





土木工程拓展署 Civil Engineering and Development Department

# Service Contract No. WD/02/2021

# Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 – Site Formation and Engineering Infrastructure

# Monthly EM&A Report (August 2023)

# (Environmental Permit No. EP-528/2017)

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	Prepared by:	Certified by:		
Name	Angel Lee	F. C. Tsang		
Position	Environmental Team Consultant	Environmental Team Leader		
Signature	A	Toang Fandbearg		
Date	15 September 2023	15 September 2023		



Our ref.: LES/J2021-08/CS/L048 Date : 18 September 2023

By Post and Email

Civil Engineering and Development Department West Development Office 9/F, Sha Tin Government Office, 1 Sheung Wo Che Road, Sha Tin, New Territories

#### Attn: Ms. LIU Tze Kwan, Fiona, Chief Engineer/ West 2

Dear Ms. LIU,

#### Agreement No. WD/01/2021 Hung Shui Kiu / Ha Tsuen New Development Area Stage 1 Works – Independent Environmental Checker Verification of Monthly EM&A Report (August 2023)

Reference is made to the captioned report (Document No. ASCL / 210168223 / MRPT09 / 0 dated 15 September 2023) provided by the Environmental Team (ET) with the ET Leader's certification. We hereby verify the captioned for submission under Condition 3.4 of Environmental Permit No. EP-528/2017.

Deferred submission of the captioned report is noted and the ET and ET Leader are reminded to work closely with relevant parties of the captioned project to ensure timely submission of monthly EM&A report for fulfilling Condition 3.4 of Environmental Permit No. EP-528/2017 with exceedance investigation reports of the reporting month included.

Yours faithfully, For and On Behalf Of Lam Environmental Services Limited

Raymond Dai Independent Environmental Checker

c.c.: Acuity Sustainability Consulting Limited Mott MacDonald Hong Kong Limited (Site office) Mr. F.C. Tsang Mr. Tom Fan (By email) (By email)



## **Revision History**

Rev.	Description of Modification	Date
1.	First issue for comments	15/09/2023
2.	Response to IEC's comments	15/09/2023



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# **EXECUTIVE SUMMARY**

This is the 9<sup>th</sup> Monthly Environment Monitoring and Audit (EM&A) Report for Hung Shui Kiu/ Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure (the Project). This report was prepared by Acuity Sustainability Consulting Limited under Service Contract No. WD/02/2021 Environmental Team for Hung Shui Kiu / Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure (hereinafter called the "Service Contract"). This report documents the findings of EM&A works during the reporting period from 1 August to 31 August 2023.

The project construction commenced on 5 December 2022 and the construction phase EM&A programme started on 6 December 2022.

### Key Construction Works in the Reporting Period

A summary of construction activities undertaken during the reporting period is presented below:

- Construction of manhole;
- Pipe laying works;
- Connecting the existing drainage to box culvert; and
- Backfilling works near the box culvert

### Environmental Monitoring and Audit Programme

The monthly EM&A programme was undertaken by the ET in accordance with the Updated EM&A Manual. A summary of the monitoring and audit activities during the reporting period is presented below:

EM&A Activities	Date			
Water Quality Monitoring	2, 4, 8, 10, 12, 15, 17, 19, 21, 23, 25, 29, and 31 August 2023			
Weekly Environmental Site Inspection	3, 7, 16, 24 and 31 August 2023			

#### Table I Summary of EM&A activities in the Reporting Period

#### Breaches of Action and Limit Levels

A summary of the environmental exceedances of the reporting month is tabulated in Table II.



Table IISummary of Exceedance in the Reporting Period							
Environmental Monitoring	Parameter	No. of non- project related exceedances		Total No. of non-project related exceedances	No. of exceedances related to the the project		Total No. of exceedance related to the project
		AL	LL		AL	LL	Fridan
	pН	0	0	0	0	0	0
Water Quality	DO	0	0	0	0	0	0
	Turbidity	0	2	2	0	0	0
	SS	0	0	0	0	0	0

#### Water Quality

All water quality monitoring was conducted as scheduled in the reporting period. Two (2) limit level exceedances of turbidity were recorded during impact water quality monitoring in the reporting period. After investigation, the exceedances were considered as non-project related.

#### **Complaint Log**

No environmental complaint was received in the reporting period.

#### Notification of Summons and Successful Prosecutions

No notification of summons or successful prosecutions was received in the reporting period.

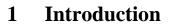
#### **Reporting Changes**

There was no reporting change in the reporting period.

#### **Future Key Issues**

The major site activities for the coming months are summarized below:

- Construction of manhole;
- Pipe laying works; and
- Construction of temporary public road.



### Project Background

The Hung Shui Kiu/ Ha Tsuen ("HSK/HT") NDA occupies an area of approximately 714 1.1. ha and is located in the north-western part of the New Territories, midway between Tuen Mun and Tin Shui Wai New Towns. It is bounded by Tin Ying Road/ Ping Ha Road/ Kiu Hung Road to the east, Castle Peak Road to the south, Kong Sham Western Highway ("KSWH") to the west, and Tin Ha Road, Lau Fau Shan Road and hillslopes along Deep Bay Road to the north. In the wider context, the proposed Project is strategically located in close proximity to Shenzhen, particularly Shenzhen Bay Control Point, Qianhai, and Shekou and efficiently linked with the Greater Pearl River Delta ("PRD") region. The KSWH and the possible highway connecting the Project area with the Tuen Mun - Chek Lap Kok Link, the Hong Kong International Airport, Kwai Tsing Container Terminals, and the Hong Kong-Zhuhai-Macao Bridge and its Boundary Crossing facilities. New strategic highway infrastructure connecting the Project area with the urban area will also be planned to address the long-term development needs of North West New Territories ("NWNT"). The proposed West Rail Hung Shui Kiu Station ("HSK Station"), with its alignment traversing the Project allows convenient and efficient access to and from the Project area.

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- 1.2. The works under HSK/HT NDA Stage 1 works comprises the construction of interim section of new distributor road (Road D1) (hereinafter call "the Project") that is a designated project ("DP") (defined under item A1 in Schedule 2 of the Environmental Impact Assessment Ordinance) connecting the site for the first batch of multi-storey buildings ("MSBs") at Sites 3-6, 3-7 and 3-8 to the existing Ha Tsuen Roundabout of KSWH.
- 1.3. The HSK/HT NDA Stage 1 works would be implemented under a fast track programme, involving various complex tasks for providing infrastructure and forming the five development sites to be conducted in parallel, so as to tie in with operation of the development MSBs or other land-efficient means and population intake of the village resite house in 2025 tentatively.
- 1.4. The scope of works for interim section of Road D1 comprise the followings:
  - (i) Site formation works for Site 3-7 and Site 3-8;
  - (ii) Land decontamination works including ground investigation works for Site 3-7 and Site 3-8 and other areas within the boundaries of the site;
  - (iii) Construction of a district distributor road connecting to the existing interchange underneath KSWH, construction of local roads, widening of a section of Fung Kong Tsuen Road and associated junction/ road improvements; and
  - (iv) Engineering infrastructure works comprising sewerage works (including a pumping station), drainage works (including a detention pond), waterworks and landscaping works.



- 1.5. Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection Department (EPD) granted the Environmental Permits (Nos.: EP-526/2017, EP-527/2017, EP-528/2017, EP-529/2017, EP-530/2017 and EP-531/2017) to the CEDD for the Project. The HSK/HT NDA Stage 1 works comprise the interim section of Road D1 that is governed under Environmental Permit No. EP-528/2017. No other DPs are identified within the scope of HSK/HT NDA Stage 1 works.
- 1.6. Acuity Sustainability Consulting Limited (ASCL) is commissioned by the Civil Engineering and Development Department (CEDD) to undertake the Environmental Team (ET) services as required and/ or implied, both explicitly and implicitly, in the Environmental Permit (EP), Environmental Impact Assessment (EIA) Report (Register No. AEIAR-203/2016) and Environmental Monitoring and Audit (EM&A) Manual for the Project; and to carry out the EM&A programme in fulfillment of the EIA Report's, EM&A requirements under Service Contract No. WD/02/2021.
- 1.7. For the construction phase of the Project, the construction has been commenced on 5 December 2022 and the construction phase EM&A programme was started on 6 December 2022.
- 1.8. This is the 9<sup>th</sup> Monthly EM&A Report summarizing the key findings of the construction phase EM&A programme from 1 August to 31 August 2023 (the reporting period) and is submitted to fulfill the requirements in Condition 3.4 of EP-528/2017 and Section 15.3 of the Updated EM&A Manual of the Project.

Construction Works Programme and Construction Works Area

- 1.9. The construction works commenced on 5 December 2022. The construction works programme and the construction works area of the Project are shown in Appendix A and Figure 1 respectively. A summary of construction activities undertaken during this reporting period is presented below:
  - Construction of manhole;
  - Pipe laying works;
  - Connecting the existing drainage to box culvert; and
  - Backfilling works near the box culvert

### **Project Organization**

- 1.10. Different parties with different levels of involvement in the Project organization include:
  - Project Proponent: Civil Engineering and Development Department (CEDD)
  - Supervisor / Engineer's Representative (ER): Mott MacDonald Hong Kong Limited
  - Contractor: China Geo-Engineering Corporation
  - Environmental Team (ET): Acuity Sustainability Consulting Limited

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- Independent Environmental Checker (IEC): Lam Environmental Services Limited
- 1.11. The key personnel contact names and numbers are summarized in Appendix B.

License, Notifications and Permits

1.12. A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 1.1**.

Table 1.1	Status of Environmental License, Notifications and Permits
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Demail / Lissen av Na	Valid	Period	<b>S</b> 4-4			
Permit / License No.	From	То	Status			
Environmental Permit						
EP-528/2017	21/02/2017	N/A	Valid			
Notification pursuant to Air Pollution	n Control (Const	ruction Dust) Re	gulation			
467008	29/04/2021	N/A	Valid			
Billing Account for Disposal of Cons	Billing Account for Disposal of Construction Waste					
7040500	13/05/2021 N/A		Valid			
Registration of Chemical Waste Producer						
467007	29/04/2021	N/A	Valid			
Effluent Discharge License under Water Pollution Control Ordinance						
WT00043404-2023	26/04/2023	30/04/2028	Valid			
WT00044131-2023	16/08/2023	31/08/2028	Valid			
Construction Noise Permit						
GW-RN0331-23	01/04/2023	30/09/2023	Valid			

Submission Status under Environmental Permit

1.13. The summary of submission status under Environmental Permit EP-528/2021 was presented in **Appendix K**.



# 2 Air Quality

#### Monitoring Requirement

2.1. In accordance with the Updated EM&A Manual, the ET shall carry out impact monitoring during the construction phase of the Project. 1-hour Total Suspended Particulates (TSP) should be conducted at a frequency of at least three times in every six days when the highest dust impact occurs.

Monitoring Location

2.2. According to the Updated EM&A Manual, the designated locations for impact air quality monitoring are listed in **Table 2.1** and their locations are shown in **Figure 2.1**.

Station(s)	EIA ID	Monitoring Location
AM23	P1032	Planned Port Back-up, Storage and Workshop (at Site 3-6)
AM24	P1501	Planned Port Back-up, Storage and Workshop (at Site 3-8)
AM25a	-	San Wai Sewage Treatment Plant near the Planned Port Back-up, Storage and Workshop (at Site 3-14)

 Table 2.1
 Summary of Proposed Air Quality Monitoring Location

- 2.3. In accordance with Table A2.4 in Appendix A of the Updated EM&A Manual, impact air quality monitoring will be carried out at monitoring stations AM23, AM24 and AM25a after the occupation of the planned port back-up, storage, and workshop.
- 2.4. As confirmed with the Engineer Representative (ER), the planned port back-up, storages, and workshops at Site 3-6, Site 3-8 and Site 3-14 are not constructed yet. Thus, the impact air quality monitoring will be carried out at AM23, AM24 and AM25a after the construction and occupation of these planned port back-up, storages, and workshops. No air quality monitoring was carried out in this reporting month.



# **3** Water Quality

#### Monitoring Requirement

- 3.1. In accordance with the Updated EM&A Manual, impact water quality monitoring should be carried out three days per week at all designated monitoring stations during the construction period. The interval between two sets of monitoring should not be less than 36 hours.
- 3.2. Replicate in-situ measurements of dissolved oxygen (DO), temperature, turbidity, pH, and suspended solids (SS) for each independent sampling event shall be collected to ensure a robust statistically interpretable database.

#### Monitoring Location

3.3. Impact water quality monitoring was conducted at 6 monitoring stations which are summarized in **Table 3.1**. The locations of water quality monitoring stations are shown in **Figure 3.1**.

Station	Description	Easting	Northing
U1	Upstream Station	815936	834150
U2	Upstream Station	816240	834009
SW	Gradient station (Downstream of U1 and the construction site of Road D1)	816304	834321
HT	Gradient station (Downstream of U2 and the construction site of Road D1)	816866	834314
TKW1	Gradient station (Downstream of the construction site of Road D1)	816563	834686
TKW	Gradient station (Downstream of TKW1 and construction site of Road D1)	816594	834690

 Table 3.1
 Summary of Impact Water Quality Monitoring Stations

Remark: The original water quality monitoring station DB was surrounded by scrubs and vegetation and located along the steep slope of the hill to south-west of Fung Kong Tsuen. The watercourse runs towards the north of Road D1, but no downstream watercourse was identified. Thus, water quality monitoring station DB is not recommended for this Contract without upstream/ downstream monitoring locations identified. An updated water quality monitoring stations TKW and TKW1 were proposed by the ET and approved by the IEC and the EPD.



Monitoring Parameter and Frequency

3.4. The parameters that have been selected for measurement in-situ and in the laboratory are those that are either determined in the EIA to be those that are likely be affected by the construction works or a standard check on water quality conditions. Parameters to be measured in the impact water quality monitoring are listed in **Table 3.2**.

Parameters	Units	Abbreviations	Frequency
In-situ measurements			
Dissolved oxygen	mg/L	DO	
Dissolved oxygen saturation	%	DO%	
Temperature	°C	-	3 days per week
рН	-	-	
Turbidity	NTU	-	
Laboratory measurements			
Suspended Solids	mg/L	SS	

 Table 3.2 Parameters measured in the Impact Water Quality Monitoring

3.5. Monitoring location and position, time, sampling depth, weather conditions and any special phenomena or work underway nearby were also recorded.

#### Sampling Depths & Replication

3.6. During impact water quality monitoring, each station was sampled, and measurements/ water samples were taken at three depths, 1 m below the water surface, mid-depth and 1 m above riverbed. If the water depth was less than 6 m, mid-depth might be omitted. If the water depth was less than 3 m, mid-depth sampling only. For *in situ* measurements, duplicate readings were made at each water depth at each station. Duplicate water samples were collected at each water depth at each station.

### Monitoring Equipment

3.7. A multi-parameter meter (Model HORIBA U-53) was used to measure DO, turbidity, salinity, pH, and temperature.

#### Dissolved Oxygen and Temperature Measuring Equipment

- 3.8. The instrument for measuring dissolved oxygen and temperature should be portable and weatherproof complete with cable, sensor, and use DC power source. The equipment was capable of measuring:
  - A dissolved oxygen level in the range of 0 20 mg/L and 0 200% saturation; and
  - The temperature within 0 45 °C.



- 3.9. The equipment had a membrane electrode with automatic temperature compensation complete with a cable.
- 3.10. Sufficient stocks of spare electrodes and cables were available for replacement where necessary.

#### Turbidity Measurement Equipment

3.11. Turbidity was measured *in situ* by using the nephelometric method. The instrument was portable and weatherproof using a DC power source complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0 and 1000 NTU. The probe cable was not less than 25 m in length.

#### Water Depth Detector

3.12. A portable, battery-operated and handheld echo sounder was used for the determination of water depth at each designated monitoring station.

pН

3.13. The instrument was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1 pH value in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

#### Sample Container and Storage

3.14. Following collection, water samples for laboratory analysis were stored in high density polyethylene bottles with appropriate preservatives added, packed in the ice (cooled to 4 °C without being frozen). The sample were delivered to Acumen Laboratory and Testing Limited (ACUMEN) (HOKLAS Registration No. 241) and analysed as soon as possible after collection of the water samples. Sufficient volume of samples was collected to achieve the detection limit.

#### Calibration of In Situ Instruments

- 3.15. The pH meter, DO meter and turbidimeter were checked and calibrated before use. DO meter and turbidimeter were certified before use and subsequently recalibrated at quarterly basis throughout all stage of water quality monitoring programme. Response of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement.
- 3.16. For the on-site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, "Guide to on-site test methods for analysis of waters" was observed.

#### Back-up Equipment

3.17. Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.



3.18. **Table 3.3** summarizes the equipment used in the water quality monitoring programme. Copies of the calibration certificates of multi-parameter water quality monitoring system are shown in **Appendix E**.

Equipment	Brand and Model Number (Serial Number)	Quantity					
Multi-parameter Water Quality System	HORIBA U-53 (PORBNFNT)	1					
Multi-parameter Water Quality System	HORIBA U-53 (PPHNOMXY)	1					

 Table 3.3 Water Quality Monitoring Equipment

#### Monitoring Methodology

3.19. A multi-parameter meter (Model HORIBA U-53) was used to measure DO, turbidity, salinity, pH and temperature.

#### **Operating/ Analytical Procedures**

3.20. At each measurement, two consecutive measurements of DO concentration, DO saturation, salinity, turbidity, pH and temperature were taken. The probes were retrieved out of 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.

#### Laboratory Analytical Methods

3.21. Duplicate samples from each independent sampling event are required for all parameters. Analysis of suspended solids were carried out by ACUMEN and comprehensive quality assurance and control procedures in place in order to ensure the quality and consistency of the results. The reporting limit and detection limit are provided in **Table 3.4** and the detection limits for the *in-situ* measurement are shown in **Table 3.5**.

 Table 3.4
 Method for Laboratory Analysis for Water Samples

Determinant	Proposed Method	Limit of Reporting
Total Suspended Solid (SS)	APHA 2540 D	1.0 mg/L

Table 3.5	Detection	Limits and	Precision	for Wate	r Quality Parameters
-----------	-----------	------------	-----------	----------	----------------------

Parameters	Detection limit	Accuracy	Precision
DO	0-20  mg/L	± 0.1 mg/L	
Temperature	0-45 °C	± 0.1 °C	25%
pН	0-14	± 0.1	23%
Turbidity	0 – 1000 NTU	±2NTU	

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### *QA/QC Requirements*

#### Decontamination Procedures

3.22. Water sampling equipment used during the course of the monitoring process was decontaminated by manual washing and rinsed with distilled water after each sampling event. All of the disposable components/ accessories were discarded after sampling.

#### Sampling Management and Supervision

3.23. All sampling bottles were labelled with the sample ID numbers (including the sampling station), and sampling date. Water samples were dispatched to the testing laboratory for analysis as soon as possible. All the collected samples were stored in a cool box to keep the temperature less than 4 °C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.

#### Quality Control Measures for Sample Testing

- 3.24. Quality control of laboratory analysis of water samples was performed by ACUMEN for every batch of 20 samples:
  - One method blank; and
  - One set of QC sample.

#### Event and Action Plan

3.25. Should any non-compliance of the criteria occur, action in accordance with the Event and Action Plan in **Appendix H** shall be followed. Investigation of the exceedances of environmental quality performance limits should be conducted, and the ET will immediately notify the IEC and the EPD, as appropriate. The notification should be followed up with advice to the IEC and the EPD on the results of the investigation, proposed actions and success of the action taken, with any necessary follow-up proposals.

#### Results and Observations

- 3.26. All water quality monitoring was conducted as scheduled in the reporting month. The water quality monitoring schedule for this reporting month is shown in **Appendix D**.
- 3.27. Water quality monitoring at U1 was temporarily suspended from 18 July 2023 due to fallen trees that blocked the access road to U1. The monitoring was resumed on 23 August 2023 as the fallen tree was removed.
- 3.28. The monitoring results and graphical presentation of water quality monitoring at the monitoring stations are shown in **Appendix F**.



3.29. During the reporting month, two (2) limit level exceedances of turbidity was recorded during impact water quality monitoring in the reporting period. Summaries of exceedance records are shown in **Table 3.6** and **Table 3.7**.

		Parameter	Depth- averaged	Excee	dance	Exceedances due to the
Date	Station	(Unit)	Measured Value	AL	LL	Project (Y/N)
29/08	TKW1	Turbidity	42.4		$\checkmark$	Ν
29/08	TKW	(NTU)	48.1		$\checkmark$	Ν

#### Table 3.6 Summary of Exceedance Records of Water Quality Monitoring

Table 3.7	Summary of Exceedance Records of Water Quality Monitoring

Parameter	No. of non- project related exceedances		Total No. of non-project related exceedances	No. of exceedance related to the Project		Total No. of exceedance related to the	
	AL	LL	exceedances	AL	LL	Project	
рН	0	0	0	0	0	0	
Dissolved Oxygen	0	0	0	0	0	0	
Turbidity	0	2	2	0	0	0	
Suspended Solids	0	0	0	0	0	0	

- 3.30. In view of the non-project related exceedances of action and limit levels recorded frequently in December 2022, review of the water quality baseline condition was proposed to reflect the baseline condition during the dry season and to reduce the number of false alarms.
- 3.31. A baseline water quality monitoring during the dry season was conducted between 6 December 2022 and 30 December 2022. The updated Baseline Monitoring Report was submitted to IEC and verified on 24 March 2023, and the derived wet season action and limit levels was adopted to review the water quality monitoring results during the reporting period.
- 3.32. The derived dry season action and limit levels for water quality monitoring will be applied to the monitoring period between November and March, and the derived wet season action and limit levels will be applied to April to October. The (wet season) action and limit levels for this reporting period are presented in **Table 3.8**.



#### Table 3.8 Derived Wet Season Action and Limit Levels for Water Quality

Parameters	Action Levels	Limit Levels		
SW				
DO (mg/L) <sup>(3)</sup>	3.7	3.5		
Turbidity (NTU)	21.4	22.9		
SS (mg/L)	9.7	9.9		
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5		
HT				
DO (mg/L) <sup>(3)</sup>	2.4	2.2		
Turbidity (NTU)	32.3	32.6		
SS (mg/L)	34.0	38.7		
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5		
TKW1				
DO (mg/L) <sup>(3)(4)</sup>	2.8	2.8		
Turbidity (NTU)	27.9	29.2		
SS (mg/L)	16.0	18.4		
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5		
TKW				
DO (mg/L) <sup>(3)</sup>	2.5	2.4		
Turbidity (NTU)	24.2	24.6		
SS (mg/L)	19.8	21.6		
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5		

Notes:

(1) For DO, non-compliance of the water quality limit occurs when monitoring result is lower than the limit.

(2) For Turbidity and Suspended Solids (SS), non-compliance of the water quality limit occurs when monitoring result is higher than the limit.

(3) The derived Action Levels and Limit Levels for dissolved oxygen only apply to mid-depth.

(4) The derived action and limit level for DO at TKW1 come up with the same value at 2.8 mg/L. If monitoring results exceeded 2.8 mg/L, it will be considered as limit level exceedance, actions according to the Event and Action Plan will be carried out.

3.33. After confirmation of exceedance of the water quality monitoring results, ET has sent the emails for Notification of Exceedance (NOE) to inform relevant parties (i.e., EPD, ER, IEC and Contractor) about the exceedances. After investigation, the exceedances recorded on 29 August 2023 were considered as non-project related. Details of the investigation results are shown in **Appendix M**.



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#### Waste Management 4

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Waste generated from the Project includes inert construction and demolition (C&D) materials and non-inert C&D wastes in the reporting period. 4.1. The amount of waste generated by the construction works of the Project during the reporting period is shown in Table 4.1 and the cumulative waste flow table was presented in Appendix I.

Table 4	able 4.1 Summary of Waste Generated in the Reporting Ferrou										
	A	Actual Quantalities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly			nthly
Month	Total Quantity Generated	Hard Rock and Lage Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Carboard Packing	Plastics	Chemical Waste	Othe ger ret
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '(
											1

0.000

0.000

### Table 4.1 Summary of Waste Generated in the Reporting Period

0.000

4.2. Construction and demolition (C&D) materials sorting was carried out on site. Sufficient receptacles were provided for general refuse collection and sorting. Excavated inert C&D materials were reused to minimize the disposal of C&D waste to public fill.

0.000

0.000

0.000

0.000

The Contractor is advised to minimize the waste generated through recycling or reusing. All applicable mitigation measures stipulated in the 4.3. Updated EM&A Manual and waste management plans shall be fully implemented.



# 5 Environmental Site Inspection and Audit

- 5.1. Site inspections were carried out by the ET on a weekly basis to monitor the implementation of proper environmental pollution control mitigation measures for the Project. During the reporting period, site inspections were carried out on 3, 7, 16, 24 and 31 August 2023. A Joint IEC site inspection was carried out on 7 August 2023.
- 5.2. Bi-weekly landscape and visual site audits were carried out by a Registered Landscape Architect (RLA) on 3, 16 and 31 August 2023. No particular observation was recorded in this reporting period.
- 5.3. During site inspection in the reporting period, no non-conformance was identified. Key observations and reminders during the site inspection and landscape and visual site audit are described in **Table 5.1**.

Inspection Date	Key Observation / Reminders	Follow-up Action
3 Aug 2023	No major environmental deficiency was observed during the site inspection.	Nil
7 Aug 2023	No major environmental deficiency was observed during the site inspection.	Nil
16 Aug 2023	No major environmental deficiency was observed during the site inspection.	Nil
24 Aug 2023	No major environmental deficiency was observed during the site inspection.	Nil
31 Aug 2023	Observation         Nil         Reminder         1. The Contractor was reminded to covered open stockpile of construction materials with tarpaulin.	Observation Nil <u>Reminder</u> 1. Open stockpile of construction materials was covered with tarpaulin.

 Table 5.1
 Summary of Site Inspections and Recommendations

Implementation Status of Environmental Mitigation Measures

5.4. According to the EIA Report, EP and the Updated EM&A Manual, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. A summary of the Project Implementation Schedule is provided in **Appendix C**.



## 6 Environmental Non-Conformance

#### Summary of Exceedances

- 6.1. Two (2) limit level exceedances of turbidity were recorded during impact water quality monitoring in the reporting period. After investigation, the exceedances were considered as non-project related. Details of the investigation results are presented in **Appendix M**.
- 6.2. Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that the Action / Limit Levels are exceeded, the actions in accordance with the Event and Action Plans in **Appendix H** would be carried out.
- 6.3. Bi-weekly landscape and visual site audits were carried out by a Registered Landscape Architect (RLA) on 3, 16 and 31 August 2023. No particular observation was recorded during the audits.
- 6.4. Should the audit results indicate any nonconformity, the actions in accordance with the Event and Action Plans in **Appendix H** would be carried out.

Summary of Environmental Non-Compliance

6.5. No environmental non-compliance was recorded in the reporting period.

Summary of Environmental Complaint

6.6. No environmental complaint was received in the reporting period. The Cumulative Complaint Log is presented in **Appendix J**.

Summary of Environmental Summon and Successful Prosecution

6.7. There was no successful environmental prosecution or notification of summons received since the Project commencement. The Cumulative Log for environmental summon and successful prosecution is presented in **Appendix J**.



# 7 Future Key Issues

- 7.1. Works to be undertaken in the next reporting period are summarized below:
  - Construction of manhole;
  - Pipe laying works; and
  - Construction of temporary public road.
- 7.2. Potential environmental impacts arising from the above construction activities are mainly associated with construction dust impact, noise impact, water quality impact and waste management.

#### Recommendation

7.3. The key environmental mitigation measures for the Project in the coming reporting period associated with above construction activities will include:

#### <u>Dust</u>

- Regular watering to reduce dust emissions from exposed site surface;
- Stockpile of dusty materials shall be covered entirely by impervious sheeting;
- Provide vehicles washing facilities at all site exits to wash away any dusty materials from vehicle body;
- NRMM Labels should be displayed on the applicable equipment on site by the Contractor;
- Provision of water sprinklers along the haul road for dust suppression; and
- All vehicle and plant should be cleaned before they leave a construction site.

#### Noise

- Only well-maintained plant should be operated on-site, and plant should be maintained regularly during the construction programme;
- Quality Powered Mechanical Equipment (QPME) should be adopted as far as possible.

#### Water Quality

- No effluent discharge would be allowed before acquisition of the effluent discharge license;
- Surface run-off from construction sites should be discharged into stormwater drains via adequately designed sand/ silt removal facilities;



- Channels/ earth bunds/ sandbags barriers should be provided on site to properly direct stormwater to silt removal facilities;
- Silt removal facilities, channels and manholes should be maintained, and the deposited silt and grit should be removed regularly;
- Open stockpiles of construction materials on sites should be covered with tarpaulin or similar fabric during rainstorms;
- Perimeter channels should be provided on site boundaries where necessary to intercept stormwater run-off from outside the site so that it will not wash across the site;
- Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.

#### Waste Management

- Provision of sufficient waste disposal points and regular collection of waste;
- Regular cleaning and maintenance programme for drainage system; and
- Chemical containers shall be stored with drip tray underneath.

#### Landscape and Visual

- Construction activities shall be carefully designed to minimize impact on existing retained trees.
- 7.4. The construction programme for the Project for the next reporting period is presented in **Appendix A**.



## 8 Conclusions and Recommendations

#### Conclusion

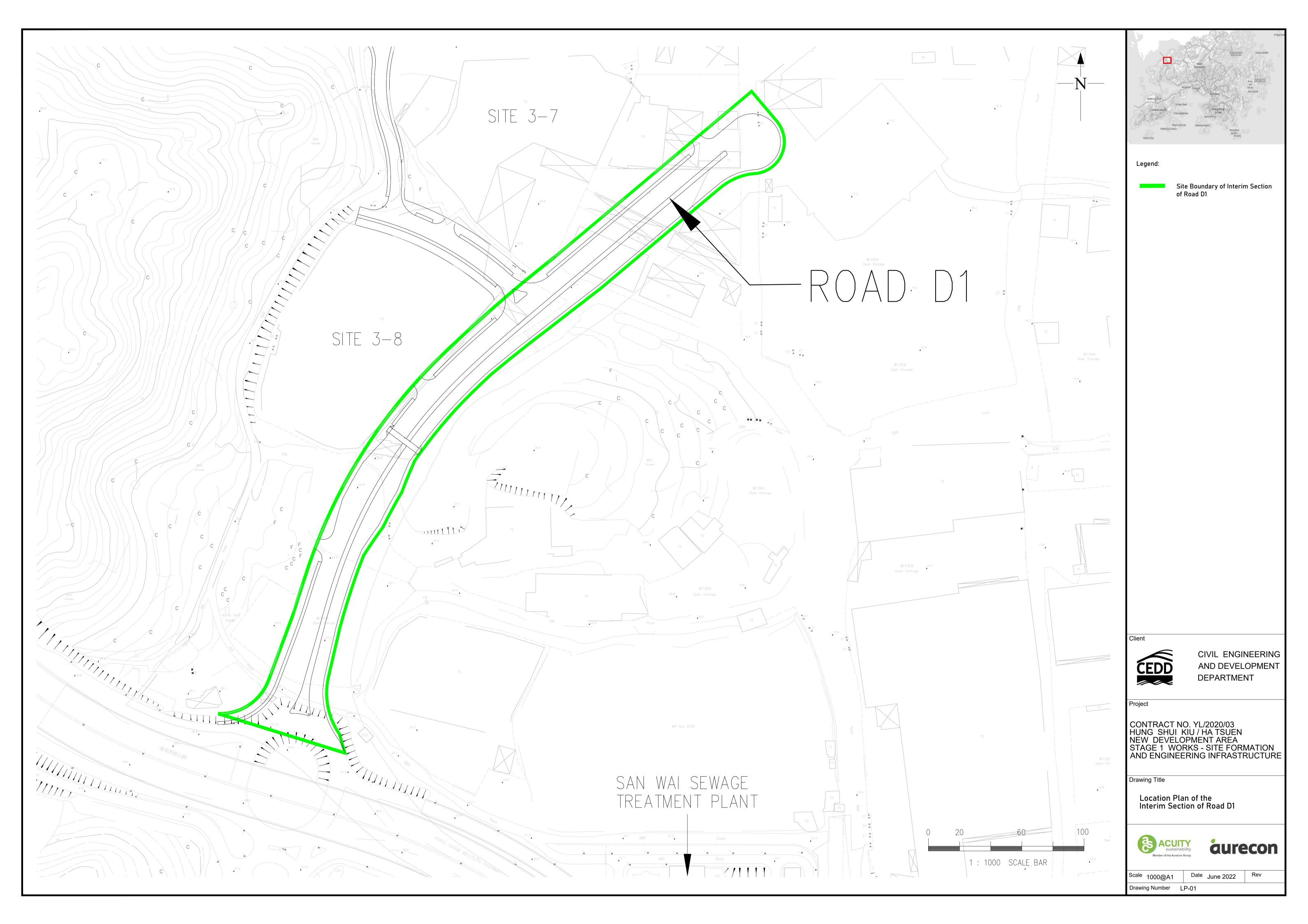
- 8.1. This Monthly EM&A Report presents the EM&A works during the reporting period from 1 August to 31 August 2023 in accordance with the Updated EM&A Manual.
- 8.2. Two (2) limit level exceedances of turbidity were recorded during impact water quality monitoring in the reporting period. After investigation, the exceedances were considered as non-project related.
- 8.3. Environmental site inspections were conducted on 3, 7, 16, 24 and 31 August 2023 by the ET in the reporting period.
- 8.4. No environmental complaint was received in the reporting period.
- 8.5. No notification of summons and prosecution was received in the reporting period.
- 8.6. The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.
- 8.7. No change to the EM&A programme was made in this reporting period.

