferdam (Se	outh Work Pumping Station) & Cofferdam for Delivery Main						1					11				: :	11	11		: :]	111		: : :	:	: : :	: :	; ;
												Project	ID: 1W	SD10	- 11003	2-3				T	Date	1	Revision	(Checked	A	oproved
Current Mile	estone Remaining Work 1 Yea	r Roll	ling Pro	ogramn	ne							aselin		2019	- 0003	-0				14-A	ug-2020	1st F	rog. Rev	.0 AT	5		
Level of Effe			100	220500							L	ayout:	Update	e Thre	e Mon	th Rol	lling			7-Se	p-2020	1st F	rog. Rev	1.1 AT			
	k maining Work										F	Page: 2	of 5							6-Nov	-2020	The	Prog. Re	ev.0 AT			



Data Date: 31-Dec-20

Contract No. 1/WSD/19 In-Situ Reprovisioning of Sha Tin Water Treatment Works (South Works) - Water Treatment Works

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float								202	21							
					- Cal	Jan	Feb	Mar	Apr	N	May	Ju	in	Ju		Aug	Sep		Oct	Nov	Dec
257	Washwater Equilization Tank - Underground pipework	12	06-Jul-21	19-Jul-21	0									in i	1						
255_01	Washwater Equilization Tank - Backfilling to formation level	4	08-Jul-21	12-Jul-21	0								1 1			111					
255_03	Washwater Equilization Tank - Formwork and rebar fixing for Basement floor slab	6	13-Jul-21	19-Jul-21	0										181	111				111	
255_05	Washwater Equilization Tank - Concreting for Basement floor slab (+16.8mPD)	1	20-Jul-21	20-Jul-21	0										'					111	
255_07	Washwater Equilization Tank - Scaffolding erection +16.8mPD to +24mPD	3	28-Jul-21	30-Jul-21	0						· · · · · · · · · · · · · · · · · · ·	···								·+··	
255_09	Washwater Equilization Tank- Formwork and rebar fixing for walls +16.8mPD to +24m	PD 6	31-Jul-21	06-Aug-21	0			1111													
255_11	Washwater Equilization Tank - Concreting for walls (up to +24mPD)	1	07-Aug-21	07-Aug-21	0								111				1111		111	111	
255_13	Washwater Equilization Tank - Formwork and rebar fixing for floor slab (+24mPD)	6	09-Aug-21	14-Aug-21	0			1111								— . I				1111	
255_15	Washwater Equilization Tank - Concreting for floor slab (+24mPD)	1	16-Aug-21	16-Aug-21	0			1111													
Superstructu	ire															1.1.1.					
255_17	Washwater Equilization Tank - Scatfolding erection +24mPD to +27.4mPD	3	17-Aug-21	19-Aug-21	0											D					
255_19	Washwater Equilization Tank - Formwork and rebar fixing for walls +24mPD to +27.4m	PD 6	20-Aug-21	26-Aug-21	0																
255_21	Washwater Equilization Tank - Concreting for walls (up to +27.4mPD)	1	27-Aug-21	27-Aug-21	0			111									Ш.				
255_23	Washwater Equilization Tank - Formwork and rebar fixing for floor slab (+27.4mPD)	6	28-Aug-21	03-Sep-21	0												P				
255_25	Washwater Equilization Tank - Concreting for floor slab (+27.4mPD)	1	04-Sep-21	04-Sep-21	0											÷				÷	
255_35	Washwater Equilization Tank - Scaffolding erection +27.4mPD to +31mPD (Roof)	3	06-Sep-21	08-Sep-21	0											111					
255_45	Washwater Equilization Tank - Formwork and rebar fixing for walls +27.4mPD to +31n	PD (Roof) 6	09-Sep-21	15-Sep-21	0											111				1111	
255_55	Washwater Equilization Tank - Concreting for walls (up to +31mPD) (Roof)	1	16-Sep-21	16-Sep-21	0															111	
255_65	Washwater Equilization Tank - Formwork and rebar fixing for Roof slab (+31mPD)	6	17-Sep-21	24-Sep-21	0																
255_75	Washwater Equilization Tank - Concreting for Roof slab (+31mPD)	1	25-Sep-21	25-Sep-21	0																
718	Washwater Equilization Tank - Apply waterproofing	3	27-Sep-21	29-Sep-21	0			1111													
256	Washwater Equilization Tank - Water Test	6	30-Sep-21	07-Oct-21	0			1111												111	
258	Washwater Equilization Tank - Completion of Civil Structure for E&M Installation	0	08-Oct-21		0	1111		1111										•			
	Equalization Tanks - M&E Works							1111													
WET.1010	Washwater Equilization Tank - Handover of Washwater Equalization Tanks for E&M w	orks 0	08-Oct-21		0											L.I.L.		٠			
	Equalization Tanks - Delivery to Installation Area							1111												1 1 1 1	
WET.1050	Washwater Equilization Tank - Delivery for Installation - LALG	7	29-Nov-21	06-Dec-21	173			1111												111	:
	Equalization Tanks - Installation							1111												111	
WET.1000	Washwater Equilization Tank - Temporary Installation for Flow Diversion	45	08-Oct-21	30-Nov-21	0			1111										1		1 1 1 1	
WET.1090	Washwater Equilization Tank - Ready for Temporary Operation	15	01-Dec-21	17-Dec-21	0	1111										L.I					
	Equalization Tanks - Installation - Mechanical																				
WET.1100	Washwater Equilization Tank - Installation of LALG	80	07-Dec-21	19-Mar-22	173			1111								111					
	and New Sampling Room							1111								111					
								1111													
New Samplin	New Sampling Room - Construct new temporary New Sampling Room	24	07-Oct-21	04-Nov-21	59			1111										¢		1	
1226	New Sampling Room - Oursidernew lemporary rear outlighting room	m to new temporary one 2	05-Nov-21	06-Nov-21	59										1				111	٥	
1228	New Sampling Room - Modify the structure of the existing sampling room	24	08-Nov-21	04-Dec-21	59			1111													
1230								1111												111	
Inlet Works -		42	07-Oct-21	25-Nov-21	26			1111										Ċ	1 1 1		
272	Inlet Works - Open cut excavation	5	26-Nov-21	01-Dec-21	26			1111												:::¢	#
273	Inlet Works - Installation of underground earthing system or earth mat (if necessary)	the second second second second second second second second second second second second second second second se	02-Dec-21	15-Jan-22	26		*****	+++	1111		1-1-1	111	111			111					
274	Inlet Works - Foundation (with 6 nos. mini pile avg. length=13m including empty borin	1)	01.000.11				1111	1111												111	
	and Sedimentation Tanks							1111													
	f of Flocculation & Sedimentation Tank Structure							1111												111	
Flocculation	& Sedimentation Tank (Western Half) - Excavation and ELS		02 0-1 01	10 Nov 21				1111											i ini		
285_01	Flocc & Sed Tanks (Western Half) - Excav & Install ELS & Plate Loading Test - S1	18	23-Oct-21 13-Nov-21	12-Nov-21	0			·····	+		·····	·· +· +·	1-1-1			••••				1	
285_03	Flocc & Sed Tanks (Western Half) - Excav & Install ELS & Plate Loading Test - S2			03-Dec-21				1111												111	-
285_05	Flocc & Sed Tanks (Western Half) - Excav & Install ELS & Plate Loading Test - S3	18	04-Dec-21	24-Dec-21	0			1111												111	
Flocculation	& Sedimentation Tank (Western Half) - Substructure	h mat 2	28-Dec-21	29-Dec-21			111	1111												111	
286	Flocc & Sed Tanks (Western Half) - Installation of underground earthing system or ear			29-Dec-21	6		111	111												111	
287_01	Flocc & Sed Tanks (Western Half) - Backfilling to formation level	12	30-Dec-21	13-5411-22	0		+	++++	1		· · · · · ·					† † †	1111			1111	
Ozone Buildi	ing							1111												1111	
Ozone Buildi	ing - Structure							1111													
	ing - Excavation and ELS							1111			111	11				111					
328_01	Ozone Building - Excav & Install ELS & Plate Loading Test - S1	18	28-Dec-21	18-Jan-22	0						111	::	1 1 1	11		111			1 1 1		
									Proise	t ID: 1W	VSD19	- 11001	1-3				Date	Re	vision	Checked	Approve
Current M		1 Year Rol	ling Pro	ogramm	ne				Baseli		3013	0000				14	1-Aug-2020	1st Pro	g. Rev.0	AT	
	Hart		-	-							These	Mon	h Dalli					_		AT	
Level of E									Layou	t: Updat	le inree	e won		ng		1-	Sep-2020	IST PIO	g. Rev. I		
Level of E Actual Wo Critical R	ork									4 of 5	le Inree	e won	In Rollin	ng			Nov-2020		og. Rev. 1		

Data Date: 31-Dec-20

Contract No. 1/WSD/19 In-Situ Reprovisioning of Sha Tin Water Treatment Works (South Works) - Water Treatment Works

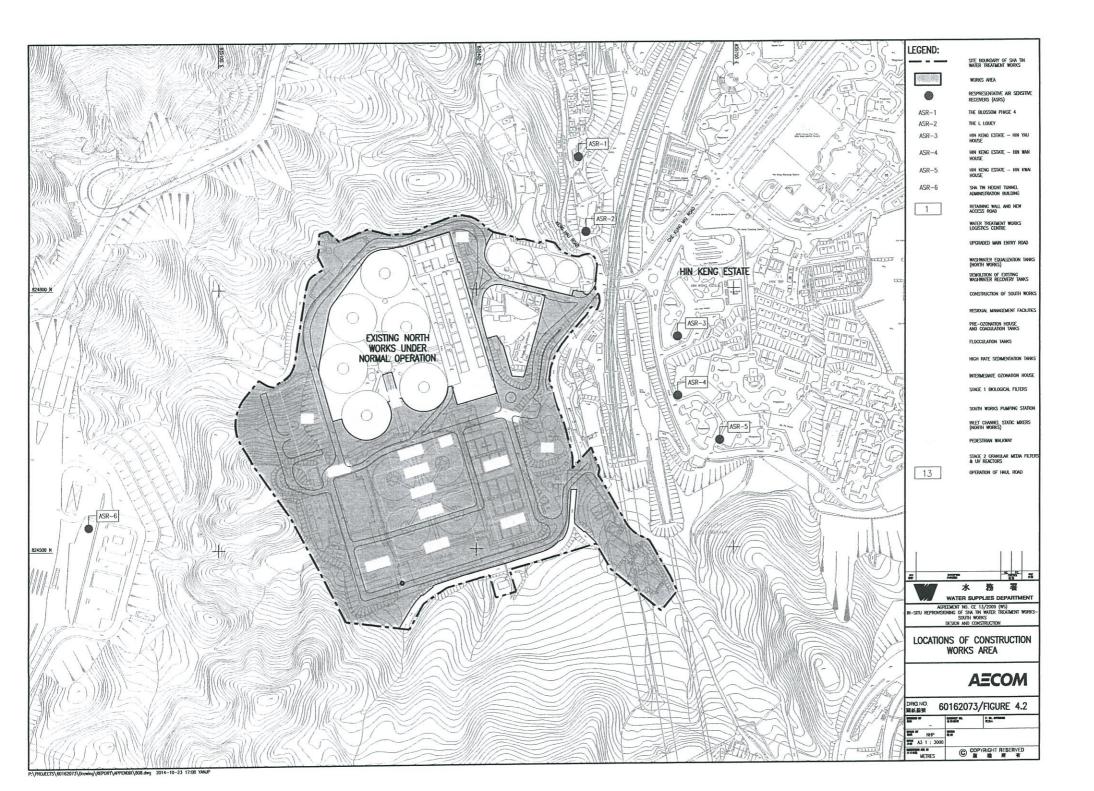
vity ID	Activity Name	Original Duration	Start	Finish	Total Float										2	021							-		-
,		Duration			Float	Jan	1	Feb	Ma	1	Apr		May	1.	Jun		Jul	Au	ug	Sep		Oct	Nr	ov	
Stage 1 Filter	rs					11		111																	
	age 1 Filters Structure (Northern Half)																								
	rs (1st Half - Northern Half) - Escavation and ELS																						111		11
357_01	Stage 1 Filter (1st Half - Northern) - Excav & Install ELS & Plate Loading Test - S1	16	23-Oct-21	10-Nov-21	1								111				111								1
357_03	Stage 1 Filter (1st Half - Northern) - Excav & Install ELS & Plate Loading Test - S2	16	11-Nov-21	29-Nov-21	1			111		11															1
357 05	Stage 1 Filter (1st Half - Northern) - Excav & Install ELS & Plate Loading Test - S3	16	30-Nov-21	17-Dec-21	1			111								11.1								iF	
357 07	Stage 1 Filter (1st Half - Northern) - Excav & Install ELS & Plate Loading Test - S4	16	18-Dec-21	08-Jan-22	1					11			111									. 1 1			
Stage 2 Filte						11		111		1 1										111		. 1 1			
Stage 2 Filter	rs - Filters Structure 1st Half (Western Half)					11		111																	
	rs (1st Half - Western Half) - Escavation and ELS																								
426_01	Stage 2 Filter (1st Half - Western) - Excav & Install ELS & Plate Loading Test - S1	18	04-Aug-21	24-Aug-21	0															1.1.1.					L.
426_03	Stage 2 Filter (1st Half - Western) - Excav & Install ELS & Plate Loading Test - S2	18	25-Aug-21	14-Sep-21	0																				
426_05	Stage 2 Filter (1st Half - Western) - Excav & Install ELS & Plate Loading Test - S3	18	15-Sep-21	07-Oct-21	0								111												
426_07	Stage 2 Filter (1st Half - Western) - Excav & Install ELS & Plate Loading Test - S4	18	08-Oct-21	29-Oct-21	0			111		1 1			111							111		1 1	4 1 1		
426_09	Stage 2 Filter (1st Half - Western) - Excav & Install ELS & Plate Loading Test - S5	18	30-Oct-21	19-Nov-21	0	11		111					111											-	
	rs (1st Half - Western Half) - Substructure					11		1.1.1					1.1.1.			1.1.				1					1.
427	Stage 2 Filter (1st Half - Western) - Install underground earthing system or earth mat (if any)	2	20-Nov-21	22-Nov-21	0	11		111					111											P	
428	Stage 2 Filter (1st Half - Western) - Tower Crane Constrction	18	23-Nov-21	13-Dec-21	0	11		111					111												1
429 01	Stage 2 Filter (1st Half - Western) - Backfilling to formation level	6	14-Dec-21	20-Dec-21	0	11																			
429_03	Stage 2 Filter (1st Half - Western) - Formwork and rebar fixing for Basement floor slab	12	21-Dec-21	06-Jan-22	0																				1
Geotechnica	l Works							ļ			ļ		1		ļļļ.	į				↓↓		·			
Retaining Wa	all A, E, G & Soldier Pipe Wall B, F							111					111												
570_01	L-Shape Retaining Wall A (Type RW1 and RW2) - 1st Section	84	11-Aug-21	19-Nov-21	0	11		111											: :			11	1 1 1		1
570_03	L-Shape Retaining Wall A (Type RW1 and RW2) - 2nd Section	84	20-Nov-21	08-Mar-22	0																		111	1	1
ection 3 - L	andscaping Softworks within Portion D																11								
Landscaping	Softworks												<u> </u>			.				ļļļ		,			
Portion D								111		11			111							111		. 1 1			1
651_01	Subletting for Landscaping Works	90	10-Aug-20 A		0			111																	
651	Portion D - Landscaping Works	194	29-Jan-21	10-Aug-21	0		1 1	: : :		: :	: : :	: :		1 : 1		: :	1 1								1
Section 3A-	Establishment Works within Portion D																						111		1
Landscaping	Establishment												111			1.1.				<u> </u>					
Portion D	[1982] 2013 - 2014 - 2015 - 2015 - 2017 - 2017 - 2017 - 2017							111															1 1 1	11	1
655	Portion D - Establishment Works	365	11-Aug-21	10-Aug-22	0														1 11		111	11	1 1 1	TI	:
Section 5 - P	Post-planting Monitoring and Maintenance Works within Portion A, D and G												111			1	11	11		111					i
	g Monitoring and Maintenance Works							111					111												
Portion A, D						11		111																	
669_01	Subletting for Post-planting Monitoring and Maintenance Works within Portion A, D and G	90	10-Aug-20 A	28-Jan-21	0																				:
669_01	Post-planting Monitoring and Maintenance Works within Portion A, D and G	1929	29-Jan-21	11-May-26	0		i dania	inini	and the second second	inciant	of Line in	No. of Concession, Name	- CALLARD	a second as	No. of Concession, Name	de la compañía de	State State	and the second	and in statistics				-		

