

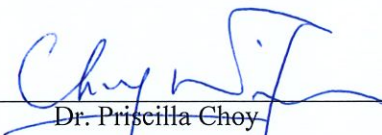
# **Civil Engineering and Development Department**

**Service Contract No. NDO 04/2019  
Environmental Team for Environmental  
Monitoring and Audit Works in  
Construction Phase for the First Phase  
Development of Kwu Tung North and  
Fanling North New Development Areas**

**Monthly Environmental Monitoring and  
Audit Report for December 2023**

**(Version 1.2)**

Certified By

  
Dr. Priscilla Choy  
(Environmental Team Leader)

**REMARKS:**

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

WELLAB accepts no responsibility for changes made to this report by third parties.

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**Agreement No. CE 33/2019 (EP)**

**Independent Environmental Checker for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas – Investigation**

**Monthly Environmental Monitoring and Audit Report No. 50 (December 2023)**

16 January 2024

**BY EMAIL**

Dear Sir,

We refer to email of 16 January 2024 attaching the Monthly Environmental Monitoring and Audit Report No. 50 prepared by the Environmental Team (ET) of the captioned.

We would like to inform you that we have no adverse comment on the captioned submission. Therefore, we write to verify the captioned submission in accordance with the Condition 3.4 of the Environmental Permit no. EP-466/2013/A, EP-467/2013/A, EP-468/2013/A, EP-469/2013, EP-470/2013A, EP-473/2013/A, EP-475/2013/A and EP-546/2017.

Should you have any queries, please contact the undersigned or our Ms. Liz Lo at 2828 5751.

Yours faithfully,  
For and on behalf of the  
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## TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY .....	1
Introduction .....	1
Environmental Monitoring and Audit Progress .....	2
Breaches of Action and Limit Levels .....	5
Reporting Changes .....	6
Future Key Issues .....	7
<b>1 INTRODUCTION .....</b>	<b>11</b>
Purpose of the report .....	11
Structure of the report.....	11
<b>2 PROJECT INFORMATION.....</b>	<b>13</b>
Background .....	13
Project Organization.....	15
Summary of Construction Works Undertaken During Reporting Month .....	17
Construction Programme.....	19
Status of Environmental Licences, Notifications and Permits .....	19
<b>3 AIR QUALITY MONITORING .....</b>	<b>23</b>
Monitoring Requirements.....	23
Monitoring Location.....	23
Monitoring Equipment .....	24
Monitoring Parameters, Frequency and Duration .....	24
Monitoring Methodology and QA/QC Procedure.....	25
Results and Observations .....	27
Event and Action Plan .....	28
<b>4. NOISE MONITORING .....</b>	<b>29</b>
Monitoring Requirements.....	29
Monitoring Location.....	29
Monitoring Equipment .....	29
Monitoring Parameters, Frequency and Duration .....	30
Monitoring Methodology and QA/QC Procedures .....	31
Maintenance and Calibration.....	31
Results and Observations .....	31
Event and Action Plan .....	33
<b>5. WATER QUALITY MONITORING.....</b>	<b>34</b>
Monitoring Requirements.....	34
Monitoring Parameters, Frequency .....	34
Results and Observations .....	34
Monitoring Requirements.....	35
Monitoring Locations .....	35
Monitoring Equipment .....	36
Monitoring Parameters and Frequency .....	38
QA/QC Requirements .....	39
Results and Observations .....	40
Event and Action Plan .....	40
<b>6. LAND CONTAMINATION (AMBIENT ARSENIC MONITORING).....</b>	<b>41</b>
Monitoring Requirements.....	41
Monitoring Location.....	41
Monitoring Equipment .....	42

Monitoring Parameters, Frequency and Duration .....	42
Monitoring Methodology and QA/QC Procedure .....	42
Maintenance/Calibration .....	43
Laboratory Measurement / Analysis .....	43
Results and Observations .....	44
Event and Action Plan .....	44
<b>7. LANDFILL GAS MONITORING.....</b>	<b>45</b>
Monitoring Requirement .....	45
Monitoring Parameters and Frequency .....	45
Monitoring Locations .....	45
Monitoring Equipment .....	45
Results and Observations .....	46
Event and Action Plan .....	46
<b>8. BUILT HERITAGE MONITORING .....</b>	<b>47</b>
Monitoring Requirement .....	47
Monitoring Location.....	47
Monitoring Parameters and Frequency .....	47
Monitoring Equipment .....	48
Results and Observations .....	48
Event and Action Plan .....	48
<b>9 ECOLOGICAL MONITORING .....</b>	<b>49</b>
Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley .....	49
Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream, and Long Valley .....	51
Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution .....	52
Results and Observation .....	57
References .....	58
<b>10 ENVIRONMENTAL SITE INSPECTION.....</b>	<b>59</b>
Site Audits .....	59
Implementation Status of Environmental Mitigation Measures.....	65
Implementation Status of Water Quality Mitigation Measures.....	67
Solid and Liquid Waste Management Status .....	69
Ecological Mitigation Measures – Creation of Long Valley Nature Park (LVNP) .....	70
<b>11 ENVIRONMENTAL NON-CONFORMANCE .....</b>	<b>73</b>
Summary of Exceedances .....	73
Summary of Environmental Non-Compliance .....	73
Summary of Environmental Complaint .....	73
Summary of Environmental Summon and Successful Prosecution .....	73
<b>12 FUTURE KEY ISSUES .....</b>	<b>74</b>
Key Issues in the Coming Three Months .....	74
Monitoring Schedule for the Next Month .....	82
Construction Programme for the Next Month.....	82
<b>13 CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>83</b>
Conclusions .....	83
Recommendations .....	84

## LIST OF TABLES

Table I	Works Contracts under relevant Environmental Permit(s) in the Reporting Month
Table II	Summary Table for EM&A Activities in the Reporting Month
Table III	Summary Table for Events Recorded in the Reporting Month
Table IV	Summary Table for Site Activities in the coming Three Months
Table 2.1a	Summary of EPs under the Project and the Respective Work Contracts
Table 2.1b	Summary of Scope of Works under Concerned EP
Table 2.2	Key Contacts of the Project
Table 2.3	Summary Table for Major Site Activities in the Reporting Month
Table 2.4	Status of Environmental Licences, Notifications and Permits
Table 3.1	Location for Air Quality Monitoring Locations
Table 3.2	Air Quality Monitoring Equipment
Table 3.3	Impact Dust Monitoring Parameters, Frequency and Duration
Table 3.4	Summary Table of 1-hour TSP Monitoring Results during the Reporting Month
Table 3.5	Summary Table of 24-hour TSP Monitoring Results during the Reporting Month
Table 3.6	Observation at Dust Monitoring Stations
Table 4.1	Location for Noise Monitoring Stations
Table 4.2	Noise Monitoring Equipment
Table 4.3	Noise Monitoring Parameters, Duration and Frequency
Table 4.4	Summary Table of Noise Monitoring Results during the Reporting Month
Table 4.5	Observation at Noise Monitoring Stations
Table 5.1	Water Quality Monitoring Parameters and Frequency
Table 5.2	Additional Water Quality Monitoring Stations
Table 5.3	Water Quality Monitoring Equipment
Table 5.4	Additional Water Quality Monitoring Parameters and Frequency
Table 5.5	Method for Laboratory Analysis for Water Samples
Table 6.1	Location of Ambient Arsenic Monitoring station
Table 6.2	Ambient Arsenic Monitoring Equipment
Table 6.3	Impact Ambient Arsenic Monitoring Parameters, Frequency and Duration
Table 6.4	Summary Table of 24-hour RSP Monitoring Results during the Reporting Month
Table 7.1	Landfill Gas Monitoring Equipment
Table 8.1	Location of Construction Vibration Monitoring
Table 8.2	Vibration Monitoring Plan
Table 8.3	Vibration Limits for Construction Vibration Monitoring
Table 9.1	Summary Table of Avifauna Monitoring Results to Corresponding Action and Limit Levels
Table 9.2	Summary Table of Aquatic Macroinvertebrates Monitoring Results to Corresponding Action and Limit Levels
Table 9.3	Summary Table of Fish Monitoring Results to Corresponding Action and Limit Levels
Table 9.4	Summary Table of Mammal Monitoring Results to Corresponding Action and Limit Levels
Table 9.5	Summary Table of Herpetofauna Monitoring Results to Corresponding Action and Limit Levels
Table 9.6	Summary Table of Butterfly Monitoring Results to Corresponding Action and Limit Levels
Table 9.7	Summary Table of Odonata Monitoring Results to Corresponding Action and

	Limit Levels
Table 10.1	Summary of Site Audit
Table 10.2	Observations and Recommendations of Site Audit
Table 10.3	Summary Table for the Outstanding item(s) in the reporting month
Table 10.4	Photographic Records and Implementation Status of Measures
Table 10.5	Specific Water Quality Mitigation Measures for Major Construction Works in the Reporting Month
Table 10.6	Photographic Records of Site Activities in LVNP
Table 12.1	Summary Table for Site Activities, Potential Environmental Impacts and Recommended Mitigation Measures in the coming Months

## LIST OF DRAWINGS

Drawing no. 1 Project Boundary for the Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas

## LIST OF FIGURES

Figure 1	Location of Air Quality Monitoring Station (KTN)
Figure 2	Location of Air Quality Monitoring Station (FLN)
Figure 3	Location of Noise Monitoring Station (KTN)
Figure 4	Location of Noise Monitoring Station (FLN)
Figure 5	Location of Additional Water Quality Monitoring Stations at River Beas
Figure 6	Location of Additional Water Quality Monitoring Stations at River Indus and near Siu Hang San Tsuen Stream
Figure 7	Location of Ambient Arsenic Monitoring Station
Figure 8	Location of Landfill Gas monitoring
Figure 9	Location of Monitoring of Measures to minimise Disturbance to Water Birds on Ng Tung, Sheung Yue River and Long Valley (Transect Routes for T1-T3&T5)
Figure 10	Location of Monitoring Stations at Ma Tso Lung Stream and Siu Hang Sun Tsuen Stream
Figure 11	Location of Transect Routes of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)
Figure 12	Site Layout Plan of Contract ND/2019/01 under EP-466/2013/A
Figure 13	Site Layout Plan of Contract ND/2019/01 under EP-467/2013/A
Figure 14	Site Layout Plan of Contract ND/2019/01 under EP-468-2013/A
Figure 15	Site Layout Plan of Contract ND/2019/03 under EP-468/2013/A
Figure 16	Site Layout Plan of Contract ND/2019/02 under EP-469/2013
Figure 17	Site Layout Plan of Contract ND/2019/01 under EP-470/2013/A
Figure 18	Site Layout Plan of Contract ND/2019/03 under EP-473/2013/A
Figure 19	Site Layout Plan of Contract ND/2019/04 under EP-473/2013/A
Figure 20	Site Layout Plan of Contract ND/2019/05 under EP-473/2013/A
Figure 21	Site Layout Plan of Contract ND/2019/06 under EP-475/2013/A
Figure 22	Site Layout Plan of Contract ND/2019/04 under EP-546-2017