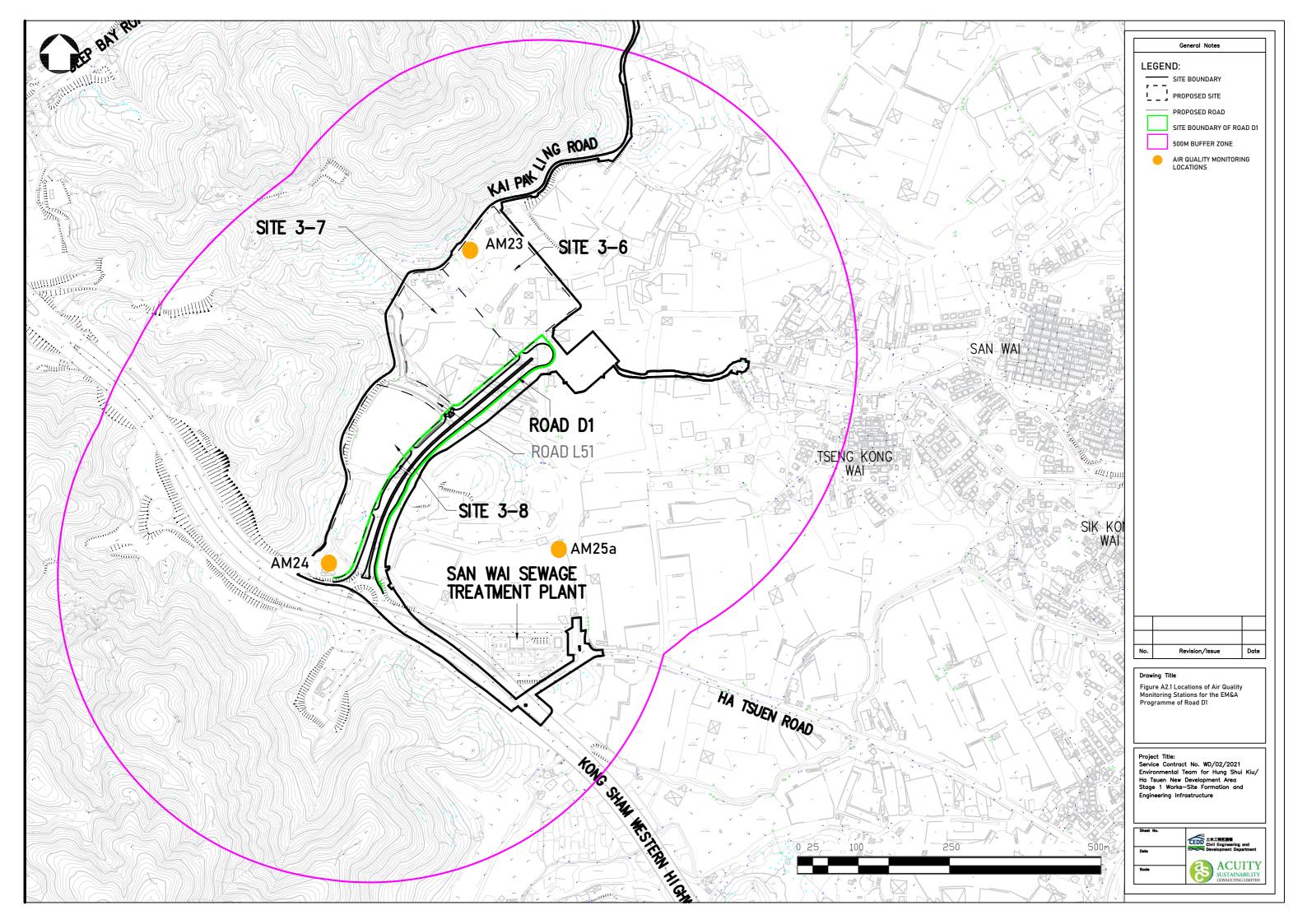
#### Comments/ Recommendations

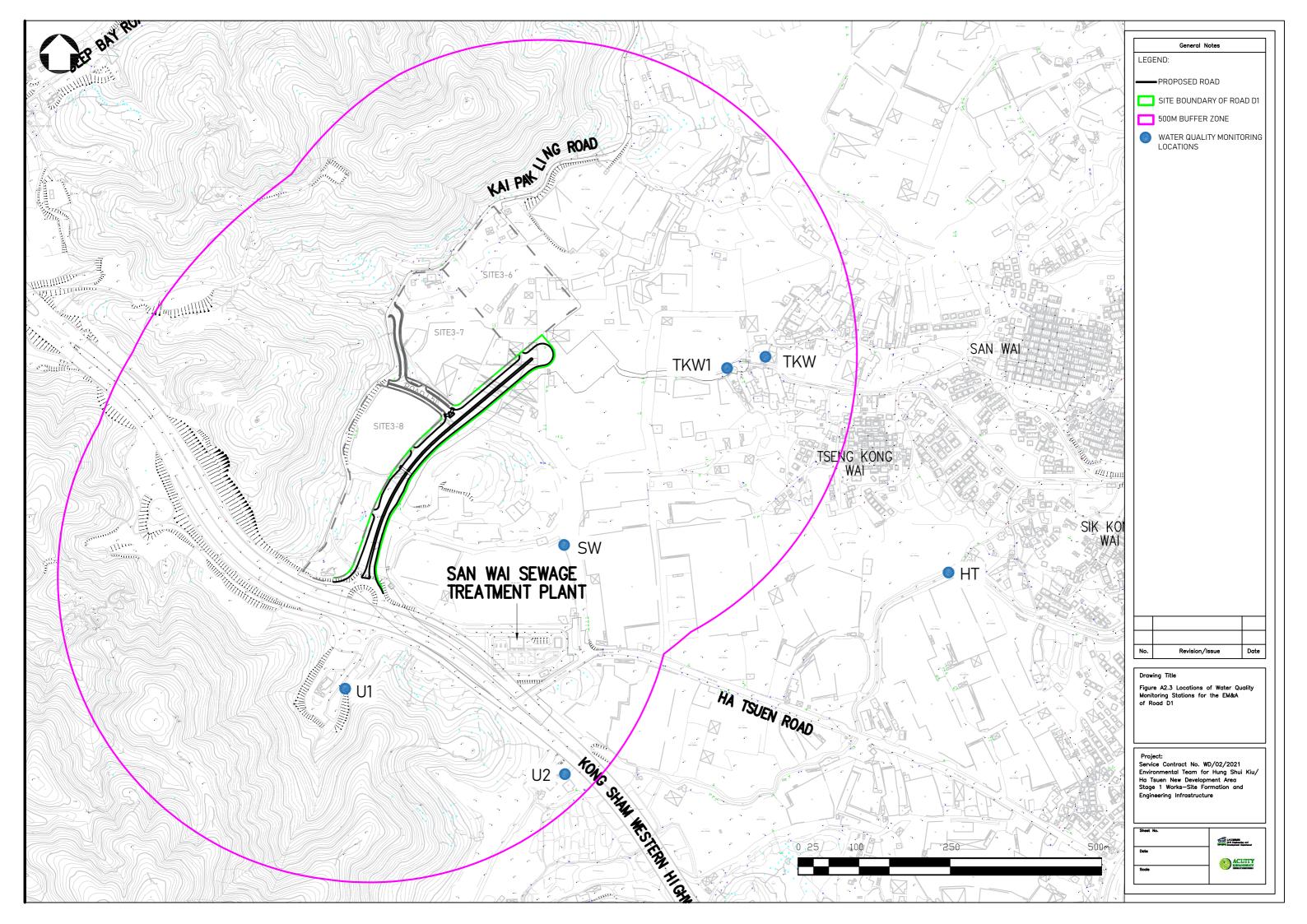
8.8. No further comment or recommendation was provided in this Monthly EM&A Report.



Figure(s)









# Appendix A

# **Construction Programme**

sk Name	Duration Start	Finish	Qtr 2. 2021	Qtr 3. 202	1 Qtr 4, 20	21 Qtr 1.2	022 Qtr 2. 20	22 Qtr 3. 20	022 Otr 4	1, 2022 Otr 1	2023 Otr	2, 2023 Qtr 3,	2023 Qtr 4. 2	2023 Qtr 1. 202	Qtr 2. 2024	Qtr 3. 2024 O	tr 4, 2024 Otr	1, 2025 Otr 2	, 2025 Otr	3, 2025 Ot	r 4, 2025 Ot	r 1, 2026 O
rogramme of YL/2020/03	1836 days Mon 19/4/21		Apr May Jun	Jul Aug Se	p Oct Nov	Dec Jan Fel	Mar Apr May	Jun Jul Aug	Sep Oct N	Nov Dec Jan Fe	b Mar Apr	May Jun Jul Au	g Sep Oct Nov	Dec Jan Feb M	ar Apr May Jun	Jul Aug Sep Oc	t Nov Dec Jan	Feb Mar Apr Ma	ay Jun Jul	Aug Sep Oct	Nov Dec Jar	Feb Mar Ar
Contract Date	0 days Mon 19/4/21		•																			
Project Dates	1826 days Wed 28/4/21																					
Starting Date	0 days Wed 28/4/21			,																		
Access Date 1	0 days Wed 28/4/21																					
Access Date 122	0 days Sat 28/8/21	Sat 28/8/21		•																		
Access Date 275	0 days Fri 28/1/22	Fri 28/1/22				•																
Access Date 456	0 days Thu 28/7/22	Thu 28/7/22						•														
Completion Dates	913 days Sat 28/10/23	Tue 28/4/26																				
Completion Date 913 Section 1A1	0 days Sat 28/10/23	Sat 28/10/23											•									
Completion Date 913 Section 1A2	0 days Sat 28/10/23	Sat 28/10/23											•									
Completion Date 913 Section 1A3	0 days Sat 28/10/23	Sat 28/10/23											•									
Completion Date 913 Section 1A4	0 days Sat 28/10/23	Sat 28/10/23											•									
Completion Date 913 Section 1A5	0 days Sat 28/10/23	Sat 28/10/23											•									
Completion Date 913 Section 1A6	0 days Sat 28/10/23	Sat 28/10/23											•									
Completion Date 1278 Section 1B	0 days Sun 27/10/24	Sun 27/10/24															•					
Completion Date 1461 Section 2A	0 days Mon 28/4/25	Mon 28/4/25																•				
Completion Date 1826 Section 2B	0 days Tue 28/4/26	Tue 28/4/26																				
Access Dates	456 days Wed 28/4/21	Thu 28/7/22	<b>│                                    </b>					Acc	cess Date	s												
Access Date of Portion A1	0 days Sat 28/8/21	Sat 28/8/21		•																		
Access Date of Portion A2	0 days Sat 28/8/21	Sat 28/8/21																				
Access Date of Portion A3	0 days Sat 28/8/21																					
Access Date of Portion A4	0 days Sat 28/8/21	Sat 28/8/21																				
Access Date of Portion A5	0 days Sat 28/8/21	Sat 28/8/21																				
Access Date of Portion A6	0 days Sat 28/8/21			-																		
Access Date of Portion A7	0 days Sat 28/8/21																					
Access Date of Portion A8	0 days Sat 28/8/21			●		╎																
Access Date of Portion B1	0 days Fri 28/1/22																					
Access Date of Portion B2	0 days Fri 28/1/22																					
Access Date of Portion B3	0 days Fri 28/1/22																					
Access Date of Portion B4	0 days Fri 28/1/22																					
Access Date of Portion B5	0 days Fri 28/1/22																					
Access Date of Portion B6	0 days Fri 28/1/22																					
Access Date of Portion B7	0 days Fri 28/1/22																					
Access Date of Portion B8	0 days Fri 28/1/22																					
Access Date of Portion B9	0 days Fri 28/1/22																					
Access Date of Portion B10	0 days Fri 28/1/22																					
Access Date of Portion B11 Access Date of Portion C1	0 days Fri 28/1/22																					
	0 days Wed 28/4/21																					
Access Date of Portion D1 Access Date of Portion D2	0 days Thu 28/7/22 0 days Fri 28/1/22																					
	-									Key Dates												
Key Dates Submission of the Detailed Boulder Survey Report with the	365 days Thu 28/10/21 0 days Fri 28/1/22									Key Dates												
Boulder Hazard Mitigation Measures to the Geotechnical Engineering Office of the Civil Engineering and Development Department	0 uays 1 11 20/ 1/22	11120/1/22																				
Submission of the Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) to the Environmental Protection Department	0 days Thu 28/7/22	Thu 28/7/22						•														
Acceptance in principle by the Project Manager of the Contractor's Design for the Sewage Pumping Station	0 days Fri 28/10/22				•				*													
Acceptance in principle by the Project Manager of the Contractor's Design of the Boost-up Transformer Room Preliminary and General Requirement	0 days Thu 28/10/21 1467 days Tue 20/4/21				<u></u>														Preliminary	y and Genera	al Requireme	ənt
General Submission	99 days Tue 20/4/21		╽╺╋╃┿┯┷┙	- Gene	ral Submis	sion												•			-	
Particulars of underground services detection equipment	7 days Tue 20/4/21																					
Details of Contract Computer Facilities and Software (PS1.49A)	-																					
Mobile phone for the contract (PS1.16)	7 days Tue 20/4/21	Mon 26/4/21																				
Specialist Provider of Smart Card System (PS29.06)	7 days Tue 20/4/21	Mon 26/4/21																				

Page 1

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

lask l	Name	Duration Start	Finish											3 Qtr 1, 2024 c Jan Feb Ma					
	Proposal of Security System (PS1.53A)	14 days Tue 20/4/21	Mon 3/5/21	H									 	 	 	 	 		
	Professional photographer and use of aircraft (PS1.55S)	1 day Thu 29/4/21	Thu 29/4/21																
	Procedures for selecting Subcontractors (ACC C9)	21 days Tue 20/4/21	Mon 10/5/21									Image: Section 1         Image: Section 2           Image: Section 2         Image: Section 2           Image: Section 2							
	Competitive process for selection of supplier of plant and materials, equipment and insurance (ACC C11)	21 days Tue 20/4/21	Mon 10/5/21																
	Designated bank and payment of wages to all the site personnel (PS29.05)	14 days Tue 20/4/21	Mon 3/5/21																
	Hygiene and Welfare facilities (PS1.50A)	14 days Thu 29/4/21	Wed 12/5/21																
	Necessary Arrangement with Bank to implement the arrangement on payment of wages to Workers (ACC E6)	14 days Thu 29/4/21	Wed 12/5/21																
	Professional video production company and a competent video director (PS1.119)	14 days Thu 29/4/21	Wed 12/5/21																
	Details of ESIS and DRIS System (PS1.129)	14 days Thu 29/4/21	Wed 12/5/21																
	Hoarding Plan (PS1.48)	14 days Thu 29/4/21	Wed 12/5/21																
	Transport for PM and Supervisor (PS1.52)	14 days Thu 29/4/21	Wed 12/5/21																
	Sub-contractor Management Plan (ACC C5)	30 days Tue 20/4/21	Wed 19/5/21																
	Weather Protection Scheme against inclement weather (PS1.86)	30 days Thu 29/4/21	Fri 28/5/21																
	Temp Drainage Management Plan	30 days Thu 29/4/21	Fri 28/5/21																
	Contingency Plan to deal with Flooding	30 days Thu 29/4/21	Fri 28/5/21	]															
	Supply of Brand New Survey Equipment (PS Appendix 1.17)	30 days Thu 29/4/21	Fri 28/5/21	1 🎽															
	Site Uniform (PS1.88)	30 days Thu 29/4/21	Fri 28/5/21	] 🎽															
	PII insurance Policy	60 days Tue 20/4/21	Fri 18/6/21																
	Book with a certification body acceptable to the Employer the date of audit for the ISO 9001:2015 certification	90 days Thu 29/4/21	Tue 27/7/21																
	Completion of Initial General Submission	0 days Fri 28/5/21	Fri 28/5/21		ř II														
	Programme	104 days Tue 20/4/21	Sun 1/8/21		╾┼─╸	Progr	amme												
	First Programme (CDP1 3)	14 days Tue 20/4/21	Mon 3/5/21	╇															
	Acceptance of the First Programme	30 days Tue 4/5/21	Wed 2/6/21																
	Expanded and more detailed version of the first programme (PSA 1.3)	60 days Thu 3/6/21	Sun 1/8/21																
	First Monthly Progress Report (PS1.08A)	30 days Tue 4/5/21		▁▏┃▎▎															
	Completion of Initial Programme Submission	0 days Wed 2/6/21	Wed 2/6/21		ĥ														
	Appointment of Personnel	99 days Tue 20/4/21	Tue 27/7/21			Appoir	ntment of I	Personr	iel										
	Contractor's Labour Officer (PS29.09)	7 days Tue 20/4/21																	
	Contractor's Surveyor (PS1.09)	7 days Thu 29/4/21																	
	List of Staff for Construction Management Team (ACC D1)	14 days Thu 29/4/21																	
	RSO and SS (ACC D1)	14 days Thu 29/4/21																	
	EO and ES (ACC D1)	14 days Thu 29/4/21																	
	Site Agents and Employees (PS1.12)	14 days Thu 29/4/21																	
	Construction Manager (PS1.12A)	14 days Thu 29/4/21																	
	Construction, Landscape and Land Decontanmination Leader (PS1.12B)	14 days Thu 29/4/21																	
	Geotechnical Engineer, Geologist, Geotechnical Supervisor and GFT (1.12C)	14 days Thu 29/4/21																	
	Foreman for Road and Drainage Works Particulars of Emergency Unit (PS1.99)	14 days Thu 29/4/21 14 days Thu 29/4/21																	
	Tree Supervisor (PS26.02)	30 days Tue 20/4/21																	
	Public Relocation Officer (PS 1.12F)	28 days Tue 20/4/21																	
				-															
	Quantity Surevying Clerk (PS1.49) Field and Drafting assistant (PS1.49C)	28 days Thu 29/4/21																	
	Field and Drafting assistant (PS1.49C)	28 days Thu 29/4/21		-															
	Independent Checking Engineer (PS1.105)	30 days Thu 29/4/21																	
	Employ CEG and TA (PS1.83)	90 days Thu 29/4/21		- +															
	BIM Team Leader (PS1.108)	90 days Thu 29/4/21		- 14															
	Completion of Construction Management Team Submission	0 days Fri 28/5/21																	
	Safety	42 days Tue 20/4/21			Safety														
	Draft Construction Health and Safety Plan (ACC D6) Ad-hoc meeting with Supervisor ro discuss the draft Safety Plan (ACC D6)	14 days Tue 20/4/21 7 days Tue 4/5/21																	
		30 days Tue 20/4/04	Wed 10/5/04	- ↓															
	Monthly Reports on Safety Performance (ACC D28)	30 days Tue 20/4/21																	
	Monthly Safety Report	30 days Tue 20/4/21	vvea 19/5/21														1		

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

4	Name	Duration Start	Finish	Apr May Ju	un Jul	Aug Sep	Oct Nov	Dec Jan										Oct Nov D	Dec Jan Fe					Ir Apr May Ju	n Jul Aug Se	p Oct Nov Dec	026 C Mar A
	Submission of Safety Plan (ACC D6)	35 days Tue 20/4/21		🚛																							
	Establish and conduct first SSC and SSMC meeting (PS1.65)	40 days Tue 20/4/21	Sat 29/5/21																								
	Site Traffic Safety Management Plan (PS1.71C)	42 days Tue 20/4/21	Mon 31/5/21																								
7	Completion of Initial Safety Submission	0 days Mon 31/5/21	Mon 31/5/21																								
8	Environmental	328 days Tue 20/4/21	Sun 13/3/22	╺┽╌┼╸						Environm	ental																
9	Register of the DDF and Trip Ticket System	14 days Tue 20/4/21	Mon 3/5/21																								
0	Draft Environmental Management Plan (ACC D20, PS1.97)	21 days Tue 20/4/21	Mon 10/5/21																								
1	Daily Cleaning Supervisor (PS1.32)	21 days Tue 20/4/21	Mon 10/5/21																								
12	Inspection Checklsit for Daily Cleaning (PS1.32)	21 days Tue 20/4/21	Mon 10/5/21																								
13	Monthly Reports on Environmental Management (PS1.98)	30 days Tue 20/4/21	Wed 19/5/21																								
14	Rodents Disinfestation Operation	14 days Thu 29/4/21	Wed 12/5/21																								
115	Apply for registration as Chemical Waste Producer (GS25.28)	21 days Thu 29/4/21	Wed 19/5/21																								
16	Trip Ticket System Proposal	21 days Thu 29/4/21	Wed 19/5/21																								
17	Site Management Plan for implementaton of Trip Ticket System (PS25.25S)	45 days Tue 20/4/21	Thu 3/6/21																								
18	Finalized Environmental Mangement Plan	45 days Tue 20/4/21	Thu 3/6/21	<b>T</b>																							
19	Appoint ET and ET Leader	42 days Tue 20/4/21	Mon 31/5/21	▏╋																							
20	Application of Discharge License - First Batch	45 days Thu 29/4/21																									
21	Application of Discharge License - Second Batch	45 days Sat 28/8/21				+																					
22	Application of Discharge License - Third Batch	45 days Fri 28/1/22							┢																		
23	Completion of Initial Environmental Submission	0 days Thu 3/6/21		💾																							
24	Ready for Commencement of Site Works	0 days Thu 3/6/21		🗍	-																						
25	Public Relation	60 days Thu 29/4/21		▏ <u></u>	Pul	blic Rel	ation																				
25	Provision of PRO (PS1.12F)	30 days Thu 29/4/21			T I I																						
20		-		The second secon																							
	Setup 24-hour telephone line cum information centre	60 days Thu 29/4/21					Traffia	Manaa																			
28	Traffic Management	147 days Thu 29/4/21					Traffic I	managel																			
9 0	Traffic Consultant and Traffic Engineer (PS1.16A) Prepare Detailed Construction Sequence with associated TTA and obtain endoresement in principle	7 days Thu 29/4/21 24 days Thu 1/7/21																									
1		30 days Sup 25/7/04	Mon 22/0/24																								
31	Setup TMLG	30 days Sun 25/7/21																									
32	Setup SLG	30 days Sun 25/7/21																									
33	Arrange First TMLG meeting	30 days Tue 24/8/21									_																
34	Excavation Permit	395 days Thu 29/4/21									Excavatio	n Permit															
35	Request employer to apply for XP (ACC D18)	7 days Thu 29/4/21		<b> </b>																							
36	1st Batch of XP (Ping Ha Road)	100 days Thu 6/5/21				🛡 1st I	Batch of 2	XP (Ping	Ha Roa	id)																	
137	Prepare particular for XP Application	40 days Thu 6/5/21																									
38	Application and approval of Excavation Permit for street maintained by HyD - (ACC D18)																										
39	2nd Batch of XP (Ha Tsuen Road)	120 days Sun 29/8/21				1		<b>2</b> n	d Batch	of XP (Ha	Tsuen Ro	ad)															
40	Prepare particular for XP Application	60 days Sun 29/8/21																									
41	Application and approval of Excavation Permit for street maintained by HyD -(ACC D18)	60 days Thu 28/10/21																									
42	3rd Batch of XP (Fung Kong Tsuen Road)	120 days Sat 29/1/22									3rd Balch	of XP (Fu	ng Kong	Tsuen Roa	d)												
43	Prepare particular for XP Application	60 days Sat 29/1/22								h																	
44	Application and approval of Excavation Permit for street maintained by HyD -(ACC D18)	60 days Wed 30/3/22																									
15	Utilities Works	1458 days Thu 29/4/21																						Utiliti	es Works		
46	Setup of Utilities Liaison Group	90 days Thu 29/4/21										. 1	_														
47	Diversion Scheme of Existing Utilities, if any	335 days Wed 28/7/21			•						Divers	sion Scher	me of Ex	isting Utilit	ies, if any	y											
48	Drainage Diversion (Existing Stream at Road D1)	150 days Sat 29/1/22																									
19	Exisiting Service at Road D1 and L51	60 days Sun 26/9/21															1										
50	Exisiting Service at Road L53 and L54	60 days Wed 28/7/21					J																				
51	New Utilities Connection	684 days Mon 12/6/23	Fri 25/4/25													-								New !	Jtilities Con	ection	
52	Watermain	634 days Tue 1/8/23	Fri 25/4/25													-					-			Water	rmain		
53	Road D1, L51 and Ha Tsuen Road	60 days Sun 23/6/24	Wed 21/8/24																	ſ	ר						
54	Road L53 and L54	30 days Tue 1/8/23	Wed 30/8/23													<b>&gt;</b>	┏┓║										
55	Ping Ha Road	30 days Thu 27/3/25	Fri 25/4/25																					<b></b>			
56	Road Lighting System	420 days Wed 30/8/23	Tue 22/10/24														-				╺┿╍╍┿╍╕	Road L	ghting Sys	tem			
57	Road D1 and L51	60 days Sat 24/8/24	Tue 22/10/24																		de de la constante de la const	•					
			Sat 28/10/23						1									1. I.						1			

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	ask Name	Duration Start Finish Qtr 2, 2021 Qtr 3, 2021 Qtr 4, 2021 Qtr 4, 2022 Qtr 1, 2022 Qtr 2, 2022 Qtr 3, 2022 Qtr 4, 2022 Qtr 4, 2022 Qtr 4, 2023 Qtr 2, 2023 Qtr 4, 2023 Qtr 4, 2024 Qtr 2, 2024 Qtr 4, 2025 Qtr 2, 2025 Qtr 3, 2025 Qtr 4, 2	Mar Anr
59	CLP	379 days Mon 12/6/23 Mon 24/6/24	
60	Road D1 and L51	60 days Fri 26/4/24 Mon 24/6/24	
61	Road L53 and L54	60 days Mon 12/6/23 Thu 10/8/23	
62	Telecom (HKT, HGC, HKBN)	379 days Mon 12/6/23 Mon 24/6/24	
63	Road D1 and L51	60 days Fri 26/4/24 Mon 24/6/24	
64	Road L53 and L54	60 days Mon 12/6/23 Thu 10/8/23	
65	Procurement	300 days Wed 28/4/21 Mon 21/2/22	
66	Subcontracting / Procurement	132 days Thu 29/4/21 Tue 7/9/21 Subcontracting / Procurement	
167	Traffic Consultant	63 days Thu 29/4/21 Wed 30/6/21 Traffic Consultant	
68	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
69	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
70	Idenpendent Checking Engineer	63 days Thu 29/4/21 Wed 30/6/21 Under the character of th	
171	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
172	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
73	PM's Accomodation (MiC Method)	63 days Thu 29/4/21 Wed 30/6/21 PM's Accomodation (MiC Method)	
74	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
75	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
76	Environmental Team and Team Leader	63 days Thu 2//3/21 Wed 30/6/21 Environmental Team and Team Leader	
70	Subletting		
	Submission and Approval	28 days Thu 29/4/21 Wed 26/5/21 35 days Thu 27/5/21 Wed 30/6/21	
78			
179	Tree Survey and Treatment	63 days Thu 29/4/21 Wed 30/6/21	
180	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
181	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
82	Specialist for Decontamination Works	63 days Thu 29/4/21 Wed 30/6/21 Specialist for Decontamination Works	
83	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
84	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
85	BIM Service	63 days Thu 29/4/21 Wed 30/6/21 Wed 30/6/21 BIM Service	
86	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
187	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
88	Rebar Supply	63 days Wed 7/7/21 Tue 7/9/21 Rebar Supply	
189	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
190	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
191	Concrete Supply	63 days Wed 7/7/21 Tue 7/9/21 Concrete Supply	
192	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
93	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
94	Bitumen Supply and Paving	63 days Wed 7/7/21 Tue 7/9/21 Bitumen Supply and Paving	
95	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
96	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
97	Ground Investigation Works	63 days Wed 7/7/21 Tue 7/9/21 Ground Investigation Works	
98	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
99	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
00	Demolition Works	63 days Wed 7/7/21 Tue 7/9/21 Demolition Works	
01	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
02	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
03	Pipe Jacking Works	63 days Thu 29/4/21 Wed 30/6/21 Pipe Jacking Works	
.04	Subletting	28 days Thu 29/4/21 Wed 26/5/21	
05	Submission and Approval	35 days Thu 27/5/21 Wed 30/6/21	
06	Road Marking	63 days Wed 7/7/21 Tue 7/9/21 Road Marking	
07	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
08	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
09	Road Lighting System (Design and Install)	63 days Wed 7/7/21 Tue 7/9/21 Road Lighting System (Design and Install)	
10	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
11	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
12	Landscaping Works	63 days Wed 7/7/21 Tue 7/9/21 Landscaping Works	
13	Subletting	28 days Wed 7/7/21 Tue 3/8/21	
14	Submission and Approval	35 days Wed 4/8/21 Tue 7/9/21	
15	E&M Works	63 days Wed 7/7/21 Tue 7/9/21	
			1

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	ask Name	Duration Start	Finish	Apr May II	un Jul Aug	Sep Oct Nov	Dec Jan Fe	eb Mar A	pr May Jun	Jul Aua S	ep Oct Nov	Dec Jan Fel	Mar Apr	May Jun Ju	Aug Sep	Oct Nov F	Dec Jan Fe	b Mar Anr	May Jun		ep Oct N	ov Dec Jan	1 Feb Mar A	pr May Jun	Jul Aug Sei	6 Qtr 4, 2025 p Oct Nov De	c Jan Feb M	26 Q¹ ∕Iar Ar
	Submission and Approval	35 days Wed 4/8/21	Tue 7/9/21							an rug e	00000000		, mai r ipr j	nay can ca	, 109 000			<u>, , , , , , , , , , , , , , , , , , , </u>	indy our	our rugio		0120004		ip: may our	our rugeo			
	Major Materials Fabrication and Delivery	300 days Wed 28/4/21	Mon 21/2/22	│ <b>∳</b> ──			━┿	🛡 Majo	r Materials F	ab ricatio	on and Deliv	very																
	MiC Modular for PM's Accomodation	90 days Tue 10/8/21	Sun 7/11/21			• • •	liC Modula	ar for PN	l's Accomod	lation																		
	Fabrication and Delivery	90 days Tue 10/8/21	Sun 7/11/21																									
	Waterpipe (Supply and Test)	300 days Wed 28/4/21	Mon 21/2/22	│ <del>∳</del> ───				🛡 Wate	erpipe (Supp	ly and Te	est)																	
	Batch 1	60 days Wed 28/4/21	Sat 26/6/21																									
	Batch 2	120 days Sun 27/6/21	Sun 24/10/21																									
	Batch 3	120 days Mon 25/10/2	1 Mon 21/2/22																									
	Drainage Pipe (Supply and Test)	300 days Wed 28/4/21	Mon 21/2/22	│ <b>∳</b> ───			━┥┥━┥┥╸	🛡 Drair	nage Pipe (S	upply an	d Test)																	
	Batch 1	80 days Wed 28/4/21	Fri 16/7/21																									
	Batch 2	100 days Sat 17/7/21	Sun 24/10/21																									
	Batch 3	120 days Mon 25/10/2	1 Mon 21/2/22																									
	Sewerage Pipe (Supply and Test)	300 days Wed 28/4/21	Mon 21/2/22	<b>│ ∳──</b>			━╋━╋	🛡 Sewe	erage Pipe (S	Sur ply ar	nd Test)																	
	Batch 1	80 days Wed 28/4/21	Fri 16/7/21																									
	Batch 2	100 days Sat 17/7/21	Sun 24/10/21																									
	Batch 3	120 days Mon 25/10/2	1 Mon 21/2/22																									
	E&M Materials	60 days Wed 28/4/21	Sat 26/6/21	<b>│ ∳┿┿┿</b>	🗬 E&M Ma	iterials																						
	Fabrication and Delivery	60 days Wed 28/4/21	Sat 26/6/21	1 ⊨⊨∔																								
	Roading Lighting Materials	60 days Wed 28/4/21	Sat 26/6/21	⊺ <b>∳</b> ⊨∔∔	🗬 Roadin	g Lighting M	laterials																					
	Fabrication and Delivery	60 days Wed 28/4/21	Sat 26/6/21	1 ⊨⊨∔																								
	Design and Method of Works	578 days Tue 20/4/21	Fri 18/11/22	╴	_					-		Design and	Method of	of Works														
	Permanent Works Design	499 days Thu 10/6/21	Fri 21/10/22	•							Perr	manent Wo	rks Desig	n														
	Natural Terrain Hazard Study	214 days Sat 28/8/21	Tue 29/3/22		-		_		Natural Terr	ain Haza	rd Study																	
	Submission of the Detailed Boulder Survey Report with the Boulder Hazard Mitigation Measures	154 days Sat 28/8/21	Fri 28/1/22				-																					
	Approval from GEO	60 days Sat 29/1/22	Tue 29/3/22																									
	Sewage Pumping Station	201 days Sat 8/1/22	Wed 27/7/22				╺			🗨 Sew	age Pumpir	ng Station																
	Prepare and Submit Design	120 days Sat 8/1/22	Sat 7/5/22				•																					
	ICE Certification, Approval and Consent	21 days Sun 8/5/22	Sat 28/5/22																									
	Approval from DSD	60 days Sun 29/5/22	Wed 27/7/22																									
	Transformer Room	141 days Thu 10/6/21	Thu 28/10/21			Tra	ansformer	Room																				
	Prepare and Submit Design	60 days Thu 10/6/21	Sun 8/8/21	-    🖌																								
	ICE Certification, Approval and Consent	21 days Mon 9/8/21	Sun 29/8/21																									
	Approval from CLP	60 days Mon 30/8/21	Thu 28/10/21																									
	Road Lighting System for Road D1 and L51	175 days Sat 29/1/22	Fri 22/7/22				•			🛡 Road	I Lighting S	ystem for F	load D1 a	nd L51														
	Prepare and Submit Design	70 days Sat 29/1/22	Fri 8/4/22				1																					
	ICE Certification, Approval and Consent	21 days Sat 9/4/22	Fri 29/4/22	-																								
	Approval from HyD Lighting Division	84 days Sat 30/4/22	Fri 22/7/22	-							<u> </u>																	
	Road Lighting System for Road L53 and L54	175 days Sat 30/4/22	Fri 21/10/22							-	🗕 🕂 Roa	d Lighting	System fo	r Road L53	and L54													
	Prepare and Submit Design	70 days Sat 30/4/22	Fri 8/7/22																									
	ICE Certification, Approval and Consent	21 days Sat 9/7/22	Fri 29/7/22	-																								
	Approval from HyD Lighting Division	84 days Sat 30/7/22	Fri 21/10/22	-																								
	Temporary Works Design	539 days Tue 20/4/21	Mon 10/10/22	혿┥┿┿┯┿							Temp	orary Work	s Design															
	Site Establishment	112 days Tue 20/4/21	Mon 9/8/21	┤╺┽┼╼╍┥	🗕 🚽 s	te Establish	ment																					
	PM's Accomodation	40 days Thu 1/7/21	Mon 9/8/21	1	<b>—</b> P	V's Accomo	dation																					
	Prepare and Submit Design	20 days Thu 1/7/21	Tue 20/7/21	1	<b>≚</b> , ∥																							
	ICE certification, approval and Consent	20 days Wed 21/7/21	Mon 9/8/21																									
	Site facilities (Hoarding, Project Signboard, Temporary Traffic Sign etc.)	32 days Tue 20/4/21	Fri 21/5/21		ite facilities	(Hoarding,	Project Sig	gnboard	l, Temporary	Traffic S	Sign etc.)																	
	Prepare and Submit Design	20 days Tue 20/4/21	Sun 9/5/21	🐈																								
	ICE Certification, Approval and Consent	12 days Mon 10/5/21	Fri 21/5/21																									
	Typical Excavation Shoring System for Trial Pit	30 days Mon 10/5/21	Tue 8/6/21	┤│┢━₩	Typical Ex	cavation Sh	oring Syst	tem for 1	Trial Pit																			
	Prepare and Submit Design	18 days Mon 10/5/21	Thu 27/5/21																									
	ICE Certification, Approval and Consent	12 days Fri 28/5/21		🕌																								
-	Decontamination Works	425 days Sat 1/5/21	Wed 29/6/22	┤┟┟┷┓┇┙						Deconta	mination W	orks																
	Contamination Assessment Plan	332 days Sat 1/5/21	Mon 28/3/22	┤┝┙					Contaminati																			
	Batch 1	44 days Sat 1/5/21		┤┟┙┙	Batch 1																							
	Site Appraisal and Preparation of Plan	14 days Sat 1/5/21		╡╏ <mark>╻</mark>																								