		Project ID: 1WSD19 - U003-3	Date	Revision	Checked	Approved
Current Milestone Remaining Work	1 Year Rolling Programme	Baseline:	14-Aug-2020	1st Prog. Rev.0	AT	
Level of Effort		Layout: Update Three Month Rolling	7-Sep-2020	1st Prog. Rev.1	AT	
Actual Work		Page: 5 of 5	6-Nov-2020	The Prog. Rev.0	AT	
Critical Remaining Work			01101 2020			

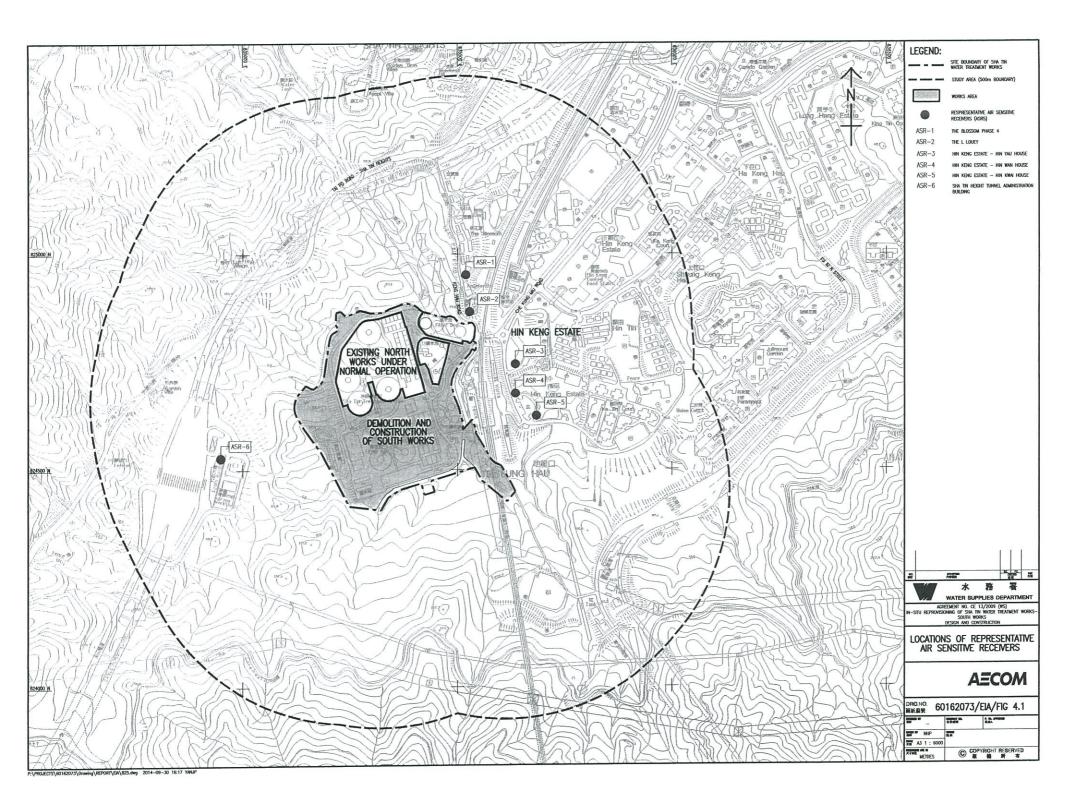
Appendix D

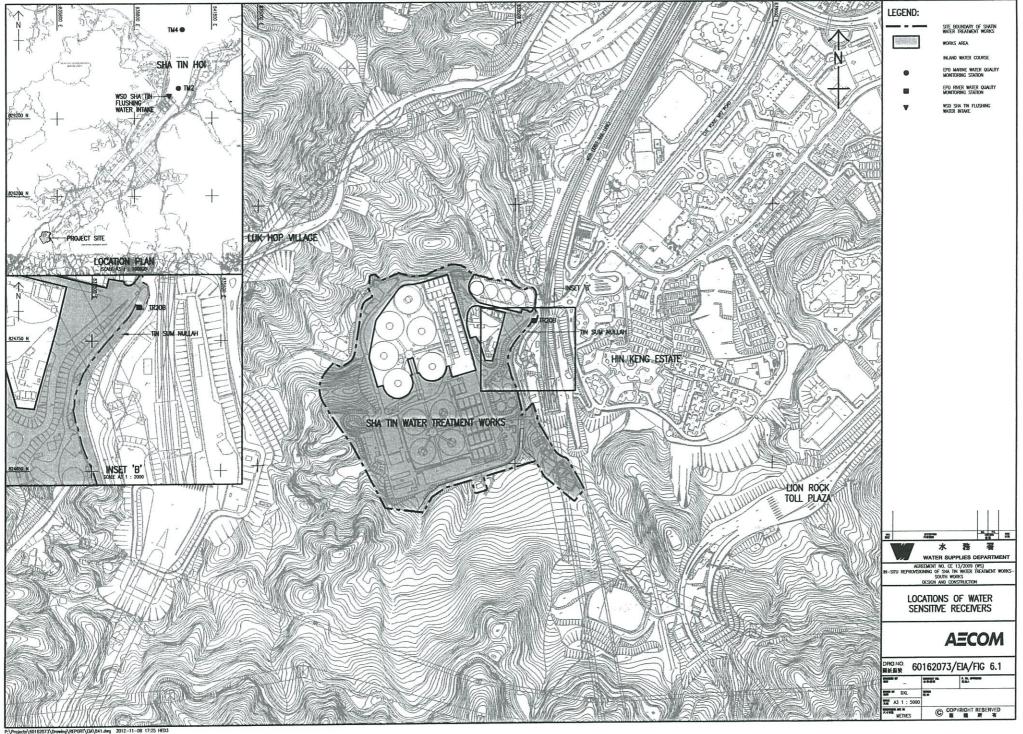
Location of Construction Activities

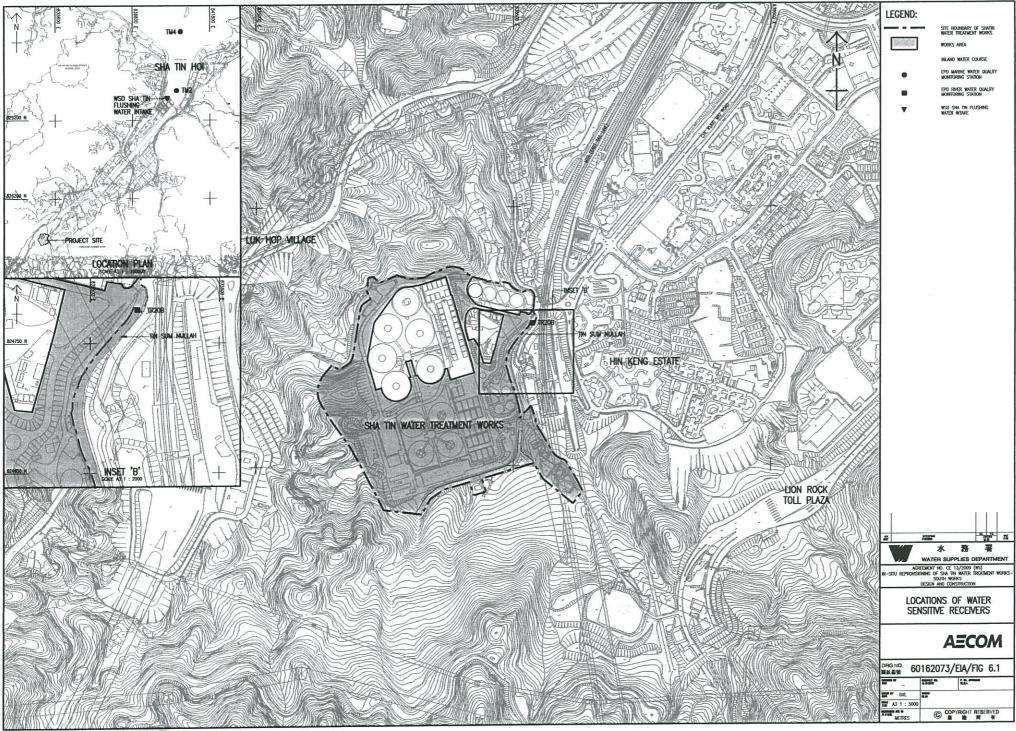
Project no.: CJO-3113



Appendix E Environmental Sensitive Receivers in the Vicinity of the Project







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Appendix F Summary of Action and Limit Levels

Project no.: CJO-3113

Determination of Action and Limit Levels for Air Quality

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

Determination of Action and Limit Levels for Noise

Monitoring	Action Level	Limit Level in dB(A)
Location	0700-1900 h	ours on normal weekdays
NM1		For domestic premises: 75 dB(A) for
NM2	When one documented	NM1 & NM2
NM3	complaint is received	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		d Oxygen g/L)	Suspended (mg/)		Turbidity	(NTU)	pł	I
monitoring 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

Acumen Environmental Engineering & Technologies Company Limited

Project no.: CJO-3113

		ACT	TION	
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	measures.	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 E
	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 day
	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 no
	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 exceedanc
	and			is abated.
	7. If exceedance stops, cease			
	additional monitoring.			

Noise

		ACT	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;	in find	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

EVENT	ACTION							
	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
- (*) /28		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.		

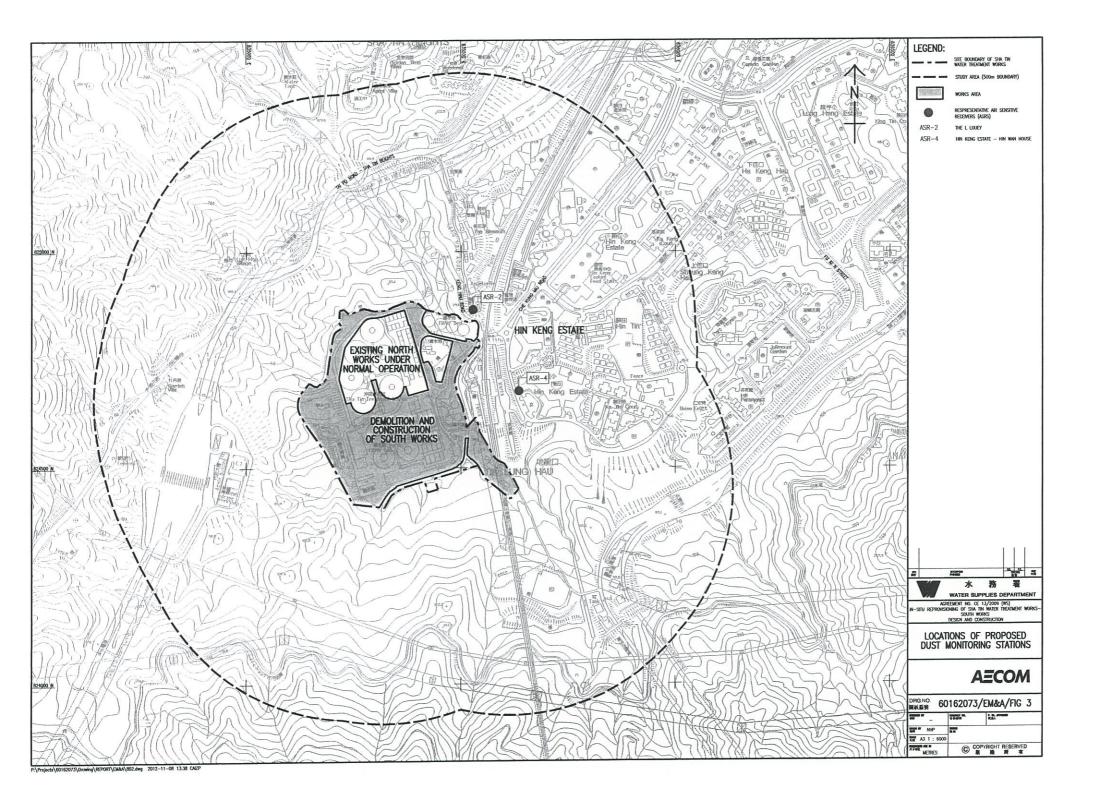
Appendix H Impact Monitoring Schedules

			Jan 21			
un	Mon	Tue	Wed	Thur	Fri	Sat
					1	2 Impact Water Quality monitoring for C1, C C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3
	4 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	5	6 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	7	8 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	9
0	11 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	12	13 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	14	15 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	16
7	18 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	19	20 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	21	22 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	23
4	25 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	26	27 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	28	29 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	30
1						

		T	entative Impact Monitoring Schedule for STWT	W		
	and the second second second second second second second second second second second second second second second		Dec-20			Cat.
Sun	Mon	Тие	Wed	Thur	Fri	Sat 5
		1	2 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	3	Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	
6	7	8	9	10	11	12
	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 & NM3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	
13	14 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	15	16 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	17	18 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	19
		22	23	24	25	26
20	21 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 & NM3			
27	28	29	30	31		
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3			

Appendix I

Location Plan of Air Quality Monitoring Station



> Appendix J Calibration Certificates (Air Monitoring)



Sensidyne 80570 Nephelometer Calibration Certificate

Recommended calibration interval is 24 months from date of shipment and at 24 month intervals thereafter.

Serial #	R14527
Firmware	80570-8100-V1.0.4
All work has been successfully com All Calibrated By: <u>J. Gist</u>	Date 01-08-2020 JAN 2 8 2020
Quality Inspector: A 5	Date
Next Calibration Due <u>01-08-2022</u>	
	Pass/Fail Criteria
Balance Sheath/Sample Flow F	Rate pass ± 5%
Set Sample Flow to 1 lpm	pass ± 5%
Set Zero (k=1)	pass ± 2 μg/m3
Set Gain	pass ± 5%
Set Serial & Model Number	X
Calibration Concentration, LD-3	3, μg/m³ 637

Sensidyne, LP 1000 112th Circle North

Sulte 100 St. Petersburg, FL 33716 U.S.A.