## **LIST OF APPENDICES**

Appendix A	Construction Programme
Appendix B	Action and Limit Levels
Appendix C	Copies of Calibration Certificates
Appendix D	Environmental Monitoring Schedules
Appendix E	Air Quality and Ambient Arsenic Monitoring Results and Graphical Presentation
Appendix F	Noise Monitoring Results and Graphical Presentation
Appendix G	Water Quality Monitoring Results and Graphical Presentations
Appendix H	Laboratory Testing Reports for Laboratory Analysis
Appendix I	Quality Control Reports for SS and Arsenic Laboratory Analysis
Appendix J	Landfill Gas Monitoring Results
Appendix K	Built Heritage Monitoring Results
Appendix L	Ecological Monitoring Results
Appendix M	Weather Condition
Appendix N	Event Action Plans
Appendix O	Summary of Exceedance
Appendix P	Site Audit Summary
Appendix Q	Environmental Mitigation Implementation Schedule (EMIS)
Appendix R	Waste Generation in the Reporting Month
Appendix S	Complaint Log
Appendix T	Summary of Successful Prosecution
Appendix U	Summary Table for Required Submission under Environmental Permits

**EXECUTIVE SUMMARY****Introduction**

1. This is the 50<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) Report for the First Phase Development of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs), comprising the Advance Works and First Stage Works (hereinafter called the “the Project”). This report is prepared by Wellab Limited under “Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of KTN and FLN NDAs” (hereinafter called the “Service Contract”). This report documents the findings of EM&A works conducted in December 2023.
2. During the reporting month, the following Works Contracts under relevant Environmental Permit(s) were undertaken for the Project:

**Table I Works Contracts under relevant Environmental Permit(s) in the Reporting Month**

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
<b>Contract No. ND/2019/01 –</b> Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	EP-466/2013/A	Castle Peak Road Diversion	12 August 2020
	EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement	12 August 2020
	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	1 June 2020
	EP-470/2013/A	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	23 March 2020
<b>Contract No. ND/2019/02 –</b> Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area	28 October 2020
<b>Contract No. ND/2019/03 –</b> Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	3 July 2020
	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6 October 2020
<b>Contract No. ND/2019/04 –</b> Fanling North New Development Area,	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23 February 2021

<b>Works Contracts</b>	<b>Environmental Permit No.</b>	<b>Designated Project (DP)</b>	<b>Commencement date of construction</b>
Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)	EP-546/2017	Fanling North Temporary Sewage Pumping Station	16 February 2021
<b>Contract No. ND/2019/05</b> – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	1 August 2020
<b>Contract No. ND/2019/06</b> – Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area	29 October 2019
<b>Contract No. ND/2019/07</b> – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works	Works area not under relevant Environmental Permit for Phase 1 of the Project.		1 March 2021

**Environmental Monitoring and Audit Progress**

3. A summary of the EM&A activities in this reporting month is listed in **Table II** below:

**Table II Summary Table for EM&A Activities in the Reporting Month**

EM&A Activities	Monitoring Station (s)	Works Contracts						
		ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07
1-hr Suspended Particulates Monitoring (TSP)	FLN-DMS1	N/A	N/A	6, 12, 18, 22 and 28 Dec 23	6, 12, 18, 22 and 28 Dec 23	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	6, 12, 18, 22 and 28 Dec 23		
	FLN-DMS5			5, 11, 15, 21 and 27 Dec 23	5, 11, 15, 21 and 27 Dec 23	N/A		
	KTN-DMS4(B)	5, 11, 15, 21 and 27 Dec 23		5, 11, 15, 21 and 27 Dec 23	N/A			
24-hr Monitoring TSP	FLN-DMS1	N/A	N/A	5, 11, 15, 21 and 27 Dec 23	5, 11, 15, 21 and 27 Dec 23	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	5, 11, 15, 21 and 27 Dec 23		
	FLN-DMS5A			5, 11, 15, 21 and 27 Dec 23	5, 11, 15, 21 and 27 Dec 23	N/A		
	KTN-DMS4(B)	5, 11, 15, 21 and 27 Dec 23		5, 11, 15, 21 and 27 Dec 23	N/A			
Noise Monitoring	CP-FLN-NMS1	N/A			6, 12, 18 and 28 Dec 23			N/A
	CP-FLN-NMS2	N/A				6, 12, 18 and 28 Dec 23	N/A	
	CP-KTN-NMS2	5, 11, 21 and 27 Dec 23	N/A	N/A				
	CP-KTN-NMS3							
	CP-KTN-NMS5							
	CP-KTN-NMS6	N/A	5, 11, 21 and 27 Dec 23					
Ecological Survey	Monitoring of Measures to Minimise Disturbance to Water Birds on Ng Tung River, Sheung Yue River, and Long Valley	N/A	N/A	4, 7, 11, 15, 18, 21, 27 and 28 Dec 2023	7, 15, 21, and 28 Dec 23	N/A	N/A	N/A
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*

	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	5 and 12 Dec 23	5 and 12 Dec 23	12 Dec 23	12 Dec 23	12 Dec 23	N/A*	N/A*
Egretty Monitoring		N/A	N/A	N/A	N/A	N/A	N/A	N/A
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		5, 11, 15, 21 and 27 Dec 23	N/A	5, 11, 15, 21 and 27 Dec 23	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	1, 4, 6, 8, 11, 13, 15, 18, 20, 22, 27 and 29 Dec 23	N/A	1, 4, 6, 8, 11, 13, 15, 18, 20, 22, 27 and 29 Dec 23	N/A	N/A	N/A
Landfill Gas Monitoring		21 Dec 23	N/A	N/A	N/A	N/A	N/A	N/A
Built Heritage Monitoring		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Environmental Site Inspection		5, 12, 19 and 28 Dec 23	6, 14, 20 and 29 Dec 23	8, 15, 19 and 27 Dec 23	7, 12, 21 and 28 Dec 23	4, 14, 18 and 27 Dec 23	NIL	1, 8, 15, 22 and 29 Dec 23

## Remarks:

N/A – No relevant monitoring is required according to the updated EM&amp;A Manual

N/A\* – No relevant monitoring is required according to the Baseline Ecological Monitoring Plan (Table 3.1)

[1] Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03

[2] Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03

[3] Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m, the monitoring station is not applicable to ND/2019/02

[4] Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m, the monitoring station is not applicable to ND/2019/05

[5] Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m, the monitoring station is not applicable to ND/2019/03 and ND/2019/04

[6] Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m, the monitoring station is not applicable to ND/2019/05

[7] Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03 and ND/2019/04

[8] Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03



**Breaches of Action and Limit Levels**

4. Summary of the environmental exceedances of the reporting month is tabulated in **Table III**.

**Table III Summary Table for Events Recorded in the Reporting Month**

Environmental Monitoring	Parameter	No. of non-project related Exceedances		Total No. of non-project related Exceedances	No. of Exceedance related to the Construction Works of the Contract		Total No. of Exceedance related to the Construction Works of the Contract
		Action Level	Limit Level		Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	0	0
	24-hr TSP	0	0	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0	0	0
Noise	L <sub>eq</sub> (30min)	0	0	0	0	0	0
Water Quality	DO	0	0	0	0	0	0
	Turbidity	0	0	0	0	0	0
	SS	0	0	0	0	0	0
	Arsenic	0	0	0	0	0	0
Landfill Gas	O <sub>2</sub>	0	0	0	0	0	0
	CH <sub>4</sub>						
	CO <sub>2</sub>						
Cultural heritage	Built Heritage Monitoring	0	0	0	0	0	0
Ecological Monitoring	Avifauna	0	0	0	0	0	0
	Non-aquatic fauna	2	2	0	0	0	0

**Air Quality**

5. All construction air quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

**Construction Noise**

6. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.

### **Water Quality**

7. All additional water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level Exceedance was recorded. No construction of channel for alternation of natural streams was carried out in the reporting month. Therefore, no water quality monitoring was conducted according to the Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA). Relevant details are given in Section 5.

### **Land Contamination**

8. All ambient arsenic monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

### **Landfill Gas Monitoring**

9. Monitoring of landfill gas in the reporting month was carried out by the Contractor under ND/2019/01 at excavation location Portion 6b. No Limit Level exceedance was recorded.

### **Built Heritage Monitoring**

10. No Built heritage monitoring was carried out in the reporting month due to no works causing for surveyed cultural heritage at all. No Limit Level exceedance was recorded.

### **Ecological Monitoring**

11. All ecological monitoring was conducted as scheduled in the reporting month.
12. Two (2) action level exceedance and two (2) limit level exceedance for non-aquatic fauna were recorded at T3 & T6. The exceedance were considered non-project related, as large proportion of vegetative habitat along T3 were observed either removed and tarmacked as haul road by construction works outside of project, first reported in the Monthly Monitoring Report in December 2021. Dry weather throughout the month might also have influenced number of species of odonates recorded. In addition, necessary Ecological mitigation measure were provided by all nearby project-related sites. No evidence to suggest that the exceedance was related to project activities.
13. The ecological monitoring result in the Reporting Month is shown in **Appendix L**.

### **Complaint Log**

14. No environmental complaint was received in the reporting month.

### **Notification of Summons and Successful Prosecutions**

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

### **Reporting Changes**

16. This report has been prepared in compliance with the reporting requirements for the subsequent monthly EM&A Report as required by the “Updated Environmental Monitoring and Audit Manual for Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas” (Updated EM&A Manual).