Master Programme Rev.1

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

D Task I		Duration Start	Finish		un Jul Aug									2023 C eb Mar A							Oct N	ov Dec				
73	Submission and Endorsement by EPD	30 days Sat 15/5/21	Sun 13/6/21														Ť									
4	Batch 2	55 days Mon 31/1/22	2 Sat 26/3/22					+	Batch 2																	
;	Site Appraisal and Preparation of Plan	25 days Mon 31/1/22																								
	Submission and Endorsement by EPD	30 days Fri 25/2/22	Sat 26/3/22						μ																	
	Batch 3	55 days Wed 2/2/22	Mon 28/3/22						Batch 3	3																
	Site Appraisal and Preparation of Plan	25 days Wed 2/2/22	Sat 26/2/22					<b>)</b>																		
	Submission and Endorsement by EPD	30 days Sun 27/2/22	Mon 28/3/22																							
)	Cement Solidification System	48 days Fri 13/5/22	Wed 29/6/22							<b></b> Ce	ement So	lidificatio	on Systen	ו												
	Prepare and Submit Design	24 days Fri 13/5/22	Sun 5/6/22	1																						
	ICE Certification, Approval and Consent	24 days Mon 6/6/22	Wed 29/6/22																							
	Biopile System	48 days Fri 13/5/22	Wed 29/6/22						-	🔫 Bi	i <mark>o</mark> pile Sys	stem														
	Prepare and Submit Design	24 days Fri 13/5/22	Sun 5/6/22	1																						
	ICE Certification, Approval and Consent	24 days Mon 6/6/22	Wed 29/6/22	1																						
	Demolition Works	84 days Sun 29/8/21	Sat 20/11/21		•		🛡 Demo	lition Wo	rks 🗍																	
	Demolition of RC Structures less than 2-storey	48 days Sun 29/8/21	Fri 15/10/21	1	•	╺╺╼╼╼	)emolitio	n of RC St	ructures l	ess tha	r 2-storey	у														
	Prepare and Submit Design	24 days Sun 29/8/21	Tue 21/9/21	1																						
	ICE Certification, Approval and Consent	24 days Wed 22/9/21	Fri 15/10/21	1																						
	Demolition of Steel Frame Structures	60 days Wed 22/9/21	Sat 20/11/21	1			🛡 Demo	lition of S	Steel Fram	e Struc	tures															
	Prepare and Submit Design	36 days Wed 22/9/21	Wed 27/10/21																							
	ICE Certification, Approval and Consent	24 days Thu 28/10/21	1 Sat 20/11/21	1			<b>Б</b>																			
	Drainage, Sewerage and Water Works	60 days Sun 29/8/21	Wed 27/10/21		-		Drainage	e, Sewerag	ge and Wa	ter Woi	rks															
	ELS Design (By Shoring Method)	36 days Sun 29/8/21	Sun 3/10/21	1	-	EL	S Design	(By Shori	ng Metho	d)																
	Prepare and Submit Design	12 days Sun 29/8/21	Thu 9/9/21	1		5																				
	ICE Certification, Approval and Consent	24 days Fri 10/9/21	Sun 3/10/21																							
	Temporary Utility Support	36 days Fri 10/9/21	Fri 15/10/21			<b>₽──₽</b> Т	emporar	y Utility Su	ipport																	
_	Prepare and Submit Design	12 days Fri 10/9/21	Tue 21/9/21			<b>*</b>																				
	ICE Certification, Approval and Consent	24 days Wed 22/9/21	Fri 15/10/21	1																						
	Formwork Design for Manhole Construction	36 days Wed 22/9/21	Wed 27/10/21	i II I			Formwo	rk Design	for Marho	ole Con	truction															
	Prepare and Submit Design	12 days Wed 22/9/21	Sun 3/10/21	1																						
_	ICE Certification, Approval and Consent	24 days Mon 4/10/21	Wed 27/10/21																							
_	Geotechnical Works	48 days Wed 30/3/22	2 Mon 16/5/22	1					• • • •	Geotech	nical Wo	orks														
_	Working Platform	36 days Wed 30/3/22	2 Wed 4/5/22							orking l	Flatform															
_	Prepare and Submit Design	12 days Wed 30/3/22	2 Sun 10/4/22	1																						
-	ICE Certification, Approval and Consent	24 days Mon 11/4/22	Wed 4/5/22	1																						
-	Formwork Design for RC Structures	36 days Mon 11/4/22	Mon 16/5/22	1					<b>•</b> •	Formwo	k Desigr	n f <mark>or</mark> RC \$	Structure	s												
-	Prepare and Submit Design	12 days Mon 11/4/22	Fri 22/4/22	1																						
_	ICE Certification, Approval and Consent	24 days Sat 23/4/22	Mon 16/5/22	1																						
_	Pipe Jacking	60 days Sat 14/8/21	Tue 12/10/21	1	- <b>•</b>		ipe Jacki	ng																		
	ELS Design (By Shoring Method)	60 days Sat 14/8/21	Tue 12/10/21	1	- <b>•</b>		LS Desig	n (By Sho	ring Meth	od)																
	Prepare and Submit Design	30 days Sat 14/8/21	Sun 12/9/21	1	📲																					
	ICE Certification, Approval and Consent	30 days Mon 13/9/21	Tue 12/10/21	1																						
	Retaining Wall	214 days Sat 28/8/21	Tue 29/3/22	1	-				Retaini	ng Wall																
	Formwork Design for Lagging Wall Construction (Soldier	36 days Sat 29/1/22	Sat 5/3/22					F	ormwork	Design	for Lagg	ing Wall	Construc	tion (So	ldier Pile	Wall)										
	Pile Wall)																									
	Prepare and Submit Design	12 days Sat 29/1/22	Wed 9/2/22					Ĩ <u>∎</u>																		
	ICE Certification, Approval and Consent	24 days Thu 10/2/22	Sat 5/3/22					+																		
	Formwork Design for Lagging Wall Construction (Bored Pile Wall)	36 days Thu 10/2/22	Thu 17/3/22						Formwor	rk Desig	gh for Lag	gging Wa	ll Constru	uction (B	ored Pile	e Wall)										
	Prepare and Submit Design	12 days Thu 10/2/22	Mon 21/2/22					Ĕ.																		
1	ICE Certification, Approval and Consent	24 days Tue 22/2/22	Thu 17/3/22	1				🎽																		
	Formwork Design for RC Capping Beam Construction	36 days Tue 22/2/22	Tue 29/3/22						🛡 Formw	ork Des	ign for R	C Cappin	g Beam (	Construc	tion											
1	Prepare and Submit Design	12 days Tue 22/2/22	Sat 5/3/22																							
	ICE Certification, Approval and Consent	24 days Sun 6/3/22	Tue 29/3/22					🎽																		
	Formwork Design for RC Retaining Wall Construction	36 days Sat 28/8/21	Sat 2/10/21		-	<b>ee</b> Fa	rmwork E	esign for	RC Retair	ning Wa	II Constru	uction														
	Prepare and Submit Design	12 days Sat 28/8/21	Wed 8/9/21																							
	ICE Certification, Approval and Consent	24 days Thu 9/9/21																								
1	Detention Pond	36 days Sat 29/1/22		+					Detention																	

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

28	Name	Duration Start	Finish	Apr May Jun Ju	I Aug Sep O	ct Nov Dec	Jan Feb Mar	r Apr May Ju	n Jul Aug S	ep Oct Nov	v Dec Jan F	eb Mar Apr May	Jun Jul Au	ig Sep Oc	t Nov Dec	Jan Feb M	ar Apr May	Jun Jul Au	ug Sep Oo	t Nov Dec	Jan Feb Ma	r Apr May Jun	Jul Aug Sep	Oct Nov Dec	Qtr 1, 2026 Jan Feb Mar	Ir Ap
9	Formwork Design for RC Structure Construction	36 days Sat 29/1/22					Ţ	-ormwork D	esign for RC	Structure	re Construc	lion														
	Prepare and Submit Design	12 days Sat 29/1/22																								
	ICE Certification, Approval and Consent	24 days Thu 10/2/22																								
	RC Box Culvert	150 days Sat 29/1/22							RC Box																	
	Temp Works for Drainage Diversion	150 days Sat 29/1/22					Ŧ		Temp W	orks for D	Drainage Div	ersion														
_	Prepare and Submit Design	30 days Sat 29/1/22																								
	ICE Certification, Approval and Consent (By DSD)	120 days Mon 28/2/22																								
5	Temp Excavation for Box Culvert Construction (Open Cut with Concrete Block Wall)	50 days Mon 28/2/22	Mon 18/4/22					Temp	Excavation	for Box Ci	ulvert Cons	truction (Oper	n Cut with C	oncrete	Block Wa	11)										
;	Prepare and Submit Design	25 days Mon 28/2/22	Thu 24/3/22				🎽																			
	ICE Certification, Approval and Consent	25 days Fri 25/3/22	Mon 18/4/22																							
3	Formwork and Falsework Design for RC Structures	50 days Fri 25/3/22	Fri 13/5/22					Fo	mwork and	Falsewor	rk Design fo	r RC Structure	es													
)	Prepare and Submit Design	25 days Fri 25/3/22	Mon 18/4/22																							
	ICE Certification, Approval and Consent	25 days Tue 19/4/22	Fri 13/5/22																							
	Transformer Room	50 days Fri 29/10/21	Fri 17/12/21			<b></b>	Transforme	er Room																		
	Formwork and Falsework Design for RC Structures	50 days Fri 29/10/21	Fri 17/12/21			<b></b>	F <mark>ormwork</mark> a	and Falsewo	ork Design f	or RC Stru	uctures															
	Prepare and Submit Design	25 days Fri 29/10/21	Mon 22/11/21																							
	ICE Certification, Approval and Consent	25 days Tue 23/11/21	1 Fri 17/12/21																							
	Sewage Pumping Station	75 days Thu 28/7/22	Mon 10/10/22							Sew	vage Pumpi	ng Station														
	ELS Design (By Shoring Method)	50 days Thu 28/7/22	Thu 15/9/22							ELS De	esign (By Sh	oring Method	)													
	Prepare and Submit Design	25 days Thu 28/7/22	Sun 21/8/22	1					🍋																	
	ICE Certification, Approval and Consent	25 days Mon 22/8/22	Thu 15/9/22						🎽	ч																
· ·	Formwork and Falsework Design for RC Structures	50 days Mon 22/8/22	Mon 10/10/22						-	Form	mwork and	Falsework De	sign for RC	Structure	es											
)	Prepare and Submit Design	25 days Mon 22/8/22	Thu 15/9/22							Ы																
	ICE Certification, Approval and Consent	25 days Fri 16/9/22	Mon 10/10/22							<b>1</b>																
	Method Statement and Risk Assessment	578 days Tue 20/4/21	Fri 18/11/22								Method S	tatement and I	Risk Assess	sment												
	Site Establishment	150 days Tue 20/4/21	Thu 16/9/21	-		ite Establish	nment																			
	General Site Clearance	9 days Tue 20/4/21	Wed 28/4/21	General S	ite Clearan	ce																				
	Prepare and Submit Method Statement/Risk Assessment	2 days Tue 20/4/21	Wed 21/4/21	<b>H</b>																						
	Approval and Consent	7 days Thu 22/4/21	Wed 28/4/21																							
	Hoarding Construction	38 days Sat 22/5/21	Mon 28/6/21	<b>••••</b> •	loarding Co	nstruction																				
	Prepare and Submit Method Statement/Risk Assessment	24 days Sat 22/5/21	Mon 14/6/21																							
	Approval and Consent	14 days Tue 15/6/21	Mon 28/6/21	Ě																						
	Construction of PM's Accomodation (MiC)	38 days Tue 10/8/21	Thu 16/9/21			onstruction	of PM's Ac	comodatio:	n (MiC)																	
	Prepare and Submit Method Statement/Risk Assessment	24 days Tue 10/8/21	Thu 2/9/21																							
2	Approval and Consent	14 days Fri 3/9/21	Thu 16/9/21		Ĕ H	-																				
	Utilities Detection and Trial Pit Excavation	21 days Wed 9/6/21	Tue 29/6/21		Itilities Dete	ction and T	rial Pit Exc	avation																		
•	Prepare and Submit Method Statement/Risk Assessment	7 days Wed 9/6/21																								
	Approval and Consent	14 days Wed 16/6/21																								
	Project Signboard Construction	38 days Sat 22/5/21			roject Signl	bcard Cons	truction																			
	Prepare and Submit Method Statement/Risk Assessment	24 days Sat 22/5/21																								
	Approval and Consent	14 days Tue 15/6/21																								
	Tree Treatment	42 days Tue 20/4/21																								
	Tree Felling and Protection	28 days Tue 20/4/21		Tree F	elling and P	rotection																				
_	Prepare and Submit Method Statement/Risk Assessment	14 days Tue 20/4/21																								
	Approval and Consent	14 days Tue 4/5/21																								
_	Tree Transplanting	28 days Tue 4/5/21		Tree Tree	Transplanti	ng																				
	Prepare and Submit Method Statement/Risk Assessment	14 days Tue 4/5/21																								
	Approval and Consent	14 days Tue 18/5/21																								
	Ground Investigation (Environmental Borehole, Trial Pit and GI Borehole)	38 days Sun 29/8/21	Tue 5/10/21			Ground Inv	vesugation	Environme	antai Boreho	ne, Irial P	Pit and GI B	orenole)														
1	Prepare and Submit Method Statement/Risk Assessment	24 days Sun 29/8/21	Tue 21/9/21																							
	Approval and Consent	14 days Wed 22/9/21	Tue 5/10/21				╉╂╌╢																			
	Demolition Works	74 days Sat 16/10/21	Tue 28/12/21			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Demolitio	n Works																		
	Demolition of RC Structures less than 2-storey	28 days Sat 16/10/21	Fri 12/11/21			🎮 Demo	olition of RC	C Structures	less than 2	-storey																
-	Prepare and Submit Method Statement/Risk Assessment	14 days Sat 16/10/21	Fri 29/10/21																							
-	Approval and Consent	14 days Sat 30/10/21	Fri 12/11/21				<b>┼</b> ┧ ║																			
	Demolition of Steel Frame Structures	38 days Sun 21/11/2	1 Tue 28/12/21				Demolitio	n of Steel Fi	ame Struct	ures																
						00000111 E							1.1	1 1 1	1.1	1		1 11				1		1		

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	sk Name	Duration Start	Finish	Otr 2, 0004	Otr 2 0004	Otr 4 0004	0+-1 0	022 0+- 0	2022 01	r 2 0000	Otr 4 000	00 04-4	2022	× 2 . 2022	Otr 2 000	2 04 4	2022	Otr 4 000	04 04-0	2024	)tr 3 001	04 04	4 2024	Otr 4 0005	0+-0.00	05 0+- 0	2025	)tr 4 2005	Otr 1 2020	Otra ana
			Finish	Apr May Jun		Qtr 4, 2021 Oct Nov Dec																								
384	Prepare and Submit Method Statement/Risk Assessment	24 days Sun 21/11/21																												
385	Approval and Consent	14 days Wed 15/12/21																												
386	Drainage, Sewerage and Waterworks	56 days Sat 16/10/21																												
387	Waterworks and Associated Reinstatement Works	28 days Sat 16/10/21		_		Wate	rworks	and Assoc	lated Reir	nstatemen	t Works																			
388	Prepare and Submit Method Statement/Risk Assessment	14 days Sat 16/10/21		_																										
389	Approval and Consent	14 days Sat 30/10/21		_																										
390	Drainage and Associated Roadworks	28 days Sat 30/10/21		_		Dra	iinage a	nd Associa	ated Road	lworks																				
391	Prepare and Submit Method Statement/Risk Assessment	14 days Sat 30/10/21		_																										
392	Approval and Consent	14 days Sat 13/11/21		_																										
393	Sewerage and Associated Reinstatement Works	28 days Sat 13/11/21		_			ewerag	e and Asso	clated Re	einstateme	ent works																			
394	Prepare and Submit Method Statement/Risk Assessment	14 days Sat 13/11/21		_																										
395	Approval and Consent	14 days Sat 27/11/21		_					Construe	tion of Po	taining M																			
396	Construction of Retaining Wall	216 days Sun 3/10/21		_					Soldier P	ction of Re	aning w	vali																		
397 398	Soldier Pile Wall Prepare and Submit Method Statement/Risk Assessment	38 days Wed 30/3/22 24 days Wed 30/3/22		_					Soluter F																					
398	Approval and Consent	14 days Sat 23/4/22		_																										
400	Bored Pile Wall			_					Bored Pi	Wall																				
400	Prepare and Submit Method Statement/Risk Assessment	38 days Wed 30/3/22 24 days Wed 30/3/22		-						TT TT CIT																				
401	Approval and Consent	14 days Sat 23/4/22		-																										
402	RC Retaining Wall	38 days Sun 3/10/21		-		RC R	etaining	Wall																						
403	Prepare and Submit Method Statement/Risk Assessment	24 days Sun 3/10/21		-																										
405	Approval and Consent	14 days Wed 27/10/21		-																										
406	Geotechnical Works	38 days Tue 17/5/22		-					Ge	eotechnica	al Works																			
407	Prepare and Submit Method Statement/Risk Assessment	24 days Tue 17/5/22		-																										
408	Approval and Consent	14 days Fri 10/6/22		-									_																	
409	Typical Roadworks Construction (Ducts, Pavement, Steet	38 days Sun 29/8/21	Tue 5/10/21	-	┥	Typical Results	adwork	s Construc	tion (Duc	ts, Pavem	ent, Stee	t furiture,	Road Ma	arking etc.	)															
	furiture, Road Marking etc.)	-																												
410	Prepare and Submit Method Statement/Risk Assessment	24 days Sun 29/8/21	Tue 21/9/21																											
411	Approval and Consent	14 days Wed 22/9/21	Tue 5/10/21																											
412	Site Formation Works (Earthwork and Surface Drainage)	38 days Sun 29/8/21	Tue 5/10/21			Site Form	ation W	orks (Earth	work and	l Surface D	Orainage)																			
413	Prepare and Submit Method Statement/Risk Assessment	24 days Sun 29/8/21	Tue 21/9/21	-																										
414	Approval and Consent	14 days Wed 22/9/21		-																										
415	Decontamination Works	28 days Mon 6/6/22		-						Decontami	nation W	orks																		
416	Cement Solidification Works	28 days Mon 6/6/22		-						Coment So	lidificatio	n Works																		
417	Prepare and Submit Method Statement/Risk Assessment	14 days Mon 6/6/22		-																										
418	Approval and Consent	14 days Mon 20/6/22	Sun 3/7/22	-																										
419	Biopile Works	28 days Mon 6/6/22	Sun 3/7/22	-					E T	Biopile Wo	orks																			
420	Prepare and Submit Method Statement/Risk Assessment	14 days Mon 6/6/22	Sun 19/6/22	-																										
421	Approval and Consent	14 days Mon 20/6/22	Sun 3/7/22	-																										
422	Construction of Sewage Pumping Station	38 days Tue 11/10/22	Thu 17/11/22	2							<b></b> c	onstructio	on of Se	wage Pum	ping Stati	on														
423	Prepare and Submit Method Statement/Risk Assessment	24 days Tue 11/10/22	Thu 3/11/22	-																										
424	Approval and Consent	14 days Fri 4/11/22	Thu 17/11/22	1																										
425	Construction of Transformer Room	38 days Sat 18/12/21	Mon 24/1/22	1		🖛		nstruction	of Transf	former Roo	om																			
426	Prepare and Submit Method Statement/Risk Assessment	24 days Sat 18/12/21	Mon 10/1/22	-																										
427	Approval and Consent	14 days Tue 11/1/22	Mon 24/1/22				¥₩-																							
428	Construction of Detention Pond	28 days Sun 6/3/22	Sat 2/4/22					Con	struction	of Detenti	on Pond																			
429	Prepare and Submit Method Statement/Risk Assessment	14 days Sun 6/3/22	Sat 19/3/22					<b>₩</b>																						
430	Approval and Consent	14 days Sun 20/3/22						<b>*</b>																						
431	Box Culvert Construction	188 days Sat 29/1/22								Box Cu																				
432	Temp Drainage Diversion Works	150 days Sat 29/1/22							Te	emp Drain	age Diver	sior Wor	'KS																	
433	Prepare and Submit Method Statement/Risk Assessment	30 days Sat 29/1/22																												
434	Approval and Consent (By DSD)	120 days Mon 28/2/22		_																										
435 436	Construction of RC Box Culvert Prepare and Submit Method Statement/Risk Assessment	38 days Tue 28/6/22 24 days Tue 28/6/22		-						- Constr	action of	RC Box (	Guivert																	
436	Approval and Consent	14 days Fri 22/7/22		-																										
437	Pipe Jacking	38 days Wed 13/10/21		_		Pipe	Jackin	_																						
438	Prepare and Submit Method Statement/Risk Assessment	24 days Wed 13/10/21		-				9																						
		2. 33,0 1104 10/10/21				====)																			1					
	Tack	Critical Task		Milestone	•	C	many																							
	Task		N	AUGESTOLIA	-	Sum	mary	•																						

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#### Contract No. YL/2020/03 Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works

Task	Name	Duration Start	Finish															Qtr 2, 2																								
)	Approval and Consent	14 days Sat 6/11/21	Fri 19/11/21	Apr May Ju	un Jul Au	g Sep Oc	t Nov Dec	c Jan F	ebMar	AprM	ay∣Jun	Jul Au	ig Sep C	Jct Nov	Dec J	an Feb	Mar	Apr May	/Jun J	ul Aug	Sep O	ct Nov	Dec Ja	an∣Feb	Mar A	pr May	Jun	Jul∣Aı	ıg∣Sep	Oct	NOVDe	ec Jan	FebM	lar Apr	May	<u>Jun J</u> ı	<u>ul Auç</u>	g Sep	Oct No	v∣Dec	Jan Fe	<u>d:</u>
	Road Lighting	28 days Sat 22/10/22	Fri 18/11/22											<b></b>	Road	Lighti	ing																					11111111111111111111111111111111111111				
	Prepare and Submit Method Statement/Risk Assessment	14 days Sat 22/10/22	Fri 4/11/22											1																												
3	Approval and Consent	14 days Sat 5/11/22	Fri 18/11/22											Ě												_																
4	Soft Landscape	38 days Wed 8/9/21	Fri 15/10/21				Soft La	ndscap	De 🛛																																	
5	Tree Planting and Soiling	38 days Wed 8/9/21	Fri 15/10/21				Tree Pla	anting	and Sc	oiling																																
6	Prepare and Submit Method Statement/Risk Assessmer	nt 24 days Wed 8/9/21	Fri 1/10/21			<b>Å</b>																																				
7	Approval and Consent	14 days Sat 2/10/21	Fri 15/10/21																																							
8	Temporary Traffic Management Scheme	329 days Thu 23/9/21	Wed 17/8/22			-							Temp	oorary	Traffic	Manag	geme	nt Sche	eme																							
9	TTA around Ping Ha Road	81 days Thu 23/9/21	Sun 12/12/21					TTA ai	round	Ping H	a Roac	d																														
i0	Preparation of TTMS	49 days Thu 23/9/21	Wed 10/11/21																																							
51	Present and Approved at TMLG	1 day Thu 11/11/21	Thu 11/11/21				ĥ																																			
62	Endorsement of TTMS	21 days Fri 12/11/21	Thu 2/12/21				ĺ ▲_																																			
i3	RWA Application and 2 Days Notification	10 days Fri 3/12/21	Sun 12/12/21				Ĭ																																			
i4	TTA around Ha Tsuen Road	81 days Mon 27/12/2					•			TTA a	ound	Ha Tsu	en Roa	ad																												
5	Preparation of TTMS	49 days Mon 27/12/2						<b>ř</b>																																		
6	Present and Approved at TMLG	1 day Mon 14/2/22							<u></u> []																																	
57	Endorsement of TTMS	21 days Tue 15/2/22																																								
18	RWA Application and 2 Days Notification	10 days Tue 8/3/22																																								
9	TTA around Fung Kong Tsuen Road	81 days Sun 29/5/22											TTA a	around	Fung	Kong	Tsue	n Road																								
0	Preparation of TTMS	49 days Sun 29/5/22																																								
51	Present and Approved at TMLG	1 day Sun 17/7/22										5																														
62	Endorsement of TTMS	21 days Mon 18/7/22																																								
3	RWA Application and 2 Days Notification	10 days Mon 8/8/22																																								
	onstruction	1826 days Thu 29/4/21																																		—						
i5	Preliminary	238 days Thu 29/4/21				ding and	nt Barali		minary	1																																
6 7	Environment Baseline Monitoring	44 days Wed 2/6/21				ronme	nt Baselii		noring	9																																
	Submission of Baseline Monitoring Plan	14 days Wed 2/6/21																																								
8	Conduct Baseline Monitoring	30 days Wed 16/6/21 0 days Thu 15/7/21																																								
0	Completion of Baseline Monitoring Site Depot	238 days Thu 29/4/21			-			Sito	Depot																																	
'1	Site Clearance	2 days Thu 29/4/21						Jile	vepor																																	
2	Establishment		Fri 21/5/21		stablishn	nent																																				
3	Condition Survey	7 days Sat 1/5/21																																								
'4	Tree Survey	7 days Sat 1/5/21	Fri 7/5/21																																							
5	Initial Survey	14 days Sat 1/5/21	Fri 14/5/21																																							
6	Health & Hygiene Facilities	7 days Sat 1/5/21	Fri 7/5/21																																							
7	Underground Utilities Detection	7 days Sat 8/5/21	Fri 14/5/21																																							
8	Setting up Temporary Office	7 days Sat 15/5/21	Fri 21/5/21																																							
9	Hoarding/Project Signboard	8 days Tue 29/6/21		_	🗰 Hoai	rding/Pr	oject Sig	nboard																																		
0	Construction of Concrete Strip	2 days Tue 29/6/21			*																																					
1	Erection of Project Signboard	6 days Thu 1/7/21	Tue 6/7/21																																							
2	Project Manager's Accomodation	54 days Sat 30/10/21	Wed 22/12/21				•	Proje	ect Mar	nager's	Acco	modati	on																													
3	Construction of Foundation	42 days Sat 30/10/21	Fri 10/12/21			Ċ	-	J																																		
4	Delivery of MiC Modulars	3 days Sat 11/12/21	Mon 13/12/21				5																																			
5	Erection of MiC Modulars	4 days Sat 11/12/21	Tue 14/12/21				- <b></b>																																			
6	Connection of Power and associated E&M works	4 days Wed 15/12/2	1 Sat 18/12/21																																							
7	Testing and Commissioning	2 days Sun 19/12/2	Mon 20/12/21				Ĩ																																			
8	Delivery of Office Furniture and Equipments	2 days Tue 21/12/21	Wed 22/12/21				ì																																			
9	Contractor's Accomodation	17 days Sat 30/10/21	Mon 15/11/21				Cor	ntracto	r's Acc	comod	ation																															
)	Construction of Foundation	10 days Sat 30/10/21	Mon 8/11/21																																							
1	Delivery and Erection of Office Containers	3 days Tue 9/11/21	Thu 11/11/21				5																																			
2	Connection of Power Supply	2 days Fri 12/11/21	Sat 13/11/21				5																															11111111111111111111111111111111111111				
3	Delivery of office Furniture and Equipments	2 days Sun 14/11/2	Mon 15/11/21				<b>*</b>																																			
4	Completion of Site Accomodation	0 days Wed 22/12/2	1 Wed 22/12/21				4																																			
5	Section 1A1	792 days Sat 28/8/21	Sat 28/10/23									┿╼╏┿										🗣 Se	ction 1	IA1														11111111111111111111111111111111111111				
6	Site 3-6 (Portion A2,B1,B2,B3)	792 days Sat 28/8/21	Sat 28/10/23																			🗣 Sit	e 3-6 (	Portio	n A2,E	B1,B2,	B3)															
	Site Clearance	158 days Sat 28/8/21								learan	h-						11			1 H						1																

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

			Finish	Apr May Ju	in Jui Aug	Sep Oct No	v Dec Ja	n Feb Ma	r Apr Ma	ay Jun Ju	I Aug S	ep Oct No	ov Dec	Jan Feb	Mar Ap	or May Ju	in Jul A	Aug∣Sep	Oct No	ov Dec	Jan Feb I	/ar Apr I	viayJun	Jui Ai	ug sep	OCLIN	ov Dec J	an Febiliv	ar Apr Ma	ay Jun J	Jul Aug Se	ep Oct Nov	, 2026 Qtr eb Mar Apr
498	Site Clearance for Portion A2	5 days Sat 28/8/21		_		<u> </u>		$\downarrow$																									
.99	Site Clearance for Portion B1,B2,B3	5 days Fri 28/1/22		_																													
00 01	Establishment	181 days Thu 2/9/21		_					stablis	nment																							
1	Condition Survey for Existing Structures to be Demolished for Portion A2	14 days Thu 2/9/21	Wed 15/9/21																														
2	Condition Survey for Existing Structures to be Demolished for Portion B1,B2,B3	14 days Wed 2/2/22	Tue 15/2/22					ħ																									
	Tree Survey for Portion A2	14 days Thu 2/9/21	Wed 15/9/21	-																													
1	Tree Survey for Portion B1,B2,B3	14 days Wed 2/2/22	Tue 15/2/22	_																													
5	Initial Survey for Portion A2	14 days Thu 2/9/21	Wed 15/9/21	-																													
3	Initial Survey for Portion B1,B2,B3	14 days Wed 2/2/22	Tue 15/2/22	_																													
7	Site Haul Road for Portion A2	7 days Thu 2/9/21	Wed 8/9/21	_																													
8	Site Haul Road for Portion B1,B2,B3	7 days Wed 2/2/22	Tue 8/2/22	-																													
9	Health & Hygiene Facilities	7 days Thu 2/9/21	Wed 8/9/21	-																													
0	Fence Work & Gate for Portion A2	14 days Thu 2/9/21	Wed 15/9/21	-																													
11	Fence Work for Portion B1,B2,B3	14 days Wed 2/2/22	Tue 15/2/22	_																													
12	Underground Utilities Detection for Portion A2	7 days Thu 2/9/21	Wed 8/9/21	-																													
13	Underground Utilities Detection for Portion B1,B2,B3	7 days Wed 2/2/22	Tue 8/2/22	-																													
14	Install Monitoring Points	14 days Wed 16/2/22	Tue 1/3/22	-																													
5	Tree Treatment	167 days Thu 16/9/21	Tue 1/3/22	-		•		╺┿╫╍╤╶╹	ree Tre	atment																							
16	Tree Felling for Portion A2	14 days Thu 16/9/21	Wed 29/9/21	-																													
7	Tree Felling for Portion B1,B2,B3	14 days Wed 16/2/22	Tue 1/3/22	_																													
8	Tree Protection Portion A2	14 days Thu 16/9/21	Wed 29/9/21	-		<b>*</b>																											
19	Tree Protection Portion B1,B2,B3	14 days Wed 16/2/22	Tue 1/3/22	_																													
0	Demolition work	71 days Wed 16/2/22	Wed 27/4/22	_						emolitio	on work																						
1	Demolition of Existing Structures	71 days Wed 16/2/22	Wed 27/4/22	_																													
2	Decontamination	668 days Thu 30/9/21	Sat 29/7/23	-		┥						_						Decor	itamina	ation													
3	CAP	180 days Thu 30/9/21	Mon 28/3/22	_		┥	_	┿	🕫 САР																								
4	Site Appraisal for Portion A2	60 days Thu 30/9/21	Sun 28/11/21	-																													
5	Site Appraisal for Portion B1,B2,B3 & Preparation of CAP for all Portions	25 days Wed 2/2/22	Sat 26/2/22																														
6	Submission & Endorsement by EPD	30 days Sun 27/2/22	Mon 28/3/22	-					•																								
27	Ground Investigation (Trial Pit / Borehole)	45 days Tue 29/3/22	Thu 12/5/22	-						Ground	d Invest	igation (T	Frial Pit	t / Borel	nole)																		
28	Trial Pit Sampling & Testing	45 days Tue 29/3/22	Thu 12/5/22	-				9	×-																								
29	Inspection Pit for installing Groundwater Wells	45 days Tue 29/3/22	Thu 12/5/22	-				9	×–																								
30	Decontamination Works	443 days Fri 13/5/22	Sat 29/7/23						•									Decor	itamina	ation W	orks												
31	Pilot Scale Trials	39 days Fri 13/5/22	Mon 20/6/22						•	Pi	ilct Sca	le Trials																					
32	Pilot Trial	15 days Fri 13/5/22	Fri 27/5/22																														
33	Treatability Test for Heavy Metal	24 days Sat 28/5/22	Mon 20/6/22																														
4	CAR & RAP Submission	43 days Tue 21/6/22	Tue 2/8/22							-	💶 CAI	R & RAP	Submi	ssion																			
5	Preparation of CAR & RAP	15 days Tue 21/6/22	Tue 5/7/22																														
6	Review & Accepted by EPD	28 days Wed 6/7/22	Tue 2/8/22							ļ																							
7	Excavation of Contaminated Soil	45 days Wed 3/8/22	Fri 16/9/22								<b>1</b>	🛡 Excav	ation o	of Conta	minate	d Soil																	
8	To Stockpile for Biopile 2	45 days Wed 3/8/22	Fri 16/9/22									Ъ																					
9	To Stockpile for Cement Solidification Plant 2	45 days Wed 3/8/22	Fri 16/9/22																														
0	Biopile Works (Hydrocarbon Treatment)	323 days Wed 6/7/22	Wed 24/5/23													B	liopile \	Works	(Hydrod	carbon	Treatme	nt)											
1	Biopile System Setup (Biopile 2)	76 days Wed 6/7/22	Mon 19/9/22							•		🛡 Biopil	le Syst	em Setu	ip (Biop	pile 2)																	
2	Preparation of Base	3 days Wed 6/7/22	Fri 8/7/22							5																						****	
3	Waterproofing Works	2 days Sat 9/7/22	Sun 10/7/22								HUI																						
4	Placing 1st layer of contaminated soil & associated pipe	15 days Wed 3/8/22	Wed 17/8/22								<b>Í</b>																						
5	Placing 2nd layer of contaminated soil & associated pipe	15 days Thu 18/8/22																		100000000000000000000000000000000000000													
i	Placing final layer of contaminated soil & cover up the whole biople	15 days Fri 2/9/22	Fri 16/9/22																														
7	Erect of Shelter for Biopile System	15 days Mon 11/7/22	Mon 25/7/22	-																													
3	Connection & Commissioning of Biopile System	3 days Sat 17/9/22		-							<b>[  </b>  •	₩																					
9	Biopile System Operation (6 months)	180 days Tue 20/9/22		-											= 🛡 Bi	opile Sy	stem O	peratio	n (6 m	onths)													
0	Operation & Maintenance	180 days Tue 20/9/22		-												,,																****	
1	Vertification, Sampling & Testing	180 days Tue 20/9/22		-								Ŧ																					