T 800-451-9444 T +1 727-530-3602 F +1 727-539-0550

Email: info@Sensidyne.com www.Sensidyne.com www.Schauenburg.com

Calibration Standards

Standard	Manufacturer	Model	SN	Cal Due
Nephelometer	Sibata	LD-3B	476795	06-07-2020

The test and calibration results on this report certify that this instrument complies with the product specifications at the time of this report. Calibration was performed using test instruments and standards that are traceable to NMIJ and the International System of Units (SI). Laser safety and anti-static procedures are followed.

80570-9600 Sensidyne Cal Cert Rev C





Sensidyne 80570 Nephelometer Calibration Certificate

Recommended calibration interval is 24 months from date of shipment and at 24 month intervals thereafter.

Serial #	P15857		
Firmware	80570-810	00-V1.0.4	
All work has been successfully com	pleted. (Sign	off)	
Calibrated By: J. Gist	14	Date 01	-27-2020
Quality Inspector: AT5		Date	JAN 2 8 2020
Next Calibration Due <u>01-27-2022</u>		Pass/Fail	Criteria
Balance Sheath/Sample Flow R	late	pass	± 5%
Set Sample Flow to 1 lpm	-	pass	± 5%
Set Zero (k=1)		pass	_ ± 2 μg/m3
Set Gain	-	pass	± 5%
Set Serial & Model Number	-	X	-
Calibration Concentration, LD-3	, μg/m³ _	395	_

1000 112th Circle North

Sensidyne, LP

Suite 100 St. Petersburg, FL 33716 U.S.A.

T 800-451-9444 T +1 727-530-3602 F +1 727-539-0550

Email: info@Sensidyne.com www.Sensidyne.com www.Schauenburg.com

Calibration Standards

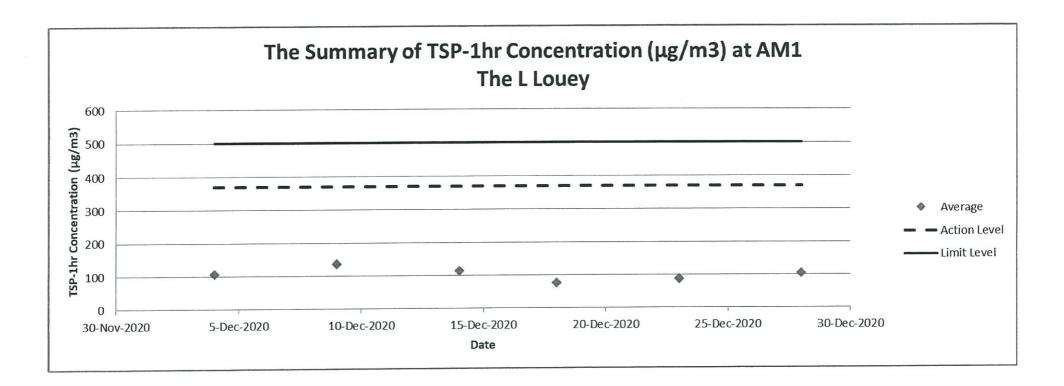
Standard	Manufacturer	Model	SN	Cal Due
Nephelometer	Sibata	LD-3B	476795	06-07-2020

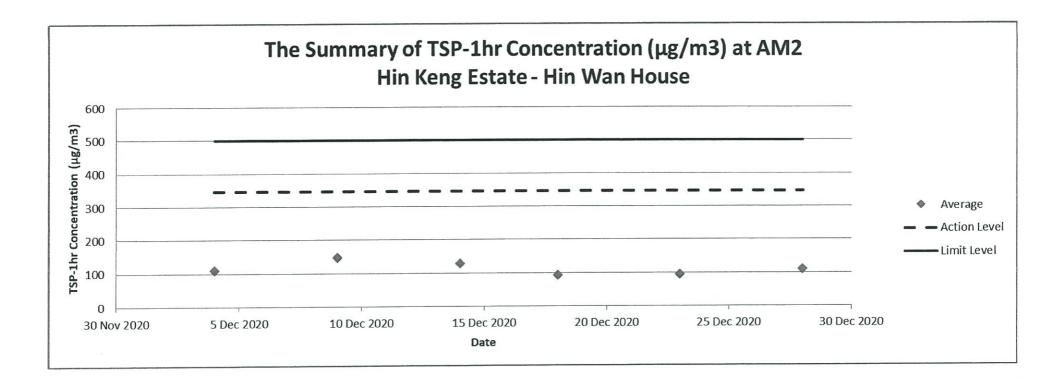
The test and calibration results on this report certify that this instrument complies with the product specifications at the time of this report. Calibration was performed using test instruments and standards that are traceable to NMIJ and the International System of Units (SI). Laser safety and anti-static procedures are followed.

80570-9600 Sensidyne Cal Cert Rev C



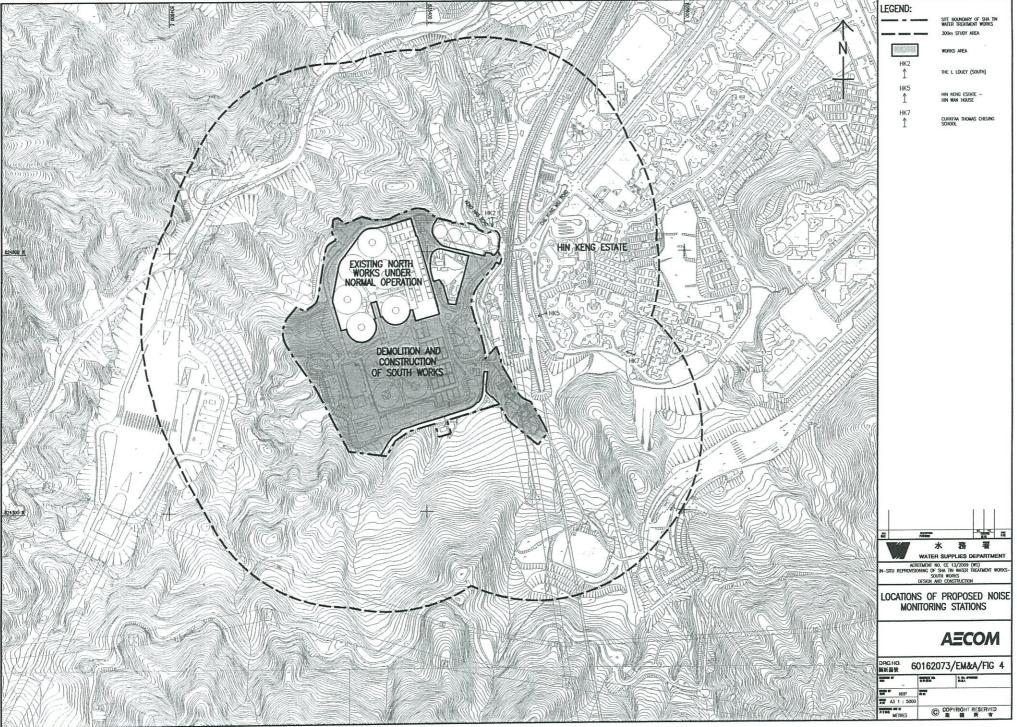
Appendix K Impact Air Quality Monitoring Results and Graphical Presentation





Appendix L

Location Plan of Noise Monitoring Station



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Appendix M Calibration Certificates (Noise)



CALIBRATION CERTIFICATE

Certificate Informati	on				
Date of Issue	17-Jan-2020		Cer	tificate Number	MLCN2001298
Customer Informatio	on a state of the				
Company Name Address	Acumen Environmen Lot 12, Tam Kon Sha Tsing Yi (N), Hong Kong		nd Technologi	ies Co. Ltd.	
Equipment-under-Te	est (EUT)				
Description Manufacturer Model Number Serial Number Equipment Number	Sound Level Meter Rion NL-52 00821088 -				
Calibration Particula	ur.				
Date of Calibration Calibration Equipment	17-Jan-2020 4231(MLTE008) / A	V180068 / 13-Ma	ay-2020	17	5
Calibration Procedure	MLCG00, MLCG15				
Calibration Conditions	EUT Sta Wa	nperature ative Humidity bilizing Time Irm-up Time ver Supply	23 °C \pm 5 °C 55% \pm 25% Over 3 hours 10 minutes Internal batte		
Calibration Results	Calibration data were	e detailed in the c	ontinuation pa	iges.	
Approved By & Date		/	lo	K.O. Lo	17-Jan-2020
Statements Calibration equipment used The results on this Calibrati not include allowance for th overloading, mishandling, r MaxLab Calibration Centre The copy of this Certificate prior written approval of M	ton Certificate only relate the EUT long term drift, van nisuse, and the capacity of Limited shall not be liabl is owned by MaxLab Cal	to the values measur riation with environ f any other laborator e for any loss or dan ibration Centre Limi	ed at the time of i mental changes, v y to repeat the me mage resulting fro	the calibration and the vibration and shock dur easurement. m the use of the EUT.	ing transportation,

Page 1 of 2

•



Certificate No. MLCN200129S

Calibration Data									
Frequency / Time Weighting	Range	EU1 Readi		Standa Readi		EUT	Error	Calibrati Uncertair	
A / FAST	25-138 dB	93.7	dB	94.0	dB	-0.3	dB	0.2	dB
(1 kHz Input)		113.7	dB	114.0	dB	-0.3	dB	0.2	dB
C / FAST	33 - 138 dB	93.7	dB	94.0	dB	-0.3	dB	0.2	dB
(1 kHz Input)		113.7	dB	114.0	dB	-0.3	dB	0.2	dB
Z/FAST	38 - 138 dB	93.7	dB	94.0	dB	-0.3	dB	0.2	dB
(1 kHz Input)		113.7	dB	114.0	dB	-0.3	dB	0.2	dB
A/SLOW	25 - 138 dB	93.7	dB	94.0	dB	-0.3	dB	0.2	dB
(1 kHz Input)		113.7	dB	114.0	dB	-0.3	dB	0.2	dB
C / SLOW	33 - 138 dB	93.7	dB	94.0	dB	-0.3	dB	0.2	dB
(1 kHz Input)		113.7	dB	114.0	dB	-0.3	dB	0.2	dB
Z/SLOW	38-138 dB	93.7	dB	94.0	dB	-0.3	dB	0.2	dB
(1 kHz Input)		113.7	dB	114.0	dB	-0.3	dB	0.2	dB

- END -

Calibrated By : Date : Dan 17-Jan-2020 Checked By : Date : K.O. Lo 17-Jan-2020 Page 2 of 2



Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	NTi Audio
Type No.:	XL2 (Serial No.: A2A-09696-E0)
Microphone:	ACO 7052 (Serial No.: 60997)
Preamplifier:	MA220 (Serial No.: 5287)
	Submitted by:

Customer:	Acumen Environmental Engineering and Technologies Co.
	Ltd.
Address:	No.12, Tam Kon Shan Road, Tsing Yi Island, Hong Kong

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: 28 February 2020

Date of calibration: 2 March 2020

Calibrated by: Calibration Technician

Date of issue: 2 March 2020

Certified by: Mr. Ng Yan Wa Laboratory Manager

Page 1 of 4

Certificate No.: APJ19-168-CC001



1. Calibration Precaution:

- 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:	23.7°C
Air Pressure:	1008 hPa
Relative Humidity:	54.5 %

3. Calibration Equipment:

	Туре	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV180064	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Sett	ing of Un	it-under-t	est (UUT)	Appl	ied 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	94.0	±0.4

Linearity

Setti	ing of Uni	t-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB Frequency, H		dB	Specification, dB	
					94		94.0	Ref
30-130	dBA	SPL	Fast	104 1000	104.0	±0.3		
				114		114.0	±0.3	

Time Weighting

Setti	ng of Uni	t-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Level, dB Frequency, Hz		Specification, dB
20.120		CDI	Fast	94	1000	94.0	Ref
30-130 dBA		SPL	Slow	94	1000	94.0	±0.3

Certificate No.: APJ19-168-CC001

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Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

Frequency Response

Linear Response

Setti	ing of Unit	t-under-t	est (UUT)	Appl	ied 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	94.2	±1.5
					250	94.1	±1.4
30-130	dB	SPL	Fast	94	500	94.1	±1.4
					1000	94.0	Ref
					2000	93.8	±1.6
					4000	93.3	±1.6
					8000	92.9	+2.1; -3.1

A-weighting

Sett	ing of Unit	-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. We	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	55.6	-39.4 ±2.0
					63	67.9	-26.2±1.5
					125	78.0	-16.1±1.5
			Fast	94	250	85.4	-8.6±1.4
30-130	dBA	SPL			500	90.8	-3.2±1.4
					1000	94.0	Ref
					2000	95.0	$+1.2\pm1.6$
					4000	94.3	$+1.0\pm1.6$
					8000	91.8	-1.1+2.1; -3.1

C-weighting

Setti	ng of Unit	t-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. We	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	94.0	-0.2±1.5	
			Fast	94	250	94.1	-0.0±1.4
30-130	dBC	SPL			500	94.1	-0.0 ± 1.4
					1000	94.0	Ref
					2000	93.6	-0.2±1.6
					4000	92.5	-0.8±1.6
					8000	89.9	-3.0+2.1; -3.1

Certificate No.: APJ19-168-CC001

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(A+A)*L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

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	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.10
	250 Hz	± 0.05
	500 Hz	± 0.10
	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.

Certificate No.: APJ19-168-CC001

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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 $^{\circ}$ 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.