**Future Key Issues**

17. The major site activities for the coming three months are shown in **Table IV**.

**Table IV Summary Table for Site Activities in the coming Three Months**

<b>Contract No.</b>	<b>Site Activities (January to March 2024)</b>
<b>ND/2019/01</b>	<ul style="list-style-type: none"> <li>(a) Drainage works and sheet piles in Portion 1a</li> <li>(b) Site formation, stockpile of soil, erection of hoarding and construction of noise barrier in Portion 1c</li> <li>(c) Sheet Piling, Site formation work, construction of subway, road works and drainage works in Portion 2</li> <li>(d) Excavation, backfilling, drainage and watermain works in Portion 3</li> <li>(e) Watermain works, excavation, backfilling, road works, sheet piling and pipe jacking in Portion 5</li> <li>(f) Drainage works, backfilling, road works and watermain works in Portion 6a</li> <li>(g) Operation of HAC treatment facility in Portion 6b</li> <li>(h) Sheet piling, excavation, stockpile of soil, drainage works and watermain work in Portion 7</li> <li>(i) Construction of retaining wall, RC construction of fresh water reservoir, excavation at WSD's maintenance access, backfilling works, drainage works and pipe pile wall installation in Portion 8a</li> <li>(j) Trenchless work, excavation, watermain works and ground treatment in Portion 8b</li> <li>(k) Sheet piling, excavation, road works, drainage works and watermain works in Portion 9b</li> <li>(l) Removal of existing structure in Portion 11b</li> <li>(m) Site clearance, tree felling, removal of existing structure, site formation and stockpile of soil in Portion 13</li> </ul>
<b>ND/2019/02</b>	<ul style="list-style-type: none"> <li>(a) Pipe Jacking</li> <li>(b) Backfilling</li> <li>(c) Concreting</li> <li>(d) Bedding &amp; Pipe Laying</li> <li>(e) ELS</li> <li>(f) Sheet Pile Installation</li> <li>(g) Cut and Fill of Slope</li> </ul>
<b>ND/2019/03</b>	<ul style="list-style-type: none"> <li>(a) Portion 2 to Portion 20C <ul style="list-style-type: none"> <li>- Wetland creation &amp; restoration, Dry agricultural land creation</li> <li>- Construction of compacted earth path</li> <li>- Construction of Water Treatment Wetland</li> <li>- Tree felling and tree pruning work</li> <li>- Construction of Lodging Facility</li> <li>- Construction of Dry Weather Flow Interception (DWFI)</li> <li>- Construction of Car Park and Farmer's Forum</li> </ul> </li> </ul>
<b>ND/2019/04</b>	<ul style="list-style-type: none"> <li>(a) Tree Pruning</li> <li>(b) Pile Cap</li> <li>(c) Back Filling</li> <li>(d) Excavation</li> <li>(e) Grouting</li> <li>(f) Sheet Piling</li> <li>(g) Road works</li> <li>(h) Formwork and Scaffolding Erection</li> <li>(i) Rebar Fixing</li> <li>(j) Bore pile</li> <li>(k) ELS</li> </ul>

Contract No.	Site Activities (January to March 2024)
ND/2019/05	<p>(a) <u>North Team Works</u></p> <ul style="list-style-type: none"> <li>- Backfilling and drainage work at C4-02 &amp; C4-01.</li> <li>- Backfilling at C2-02, C3-03 &amp; portion II.</li> <li>- Haul Road to bridge deck In On Lok Garden.</li> <li>- Construction of remaining abutment wall near portal B2-01.</li> <li>- Construction of FW 53.</li> <li>- Water works at Jockey Club Rd.</li> <li>- Road works of northbound of Jockey Club Rd &amp; ducting works at central median.</li> <li>- Sampling of existing pavement in southbound of Jockey Club Rd.</li> <li>- Construction of new box culvert &amp; retaining wall at Tong Hang Tsuen</li> <li>- Drainage works –DN 900 at On Kui Street near B1.</li> <li>- Cross head construction at B2-01, B2-02 &amp; B2-03.</li> </ul> <p>(b) <u>Viaduct Works</u></p> <ul style="list-style-type: none"> <li>- Segment fabrication for bridge C2, C1, D2, E4</li> <li>- Segments erection by LG at bridges C3, C2</li> <li>- SOP construction at D2-01</li> <li>- Construction of Bridge B1</li> <li>- Parapet skin fabrication and parapet construction.</li> <li>- Segment fabrication for bridge B2.</li> </ul> <p>(c) <u>South Team Works</u></p> <ul style="list-style-type: none"> <li>- TWSRW – Road work and UUs laying (Section P800 CH 450 to 600).</li> <li>- TWSRW – Construction of lower berm and Hydroseeding at FS04.</li> <li>- TWSRW - CLP 11 kv cable diversion work (1ST)</li> <li>- TWSRW – Gas (IPA400 and HP600) diversion work</li> <li>- TWSRW – Foundation work of D2-04M</li> <li>- HKY FB (East) – Installation of cladding and E&amp;M works.</li> <li>- HKY FB (West) – Construction of LT2 (Mini-piles)</li> <li>- E3-04a, E304b, E4-01 and E4-02 – cap construction</li> <li>- E305M Pier Head construction</li> <li>- NB109 – Bay 11~12 base slab construction. Bay 5 to 12 wall construction.</li> <li>- NB69 – Bay 2~8 ELS works</li> <li>- NB110 – Bay 6~7 ELS works</li> <li>- Demolish Existing NB74 and BBI</li> <li>- Removal Sign Gantry DS64</li> </ul> <p>(d) <u>Form Traveler</u></p> <ul style="list-style-type: none"> <li>- E3-01 – construction 4rd to 6th pair</li> <li>- E2-02 – dismantling of FT1</li> <li>- D2-02 – construction 08th to 11th pair</li> <li>- D2-03 – construction 3rd pair to 5th pair</li> <li>- E2-01 - construction 02nd pair to 05th pair</li> </ul>
ND/2019/06	The construction phase has been completed and handed over to AFCD since 4 April 2022.



Contract No.	Site Activities (January to March 2024)
ND/2019/07	(a) Road works at Portion 1, 4 and 5 (b) C&D waste disposal at Portion 1, 2, 4 and 5 (c) Construction of box culvert at Portion 2 (d) Filling works at Portion 2 and 4 (e) Construction of site haul road at Portion 4 (f) Drainage works, Sewerage works at Portion 2, 3, 4 and 5 (g) Construction of noise barrier at Portion 4 and 5 (h) Waterworks at Portion 1, 2 and 4

## 1 INTRODUCTION

- 1.1 Wellab Limited was commissioned by Civil Engineering and Development Department (CEDD) as the Environmental Team to undertake the Environmental Monitoring and Audit (EM&A) services for the Works Contracts involved in the implementation of the First Phase Development of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs) Project to ensure that the environmental performance of the Works Contracts complies with the requirements specified in the Environmental Permits (EPs), Updated EM&A Manual, Environmental Impact Assessment (EIA) Report of the KTN FLN NDAs project and other relevant statutory requirements.

### Purpose of the report

- 1.2 This is the 50<sup>th</sup> EM&A Report which summarises the key findings of the EM&A programme in December 2023.

### Structure of the report

- 1.3 The structure of the report is as follows:
- Section 1: **Introduction** - purpose and structure of the report.
  - Section 2: **Project Information** - summarises background and scope of the Project, site description, project organisation and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licences during the reporting month.
  - Section 3: **Air Quality Monitoring** - summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
  - Section 4: **Noise Monitoring** - summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
  - Section 5: **Water Quality Monitoring** - summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels and Event / Action Plans.
  - Section 6: **Land Contamination (Ambient Arsenic Monitoring)** - summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
  - Section 7: **Landfill Gas Monitoring** - summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation, and Event / Action Plans.
  - Section 8: **Built Heritage Monitoring** – summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation.
  - Section 9: **Ecological Monitoring** – summarises the details of monitoring of measures to minimise disturbance to waterbirds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley, monitoring of measures to

minimise impacts on ecological sensitive habitats from disturbance and pollution during the reporting month.

- Section 10: **Environmental Site Inspection** - summarises the audit findings of the weekly site inspections undertaken within the reporting month.
- Section 11: **Environmental Non-conformance** - summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.
- Section 12: **Future Key Issues** - summarises the impact forecast, proposed mitigation measures and monitoring schedule for the upcoming months.
- Section 13: **Conclusions and Recommendations**

## 2 PROJECT INFORMATION

### Background

- 2.1 The Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs) are one of the important sources of land and housing supply in the medium and long term. The development of the KTN and FLN NDAs will be implemented in phase for full completion by 2031. The Phase 1 of the NDAs development, comprising the Advance Works and First Stage Works, is targeted to be implemented from the second half of 2019 progressively. The Advance and First Stage Works would include site formation, engineering infrastructure works (including roads, drainage, sewerage, waterworks, landscaping works, pumping stations, and fresh water and flushing water service reservoirs), soil remediation, reprovisioning of North District Temporary Wholesale Market, development of a nature park at Long Valley and implementation of environmental mitigation measures.
- 2.2 The scope of works under the Advance and First Stage Works comprises the following:
- a) The Advance Works (PWP item No. 7747CL-2) consist of:
    - i) site formation of land (including soil remediation) in KTN and FLN NDAs for housing, community facilities and engineering infrastructure;
    - ii) construction of roads including the eastern section of Fanling Bypass (FLBP(E)) connecting the FLN NDA to Fanling Highway and other roads with footpaths and cycle tracks, and associated junction/ road improvements;
    - iii) engineering infrastructure works including drainage. Sewerage (including two sewage pumping stations), waterworks (including a fresh water service reservoir and a flushing water service reservoir in the KTN NDA), landscape works and slopeworks;
    - iv) part expansion and upgrading of Shek Wu Hui Sewage Treatment Works (SWHSTW);
    - v) reprovisioning works; and
    - vi) implementation of environmental mitigation measures and environmental monitoring and audit (EM&A) programme for the works mentioned in (i) to (v) above.
  - b) The First Stage Works (PWP item No. 7759CL) consist of:
    - i) development of a nature park at Long Valley including provision of a visitor centre and a footbridge spanning across Sheung Yue River for connection between these two facilities;
    - ii) reprovisioning of two egret sites in the FLN NDA and enhancement works to an existing egret site in the KTN NDA;
    - iii) site formation of land for a village resite area and a district police station in the KTN NDA;
    - iv) engineering infrastructure works including roads, drainage, sewerage, waterbirds, and landscape works; and
    - v) implementation of environmental mitigation measures and environmental monitoring and audit (EM&A) programme for the works mentioned in (i) to (iv) above.

- 2.3 The Project which covers KTN and FLN NDAs is a designated project (DP) under Schedule 3

of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). In October 2013, the EIA Report (AEIAR-175/2013) for the Project was approved by the Director of Environmental Protection pursuant to the EIA Ordinance. The relevant EPs under the Project and the respective Work Contracts are summarised in **Tables 2.1a** and **2.1b**.