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	ame	Duration Start	Finish	Apr May Jun	Jul Aug Sep C	ct Nov Dec	Jan Feb M	ar Apr Ma	y Jun Jui	Aug Sep	Oct Nov	v Dec Jan	Feb Mar	Apr May J	un Jul	Aug Sep	Oct Nov	/Dec Jar	Feb Ma	ar Apr	May Ju	n Jul A	ug Sep (	Oct Nov [	Dec Jan	Feb Mar	Apr May Jur	I Jul Aug Se	ep Oct Nov E	2026 Qt b Mar Ap
52	Completion of Biopile	30 days Sun 19/3/23												Com	pletion	of Biopil														
53	Submission of Closure Assessment Report	30 days Sun 19/3/23																												
4	Backfilling to Formation	25 days Tue 18/4/23													ר 📗															
55	Removal of Facilities	12 days Sat 13/5/23												<b>  ■</b> -																
56	Cement Solidification Works (Heavy Metal Treatment)	343 days Sat 9/7/22	Fri 16/6/23						•						🗣 Cem	ient Solii	lificatio	on Works	s (Heavy	y Meta	l Treatr	nent)								
7	Mixing Facilities Setup (Plant 2)	39 days Sat 9/7/22	Tue 16/8/22						<u> </u>	💵 Mixi	ing Facil	lities Setu	up (Plan	t 2)																
8	Preparation of Base	6 days Sat 9/7/22	Thu 14/7/22						- FL																					
9	Placing Concrete Block Barrier	9 days Fri 15/7/22	Sat 23/7/22																											
60	Waterproofing Works	6 days Sun 24/7/22	Fri 29/7/22																											
51	Erection of Shelter	18 days Sat 30/7/22	Tue 16/8/22																											
62	Cement Solidification Operation	253 days Sat 17/9/22	Sat 27/5/23												Cemen	t Solidifi	cation (	Operatio	n											
3	Mixing Operation	243 days Sat 17/9/22	Wed 17/5/23							9																				
64	Confirmation Test	243 days Tue 27/9/22	Sat 27/5/23							9																				
5	Backfilling to Formation	220 days Wed 9/11/22	Fri 16/6/23												<u>.</u>															
6	Decommissing of Facilities	4 days Sun 28/5/23	Wed 31/5/23											F																
7	Remediation Report Submission	43 days Sat 17/6/23	Sat 29/7/23												•	Remed	ation R	Report S	ubmiss	ion										
8	Preparation of Remediation Report	15 days Sat 17/6/23	Sat 1/7/23																											
9	Review & Accepted by EPD	28 days Sun 2/7/23	Sat 29/7/23														ЫΙ													
0	Geotechnical Work	142 days Wed 1/3/23	Thu 20/7/23	1									•			Geotech	nical W	/ork												
1	Check Dam Construction	142 days Wed 1/3/23	Thu 20/7/23										╽╽╪┿━			Check D	am Cor	nstructio	n											
2	Excavation to Formation	1 day Wed 1/3/23	Wed 1/3/23	1																										
3	Blinding Concrete	1 day Thu 2/3/23	Thu 2/3/23	-									I R																	
4	RC Structure Construction	140 days Fri 3/3/23	Thu 20/7/23	-												RC Stru	ture Co	onstruct	ion											
5	Base Slab & Wall Base	15 days Fri 3/3/23	Fri 17/3/23	-									👗																	
6	Slab on Cut Slope	25 days Sat 18/3/23	Tue 11/4/23																											
7	Lower Portion of Wall	45 days Wed 12/4/23	Fri 26/5/23	-																										
8	Upper Portion of Wall	45 days Sat 27/5/23	Mon 10/7/23	-																										
79	Baffle Structures	10 days Tue 11/7/23	Thu 20/7/23	-											¥		ЦП													
30	Site formation	354 days Wed 9/11/22	Sat 28/10/23	-							-			-			= 💵 Si	ite forma	ition											
1	Earthwork	302 days Wed 9/11/22	Wed 6/9/23	-							-				_	E	arthwor	rk												
2	Excavation to +30mPD	15 days Tue 14/2/23		-																										
3	Excavation to Formation	25 days Tue 11/7/23	Fri 4/8/23	-									1			Ь														
34	Cut Slope to +30mPD	15 days Tue 14/2/23		-											1															
35	Cut Slope to Formation	25 days Tue 11/7/23		-																										
86	Backfilling & Compaction to Formation	287 days Wed 9/11/22		-																										
37	Trimming for Fill Slope	15 days Wed 23/8/23		-											ſ	╤╅														
8	Surface Drainage	242 days Wed 1/3/23		-													= 🗊 Sı	urface D	rainage	,										
9	At Cut Slope Crest	61 days Wed 1/3/23		-										At C	Cut Slo	oe Crest			Ŭ											
0	Excavation to Formation	40 days Wed 1/3/23		-									<b>H</b>	•																
1	Catchpit	40 days Wed 8/3/23		-										T_																
2	U-channel	40 days Wed 22/3/23		-																										
3	At +30mPD	54 days Mon 1/5/23		-											<b>.</b>	+30mPD														
4	Excavation to Formation	30 days Mon 1/5/23		-																										
5	Catchpit	30 days Thu 11/5/23		-																										
6	U-channel	30 days Thu 25/5/23		_																										
7		10 days Thu 1/6/23		_																										
8	Stepped Channel At Formation Level	-		_														t Format												
	Excavation to Formation	85 days Sat 5/8/23 64 days Sat 5/8/23		_														ronna	ion Lev	/ei										
9		-		_																										
0	Catchpit	64 days Sat 12/8/23		_																										
1	U-channel	64 days Sat 26/8/23		_														1												
2	Stepped Channel	20 days Sat 2/9/23		_																										
3	At Fill Slope Toe	52 days Thu 7/9/23															At	t Fill Slo	pe Toe											
4	Excavation to Formation	28 days Thu 7/9/23		_																										
)5	Catchpit	28 days Sun 17/9/23																												
6	U-channel	28 days Sun 1/10/23																												
7	Concrete Access	130 days Thu 25/5/23												-		┥┼╾┼┩	Conci	rete Acc	ess											
8	Maintenance Access	30 days Thu 25/5/23	Fri 23/6/23																											

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

) Task		Duration Start	Finish
09 10	Stairway above +30mPD	10 days Sat 24/6/23	
11	Stairway above Formation Level Planned Completion of Section 1A1	10 days Fri 22/9/23 0 days Sat 28/10/23	
12	Section 1A2	792 days Sat 28/8/21	
13	Site 3-7 (Portion A2,B2,B3,B5)	792 days Sat 28/8/21	
14	Site Clearance	158 days Sat 28/8/21	
15	Site Clearance for Portion A2	5 days Sat 28/8/21	
16	Site Clearance for Portion B2,B3,B5	5 days Fri 28/1/22	Tue 1/2/22
17	Establishment	181 days Thu 2/9/21	Tue 1/3/22
18	Condition Survey for Existing Structures to be Demolished for Portion A2	14 days Thu 2/9/21	Wed 15/9/21
9	Condition Survey for Existing Structures to be Demolished for Portion B2,B3,B5	14 days Wed 2/2/22	
0	Tree Survey for Portion A2	-	Wed 15/9/21
21	Tree Survey for Portion B2,B3,B5	14 days Wed 2/2/22	
22	Initial Survey for Portion A2		Wed 15/9/21
23	Initial Survey for Portion B2,B3,B5	14 days Wed 2/2/22	
24	Site Haul Road for Portion A2	-	Wed 8/9/21
25	Site Haul Road for Portion B2,B3,B5	7 days Wed 2/2/22	
26	Health & Hygiene Facilities		Wed 8/9/21
27	Fence Work & Gate for Portion A2	-	Wed 15/9/21
28	Fence Work for Portion B2,B3,B5	14 days Wed 2/2/22	
29	Underground Utilities Detection for Portion A2	7 days Thu 2/9/21	
30	Underground Utilities Detection for Portion B2,B3,B5	7 days Wed 2/2/22	
1	Install Monitoring Points	14 days Wed 16/2/22	
2	Tree Treatment	167 days Thu 16/9/21	
3	Tree Felling for Portion A2	14 days Thu 16/9/21	
4	Tree Felling for Portion B2,B3,B5	14 days Wed 16/2/22	
35	Tree Protection Portion A2	14 days Thu 16/9/21	
36	Tree Protection Portion B2,B3,B5	14 days Wed 16/2/22	
37	Demolition work	71 days Wed 16/2/22	
38	Demolition of Existing Structures	71 days Wed 16/2/22	
39	Decontamination	668 days Thu 30/9/21	
40 41	CAP Site Appraisal for Portion A2	180 days Thu 30/9/21 60 days Thu 30/9/21	
12	Site Appraisal for Portion B2,B3,B5 & Preparation of CAP for all Portions	25 days Wed 2/2/22	
43	Submission & Endorsement by EPD	30 days Sun 27/2/22	Mon 28/3/22
14	Ground Investigation (Trial Pit / Borehole)	45 days Tue 29/3/22	Thu 12/5/22
45	Trial Pit Sampling & Testing	45 days Tue 29/3/22	Thu 12/5/22
16	Inspection Pit for installing Groundwater Wells	45 days Tue 29/3/22	Thu 12/5/22
47	Decontamination Works	443 days Fri 13/5/22	Sat 29/7/23
48	Pilot Scale Trials	39 days Fri 13/5/22	Mon 20/6/22
49	Pilot Trial	15 days Fri 13/5/22	Fri 27/5/22
50	Treatability Test for Heavy Metal	24 days Sat 28/5/22	Mon 20/6/22
51	CAR & RAP Submission	43 days Tue 21/6/22	Tue 2/8/22
52	Preparation of CAR & RAP	15 days Tue 21/6/22	Tue 5/7/22
53	Review & Accepted by EPD	28 days Wed 6/7/22	Tue 2/8/22
54	Excavation of Contaminated Soil	45 days Wed 3/8/22	Fri 16/9/22
55	To Stockpile for Biopile 1	45 days Wed 3/8/22	Fri 16/9/22
6	To Stockpile for Cement Solidification Plant 1	45 days Wed 3/8/22	Fri 16/9/22
7	Biopile Works (Hydrocarbon Treatment)	323 days Wed 6/7/22	Wed 24/5/23
В	Biopile System Setup (Biopile 1)	76 days Wed 6/7/22	Mon 19/9/22
9	Preparation of Base	3 days Wed 6/7/22	Fri 8/7/22
0	Waterproofing Works	2 days Sat 9/7/22	Sun 10/7/22
1	Placing 1st layer of contaminated soil & associated pipe	15 days Wed 3/8/22	Wed 17/8/22
62	Placing 2nd layer of contaminated soil & associated pipe	15 days Thu 18/8/22	Thu 1/9/22

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

			Finish	Apr May Jun	Jui Aug	Sep Oct Nov L	Dec Jan	Feb Mar /	Apr May Ju	un Jul A	ug Sep C			eb Mar	Apr May	Jun Ju	I Aug S	Sep Oct	t Nov E	Dec Jan	Feb Ma	ar Apr N	lay Jur	n Jul A	Aug Se	ep Oct	t Nov E	Dec Jar	n Feb M	lar Apr N	∕lay Jun	I Jul Au	g Sep C	Oct Nov E	Dec Jan I	6 Qt ar Ap
3	Placing final layer of contaminated soil & cover up the whole biople	15 days Fri 2/9/22	Fri 16/9/22																												_					-
	Erect of Shelter for Biopile System	15 days Mon 11/7/22		-																																
	Connection & Commissioning of Biopile System	3 days Sat 17/9/22																																		
	Biopile System Operation (6 months)	180 days Tue 20/9/22		_											Biopile \$	System	) Operat	tion (6	6 mont	hs)																
	Operation & Maintenance	180 days Tue 20/9/22	Sat 18/3/23											Ь																						
	Vertification, Sampling & Testing	180 days Tue 20/9/22	Sat 18/3/23								<b>ř</b>																									
	Completion of Biopile	30 days Sun 19/3/23	Mon 17/4/23												Com	npletio	n of Bio	pile																		
	Submission of Closure Assessment Report	30 days Sun 19/3/23												Ĺ																						
	Backfilling to Formation	25 days Tue 18/4/23	Fri 12/5/23													ר																				
	Removal of Facilities	12 days Sat 13/5/23	Wed 24/5/23												<b>i</b> -	+																				
	Cement Solidification Works (Heavy Metal Treatment)	343 days Sat 9/7/22	Fri 16/6/23													<b>-</b> Ce	ement S	olidific	cation	Works	(Heavy	Metal	Treatn	nent)												
	Mixing Facilities Setup (Plant 1)	39 days Sat 9/7/22	Tue 16/8/22								🋡 Mixin	g Facilit	ties Setu	p (Plan	: 1)																					
	Preparation of Base	6 days Sat 9/7/22	Thu 14/7/22	1						<b>F</b>																										
	Placing Concrete Block Barrier	9 days Fri 15/7/22	Sat 23/7/22	1																																
	Waterproofing Works	6 days Sun 24/7/22	Fri 29/7/22	1																																
	Erection of Shelter	18 days Sat 30/7/22	Tue 16/8/22	1																																
	Cement Solidification Operation	253 days Sat 17/9/22	Sat 27/5/23													Ceme	ent Soli	dificati	tion Or	peration																
	Mixing Operation	243 days Sat 17/9/22	Wed 17/5/23	-																																
	Confirmation Test	243 days Tue 27/9/22	Sat 27/5/23	-												וון ו ר																				
	Backfilling to Formation	220 days Wed 9/11/22	Fri 16/6/23	-												1.																				
	Decommissing of Facilities	4 days Sun 28/5/23	Wed 31/5/23	-												┍╪╡┥╢║																				
	Remediation Report Submission	43 days Sat 17/6/23	Sat 29/7/23	-													🗬 Rem	nediati	ion Re	port Su	bmissi	on														
	Preparation of Remediation Report	15 days Sat 17/6/23	Sat 1/7/23	-																																
	Review & Accepted by EPD	28 days Sun 2/7/23	Sat 29/7/23	-													∎↓↓	$\square$																		
	Site Formation	354 days Wed 9/11/22		-								-		┝┥┥╸					🛡 Site	e Forma	tion															
	Earthwork	287 days Wed 9/11/22		-										┝┝┥╾┥				Earthw	vork																	
	Excavation to +30mPD	15 days Mon 27/2/23		-																																
	Excavation to Formation	25 days Fri 7/7/23												<b> </b>																						
	Cut Slope to +30mPD	15 days Mon 27/2/23		-													· [																			
	Cut Slope to Formation	25 days Fri 7/7/23		-										$ \Pi $																						
	Backfilling & Compaction to Formation	287 days Wed 9/11/22		-																																
	Surface Drainage	229 days Tue 14/3/23		-															u Sur	face Dr	ainage															
	At Cut Slope Crest	61 days Tue 14/3/23		-												At Cut	Slope C		Ť		Ŭ															
	Excavation to Formation	40 days Tue 14/3/23		-											Ť																					
	Catchpit	40 days Tue 21/3/23		-																																
	U-channel	40 days Tue 4/4/23		-																																
	At +30mPD	54 days Sun 14/5/23		-										1111			At +30r	mPD																		
	Excavation to Formation	30 days Sun 14/5/23		-																																
	Catchpit	30 days Wed 24/5/23																																		
	U-channel	30 days Wed 7/6/23		-																																
	At Formation Level	85 days Sat 5/8/23													ſ				Δ+ =	ormatio	on Leve	el														
	Excavation to Formation	64 days Sat 5/8/23		-															<b>*</b> [""	Jinall		-														
	Catchpit	64 days Sat 5/6/23		-																																
	Catcopit U-channel	64 days Sat 12/8/23																																		
	U-channel Stepped Channel	20 days Sat 2/9/23		-																																
		-																		to Acc																
	Concrete Access Maintenance Access	117 days Wed 7/6/23 30 days Wed 7/6/23		-														Ĭ	oncre	te Acce	33															
				-											9																					
	Stairway above Formation Level	10 days Fri 22/9/23		-																																
	Planned Completion of Section 1A2	0 days Sat 28/10/23		-	_														TI I																	
	Section 1A3	792 days Sat 28/8/21																	T I I	tion 1A																
	Site 3-8 (Portion A3,B4,B5,B6,B7)	792 days Sat 28/8/21																	Site	9 3-8 (Po	ortion A	43,B4,E	5,B6,E	57)												
	Site Clearance	158 days Sat 28/8/21		_				Site Cl	earance																											
	Site Clearance for Portion A3	5 days Sat 28/8/21			F																															
	Site Clearance for Portion B4,B5,B6,B7	5 days Fri 28/1/22						Η ΙΙ																												
	Establishment	181 days Thu 2/9/21						Est	ablishme	ent																										
	Condition Survey for Existing Structures to be Demolished	14 days Thu 2/9/21	Wed 15/9/21																																	

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

#### Master Programme Rev.1

	Name	Duration Start	Finish			ep Oct Nov D																					2026 Qt Mar Ap
)	Condition Survey for Existing Structures to be Demolished for Portion B4,B5,B6,B7	14 days Wed 2/2/22	Tue 15/2/22									Dooloan		, to may		,					, may e	ag e ep	1200004		, ug oop	000,000,000	<u>, , , , , , , , , , , , , , , , , , , </u>
	Tree Survey for Portion A3	14 days Thu 2/9/21	Wed 15/9/21			5																					
	Tree Survey for Portion B4,B5,B6,B7	14 days Wed 2/2/22	Tue 15/2/22																								
	Initial Survey for Portion A3	14 days Thu 2/9/21	Wed 15/9/21																								
	Initial Survey for Portion B4,B5,B6,B7	14 days Wed 2/2/22	Tue 15/2/22																								
	Site Haul Road for Portion A3	7 days Thu 2/9/21	Wed 8/9/21																								
	Site Haul Road for Portion B4,B5,B6,B7	7 days Wed 2/2/22	Tue 8/2/22																								
	Health & Hygiene Facilities	7 days Thu 2/9/21	Wed 8/9/21																								
	Fence Work & Gate for Portion A3	14 days Thu 2/9/21	Wed 15/9/21																								
	Fence Work for Portion B4,B5,B6,B7	14 days Wed 2/2/22	Tue 15/2/22																								
	Underground Utilities Detection for Portion A3	7 days Thu 2/9/21	Wed 8/9/21																								
	Underground Utilities Detection for Portion B4,B5,B6,B7	7 days Wed 2/2/22	Tue 8/2/22																								
	Install Monitoring Points	14 days Wed 16/2/22	Tue 1/3/22	1																							
	Tree Treatment	167 days Thu 16/9/21	Tue 1/3/22		-	v —		🛡 Tree Tr	eatment																		
	Tree Felling for Portion A3	14 days Thu 16/9/21	Wed 29/9/21																								
	Tree Felling for Portion B4,B5,B6,B7	14 days Wed 16/2/22	Tue 1/3/22					<b>[]</b>																			
	Tree Protection for Portion A3	14 days Thu 16/9/21	Wed 29/9/21																								
	Tree Protection for Portion B4,B5,B6,B7	14 days Wed 16/2/22	Tue 1/3/22																								
	Demolition work	71 days Wed 16/2/22	Wed 27/4/22	-				━━━━━━━━	Demolitic	on work																	
	Demolition of Existing Structures	71 days Wed 16/2/22	Wed 27/4/22																								
	Decontamination	668 days Thu 30/9/21	Sat 29/7/23	-		+				┝┫┿┿╼╇	┝╾╋╣═╇	┝┥╾┿┥╾	╺┥┥┥╸		╺┥┥┥┥┥	Decor	ntamina	ition									
	САР	180 days Thu 30/9/21	Mon 28/3/22	-			╾╾	CAF	<b>-</b>																		
	Site Appraisal for Portion A3	60 days Thu 30/9/21	Sun 28/11/21	-																							
	Site Appraisal for Portion B4,B5,B6,B7 & Preparation of CAP for all Portions	25 days Wed 2/2/22	Sat 26/2/22	_				h																			
	Submission & Endorsement by EPD	30 days Sun 27/2/22	Mon 28/3/22					ž.																			
	Ground Investigation (Trial Pit / Borehole)	45 days Tue 29/3/22	Thu 12/5/22	-					Ground	l Investiga	ation (Tri	al Pit <i>i</i> B	orehole)														
	Trial Pit Sampling & Testing	45 days Tue 29/3/22	Thu 12/5/22	-					K																		
	Inspection Pit for installing Groundwater Wells	45 days Tue 29/3/22	Thu 12/5/22	-																							
	Decontamination Works	443 days Fri 13/5/22	Sat 29/7/23	-											_	Decor	ntamina	ition Wo	orks								
	Pilot Scale Trials	39 days Fri 13/5/22	Mon 20/6/22	-					Pi	ilot Scale	Trials																
	Pilot Trial	15 days Fri 13/5/22	Fri 27/5/22	-					<b>i</b>																		
	Treatability Test for Heavy Metal	24 days Sat 28/5/22	Mon 20/6/22	-																							
	CAR & RAP Submission	43 days Tue 21/6/22	Tue 2/8/22	-							& RAP SL	ubmissio	n														
	Preparation of CAR & RAP	15 days Tue 21/6/22	Tue 5/7/22	-																							
	Review & Accepted by EPD	28 days Wed 6/7/22	Tue 2/8/22	-																							
	Excavation of Contaminated Soil	45 days Wed 3/8/22	Fri 16/9/22	-						••••••	Excavat	ion of Co	ontamin	ated Soil													
	To Stockpile for Biopile 1	45 days Wed 3/8/22		-																							
	To Stockpile for Cement Solidification Plant 1	45 days Wed 3/8/22		-																							
	Remediation Report Submission	43 days Sat 17/6/23		-											-	Reme	diation	Report	Submi	ssion							
	Preparation of Remediation Report	15 days Sat 17/6/23		-											₩.												
	Review & Accepted by EPD	28 days Sun 2/7/23		-																							
	Site Formation	354 days Wed 9/11/22		-														Site For	mation								
	Earthwork	287 days Wed 9/11/22		-												Ea	rthwork										
	Excavation to +32mPD	15 days Mon 27/2/23		-												1											
	Excavation to Formation	25 days Sat 15/7/23		-																							
	Cut Slope to +32mPD	15 days Mon 27/2/23		-																							
	Cut Slope to Formation	25 days Sat 15/7/23		-																							
	Backfilling & Compaction to Formation	287 days Wed 9/11/22		-																							
	Surface Drainage	229 days Tue 14/3/23		-														Surface	Draina	ae							
	At Cut Slope Crest	56 days Tue 14/3/23		-											t Cut Sk	ope Cre				<b>J</b>							
	Excavation to Formation	35 days Tue 14/3/23		-									¥.	• • ^													
	Catchpit	35 days Tue 14/3/23		-																							
	U-channel	35 days Tue 21/3/23		-																							
		-		-												At +32m											
	At +32mPD	64 days Tue 9/5/23		-												n rozm	۲ <b>۲</b>										
	Excavation to Formation	40 days Tue 9/5/23		_																							
	Catchpit	40 days Fri 19/5/23	Tue 27/6/23																								

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	( Name	Duration Start	Finish	Qtr 2, 2021 Apr May Jur
5	U-channel	40 days Fri 2/6/23	Tue 11/7/23	
76 77	Stepped Channel		Sun 18/6/23	
	At Formation Level	81 days Wed 9/8/23		
5	Excavation to Formation	60 days Wed 9/8/23	Sat 7/10/23	
)	Catchpit	60 days Wed 16/8/23	Sat 14/10/23	
0	U-channel	60 days Wed 30/8/23	Sat 28/10/23	
I	Stepped Channel	20 days Wed 6/9/23	Mon 25/9/23	
32	Concrete Access	136 days Fri 2/6/23	Sun 15/10/23	-
83	Maintenance Access	40 days Fri 2/6/23	Tue 11/7/23	
784	Stairway above +32mPD	3 days Wed 12/7/23	Fri 14/7/23	
785	Stairway above Formation Level	20 days Tue 26/9/23	Sun 15/10/23	-
86	Planned Completion of Section 1A3	0 days Sat 28/10/23	Sat 28/10/23	
87	Section 1A4	639 days Fri 28/1/22	Sat 28/10/23	-
'88	Site 2-18 (Portion B11)	639 days Fri 28/1/22	Sat 28/10/23	-
39	Site Clearance	3 days Fri 28/1/22	Sun 30/1/22	
0	Establishment	14 days Mon 31/1/22	Sun 13/2/22	-
1	Condition Survey for Existing Structures to be Demolished	14 days Mon 31/1/22	Sun 13/2/22	1
_				_
92	Tree Survey	14 days Mon 31/1/22		_
93	Initial Survey	14 days Mon 31/1/22		_
4	Site Haul Road	7 days Mon 31/1/22		_
5	Health & Hygiene Facilities	7 days Mon 31/1/22		
96	Fence Work	14 days Mon 31/1/22		_
'97	Underground Utilities Detection	7 days Mon 31/1/22		_
798	Install Monitoring Points	14 days Mon 31/1/22		
'99	Tree Treatment	14 days Mon 14/2/22		_
00	Tree Felling	14 days Mon 14/2/22		
301	Tree Protection	14 days Mon 14/2/22	Sun 27/2/22	
302	Demolition work	41 days Mon 14/2/22		
03	Demolition of Existing Structures	41 days Mon 14/2/22	Sat 26/3/22	
304	Decontamination	543 days Mon 31/1/22		
05	CAP	55 days Mon 31/1/22		_
06	Site Appraisal & Preparation of CAP	25 days Mon 31/1/22		
)7	Submission & Endorsement by EPD	30 days Fri 25/2/22		
08	Ground Investigation (Trial Pit / Borehole)	45 days Sun 27/3/22		
09	Trial Pit Sampling & Testing	45 days Sun 27/3/22		
310	Inspection Pit for installing Groundwater Wells	45 days Sun 27/3/22		
311	Decontamination Works	443 days Wed 11/5/22		
12	Pilot Scale Trials	39 days Wed 11/5/22		
13	Pilot Trial	15 days Wed 11/5/22		_
14	Treatability Test for Heavy Metal	24 days Thu 26/5/22		
15	CAR & RAP Submission	43 days Sun 19/6/22		_
16	Preparation of CAR & RAP	15 days Sun 19/6/22		_
17	Review & Accepted by EPD	28 days Mon 4/7/22		_
18	Excavation of Contaminated Soil	45 days Mon 1/8/22		_
19	To Stockpile for Biopile 3	45 days Mon 1/8/22		
320	To Stockpile for Cement Solidification Plant 3	45 days Mon 1/8/22		
21	Biopile Works (Hydrocarbon Treatment)	323 days Mon 4/7/22		_
822	Biopile System Setup (Biopile 3)	76 days Mon 4/7/22		
323	Preparation of Base	3 days Mon 4/7/22		
24	Waterproofing Works	2 days Thu 7/7/22		
25	Placing 1st layer of contaminated soil & associated pipe	15 days Mon 1/8/22	Mon 15/8/22	
326	Placing 2nd layer of contaminated soil & associated pipe	15 days Tue 16/8/22	Tue 30/8/22	
827	Placing final layer of contaminated soil & cover up the whole biople	15 days Wed 31/8/22	Wed 14/9/22	
28	Erect of Shelter for Biopile System	15 days Sat 9/7/22	Sat 23/7/22	
29	Connection & Commissioning of Biopile System	3 days Thu 15/9/22	Sat 17/9/22	

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

ון כ	ask Name	Duration Start	Finish	Qtr 2, 2021 Apr May Jun																							
80	Biopile System Operation (6 months)	180 days Sun 18/9/22	Thu 16/3/23						, , , , , , , , , , , , , , , , , , ,				Biopile	System	Operatio	on (6 mc	onths)						 		 	 	
1	Operation & Maintenance	180 days Sun 18/9/22	Thu 16/3/23	-																							
2	Vertification, Sampling & Testing	180 days Sun 18/9/22	Thu 16/3/23																								
3	Completion of Biopile	30 days Fri 17/3/23	Sat 15/4/23									•	💶 🗣 Con	npletion	n of Biop	ile											
	Submission of Closure Assessment Report	30 days Fri 17/3/23	Sat 15/4/23	-																							
5	Backfilling to Formation	25 days Sun 16/4/23	Wed 10/5/23	-									<b>1</b>														
3	Removal of Facilities	12 days Thu 11/5/23	Mon 22/5/23	-									l 👗														
7	Cement Solidification Works (Heavy Metal Treatment)	343 days Thu 7/7/22	Wed 14/6/23						•					🔫 Cer	ment Sol	idificati	on Worl	ks (Hea	vy Meta	ıl Treatı	nent)						
3	Mixing Facilities Setup (Plant 3)	39 days Thu 7/7/22	Sun 14/8/22						<b>etere</b> h	Aixing Fa	acilities S	etup (Plar	nt 3)														
	Preparation of Base	6 days Thu 7/7/22	Tue 12/7/22	-					<b>r</b>																		
	Placing Concrete Block Barrier	9 days Wed 13/7/22	Thu 21/7/22	-					<b>K</b>																		
	Waterproofing Works	6 days Fri 22/7/22	Wed 27/7/22																								
2	Erection of Shelter	18 days Thu 28/7/22	Sun 14/8/22	-						-																	
3	Cement Solidification Operation	253 days Thu 15/9/22	Thu 25/5/23	-						<b></b>		_		Ceme	nt Solidi	fication	Operati	on									
	Mixing Operation	243 days Thu 15/9/22	Mon 15/5/23	-																							
-	Confirmation Test	243 days Sun 25/9/22	Thu 25/5/23	-																							
+	Backfilling to Formation	220 days Mon 7/11/22	Wed 14/6/23	-																							
+	Decommissing of Facilities	4 days Fri 26/5/23		-										<b>*    </b>													
+	Remediation Report Submission	43 days Thu 15/6/23	Thu 27/7/23	-										╯╋┿┿╇	🛡 Reme	diation	Report	Submis	sion								
-	Preparation of Remediation Report	15 days Thu 15/6/23	Thu 29/6/23	-										₩.													
-	Review & Accepted by EPD	28 days Fri 30/6/23		-												$\parallel$											
+	Site formation	356 days Mon 7/11/22		-													Site forn	nation									
+	Earthwork	305 days Mon 7/11/22		-												Earthwo	ork										
-	Backfilling & Compaction to Formation	290 days Mon 7/11/22		-																							
-	Trimming for Fill Slope	15 days Thu 24/8/23		-																							
+	Surface Drainage	51 days Fri 8/9/23		-													Surface	Drainad	ie i								
+	At Formation Level	-	Sat 28/10/23														At Forma										
+	Excavation to Formation	30 days Fri 8/9/23	Sat 7/10/23	-																							
+	Catchpit	30 days Fri 15/9/23		-																							
_	U-channel	30 days Fri 29/9/23		-																							
	Planned Completion of Section 1A4	0 days Sat 28/10/23		_																							
	Section 1A5	792 days Sat 28/8/21															Section	145									
	Site 2-19 (Portion A5,B10)	792 days Sat 28/8/21		_													Site 2-19		on 45 B	10)							
	Site Clearance	156 days Sat 28/8/21		-			Site Clear	3000											/II A0,D	,							
_	Site Clearance for Portion A5	3 days Sat 28/8/21		-			One orean	ance																			
+	Site Clearance for Portion B10	3 days Fri 28/1/22		-	<sup> </sup>		 -																				
	Establishment	181 days Tue 31/8/21		-			- Establ	ishment																			
+	Condition Survey for Existing Structures to be Demolished for Portion A5	14 days Tue 31/8/21		_				isiment																			
	Condition Survey for Existing Structures to be Demolished for Portion B10	14 days Mon 31/1/22	Sun 13/2/22	-																							
	Tree Survey for Portion A5	14 days Tue 31/8/21	Mon 13/9/21		👗	6																					
1	Tree Survey for Portion B10	14 days Mon 31/1/22	Sun 13/2/22																								
t	Initial Survey for Portion A5	14 days Tue 31/8/21	Mon 13/9/21		📫	<b>i</b>																					
+	Initial Survey for Portion B10	14 days Mon 31/1/22	Sun 13/2/22	-																							
+	Site Haul Road for Portion A5	7 days Tue 31/8/21	Mon 6/9/21	-																							
+	Site Haul Road for Portion B10	7 days Mon 31/1/22		-			\$																				
t	Health & Hygiene Facilities	7 days Tue 31/8/21		-	📩																						
-	Fence Work & Gate for Portion A5	14 days Tue 31/8/21		-																							
$\vdash$	Fence Work for Portion B10	14 days Mon 31/1/22		-																							
-	Underground Utilities Detection for Portion A5	7 days Tue 31/8/21		-																							
+	Underground Utilities Detection for Portion B10	7 days Mon 31/1/22		-			┫																				
+	Install Monitoring Points	14 days Mon 14/2/22		-																							
+	Tree Treatment	167 days Tue 14/9/21		_			Tree T	reatment																			
+	Tree Felling for Portion A5	14 days Tue 14/9/21		-				. cauncill	.																		
+	Tree Felling for Portion B10	14 days Non 14/2/22		-																							
-	Tree Protection for Portion A5	14 days Mon 14/2/22 14 days Tue 14/9/21		-																							
-		-		_			₩																				
1	Tree Protection for Portion B10	14 days Mon 14/2/22	Sun 21/2/22	1																				1			1