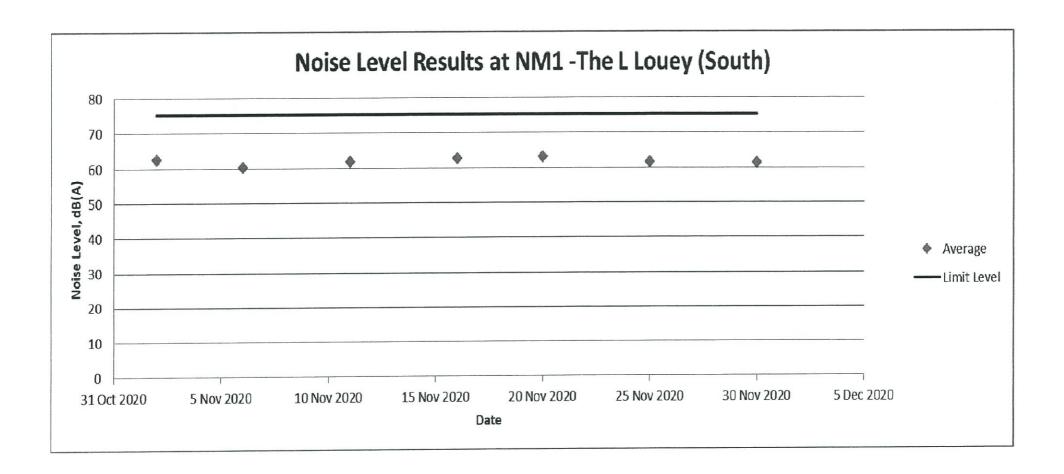
SENSOR 10	00 2000 25	00 390	10 3500	3800	4000	4200	4250	4300	4400	4500	4500	ACCURACY (+/-)*	REBOLUTION	SPECIFICATION RANGE	OPERATIONAL RANGE	NOTES
Wind Speed Air Flow				•					•		•	Larper of 3% of reading, least significant digit or 20 formin	0 1 m/s 5 ft/min 0,1 km/h 0,1 mph 0,1 km/s 1 B	0.6 to 40 0 m/s 118 to 7,874 filmin 2.2 to 144.0 kmh 1.3 to 49.5 mph 1.2 to 77.6 kmts 0 to 12 B	0.6 to 60.0 m/s 118 to 11,811 f/mm 2.2 to 216,0 km/h 1.3 to 134,2 mph 1.2 to 116,6 km/s 0 to 12 8	1 indig20 mm damates mayber with introlline table and two foldow 2,64% instance, 50% and 50% intervention of a similar table and the foldow 2,64% instance, 50% and 50% intervention of a similar table and table table and table and table table and table and table and table table and table and table and table table and table and table and table and table table and
Ambient Temperature				•			•	•	•			0.9 °F 0.5 °C	0.1 'F 0.1 °C	-20.0 to 158.0 "F -29.0 to 70.0 "C	14.00 to 131.0 °F -10.0 to 55.0 °C	Hermsteak-seake, precision thermiser recorded externelly and the major pro- 5x30346(s) for reader separate. Antimot 0.2 min 10 min or graviting in the second secon
Globe Temperature - Tg	hilders	313	13.202	1.10	PIPEC		23.1	12473		187	Cherry .	۰۶ ۱.4 °C	01 'F 01 'C	-20.0 to 140.0 "F -29.0 to 50.0 "C	14 0 to 131.0 °F -10 6 to 55.0 °C	Temperature anside 11x/26 mm black powder coated copper globe converted to Tg equivale standard 6 m/150 mm globe. Closest equivalence obtained with sinflowgreater than 2.2 mp m/s
Relative Humdity		Calls P.			0.0			121			•	3.0 9JRH	0.1 %RH	5 to 95% non-condensing	0 to 100%	Polymer capacitive humidity sensor mounted in thin-valked chamter external to case for maccuate response (UE Praters 6.257/24). To entiwer stated sensors, until man to permit originates to actionate tamperature the special to large, problemphatator changes and out of dense sungity. California data in this 4 - 2% over 24 months. Humidity sensor may be see at factory or in fault any favore 11 mining. Calabitation Kr (KIF (PH-000)).
Pressure		191.0										0.03 inHg 1.0 hPajmbar 0.01 PSI	0.01 inHg 0 1 hPatribar 0.01 PSI	5 86 to 32 49 mHg 300.0 to 1100 0 MPa(mbar 4.36 to 15.95 PSI and 32 0 to 165.0 °F 0.0 to 55.0 °C	0.30 to 48.87 mHg 10.0 to 1604.7 hPaymbar 0.14 to 24.00 P31 and 14.0 to 131.0 °F -10.0 to 55.0 °C	Monother values planetariation pressure series with solond-order temperature correctly Pressure series may be includated and tentory on in Int. Alphabels (reference abdue al (display of tables) pressure or beneration pressure conceled to MBL. Natel (200 delay bases Joo Las mento) pressure tend indicator may randy, filing Jahou, filing Jahou Sandon Las mentos pressure tend indicator may randy, filing Jahou, filing Jahou Sandon Las mentos pressure tend indicator may randy, filing Jahou, filing Jahou Sandon Las mentos pressure tend indicator may randy, filing Jahou, filing Jahou (200 benets) cettor.
Compess		- -	1000		190	34		11	- 52			5"	1* 1/18th Cardinal Scale	0 to 380*	0 to 360*	Auto solution of the second se
	NO.	1	ale ale	1283		SIL C						CALCUL	ATED ME	ASUREMENTS		
MEASUREMENT 10	00 2000 20	00 300	0000 000	3500 DT	4000	4200	4280	4300	4400	4800	4500 HOR	ACCURACY (+/-)*	MESOLUTION	SPECIFICATION RANOE	SENSORS EMPLOYED	NOTES
Air Density		1	12. 14. a.	l			2					0.0002 Is/K ³ 0.0003 Isg/m ³	0.001 be/ft ³ 0.001 kg/m ³	Refer to Ranges for Semions Employed	Relative Humidity Pressure	Mass of air per unit volume
Air Flow						•						671%	5 m ² 7e 1 m ² m 0 1 m ² m 1 L/s	Refer to Ranges let Sensors Employed	Air Flow User Input (Duct Shape & Size)	Volume of air flowing through an opening. Automatically calculated from Air Webcilly massu and user-specified duct shape (circle er rectangid) and dimensions (units: in, ft onnor m) Maximum duct dimension input: 256 0 in j 21.5 ft 655.3 cm 6.55 m
Attitude		•			•	•	•		-			typical: 23.6 ft 7.2 m max: 46.2 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 Bos Level (*MBL*). Tomparature companiated pressure (berometric) atometer requires accumts reference barometric pressure to produce maximum attracture accuracy. Beth accuracy spece corresponds to a reference pressure anywhere from 550 mBar.
Barometric Pressure	1000			1	•	•	•	•	100			0 07 inHg 2 4 hPs/mbsr 0 03 IPSI	0.01 inHg 0 1 hPaimbar 0.01 PSI	Refer to Ranges for Sensors Employed	Pressure User input (Reference Atitude)	Air pressure that would be present in identical conditions at MSL. Bration pressure comper- for local elevation provided by reference attitude. Requires accurate reference attitude to p maximum attrolute accuracy.
Crosswind & Headwind/Tailwind												7 1%	1 mph 1 fl/min 0 1 km/h 0 1 m/s 0 1 knots	Refer to Ranges for Sensors Employed	Wind Speed Compess	Effective wind relative to a target or travel direction. Auto-switching headwind/tailwind indic
Delta T					1		-			15.152	R.R.ZIC	3.2 'F 1.8 'C	01'F 01'C	Refer to Ranges for Sensors Employed	Temperature Relative Humiday Pressure	Difference between dry bub temporature and wet bub temperature. When spraying, indica eveporation rate and droplet lifetime. Safe range for posticide spraying is 4 to 16 °F / 2 to
Density Altitude			+	1233		•						226 ft 69 m	16	Refer to Ranges for Sensors Employed	Temperature Rolative Hurriday	Local air dansity converted to equivalent elevation above sea level in a uniform layer cons the international Standard Azmosphere.
Dewpoint		1	1		1.		1	10	-			3.4 °F 19 °C	01'F 01'C	15 to 95 % RH Refer to Range for Temperature Sensor	Pressure Temperature Relative Humidity	Temperature that a volume of air must be pooled to at constant pressure for the water vop present to condeme into dewand form on a sold surface. Can also be considered to be t water-to-air saturation temporature
Evaporation Rate	11			1								0.01 lb/ft ² /lw 0.05 kg/m2/lw	0.01 มฑิรักษ 0.01 เอาร์กา	Refer to Ranges for Sensors Employed	Wind Epsed Temperature Roblive Humidby Prassure User input (Concrete Temperature	The rate at which moisture is last from the surface of cuing concrete, Requires user measurement and why of concrete temperature obtained with an accurate IR or probe thermometer ("F or 1", on included), Readings should be taken 20 incluse show pour us who the structure whold or maximum of the fit to eccents which an exercised function to the structure whold or more supported support.
Heat Index	1			16			5	•		-		71*F 40*C	01'F 01'C	Refer to Ranges for Sensors Employed	Temperature Relative Humidity	Perceived temperature resulting from the combined effect of temperature and relative hur Calculated based on NWG Heat Index (HI) tables. Measurement range londed by estent o matibilities bables.
Moisture Content Humidity Ratio ("Grains")					harris	TRE			harris			.3 gpp 04	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 twi air density of a star atmosphere as defined by the ICAO
Thermal Work Limit (TWL)		-		ala -	1							10.9 Word	0.1 Wini	Rofer to Ronges for Sensors Employed	Wind Speed Temperature Globe Temperature Relative Humidity Pressure	Estimated sale maximum continuously sustainable human metabolic relic (Win2) for the conditions and cicilizing factors. Based off of estimated metabolic output of typical human scneen zone vernings
Gutdoor Wet Bulb Globe Temperature (WBGT)		in Allan										13"F 07 °C	01°F 01°C	Rofer to Ranges for Sensors Empiryed	Wind Speed Temperature Globe Temperature Relative Humidity	Measure of human heat stress defined as the combination of effects due to radiation, co and contection. Oxedoor WBGT is calculated from a weighted sum of natural wet buth (Tr globa temperature (Tg), and thy butb temperature (Td). User settable on-screen warring t
Wet Bulb Temperature - Isturally Aspirated (Triwb)				-+ ;	ad - 1944	1				1	1	1.4 *F 08 *C	01*F 01*C	Refer to Ranges for Sensors Employed	Pressure Wind Speed Temperature Clobe Temperature Relative Humday Pressure	Similar to psychromatic web bub temperature (see betro), However, Texb only undergo connection from the ambient air velocity. Timet is a measure of the eveporative cooling th will allow This is accounted for by combining the effects of, memory, relative humidity and windpeed.
Wet Bulb Temperature - Psychrometric				1.0 1.0	N.				物語			3.2 'F 1.8 °C	01"F 0.1"C	Refer to Rangeu for Sensors Employed	Temporature Relative Humidity Pressure	Temperature indicated by a sing psychrometer. Due to nature of the psychrometric ratio- vator-air system, this approximates the thermodynamic web-bub temperature. The therm web-bub temperature is the temperature a percent of air vocated have if covied adaptationly saturation temperature via watter oveporating info it.
Wind Chill			1 5		1.			100	26	14		1.6 'F 0 * 20	0.1 °F 0 1 °C	Refer to Ranges for Sensors Employed	Wind Speed Temporature	Purcewel temperature resulting from combined effect of wind speed and temperature. Cr based on the NVMS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed by a factor of 1.5 to yield equivalent results to wind speed measured at 10 m above groun Measurement range initiacit by entined of published tables.
and the second			1154	BB	PAP.			1999				ADDIT	IONAL SPI	ECIFICATIONS	oluminescent beckligte. Menual ective	and the state of the second second second second second second second second second second second second second
Display & Backlight	•	•	•	•								Reflective 5 digit LCD Multifunction, multi-did	Digit height 0.36 in /	9 mm. Choice of aviation green attix display. Choice of aviation	or visible red (NV models only) electr green or visible red (NV models only	okiminescent biololight, Manual activation with subo-off.) electroluminescent bacidight. Automatic or minual activation
Response Time & Display Update	: : :	•	• •							•		All modeunements exc equilibrate to a large o	apt those based on re hange in the measure	lative hundridy respond scours mant environment. Display upd	taly within 1 second. Relative hurridity ates every 1 second.	and all measurements which include RH in their calculation may require as long as 1 minute t
Maskvg Wind						•	•			•	•	TWL, evaporation rat				ng with all other wind-related functions air velocity, crosswind, heedwindftailwind, wind chill, W
Data Storage & Graphical Display, Min/Max/Avg History											2500 points		iverage and logged for tore interval settable fr	story stored and displayed for a rom 2 seconds to 12 hours, ev	very measured value. Large capacity availe on or off Loga even when disp	data logger with graphucal display. Manual and auto data storage. Min/Max/Aog history may b lay off except for 2 and 5 second intervals (code version 4 18 and later). Data capacity show
Data Upload & Bluetooth& Data Connect Option						•		4				Bluetooth Data Tra	nsfer Option. Adjust	able power consumption and ra Servel Port Protocol for data tri	ar option and provided software dio range from up to 30 ft 5 meters insmassion.	Individual unit ID and 4-digt PIN code preprogrammed for easy identification and data securit
Clock / Calendar	• •	•	• •				•		•	•		Requires optional PC Requires optional PC	interface (USB or RS interface (USB or RS	-232) or Bluetooth data transf -232) or Bluetooth data transf	or option and provided software. In option and provided software or option and provided software.	
Auto Shutdown	• •	•			*	•	:	•	•	:	:	Requires optional PC English Exercisi Clarg	interface (USB or RS	-232) or Bluetooth data transf	er opbon and provided coftware.	
Certifications Origin	1111	-	: :			•	•					CE certified, RoHS a Designed and menulo CR2032, one, include	nd WEEE compliant. I actured in the USA fro d. Average Me. 300 h	m US and imported component ours. Battery life reduced by ba	clight use in 2000 to 3500 models.	ent and Tariff Code Transformation requirements for NAFTA Preference Criterion B.
Battery Life Shock Resistance	1. F.					•	•				•	Standard Models: / MiL-STD-810g, Tran	WAA Alkaline . two, inclu at Shock Method 516	aded. Average Me, 400 hours a	f use, reduced by backlight or Blueton oct may damage replaceable impoler	th radio transmission use.
Sealing Operational Temperature Limits	: :		• •						•		•	to the more extreme i	"C to 55 "C Measure environment for the m	ments may be taken beyond the minum time necessary to take	inits of the operational temperature reading	range of the display and betteries by maintaining the unit within the operational range and ex
Storage Temperature	: :	:	: :	:	•	•	•	•	•	•	•	-22.0 *F to 140.0 *F 4.8 x 1.9 x 1 1 in / 12	-30.0 *C to 80 0 *C 2 x 4 6 x 2.8 cm 3 6 i	az / 102 g (including stip-on cov		
Size & Weight				-	1.0			4.0	q.	1.0		5.0 x 1.8 x 1.1 in/12 65 x 2.3 x 1 1 in/10	7x45x28 cm 3.6	az/102g		

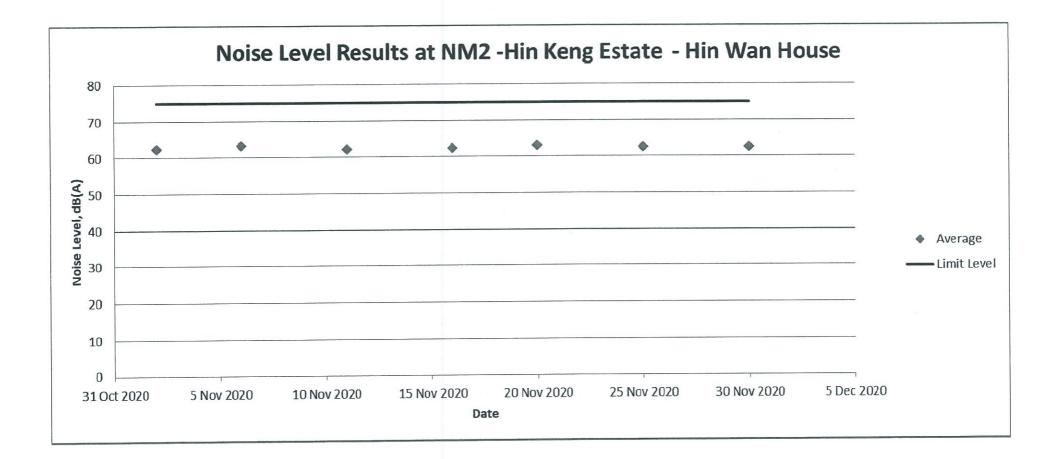
© 2013 Nielsen-Kellerman | 21 Creek Circle Boothwyn PA 19061 USA : www.NKhome.com