**Table 2.1a Summary of EPs under the Project and the Respective Work Contracts**

EP No.	Designated Project	C1	C2	C3	C5 A	C5 B	C6	C7
EP-466/2013/A	Castle Peak Road Diversion	✓						
EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement	✓						
EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	✓		✓				
EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area		✓					
EP-470/2013/A	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	✓						
EP-473/2013/A	Fanling Bypass Eastern Section			✓	✓	✓		
EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area						✓	
EP-546/2017	Fanling North Temporary Sewage Pumping Station				✓			

**Notes:** C1: ND/2019/01 C2: ND/2019/02 C3: ND/2019/03 C5A: ND/2019/04

C5B: ND/2019/05 C6: ND/2019/06 C7: ND/2019/07

**Table 2.1b Summary of Scope of Works under concerned EP**

Environmental Permit (EP) No.	Work Contract(s)	Scope of Works under concerned EP(s)	Site Layout Plan under concerned EP(s)
EP-466/2013/A(Part)	C1	Realign Castle Peak Road and join with the Pak Shek Au Interchange at the western end	Figure 12
EP-467/2013/A(Part)	C1	Construction of new primary distributor road (P1) within Kwu Tung North New Development Area	Figure 13
EP-468/2013/A(Part)	C1	Construction of new primary distributor roads (D1, D3, D4 and part of D5) within Kwu Tung North New Development Area	Figure 14
	C3	Development of a nature park at Long Valley and ecological mitigation and enhancement works for the nature park (Condition 2.9)	Figure 15
EP-469/2013(Part)	C2	Construction of one sewage pumping station in Kwu Tung North with installed capacity of more than 2,000 m3 per day	Figure 16



Environmental Permit (EP) No.	Work Contract(s)	Scope of Works under concerned EP(s)	Site Layout Plan under concerned EP(s)
EP-470/2013/A(Part)	C1	Construction of service reservoir and watermain for the reuse of treated sewage effluent for reuse in Kwu Tung North Development Areas	Figure 17
EP-473/2013/A(Part)	C3	Establishment of alternative egretry sites and enhance the existing egretry site at Ho Sheung Heung and/or its vicinity (Condition 2.7)	Figure 18
EP-473/2013/A(Part)	C5A	Construction of new district distributor inside FLN NDA, which provides a linkage between the Man Kam To Road and the proposed Fanling Bypass Eastern Section	Figure 19
EP-473/2013/A(Part)	C5B		Figure 20
EP-475/2013/A	C6	The re-provisioned wholesale market will have approximately 1,000 market stalls within a site area of around 1.3 ha	Figure21
EP-546/2017	C5A	Construct and operate a temporary sewage pumping station in Fanling North with installed capacity (average dry weather flow) of about 3,600m <sup>3</sup> /day	Figure 22

Remark: The EP(s) not related to the Project of the First Phase of the Kwu Tung North (KTN) and Fanling North (FLN) New Development Area (NDA) Development Areas are not included in the Table.

- 2.4 The site boundary of the Project and all Works Contracts are shown in **Drawing No. 1**.
- 2.5 The required submissions and submission status under Environmental Permits are shown in **Appendix U**.
- 2.6 The site layout plans under concerned Environmental Permits are shown in Figures 12 - 22.

### Project Organization

- 2.7 Different parties with different levels of involvement in the Project organisation include:
- Project Proponent – Civil Engineering and Development Department (CEDD)
  - *Supervisor / Supervisor's* Representative – AECOM Asia Co. Ltd.
  - Environmental Team (ET) – Wellab Limited
  - Independent Environmental Checker (IEC) – Mott MacDonald Hong Kong Ltd (MottMac)
- 2.8 The names and contact numbers of key personnel are summarised in **Table 2.2**.

**Table 2.2 Key Contacts of the Project**

<b>Party</b>	<b>Role</b>	<b>Contact Person</b>	<b>Phone No.</b>	<b>Fax No.</b>
Civil Engineering and Development Department, HKSAR (CEDD)	Project Proponent	Mr. Ryan Chau	3797 5387	3547 1658
<i>Supervisor / Supervisor's Representative</i> (AECOM Asia Co. Ltd.)	Chief Resident Engineer	Mr. Alan Lee	6398 5982	2680 9515
	Senior Resident Engineer	Mr. King-man Chan	9651 2635	2680 9515
Environmental Team (Wellab Limited)	Environmental Team Leader	Dr. Priscilla Choy	2898 7388	2898 7076
Independent Environmental Checker (MottMac)	Independent Environmental Checker	Mr. Thomas Chan	2828 5967	2827 1823
<b><u>Contract No. ND/2019/01</u></b> Contractor (Build King – Richwell Engineering Joint Venture)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Edward Tam	9287 8270	
<b><u>Contract No. ND/2019/02</u></b> Contractor (Chun Wo – Kwan Lee Joint Venture.)	Site Agent	Mr. Andy Chan	3485 9780	--
	Environmental Officer	TBC	--	
<b><u>Contract No. ND/2019/03</u></b> Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Ken Cheung	9803 5297	
<b><u>Contract No. ND/2019/04</u></b> Contractor (Daewoo – Chun Wo – Kwan Lee Joint Venture)	Site Agent	Mr. Eric Wu	9786 8630	--
	Environmental Officer	Mr. Sam Lam	6178 3179	
<b><u>Contract No. ND/2019/05</u></b> Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Darwin Lo	9467 5891	--
	Environmental Manager	Mr. Pan Fong	9436 9435	
	Environmental Officer	Ms. Iris Ho	5611 8325	
<b><u>Contract No. ND/2019/06</u></b> Contractor (New Concepts Engineering Development Ltd.)	Project Manager	Mr. Joe Cheng	9861 0060	--
	Environmental Officer	Mr. Alex Choy	6360 3236	
<b><u>Contract No. ND/2019/07</u></b> Contractor (China Road and Bridge Corporation)	Site Agent	Mr. Mac Chow	9169 9567	--
	Environmental Officer	Mr. K. M. Lui	5113 8223	
	Environmental Supervisor	Mr. Attlee Chau	6386 9018	

**Summary of Construction Works Undertaken During Reporting Month**

2.9 The major site activities undertaken in the reporting month are shown in **Table 2.3**.

**Table 2.3 Summary Table for Major Site Activities in the Reporting Month**

<b>Contract No.</b>	<b>Site Activities (December 2023)</b>
<b>ND/2019/01</b>	(a) Drainage works, watermain works and sheet piles in Portion 1a (b) Site formation and erection of hoarding in Portion 1c (c) Sheet piling, site clearance, site formation, construction of subway, drainage works and road works in Portion 2 (d) Sheet piling, drainage works and watermain works in Portion 3 (e) Watermain works in Portion 5 (f) Backfilling, drainage and watermain works in Portion 6a (g) Operation of HAC treatment facility in Portion 6b (h) Excavation and drainage works in Portion 7 (i) Construction of retaining wall, RC construction of fresh water reservoir, construction of WSD's maintenance access, drainage works, backfilling works and soil nail in Portion 8a (j) Pipe jacking at LWSC's carpark, trenchless work and watermain construction in Portion 8b (k) Sheet piling, excavation, drainage and watermain works in Portion 9b (l) Removal of existing structure in Portion 11b (m) Site clearance, removal of existing structure, site formation and erection of hoarding in Portion 13
<b>ND/2019/02</b>	(a) Pipe Jacking (b) Backfilling (c) Concreting (d) Bedding and pipe laying (e) ELS (f) Sheet Pile Installation (g) Cut and Fill of Slope
<b>ND/2019/03</b>	(a) Portion 1 & Portion 1A - Road & Drainage works and watermain works at Yin Kong Road - Construction of Pavilion at Yin Kong Road (b) Portion 2 to Portion 20C - Wetland creation & restoration, Dry agricultural land creation - Construction of compacted earth path - Construction of Water Treatment Wetland - Tree felling and tree pruning work - Construction of Lodging Facility - Construction of Dry Weather Flow Interception (DWFI) - Construction of Car Park and Farmer's Forum
<b>ND/2019/04</b>	(a) Tree Pruning (b) Pile Cap (c) Back Filling (d) Excavation (e) Grouting (f) Sheet Piling (g) Road works (h) Formwork and Scaffolding Erection (i) Rebar Fixing (j) Bore pile

Contract No.	Site Activities (December 2023)
	(k) ELS
ND/2019/05	<p>(a) <u>South Team</u></p> <ul style="list-style-type: none"> <li>- E3-05M – Pier head construction in progress.</li> <li>- E3-04a – Column construction in progress.</li> <li>- E3-04b – ELS in progress. Unforeseen obstruction encountered.</li> <li>- E4-01 – ELS in progress.</li> <li>- E4-02 – ELS pipe pile wall in progress. Unforeseen obstruction encountered.</li> <li>- D2-04M – Bored Piling completed on 22 Nov 2023.</li> <li>- FS04 – Raking drain completed. Middle berm and U-channel construction in progress.</li> <li>- Works in TWSRE <ul style="list-style-type: none"> <li>A. BBI cover walkway (Steelwork) – 1st stage was completed.</li> <li>B. HKY Footbridge/Staircase – Installation of subframe and roof in progress.</li> <li>C. BBI Toilet – Base slab was casted. Wall construction is in progress.</li> <li>D. Connecting Road L201 to D300 – Backfilling is in progress.</li> </ul> </li> <li>- Works in TWSRW <ul style="list-style-type: none"> <li>A. TWRSW Stage 2 TTA completed on 22 Nov 2023.</li> <li>B. 11kv cable laying (near HKY entrance) in progress.</li> <li>C. Drainage work – Laying 2x1200Dia Pipes to Manhole (FL9110) in progress.</li> <li>D. Sewerage work – Laying 600Dia pipes at FW06 is in progress.</li> <li>E. Gas Pipe laying (IPA400/HP600 – near HKY entrance) in progress.</li> <li>F. Fresh watermain diversion in progress. Connection works to be carried out by WSD in Early Feb 2024.</li> <li>G. Lift LT02 – Mini piles in progress. 13 out of 19 piles were completed.</li> </ul> </li> <li>- NB109 <ul style="list-style-type: none"> <li>A. Bay 11 – 1st Wall was completed.</li> <li>B. Bay 12 Footing was completed. 1st Wall is in progress.</li> <li>C. Bay 13 Site Clearance is in progress.</li> </ul> </li> <li>- NB69 <ul style="list-style-type: none"> <li>A. Bay 5, Bay 6 – 1st Wall was completed.</li> <li>B. Bay 2, Bay 3 – ELS is in progress. Unforeseen obstruction encountered.</li> <li>C. Bay 6, Bay 7, Bay 8 – ELS is in progress</li> </ul> </li> <li>- NB110 <ul style="list-style-type: none"> <li>A. Bay 3 to 5 was completed. Backfilling to formation is in progress</li> <li>B. Bay 8 was completed on 10 Nov 2023.</li> <li>C. Bay 9 – ELS is in progress.</li> </ul> </li> <li>- NB 29 <ul style="list-style-type: none"> <li>A. 3 Trial Pits were carried out along NB29 U-trough area.</li> </ul> </li> </ul> <p>(b) <u>North Team</u></p> <ul style="list-style-type: none"> <li>- Slope works of FS 30 completed.</li> <li>- 1st pour concreting at C2-01 crosshead completed.</li> <li>- Dismantling of steel beam for B1-02 Portal Beam construction completed.</li> <li>- Soffit erection for C1-02 portal beam construction completed.</li> <li>- Truss erection for C1-01 MJ portal construction in progress.</li> <li>- Falsework erection for B2-02 &amp; B2-03 cross head construction in progress</li> <li>- D2-01 pier &amp; pier head construction completed.</li> <li>- Sheet pile extraction of B1- Abutment wall- phase 1 completed.</li> <li>- Backfilling &amp; extraction of sheet pile at C2-02 were in progress.</li> <li>- Backfilling at C4-02, C4-01a &amp; C4-01b were in progress</li> </ul>