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	k Name	Duration Start	Finish	Apr May Jun	Jul Aug Sep Oct	Nov Dec Ja	an Feb Mar	Apr May Ju	in Jul Au	g Sep Oct	Nov Dec	Jan Feb	Mar Apr					ec Jan	Feb Mar	r Apr N	<u>lay Jun</u>	Jul Au	g Sep (	Oct Nov	Dec Ja	n Feb Ma	r Apr May	<u>Jun Jul</u> A			026 Qtr Mar Apr
3	Demolition work	41 days Mon 14/2/22	Sat 26/3/22					Demolitio	on work																				-9	 	
'	Demolition of Existing Structures	41 days Mon 14/2/22	Sat 26/3/22																												
3	Decontamination	543 days Mon 31/1/22	Thu 27/7/23												<b></b>	econtar	nination														
	САР	55 days Mon 31/1/22	Sat 26/3/22					САР																							
	Site Appraisal for Portion B10 & Preparation of CAP	25 days Mon 31/1/22	Thu 24/2/22				└╈┓║																								
	Submission & Endorsement by EPD	30 days Fri 25/2/22	Sat 26/3/22																												
	Ground Investigation (Trial Pit / Borehole)	45 days Sun 27/3/22	Tue 10/5/22	m				Gr	ound Inve	estigation	(Trial Pi	it / Boreh	nole)																		
	Trial Pit Sampling & Testing	45 days Sun 27/3/22	Tue 10/5/22																												
	Inspection Pit for installing Groundwater Wells	45 days Sun 27/3/22	Tue 10/5/22																												
	Decontamination Works	443 days Wed 11/5/22	Thu 27/7/23												<b></b> D	econtar	nination	Works													
	Pilot Scale Trials	39 days Wed 11/5/22	Sat 18/6/22						🛡 Pilot S	cale Trials	s																				
	Pilot Trial	15 days Wed 11/5/22	Wed 25/5/22					<b>š</b>																							
	Treatability Test for Heavy Metal	24 days Thu 26/5/22	Sat 18/6/22					L	Ь																						
	CAR & RAP Submission	43 days Sun 19/6/22	Sun 31/7/22						<b>erente</b> o	AR & RA	P Submi	ission																			
	Preparation of CAR & RAP	15 days Sun 19/6/22	Sun 3/7/22						<b>š</b>																						
	Review & Accepted by EPD	28 days Mon 4/7/22	Sun 31/7/22						<b>T</b>																						
	Excavation of Contaminated Soil	15 days Mon 1/8/22	Mon 15/8/22						•••	Excavati	tion of Co	ontamina	ated Soi	ı																	
	To Stockpile for Biopile 3	15 days Mon 1/8/22	Mon 15/8/22							$\left  \right $																					
1	To Stockpile for Cement Solidification Plant 3	15 days Mon 1/8/22	Mon 15/8/22							$\mu$																					
	Remediation Report Submission	43 days Thu 15/6/23	Thu 27/7/23												R	emedia	tion Rep	oort Sul	omissio	on											
	Preparation of Remediation Report	15 days Thu 15/6/23	Thu 29/6/23											- +	$\parallel \parallel$																
	Review & Accepted by EPD	28 days Fri 30/6/23	Thu 27/7/23												▙																
	Site Formation	439 days Tue 16/8/22	Sat 28/10/23						•								🖤 Site	Forma	ion												
	Earthwork	385 days Tue 16/8/22	Mon 4/9/23						•							🛡 Eart	hwork														
	Excavation to Formation of RW1 & +11mPD	15 days Tue 16/8/22	Tue 30/8/22																												
	Backfilling & Compaction to Formation (Contamination Area)	40 days Tue 16/8/22	Sat 24/9/22																												
	Backfilling & Compaction at the Back of RW1	40 days Sat 15/10/22	Wed 23/11/22																												
	Excavation to Formation of RW3 & +9.5mPD	15 days Thu 24/11/22	2 Thu 8/12/22								Ì 👗																				
	Backfilling & Compaction at the Back of RW3	40 days Sat 4/3/23	Wed 12/4/23																												
	Excavation to Formation of RW2 & +7.5mPD	15 days Thu 13/4/23	Thu 27/4/23											ĥ																	
	Backfilling & Compaction at the Back of RW2	40 days Thu 27/7/23	Mon 4/9/23													<b>-</b>															
-	Cut Slope	15 days Thu 27/7/23	Thu 10/8/23																												
	Retaining Wall	330 days Wed 31/8/22	Wed 26/7/23							•	┝━┼┝╋━		-		<b>R</b>	etaining	Wall														
-	RW1 above +11mPD	45 days Wed 31/8/22	Fri 14/10/22																												
	RW1 at both sides, RW3 above +9.5mPD	85 days Fri 9/12/22	Fri 3/3/23										┛║║																		
	RW1 at both sides, RW2 above +7.5mPD	90 days Fri 28/4/23	Wed 26/7/23																												
-	Surface Drainage	339 days Thu 24/11/22	2 Sat 28/10/23														💵 Surf	ace Dra	inage												
	At +12.14mPD	24 days Thu 24/11/22	2 Sat 17/12/22	-							<b>•••</b>	At +12.1	I4mPD																		
	Excavation to Formation	10 days Thu 24/11/22	Sat 3/12/22																												
	Catchpit	10 days Thu 1/12/22	Sat 10/12/22																												
	U-channel	10 days Thu 8/12/22																													
	At +11mPD	50 days Thu 13/4/23									T			- A	t +11mP	D															
	Excavation to Formation	30 days Thu 13/4/23																													
<u> </u>	Catchpit	30 days Sun 23/4/23												-																	
-	U-channel	30 days Wed 3/5/23											116																		
-	At +9.5mPD Level	54 days Tue 5/9/23														╈┿┿	At +	9.5mPC	Level												
	Excavation to Formation	30 days Tue 5/9/23																													
	Catchpit	30 days Tue 12/9/23																													
	U-channel	40 days Tue 19/9/23																													
	At +7.5mPD Level	44 days Fri 11/8/23															t +7.5m	PD Lev	el												
	Excavation to Formation	30 days Fri 11/8/23																													
	Catchpit	30 days Fri 18/8/23																													
-	U-channel	30 days Fri 25/8/23																													
	Outside RW1 at the Side	40 days Tue 5/9/23															Outsid		at the	Side											
-	Excavation to Formation	10 days Tue 5/9/23														<b>•</b>	Juisi		atures	0106											
		-																													
-	Catchpit	10 days Fri 15/9/23																													
	U-channel	20 days Mon 25/9/23	Sat 14/10/23														1111														

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

	k Name	Duration Start	Finish		Jul Aug Sep /	Oct Nov Dec Jan	Feb Mar Apr May	2022 Qtr 3, 202 Jun Jul Aug S															
	Planned Completion of Section 1A5	0 days Sat 28/10/23																					
	Section 1A6	319 days Wed 14/12/2		-									Section										
_	Road L53 + L54 (Portion A5,B10,B11)	319 days Wed 14/12/2		_									Road	_53 + L54 (P	ortion A5,	510,811)							
_	Drainage Work	200 days Wed 14/12/2		_																			
	Sewer Work	200 days Fri 13/1/23		_																			
8	Water Work	200 days Sun 12/2/23		-									ater Work										
9	Water Pipe Installation	170 days Sun 12/2/23		_																			
0	Water Connection	30 days Tue 1/8/23		_									ater Connec	tion									
1	Testing and Submission	24 days Tue 1/8/23		_																			
2	Approval from WSD	1 day Fri 25/8/23		_																			
3	Water Connection	1 day Sat 26/8/23		_																			
4	Reinstatement Works	4 days Sun 27/8/23		_																			
5	Utilities	150 days Tue 14/3/23																					
6	Road Work	200 days Tue 14/3/23								Y			5										
7	Road Lighting	109 days Wed 12/7/23	Sat 28/10/23										▐■										
8	Landscaping Work	74 days Wed 16/8/23																					
9	Transformer Room	155 days Wed 5/4/23									¥		ransformer	Room									
0	Excavation to Formation Level	10 days Wed 5/4/23									1												
1	Construction of Footing & Trench	10 days Sat 15/4/23									- L												
2	Construction of RC Structures	30 days Tue 25/4/23	Wed 24/5/23																				
3	Waterproofing, Finishing & Painting Works	25 days Thu 25/5/23	Sun 18/6/23																				
4	Hardware	20 days Mon 19/6/23	Sat 8/7/23									<b>-</b>											
5	E&M Works	30 days Sun 9/7/23	Mon 7/8/23																				
6	Testing & Commissioning	20 days Tue 8/8/23	Sun 27/8/23																				
7	Handover to CLP	10 days Mon 28/8/23	Wed 6/9/23	1																			
В	Planned Completion of Section 1A6	0 days Sat 28/10/23	Sat 28/10/23																				
9	Section 1B	365 days Sun 29/10/2	3 Sun 27/10/24															Section	1B				
0	Establishment works of Sections 1A4, 1A5, 1A6	365 days Sun 29/10/23	3 Sun 27/10/24	1														▶					
1	Planned Completion of Section 1B	0 days Sun 27/10/24	4 Sun 27/10/24															•					
2	Section 2A	1459 days Sat 1/5/21	Mon 28/4/25				+													Section	n 2A		
3	Ping Ha Road (Portion C1)	1459 days Sat 1/5/21	Mon 28/4/25				+													Ping H	a Road (Porti	ion C1)	
4	Decontamination	182 days Sat 1/5/21	Fri 29/10/21			Decontami	nation																
1	Pipe Jacking	667 days Mon 13/12/2	1 Tue 10/10/23				+						📭 Pipe Jac	king									
14	Water Work	1233 days Mon 13/12/2	1 Mon 28/4/25																	Water	Work		
1	Ha Tsuen Road (Portion A3,A6,A7,A8,D1,D2)	888 days Fri 18/3/22	Wed 21/8/24				•										🛛 Ha Ts	uen Road (	Portion A3,	A6,A7,A8,D1,	D2)		
2	Water Work	888 days Fri 18/3/22	Wed 21/8/24				•										Water	Work					
3	Water Pipe Installation (Ha Tsuen Road to Road D1)	690 days Fri 18/3/22	Mon 5/2/24																				
4	Water Connection	60 days Sun 23/6/24	Wed 21/8/24														Water	Connectio	n				
5	Testing and Submission	54 days Sun 23/6/24	Thu 15/8/24																				
6	Approval from WSD	1 day Fri 16/8/24															I						
7	Water Connection	1 day Sat 17/8/24															I I						
8	Reinstatement Works	4 days Sun 18/8/24																					
9	Sewage Pumping Station	563 days Thu 28/7/22													vage Pump	ing Statio	n						
20	Sewage Work	503 days Thu 28/7/22												Sewage Wo	rk								
21	Access day 456	0 days Thu 28/7/22	Thu 28/7/22																				
2	Site Clearance	5 days Thu 28/7/22																					
:3	Initial Survey	7 days Tue 2/8/22	Mon 8/8/22																				
.4	Tree Survey	7 days Tue 2/8/22	Mon 8/8/22																				
25	Fence Work	7 days Tue 2/8/22	Mon 8/8/22																				
26	Underground Utilities Detection	7 days Tue 2/8/22	Mon 8/8/22	1																			
?7	Install Monitoring Points	14 days Tue 9/8/22	Mon 22/8/22					👗	++														
.8	ELS	90 days Fri 18/11/22	Wed 15/2/23						🎽														
9	Construction of RC Structures	120 days Thu 16/2/23	Thu 15/6/23									Ы											
	Builder's Works and Finish	150 days Mon 17/4/23	Wed 13/9/23								•												
10		180 days Fri 16/6/23	Tue 12/12/23	4																			
	E&M Works	100 days 111 10/0/20													- A - L								
0	E&M Works Rising Main	240 days Mon 17/4/23		_																			
50 51		-	Tue 12/12/23	-							<b>}</b>			Sett	ting Equip	nent							

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

1035	Detention Pond (Portion B2)	1137 doub Er: 29/4/00	Sup 0/2/25	Apr May Jun Ju	Aug Sep Oct	Nov Dec Jan	Feb Mar Ar	or May Jun	Jul Aug Sep	Oct Nov De	ec Jan Feb I	Mar Apr Ma	y Jun Jul /	Aug Sep O	ct Nov De	ec Jan Fel	Mar Apr	May Jun	Jul Aug Se	ep Oct Nov	Dec Jan F		ention Pond (Portion		c Jan Feb
1035 1036	· · · · ·	1137 days Fri 28/1/22																						(24)	
	Site Clearance	5 days Fri 28/1/22		-			<b>]</b>																		
1037	Initial Survey	7 days Wed 2/2/22					<b>]</b>																		
1038	Tree Survey	7 days Wed 2/2/22		-																					
1039	Fence Work	7 days Wed 2/2/22																							
1040	Underground Utilities Detection	7 days Wed 2/2/22																							
1041	Install Monitoring Points	14 days Wed 9/2/22		-				-																	
1042	Excavation to Bottom Level & Cut Slope	60 days Sun 3/4/22																							
1043	Laying 1st Layer of Granular Material with Geotextile Filter	60 days Thu 2/6/22																							
1044	Laying 2nd Layer of Granular Material with Geotextile Filter	60 days Mon 1/8/22	Thu 29/9/22						Ť																
1045	300 u-channel at +17.2mPD	75 days Fri 30/9/22	Tue 13/12/22								L														
1046	Construction of Toe Block & Outlet Chamber	150 days Wed 14/12/2	2 Fri 12/5/23									<b></b> _													
1047	Laying Granular Material with Geotextile Filter on Slope	90 days Sat 13/5/23	Thu 10/8/23									Í													
1048	Laying 150mm thk. Cast In-situ Cellar Reinforced Paving	150 days Fri 11/8/23	Sun 7/1/24																						
1049	Install Drainage Trunk Main No.1 & No.2	100 days Mon 8/1/24	Tue 16/4/24																						
1050	Access Road from +17.2mPD to Top	75 days Wed 17/4/24	Sun 30/6/24																						
1051	2 Nos. 600Dia Pipe to Outlet	100 days Mon 1/7/24	Tue 8/10/24																	<b>•</b> 1					
1052	Construction of Outlet Structure	152 days Wed 9/10/24	Sun 9/3/25																						
1053	150 u-channel & Concrete Slab on Top Level around the	100 days Mon 1/7/24	Tue 8/10/24																	•					
1051	Pond																								
1054	D1	930 days Wed 3/8/22																				- D1			
1055	Soldier Pile Wall	430 days Wed 3/8/22												<b>T</b>	Soldier	Pile Wall									
1056	Working platform	30 days Wed 3/8/22																							
1057	Pre-drilling	60 days Fri 2/9/22							📫																
1058	Socket H-Pile	180 days Tue 1/11/22																							
1059	Lagging Wall & Capping Beam	150 days Wed 10/5/23	Fri 6/10/23																						
1060	Site Formation	220 days Sun 30/4/23														Site Forn	nation								
1061	Earthwork	160 days Sun 30/4/23													Earthwo	ork									
1062	Excavation to Formation	105 days Sun 30/4/23	Sat 12/8/23																						
1063	Backfilling & Compaction to Formation	125 days Sun 30/4/23	Fri 1/9/23																						
1064	Trimming for Fill Slope	35 days Sat 2/9/23	Fri 6/10/23																						
1065	Surface Drainage	210 days Wed 10/5/23	Tue 5/12/23									-				Surface I	Drainage								
1066	At Capping Beam Level	120 days Wed 10/5/23	Wed 6/9/23																						
1067	At Cut Slope Toe Level	60 days Sat 7/10/23	Tue 5/12/23																						
1068	Box Culvert Construction	151 days Tue 1/11/22	Fri 31/3/23							+		🗕 🗕 🗕 🗕	Culvert Co	nstruction	ו ו										
1069	Dry Season Period	151 days Tue 1/11/22	Fri 31/3/23							<b>•</b>		🗕 🗕 🗖 🗖 🗕	eason Per	iod											
1070	Start of Dry Season	0 days Tue 1/11/22	Tue 1/11/22																						
1071	End of Dry Season	0 days Fri 31/3/23	Fri 31/3/23																						
1072	Temporary Drainage Diversion (Bulkhead for water cuttoff)	30 days Tue 1/11/22	Wed 30/11/2							••••	Temporary	Drainage [	Diversion (	Bulkhead	for wate	r cuttoff)									
1073	Placing Sand Bag	14 days Tue 1/11/22	Mon 14/11/22							1															
1074	Install Diversion Pipes	7 days Tue 15/11/22	2 Mon 21/11/22																						
1075	Sealing and Waterproof works for Bulkhead	7 days Tue 22/11/22	2 Mon 28/11/22																						
076	Pumping water to Dry Condition	2 days Tue 29/11/22	2 Wed 30/11/2							👗															
077	Excavation to Formation	21 days Thu 1/12/22	Wed 21/12/2								Excavat	ion to Forn	nation												
1078	Excavation (Open Cut)	7 days Thu 1/12/22	Wed 7/12/22							🏌															
1079	Placing Precast Concrete Block	7 days Thu 8/12/22	Wed 14/12/2																						
1080	Temp Backfilling	7 days Thu 15/12/22	2 Wed 21/12/2								<b>K</b>														
1081	Foundation	7 days Thu 22/12/22									Founda	ation													
1082	Rockfill and Subbase	5 days Thu 22/12/22									<b>K</b>														
1083	Blinding Concrete	2 days Tue 27/12/22									K														
084	RC Structure Constructiom	73 days Thu 29/12/2		-								🛡 RC Stru	cture Cons	structiom											
085	Base Slab	21 days Thu 29/12/22		-							<b>*</b>		_												
086	Wall	21 days Thu 19/1/23																							
1087	Top Slab	21 days Thu 9/2/23																							
1088	Removal of Falsework and Defect Rectification	10 days Thu 2/3/23										<u> </u>													
1089	Removal of FLS and Backfilling	28 days Thu 2/3/23										Remo	val of FI S	and Rar	kfilling										
		-										- Kenil		and Day											
1090	Excavation	7 days Thu 2/3/23	vved 8/3/23																						

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Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works -Site Formation and Engineering Infrastructure

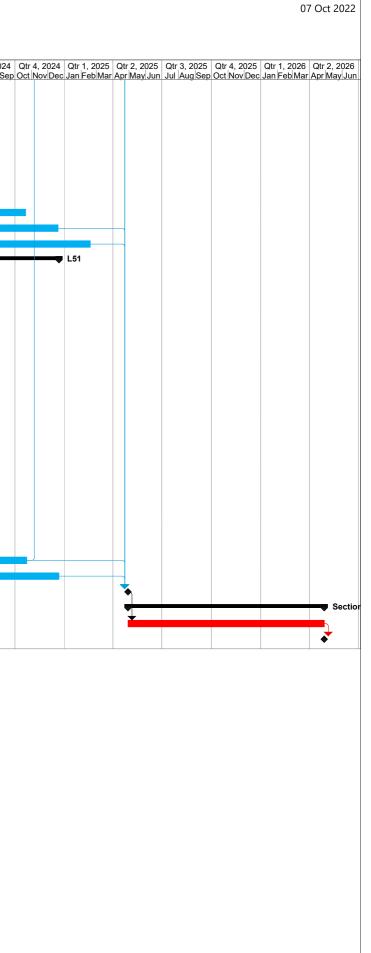
ID Tas	k Name	Duration	Start	Finish	Qtr 2, 2021 Apr May Jun	Qtr 3, 2021	Qtr 4, 2021 Oct Nov Dec	Qtr 1, 2022 Jan Feb Mar	Qtr 2, 2022	Qtr 3, 2022 Jul Aug Se	Qtr 4, 2022 Oct Nov Dec	Qtr 1, 2023 Jan Feb Mar	Qtr 2, 2023 Apr May Jun	Qtr 3, 2023 Jul Aug Sep	Qtr 4, 2023 Oct Nov Dec	Qtr 1, 20 Jan Feb I	24 Qtr 2, Mar Apr Ma	2024 ( av Jun J	Qtr 3, 2024
1091	Removal Concrete Block	7 days	Thu 9/3/23	Wed 15/3/23	, ibi mayour	, our rug cop	0000000000	ourr op mar	, in a four	ou. rugeo		ĥ	, princy can	ou. , ugloop				. <u>,</u>	<u></u>
1092	Backfilling to Formation	14 days	Thu 16/3/23	Wed 29/3/23								1							
1093	Removal of Temp Drainage System	5 days	Mon 27/3/23	Fri 31/3/23									Removal o	f Temp Drai	nage System				
1094	Removal of Pipe	3 days	Mon 27/3/23	Wed 29/3/23															
1095	Removal of Bulk Head	2 days	Thu 30/3/23	Fri 31/3/23															
1096	Drainage and Sewerage	200 days	Sat 7/10/23	Tue 23/4/24															
1097	Water Pipe Installation	200 days	Wed 6/12/23	Sat 22/6/24															
1098	Utilities	200 days	Sun 4/2/24	Wed 21/8/24															
1099	Road Work	200 days	Thu 4/4/24	Sun 20/10/24															
1100	Road Lighting	200 days	Mon 3/6/24	Thu 19/12/24															
1101	Landscaping Work	200 days	Fri 2/8/24	Mon 17/2/25													<u> </u>		
1102	L51	872 days	Wed 3/8/22	Sat 21/12/24						•									
1103	Bored Pile Wall	452 days	Wed 3/8/22	Sat 28/10/23						•					Bored	Pile Wall			
1104	Working platform	30 days	Wed 3/8/22	Thu 1/9/22															
1105	Pre-drilling	60 days	Fri 2/9/22	Mon 31/10/22	2														
1106	A1 Bored Piles	200 days	Tue 1/11/22	Fri 19/5/23															
1107	A2 Bored Piles	200 days	Tue 1/11/22	Fri 19/5/23															
1108	Lagging Wall & Capping Beam	150 days	Thu 1/6/23	Sat 28/10/23															
1109	Site Formation	222 days	Sat 20/5/23	Wed 27/12/23	3											Site For	rmation		
1110	Earthwork	73 days	Sat 20/5/23	Mon 31/7/23									-	Earth	work				
1111	Excavation to Formation	60 days	Sat 20/5/23	Tue 18/7/23															
1112	Backfilling & Compaction for Fill Slope	63 days	Sat 20/5/23	Fri 21/7/23															
1113	Trimming for Fill Slope	10 days	Sat 22/7/23	Mon 31/7/23															
1114	Surface Drainage	149 days	Tue 1/8/23	Wed 27/12/23	3									•		Surface	e Drainage		
1115	At Road Level	60 days	Tue 1/8/23	Fri 29/9/23															
1116	At Capping Beam Level	60 days	Sun 29/10/23	Wed 27/12/23	3														
1117	Drainage and Sewerage	120 days	Sun 29/10/23	Sun 25/2/24															
1118	Water Pipe Installation	120 days	Thu 28/12/23	Thu 25/4/24															
1119	Utilities	120 days	Mon 26/2/24	Mon 24/6/24														Ψ	
1120	Road Work	120 days	Fri 26/4/24	Fri 23/8/24															
1121	Road Lighting	120 days	Tue 25/6/24	Tue 22/10/24														— <b>Ň</b>	
1122	Landscaping Work	120 days	Sat 24/8/24	Sat 21/12/24															
1123	Planned Completion of Section 2A	0 days	Mon 28/4/25	Mon 28/4/25															
1124	Section 2B	365 days	Tue 29/4/25	Tue 28/4/26															
1125	Establishment works of Sections 1A1, 1A2, 1A3, 2A	365 days	Tue 29/4/25	Tue 28/4/26															
1126	Planned Completion of Section 2B	0 days	Tue 28/4/26	Tue 28/4/26															

Critical Task

Milestone 🔶

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Summary 🛡





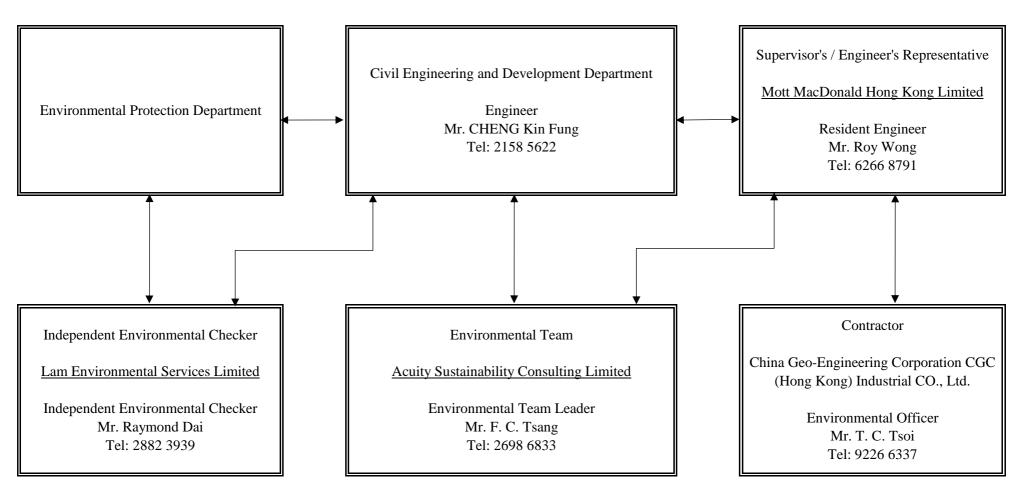
# Appendix B

# **Project Organization Chart**

Service Contract No. WD/02/2021 Environmental Team for Hung Shui Kui/ Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure Monthly EM&A Report



## **Project Organization Chart**



← → Link of Communication



# Appendix C

## Project Implementation Schedule (PIS)



### Environmental Mitigation Implementation Schedule (EMIS)

Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
'y					
<ul> <li>Watering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emission</li> <li>The active construction works area should be reduced to one-third of monthly average work of the respective Work Contract so as to alleviate adverse dust impact.</li> <li>When there are open excavation and spoil handling works, hoarding of 3m high should be provided along the construction site boundary adjacent to the non-construction areas such as residential, educational institutes or recreation area in use so as to minimize the dust impact.</li> <li>Dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices:</li> <li>Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>Use of frequent watering for particularly dusty construction areas and areas close to Air Sensitive Receivers (ASRs).</li> <li>Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> </ul>	To minimize the dust impact	Contractor	Construction Phase	<ul> <li>Air Pollution Control Ordinance (APCO)</li> <li>To control the dust impact to meet HKAQO and TM- EIAO criteria</li> <li>Air Pollution Control (Construction Dust) Ordinance (APCO)</li> <li>To control the dust impact to meet HKAQO and TM- EIAO criteria</li> </ul>	Implemented Implemented To be Implemented Implemented
	<ul> <li>Watering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emission</li> <li>The active construction works area should be reduced to one-third of monthly average work of the respective Work Contract so as to alleviate adverse dust impact.</li> <li>When there are open excavation and spoil handling works, hoarding of 3m high should be provided along the construction site boundary adjacent to the non-construction areas such as residential, educational institutes or recreation area in use so as to minimize the dust impact.</li> <li>Dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices:</li> <li>Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>Use of frequent watering for particularly dusty construction areas and areas close to Air Sensitive Receivers (ASRs).</li> <li>Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>Tarpaulin covering of all dusty vehicle loads transported</li> </ul>	Mitigation Measuresrecommended measure & main concerns to addressWatering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emissionTo minimize the dust impactWatering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emissionTo minimize the dustThe active construction works area should be reduced to one- third of monthly average work of the respective Work Contract so as to alleviate adverse dust impact.To minimize the dustWhen there are open excavation and spoil handling works, hoarding of 3m high should be provided along the construction site boundary adjacent to the non-construction areas such as residential, educational institutes or recreation area in use so as to minimize the dust impact.To minimize the dustDust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices:Use of requent watering for particularly dusty construction areas and areas close to Air Sensitive Receivers (ASRs).Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.Establishment and use of vehicle wheel and body	Mitigation Measuresrecommended measure & main concerns to addressImplement AgentWatering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emissionTo minimize the dust impactContractorThe active construction works area should be reduced to one- third of monthly average work of the respective Work Contract 	Mitigation Measuresrecommended measure & main concerns to addressImplement AgentImplementation TimingWatering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emissionTo minimize the dust impactContractorConstructionThe active construction works area should be reduced to one- third of monthly average work of the respective Work Contract so as to alleviate adverse dust impact.To minimize the dust impactContractorConstruction PhaseWhen there are open excavation and spoil handling works, hoarding of 3m high should be provided along the construction site boundary adjacent to the non-construction areas such as residential, educational institutes or recreation area in use so as to minimize the dust impact.ContractorConstruction PhaseDust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices:Use of frequent watering for particularly dusty construction areas and areas close to Air Sensitive Receivers (ASRs).Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.Side enclosure and covering of any aggregate or dusty material storage piles to reduce dust transported to, from and between site locations.Hind be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.Implementation Timing•Den studycene site locations.•Establishment and use of vehicle wheel and bodyImplementation to wateria storage piles near ASRs.	Mitigation Measuresrecommended measure & main concerns to addressImplement AgentImplementation TimingRequirements and or Standards to be AchievedWatering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emissionTo minimize the dust impactContractorAir Pollution Control Ordinance (APCO)The active construction works area should be reduced to one- third of monthly average work of the respective Work Contract so as to alleviate adverse dust impact.To minimize the dust impactContractorAir Pollution Control the dust impact to meet HKAQO and TM- EIAO criteriaWhen there are open excavation and spoil handling works, hoarding of 3m high should be provided along the construction areas in use so as to minimize the dust impact.To minimize the dust impact to meet HKAQO and TM- EIAO criteriaAir Pollution Control (Construction Dust) Regulation and good site practices:Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.Use of frequent watering for particularly dustry construction areas and areas close to Air Sensitive Receivers (ASRs).Air Pollution ControlOpen stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.Nere to covered. Where mossible, prevent placing dusty material storage piles near ASRs.Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.Side enclosure and use of vehicle wheel and body </td



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul> <li>Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/periods.</li> <li>Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.</li> <li>Imposition of speed controls for vehicles on site haul roads.</li> <li>Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.</li> </ul>					
Construct	ion Noise					
\$5.13	Use of quiet plant which should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME.	Reduce the noise levels of plant items	Contractor	Construction Phase	EIAO-TM	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S5.13	Install movable noise barrier and enclosures. The movable noise barrier can provide 5 dB(A) noise reduction for mobile plant and 10 dB(A) noise reduction for static plant. The barrier material shall have a surface mass of not less than 14 kg/m2. The enclosures can provide 15 dB(A) noise reduction.	Screen the noisy plant items to be used at all construction sites				To be implemented
S5.13	Proper workfront management and proper grouping of PME during construction activities operated at the critical work areas.	Reduce the construction noise impact				Implemented
S5.13	Maintain the recommended minimum separation between the schools and the critical works areas during examination periods.					N/A
\$5.13	<ul> <li>Good Site Management Practices</li> <li>only well-maintained plant should be operated on-site, and plant should be serviced regularly during the construction programme;</li> <li>machines and plant (such as trucks and cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> <li>plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs</li> <li>silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works</li> <li>mobile plant should be sited as far away from NSRs as possible and practicable; and</li> <li>material stockpiles, site offices and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities.</li> </ul>	Control construction airborne noise				Implemented
\$5.13	Liaison with the school representative(s) to obtain the examination schedule so as to avoid noisy construction activities during school examination period.					N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
\$5.13	Set up a liaison group among CEDD, relevant government departments, contractors of the Works contracts, etc. during construction phase of the Project to ensure proper implementation of mitigation measures.					To be implemented
Water Qu	ality					
S6.11	Surface run-off from construction sites should be discharged into stormwater drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels/earth bunds/sandbag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels should be provided on site boundaries where necessary to intercept stormwater run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	To minimise impact from construction site run-off	Contractor	Construction Phase	<ul> <li>Water Pollution Control Ordinance (WPCO), Technical Memorandum on EIA Ordinance (EIAO-TM), ProPECC PN 1/94,</li> <li>Technical</li> </ul>	Implemented
S6.11	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. Any practical options for the diversion and re- alignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains.				Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland	Implemented
S6.11	Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g., along the crest / edge of excavation) to prevent stormwater run-off from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface				and Coastal Waters (TM-DSS)	Implemented

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EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	protection measures can be safely carried out well before the arrival of a rainstorm.					
S6.11	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.					To be implemented
S6.11	Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into stormwater drains via silt removal facilities.					N/A
S6.11	Open stockpiles of construction materials (e.g., aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms.					Implemented after reminder
S6.11	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, and to prevent stormwater run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.					Implemented
\$6.11	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. It is recommended to clean the construction sites on a regular basis.					Implemented
\$6.11	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re- circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into stormwater drains via silt removal facilities.	To minimise impact from boring and drilling water				N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	All vehicles and plants should be cleaned before they leave a construction site to minimise 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 stormwater drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	To minimise impact from wheel washing water				Implemented
\$6.11	Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralised to within the pH range of 6 to 10 before discharging into foul sewers.	To minimise impact from acidic wastewater				N/A
\$6.11	There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS.	To minimise impact from effluent discharges				Implemented
S6.11	Beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence.	To minimise impact from effluent discharges				Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	<ul> <li>To minimise the potential water quality impacts from the construction works located near any inland watercourses, the practices outlined in ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted where applicable:</li> <li>Impermeable sheet piles and cofferdams should be used as required to divert water flow from the construction works area so that all the construction works would be undertaken within a dry zone and physically separated from the watercourses.</li> <li>The proposed works should preferably be carried out within the dry season where the flow in the stormwater culvert/water channel/stream is low.</li> <li>The use of less or smaller construction plants may be specified in works areas close to the inland water bodies.</li> <li>Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any watercourses during carrying out of the construction works.</li> <li>Stockpiling of construction materials and dusty materials should be covered and located away from any watercourses.</li> <li>Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.</li> <li>Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the watercourses, where practicable.</li> <li>Mitigation measures to control site run-off from entering the nearby water environment should be implemented to minimise water quality impacts. Surface channels should</li> </ul>	To minimise impact from construction works near watercourses			• WPCO, EIAO- TM, ETWB TC9Works) No. 5/2005	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul> <li>be provided along the edge of the waterfront within the work sites to intercept the run-off.</li> <li>Construction effluent, site run-off and sewage should be properly collected and/or treated.</li> <li>Any temporary works site inside the stormwater watercourses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the stormwater quality.</li> <li>Proper shoring may need to be erected in order to prevent soil/mud from slipping into the inland water bodies.</li> </ul>					
S6.11	<ul> <li>The key water quality measure for protection of the revitalised drainage channel water is to avoid polluted site run-off from reaching the revitalised drainage channel water. Relevant mitigation measures should follow the practices outlined in ETWB TC (Works) No. 5/2005 "Protection of natural streams / rivers from adverse impacts arising from construction works" as listed below:</li> <li>Impermeable sheet piles and cofferdams should be used as required to divert water flow from the construction works area so that all the construction works would be undertaken within a dry zone and physically separated from the revitalised drainage channel water.</li> <li>The proposed works should preferably be carried out within the dry season where the flow in the revitalised drainage channel is low.</li> <li>The use of less or smaller construction plants may be specified in works areas close to the revitalised drainage channel.</li> <li>Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from</li> </ul>	To minimise impact from revitalisation and greening of Drainage Channel Banks				N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul> <li>the revitalised drainage channel during carrying out of the construction works.</li> <li>Stockpiling of construction materials and dusty materials should be covered and located away from the revitalised drainage channel water.</li> <li>Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby revitalised drainage channel.</li> <li>Construction activities, which generate large amount of wastewater, should be carried out a distance away from the revitalised drainage channel, where practicable.</li> <li>Mitigation measures to control site run-off from entering the nearby revitalised drainage channel should be implemented to minimise water quality impacts. Surface channels should be provided along the edge of the revitalised drainage channel within the work sites to intercept the run-off.</li> <li>Construction effluent, site run-off and sewage should be properly collected and/or treated.</li> <li>Any temporary works site inside the revitalised drainage channel should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the revitalised drainage channel water.</li> </ul>					
S6.11	The construction method and sequence of the proposed construction in watercourses / concrete flood storage pond for works sites of DP12 should be carefully designed so that all the construction works including any excavation and pilling operations would be undertaken within a dry zone and physically separated from the watercourses downstream.	To minimise impact from construction in watercourses / concrete flood storage pond			WPCO, EIAO-TM	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	Impermeable sheet pile walls or cofferdam walls or steel casing should be installed to fully enclose the construction works area (including all the excavation and piling works) in the watercourse / pond prior to the commencement of any works in watercourse / pond. Dewatering of the construction works area or diversion of water flow should be undertaken before the construction works to avoid water flow in the construction works area. Silt removal facilities should be used to clarify the effluent generated from the dewatering operation before discharging back to the watercourse / drainage system.	To minimise impact from construction in watercourses / concrete flood storage pond			WPCO, EIAO-TM, TM-DSS	N/A
S6.11	Any construction works including excavation and pilling activities should be undertaken in a dry zone surrounded by the impermeable sheet pile walls or cofferdam walls or steel casing. Silt curtains should also be deployed around the construction works area inside the watercourse, where practicable, as a second layer of protection to further minimise sediment and contaminant release. All wastewater generated from the pilling activities should be regarded as part of the construction site effluent, which should be properly collected and treated as appropriate to meet the standards stipulated in the TM-DSS before disposal. It is recommended that the construction works in watercourses / pond should be undertaken in dry seasons, where practicable, when the water flow is low.	To minimise impact from construction in watercourses / concrete flood storage pond			WPCO, EIAO-TM	N/A
\$6.11	Construction works for removal and diversion of watercourses should be undertaken within a dry zone. Where necessary, cofferdams or similar impermeable sheet pile walls should be used to isolate the works areas from the neighbouring waters.	To minimise impact from removal and diversion of watercourse			WPCO, EIAO-TM	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	Construction works at watercourse should be undertaken only after flow diversion or dewatering operation is fully completed to avoid water flow in the works area. Dewatering of watercourse should be performed by diverting the water flow to new or temporary drainage. Where necessary, cofferdams or similar impermeable sheet pile walls should be used to isolate the works areas from neighbouring waters. The permanent or temporary drainage for carrying the diverted flow from existing watercourse to be removed should be constructed and completed before dewatering of that existing watercourse. Construction of all the proposed permanent and temporary drainage should be undertaken in a dry zone prior to receiving any water flow.				WPCO, EIAO-TM, TM-DSS	N/A
S6.11	The Contractor should provide a dry zone for all the construction works to be undertaken in watercourses and stormwater drainage following the tentative works sequence as described above or using other approved methods as appropriate to suit the works condition. The flow diversion works should be conducted in dry season, where possible, when the flow in the watercourse is low. The wastewater and ingress water from the site should be properly treated to comply with the WPCO and the TM-DSS before discharge.				WPCO, EIAO-TM, TM-DSS	N/A
S6.11	The site practices outlined in the ProPECC PN 1/94 "Construction Site Drainage" and ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted for the proposed demolition or diversion of watercourses where applicable.				WPCO, EIAO-TM, ProPECC PN 1/94, ETWB TC (Works) No. 5/2005	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	Construction works at the existing ponds / wet areas should be conducted only after dewatering of these ponds / wet areas is fully completed. The drained water generated from the dewatering of these ponds / wet areas to be removed should be temporarily stored in appropriate storage tanks or containers for reuse on-site as far as possible. Any surplus drained water should be tankered away for proper disposal at STW in a controlled manner.	To minimise impact from removal of ponds / wet areas			WPCO, EIAO-TM	N/A
S6.11	It is recommended to drain only one pond at a time to minimise the potential water quality impact. Dewatering works at ponds / wet areas should be conducted within dry season to minimise the quantity of drained water. No direct discharge of drained water to the stormwater drainage system or marine water should be allowed.					N/A
S6.11	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.	To minimise impact from accidental spillage			WPCO, Waste Disposal Ordinance (WDO), Waste Disposal (Chemical Waste) (General) Regulation, EIAO- TM	Implemented
S6.11	Any service workshop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. 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.				WPCO, WDO, Waste Disposal (Chemical Waste) (General) Regulation, EIAO- TM	N/A
S6.11	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows:					Implemented