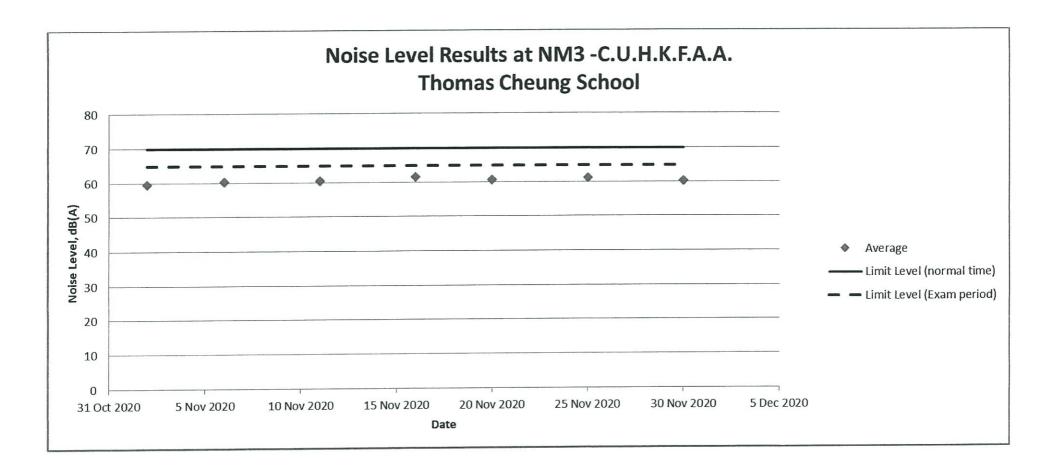
1

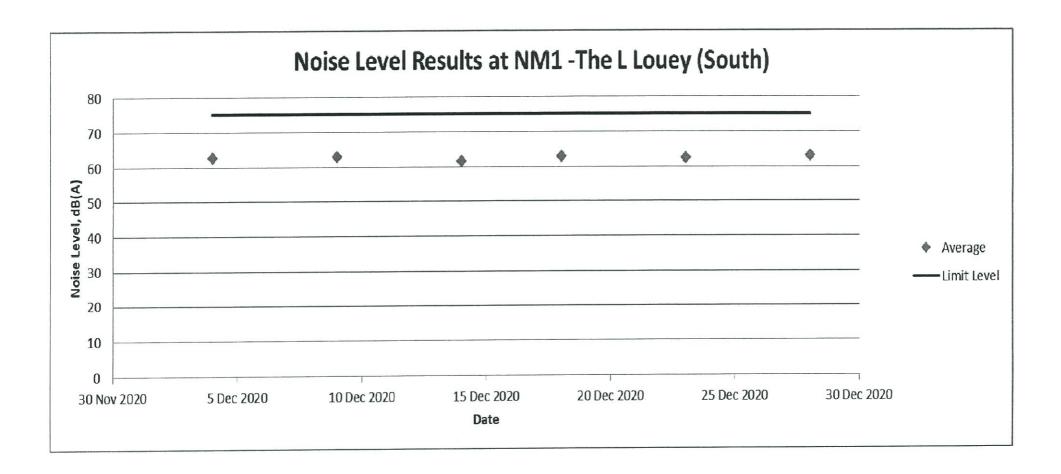
NK #0011 1 19 9 11

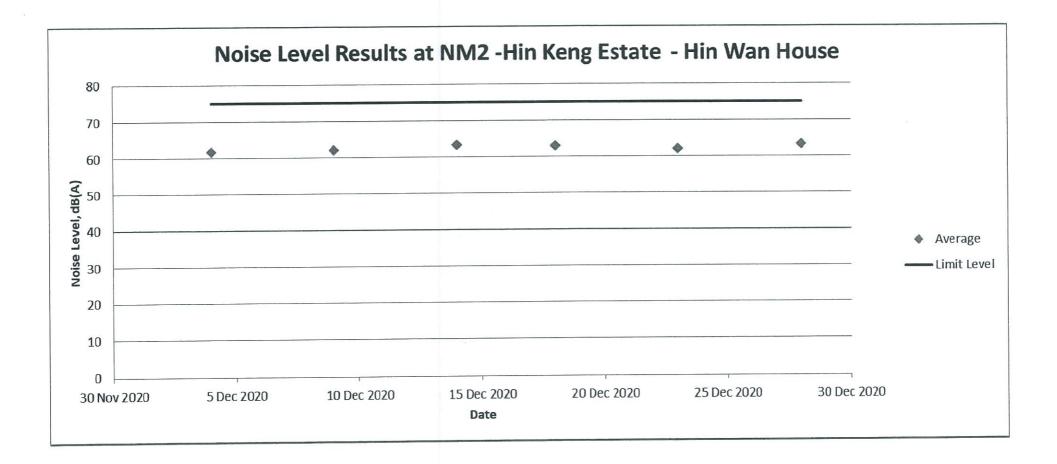
Appendix N Impact Noise Monitoring Results and Graphical Presentation

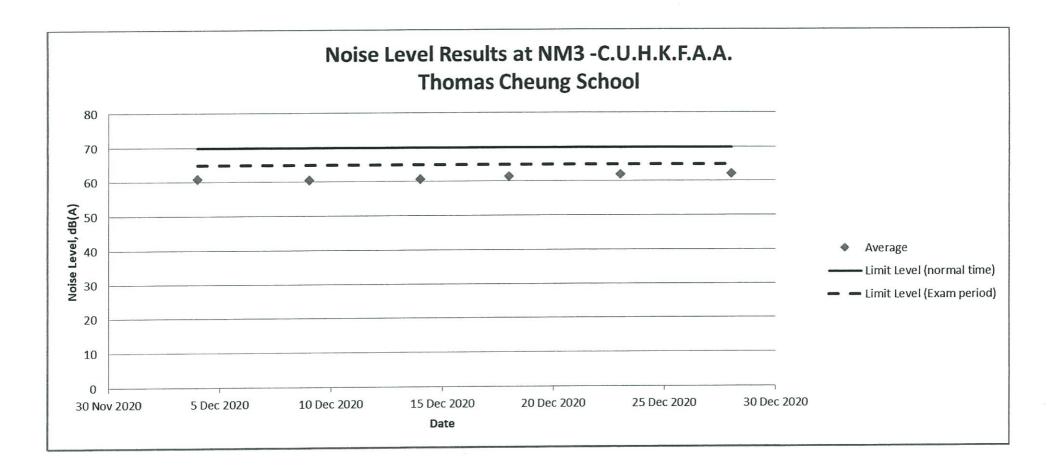












Appendix O Location Plan of Water Quality Monitoring Station



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.
Date of Issue
Page No.

AJ110022 : 11 November 2020 : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited Unit C, 11/F, Ford Glory Plaza 37-39 Wing Hong Street Cheung Sha Wan, Kowloon, Hong Kong Attn: Mr. Nelson TSUI

PART B - DESCRIPTION

Name of Equipment	:	Multi Water Quality Checker U-53
Manufacturer	:	Horiba
Serial Number	:	UHB5F2BB
Date of Received	:	Nov 04, 2020
Date of Calibration	:	Nov 11, 2020
Date of Next Calibration(a)	:	Feb 10, 2021

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Reference Method
APHA 21e 4500-H ⁺ B
APHA 21e 4500-O G
APHA 21e 2520 B
APHA 21e 2130 B
Section 6 of international Accreditation New Zealand Technical
Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.
APHA 22e 2580 B

PART D - CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.10	0.10	Satisfactory
7.42	7.46	0.04	Satisfactory
10.01	10.02	0.01	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer	Displayed Reading (°C)	Tolerance (°C)	Results
12	12.38	0.38	Satisfactory
25	25.01	0.01	Satisfactory
35	35.75	0.75	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

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 (b)

(c)

(d)

The results relate only to 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 (c) international standards.

LEE Chun-ning, Desmond

Senior Chemist



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.	:	AJ110022
Date of Issue	:	11 November 2020
Page No.	:	2 of 2

PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.07	0.00	-0.07	Satisfactory
4.60	4.27	-0.33	Satisfactory
6.32	6.11	-0.21	Satisfactory
7.98	8.00	0.02	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.88	-1.20	Satisfactory
20	19.60	-2.00	Satisfactory
30	28.55	-4.83	Satisfactory

olerance limit of salinity should

(5) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.46		Satisfactory
10	10.01	0.1	Satisfactory
20	20.11	0.5	Satisfactory
100	96.80	-3.2	Satisfactory
800	797.00	-0.4	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

(6) Oxidation-Reduction Potential

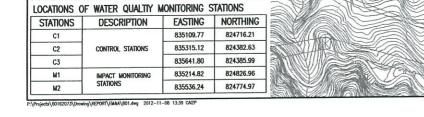
Expected Reading (mV)	Displayed Reading (mV)	Tolerance (mV) ^(g)	Results
222	225	3	Satisfactory
Tolerance limit of Oxidation-Reduc	ction Potential should be less than ±	10 (mV)	

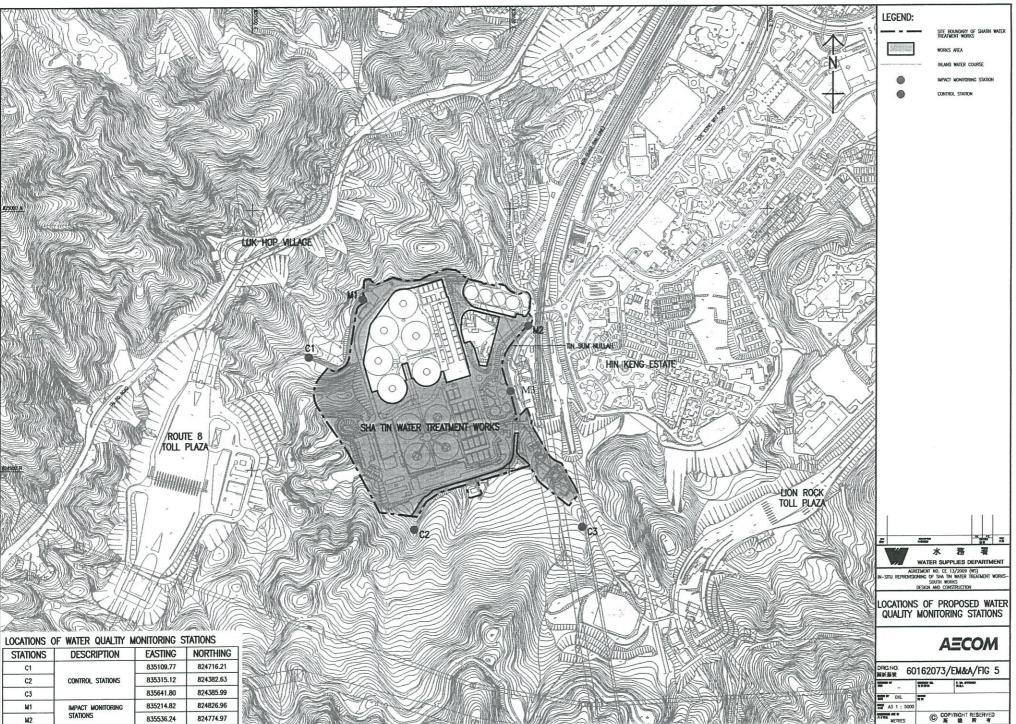
~ END OF REPORT ~

<u>Remark(s): -</u>

"Displayed Reading" presents the figures 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 (g) relevant international standards.

Appendix P Calibration Certificate (Water Quality)





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). 此項 ISO/IEC 17025:2005 的認可資格證明此實驗所具備指定範疇內所須的技術能力並 資施一套實驗所貸量管理箇系(見國際認可論壇、國際實驗所認可合作超微及醫襟導化超識的聯合公報)。

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福在此畫上香港認可處的印章

Chor

WONG Wang-wen, Executive Administrator 執行幹事 黃宏華 Issue Date: 16 July 2014 發發日期: 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 本語書授照香港認可處訂立的集款及條件發出



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

L 001195

Appendix R

Impact Water Quality Monitoring Results

Test Report

Page 1 of 2

Report Number	: Q200003aR210031
Job Number	: R210031
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-788
Sample Description	: pH Value, TSS and COD tests
Laboratory ID	: R210031/1
Date of Sampling	: 16/12/2020
Date Received	: 16/12/2020
Test Period	: 16/12/2020 – 17/12/2020
Test Required	: 1. pH Value;
	2. Total Suspended Solids (TSS);
	3. Chemical Oxygen Demand (COD)
Method Used	: 1. QPL-15d, APHA 22ed 4500-H ⁺ B
	2. QPL-15e, APHA 22ed 2540 D
	3. QPL-15f, APHA 22ed 5220 B
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 Division

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

Page 2 of 2

Report Number	: Q200003aR210031

: R210031 Job Number

Issue Date : 05/01/2021

Test Result:

Lab ID	Date of Sampling	Client Sample ID	pH Value at (measured temperature °C)	Total Suspended Solids (TSS), mg/L	Chemical Oxygen Demand (COD), mg O ₂ /L
R210031/1	16/12/2020	Hing Keng, Wall C	7.9(23)	<2.5	<50

Note:

1. mg/L indicates milligram per liter 2. mg O₂/ L indicates milligram oxygen per liter 3. < indicates less than.

4. > indicates more than. 5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

Page 1 of 2

Report Number	: Q200003aR210019
Job Number	: R210019
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-776
Sample Description	: SS test
Laboratory ID	: R210019/1-5
Date of Sampling	: 02/12/2020
Date Received	: 02/12/2020
Test Period	: 02/12/2020 – 03/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210019	

Job Number	: R210019
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Issue Date : 05/01/2021

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210019/1	02/12/2020	C1	2.9
R210019/2	02/12/2020	C2	3.4
R210019/3	02/12/2020	M1	2.4
R210019/4	02/12/2020	M2	4.8
R210019/5	02/12/2020	М3	<1

Note:

1. mg/L indicates milligram per liter 2. mg O₂/L indicates milligram oxygen per liter 3. < indicates less than.

4. > indicates more than.

5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210020
Job Number Issue Date	: R210020 : 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-777
Sample Description	: SS test
Laboratory ID	: R210020/1-5
Date of Sampling	: 04/12/2020
Date Received	: 04/12/2020
Test Period	: 04/12/2020 – 05/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210020
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210020

: 05/01/2021 **Issue Date**

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210020/1	04/12/2020	C1	3.0
R210020/2	04/12/2020	C2	3.3
R210020/3	04/12/2020	M1	2.5
R210020/4	04/12/2020	M2	4.9
R210020/5	04/12/2020	М3	<1

Note:

1. mg/L indicates milligram per liter 2. mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210021
Job Number	: R210021
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-778
Sample Description	: SS test
Laboratory ID	: R210021/1-5
Date of Sampling	: 07/12/2020
Date Received	: 07/12/2020
Test Period	: 07/12/2020 – 08/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number : Q20	0003aR210021
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Job Number : R2	10021
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: 05/01/2021 **Issue Date**

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210021/1	07/12/2020	C1	2.9
R210021/2	07/12/2020	C2	3.3
R210021/3	07/12/2020	M1	2.4
R210021/4	07/12/2020	M2	4.9
R210021/5	07/12/2020	М3	<1

Note: 1. mg/L indicates milligram per liter

2. mg O2/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.