Contract No.	Site Activities (December 2023)
	<ul style="list-style-type: none"> <li>- Removal of debris (additional request from DSD) due to black rainstorm were completed.</li> <li>- JCR: Permeant bitumen pavement works in northbound completed. Traffic diversion completed.</li> <li>- JCR: Construction of pipe support for DN 150 exposed pipe &amp; trench excavation for WSD were in progress.</li> <li>- JCR Tong Hang Village J/O improvement works: Blinding of box-culvert casted. Construction of box-culvert &amp; head wall for footpath were in progress.</li> <li>- Construction of manhole &amp; associated DN 900 drain pipe were in progress</li> </ul> <p>(c) <u>Bridges and Structures</u></p> <ul style="list-style-type: none"> <li>- Total 746 segments were casted in Huizhou casting yard.</li> <li>- Total 489 segments were delivered to site, and total 489 segments erected.</li> <li>- C2-04 to C3-01 end span segment erection by LG completed.</li> <li>- Fabrication of steel support for Bridge B1 completed at Zhengzhou.</li> <li>- Bridge B1 construction in progress.</li> <li>- Preparation of casting yard for Bridge B2 segments commenced at Dongguang.</li> <li>- Fabrication of parapet-skin commenced at ShenZheng casting yard, total 20 pieces parapet-skin fabricated.</li> </ul> <p>(d) <u>Form Traveler</u></p> <ul style="list-style-type: none"> <li>- Form traveler rebar fixing for 04th pair segment at E3-01 in progress.</li> <li>- Form traveler rebar fixing for 07th pair segment at D2-02 in progress.</li> <li>- Form traveler rebar fixing for 07th pair segment at D2-03 in progress.</li> <li>- Form traveler rebar fixing for 01st pair segment at E2-02 in progress.</li> <li>- FT05 erection at E2-01 completed.</li> <li>- Completed concreting E2-E2-02-E2-03-S013, E2-E2-02-E2-01-S13. E2-E2-02-E2-03-S014,</li> <li>- Completed concreting D2-D2-02-D2-03-S05, D2-D2-02-D2-01-S05, D2-D2-02-D2-03-S06, D2-D2-01-S06.</li> <li>- Completed concreting D2-D2-03-D2-04-S02, D2-D2-03-D2-02-S02,</li> <li>- Completed concreting E3-E3-01-E2-03-S03 &amp; E2-E2-01-E2-02-S01</li> </ul>
ND/2019/06	The construction phase was completed and handed over to AFCD since 4 April 2022.
ND/2019/07	<ul style="list-style-type: none"> <li>(a) Road works at Portion 1, 4 and 5</li> <li>(b) C&amp;D waste disposal at Portion 1, 2, 4 and 5</li> <li>(c) Drainage works, Sewerage works at Portion 2, 3, 4 and 5</li> <li>(d) Construction of box culvert at Portion 2</li> <li>(e) Filling works at Portion 2 and 4</li> <li>(f) Construction of site haul road at Portion 4</li> <li>(g) Waterworks at Portion 1, 2 and 4</li> </ul>

### Construction Programme

2.10 Copies of Contractors' construction programmes are provided in **Appendix A**.

### Status of Environmental Licences, Notifications and Permits

2.11 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 2.4**.

**Table 2.4 Status of Environmental Licences, Notifications and Permits**

Contract No.	Permit / Licence No.	Valid Period		Status
		From	To	
Environmental Permit (EP)				
ND/2019/01	EP-466/2013/A	21/11/2013	N/A	Valid
	EP-467/2013/A	27/01/2017	N/A	Valid
	EP-468/2013/A	27/01/2017	N/A	Valid
	EP-470/2013/A	21/11/2013	N/A	Valid
ND/2019/02	EP-469/2013	21/11/2013	N/A	Valid
ND/2019/03	EP-468/2013/A	27/01/2017	N/A	Valid
	EP-473/2013/A	27/01/2017	N/A	Valid
ND/2019/04	EP/473/2013/A	27/01/2017	N/A	Valid
	EP/546/2017	16/11/2017	N/A	Valid
ND/2019/05	EP-473/2013/A	27/01/2017	N/A	Valid
ND/2019/06	EP-475/2013/A	13/01/2017	N/A	Valid
Construction Noise Permit (CNP)				
ND/2019/01	GW-RN0966-23	25/09/2023	24/12/2023	Expired in reporting month
	GW-RN0840-23	01/09/2023	29/02/2024	Valid
	GW-RN0877-23	01/09/2023	29/02/2024	Valid
	GW-RN0997-23	01/10/2023	31/03/2024	Valid
	GW-RN1057-23	13/10/2023	12/01/2024	Valid
	GW-RN1224-23	21/11/2023	20/02/2024	Valid
	GW-RN1146-23	19/11/2023	18/05/2024	Valid
	GW-RN1329-23	20/12/2023	28/02/2024	Valid
	GW-RN1330-23	20/12/2023	19/03/2024	Valid
	GW-RN1235-23	01/12/2023	29/02/2024	Valid
	GW-RN1328-23	25/12/2023	24/03/2024	Valid
ND/2019/02	GW-RN0873-23	01/09/2023	31/12/2023	Expired in reporting month
	GW-RN1178-23	10/11/2023	09/02/2024	Valid
	GW-RN1163-23	08/11/2023	07/04/2024	Valid
ND/2019/03	GW-RN0733-23	01/09/2023	29/02/2024	Valid
ND/2019/04	GW-RN0878-23	17/08/2023	07/12/2023	Expired in reporting month
	GW-RN0984-23	23/09/2023	22/12/2023	Expired in reporting month
	GW-RN1110-23	19/10/2023	31/12/2023	Expired in reporting month
	GW-RN1039-23	08/10/2023	07/01/2024	Valid
	GW-RN1048-23	29/12/2023	28/03/2024	Valid
ND/2019/05	GW-RN0977-23	01/10/2023	31/12/2023	Expired in reporting month
	GW-RN1138-23	09/11/2023	31/01/2024	Valid
	GW-RN0897-23	01/09/2023	29/02/2024	Valid
	GW-RN1248-23	01/12/2023	29/02/2024	Valid
	GW-RN1334-23	13/12/2023	29/02/2024	Valid
	GW-RN1368-23	27/12/2023	31/01/2024	Valid
	GW-RN1367-23	29/12/2023	28/02/2024	Valid
	GW-RN1369-23	27/12/2023	26/03/2024	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				

Contract No.	Permit / Licence No.	Valid Period		Status
		From	To	
ND/2019/01	451792	11/12/2019	N/A	Valid
	477388	02/03/2022	N/A	Valid
ND/2019/02	454012	05/03/2020	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/04	461184	23/10/2020	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
ND/2019/07	459393	28/08/2020	N/A	Valid
<b>Billing Account for Disposal of Construction Waste</b>				
ND/2019/01	7036265	17/01/2020	N/A	Valid
ND/2019/02	7036898	01/04/2020	N/A	Valid
ND/2019/03	7036378	22/01/2020	N/A	Valid
ND/2019/04	7038391	22/09/2020	N/A	Valid
ND/2019/05	7036901	01/04/2020	N/A	Valid
ND/2019/06	7035473	17/10/2019	N/A	Valid
ND/2019/07	7038309	14/09/2020	N/A	Valid
<b>Registration of Chemical Waste Producer</b>				
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid
ND/2019/02	5213-548-C4439-01	06/05/2020	N/A	Valid
ND/2019/03	5213-623-S4231-01	14/04/2020	N/A	Valid
ND/2019/04	5211-624-D2709-01	26/11/2020	N/A	Valid
ND/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid
ND/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid
ND/2019/07	5213-625-C4498-01	21/09/2020	N/A	Valid
<b>Effluent Discharge License under Water Pollution Control Ordinance</b>				
ND/2019/01	WT00036071-2020	22/06/2020	30/06/2025	Valid
	WT00036073-2020	22/06/2020	30/06/2025	Valid
	WT00036067-2020	22/06/2020	30/06/2025	Valid
	WT00036075-2020	22/06/2020	30/06/2025	Valid
	WT00036076-2020	22/06/2020	30/06/2025	Valid
	WT00037191-2020	21/04/2022	28/02/2026	Valid
	WT00037204-2020	16/11/2022	28/02/2026	Valid
	WT00037412-2021	16/11/2022	30/04/2026	Valid
	WT00037564-2021	19/04/2021	30/04/2026	Valid
	WT00037886-2021	28/06/2021	30/06/2026	Valid
	WT00041311-2022	21/06/2022	30/06/2027	Valid
ND/2019/02	WT00036584-2020	21/10/2020	31/10/2025	Valid
	WT00036952-2020	17/12/2020	31/12/2025	Valid
ND/2019/03	WT00035847-2020	12/08/2020	31/08/2025	Valid

Contract No.	Permit / Licence No.	Valid Period		Status
		From	To	
	WT00036414-2020	25/02/2021	28/02/2026	Valid
	WT00037771-2021	08/07/2021	31/07/2026	Valid
	WT00035984-2020	25/02/2021	28/02/2026	Valid
ND/2019/04	WT00037539-2021	02/06/2022	30/04/2026	Valid
ND/2019/05	WT00036996-2020	22/12/2020	31/12/2025	Valid
ND/2019/06	WT00035415-2019	20/03/2020	31/03/2025	Valid
ND/2019/07	WT00037526-2021	21/04/2022	31/05/2026	Valid



### 3 AIR QUALITY MONITORING

#### Monitoring Requirements

- 3.1 In accordance with the Updated EM&A Manual, impact 1-hour TSP and 24-hr TSP monitoring shall be conducted to monitor the air quality for the Works Contracts. **Appendix B** shows the established Action/Limit Level for the air quality monitoring works.
- 3.2 Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while the impact 24-hour TSP monitoring was conducted for at least once every 6 days at the designated air quality monitoring stations.