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EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul> <li>Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> <li>Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> <li>Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>					
S6.11	No discharge of sewage to the stormwater system and marine water will be allowed. Adequate and sufficient portable chemical toilets should be provided in the works areas to handle sewage from construction workforce. A licensed waste collector should be employed to clean and maintain the chemical toilets on a regular basis.	To minimise impact from workforce sewage effluent			WPCO, EIAO-TM, TM-DSS	Implemented
S6.11	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. Regular environmental audit of the construction site should be conducted to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site.				WPCO, EIAO-TM	Implemented
S6.11	Any excavated contaminated material and exposed contaminated surface should be properly housed and covered to avoid generation of contaminated run-off. Open stockpiling of contaminated materials should not be allowed. Any contaminated run-off or wastewater generated from the land decontamination processes should be properly collected and diverted to wastewater treatment facilities (WTF). The WTF shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as total petroleum hydrocarbon) to an undetectable range. All treated effluent from the wastewater treatment system shall meet the	To minimise impact from contaminated site run-off and wastewater from land decontamination			WPCO, EIAO-TM, TM-DSS	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	requirements as stated in TM-DSS and should be either discharged into the foul sewers or tankered away for proper disposal.					
S6.11	No direct discharge of groundwater from contaminated areas should be adopted. Prior to any excavation works within the potentially contaminated areas, the baseline groundwater quality in these areas should be reviewed based on the past relevant site investigation data and any additional groundwater quality measurements to be performed with reference to Guidance Note for Contaminated Land Assessment and Remediation and the review results should be submitted to EPD for examination. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, this contaminated groundwater should be either properly treated or properly recharged into the ground in compliance with the requirements of the TM-DSS. If wastewater treatment is to be deployed for treating the contaminated groundwater, the wastewater treatment unit shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as total petroleum hydrocarbon) to an undetectable range. All treated effluent from the wastewater treatment plant shall meet the requirements as stated in the TM-DSS and should be either discharged into the foul sewers or tankered away for proper disposal.	To minimise impact from groundwater from contaminated areas			WPCO, TM-DSS, Guidance Note for Contaminated Land Assessment and Remediation	Implemented
S6.11	If deployment of wastewater treatment is not feasible for handling the contaminated groundwater, groundwater recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in section 2.3 of the TM-DSS. The baseline groundwater quality should be determined prior to the	To minimise impact from groundwater from contaminated areas			WPCO, EIAO-TM, TM-DSS	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	selection of the recharge wells and submit a working plan to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Groundwater monitoring wells should be installed near the recharge points to monitor the effectiveness of the recharge wells and to ensure that no likelihood of increase of groundwater level and transfer of pollutants beyond the site boundary. Prior to recharge, free products should be removed as necessary by installing the petrol interceptor. The Contractor should apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater recharge operation or discharge of treated groundwater.					
S6.11	<ul> <li>The following measures should be implemented by the Contractors to minimise the chance of emergency construction site discharge (due to failure of treatment facilities such as sand traps, silt traps, sedimentation basins, oil interceptors etc.):</li> <li>Provide spare or standby treatment facilities of suitable capacities for emergency replacement in case damage or defect or malfunctioning of the duty treatment facilities is observed.</li> <li>Conduct daily integrity checking of the construction site drainage and treatment facilities to inspect malfunctions, in particular before, during and after a storm event.</li> <li>Carry out regular maintenance or desilting works to maintain effectiveness of the construction site drainage and treatment facilities in particular before, during and after a storm event.</li> </ul>	To minimise impact from construction site discharges			WPCO, EIAO-TM, TM-DSS	Implemented
S6.11	An Emergency Response Plan (ERP) should be developed to minimise the potential impact from construction site discharges under failure of treatment facilities during emergency situations or inclement weather. The ERP should give the emergency contacts to mobilise retention facilities and	To minimise impact from construction site discharges				Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	stakeholders to be notified as well as the details of the proposed construction site drainage system and the design and operation of duty and standby treatment facilities. The ERP should also provide the procedures and guidelines for routine integrity checking and maintenance of the drainage system and treatment facilities as well as the emergency response and rectification procedures to restore normal operation of the treatment facilities in case of treatment failure during emergency situation or inclement weather. The Best Management Practices (BMPs) in controlling water pollution arising from the construction activities and an event and action plan with action and limit levels for water quality monitoring should be included in the ERP. The ERP should be submitted to the EPD for approval before commencement of the construction works.					
S6.11	Construction of the Project would involve diversion of the existing twin 800 mm diameter rising mains along Tin Ying Road. New sewerage facilities for receiving the diverted sewage flow from the existing rising mains should be constructed prior to the commencement of any demolition and construction works at the existing rising mains. All sewage flow running in the existing rising mains along Tin Ying Road should be diverted to the new sewerage system prior to any demolition and construction works at the existing rising mains. No discharge of sewage flow to the environment should be allowed during the sewerage diversion works.	To minimise impact from sewerage diversion works			WPCO, EIAO-TM	N/A
S6.11	All excavated materials generated from removal and diversion of watercourses, removal and construction works in ponds and wet areas as well as the proposed bridge pier construction works in watercourses should be collected and handled in compliance with the Waste Disposal Ordinance. Excavated sediment, if any, generated from the excavation activities in watercourses, ponds and wet areas should be tested and classified in accordance with the ETWB TCW No. 34/2002 for	To manage the disposal of sediment			Waste Disposal Ordinance, ETWB TCW No. 34/2002	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	determining the disposal arrangement for the sediment. No direct disposal of the construction wastes or excavated materials into the stormwater drainage system and marine water should be allowed.					
Waste Ma	anagement					
S8.2	<ul> <li><u>Good Site Practice</u> The following good site practices are recommended during the construction phase: <ul> <li>Nomination of an approved person, such as a site manager, to be responsible for the implementation of good site practices,</li> <li>Training of site personnel in proper waste management and chemical handling procedures. <li>Provision of sufficient waste disposal points and regular collection of waste.</li> <li>Appropriate measures to minimize windblown litter and dust during handing, transportation and disposal of waste; and</li> <li>Preparation of a WMP in accordance with the ETWB TCW No. 19/2005 Environmental Management on Construction Sites and submitted it to the Engineer for approval.</li> </li></ul></li></ul>	Minimise waste generation during construction	Contractor	Construction Phase	Waste Disposal Ordinance, Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK)	Implemented
S8.2	<ul> <li>Waste Reduction Measures</li> <li>Waste reduction is best achieved by proper planning and design at the planning and design phases, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve waste reduction:</li> <li>Segregation and storage of different types of waste in different containers or skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> <li>Adopt proper storage and site practices to minimize the potential for damage to, and contamination of, construction materials;</li> </ul>				Waste Disposal Ordinance	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul> <li>Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated;</li> <li>Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions (i.e. soil, rock, broken concrete, etc.);</li> <li>Maximize the use of reusable steel formwork to reduce the amount of C&amp;D materials;</li> <li>Minimize over ordering concrete, mortars and cement grout by doing careful check before ordering; and</li> <li>Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as far as possible.</li> </ul>					
S8.2	<ul> <li><u>Storage of Waste</u></li> <li>Storage of materials on site may induce adverse environmental impacts if not properly managed. The following recommendations should be implemented to minimise the impacts:</li> <li>Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution;</li> <li>Maintain and clean storage areas routinely;</li> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from being windblown or washed away; and</li> <li>Different locations should be designated to stockpile each material to enhance reuse.</li> </ul>	Minimise waste impacts during storage of waste			Waste Disposal Ordinance	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S8.2	<ul> <li><u>Collection and Transportation of Waste</u></li> <li>Waste hauler with appropriate permits should be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets. The following recommendation should be implemented to minimise the impacts:</li> <li>Remove waste in timely manner;</li> <li>Employ the trucks with cover or enclosed containers for waste transportation;</li> <li>Obtain relevant waste disposal permits from the appropriate authorities; and</li> <li>Dispose of waste at licensed waste disposal facilities.</li> </ul>	Minimise waste impacts during collection and transportation of waste			Waste Disposal Ordinance	Implemented
S8.2	<ul> <li>Construction and Demolition (C&amp;D) Materials</li> <li>Wherever practicable, C&amp;D materials should be segregated from other waste to avoid contamination and ensure acceptability at the public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the C&amp;D materials:</li> <li>Adopt "selective demolition" technique to demolish the existing structure and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;</li> <li>Maintain the stockpile areas and reuse excavated fill material for backfilling;</li> <li>Carry out on-site sorting to recover the inert C&amp;D materials and reusable and recyclable materials prior to disposal offsite;</li> <li>Make provisions in the contract documents to allow and promote the use of recycled aggregates where appropriate; and</li> <li>Implement a trip-ticket system for each works contract in accordance with DEVB TC(W) No. 6/2010 Trip-ticket System for Disposal of Construction and Demolition</li> </ul>	Minimise waste impacts from C&D materials			Waste Disposal Ordinance, Land (Miscellaneous Provisions) Ordinance, Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	Material to ensure that the disposal of C&D materials are properly documented and verified. The Contractor should be responsible for devising a system to work for on-site sorting of C&D materials. It is recommended that the system should include the identification of the source of generation, estimated quantity of waste generated, arrangement for on-site sorting and/or collection, designated stockpiling areas, frequency of collection by recycling contractors and frequency of removal off-site.					
\$8.2	<ul> <li><u>Asbestos Containing Materials</u> Due to the potential large amount of asbestos containing materials during the site clearance stage, asbestos investigation is required. However, as asbestos investigation will involve a large number of buildings and most premises will involve private access, which cannot be obtained at this stage, it is considered that an asbestos specialist shall be employed by the responsible parties during the construction stage to investigate this issue.</li> <li>Sufficient and reasonable lead time shall be allowed for preparation, vetting and implementation of Asbestos Investigation Report and Asbestos Abatement Plan in accordance with Air Pollution Control Ordinance before commencement of any demolition or site clearance work. Some key precautionary measures related to the handling and disposal of asbestos are listed as following:</li> <li>Adoption of protection, such as full containment, mini containment, or segregation of work area;</li> <li>Provision of decontamination facilities for cleaning of workings, equipment and bagged waste before leaving the work area;</li> <li>Adoption of engineering control techniques to prevent fibre release from work area, such as use of negative pressure equipment with high efficiency particulate air (HEPA)</li> </ul>	Control the asbestos containing materials and ensure proper storage, handling and disposal			Code of Practice on Handling, Transportation and Disposal of Asbestos Waste ProPECC PN 2/97 Handling of Asbestos Containing Materials in Buildings	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul> <li>filters to control air flow between the work area and the outside environment;</li> <li>Wetting of asbestos containing materials before and during disturbance, minimising the breakage and dropping of asbestos containing materials, and packing of debris and waste immediately after it is produced;</li> <li>Cleaning of work area by wet wiping and vacuuming with HEPA-filtered vacuum cleaner;</li> <li>Coating on any surfaces previously in contact with or contained by asbestos with a sealant;</li> <li>Proper bagging, safe storage and disposal of asbestos and asbestos-contaminated waste;</li> <li>Pre-treatment of all effluent from the work area before discharged; and</li> <li>Air monitoring strategy to check the leakage and clearance of the work area during and after the asbestos work.</li> </ul>					
S8.2	<u>Chemical Waste</u> For those processes which generated chemical waste, it may be possible to find alternatives to eliminate the use of chemicals, to reduce the generation quantities or to select a chemical type of less impact on environment, health and safety as far as possible. If chemical waste is produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer. Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste contractor. Chemical waste (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while chemical waste that cannot be recycled should be disposed of at either the CWTC, or another licensed facility.	Control the chemical waste and ensure proper storage, handling and disposal.			Waste Disposal (Chemical Waste) General) Regulation, Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S8.2	<u>General Refuse</u> General refuse should be stored in enclosed bins separately from construction and chemical waste. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. A reputable waste collector should be employed to remove general refuse on a daily basis. It is expected that such arrangements would minimise potential environmental impacts.	Minimise production of general refuse and avoid odour, pest and litter impacts			Waste Disposal Ordinance	Implemented after reminder
	Excavated Sediment Since the amount of excavated sediment generated from the inland water removal / diversion works is expected to be small, all excavated sediment will be treated and reused on-site as backfilling materials for the Project. This approach avoids the need for off-site disposal that may result in impacts on the marine environment. In addition, all construction works near the watercourses should be undertaken within a dry zone and during dry season to avoid adverse impacts to the environment. The excavated sediment, if stockpiled on site, should be stored in enclosed containers and transported to the on-site treatment facilities as soon as practicable to minimise any potential odour impacts.	Proper handling of excavated sediment			Waste Disposal Ordinance	N/A
	<u>Contaminated Soil</u> It is considered unlikely that contaminated land issues, if any subject to site investigation, would be a concern during either the construction or the operational of the proposed development as remediation on contaminated area would be carried out prior to construction. However, as a precaution, it is recommended that standard good site practices should be implemented during the construction phase to minimise any potential exposure to contaminated soils or groundwater.	Proper handling of contaminated soil			Practice Guide for Investigation and Remediation of Contaminated Land	Implemented

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	WeA Report								
EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status			
Land Cor	and Contamination								
-	Identified Potentially Contaminated SitesPrior to development of these sites, the Project Proponentshould appoint a consultant to re-appraise these sites to updatethe corresponding findings and sampling and testingrequirements presented in the Contamination Assessment Plan(CAP).Supplementary CAP(s), incorporating the findings of the sitere-appraisal and the updated sampling and testing strategy,should be prepared and submitted to EPD for approval prior toconducting any site investigation (SI) works.SI works should then be carried out according to thesupplementary CAP(s). Contamination Assessment Report(CAR(s)) and, if contaminated soil and/or groundwateridentified, Remediation Action Plan (RAP(s)) should beprepared and submitted to EPD for approval.Remaining Non-Contaminated SitesAfter the sites are handed over to the Project Proponent fordevelopment, the Project Proponent should appoint aconsultant to revisit these sites to assess the latest land uses andsite conditions. If any of these sites are found to have potentialland contamination issues, the Project Proponents appointedconsultant should prepare and submit supplementary CAP(s) toEPD for approval prior to conducting any SI works.SI works should then be carried out according to thesupplementary CAP(s). CAR(s) and, if contaminated soiland/or groundwater identified, RAP(s) should be prepared andsubmitted to EPD for approval	Identify the presence, nature and extent of contamination and formulate the necessary remedial actions	CEDD/ Detailed Design Consultant / Contractor	After the land is resumed and handed over to the Project Proponent and prior to commencement of any remediation / construction works.	EIAO-TM, Guidance Manual for Use of Risk- Based Remediation Goals (RBRGs) for Contaminated Land Management, Guidance Notes for Contaminated Land Assessment and Remediation; and Practice Guide for Investigation and Remediation of Contaminated Land	Implemented			



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
-	Any contaminated soil and groundwater should be treated according to EPD's approved RAP(s) and RR(s) should be submitted to EPD for agreement after completion of the remediation works.	Remediate any contaminated soil and groundwater and demonstrate that the remediation works are adequate and is carried out in accordance with EPD's approved RAP(s).	Contractor	After the land is resumed and handed over to the PP and prior to commencement of any construction works.		Implemented
Ecology	·	, , , , , , , , , , , , , , , , , , ,				
S10.2.4	Scheduling the site formation and construction works at Sites 3-32, 3-33, 3-37, 3-39 and 3-40 outside the breeding season of ardeids	Minimise disturbance impacts to breeding ardeids in San Sang San Tsuen egretry	CEDD / Contractor	Construction phase	TM-EIAO	N/A
\$10.2.5	Provision of screening (e.g., hoarding) at adjacent habitats within CA at northwest of San Sang San Tsuen.	Disturbance impacts (e.g. noise/vibration, visual) to adjacent habitats within the CA				N/A
\$10.2.6	Hoarding around "Green Belt" zoning to mitigate construction disturbance impacts to the Crested Serpent Eagle habitat.	Minimise construction disturbance impacts to the Crested Serpent Eagle habitat				N/A
S10.2.7	Carefully design the construction methods and sequence of the proposed pier in the watercourses so that all piling and excavation works would be done within dry zone and physically separated from the watercourse downstream	Minimise potential water quality impacts to the habitats of the main channel and waterbird species				N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S10.2.8	An ecologist with relevant experience should be consulted before the clearance of any bat roost.	Ensure no bat roost would be damaged due to the proposed development				N/A
\$10.2.10	Provision of hoarding for proper delineation of works boundary.	Minimise construction disturbance impacts to existing mitigation ponds				Implemented
S10.2.11	General dust and noise control measures.	Mitigate disturbance impacts to the surrounding habitats and associated wildlife				Implemented
S10.2.12	Night-time lighting control.	Minimise glare disturbance to wildlife				Implemented
S10.2.13 	Good site practices during the construction phase to avoid any pollution entering any nearby watercourses.	Minimise water quality impacts to nearby water bodies				Implemented
Fisheries						
S.13.4.8	Follow the mitigation measures proposed in the water quality assessment for construction and operational phase.	To protect fisheries resources from potential indirect impacts arising from deterioration of water quality	Contractor	Construction phase	EIA, contractual requirements	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status			
Landscap	Landscape and Visual								
CM1	Minimised construction area and contractor's temporary works areas The construction area and contractor's temporary works areas should be minimised. General Good Practice Measures - For areas unavoidably disturbed by the Project on a short-term basis e.g., works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to	Minimise impacts on adjacent landscape	Government/ Developer/ Detailed Design Consultant/ Contractor	Prior to construction, construction stages. This should be implemented as soon as the areas become available, to achieve early establishment	-	Implemented			
CM2	Stripping and storing of topsoil Topsoil, where identified, should be stripped and stored for re- use in the construction of the soft landscape works, where practical. The Contract Specification shall include storage and reuse of topsoil as appropriate. On potentially contaminated sites (as per Section 8) where investigation results indicate soil contamination is present, the use of contaminated soils for planting is to be avoided where appropriate.	Minimise the loss of existing topsoil and reduce the need to provide imported material		Detailed design, construction stages	-	Implemented			



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
CM3	<u>Protection of existing trees</u> Tree Protection & Preservation – Exiting trees to be retained within the Project site should be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees			ETWB Technical Circular Works (TCW) No. 29/2004 and 3/2006	Implemented
CM4	Transplantation of existing trees where practical Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the Project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation		Prior to Construction, Construction Phase & Maintenance in Operation Phase	ETWB TCW 3/2006 and 2/2004 HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit	Implemented

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EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
CM5	<u>Control of night-time lighting</u> Control of night-time lighting and glare by hooding all lights. Construction day and night-time lighting should be controlled to minimise glare impact to adjacent VSRs during the construction phase.	Minimise impact of night-time lighting and glare	Government/ Developer/ Contractor	Construction stage	-	Implemented
CM6	Construction of decorative hoarding around construction works Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publicly accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	To screen undesirable views of the works site.	Contractor	Construction stage	-	To be implemented
CM7	Reduction of construction period to practical minimum Reduction of construction period to practical minimum	Minimise length of exposure to construction works	Government/ Developer/ Detailed	Construction stage	-	Implemented
CM8	<u>Prevention of run-off</u> Limitation of / Ensuring no run-off into surrounding landscape and prohibit run-off from entering adjacent water bodies and waterways.	Minimise / limit impacts on surrounding landscape and adjacent water sea areas	Design Consultant/ Contractor	Construction stage	Guidelines for this include ETWB Technical Circular (Works) No. 5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works; Building Department (BD) Practice Note for Authorized Persons and Registered Structural	Implemented

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EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
					Engineers 295: Protection of natural streams/rivers from adverse impacts arising from construction works	
CM9	Phasing of construction stage Phasing of the construction stage to reduce visual impacts.	Minimise visual impacts during the construction phase		Construction stage	-	To be implemented
CM10	Advance screen planting Advance screen planting of fast-growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years.	Minimise length of exposure without long term mitigation measures		Detailed design, construction stages	ETWB TCW 3/2006 and 2/2004	To be implemented
CM11	<u>Minimise disturbance footprints</u> To minimise landscape and visual impacts, the footprint and elevation of such elements should be optimised to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimise landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption		Detailed design, construction stages	GEO Publication No. 1/2011, Technical Guidelines on Landscape Treatment on Slopes	Implemented
CM12	Protection of existing water courses For all the natural rivers and streams inside the development area, consideration of protection measures should be made to minimise any impacts from the construction works.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	Detailed design, construction stages	Guidelines for this include ETWB Technical Circular (Works) No.	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimise any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. Bridges and box culverts should also be used to minimise the necessity of watercourse modification and protect the watercourses where necessary.				5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works; Building Department (BD) Practice Note for Authorized Persons and Registered Structural Engineers 295: Protection of natural streams/rivers from adverse impacts arising from construction works	
CM13	Hydroseeding on modified slopes Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government/ Developer/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	GEO publication (1999) – Use of Vegetation as Surface Protection on Slope; GEO Publication No. 1/2011- Technical Guidelines on Landscape Treatment for Slopes	To be implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
CM14	Integrate Open Space Network with existing nullah conditions For watercourses affected during construction, measures should be sought to minimise the impact with respect to the existing nullah conditions, existing shrubs and trees along the banks. Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used.	Minimise / limit impacts on surrounding landscape and adjacent water sea areas			ETWB TCW No. 5/2005 – Protection of natural streams/rivers from adverse impacts arising from construction works; DSD Practice Note No.1/2005, Guidelines on Environmental Considerations for River Channel Design	N/A
Cultural I	Heritage Impact					
\$13.1.1	The archaeological impact arising from the construction works should be assessed when the detailed design of the works is available. Preservation in situ is the top priority to safeguard the archaeological remains in the impacted area by amending the layout plans of the construction works. However, if the works cannot avoid disturbance to the archaeological deposit, depending on degree of direct impact, the following mitigation measures should be considered, such as archaeological surveys, archaeological watching brief, preservation by record and relocation of archaeological fieldwork would be agreed with AMO.	Minimise impact to archaeology in SAIs	Contractor	Prior to construction phase commencement	Environmental Impact Assessment Ordinance EIAO (Cap.499) and Technical Memorandum (EIAO-TM) Guidance Note on Assessment of Impact on Sites of Culture Heritage in Environmental Impact Assessment Studies (GCH-EIA) Antiquities and Monuments Ordinance (A&MO)	N/A

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EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
					Hong Kong Planning Standards and Guidelines (HKPSG) Guidelines for Cultural Heritage Impact Assessment (GCHIA)	
\$13.1.2	Further archaeological survey is required to be conducted at APA 1 and APA 2 to ascertain the extent of any archaeological remains within the APAs if any construction works will be carried out. Based on the findings of the survey, mitigation measures could be proposed, such as preservation in situ, preservation by record, or relocation of archaeological remains, in prior agreement with the AMO. Direct impact arising from the proposed development within APA 3 should be avoided as far as possible.	Minimise impact to archaeology in APAs.			EIAO-TM GCH-EIA A&MO HKPSG GCHIA	N/A
\$13.1.5	Preservation by record (including cartographic and photographic record) prior to any construction works would be required for the directly impacted built heritage.	Minimise impact to built heritage			EIAO-TM GCH-EIA HKPSG GCHIA	N/A
-	A Conservation Management Plan should be proposed to implement future maintenance and management of the cultural heritage.	Maximise the public education, heritage and cultural tourism related opportunities in this area as heritage attractions.	CEDD		EIAO-TM GCH-EIA A&MO HKPSG GCHIA	N/A



# Appendix D

# Environmental Monitoring Schedule

#### Contract No. WD/02/2021 Environmental Team for Hung Shui Kiu/ Ha Tsuen New Development Area Stage 1 Works - Site Formation and Engineering Infrastructure

		Er	vironmental Monitoring Schee	lule		
			August 2023			
Sun	Mon	Tue	Wed	Thur	Fri	Sat
		1	2 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	3	4 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	5
6	7	8 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	9	10 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	11	12 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)
13	14	15 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	16	17 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	18	<b>19</b> Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)
20	<b>21</b> Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	22	23 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	24	25 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	26
27	28	29 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	30	31 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	1	2 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1) (Cancelled due to adverse weather)
HT - Gradient station (d	downstream of U1 and the construction site of Road D downstream of U2 and the construction site of Road D n (downstream of the construction site of Road D1)		1	1	1	1

TKW - Gradient station (downstream of the construction site of Road D1)

### Contract No. WD/02/2021 Environmental Team for Hung Shui Kiu/ Ha Tsuen New Development Area Stage 1 Works - Site Formation and Engineering Infrastructure

	Tentative Environmental Monitoring Schedule					
			September 2023			
Sun	Mon	Tue	Wed	Thur	Fri	Sat
					1	2 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1) (Cancelled due to adverse weather)
3	<b>4</b> Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	5	6 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	7	8 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	9
10	11 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	12	13 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	14	15 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	16
17	18	19 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	20	21 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	22	23 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)
24	25 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	26	27 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	28	29 Water Quality Monitoring (U1, U2, SW, HT, TKW, TKW1)	30
Water Quality Monitoring Station: U1 - Upstream Station U2 - Upstream Station SW - Gradient station (downstream HT - Gradient station (downstream TKW1 - Gradient station (downstream	of U1 and the construction site of Road D1 of U2 and the construction site of Road D1 am of the construction site of Road D1) m of the construction site of Road D1)		·	·	·	



# Appendix E Calibration Certification

專業化驗有限公司 QUALITY PRO TEST-CONSULT LIMITED Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

## **REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

 Test Report No.
 : R-BC050055

 Date of Issue
 : 17 May 2023

 Page No.
 : 1 of 2

#### PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

#### **PART B - SAMPLE INFORMATION**

Name of Equipment :	HORIBA U-53
Manufacturer :	HORIBA
Serial Number :	PORBNFNT
Date of Received :	11 May 2023
Date of Calibration :	17 May 2023
Date of Next Calibration :	16 August 2023
Request No. :	D-BC050055

#### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

#### **PART D - CALIBRATION RESULT**

#### (1) pH value

Target ( pH unit )	Display Reading ( pH unit )	Tolerance	Result
4.00	4.14	0.14	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.06	0.05	Satisfactory

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

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
16	17.5	1.5	Satisfactory
24	25.7	1.7	Satisfactory
32	32.3	0.3	Satisfactory

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

#### (3) Salinity

Expected Reading (g/L)	Display Reading ( g/L )	Tolerance ( % )	Result
10	9.66	-3.40	Satisfactory
20	19.52	-2.40	Satisfactory
30	30.20	0.67	Satisfactory

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

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AUTHORIZED SIGNATORY:

LEE Chun-ning

Assistant Manager (Chemical Testing)

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## **REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

Test Report No.	: R-BC050055
Date of Issue	: 17 May 2023
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#### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.22	7.88	-0.34	Satisfactory
4.31	3.90	-0.41	Satisfactory
1.81	1.37	-0.44	Satisfactory
0.07	0.00	-0.07	Satisfactory

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

#### (5) Turbidity

Expected Reading (NTU)	Display Reading ( NTU )	Tolerance ( % )	Result
0	0.00		Satisfactory
10	10.8	8.00	Satisfactory
20	20.0	0.00	Satisfactory
100	106	6.00	Satisfactory
800	811	1.40	Satisfactory

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

#### Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. •The results relate only to the calibrated equipment as received

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

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

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

--- END OF REPORT ----



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

Test Report No. Date of Issue Page No. : R-BC080079 : 25 August 2023 : 1 of 2

#### **PART A - CUSTOMER INFORMATION**

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

#### **PART B - SAMPLE INFORMATION**

Name of Equipment :	HORIBA U-53
Manufacturer :	HORIBA
Serial Number :	PPHNOMXY
Date of Received :	22 August 2023
Date of Calibration :	22 August 2023
Date of Next Calibration :	22 February 2023
Request No. :	D-BC080079

#### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H+ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21e 2130 B (Nephelometric Method)

#### **PART D - CALIBRATION RESULT**

#### (1) pH value

Target ( pH unit )	Display Reading ( pH unit )	Tolerance	Result
4.00	4.16	0.16	Satisfactory
7.42	7.56	0.14	Satisfactory
10.01	9.92	-0.09	Satisfactory

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

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
18	19.15	1.15	Satisfactory
28	27.79	-0.21	Satisfactory
37	36.58	-0.42	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance ( % )	Result
10	10.11	1.10	Satisfactory
20	21.27	6.35	Satisfactory
30	32.28	7.60	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun ning



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION**

Test Report No.	:R-B0
Date of Issue	:25 A
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: R-BC080079 : 25 August 2023 : 2 of 2

#### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
7.50	7.88	0.38	Satisfactory
6.31	6.76	0.45	Satisfactory
1.11	1.29	0.18	Satisfactory
0.07	0.00	-0.07	Satisfactory

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

#### (5) Turbidity

Expected Reading (NTU)	Display Reading ( NTU )	Tolerance ( % )	Result
0	0.98		Satisfactory
10	10.7	7.00	Satisfactory
20	20.7	3.50	Satisfactory
100	107	7.00	Satisfactory
800	807	0.90	Satisfactory

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

#### Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards. •The results relate only to the calibrated equipment as received

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

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

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

--- END OF REPORT ---



# Appendix F

Water Quality Monitoring Results and Graphical Presentation



Water Quality Monitoring Location : TKW1

Water Quanty Me			Water depth	Tempera	ture (°C)	р	H	DO (	(mg/L)	DO	(%)	Turbidi	ty (NTU)	Suspended S	Solids (mg/L)
Date	Start Time	Weather	(cm)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 August 2023	15:35	Sunny	14	23.4 23.0	23.2	7.9 7.9	7.9	4.9 4.9	4.9	57.1 57.0	57.1	17.9 18.5	18.2	9.5 8.6	9.1
04 August 2023	15:35	Sunny	13	23.1 23.0	23.1	7.3 7.3	7.3	5.9 5.8	5.9	68.6 68.1	68.4	21.8 22.1	22.0	3.6 4.6	4.1
08 August 2023	16:47	Sunny	9	27.5 27.5	27.5	7.8 7.8	7.8	3.6 3.5	3.6	45.1 44.6	44.9	10.4 10.6	10.5	4.3 4.6	4.5
10 August 2023	15:40	Fine	12	21.5 21.5	21.5	7.5 7.5	7.5	5.8 5.8	5.8	66.0 66.0	66.0	12.3 12.2	12.3	1.0 1.3	1.2
12 August 2023	14:55	Fine	9	22.7 22.7	22.7	7.5 7.5	7.5	6.8 6.8	6.8	78.3 78.4	78.4	15.2 16.3	15.8	1.1 1.2	1.2
15 August 2023	15:36	Fine	12	24.5 24.5	24.5	7.6 7.6	7.6	4.5 4.4	4.5	53.7 53.2	53.5	11.7 10.4	11.1	2.1 2.1	2.1
17 August 2023	16:18	Fine	8	24.4 24.4	24.4	7.7 7.7	7.7	4.8 4.6	4.7	57.0 55.2	56.1	3.9 4.0	4.0	1.7 2.1	1.9
19 August 2023	15:37	Cloudy	10	24.5 24.5	24.5	7.6 7.6	7.6	6.6 6.6	6.6	79.1 79.0	79.1	5.4 5.3	5.4	2.8 2.4	2.6
21 August 2023	15:36	Fine	8	21.2 21.2	21.2	7.5 7.5	7.5	6.0 6.0	6.0	67.1 67.0	67.1	14.1 15.5	14.8	1.5 2.0	1.8
23 August 2023	16:22	Sunny	12	19.6 19.6	19.6	7.1 7.1	7.1	6.1 6.1	6.1	66.9 66.9	66.9	16.5 17.7	17.1	1.2 1.2	1.2
25 August 2023	17:43	Cloudy	11	24.3 24.3	24.3	7.7 7.6	7.7	5.3 5.3	5.3	63.2 62.9	63.1	4.2 4.2	4.2	1.0 1.0	1.0
29 August 2023	14:44	Fine	12	30.2 30.2	30.2	7.8 7.8	7.8	4.8 4.8	4.8	64.3 63.5	63.9	42.5 42.2	42.4	13.0 13.0	13.0
31 August 2023	16:32	Fine	14	20.9 20.9	20.9	7.3 7.3	7.3	4.0 4.0	4.0	45.3 44.4	44.9	18.5 19.6	19.1	2.9 2.2	2.6