5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

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Report Number	: Q200003aR210022
Job Number	: R210022
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-779
Sample Description	: SS test
Laboratory ID	: R210022/1-5
Date of Sampling	: 09/12/2020
Date Received	: 09/12/2020
Test Period	: 09/12/2020 – 10/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

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Test Report

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Job Number : R210022

Issue Date : 05/01/2021

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210022/1	09/12/2020	C1	3.2
R210022/2	09/12/2020	C2	3.7
R210022/3	09/12/2020	M1	2.8
R210022/4	09/12/2020	M2	5.0
R210022/5	09/12/2020	МЗ	<1

Note:

mg/L indicates milligram per liter
 mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.
 4. > indicates more than.
 5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210023
Job Number	: R210023
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-780
Sample Description	: SS test
Laboratory ID	: R210023/1-5
Date of Sampling	: 11/12/2020
Date Received	: 11/12/2020
Test Period	: 11/12/2020 – 12/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

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Test Report

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Report Number	: Q200003aR210023

Job Number : R210023

Issue Date : 05/01/2021

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210023/1	11/12/2020	C1	3.5
R210023/2	11/12/2020	C2	4.0
R210023/3	11/12/2020	M1	2.7
R210023/4	11/12/2020	M2	5.6
R210023/5	11/12/2020	М3	<1

Note:

1. mg/L indicates milligram per liter 2. mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.

5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

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Report Number	: Q200003aR210024
Job Number	: R210024
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-781
Sample Description	: SS test
Laboratory ID	: R210024/1-5
Date of Sampling	: 14/12/2020
Date Received	: 14/12/2020
Test Period	: 14/12/2020 – 15/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division

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Test Report

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: R210024 Job Number

Issue Date : 05/01/2021

Test Result:

·Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210024/1	14/12/2020	C1	3.0
R210024/2	14/12/2020	C2	3.5
R210024/3	14/12/2020	M1	2.5
R210024/4	14/12/2020	M2	4.8
R210024/5	14/12/2020	M3	<1

Note:

mg/L indicates milligram per liter
 mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.
 4. > indicates more than.
 5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210025
Job Number	: R210025
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-782
Sample Description	: SS test
Laboratory ID	: R210025/1-5
Date of Sampling	: 16/12/2020
Date Received	: 16/12/2020
Test Period	: 16/12/2020 – 17/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

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Test Report

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Report Number	: Q200003aR210025
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Job Number	: R210025
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: 05/01/2021 Issue Date

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210025/1	16/12/2020	C1	2.9
R210025/2	16/12/2020	C2	3.0
R210025/3	16/12/2020	M1	2.6
R210025/4	16/12/2020	M2	4.5
R210025/5	16/12/2020	М3	<1

Note:

1. mg/L indicates milligram per liter 2. mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.
 4. > indicates more than.
 5. NA indicates Not Applicable.

End of Report

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Test Report

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Report Number	: Q200003aR210026
Job Number	: R210026
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-783
Sample Description	: SS test
Laboratory ID	: R210026/1-5
Date of Sampling	: 18/12/2020
Date Received	: 18/12/2020
Test Period	: 18/12/2020 – 19/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

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Test Report

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Report Number	: Q200003aR210026
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: R210026 Job Number

Issue Date : 05/01/2021

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210026/1	18/12/2020	C1	3.4
R210026/2	18/12/2020	C2	3.8
R210026/3	18/12/2020	M1	2.8
R210026/4	18/12/2020	M2	5.4
R210026/5	18/12/2020	М3	<1

1. mg/L indicates milligram per liter Note:

2. mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.

5. NA indicates Not Applicable.

End of Report

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Test Report

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Report Number	: Q200003aR210027
Job Number	: R210027
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-784
Sample Description	: SS test
Laboratory ID	: R210027/1-5
Date of Sampling	: 21/12/2020
Date Received	: 21/12/2020
Test Period	: 21/12/2020 – 22/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D
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 Division**

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number : Q200003aR210027

Job Number : R210027

: 05/01/2021 **Issue** Date

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210027/1	21/12/2020	C1	3.1
R210027/2	21/12/2020	C2	3.5
R210027/3	21/12/2020	M1	2.6
R210027/4	21/12/2020	M2	4.9
R210027/5	21/12/2020	М3	<1

Note: 1. mg/L indicates milligram per liter

2. mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210028
Job Number	: R210028
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-785
Sample Description	: SS test
Laboratory ID	: R210028/1-5
Date of Sampling	: 23/12/2020
Date Received	: 23/12/2020
Test Period	: 23/12/2020 – 24/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210028		
Job Number	: R210028		

Issue Date : 05/01/2021

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210028/1	23/12/2020	C1	3.0
R210028/2	23/12/2020	C2	3.4
R210028/3	23/12/2020	M1	2.5
R210028/4	23/12/2020	M2	4.8
R210028/5	23/12/2020	М3	<1

Note: 1. mg/L indicates milligram per liter

2. mg O2/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.

5. NA indicates Not Applicable.

End of Report

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Test Report

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Report Number	: Q200003aR210029
Job Number Issue Date	: R210029 : 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-786
Sample Description	: SS test
Laboratory ID	: R210029/1-5
Date of Sampling	: 28/12/2020
Date Received	: 28/12/2020
Test Period	: 28/12/2020 – 29/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210029
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: R210029 Job Number

: 05/01/2021 **Issue Date**

Test Result:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210029/1	28/12/2020	C1	3.0
R210029/2	28/12/2020	C2	3.4
R210029/3	28/12/2020	M1	2.4
R210029/4	28/12/2020	M2	4.9
R210029/5	28/12/2020	М3	<1

1. mg/L indicates milligram per liter Note:

2. mg O₂/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.5. NA indicates Not Applicable.

End of Report

Hong Kong Accreditation Service (HKAS) has accredited Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241 - TEST) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. This report is issued subject to Acumen Laboratory and Testing Limited standard TERMS AND CONDITIONS, and shall not be reproduced except in full or with written approval by Acumen Laboratory and Testing Limited. The result(s) of this report are applied to the sample(s) submitted only.

Test Report

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Report Number	: Q200003aR210030
Job Number	: R210030
Issue Date	: 05/01/2021
Name of Applicant	: Acumen Environmental Engineering and Technologies Co., Ltd.
Address of Applicant	: No. 12, Tam Kon Shan Road, Tsing Yi (North), N.T.
Project Name	: CJO-3113-787
Sample Description	: SS test
Laboratory ID	: R210030/1-5
Date of Sampling	: 30/12/2020
Date Received	: 30/12/2020
Test Period	: 30/12/2020 – 31/12/2020
Test Required	: 1. Suspended Solids (SS)
Method Used	: 1. QPL-15e, APHA 22ed 2540 D

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 Division**

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Test Report

Page 2 of 2

Report Number	: Q200003aR210030
---------------	-------------------

: R210030 Job Number

Issue Date : 05/01/2021

Test Result:

Note:

Lab ID	Date of Sampling	Client Sample ID	Suspended Solids (SS), mg/L
R210030/1	30/12/2020	C1	3.1
R210030/2	30/12/2020	C2	3.2
R210030/3	30/12/2020	M1	2.6
R210030/4	30/12/2020	M2	4.8
R210030/5	30/12/2020	М3	<1

1. mg/L indicates milligram per liter

2. mg O2/ L indicates milligram oxygen per liter

3. < indicates less than.

4. > indicates more than.

5. NA indicates Not Applicable.

End of Report

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Date	Time	Weather	Location		dinates	Water Depth	Sample Depth		mp.		con.		turation %	1000	bidity TU		p		SS
				East	North	m	m		С		g/L					2.0	ur		mg/I
	13:33	Sunny	C1	835110	824716	0.04	0.02	25.3	25.3	8.76	8.75	88.7		2.3		2.3	7.32	7.31	2.9
		Sunny	C2	835403	824470	0.02	0.01	25.9	25.9	8.79	8.79	89.2	89.3	2.6		2.5	7.80	7.81	3.4
Dec 2020	N/A	N/A	C3	835642	824386		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.2		N/A	N/A
DCC 2020	13:22	Sunny	M1	835215	824827	0.8	0.4	25.1	25.1	9.06	9.06	98.5	98.4	2.3		2.2	7.64	7.63	2.4
	13:00	Sunny	M2	835536	824775	0.05	0.025	25.2	25.2	9.16	9.16	96.9		1.8		0.8	7.86	7.84	4.8
	13:15	Sunny	M3	835501	824648	0.02	0.01	25.1	25.1	9.42	9.41	101.6	101.5	0.5		0.6	7.68	7.67	<1
A States																			
	13:25	Sunny	C1	835110	824716	0.04	0.02	22.5	22.5	8.38	8.38	94.7	94.6			2.4	7.73	7.74	3.0
4 Dec 2020		Sunny	C2	835403	824470	0.02	0.01	22.7	22.8	8.81	8.80	91.6	91.7	2.5	i	2.6	7.76	7.76	3.3
		N/A	C3	835642		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A
		Sunny	M1	835215	824827	0.8	0.4	22.3	22.2	9.22	9.22	99.6	99.6	2.1		2.0	7.66	7.66	2.5
		Sunny	M2	835536	824775	0.05	0.025	22.4	22.5	9.34	9.33	97.8	97.7	1.8	3	1.9	7.82	7.81	4.9
		Sunny	M3	835501	824648	0.02	0.01	22.3	22.3	9.64	9.65	100.8	100.9	0.7	1	0.6	7.51	7.49	<1
and the second	1.5.08		1015	000001	501010	0.01		Calles .	A State										
	0.50	Cloudy	Cl	835110	824716	0.04	0.02	21.9	21.9	8.86	8.86	94.9	94.9	2.3		2.2	7.56	7.56	2.9
			C2	835403	824470	0.04	0.02	21.4	21.4	8.58	8.58	96.0				2.6	7.82	7.84	3.3
		Cloudy	C2 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	N/A
Dec 2020		N/A	M1	835215	824827	0.8	0.4	21.4	21.4	9.31	9.31	98.7				2.2	7.67	7.66	2.4
		Cloudy		835536	824827	0.05	0.025		21.4	9.02	9.01	99.6		1.6		1.7	7.81	7.81	4.9
		Cloudy	M2	835501	824773	0.03	0.025	21.0	21.3	9.30	9.30	98.2				0.6	7.51	7.49	<1
	9:32	Cloudy	M3	855501	024040	0.02	0.01	21.2	21.4	7.50	7.50	1011		Merchand State	North Car				
	10.40		CI	025110	824716	0.04	0.02	21.4	21.3	8.74	8.74	94.1	94.2	2.4		2.5	7.23	7.25	3.2
		Sunny	C1 C2	835110 835403	824710	0.04	0.02	21.4	21.5	8.92	8.91	91.6		2.5		2.5	7.64	7.64	3.7
		Sunny	0.0	000 .000			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			N/A	N/A
Dec 2020		N/A	C3	835642	824386	N/A 0.8	0.4		21.8	9.20	9.20	98.8		1.9	1.011	1.9	7.67	7.68	2.8
		Sunny	M1	835215	824827			21.0	21.8	9.20	9.07	99.8		1.5		1.4	7.83	7.83	5.0
		Sunny	M2	835536	824775	0.05	0.025	21.4	21.5	9.07	9.46	99.4		0.7		0.6	7.52	7.53	<1
	10:29	Sunny	M3	835501	824648	0.02	0.01	21.4	21.4	9.47	9.40	99.4	77.4	0.7	and the second	0.0	1.52	1.55	
								21.2	21.0	0.47	0.47	95.1	95.1	2.7		2.7	7.78	7.78	3.5
		Sunny	C1	835110	824716	0.04	0.02		21.3	8.47 8.78	8.47 8.78	95.1		2.7		2.7	7.79	7.80	4.0
		Sunny	C2	835403	824470	0.02	0.01	21.7	21.7			91.3 N/A	91.5 N/A	N/A	N/A	2.1		N/A	4.0 N/A
Dec 2020		N/A	C3	835642	824386		N/A	N/A	N/A	N/A	N/A			1N/A 2.0		1.9	7.66	7.67	2.7
Dec 2020		Sunny	M1	835215	824827	0.8	0.4		21.0		9.11	98.7				1.9	7.61	7.59	5.6
		Sunny	M2	835536	824775	0.05	0.025	21.7	21.7	9.09	9.08	98.1	98.0	1.8		0.4	7.68	7.66	<1
	9:20	Sunny	M3	835501	824648	0.02	0.01	21.7	21.7	9.47	9.46	101.1	101.2	0.3	State of the local division of the local div	0.4	7.08	7.00	<1
		TES MANUEL		A State of the					Carlo and		0.55	0.1.1	0.1.1		and the second	2.6	7.00	7.25	3.0
	10:36	Cloudy	C1	835110	824716	0.04	0.02	20.1	20.1	8.54	8.55	94.4	94.4	2.4		2.5	7.26	7.25	3.0
	10:49	Cloudy	C2	835403	824470	0.02	0.01	20.0	20.0	8.86	8.86	90.0	89.9	2.6		2.5	7.79	7.78	
(D., 2020	N/A	N/A	C3	835642	824386				N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0		N/A 7.80	N/A
Dec 2020	10:21	Cloudy	M1	835215	824827	0.8	0.4	20.4	20.4	9.13	9.12	96.2	96.3	2.2		2.3	7.80	7.80	2.5
	10:00	Cloudy	M2	835536	824775	0.05	0.025	20.4	20.1	9.39	9.39	100.3	100.3	1.9		1.9	7.68	7.69	4.8
		Cloudy	M3	835501	824648	0.02	0.01	20.0	20.0	9.63	9.64	100.5	100.4	0.6		0.6	7.57	7.59	<1