#### Monitoring Location

- 3.3 Impact air quality monitoring was conducted at the monitoring stations under the Works Contracts, as shown in **Figure 1 and Figure 2** according to Table 1.1 of Updated EM&A Manual and Baseline Air Quality Monitoring Report (KTN & FLN NDA).

#### Alternative Monitoring Station for KTN-DMS4

- 3.4 As KTN-DMS4 - Temporary structure near Fanling Highway (near Pak Shek Au) is no longer as existing ASR, air quality monitoring station should be relocated to the alternative dust monitoring location according to the updated EM&A Manual, Section 2.6.2. According to Figure 3.1 of Approved EIA report and site visits conducted in June 2022, ASR at near KTN-E70 – Temporary Structure near Fanling Highway near Pak Shek Au is considered as the most representative alternative station **KTN-DMS4(B)** for air quality monitoring for KTN-DMS4 (i.e. KTNE162).
- 3.5 The alternative monitoring location **KTN-DMS4(B)** is agreed by EPD on 17 August 2022. The 1-hr and 24-hrs TSP monitoring commenced starting from **24 August 2022**. **Table 3.1** describes the location of the air quality monitoring stations.

**Table 3.1 Location for Air Quality Monitoring Locations**

EP No.	Contract No.	Monitoring Station	Location
EP-473/2013/A	ND/2019/03	FLN-DMS1 <sup>[2]</sup>	Scattered Village Houses North of Proposed Potential Ecopark
	ND/2019/04		
	ND/2019/05	FLN-DMS3 <sup>[3]</sup>	House near Tong Hang
	ND/2019/03	FLN-DMS5 <sup>[4]</sup>	Noble Hill
	ND/2019/04	FLN-DMS5A	Good View New Village
EP-466/2013/A EP-467/2013/A EP-468/2013/A	ND/2019/01	KTN-DMS4(B) <sup>[5]</sup>	Temporary Structure near Fanling Highway (near Pak Shek Au)
EP-468/2013/A	ND/2019/03		

Remarks:

[1]: Noting that construction phase air quality monitoring at the other proposed monitoring stations (e.g. planned), where access is permitted, will be conducted during construction phase of relevant works contract(s).

[2]: Since the distance between monitoring station and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m, the monitoring station is not applicable to ND/2019/05.

[3]: Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m, the monitoring station is not applicable to ND/2019/03 and ND/2019/04.

[4]: Since the distance between monitoring station and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m, the monitoring station is not applicable to ND/2019/05

[5] KTN-DMS4(B) commenced starting from 24 August 2022 as an alternative monitoring station of KTN-DMS4.

**Monitoring Equipment**

- 3.6 As the power supply for High Volume Sampler (HVS) for TSP monitoring at FLN-DMS 5A, KTN-DMS 4 and KTN-DMS 4(B) were rejected, direct reading dust meter was used to measure both 1-hour and 24-hour TSP levels:-
- The proposal for alternative monitoring equipment (i.e. direct reading dust meter) for TSP monitoring was approved by EPD according to the approved Baseline Air Quality Monitoring Report (KTN & FLN NDA); and
  - Same measurement methodology (i.e. direct reading dust meter) was adopted as baseline monitoring for a reliable comparison.
- 3.7 The proposed use of portable direct reading dust meters was also submitted to IEC and agreement was obtained from the IEC in accordance with Section 2.4.5 of the Updated EM&A Manual.
- 3.8 HVS for 24-hour TSP monitoring will be adopted once secured supply of electricity become available at FLN-DMS 5A and KTN-DMS 4(B).
- 3.9 **Table 3.2** summarises the equipment used in the impact air monitoring programme. Copies of calibration certificates are attached in **Appendix C**.

**Table 3.2 Air Quality Monitoring Equipment**

Monitoring Station	Equipment	Manufacturer	Model and Make	Quantity
FLN-DMS5 FLN-DMS5A KTN-DMS4(B)	Dust Monitor (1-hour and 24-hour TSP)	Met One Instruments	AEROCET-831	9
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

- 3.10 Meteorological information extracted from “Hong Kong Observatory - Ta Kwu Ling Weather Station” was proposed as the alternative method to obtain representative wind data. For Ta Kwu Ling Weather Station, it is located nearby the Project site and situated at approximately 15m above mean sea level. The station’s wind data monitoring equipment is set above the existing ground 10 meters in compliance with the general setting up requirements. Furthermore, this station also provides other meteorological information, such as humidity, rainfall, air pressure and temperature etc.
- 3.11 The general weather conditions (i.e. sunny, cloudy or rainy) were recorded by the field staffs during the monitoring days.

**Monitoring Parameters, Frequency and Duration**

- 3.12 **Table 3.3** summarises the monitoring parameters and frequencies of impact dust monitoring during the Works Contracts activities. The air quality monitoring schedule for the reporting month is shown in **Appendix D**.

**Table 3.3 Impact Dust Monitoring Parameters, Frequency and Duration**

Parameters	Frequency
1-hour TSP	Three times/ 6 days
24-hour TSP	Once / 6 days

**Monitoring Methodology and QA/QC Procedure****1-hour and 24-hour TSP Air Quality Monitoring*****Instrumentation***

- 3.13 Direct reading dust meter was deployed for the air quality monitoring as shown in **Table 3.2**.
- 3.14 The measuring procedures of the dust meters were in accordance with the Manufacturer's Instruction Manual as follows:

**(AEROCET-831)**

- Place the 1-hour dust meter at least 1.3 meters above ground.
- Press and hold the Power key momentarily to power on the unit and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 second to display the Sample Screen minutes.
- Press the START / STOP key to run the internal vacuum pump for 1 minute and be ready to use.
- Use the select dial to select the PM range and press the START / STOP key to start a measurement.
- Finally, push the START/STOP key to stop the measurement after 1 hour sampling.
- Information such as sampling date, time, value and site condition were recorded during the monitoring period.
- All data were recorded in the data logger for further data processing.

***Maintenance/Calibration***

- 3.15 The following maintenance/calibration was required for the direct dust meters:
- Check and calibrate the meters by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

**24-hour TSP Air Quality Monitoring*****Instrumentation*****(TISCH Model: TE-5170)**

- 3.16 High volume Samplers (HVS) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. Each sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

***HVS Installation***

3.17 The following guidelines were adopted during the installation of HVS:

- A horizontal platform with appropriate support was provided to secure the samplers against gusty wind.
- No two samplers were placed less than 2 meters apart.
- The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
- A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
- A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
- No furnaces or incineration flues were nearby.
- Airflow around the sampler was unrestricted.
- The samplers were more than 20 meters from the drip line.
- Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- Permission and access to the monitoring stations have been obtained to set up the samplers.
- A secured supply of electricity was provided to operate the samplers.

***Filters Preparation***

3.18 Wellab Limited (HOKLAS Registration No. HOKLAS083) is a HOKLAS accredited laboratory and responsible for the preparation of 24-hour conditioned and pre-weighed filter papers for the monitoring team.

3.19 All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25°C and not variable by more than  $\pm 3^\circ\text{C}$ ; the relative humidity (RH) was  $< 50\%$  and not variable by more than  $\pm 5\%$ . A convenient working RH was 40%.

***Operating/Analytical Procedures***

3.20 Operating/analytical procedures for the air quality monitoring were highlighted as follows:

- Prior to the commencement of dust sampling, the flow rate of the HVS was properly set (between 1.1 m<sup>3</sup>/min. and 1.4 m<sup>3</sup>/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50;
- The power supply was checked to ensure the sampler worked properly;
- On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air quality monitoring station;
- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen;
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. The filter holding frame was then tightened to the filter holder

with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges;

- The shelter lid was closed and secured with the aluminum strip;
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number);
- After sampling, the filter was removed and kept in a clean and tightly sealed plastic bag. The filter paper was then returned to the HOKLAS accredited laboratory (Wellab Ltd.) for reconditioning in the humidity-controlled chamber followed by accurate weighing by an electronic balance with a readout down to 0.1mg. The elapsed time was also recorded; and
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and did not vary by more than  $\pm 3^\circ\text{C}$ ; the RH should be  $< 50\%$  and did not vary by more than  $\pm 5\%$ . A convenient working RH is 40%. Weighing results were returned for further analysis of TSP concentrations collected by each filter.

### ***Maintenance/Calibration***

3.21 The following maintenance/calibration was required for the HVS:

- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working conditions; and
- All HVS were calibrated (five point calibration) using Calibration Kit prior to the commencement of baseline monitoring and thereafter at bi-monthly intervals.

### **Results and Observations**

3.22 The monitoring results for 1-hour TSP and 24-hour TSP are summarised in **Tables 3.4** and **3.5** respectively. Detailed monitoring results and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E**.

**Table 3.4 Summary Table of 1-hour TSP Monitoring Results during the Reporting Month**

Monitoring Station	Concentration ( $\mu\text{g}/\text{m}^3$ )		Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
	Average	Range		
FLN-DMS1	118.9	44.8 – 204.5	303	500
FLN-DMS3	108.1	51.3 – 176.9	301	500
FLN-DMS5	59.5	26.8 – 134.3	279	500
KTN-DMS4(B)	70.8	22.2 – 156.6	297	500

**Table 3.5 Summary Table of 24-hour TSP Monitoring Results during the Reporting Month**

Monitoring Station	Concentration ( $\mu\text{g}/\text{m}^3$ )		Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
	Average	Range		
FLN-DMS1	105.9	74.5 – 121.2	150	260
FLN-DMS3	43.7	23.7 – 64.2	165	260
FLN-DMS5A	75.5	36.7 – 122.2	153	260
KTN-DMS4(B)	85.1	37.5 – 140.3	192	260

- 3.23 All 1-hour and 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.
- 3.24 According to our field observations, the major dust sources identified at the designated air quality monitoring stations in the reporting month are shown in **Table 3.6**:

**Table 3.6 Observation at Dust Monitoring Stations**

Monitoring Station	Major Dust Sources
FLN DMS1	Mobile crane, Excavator, piling, road traffic
FLN-DMS3	Excavator, piling, mobile crane, road traffic
FLN-DMS5	Road traffic
KTN-DMS4(B)	Excavator, piling, mobile crane, dump truck, road traffic

#### Event and Action Plan

- 3.25 Should any non-compliance of the criteria occur, actions in accordance with the Event/Action Plan in **Appendix N** shall be carried out.