#### Water Quality Monitoring Location : TKW

			Water depth	Tempera	ture (°C)	р	Н	DO (	mg/L)	DO	(%)	Turbidi	ty (NTU)	Suspended S	Solids (mg/L)
Date	Start Time	Weather	(cm)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 August 2023	15:49	Sunny	11	22.9 22.9	22.9	7.9 7.9	7.9	5.2 5.2	5.2	61.0 60.8	60.9	18.4 17.0	17.7	7.3 6.1	6.7
04 August 2023	15:43	Sunny	14	23.0 23.0	23.0	7.3 7.3	7.3	5.5 5.5	5.5	64.4 64.1	64.3	19.7 19.3	19.5	2.9 3.6	3.3
08 August 2023	17:57	Sunny	10	27.6 27.6	27.6	7.8 7.8	7.8	3.4 3.3	3.4	42.1 42.5	42.3	10.5 10.1	10.3	3.9 3.2	3.6
10 August 2023	15:42	Fine	16	21.4 21.4	21.4	7.0 7.5	7.3	5.8 5.8	5.8	65.8 65.7	65.8	12.4 13.2	12.8	1.0 1.0	1.0
12 August 2023	15:09	Fine	11	22.7 22.7	22.7	7.4 7.4	7.4	6.7 6.8	6.8	78.3 78.3	78.3	18.9 19.7	19.3	1.5 1.0	1.3
15 August 2023	16:26	Fine	15	24.4 24.4	24.4	7.4 7.4	7.4	5.4 5.4	5.4	65.1 65.0	65.1	19.3 20.4	19.9	2.1 2.1	2.1
17 August 2023	16:23	Fine	17	24.2 24.2	24.2	7.9 7.9	7.9	4.3 4.2	4.3	51.5 50.0	50.8	2.5 2.5	2.5	2.0	1.8
19 August 2023	15:47	Cloudy	12	24.5 24.5	24.5	7.6 7.6	7.6	6.6 6.5	6.6	78.5 78.1	78.3	5.2 5.2	5.2	2.0	2.0
21 August 2023	15:37	Fine	13	21.2 21.2	21.2	7.5 7.4	7.5	6.0 5.9	6.0	67.0 66.6	66.8	15.5 12.6	14.1	1.8 1.7	1.8
23 August 2023	17:56	Sunny	17	24.4 24.4	24.4	7.6 7.6	7.6	5.2 5.2	5.2	62.1 62.0	62.1	3.3 3.3	3.3	1.9 1.9	1.9
25 August 2023	17:56	Cloudy	15	24.4 24.4	24.4	7.6 7.6	7.6	5.2 5.2	5.2	62.1 62.0	62.1	3.3 3.3	3.3	1.2	1.2
29 August 2023	14:47	Fine	14	30.5 30.5	30.5	7.9 7.9	7.9	4.1 4.2	4.2	55.4 55.6	55.5	47.7 48.4	48.1	8.4 7.7	8.1
31 August 2023	16:41	Fine	11	20.8 20.9	20.9	7.3 7.3	7.3	3.9 3.9	3.9	44.0 44.2	44.1	22.1 23.1	22.6	3.1 2.9	3.0

#### Water Quality Monitoring Location : U1

Date	Start Time	Weather	Water depth	Tempera	ture (°C)	р	Н	DO (	mg/L)	DO	(%)	Turbidi	ty (NTU)	Suspended S	olids (mg/L)
Date	Surt Tine	weather	(cm)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
23 August 2023	15:43	Sunny	2	20.5	20.5	7.2	7.2	6.7	6.7	73.9	73.9	11.9	12.4	1.3	1.5
25 August 2025	15.45	Sunny	2	20.5	20.5	7.2	1.2	6.7	0.7	73.9	13.9	12.8	12.4	1.6	1.5
25 August 2023	17:01	Cloudy	2	25.0	25.0	8.0	8.0	6.1	6.1	74.1	73.6	4.5	4.6	1.9	1.8
25 Mugust 2025	17.01	Cloudy	2	25.0	25.0	8.0	0.0	6.0	0.1	73.1	75.0	4.7	4.0	1.6	1.0
29 August 2023	14:02	Fine	2	28.5	28.5	7.8	7.9	5.0	5.0	63.9	64.1	34.9	35.8	10.0	10.5
2) Hugust 2025	14.02	The	2	28.5	20.5	7.9	1.9	5.0	5.0	64.2	04.1	36.6	55.0	11.0	10.5
31 August 2023	15:56	Fine	1	30.3	30.2	8.1	8.1	7.4	7.4	98.7	98.0	4.2	4.3	3.4	3.5
51 / tugust 2025	15.50	1 life	1	30.2	50.2	8.1	0.1	7.3	7.4	97.3	23.0	4.3	4.5	3.5	5.5

 Image: Solution of the sector of the sect



Water Quality Monitoring Location : SW

Date	Start Time	Weather	Water depth	Tempera	ture (°C)	р	H	DO (	(mg/L)	DO	(%)	Turbidi	ty (NTU)	Suspended S	Solids (mg/L)
Date	Start Time	weather	(cm)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 August 2023	15:23	Sunny	9	23.0 23.0	23.0	7.7 7.7	7.7	6.0 6.0	6.0	69.6 69.6	69.6	14.5 14.8	14.7	3.4 3.5	3.5
04 August 2023	15:06	Sunny	9	22.3 22.2	22.3	7.9 7.9	7.9	4.3 4.3	4.3	49.3 49.0	49.2	12.8 13.0	12.9	2.2 2.2	2.2
08 August 2023	16:36	Sunny	8	27.7	27.8	7.7 7.7	7.7	6.2 6.3	6.3	80.1 79.5	79.8	8.2 8.3	8.3	4.9 3.9	4.4
10 August 2023	15:25	Fine	6	21.5	21.5	7.6	7.6	7.1	7.1	79.9	79.8	8.9 8.9	8.9	1.6	1.8
12 August 2023	16:38	Fine	7	23.0 23.0	23.0	7.5 7.5	7.5	5.7 5.7	5.7	66.4 66.2	66.3	12.6 13.1	12.9	2.8 3.1	3.0
15 August 2023	15:52	Fine	5	24.5 24.5	24.5	7.6 7.6	7.6	4.5 4.4	4.5	53.7 53.2	53.5	11.7 10.4	11.1	1.9 1.8	1.9
17 August 2023	16:01	Fine	9	24.6 24.5	24.6	7.6 7.6	7.6	6.9 6.9	6.9	82.4 82.3	82.4	4.4 4.4	4.4	1.5 1.8	1.7
19 August 2023	15:28	Cloudy	10	24.6 24.6	24.6	7.5 7.5	7.5	6.5 6.5	6.5	77.9 77.9	77.9	5.4 5.3	5.4	2.3 2.8	2.6
21 August 2023	15:21	Fine	10	21.4 21.4	21.4	7.5 7.5	7.5	6.0 6.0	6.0	67.6 67.5	67.6	13.6 13.9	13.8	2.1 2.0	2.1
23 August 2023	16:08	Sunny	6	20.0 20.0	20.0	7.1 7.1	7.1	4.9 4.8	4.9	53.5 53.2	53.4	14.1 15.3	14.7	2.8 2.3	2.6
25 August 2023	16:35	Cloudy	7	24.4 24.4	24.4	7.6 7.6	7.6	5.2 5.2	5.2	62.1 62.0	62.1	3.3 3.3	3.3	1.9 2.1	2.0
29 August 2023	14:30	Fine	9	29.6 29.6	29.6	7.7 7.7	7.7	6.1 6.1	6.1	80.7 80.6	80.7	14.9 14.2	14.6	9.3 8.8	9.1
31 August 2023	16:20	Fine	9	21.5 21.4	21.5	7.1 7.1	7.1	5.6 5.6	5.6	63.0 63.1	63.1	17.4 18.8	18.1	3.6 3.5	3.6

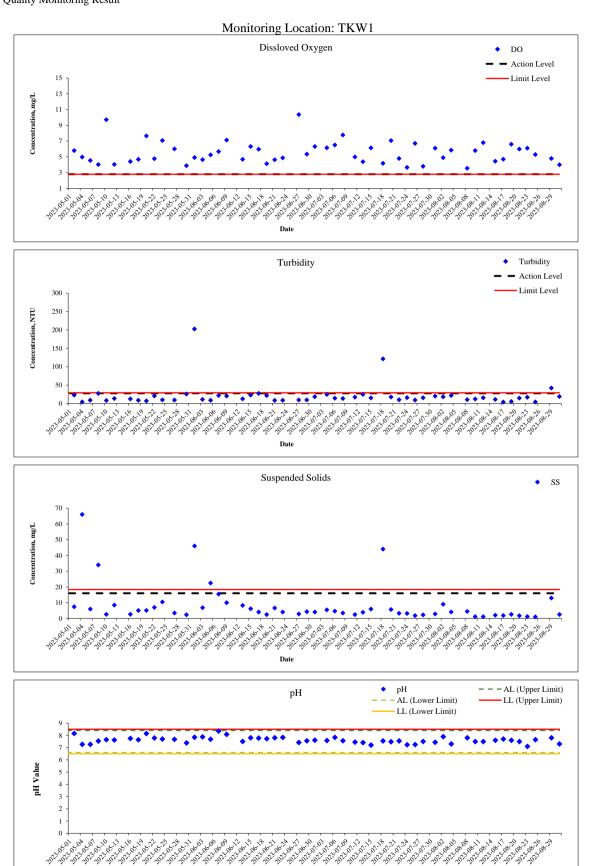
#### Water Quality Monitoring Location : U2

Date	Start Time	Weather	Water depth	Tempera	ture (°C)	р	Н	DO (	(mg/L)	DO	(%)	Turbidi	ty (NTU)	Suspended S	Solids (mg/L)
Date	Start Time	weather	(cm)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 August 2023	15:11	Sunny	26	23.0 23.0	23.0	7.8 7.7	7.8	7.6 7.6	7.6	89.0 89.0	89.0	13.3 13.1	13.2	3.1	3.3
04 August 2023	14:33	Sunny	23	22.1 22.1	22.1	7.9 7.9	7.9	7.0 7.0	7.0	80.2 80.3	80.3	14.9 15.0	15.0	2.3 2.9	2.6
08 August 2023	16:20	Sunny	26	28.3 28.3	28.3	7.7	7.7	7.2	7.3	92.6 93.1	92.9	4.8	4.9	1.8	1.5
10 August 2023	15:13	Fine	25	22.1	22.1	7.7	7.7	7.0	7.0	79.9	79.9	5.9	6.0	1.2	1.3
12 August 2023	14:21	Fine	30	23.8	23.8	7.5	7.5	4.5	4.5	52.8 51.9	52.4	9.0	9.1	1.6	1.8
15 August 2023	15:36	Fine	23	24.5 24.5	24.5	7.8	7.8	5.6	5.6	66.7 66.6	66.7	10.2	10.3	1.9	1.9
17 August 2023	15:48	Fine	26	25.1 25.0	25.1	7.6	7.6	3.2	3.2	38.1 37.0	37.6	3.7	3.8	1.5	1.4
19 August 2023	15:10	Cloudy	29	24.4 24.4	24.4	7.5	7.5	8.5 8.1	8.3	96.4 97.2	96.8	4.8	4.9	1.3 1.6	1.5
21 August 2023	15:07	Fine	24	21.4 21.4	21.4	7.6	7.7	4.9	5.0	55.8 56.4	56.1	9.1 9.0	9.1	2.2 2.1	2.2
23 August 2023	15:53	Sunny	29	20.1 20.1	20.1	7.1 7.1	7.1	3.5 3.5	3.5	38.6 38.6	38.6	13.5 14.7	14.1	2.3 2.8	2.6
25 August 2023	17:14	Cloudy	30	24.9 24.9	24.9	8.0 8.0	8.0	6.7 6.6	6.7	80.7 80.2	80.5	4.8 4.8	4.8	1.8 1.7	1.8
29 August 2023	14:21	Fine	27	29.7 29.7	29.7	7.4 7.4	7.4	4.8 4.9	4.9	63.5 64.4	64.0	14.2 14.2	14.2	3.8 4.7	4.3
31 August 2023	16:05	Fine	24	29.6 29.6	29.6	8.0 8.0	8.0	6.3 6.3	6.3	82.3 82.4	82.4	5.7 5.7	5.7	3.0 3.1	3.1

#### Water Quality Monitoring Location : HT

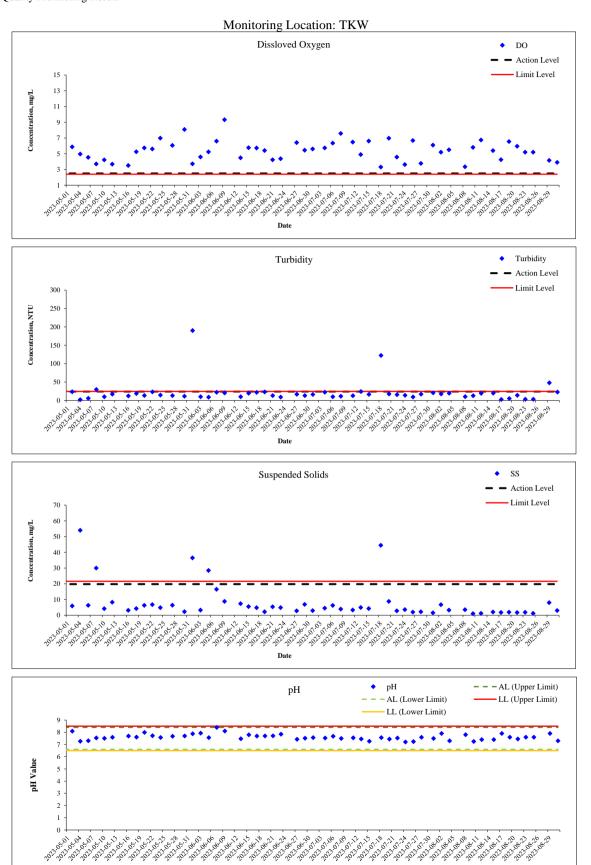
Date	Start Time	Weather	Water depth	Tempera	ture (°C)	р	Н	DO (	mg/L)	DO	(%)	Turbidi	ty (NTU)	Suspended S	Solids (mg/L)
Date	Start Time	weather	(cm)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 August 2023	16:13	Sunny	4	22.7 22.7	22.7	7.8 7.8	7.8	4.5 4.5	4.5	52.1 52.1	52.1	23.4 24.5	24.0	2.6 3.4	3.0
04 August 2023	16:03	Sunny	4	22.4 22.3	22.4	7.6 7.6	7.6	5.8 5.8	5.8	66.7 66.2	66.5	15.2 15.5	15.4	1.6 1.5	1.6
08 August 2023	17:21	Sunny	3	27.2 27.2	27.2	7.8 7.8	7.8	6.0 6.0	6.0	75.3 74.9	75.1	5.0 5.0	5.0	2.3 2.5	2.4
10 August 2023	16:05	Fine	4	21.2	21.2	7.2 7.2	7.2	4.2	4.2	47.7 47.5	47.6	15.3 16.5	15.9	2.0	1.8
12 August 2023	15:23	Fine	5	22.6	22.6	7.3	7.3	6.7 6.7	6.7	47.3 77.4 77.4	77.4	18.1	18.8	1.0	1.4
15 August 2023	16:41	Fine	4	24.4 24.4	24.4	7.4	7.4	5.4	5.4	64.8 64.8	64.8	20.0	20.6	1.3 1.9	1.6
17 August 2023	16:58	Fine	7	23.8 23.8	23.8	7.5 7.5	7.5	7.2 7.1	7.2	84.9 84.6	84.8	3.0 2.8	2.9	2.0 2.5	2.3
19 August 2023	16:11	Cloudy	6	24.3 24.3	24.3	7.6 7.5	7.6	6.5 6.5	6.5	77.9 77.7	77.8	3.9 4.0	4.0	2.1	2.1
21 August 2023	16:13	Fine	4	20.8 20.8	20.8	7.4 7.4	7.4	4.0 4.0	4.0	44.2 44.2	44.2	20.0 19.0	19.5	2.0 1.8	1.9
23 August 2023	18:15	Sunny	5	24.2 24.2	24.2	7.6 7.6	7.6	6.9 6.9	6.9	82.0 82.0	82.0	2.9 2.8	2.9	2.2 2.7	2.5
25 August 2023	18:15	Cloudy	5	24.2 24.2	24.2	7.6 7.6	7.6	6.9 6.9	6.9	82.0 82.0	82.0	2.9 2.8	2.9	1.6 2.0	1.8
29 August 2023	15:05	Fine	3	30.3 30.3	30.3	7.9 7.9	7.9	3.7 3.8	3.8	48.6 50.1	49.4	19.2 20.1	19.7	9.9 9.6	9.8
31 August 2023	17:01	Fine	6	20.8 20.8	20.8	7.5 7.5	7.5	4.9 4.8	4.9	55.0 53.8	54.4	25.8 25.5	25.7	1.6 1.5	1.6





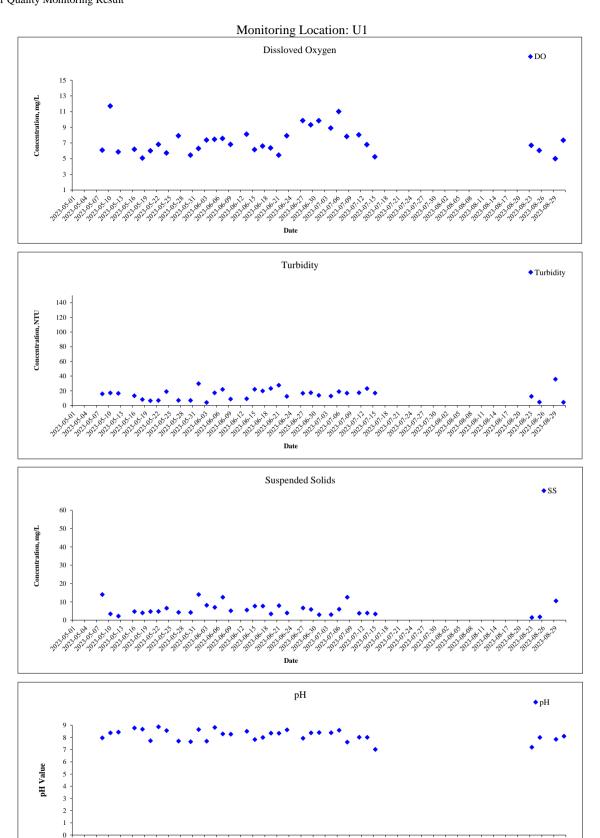
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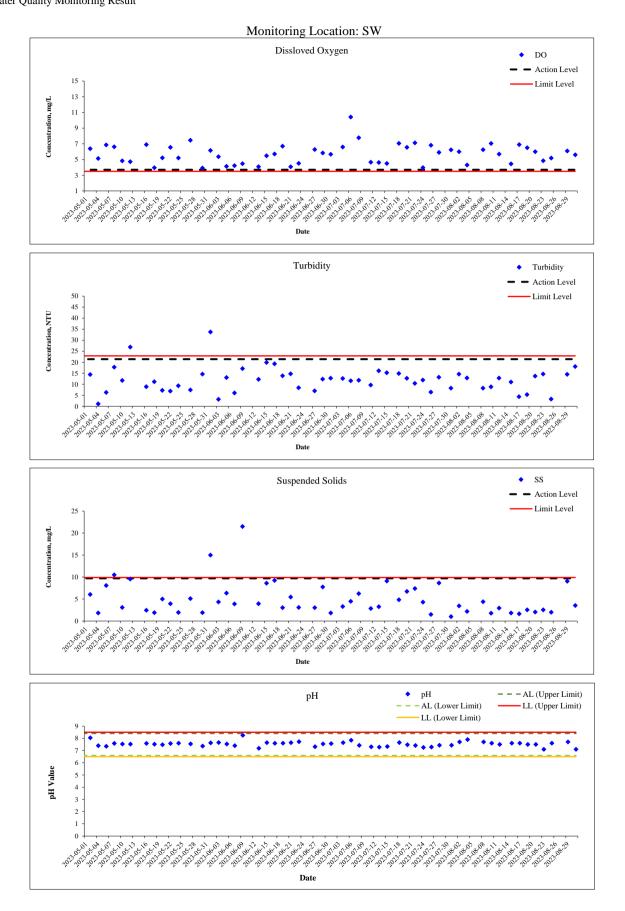
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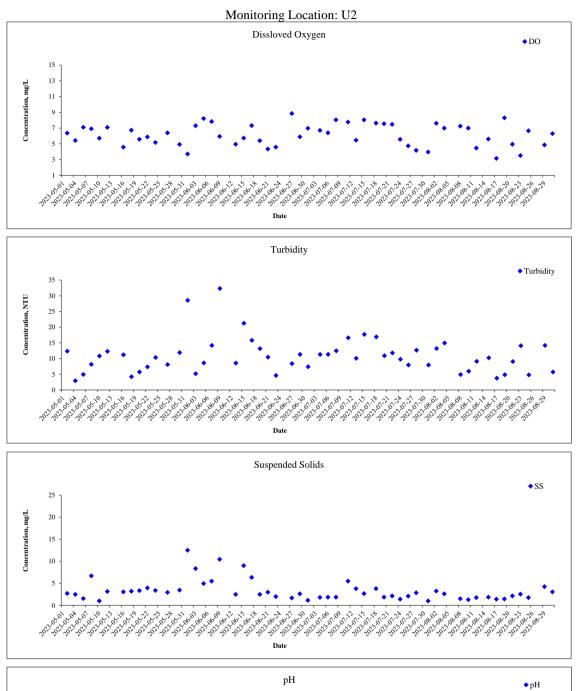
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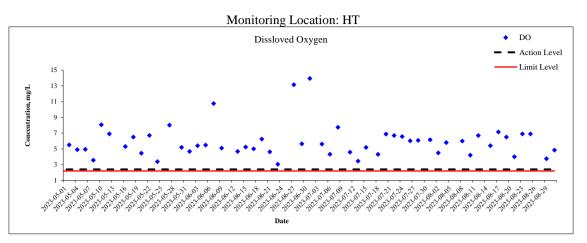


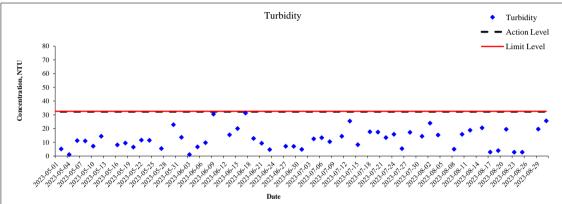


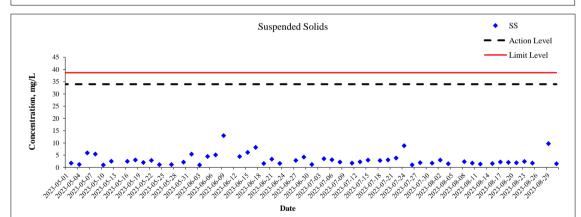


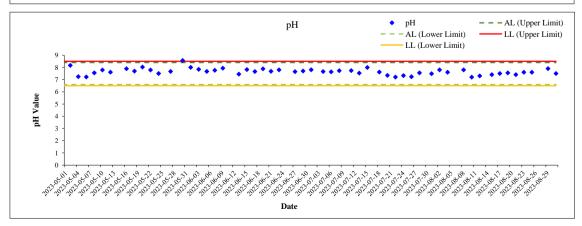
s 6 pH Va;ue 5 4 3 2 1 0 ~?<sup>}</sup> 2ª 622 630103010610911611611611612 ŝ 20 , Q2 0 Nº. Ś 6 ŵ, 02 0 0 Date













# Appendix G

# Quality Control Report for Suspended Solids

# acumen

# Acumen Laboratory and Testing Limited

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

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## Appendix - Quality Control Summary Table

Project Name: Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works

		Method Bla	nk Report	Duplicate Report			Sample Spike Report		
		MDL	Result	Original Result	Duplicate Result	RPD	Spike concentration	Spike Recovery	Pass / Fail
Sampling Date	Job No.	mg/L	mg/L	mg/L	mg/L	%	mg/L	%	/
02/08/2023	R231133	0.22	0.05	5.12	4.82	6.0	10	93.1	Pass
04/08/2023	R231134	0.22	0.08	5.09	5.33	-4.6	10	92.5	Pass
08/08/2023	R231180	0.22	0.06	5.70	5.88	-3.1	10	96.2	Pass
10/08/2023	R231205	0.22	0.05	4.04	3.82	5.6	10	91.2	Pass
12/08/2203	R231206	0.22	0.07	3.41	3.64	-6.5	10	92.4	Pass
15/08/2023	R231235	0.22	0.06	5.06	4.78	5.7	10	96.6	Pass
17/08/2023	R231251	0.22	0.08	4.93	5.17	-4.8	10	91.5	Pass
19/08/2023	R231252	0.22	0.06	4.50	4.78	-6.0	10	93.6	Pass
21/08/2023	R231301	0.22	0.07	4.21	4.07	3.4	10	90.9	Pass
23/08/2023	R231302	0.22	0.07	4.96	4.80	3.3	10	94.4	Pass
25/08/2023	R231303	0.22	0.09	5.13	5.44	-5.9	10	93.7	Pass
29/08/2023	R231341	0.22	0.07	5.72	5.98	-4.4	10	95.0	Pass
30/08/2023	R231342	0.22	0.05	5.50	5.32	3.3	10	92.1	Pass
31/08/2023	R231343	0.22	0.06	4.24	4.10	3.4	10	96.0	Pass



# Appendix H Event and Action Plan



## Table H1Event and Action Plan for Water Quality

Event	Action					
Event	ET Leader	IEC	ER	Contractor		
Action Level						
Action level being exceeded by one sampling day	<ul> <li>Repeat in-situ measurement to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform IEC and Contractor;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC and Contractor;</li> <li>Repeat measurement on next day of exceedance.</li> </ul>	<ul> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ul>	<ul> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Make agreement on the mitigation measures to be implemented.</li> </ul>	<ul> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with ET and IEC and propose mitigation measures to IEC and ER;</li> <li>Implement the agreed mitigation measures.</li> </ul>		
Action Level being exceeded by more than one consecutive sampling days	<ul> <li>Repeat in-situ measurement to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform IEC and Contractor;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Prepare to increase the monitoring frequency to daily;</li> <li>Repeat measurement on next day of exceedance.</li> </ul>	<ul> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ul>	<ul> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures</li> </ul>	<ul> <li>Inform the Engineer and confirm notification of the noncompliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ul>		



Event	Action					
Event	ET Leader	IEC	ER	Contractor		
Limit Level						
Limit level being exceeded by one sampling day	<ul> <li>Repeat in-situ measurement to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform IEC and Contractor;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Increase the monitoring frequency to daily until no exceedance of Limit Level.</li> </ul>	<ul> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ul>	<ul> <li>Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>Request Contractor to critically review the working methods;</li> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ul>	<ul> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ul>		
Limit level being exceeded by more than one consecutive sampling days	<ul> <li>Repeat in-situ measurement to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform IEC, Contractor and EPD;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC, ER and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.</li> </ul>	<ul> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ul>	<ul> <li>Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>Request Contractor to critically review the working methods;</li> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> <li>Consider and instruct, if necessary the Contractor to slow down or to stop all or part of the marine work</li> </ul>	<ul> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ul>		



Event	Action					
Event	ET Leader	IEC	ER	Contractor		
			until no exceedance if Limit Level.	• As directed by the ER, to slow down or to stop all or part of the marine work or construction activities.		



Event	Action					
Event	ET	IEC	ER	Contractor		
Design Check	1. Check final design conforms to the requirements of EP and prepare report.	<ol> <li>Check report.</li> <li>Recommend remedial design if necessary.</li> </ol>	1. Undertake remedial design if necessary.	-		
Nonconformity on one occasion	<ol> <li>Inform the IEC, ER and the Contractor</li> <li>Discuss remedial actions with IEC, ER and Contractor</li> <li>Monitor remedial actions until rectification has been completed</li> </ol>	<ol> <li>Check inspection report.</li> <li>Check Contractor's working method</li> <li>Discuss with ET, ER and Contractor on possible remedial measures.</li> <li>Advise ER on effective of proposed remedial measures.</li> <li>Check implementation of remedial measures</li> </ol>	<ol> <li>Confirm receipt of notification of nonconformity in writing</li> <li>Review and agree on the remedial measures proposed by the Contractor</li> <li>Ensure remedial measures are properly implemented</li> </ol>	<ol> <li>Identify source and investigate the nonconformity</li> <li>Amend working methods agreed with ER as appropriate</li> <li>Rectify damage and undertake any necessary replacement</li> </ol>		
Repeated nonconformity	<ol> <li>I.Identify sources</li> <li>Inform the Contractor, IEC and ER</li> <li>Discuss inspection frequency</li> <li>Discuss remedial actions with IEC, ER and Contractor</li> <li>Monitor remedial actions until rectification has been completed</li> <li>If nonconformity stops, cease additional monitoring</li> </ol>	<ol> <li>Check inspection report</li> <li>Check Contractor's working method</li> <li>Discuss with ET, ER and Contractor on possible remedial measures</li> <li>Advise ER on effectiveness of proposed remedial measures</li> </ol>	<ol> <li>Notify the Contractor</li> <li>In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented</li> <li>Supervise implementation of remedial measures</li> </ol>	<ol> <li>Identify source and investigate the nonconformity</li> <li>Amend working methods agreed with ER as appropriate</li> <li>Rectify damage and undertake any necessary replacement.</li> <li>Stop relevant portion of works as determined by ER until the nonconformity is abated.</li> </ol>		



### Appendix I

### Waste Generation in the Reporting Month

Name of Department : Civil Engineering and Development Department

Contract No.: <u>YL/2020/03</u>

### Monthly Summary Waste Flow Table for 2023 (year)

	Actual Quantities of Inert C&D Materials Generated Monthly Actual Quantities of C&D Wastes Generated Monthly								Nonthly		
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete ^1	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065
SUB-TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.212
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
Sep											
Oct											
Nov											
Dec											
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.269

Notes :

(1) The performance targets are given in PS Clause 115(14).

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

(3) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging materials

(4) The Contractor shall also submit the latest forecast of the total amount of C&D material expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m<sup>3</sup>.



### Appendix J

Summary of Complaint, Notification of summons and Prosecution



Statistical Summary of Environmental Complaints

Demonstra Decie 1	Environmental Complaint Statistics					
Reporting Period	Frequency	Cumulative	Complaint Nature			
1 – 31 August 2023	0	0	N/A			

#### Statistical Summary of Environmental Summons

Dementing David	Environmental Summons Statistics					
Reporting Period	Frequency	Cumulative	Details			
1 – 31 August 2023	0	0	N/A			

#### Statistical Summary of Environmental Prosecution

	Environmental Prosecution Statistics					
Reporting Period	Frequency	Cumulative	Details			
1 – 31 August 2023	0	0	N/A			



### Appendix K

## Summary of Submission Status under Environmental Permit



### Submission Status Under Environmental Permit EP-528/2017

EP Condition	Title of Submission	Submission Status
2.3	Management Organization of Main Construction Companies	Submitted to the EPD on 15 Nov 2021
2.4	Updated Environmental Monitoring and Audit Manual	Submitted to the EPD on 13 Jul 2022
2.5	Location Plans	Submitted to the EPD on 3 Nov 2022 (1st submission) Submitted to the EPD on 22 May 2023 (2nd submission)
2.6	Supplementary Contamination Assessment Plan (CAP)	Submitted to the EPD on 4 Jul 2022
2.7	Landscape and Visual Mitigation Plan	Submitted to the EPD on 12 Jan 2023 (1st submission) Submitted to the EPD on 8 Jul 2023 (2nd submission)
3.3	Baseline Monitoring Report	Submitted to the EPD on 28 Oct 2022 (1 <sup>st</sup> Submission) EPD issued comment on 5 May 2023
3.4	Monthly EM&A Report (December 2022)	Verified by the IEC on 18 Jan 2023
3.4	Monthly EM&A Report (January 2023)	Verified by the IEC on 16 Feb 2023
3.4	Monthly EM&A Report (February 2023)	Verified by the IEC on 15 Mar 2023
3.4	Monthly EM&A Report (March 2023)	Verified by the IEC on 21 Apr 2023
3.4	Monthly EM&A Report (April 2023)	Verified by the IEC on 29 Jun 2023
3.4	Monthly EM&A Report (May 2023)	Verified by the IEC on 29 Jun 2023
3.4	Monthly EM&A Report (June 2023)	Verified by the IEC on 20 Jul 2023
3.4	Monthly EM&A Report (July 2023)	Verified by the IEC on 16 Aug 2023
4.2	Dedicated Internet web site	Launched in mid-January 2023



### Appendix L

### Laboratory Report for Suspended Solids

Acumen Laboratory and Testing Limited Tel: (852) 2333 6823 Fax: (852) 2333 1316 TEST

		Test Report
Report Number	1	Q230003aR231133 Page 1 of 2
Job Number	:	R231133
Issue Date	:	08/08/2023
Applicant Name	:	Acuity Sustainability Consulting Limited
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,
		Cheung Sha Wan, Kowloon, Hong Kong
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works
Test Required	:	Total Suspended Solids (TSS)
Sampling Date	:	02/08/2023
Date Samples Received	:	02/08/2023
Sample Nature	:	Wastewater
Number of Samples Received	:	10
Condition Received	:	Sample(s) arrived laboratory in chilled condition
Type of Container	:	HDPE Plastic Bottles
Laboratory ID	:	R231133/1 – 10
Test Period	:	02/08/2023 - 03/08/2023
Method Used	:	APHA 23ed 2540D for Total Suspended Solids

Test Result

Refer to the results on page 2.

:

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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

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Report Number	:	Q230003aR231133
Job Number	:	R231133
Issue Date	:	08/08/2023

#### **Test Result:**

3.	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231133/1	02/08/2023	U2	3.1
R231133/2	02/08/2023	U2#	3.4
R231133/3	02/08/2023	SW	3.4
R231133/4	02/08/2023	SW#	3.5
R231133/5	02/08/2023	HT	2.6
R231133/6	02/08/2023	HT#	3.4
R231133/7	02/08/2023	TKW1	9.5
R231133/8	02/08/2023	TKW1#	8.6
R231133/9	02/08/2023	TKW	7.3
R231133/10	02/08/2023	TKW#	6.1

Note:

mg/L indicates milligram per liter 1.

< indicates less than. 2.

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

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

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

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

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

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	Test Report	
Report Number	:	Q230003aR231134 Page 1 of 2
Job Number	:	R231134
Issue Date	:	08/08/2023
Applicant Name	:	Acuity Sustainability Consulting Limited
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,
		Cheung Sha Wan, Kowloon, Hong Kong
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works
Test Required	;	Total Suspended Solids (TSS)
Sampling Date	:	04/08/2023
Date Samples Received	:	04/08/2023
Sample Nature	:	Wastewater
Number of Samples Received	÷	10
Condition Received	: .	Sample(s) arrived laboratory in chilled condition
Type of Container	:	HDPE Plastic Bottles
Laboratory ID	:	R231134/1 – 10
Test Period	:	04/08/2023 – 05/08/2023
Method Used	:	APHA 23ed 2540D for Total Suspended Solids

Test Result

Refer to the results on page 2.

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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HOKLAS 241	
TEST	

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RS

#### **Test Report**

Report Number : Q230003aR231134

Job Number : R231134

Issue Date : 08/08/2023

#### **Test Result:**

3.	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231134/1	04/08/2023	U2	2.3
R231134/2	04/08/2023	U2#	2.9
R231134/3	04/08/2023	SW	2.2
R231134/4	04/08/2023	SW#	2.2
R231134/5	04/08/2023	HT	1.6
R231134/6	04/08/2023	HT#	1.5
R231134/7	04/08/2023	TKW1	3.6
R231134/8	04/08/2023	TKW1#	4.6
R231134/9	04/08/2023	TKW	2.9
R231134/10	04/08/2023	TKW#	3.6

Note:

1. mg/L indicates milligram per liter

2. < indicates less than.