	14.11	Sunny	C1	835110	824716	0.04	0.02	21.4	21.4	8.83	8.83	89.4	89.4	2.7	2.6	7.33	7.32	2.9
	14:25		C2	835403	824470	0.02	0.01	21.4	21.4	8.61	8.61	89.4	89.5	2.6	2.6	7.44	7.42	3.0
16 Dec 2020	N/A	N/A	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	N/A	N/A
		Sunny	M1	835215	824827	0.8	0.4	21.8	21.8	9.12	9.13	98.2	98.3	2.2	2.2	7.65	7.63	2.6
		Sunny	M2	835536	824775	0.05	0.025	21.6	21.6	9.10	9.11	96.0	96.1	1.6	1.7		7.86	4.5
		Sunny	M3	835501	824648	0.02	0.01	21.4	21.5	9.47	9.46	98.7	98.5	0.6	0.7	7.74	7.75	<1
			TALE AND													Rends Their		
	11:59	Cloudy	C1	835110	824716	0.04	0.02	23.6	23.6	8.69	8.69	94.0	94.0	2.7	2.7			3.4
	12:16	Cloudy	C2	835403	824470	0.02	0.01	23.8	23.8	8.57	8.57	92.6	92.6	2.7	2.7		7.53	3.8
10.0	N/A	N/A	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
18 Dec 2020	11:42	Cloudy	M1	835215	824827	0.8	0.4		2.7	9.13	9.13	96.8	96.9	2.3	2.2		7.77	2.8
	11:21	Cloudy	M2	835536	824775	0.05	0.025		22.5	9.39	9.39	96.5	96.6	2.0	2.0			5.4
	11:33	Cloudy	M3	835501	824648	0.02	0.01	22.2	22.1	9.30	9.31	101.5	101.4	0.4	0.4	7.53	7.52	<1
							The Lat			State State	- Dialoga							
	12:59	Cloudy	C1	835110	824716	0.04	0.02		23.5	8.42	8.42	94.2	94.2	2.4	2.4			3.1
	13:12	Cloudy	C2	835403	824470	0.02	0.01		24.0		8.47	93.7	93.7	2.6			7.43	3.5
21 Dec 2020	N/A	N/A	C3	835642	824386		N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A
21 Dec 2020	12:43	Cloudy	M1	835215	824827	0.8	0.4		24.0	9.33	9.34	97.9	97.8	2.3	2.0		7.71	2.6
	12:19	Cloudy	M2	835536	824775	0.05	0.025		23.6	9.17	9.17	97.9	98.0	2.0	2.0		7.87	4.9
	12:31	Cloudy	M3	835501	824648	0.02	0.01	23.5	23.5	9.61	9.61	101.3	101.4	0.7	0.8	7.56	7.56	<1
and the state of the								Statute La			0.45	00.0	00.0	2.4	2.6	7.01	7.01	2.0
		Sunny	Cl	835110	824716	0.04	0.02		23.1	8.64	8.65	90.8	90.9 89.6		2.5		7.21	3.0
	16:42	Sunny	C2	835403	824470	0.02	0.01		22.7	8.56	8.56	89.6 N/A	89.6 N/A	2.0 N/A	2.3 N/A		N/A	5.4 N/A
23 Dec 2020	N/A	N/A	C3	835642			N/A		N/A	N/A	N/A		IN/A 98.5	IN/A 2.3	N/A 2.2		7.65	2.5
25 Dec 2020	16:25	Sunny	M1	835215	824827	0.8	0.4		23.0	9.03	9.02	98.4			1.8		7.62	4.8
		Sunny	M2	835536	824775	0.05	0.025		22.9	9.11	9.10	96.6	96.5	1.8	0.8		7.65	<1
	16:15	Sunny	M3	835501	824648	0.02	0.01	22.9	23.0	9.32	9.32	99.7	99.6	0.8	0.8	7.04	7.03	
	E BUSA					0.5	0.00	02.5	02.5	0.75	8.75	89,3	89.5	2.5	2.6	7.26	7.26	3.0
		Sunny	C1	835110	824716	0.04	0.02		23.5	8.75	8.75	92.4	92.3	2.5	2.0		7.73	3.4
	1225.775	Sunny	C2	835403	824470	0.02	0.01			8.81 N/A	8.81 N/A		92.3 N/A	2.0 N/A	N/A		N/A	N/A
28 Dec 2020	N/A	N/A	<u>C3</u>	835642	824386		N/A		N/A 23.7	N/A 9.24	9.24	N/A 97.9	N/A 97.9	1N/A 2.1	IN/A 2.0		7.71	2.4
20 200 2020		Sunny	Ml	835215	824827	0.8	0.4		23.7	9.24	9.24	97.9	97.9	1.8	1.8		7.81	4.9
		Sunny	M2	835536	824775	0.05	0.025		23.8	9.13	9.12	97.8	99.5	0.8	0.8		7.57	<1
	13:26	Sunny	M3	835501	824648	0.02	0.01	23.9	23.9	9.48	9.48	99.3	99.3	0.8	0.0	1.59	1	
Collins on State	BIERR		C1	025110	024716	0.04	0.02	22.9	22.9	8.36	8.37	92.1	92.1	2.6	2.5	7.52	7.53	3.1
		Cloudy	C1	835110 835403	824716 824470	0.04	0.02		22.9	8.33	8.34	92.4	92.4	2.4	2.5		7.71	3.2
		Cloudy	C2				0.01 N/A			N/A	N/A		N/A	N/A	N/A		N/A	N/A
30 Dec 2020	N/A	N/A	C3	835642	824386	N/A 0.8	N/A 0.4		23.1	9.38	9.38	98.2	98.1	2.1	2.2		7.63	2.6
		Cloudy	MI	835215	824827		0.4		23.3	9.38	9.38	98.8	98.7	1.7	1.6		7.67	4.8
	14:18	Cloudy	M2	835536 835501	824775 824648	0.05	0.025		23.0	9.14	9.14	101.2	101.2	0.6	0.5		7.63	<1
		Cloudy	M3															

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.76

December 2020

IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS - SOUTH WORKS-Post-Transplantation Monitoring Report

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APPENDICES

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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*) trees, 5 colonies of Lamb of Tartary (*Cibotium barometz*) and 1 no. Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) was recommended to be transplanted in the approved detailed vegetation survey report.
- 1.4 Detailed vegetation report was planned that Incense Tree (Aquilaria sinensis) and Ailanthus (Ailanthus fordii) trees will 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) will be transplanted to the hillside slope at Sha Tin South Fresh Water Service Reservoir (STSFWSR).
- 1.2 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.
- 1.3 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.
- 1.3 This is Tree Report presents data collected on 30 December 2020. It contains the following information:
 - Introduction (Section 1)
 - Description Of Tree Monitoring Area (Section 2)
 - Monitoring Methodology (Section 3)
 - Result (Section 4)
 - Summary

- Photos (Appendix I)
- Summary table (Appendix II)
- Typhoon information (Appendix III)

2. DESCRIPTION OF TREE MONITORING SITE

- 2.1 Incense Tree (*Aquilaria sinensis*) and Ailanthus (*Ailanthus fordii*) trees was transplanted within existing Sha Tin Water Treatment Works (STWTW) where it is the extended compensatory plantation area. 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). Plough is required before planting on to this open corner of short grassland.
- 2.3 Other compensatory trees have been planted at STWTW and STSFWSR. Lamb of Tartary (*Cibotium barometz*) to be transplanted was temporally stored at a nursery garden at Shui Mei Tsuen, Kam Tin. Once the planting site at STSFWSR was ready; while the Lamb of Tartary (*Cibotium barometz*) are in acceptable (fair) condition, they will be planted at the planting site within one day.

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.
- 3.4 Health condition of all transplanted vegetation including trees/Shrubs surveyed was evaluated according to the following criteria:
 - Transplanted vegetation with good health are classified as **good**;
 - Transplanted vegetation with few or no visible defects or health problems are classified as being **fair**;
 - Transplanted vegetation was badly damaged or clearly suffering from decay die back or the effects of very heavy vine growth are classified as **poor**.
- 3.5 Survival rate for each of transplanted vegetation species will be calculated based on site observation.

4. **RESULT**

- 4.1 Monitoring inspections were conducted on 30 November 2020. Three trees TA572, TA326 and TA327 were transplanted to tree compensation area within the Sha Tin Water Treatment Works (STWTW) in 20 June 2016.
- 4.2 The condition of TA572 was observed in poor condition due to the damage of two main trunks. TA327 was also 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.
- 4.3 All transplanted Lamb of Tartary (*Cibotium barometz*) have been severely damaged by Typhon Wipha on 30-31 July 2019. During last monitoring, all are dehydrated without foliage in poor condition; however, 27 nos. new individuals are propagated from previously collected spores during current monitoring. A new shelter has been set up for these new individuals. They are generally in fair condition. Next few monitoring will be critical to assess their survival and suitability for transplanting back to the project site according to works progress.
- 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 is not a favourable microhabitat for *Cibotium barometz* to be transplanted back. Two best (but still sub-optimal) 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 In general, all 27 Lamb of Tartary (*Cibotium barometz*) stored at the nursery are in fair condition. Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) was observed dead during inspection on 20 August 2016. The survival rate for Lamb of Tartary (*Cibotium barometz*) and Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) was 96%. The Summary table for health condition and survival rate was shown in Appendix II.

5. MITIGATION MEASURE

5.1 Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) was observed dead during inspection on 20 August 2016. In order to compensate for the loss of transplanted Hong Kong Eagle's Claw which is in climber growing form, it is recommended to plant an individual of native climber species at compensatory planting site (STSFWSR) together with compensatory tree planting. Recommended list of species are given in the Table 1 below. It is suggested that about 1 species of climber to 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.

Native Tree Species	3		
Common Name	Latin 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-floweredHoneysuckle	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

Table 1. Table for Recommended climber species list to be planted

- 5.2 Despite all 27 transplanted Lamb of Tartary (*Cibotium barometz*) are generally in fair condition, yellowish foliage was observed in those individuals that were placed at the edge of the shelter receiving excessive direct sunlight. It is recommended to retain them at the nursery garden under proper maintenance. A larger shelter (such as 遮光網) shall be provided to reduce the amount of sunlight received and avoid direct hit of rainstorm/ typhoon. Irrigation spray head has been installed to facilitate watering frequency whenever necessary. Once their condition has recovered to acceptable level, they can be moved to the recipient site at STSFWSR when the site is ready.
- 5.3 In order to enhance a sustainable survival of 27 nos. *Cibotium barometz* during the post-transplantation stage, the recipient site at STSFWSR shall install a shelter (such as 遮光網) to reduce intensity of direct sunlight received and avoid direct hit of rainstorm/ typhoon. 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.
- 5.4 Robust fencing (protection zone) shall be set up to enclose the 27 nos. transplanted *Cibotium barometz* (in two groups: one at the corner with shading canopy from trees on a man-made feature nearby; another at understory zone of an existing tree) to avoid unnecessary disturbance/ damage to them.

- 5.5 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.
- 5.6 The 27 nos. transplanted *Cibotium barometz* shall be maintained with measures mentioned in Section 5.3-5.5 above for 12 months for establishment. A 12-month post-transplantation monitoring period helps to assess their survival during the establishment period.
- 5.7 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 open grassland under direct sunlight, shall be sourced for compensatory planting.
- 5.8 The designated recipient site for transplanting 27 nos. *Cibotium barometz* at STSFWSR was under excessive exposure of direct sunlight, strong winds, far from riparian zone/ moist valley and low in soil moisture. This is not a favourable microhabitat for *Cibotium barometz*. Two best (but still sub-optimal) 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.
- 5.9 After transplantation, root ball of TA572 and TA327 tree should be kept moisture especially during non-raining day.
- 5.10 Incense Tree (*Aquilaria sinensis*) tagged as TA326 was observed dead during inspection on 10 August 2017. Its DBH was measured as 346cm. In according to the Tree Preservation, Development Bureau Technical Circular (Works) No. 7/2015, the compensatory planting will try to achieve the compensatory planting ratio of 1:1 in terms of aggregated DBH.
- 5.11 In total, 3 individual of native tree species with heavy standard size will be planted with 2.5-3 meters (center to center) spacing at compensatory planting site. Recommended list of species are given in the Table 2 below. It is suggested that at least 1 tree species to 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.

Native Tree Species			
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

Table 2. Table for Recommended tree species list to be planted

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

IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS - SOUTH WORKS-Post-Transplantation Monitoring Report