## 4. NOISE MONITORING

### Monitoring Requirements

- 4.1 In accordance with the Updated EM&A Manual, construction noise monitoring shall be conducted in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ) to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station was on a weekly basis and one set of measurements between 0700 and 1900 hours on normal weekdays was conducted. **Appendix B** shows the established Action and Limit Levels for the environmental monitoring works.

### Monitoring Location

- 4.2 Impact noise monitoring was conducted at the monitoring stations, as shown in **Figures 3** and **4** according to Table 1.1 of the Updated EM&A Manual. **Table 4.1** describes the locations of the noise monitoring stations.

**Table 4.1 Location of Noise Monitoring Stations**

Contract No.	Monitoring Station(s)	Location(s)
ND/2019/06	CP-FLN-NMS1 <sup>[2]</sup>	Belair Monte
ND/2019/04		
ND/2019/05	CP-FLN-NMS2 <sup>[3]</sup>	Scattered Village Houses in Tong Hang
ND/2019/01	CP-KTN-NMS2 <sup>[4]</sup>	Residential Buildings at Ma Tso Lung
	CP-KTN-NMS3 <sup>[5]</sup>	Fung Kong Garden
ND/2019/01	CP-KTN-NMS5	N/A
ND/2019/02	CP-KTN-NMS6	Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery

**Remarks:**

[1]: Noting that construction phase noise monitoring at the other proposed monitoring stations (e.g. planned), where access is permitted, will be conducted during construction phase of relevant works contract(s).

[2]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

[3]: Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03 and ND/2019/04.

[4],[5]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

### Monitoring Equipment

- 4.3 Integrating Sound Level Meters were used for impact noise monitoring. The meters were Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level ( $L_{eq}$ ) and percentile sound pressure level ( $L_x$ ) that complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 4.2** summarises the noise monitoring equipment used. Copies of calibration certificates are attached in **Appendix C**.

**Table 4.2 Noise Monitoring Equipment**

Equipment	Manufacturer	Model	Quantity
Sound Level Meter	BSWA	BSWA 308	6
Acoustical Calibrator	SVANTEK	SV30A	3

**Monitoring Parameters, Frequency and Duration**

- 4.4 **Table 4.3** summarises the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

**Table 4.3 Noise Monitoring Parameters, Duration and Frequency**

Contract No.	Monitoring Stations	Parameters <sup>[2]</sup>	Duration	Frequency	Measurement
ND/2019/06	CP-FLN-NMS1 <sup>[3]</sup>	$L_{10}(30 \text{ min.}) \text{ dB(A)}$ $L_{90}(30 \text{ min.}) \text{ dB(A)}$ $L_{eq}(30 \text{ min.}) \text{ dB(A)}$ (as six consecutive $L_{eq, 5 \text{ min}}$ readings)	0700-1900 hours on normal weekdays	Once per week	Façade
ND/2019/04					
ND/2019/05	CP-FLN-NMS2 <sup>[4]</sup>				
ND/2019/01	CP-KTN NMS2 <sup>[5]</sup>				Free-field <sup>[1]</sup>
	CP-KTN NMS3 <sup>[6]</sup>				
ND/2019/01	CP-KTN NMS5				Façade
ND/2019/02	CP-KTN-NMS6				

**Remarks:**

[1]: Correction of +3dB (A) for free-field measurement.

[2]: A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ). It is the constant noise level which, under a given situation and time period, contains the same acoustic energy as the actual time-varying noise level.

$L_{10}$  is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above  $L_{10}$ .  $L_{90}$  is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

[3]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

[4]: Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03 and ND/2019/04.

[5],[6]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.



### Monitoring Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive I and lowered sufficiently so that the building's external wall acted as a reflecting surface;
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, time weighting and measurement time were set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - time measurement :  $L_{eq}(30 \text{ min.}) \text{ dB(A)}$   
(as six consecutive  $L_{eq, 5\text{min}}$  readings) during non-restricted hours (i.e. 0700-1900 hours on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment;
- During the monitoring period, the values of  $L_{eq}$ ,  $L_{90}$  and  $L_{10}$  were recorded. In addition, site conditions and noise sources were also recorded on a standard record sheet;
- Noise measurement was paused temporarily during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible and observation records during measurement period should be provided; and
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. The wind speed should be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

### Maintenance and Calibration

- 4.5 The microphone heads of the sound level meters and calibrators were cleaned with a soft cloth at quarterly intervals.
- 4.6 The sound level meters and calibrators were checked and calibrated at yearly intervals.
- 4.7 Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration levels before and after the noise measurement agreed to within 1.0 dB.

### Results and Observations

- 4.8 The noise monitoring results are summarised in **Table 4.4**. Detailed monitoring results and graphical presentations of noise monitoring are shown in **Appendix F**. The weather information for the reporting month is summarised in **Appendix M**.

**Table 4.4 Summary Table of Noise Monitoring Results during the Reporting Month**

Contract No.	Monitoring Station	Noise Level Leq (30 min), dB(A)	Baseline Level, dB(A)	Limit Level, dB(A)
ND/2019/06	CP-FLN-NMS1 <sup>[1]</sup>	66.7 – 68.9	69.9	75
ND/2019/04				
ND/2019/05	CP-FLN-NMS2 <sup>[2]</sup>	58.6 – 67.9	59.6	
ND/2019/01	CP-KTN-NMS2 <sup>[3]</sup>	48.5 – 59.6	58.6	
	CP-KTN-NMS3 <sup>[4]</sup>	49.0 – 52.1	51.6	
ND/2019/01	CP-KTN-NMS5	53.7 – 61.3	57.2	
ND/2019/02	CP-KTN-NMS6	56.8 – 66.5	55.1	

Remarks:

[1]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

[2]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

[3],[4]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

- 4.9 All noise monitoring was conducted as scheduled in the reporting month. No complaint on construction noise was received during the reporting month. No Action/Limit Level exceedances was recorded. The summary of exceedance record in reporting month is shown in **Appendix O**.
- 4.10 According to our field observations, the major noise sources identified at the designated noise monitoring stations in the reporting month are as follows:

**Table 4.5 Observation at Noise Monitoring Stations**

Contract No.	Monitoring Station	Location	Major Noise Source
ND/2019/06	CP-FLN-NMS1 <sup>[1]</sup>	Belair Monte (Existing)	Excavator, dump truck, mobile crane, piling, road traffic
ND/2019/04			
ND/2019/05	CP-FLN-NMS2 <sup>[2]</sup>	Scattered Village House in Tong Hang (Existing)	Excavator, piling, dump truck, road traffic
ND/2019/01	CP-KTN-NMS2 <sup>[3]</sup>	Residential Buildings at Ma Tso Lung (Existing)	Dump truck, excavator, road traffic
ND/2019/01	CP-KTN-NMS3 <sup>[4]</sup>	Fung Kong Garden (Existing)	Road traffic
ND/2019/01	CP-KTN-NMS5	N/A	Road traffic
ND/2019/02	CP-KTN-NMS6	Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)	Road traffic

Remarks:

[1]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

[2]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m, the monitoring station is not applicable to ND/2019/03.

[3],[4]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

**Event and Action Plan**

- 4.11 Should any non-compliance of the criteria occur, actions in accordance with the Event/Action Plan in **Appendix N** shall be carried out.

## 5. WATER QUALITY MONITORING

### Monitoring Requirements

- 5.1 In accordance with the Updated EM&A Manual, impact water quality monitoring shall be carried out three days per week at all the designated monitoring stations during the construction period. The measurement periods are during the construction of channel specified in Table 4.1 of the Updated EM&A Manual. The interval between two sets of monitoring shall not be less than 36 hours.
- 5.2 Replicate in-situ measurements of Dissolved Oxygen (DO), temperature, turbidity, pH, Suspended Solids (SS) and samples for Suspended Solids (SS), ammonia nitrogen, unionized ammonia, nitrate nitrogen and orthophosphate from each independent sampling event were collected to ensure a robust statistically interpretable database.
- 5.3 **Appendix B** shows the established Action and Limit Levels for the water quality monitoring work according to the Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA).

### Monitoring Parameters, Frequency

- 5.4 **Table 5.1** summarises the monitoring parameters, monitoring periods and frequencies of the water quality monitoring.

**Table 5.1 Water Quality Monitoring Parameters and Frequency**

Parameters, unit	Depth	Frequency
<ul style="list-style-type: none"> <li>Temperature(°C)</li> <li>pH(pH unit)</li> <li>turbidity (NTU)</li> <li>water depth (m)</li> <li>salinity (ppt)</li> <li>DO (mg/L and % of saturation)</li> <li>SS (mg/L)</li> <li>Ammonia Nitrogen (NH<sub>3</sub>-N) (mg NH<sub>3</sub>-N/L)</li> <li>Unionized Ammonia (UIA) (mg/L)</li> <li>Nitrate-nitrogen (NO<sub>3</sub>-N) (mg NO<sub>3</sub><sup>-</sup>-N/L)</li> <li>Ortho-phosphate (PO<sub>4</sub>) (mg PO<sub>4</sub><sup>3-</sup>-P/L)</li> </ul>	<ul style="list-style-type: none"> <li>3 water depths: 1m below water surface, mid-depth and 1m above river bed.</li> <li>If the water depth was less than 3m, mid-depth sampling only.</li> <li>If water depth was less than 6m, mid-depth may be omitted.</li> </ul>	3 days per week during construction of channel

### Results and Observations

- 5.5 According to Section 5.6.1.2 of the approved EIA Report, the potential water quality impact during construction is due to the alternation of natural streams (i.e. channelization of Ma Tso Lung Stream and Siu Hang San Tsuen Stream) as these two streams are the ecologically important streams.

- 5.6 No construction of channel was carried out at Ma Tso Lung Stream and Siu Hang San Tsuen Stream during the reporting month. Therefore, no water quality monitoring was conducted.