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

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

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

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

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

\*\*\*End of Report\*\*\*

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Test Report

		Test Report
Report Number	:	Q230003aR231180 Page 1 of 2
Job Number	:	R231180
Issue Date	:	14/08/2023
Applicant Name	:	Acuity Sustainability Consulting Limited
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,
		Cheung Sha Wan, Kowloon, Hong Kong
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works
Test Required	:	Total Suspended Solids (TSS)
Sampling Date	:	08/08/2023
Date Samples Received	:	08/08/2023
Sample Nature	:	Wastewater
Number of Samples Received		10
Condition Received	:	Sample(s) arrived laboratory in chilled condition
Type of Container	:	HDPE Plastic Bottles
Laboratory ID	:	R231180/1 – 10
Test Period	:	08/08/2023 – 09/08/2023
Method Used	:	APHA 23ed 2540D for Total Suspended Solids

**Test Result** 

Refer to the results on page 2.

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

Chemical and Microbiological Division

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Page 2 of 2

### **Test Report**

Report Number	:	Q230003aR231180
Job Number	:	R231180
Issue Date	:	14/08/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231180/1	08/08/2023	U2	1.8
R231180/2	08/08/2023	U2#	1.2
R231180/3	08/08/2023	SW	4.9
R231180/4	08/08/2023	SW#	3.9
R231180/5	08/08/2023	HT	2.3
R231180/6	08/08/2023	HT#	2.5
R231180/7	08/08/2023	TKW1	4.3
R231180/8	08/08/2023	TKW1#	4.6
R231180/9	08/08/2023	ткw	3.9
R231180/10	08/08/2023	TKW#	3.2

Note:

mg/L indicates milligram per liter 1.

2. < indicates less than.

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

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

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

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

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

#### \*\*\*End of Report\*\*\*

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**Test Report** 

		lest Report	
Report Number	:	Q230003aR231205	Page 1 of 2
Job Number	:	R231205	
Issue Date	:	16/08/2023	
Applicant Name	:	Acuity Sustainability Consulting Limited	
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong S	treet,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage	e 1 Works
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	10/08/2023	
Date Samples Received	:	10/08/2023	
Sample Nature	:	Wastewater	
Number of Samples Received	:	10	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R231205/1 – 10	
Test Period	:	10/08/2023 – 11/08/2023	
Method Used	:	APHA 23ed 2540D for Total Suspended Solids	

**Test Result** 

Refer to the results on page 2.

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager

Chemical and Microbiological Division

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Test Report

Report Number	:	Q230003aR231205
Job Number	:	R231205
Issue Date	:	16/08/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231205/1	10/08/2023	U2	1.2
R231205/2	10/08/2023	U2#	1.4
R231205/3	10/08/2023	SW	1.6
R231205/4	10/08/2023	SW#	2.0
R231205/5	10/08/2023	HT	2.0
R231205/6	10/08/2023	HT#	1.6
R231205/7	10/08/2023	TKW1	<1
R231205/8	10/08/2023	TKW1#	1.3
R231205/9	10/08/2023	ТКѠ	<1
R231205/10	10/08/2023	TKW#	1.0

Note:

mg/L indicates milligram per liter 1.

2. 3. < indicates less than.

Reporting limit is 2.5mg/L for 1L sample

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

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

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

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

#### \*\*\*End of Report\*\*\*

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Test Report

		lest Report	
Report Number	:	Q230003aR231206	Page <b>1</b> of <b>2</b>
Job Number	:	R231206	
Issue Date	:	18/08/2023	
Applicant Name	:	Acuity Sustainability Consulting Limited	
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong St	reet,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage	1 Works
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	12/08/2023	
Date Samples Received	:	12/08/2023	
Sample Nature	:	Wastewater	
Number of Samples Received	:	10	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R231206/1 – 10	
Test Period	:	12/08/2023 – 14/08/2023	
Method Used	:	APHA 23ed 2540D for Total Suspended Solids	

Test Result

Refer to the results on page 2.

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntin Laboratory Manager Chemical and Microbiological Division

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Test Report

		Teotricport
Report Number	:	Q230003aR231206
Job Number	:	R231206
Issue Date	:	18/08/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231206/1	12/08/2023	U2	1.6
R231206/2	12/08/2023	U2#	1.9
R231206/3	12/08/2023	SW	2.8
R231206/4	12/08/2023	SW#	3.1
R231206/5	12/08/2023	НТ	1.8
R231206/6	12/08/2023	HT#	1.0
R231206/7	12/08/2023	TKW1	1.1
R231206/8	12/08/2023	TKW1#	1.2
R231206/9	12/08/2023	ткw	1.5
R231206/10	12/08/2023	TKW#	<1

Note:

mg/L indicates milligram per liter 1.

2. 3. < indicates less than.

Reporting limit is 2.5mg/L for 1L sample

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

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

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

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

#### \*\*\*End of Report\*\*\*

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of 2

		Test Report	
Report Number	:	Q230003aR231235	Page 1 o
Job Number	:	R231235	
Issue Date	:	22/08/2023	
Applicant Name	:	Acuity Sustainability Consulting Limited	
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong St	reet,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage	1 Works
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	15/08/2023	
Date Samples Received	:	15/08/2023	
Sample Nature	:	Wastewater	
Number of Samples Received	:	10	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	÷	R231235/1 – 10	
Test Period	:	15/08/2023 – 16/08/2023	
Method Used	:	APHA 23ed 2540D for Total Suspended Solids	

Test Result

Refer to the results on page 2. :

> For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager

:

Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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



Page 2 of 2

### **Test Report**

Report Number	:	Q230003aR231235
Job Number	:	R231235
Issue Date	:	22/08/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231235/1	15/08/2023	U2	1.8
R231235/2	15/08/2023	U2#	1.8
R231235/3	15/08/2023	SW	1.9
R231235/4	15/08/2023	SW#	1.8
R231235/5	15/08/2023	HT	1.3
R231235/6	15/08/2023	HT#	1.9
R231235/7	15/08/2023	TKW1	2.0
R231235/8	15/08/2023	TKW1#	2.3
R231235/9	15/08/2023	ТКМ	2.1
R231235/10	15/08/2023	TKW#	2.1

Note:

mg/L indicates milligram per liter 1.

< indicates less than.

Reporting limit is 2.5mg/L for 1L sample

2. 3. 4. 5. Reporting limit is 1 mg/L for 2.5L sample

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

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

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

#### \*\*\*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.

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## Acumen Laboratory and Testing Limited

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**Test Report** 

			<u></u>
Report Number	:	Q230003aR231251	Page 1 of 2
Job Number	:	R231251	
Issue Date	:	24/08/2023	
Applicant Name		Acuity Sustainability Consulting Limited	
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong S	Street,
		Cheung Sha Wan, Kowloon, Hong Kong	a destructuresta.
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stag	e 1 Works
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	17/08/2023	
Date Samples Received	:	17/08/2023	
Sample Nature	•	Wastewater	
Number of Samples Received	:	10	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R231251/1 – 10	
Test Period	:	17/08/2023 – 18/08/2023	
Method Used	:	APHA 23ed 2540D for Total Suspended Solids	
		200	

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

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Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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Page 2 of 2

### **Test Report**

- Q230003aR231251 Report Number Job Number R231251 :
- 24/08/2023 Issue Date

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231251/1	17/08/2023	U2	1.5
R231251/2	17/08/2023	U2#	1.3
R231251/3	17/08/2023	SW	1.5
R231251/4	17/08/2023	SW#	1.8
R231251/5	17/08/2023	HT	2.0
R231251/6	17/08/2023	HT#	2.5
R231251/7	17/08/2023	TKW1	1.7
R231251/8	17/08/2023	TKW1#	2.1
R231251/9	17/08/2023	TKW	2.0
R231251/10	17/08/2023	TKW#	1.6

Note:

mg/L indicates milligram per liter 1.

2. < indicates less than.

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

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

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

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

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

#### \*\*\*End of Report\*\*\*

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Test Report

		Test Report	-
Report Number	:	Q230003aR231252	Page 1 o
Job Number	:	R231252	
Issue Date	:	24/08/2023	
Applicant Name	:	Acuity Sustainability Consulting Limited	
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong St	reet,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage	1 Works
Test Required	:	Total Suspended Solids (TSS)	
Sampling Date	:	19/08/2023	
Date Samples Received	:	19/08/2023	
Sample Nature	:	Wastewater	
Number of Samples Received	:	10	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	•	R231252/1 – 10	
Test Period	:	19/08/2023 - 21/08/2023	
Method Used	:	APHA 23ed 2540D for Total Suspended Solids	

Test Result

Refer to the results on page 2.

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For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

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Page 2 of 2

### **Test Report**

Report Number	:	Q230003aR231252
Job Number	:	R231252

24/08/2023 Issue Date

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231252/1	19/08/2023	U2	1.3
R231252/2	19/08/2023	U2#	1.5
R231252/3	19/08/2023	SW	2.3
R231252/4	19/08/2023	SW#	2.8
R231252/5	19/08/2023	HT	2.1
R231252/6	19/08/2023	HT#	2.1
R231252/7	19/08/2023	TKW1	2.8
R231252/8	19/08/2023	TKW1#	2.4
R231252/9	19/08/2023	TKW	2.0
R231252/10	19/08/2023	TKW#	1.9

Note:

mg/L indicates milligram per liter 1.

< indicates less than.

Reporting limit is 2.5mg/L for 1L sample

Reporting limit is 1 mg/L for 2.5L sample

2. 3. 4. 5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.

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

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

#### \*\*\*End of Report\*\*\*

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## Acumen Laboratory and Testing Limited

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Test Report



<u>Test Report</u>					
Report Number	:	Q230003aR231301	Page 1 of 2		
Job Number	:	R231301			
Issue Date	:	28/08/2023			
Applicant Name	:	Acuity Sustainability Consulting Limited			
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong S	Street,		
		Cheung Sha Wan, Kowloon, Hong Kong			
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stag	e 1 Works		
Test Required	:	Total Suspended Solids (TSS)			
Sampling Date	:	21/08/2023			
Date Samples Received	:	21/08/2023			
Sample Nature	:	Wastewater			
Number of Samples Received	:	10			
Condition Received	:	Sample(s) arrived laboratory in chilled condition			
Type of Container	:	HDPE Plastic Bottles			
Laboratory ID	:	R231301/1 – 10			
Test Period	:	21/08/2023 - 22/08/2023			
Method Used	:	APHA 23ed 2540D for Total Suspended Solids			
Test Result	:	Refer to the results on page 2.			
		For and an babalit of			

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

•

Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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		<b>Test Report</b>
Report Number	:	Q230003aR231301
Job Number	:	R231301
Issue Date	:	28/08/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231301/1	21/08/2023	U2	2.2
R231301/2	21/08/2023	U2#	2.1
R231301/3	21/08/2023	SW	2.1
R231301/4	21/08/2023	SW#	2.0
R231301/5	21/08/2023	HT	2.0
R231301/6	21/08/2023	HT#	1.8
R231301/7	21/08/2023	TKW1	1.5
R231301/8	21/08/2023	TKW1#	2.0
R231301/9	21/08/2023	ТКЖ	1.8
R231301/10	21/08/2023	TKW#	1.7

Note:

mg/L indicates milligram per liter 1.

2. 3. < indicates less than.

Reporting limit is 2.5mg/L for 1L sample

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

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

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

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

#### \*\*\*End of Report\*\*\*

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**Test Report** 

			Teet Report	
R	eport Number	:	Q230003aR231302	Page 1 of 3
Jo	bb Number	:	R231302	
ls	sue Date	:	28/08/2023	
A	oplicant Name	:	Acuity Sustainability Consulting Limited	
A	oplicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong S	Street,
			Cheung Sha Wan, Kowloon, Hong Kong	
Pr	roject Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stag	e 1 Works
Te	est Required	:	Total Suspended Solids (TSS)	
Sa	ampling Date	:	23/08/2023	
Da	ate Samples Received	:	23/08/2023	
Sa	ample Nature	:	Wastewater	
Nu	umber of Samples Received	:	12	
Co	ondition Received	:	Sample(s) arrived laboratory in chilled condition	
Ту	pe of Container	:	HDPE Plastic Bottles	
La	boratory ID	:	R231302/1 – 12	
Te	st Period	:	23/08/2023 - 24/08/2023	
Me	ethod Used	:	APHA 23ed 2540D for Total Suspended Solids	

Test Result

Refer to the results on page 2-3.

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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**Test Report** 

Report Number	:	Q230003aR231302
Job Number	:	R231302
Issue Date	:	28/08/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231302/1	23/08/2023	U2	2.3
R231302/2	23/08/2023	U2#	2.8
R231302/3	23/08/2023	U1	1.3
R231302/4	23/08/2023	U1#	1.6
R231302/5	23/08/2023	SW	2.8
R231302/6	23/08/2023	SW#	2.3
R231302/7	23/08/2023	HT	2.2
R231302/8	23/08/2023	HT#	2.7
R231302/9	23/08/2023	TKW1	1.2
R231302/10	23/08/2023	TKW1#	1.2
R231302/11	23/08/2023	ТКЖ	1.9
R231302/12	23/08/2023	TKW#	1.9

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### Test Report

Report Number : Q230003aR231302

Job Number : R231302

Issue Date : 28/08/2023

Note:

- 1. mg/L indicates milligram per liter
- 2. < indicates less than.
- 3. Reporting limit is 2.5mg/L for 1L sample
- Reporting limit is 1 mg/L for 2.5L sample
- 5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.
- The result(s) relate only to the item(s) tested.
   The result(s) are applied only to the sample(s) related only to the sample(s) are applied only to the sample(s).
- The result(s) are applied only to the sample(s) received.

#### \*\*\*End of Report\*\*\*

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Page 3 of 3

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<u>Test Report</u>				
	Report Number	:	Q230003aR231303	Page 1 of 3
	Job Number	:	R231303	
	Issue Date	:	30/08/2023	
	Applicant Name	:	Acuity Sustainability Consulting Limited	
	Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong St	treet,
			Cheung Sha Wan, Kowloon, Hong Kong	
	Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage	1 Works
	Test Required	:	Total Suspended Solids (TSS)	
	Sampling Date	:	25/08/2023	
	Date Samples Received	:	25/08/2023	
	Sample Nature	:	Wastewater	
	Number of Samples Received	:	12	
	Condition Received	:	Sample(s) arrived laboratory in chilled condition	
	Type of Container	:	HDPE Plastic Bottles	
	Laboratory ID	:	R231303/1 – 12	
	Test Period	:	25/08/2023 – 26/08/2023	
	Method Used	:	APHA 23ed 2540D for Total Suspended Solids	

Test Result

Refer to the results on page 2-3.

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager

Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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### **Test Report**

Report Number	:	Q230003aR231303
Job Number	:	R231303
		~~~~~~~

• 30/08/2023 Issue Date

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231303/1	25/08/2023	U2	1.8
R231303/2	25/08/2023	U2#	1.7
R231303/3	25/08/2023	U1	1.9
R231303/4	25/08/2023	U1#	1.6
R231303/5	25/08/2023	SW	1.9
R231303/6	25/08/2023	SW#	2.1
R231303/7	25/08/2023	НТ	2.6
R231303/8	25/08/2023	HT#	2.0
R231303/9	25/08/2023	TKW1	<1
R231303/10	25/08/2023	TKW1#	<1
R231303/11	25/08/2023	TKW	1.2
R231303/12	25/08/2023	TKW#	1.2

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Test Report

Report Number : Q230003aR231303

Job Number : R231303

Issue Date : 30/08/2023

Note:

- 1. mg/L indicates milligram per liter
- 2. < indicates less than.
- 3. Reporting limit is 2.5mg/L for 1L sample
- 4. Reporting limit is 1 mg/L for 2.5L sample
- 5. Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.
- The result(s) relate only to the item(s) tested.
   The result(s) are applied only to the sample(a) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the sample(s) of the result(s) are applied only to the result(s) ar
- The result(s) are applied only to the sample(s) received.

#### \*\*\*End of Report\*\*\*

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### Acumen Laboratory and Testing Limited

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**Test Report** 

		TOUTROPORT	
Report Number	:	Q230003aR231341	Page 1 of 3
Job Number	:	R231341	
Issue Date	:	05/09/2023	
Applicant Name	:	Acuity Sustainability Consulting Limited	
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong S	street,
		Cheung Sha Wan, Kowloon, Hong Kong	
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage	∋ 1 Works
Test Required	:	Total Suspended Solids (TSS)	2
Sampling Date	:	29/08/2023	
Date Samples Received	:	29/08/2023	
Sample Nature	÷	Wastewater	
Number of Samples Received	:	12	
Condition Received	:	Sample(s) arrived laboratory in chilled condition	
Type of Container	:	HDPE Plastic Bottles	
Laboratory ID	:	R231341/1 – 12	
Test Period	:	29/08/2023 – 30/08/2023	
Method Used	10	APHA 23ed 2540D for Total Suspended Solids	

Test Result

Refer to the results on page 2-3.

:

:

For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington

Laboratory Manager Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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



### **Test Report**

Report Number	:	Q230003aR231341
Job Number	:	R231341
Issue Date	:	05/09/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231341/1	29/08/2023	U2	3.8
R231341/2	29/08/2023	U2#	4.7
R231341/3	29/08/2023	U1	10
R231341/4	29/08/2023	U1#	11
R231341/5	29/08/2023	SW	9.3
R231341/6	29/08/2023	SW#	8.8
R231341/7	29/08/2023	HT	9.9
R231341/8	29/08/2023	HT#	9.6
R231341/9	29/08/2023	TKW1	13
R231341/10	29/08/2023	TKW1#	13
R231341/11	29/08/2023	TƘW	8.4
R231341/12	29/08/2023	TKW#	7.7

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### Test Report

Report Number	:	Q230003aR231341
---------------	---	-----------------

Job Number : R231341

Issue Date : 05/09/2023

Note:

- 1. mg/L indicates milligram per liter
- 2. < indicates less than.
- 3. Reporting limit is 2.5mg/L for 1L sample
- 4. Reporting limit is 1 mg/L for 2.5L sample
- Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.
- 6. The result(s) relate only to the item(s) tested.
- The result(s) are applied only to the sample(s) received.

#### \*\*\*End of Report\*\*\*

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Page 3 of 3

### Acumen Laboratory and Testing Limited

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Test Report

		Test Report
Report Number	:	Q230003aR231343 Page 1 of 3
Job Number	:	R231343
Issue Date	:	07/09/2023
Applicant Name	:	Acuity Sustainability Consulting Limited
Applicant Address	:	Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,
		Cheung Sha Wan, Kowloon, Hong Kong
Project Name	:	Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works
Test Required	:	Total Suspended Solids (TSS)
Sampling Date	: -	31/08/2023
Date Samples Received	:	31/08/2023
Sample Nature	:	Wastewater
Number of Samples Received	:	12
Condition Received	:	Sample(s) arrived laboratory in chilled condition
Type of Container	:	HDPE Plastic Bottles
Laboratory ID	:	R231343/1 – 12
Test Period	:	31/08/2023 - 04/09/2023
Method Used	:	APHA 23ed 2540D for Total Suspended Solids

Test Result

Refer to the results on page 2-3. :

> For and on behalf of Acumen Laboratory and Testing Limited

Authorized Signature

Hui Wai Fung, Huntington Laboratory Manager

•

Chemical and Microbiological Division

### Acumen Laboratory and Testing Limited

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**Test Report** 

Report Number	:	Q230003aR231343
Job Number	:	R231343
Issue Date	:	07/09/2023

#### **Test Result:**

Lab ID	Sampling Date	Client Sample ID	Total Suspended Solids (TSS), mg/L
R231343/1	31/08/2023	U2	3.0
R231343/2	31/08/2023	U2#	3.1
R231343/3	31/08/2023	U1	3.4
R231343/4	31/08/2023	U1#	3.5
R231343/5	31/08/2023	SW	3.6
R231343/6	31/08/2023	SW#	3.5
R231343/7	31/08/2023	HT	1.6
R231343/8	31/08/2023	HT#	1.5
R231343/9	31/08/2023	TKW1	2.2
R231343/10	31/08/2023	TKW1#	2.9
R231343/11	31/08/2023	TKW	3.1
R231343/12	31/08/2023	TKW#	2.9

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#### Test Report

- Report Number : Q230003aR231343
- Job Number : R231343

Issue Date : 07/09/2023

Note:

- 1. mg/L indicates milligram per liter
- 2. < indicates less than.
- 3. Reporting limit is 2.5mg/L for 1L sample
- 4. Reporting limit is 1 mg/L for 2.5L sample
- Applicant name, applicant address, project name, sampling date, sample ID and sample nature are provided by applicant.
- The result(s) relate only to the item(s) tested.
   The result(s) are applied only to the sample(c) re
- The result(s) are applied only to the sample(s) received.

#### \*\*\*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.

Page 3 of 3



## Appendix M

Incident Report(s) for Water Quality Monitoring Exceedance

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#### Investigation Report for Exceedances of Limit Levels of Water Quality Monitoring on 29 August 2023

Investigation was carried out in response to exceedances of limit levels during the water quality monitoring on 29 August 2023. The following table summarizes details of the exceedances.

Environmental Team for Hung Shui Kiu/ Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure								
Date	Station	Parameter (Unit)	Depth- averaged Measured Value	Action Level	Limit Level	Exceedance		Project Related
						AL	LL	(Y/N)
29/08	TKW1	Turbidity (NTU)	42.4	27.9	29.2		~	Ν
	TKW		48.1	24.2	24.6		✓	N

	<ul> <li>According to the information provided by the engine representative (RE), the construction works carried out within the site area of Road D1 (Designated Project (DP)) on 29 August 202 include:</li> <li><u>Site 3-8 (Road D1) at Portion B7</u></li> <li>Dewatering.</li> <li>Housekeeping.</li> <li>Laying type A material for SMH-D1-75 to SMH-D1-03 30 concrete pipe.</li> </ul>				
Construction activities carried out at and adjacent to Road D1 during the investigation period:	<ul> <li>The construction works carried out at adjoining non-DP works area on 29 August 2023 include:</li> <li><u>Site 3-6 and Site 3-7 at Portion B2</u></li> <li>Transport soil to site 2-18.</li> <li><u>Site 3-6 (near Chun Tsuen) (Temporary Stockpile Area) at Portion B1</u></li> <li>Hand dig to exposing underground utility from starting to CP-KP-01.</li> <li>Make good Trial pit TP2 and TP1.</li> <li><u>Site 3-6 (Wing Hong) at Portion B2</u></li> <li>General Electric work for blower of solidification.</li> </ul>				
	<ul> <li>Preparation work before typhoon.</li> <li><u>Site 3-7 (near Bee Bee Garden) at Portion A2</u></li> <li>Erecting formwork for catchpit CP-3.7-01.</li> <li>Make good trial pit TP3 and TP4.</li> <li><u>Site 3-7 (near gate B) at Portion A2</u></li> <li>Preparation works for interface core and sonic test.</li> <li>Tidy up the site.</li> <li><u>Site 3-7 and Site 3-8 at Portion B6</u></li> </ul>				



	No construction activity.							
	Site 3-8 (Box Culvert) at Portion B7							
	No construction activity.							
	Site 3-8 (Hung Wan) at Portion B7							
	• Laying 675 concrete pipe for SMH-KP-01 to SMH-KP-02.							
	According to the records of the Hong Kong Observatory, about 5 to 20 mm rainfalls were recorded over Hung Shui Kiu on 29 August 2023, which may lead to river runoff with high turbidity levels due to surface runoff from the catchment.							
Possible reason for Action or	As observed during the site inspections on 29 and 31 August 2023, the Contractor had implemented on site measures to control site runoff from Site 3-8 and Road D1, including sump, WetSep and portable pumps for temporary storage and treatment of surface water and site effluent. As no effluent discharge licence was applied for Site 3-6 and Site 3-7, no direct discharge from these sites was allowed. Effluent and surface runoff at Site 3-6 and Site 3-7 were collected and diverted to retention ponds on-site for ground infiltration.							
Limit Level Non-compliance:	No evidence was found to indicate that the exceedances on 29 August 2023 were affected by the site activities. The non- compliances at TKW1 and TKW may be related to surface runoff from the catchment and effluent discharges from workshops, open storages, warehouse, private toilet(s) and/ or residential dwellings along the catchment downstream of the site.							
	No further exceedance of action or limit levels of turbidity at TKW1 and TKW was detected during the water quality monitoring on 30 and 31 August 2023.							
	In conclusion, the exceedances recorded on 29 August 2023 were considered non-project related.							
	1. Repeated in-situ measurement was carried out to confirm the turbidity level measured at TKW and TKW1.							
Action taken / to be taken:	2. The source of impact may be related to rainfall at Hung Shui Kiu recorded on 29 August 2023 and also surface runoff and effluent discharges from workshops, open storages, warehouse, private toilet(s) and/ or residential dwellings along the catchment downstream of the site.							
	3. Notifications of exceedances have been issued to the IEC, the Contractor, and the EPD.							
	4. Duplicate water samples were collected on site, and in-situ measurement was repeated. The monitoring data were checked							



	and confirmed. All plant, equipment and the Contractor's working methods were checked during the site inspection. No non-compliance was observed.
	5. As no evidence was found to indicate that the exceedances on 29 August 2023 were affected by the site activities, no additional mitigation measure was discussed with the IEC, the RE and the Contractor.
	<ul> <li>6. During the site inspection, the Contractor had implemented on- site measures to control site runoff. The Contractor was reminded to implement/ maintain the following mitigation measures:</li> <li><u>Site 3-8 and Road D1</u></li> <li>a. The WetSep and other accessories shall be maintained</li> </ul>
	<ul> <li>regularly to minimise malfunction.</li> <li>b. Surface run-off from construction sites shall be discharged at the designated discharge point as indicated in the effluent discharge licence for Site 3-8 via adequately designed sand/ silt removal facilities.</li> </ul>
	<ul> <li>c. The Contractor will provide sump/ detention pond at Site 3-8 to temporary store site runoff prior to treatment (Figure 3).</li> <li>d. Channels/ earth bunds/ sandbag barriers will be properly provided on site to direct stormwater to the sump(s).</li> <li>e. Any site runoff detained behind the box culvert will be</li> </ul>
	treated by the WetSep at Site 3-8 prior to discharge.
	<ul> <li><u>Site 3-6, Site 3-7, and Contaminated Soil Treatment Area</u></li> <li>f. As no effluent discharge licence is available for Site 3-6 and Site 3-7, no direct discharge of surface runoff or construction effluent is allowed from the sites.</li> </ul>
	g. Impervious canvases are deployed to cover the stockpiles at the contaminated soil treatment area to minimise contaminated surface runoff (Figure 3).
	h. Perimeter channels, sump pits and leachate collection tanks are installed at the contaminated soil treatment area to collect and store leachate from the stockpiles of excavated materials to eliminate untreated leachate escaping from the treatment area.
	i. A retention pond is set up at Site 3-6 (Portion B1) to store effluent and surface runoff from Site 3-6 and Site 3-7 (Figure 3).
	<ul> <li>j. Another retention pond is also set up near the contaminated soil treatment area for the discharge chamber workfront to collect effluent and surface runoff (Figure 3).</li> </ul>
,	7. The frequency of monitoring was increased to daily at TKW1 and TKW from 30 August 2023. No further action or limit level exceedances of turbidity at TKW and TKW1 were recorded on 30 and 31 August 2023. Daily monitoring was



therefore ceased after 31 August 2023. The following table summarizes the monitoring results of turbidity at TKW, TKW1 on 30 and 31 August 2023.				
Date	30 August 2023	31 August 2023		
Parameters Stations	Turbidity (NTU)	Turbidity (NTU)		
TKW1	13.3	19.1		
TKW	12.8	22.6		

#### Photo Records of Site Inspection held by the ET on 31 August 2023



(P1)

 (P2)

Stockpile of dusty materials was covered properly to avoid generation of muddy runoff. No muddy surface runoff was observed during the site inspection. Surface runoff and site effluent were collected and diverted to the WetSep for temporary storage and treatment before the water was used for fugitive dust suppression on site or discharged at designated location under the requirement of effluent discharge



Surface runoff was directed to the sump/ detention pond for temporary storage. No muddy surface runoff and no direct discharge of construction licence.



effluent was observed.





#### Site Photos on 29 August 2023 provided by the RE

Site 3-8 and Road D1 (Portion B7)



(R1) Stockpile of dusty materials was covered properly to avoid generation of muddy runoff.

Contaminated Soil Treatment Area (Portion B2) (Non-DP area)



(R2)

Sloping surfaces of stockpiles within the contaminated soil treatment area were covered by impervious canvas. No surface runoff or effluent was leaked from the contaminated soil treatment area during the site inspection.

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Site 3-6 (Portion B2) (Non-DP area)



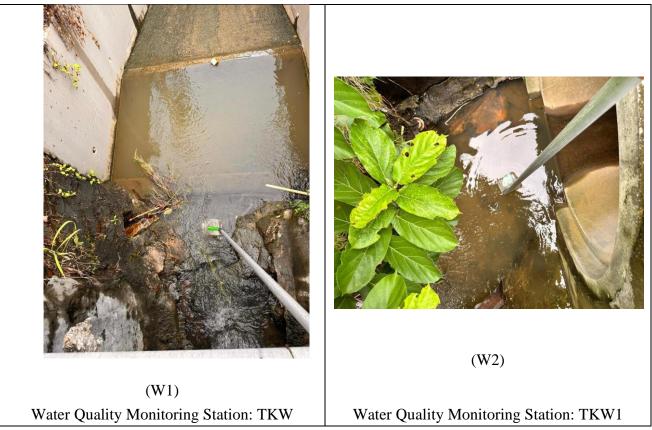
No effluent discharge from the site was observed.



(R4) No effluent discharge from the site was observed.



#### Site Observation Photos around Water Quality Monitoring Stations taken by the ET on 29 August 2023





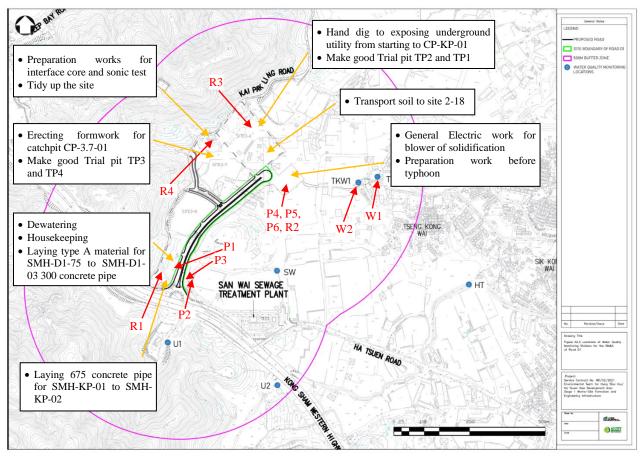
#### Figure 1 Rainfall Records from the Hong Kong Observatory

Ta Kwu Ling Lau Fau Shan Tai Po Shek Kong Sha Tin Tuen Mun Sai Kung Chek Lap Kok Tsing Yi HKO 0 Tseung Kwan O Wong Chuk Hang Cheung Chau 🌢 mm 0 0.5 2 5 10 20 30 40 50 70 100 150 200 300 400 500 600>600 香港天文台 HONG KONG OBSERVATORY

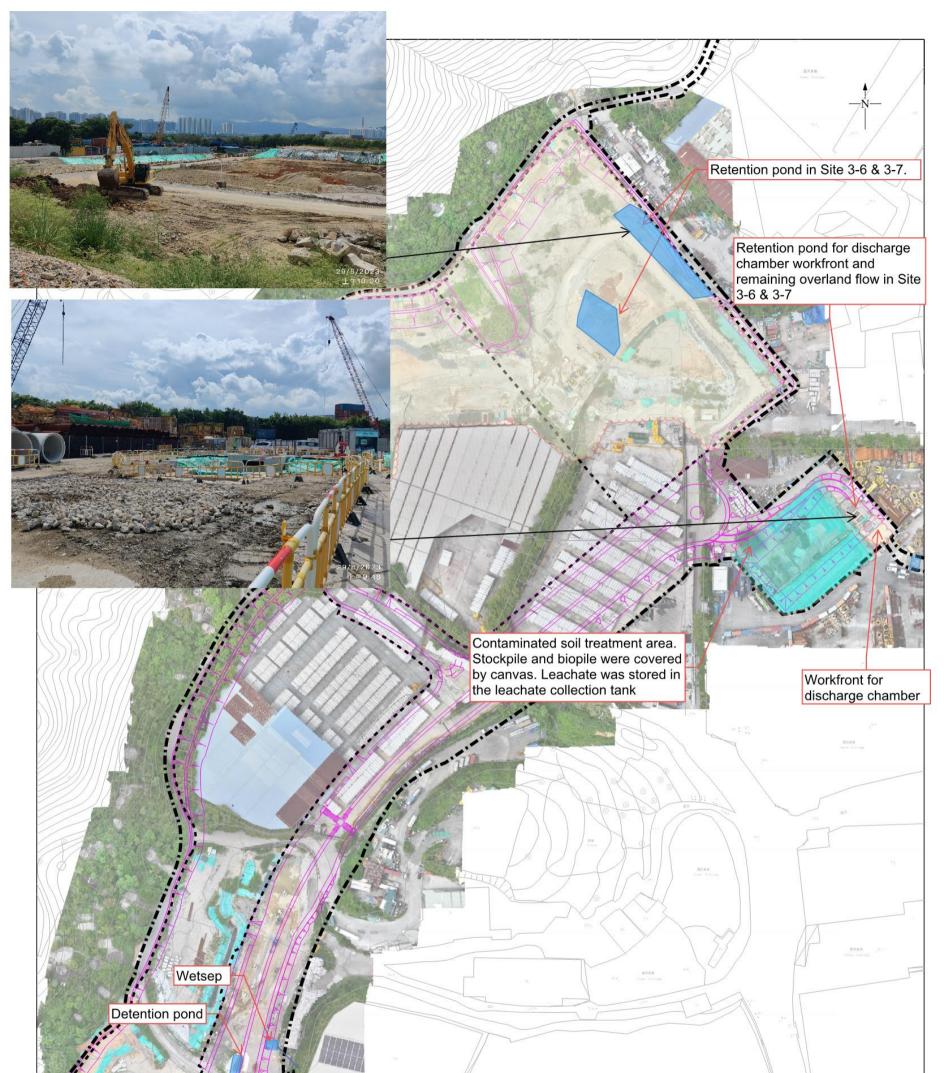
Total rainfall on 29-Aug-2023 (based on raingauges and radar data)



## Figure 2 Location Plan of Impact Water Quality Monitoring Stations (Site activities held on 29 August 2023 were reported in text boxes)







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	·			10.0° New 2018		LE	GEND:	
						-	SITE BOUNDARY	
				2 <sup>211</sup> ana 210, 121 U,	Novi 1. C. C.	0	20 40 60 80 1 : 2000 SCALE BAR	100m
M	CONTRACT NO.	Water quality pollution control	SCALE	1:2000 @ /	43	DATE	29-AUG-23	
MOTT MACDONALD	YL/2020/03 HUNG SHUI KIU/HA TSUEN NEW DEVELOPMENT AREA STAGE 1 WORKS	measures implemented at Site 3-6 and Site 3-7	CHECK JOB NO.	- SK0050	SKETCH NO.	ure 3	RH	rev 34

Default \\YI202003-srv1\share\Public\YL202003\Land Survey\Site Sketch\0050 Aerial photo\380288-CV-SK-0050 - rev.34.dgn 29/8/2023