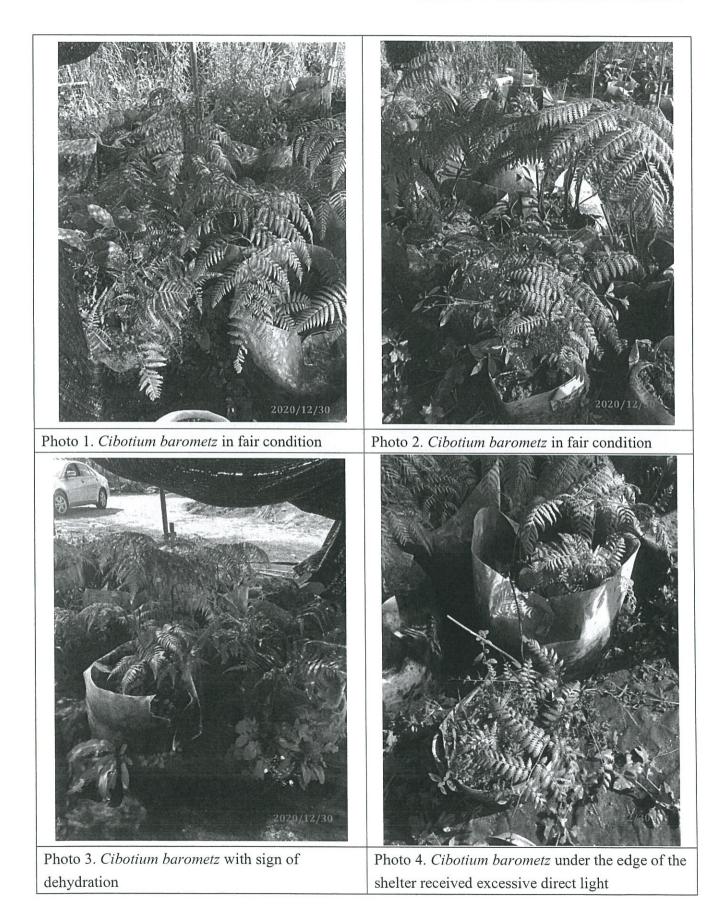
6. SUMMARY

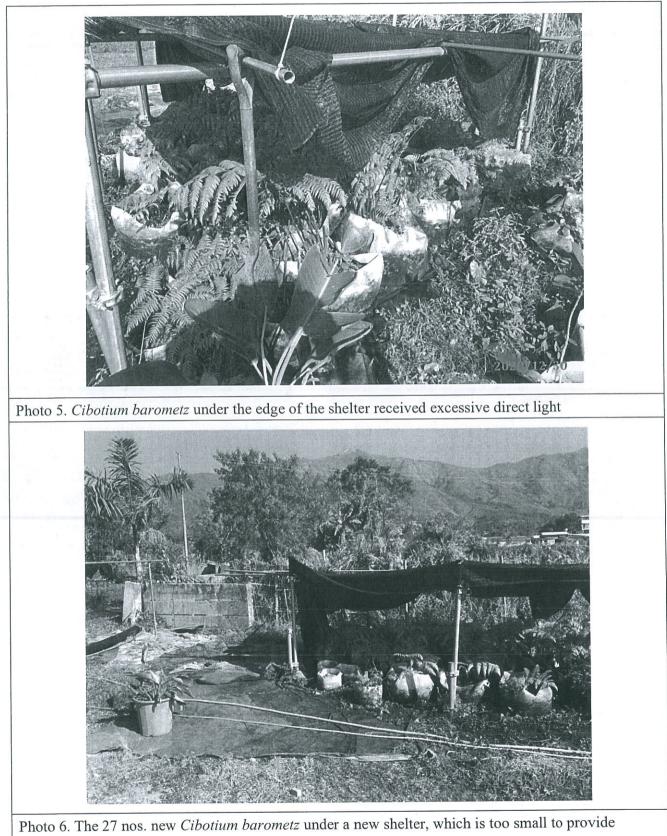
- 6.1 The condition of TA572 was observed in poor condition due to broken of main trunk. TA327 was also in poor condition; while already dead TA326 collapsed under Signal No. 10 typhoon Mangkhut in September 2018. Tree guying cables have been installed to provide external support to the two remaining transplanted trees.
- 6.2 All Lamb of Tartary (*Cibotium barometz*) previously stored at the nursery have been severely damaged by Typhon Wipha on 30-31 July 2019. During last monitoring, all are dehydrated without foliage in poor condition; however, 27 nos. new individuals are propagated from previously collected spores during current monitoring. A new shelter has been set up for these new individuals. They are generally in fair condition. Next few monitoring will be critical to assess their survival and suitability for transplanting back to the project site according to works progress.
- 6.3 Currently, Lamb of Tartary was temporally stored in a nursery garden at Shui Mei Tsuen, Kam Tin. The shelter (遮光網) for reducing the intensity of sunlight and avoid direct hit of rainstorm/ typhoon was a bit too small, as reflected by yellowish foliage under the edge of the shelter. It is recommended to retain them at the nursery garden under proper maintenance during current recovery stage. In case their condition is not in an acceptable level, new, healthy individuals of *Cibotium barometz* (or other possible candidate such as *Brainea insignis*) shall be replaced for compensatory planting at the STSFWSR recipient site.
- 6.4 Shelter, regular irrigation, protection zone and weeding by hand held tools within protection zone, shall also be provided to the 27 nos. *Cibotium barometz* after being transplanted to the STSFWSR recipient site in order to sustain their survival during the post-transplantation stage.
- 6.5 The 27 nos. transplanted *Cibotium barometz* shall be maintained for 12 months for their establishment at the STSFWSR recipient site, followed with a 12-month post-transplantation monitoring to assess their survival.
- 6.6 Hong Kong Eagle's Claw (*Artabotrys hongkongensis*) was observed dead during inspection on 20 August 2016. In order to compensate for the loss of transplanted Hong Kong Eagle's Claw and Incense Tree TA326, it is recommended to plant an individual of native climber species and 3 heavy standard native tree species at compensatory planting site. The suggested species in planting

list would have certain ecological value in terms of plant ecology and the associated wildlife including birds.

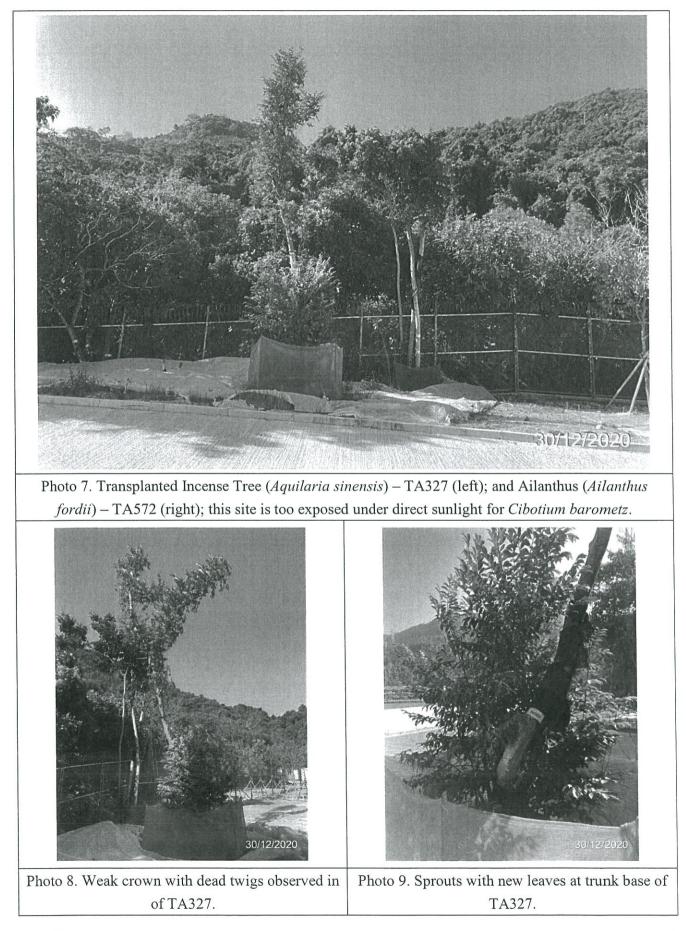
6.7 After transplantation, root ball of TA572 and TA327 tree should be kept moisture especially during dry and non-raining day.

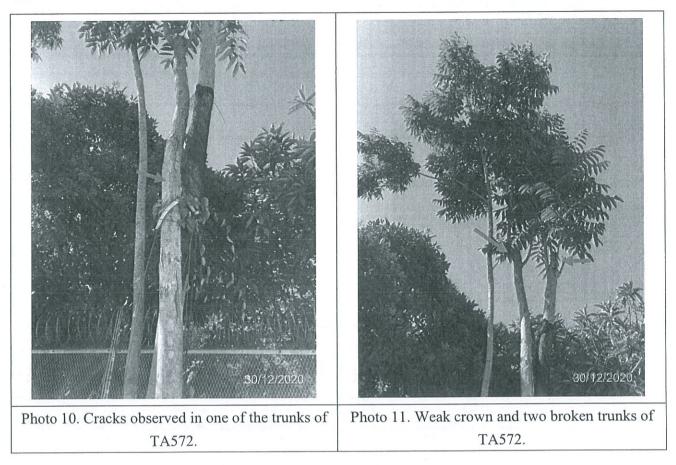
APPENDIX I Photo





shading for individuals under the edge.





APPENDIX II 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	
6	Cibotium barometz	Fair	Alive	
7	Cibotium barometz	Fair	Alive	
8	Cibotium barometz	Fair	Alive	D 1 1 1
9	Cibotium barometz	Fair	Alive	Previous batch were
10	Cibotium barometz	Fair	Alive	severely damaged by
11	Cibotium barometz	Fair	Alive	Typhon Wipha on 30-31
12	Cibotium barometz	Fair	Alive	July 2019 and failed to recover until last
13	Cibotium barometz	Fair	Alive	
14	Cibotium barometz	Fair	Alive	monitoring
15	Cibotium barometz	Fair	Alive	27 new individuals are
16	Cibotium barometz	Fair	Alive	propagated from
17	Cibotium barometz	Fair	Alive	previously collected
18	Cibotium barometz	Fair	Alive	spores as a replacement.
19	Cibotium barometz	Fair	Alive	
20	Cibotium barometz	Fair	Alive	
21	Cibotium barometz	Fair	Alive	
22	Cibotium barometz	Fair	Alive	
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 new shelter (such as	遮光網) is too smal	l to provide shadin	g and against direct hit of
	rainstorm/ ty	phoon on the plants,	especially those un	nder the edge.
28	Artabotrys hongkongensis		Dead	
		Survival rate (%)	96%	

Shrubs of Lamb of Tartary and Hong Kong Eagle's Claw

No.	Species	Condition	Alive/Dead	Remark
TA572	Ailanthus fordii	Poor	Alive	Two main trunks were
				broken during typhoon
				on 23 August 2017.
				Cracks and wounds
				observed in one of the
				trunks. Weak canopy
				formed only by sprouts.
TA327	Aquilaria sinensis	Poor	Alive	Tree crown of TA327
				was thinner after
				transplantation. Water
				sprouts, cracks on tree
				bark and would at trunk
				base observed.
TA326	Aquilaria sinensis	Dead	Dead	Collapsed due to the
				Signal No.10 typhoon
				Mangkhut in September
				2018.
		Survival rate (%)	67%	

Trees of Ailanthus and Incense Tree

Appendix T

Monthly Summary of Waste Flow Table

Water Supplies Department

Monthly Summary Waste Flow Table

for Contract with Environmental Management Plan under ETWB TCW No. 19/2005 and its Interim Guidance Note

Reporting Year: 2020

Contract No. 3/WSD/15

(To be submitted to C&D MM Coordinator of Respective Division/Region via Engineer's Representative before 15th of the following month)

	Act	ual Quantities of Inc	ert C&D Materials	Generated / Import	ed (in '000 m ³)		Ad	ctual Quantities of (Other C&D Materia	uls / Wastes Genera	ted
Month	Total Quantities Generated	Broken Concrete (including rock for recycling into aggregates)	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported C&D Material	Metal	Paper/ Cardboard Packaging	Plastic (bottles/containers, plastic sheets/ foams from package material)	Chemical Waste	Others (e.g. General Refuse etc.)
	[a+b+c+d)	(a)	(b)	(c)	(d)		(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
January	0.457	0.178	0.000	0.000	0.279	0.277	3.340	0.000	0.000	0.000	0.115
February	0.219	0.131	0.000	0.000	0.088	0.213	0.000	0.000	0.000	0.000	0.048
March	0.448	0.160	0.000	0.000	0.288	0.876	0.000	0.000	0.000	0.000	0.112
April	0.149	0.086	0.000	0.000	0.063	0.465	0.000	0.000	0.000	0.000	0.085
May	0.216	0.095	0.000	0.000	0.121	0.161	0.039	0.000	5.675	0.000	0.096
June	0.143	0.010	0.000	0.000	0.133	0.000	0.000	0.000	0.000	0.000	0.052
Half-year total	1.632	0.661	0.000	0.000	0.972	1.991	3.379	0.000	5.675	0.000	0.508
July	0.223	0.201	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.036
August	0.136	0.012	0.000	0.000	0.125	0.036	21.280	0.000	0.000	0.000	0.066
September	0.135	0.015	0.000	0.000	0.120	0.046	0.000	0.000	0.000	0.000	0.027
October	0.000	0.000	0.000	0.000	0.000	0.000	115.290	0.000	0.000	0.000	0.018
November	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.300	0.075
December	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039
Yearly Total	2.127	0.888	0.000	0.000	1.239	2.073	139.949	0.000	5.675	0.300	0.770

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	Relevant Legislation and Guidelines	Implementation Phase			Status
LIA NEI.	Recommended withgation wedgates	Measures	Agent		D	С	ο	Status
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			\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			\checkmark		Y
Noise				r		,		
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				1				
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			TM-DSS		
	stormwater to such silt removal facilities. Perimeter channels at site 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 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		V	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		\checkmark	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		V	
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		\checkmark	2
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		\checkmark	,
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		\checkmark	١
6.8.17	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance.	All works areas	Contractor		\checkmark	Y
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		\checkmark	Y
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		\checkmark	Y
6.10	Water quality monitoring	Monitoring points	Contractor		\checkmark	Y

7.6.1	Appropriate waste handling, transportation and disposal methods for all	All works areas	Contractor	Waste Disposal		
/.0.1	waste arisings generated during the construction works for the Project			Ordinance	\checkmark	Y
	should be implemented to ensure that construction wastes do not enter				N	I
	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,	√	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 C&D material and to facilitate the sorting process.	All works areas	Contractor	(Miscellaneous Provisions) Ordinance	~	Y
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	\checkmark	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		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		~	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		1	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		V	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		V	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		\checkmark	Y
8.8.9-8.8.11	Implement woodland compensation		The Engineer/ Contractor		\checkmark	N/A

Landscape and		AN () () () () () () () () () (1			
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		T				
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 Contamir	hation					
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		\checkmark	Y

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

12.15.4,	GPS fleet management system with driver training to help enforce truck	Chlorine delivery trucks,	WSD / Chlorine Supply	EIAO-TM		
12.18.1,	speeds	fleet	Contractor			k.i.v.
12.22.9		management	contractor		,	
		centre				
	Improved clamps with independent checks to prevent load shedding	Chlorine	-		\checkmark	F
	Installation of fire screen and larger fire extinguishers to prevent engine and wheel fires from spreading to the cargo area	delivery trucks			\checkmark	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.				\checkmark	F
	Limit fuel tanks capacity at the beginning of the Project (Item 2.3 of Table 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			\checkmark	k.i.v.
	Implement a sturdy steel frame to minimize the potential for chlorine release due to truck rollover				√	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.

		Training should be provided for the use of the GPS fleet management and improved safe driving.	\checkmark	k.i.v.
		Ensured that independent checks are performed to ensure proper chlorine drum latching and clamping.	\checkmark	F
		Chlorine truck 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.	\checkmark	k.i.v.
	-	Training should be provided to driver and driver attendant for the emergency use of the new 2 × 9L AFFF extinguishers.	\checkmark	F
		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	k.i.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	F
	-	To keep under review alternate chlorine receiving dock in Sha Tin/Tai Po area for chlorine delivery to STWTW.	\checkmark	k.i.v.
Ì	Legend			
	D – Design Phas	e		
	C – Construction	n Phase		
	O – Operation P	hase		
	Y - Compliance	of Mitigation Measures		
	N/A – Not Appli	cable in Reporting Period		
	k.i.v – Keep In V	iew		
	F - Completed			

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

				Ai	r Quality	1			
Location	A	ction Leve	el		I	Total			
AM1		0				0			0
AM2		0				0			0
					Noise				
Location	A	ction Leve	el		I	limit Leve	el		Total
NM1		0				0			0
NM2		0				0			0
NM3	0				0			0	
				Wat	ter Qualit	у			
T	Action Level					Limit	Level		Tetal
Location	DO	Turbidity	SS	pH	DO	Turbidity	SS	pН	Total
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

Statistical Summary of Environmental Complaints

Reporting	Environmental Complaint Statistics						
Period	Frequency	Complaint Nature	Cumulative				
1 December -							
31 December	0	N/A	4				
2020							

Statistical Summary of Environmental Summons

Reporting	Environmental Summons Statistics					
Period	Frequency	Details	Cumulative			
1 December -						
31 December	0	N/A	0			
2020						

Statistical Summary of Environmental Prosecution

Reporting	Environmental Prosecution Statistics					
Period	Frequency	Details	Cumulative			
1 December -						
31 December	0	N/A	0			
2020						

Appendix W

Tentative schedule for environmental monitoring

Tentative	Impact	Monitoring	Schedule	for	STWTV	V
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			Dec-20			
n	Mon	Tue	Wed	Thur	Fri	Sat
		1	2 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	3	4 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	5
	7	8	9	10	11	12
	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 & NM3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	
3	14 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	15	16 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	17	18 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	19
0	21	22	23	24	25	26
	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 & NM3			
7	28	29	30	31		
	Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3		Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3			

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

Tentative Impact Monitoring Schedule for STWTW

Tentative Impact Monitoring Schedule for STWTW								
			Feb 21	TL	E-i	Sat		
Sun	Mon		Wed	Thur A	Fri 5	6		
	1 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	2	3 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	4	J Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3			
7	8 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3		10 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	11	12	13		
14	15	16 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	17	18 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	19	20 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3		
21	22 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	23	24 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3 Air monitoring for AM1 & AM2 Noise monitoring for NM1, NM2 & NM3	25	26 Impact Water Quality monitoring for C1, C2, C3, M1, M2 & M3	27		
28								

Tentative Impact Monitoring Schedule for STWTW

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

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