### **Additional Water Quality Monitoring**

#### **Monitoring Requirements**

- 5.7 Additional Water Quality Monitoring shall be carried out at River Beas, River Indus and near Siu Hang San Tsuen Stream three days per week at all designated monitoring stations during the construction period. The measurement period are during the construction site drainage along River Beas, construction of footbridge across River Beas and during construction of bridge across River Indus.
- 5.8 Replicate in-situ measurement and samples from each independent sampling event were collected to ensure a robust statistically interpretable database. DO, temperature, turbidity and pH were measured in-situ whereas SS and arsenic were determined by an accredited laboratory. Other relevant data, including monitoring location / position, time, water depth, weather conditions and any special phenomena or work underway at the construction site were recorded.
- 5.9 For all the monitoring stations, sampling were taken at 3 water depths, namely 1m below the water surface, mid depth and 1m above the river bed. For stations that were less than 3m in depth, only the mid depth sample was taken. Should the water depth was less than 6m, in which case the mid-depth station may have been omitted. The interval between two sampling surveys was not less than 36 hours.
- 5.10 **Appendix B** shows the established Action and Limit Levels for the environmental monitoring works.

#### **Monitoring Locations**

- 5.11 Additional impact water quality monitoring was conducted at 6 monitoring stations (SYR-CS1, SYR-IS1, NTR-CS1, NTR-IS1, SHST-IS2, MWR-IS3) which are summarised in **Table 5.2**. The location of monitoring stations is shown in **Figures 5 and 6**.

**Table 5.2 Additional Water Quality Monitoring Stations**

Station	Description	Locations	Measurement Periods
River Beas			
SYR-CS1	Control Station	Upstream of river	During the construction site drainage along River Beas and construction of the footbridge across River Beas
SYR-IS1	Impact Station	Downstream of river	
River Indus and near Siu Hang San Tsuen Stream			
NTR-CS1	Control Station	Upstream of river	During construction of the bridge across River Indus
NTR-IS1	Impact Station	Downstream of river	
SHST-IS2	Impact Station	Water sensitive receiver at near Siu Hang San Tsuen Stream	
MWR-IS3	Impact Station	Water sensitive receiver at near Ma Wat River	

**Monitoring Equipment**Instrumentation

- 5.12 Multi-parameter meters (Model YSI EXO) were used to measure DO, turbidity, salinity, pH and temperature.

Dissolved Oxygen (DO) and Temperature Measuring Equipment

- 5.13 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 0-20mg/L and 0-200% saturation; and
  - The temperature within 0-45 degree Celsius.
- 5.14 The equipment had a membrane electrode with automatic temperature compensation complete with a cable.
- 5.15 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.
- 5.16 Salinity compensation was built-in in the DO equipment. *In-situ* salinity was measured to calibrate the DO equipment prior to each DO measurement.

Turbidity

- 5.17 Turbidity was measured *in situ* by using the nephelometric method. The instrument was portable and weatherproof using a DC power sources complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0-1000 NTU. The probe cable was not less than 25m in length. The meter was calibrated in order to establish the relationship between NTU units and the levels of Suspended Solids.

### Salinity

- 5.18 A portable salinometer capable of recording salinity within the range of 0-40 parts per thousand (ppt) was used for salinity measurement.

### Water Depth Detector

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

### pH

- 5.20 The instrument consisted of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH 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.

### Water Sampling for Laboratory Analysis

- 5.21 A water sampler, consisting of a transparent Polyvinyl Chloride (PVC) of a capacity of not less than two litres which can be effectively sealed with cups at both ends was used. The water sampler had a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth. In addition, a sampling cup attached to a fixed or extendable rod was also used for sampling at the monitoring stations with swallow water.

### Sample Container and Storage

- 5.22 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 samples were delivered to WELLAB Limited (HOKLAS Registration No. HOKLAS083) 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

- 5.23 The pH meter, DO meter and turbidimeter were checked and calibrated before use. DO meter and turbidimeter were certified by WELLAB Limited before use and subsequently re-calibrated 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 at each monitoring station.
- 5.24 For on-site calibration of field equipment (Multi-parameter Water Quality System), the standard BS 1427:2009 “Guide to on-site test methods for analysis of waters” was observed.

### Back-up Equipment

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

5.26 **Table 5.3** summarises the equipment used in the water quality monitoring programme. Copies of the calibration certificates of the multi-parameter water quality systems are shown in **Appendix C**.

**Table 5.3 Water Quality Monitoring Equipment**

Equipment	Model and Make	Qty.
Water sampler and sampling cup	A 2-Litre transparent PVC cylinder with latex cups at both ends and sampling cup for monitoring stations with swallow water	1
Sonar Water Depth Detector	Garmin Striker plus 4	1
Multi-parameter Water Quality System	YSI EXO 1	2

#### Monitoring Parameters and Frequency

5.27 **Table 5.4** summarises the monitoring parameters and frequencies of the additional water quality monitoring. The water quality monitoring schedule for the reporting month is shown in **Appendix D**.

**Table 5.4 Additional Water Quality Monitoring Parameters and Frequency**

Monitoring Station(s)		Parameters, unit	Depth	Frequency
River Beas	SYR-CS1 SYR-IS1	<ul style="list-style-type: none"> <li>Temperature (°C)</li> <li>pH (pH unit)</li> <li>Turbidity (NTU)</li> <li>Water depth (m)</li> <li>Salinity (ppt)</li> <li>Dissolved Oxygen (DO) (mg/L and % of saturation)</li> <li>Suspended Solids (SS) (mg/L)</li> <li>Arsenic (As) (µg/L)</li> </ul>	<ul style="list-style-type: none"> <li>3 water depths: 1m below water surface, mid-depth and 1m above river bed.</li> <li>If the water depth was less than 3m, mid-depth sampling only.</li> <li>If water depth was less than 6m, mid-depth might be omitted.</li> </ul>	3 days per week
River Indus and near Siu Hang San Tsuen Stream	NTR-CS1 NTR-IS1 SHST-IS2 MWR-IS3	<ul style="list-style-type: none"> <li>Temperature (°C)</li> <li>pH (pH unit)</li> <li>Turbidity (NTU)</li> <li>Water depth (m)</li> <li>Salinity (ppt)</li> <li>Dissolved Oxygen (DO) (mg/L and % of saturation)</li> <li>Suspended Solids (SS) (mg/L)</li> </ul>		

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



## Monitoring Methodology

### Instrumentation

- 5.29 Multi-parameter meters (Model YSI EXO) were used to measure DO, turbidity, salinity, pH and temperature.

### Operating/Analytical Procedures

- 5.30 At each measurement, two consecutive measurements of DO concentration, DO saturation, salinity, turbidity, pH and temperature were taken. The probes were retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.

### Laboratory Analytical Methods

- 5.31 Duplicate samples from each independent sampling event were required for all parameters. Analysis of suspended solids and arsenic were carried out by WELLAB Ltd. and comprehensive quality assurance and control procedures were in place in order to ensure the quality and consistency in results. The analysis methods and limits of reporting are provided in **Table 5.5**.

**Table 5.5 Method for Laboratory Analysis for Water Samples**

Determinant	Proposed Method	Limit of Reporting
Total Suspend Solids (SS)	APHA 17ed 2540 D	2.5 mg/L
Arsenic (As)	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

## QA/QC Requirements

### Decontamination Procedures

- 5.32 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 disposal equipment was discarded after the sampling.

### Sampling Management and Supervision

- 5.33 All sampling bottles were labelled with the sample I.D. (including sampling station), laboratory number 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

- 5.34 The samples testing and following QC programmes were performed by WELLAB Ltd. for every batch of 20 samples:
- One method blank; and
  - One set of QC sample.

#### **Results and Observations**

- 5.35 All additional 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**.
- 5.36 The monitoring results and graphical presentation of additional water quality monitoring are shown in **Appendix G**.
- 5.37 No Action/Limit Level exceedance was recorded in the reporting month. The summary of exceedance record in the reporting month is shown in **Appendix O**.

#### **Event and Action Plan**

- 5.38 Should any non-compliance of the criteria occur, actions in accordance with the Event/Action Plan in **Appendix N** shall be carried out.

**6. LAND CONTAMINATION (AMBIENT ARSENIC MONITORING)****Monitoring Requirements**

- 6.1 According to Section 7.5 of the updated EM&A Manual, an ambient arsenic monitoring is required to be conducted in KTN during the clean-up processes of arsenic containing soil and the construction phase.
- 6.2 The Respirable Suspended Particulate (RSP, or PM10) was measured by High Volume Sampler (HVS) equipped with PM10 selector following the "Reference Method for the Determination of Particulate Matter as PM10 in the Atmosphere" Part 50 Chapter 1 Appendix J, Title 40 of the Code of Federal Regulations of the USEPA.
- 6.3 The Dust-laden air was drawn through PM10 HVS fitted with a conditioned pre-weighting filter paper, at a controlled rate. After sampling for 24-hour (details on measurement period are provided in Section 9.5.5), the filter paper with retained PM10 particulates was collected and returned to the laboratory for drying in a desiccators followed by accurate weighting. 24-hour average RSP levels were calculated from the ratio of the mass of PM10 particulates retained on the filter paper to the total volume of air sampled.
- 6.4 The weighted filter paper was prepared for arsenic testing through a "Hot Acid Extraction Procedure". The extracted material was tested for arsenic by using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS). The extraction and testing was referenced to the following methods:
- Compendium Method 10-3.1 Selection, Preparation and Extraction of Filter Material, Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999; and
  - Compendium Method 10-3.5 determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS., Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999.

**Monitoring Location**

- 6.5 Ambient arsenic monitoring was conducted at the monitoring station(s) under the Work Contract(s), as shown in **Figure 5. Table 6.1** describes the location of the ambient arsenic monitoring station.

**Table 6.1 Location of Ambient Arsenic Monitoring station**

EP. No	Contract No.	Monitoring Stations	Location
EP-466/2013/A EP-467/2013/A EP-468/2013/A	ND/2019/01	KTN-DMS-4A <sup>[1]</sup>	Temporary Structure at Pak Shek Au
EP-468/2013/A	ND/2019/03		

Remark:

[1]: Monitoring at the original location of KTN-DMS-4 (originally proposed in the approved EM&A Manual) was denied as there was no electricity supply. An alternative location (KTN-DMS-4A) was proposed.

**Monitoring Equipment**

- 6.6 **Table 6.2** summarises the equipment used in the ambient arsenic monitoring. Copies of calibration certificates are attached in **Appendix C**.

**Table 6.2 Ambient Arsenic Monitoring Equipment**

Monitoring Stations	Equipment	Model and Make	Quantity
KTN-DMS-4A	Calibrator	TISCH Model: TE-5025A	1
	HVS Sampler (RSP)	TISCH Model: TE-6070X	1

**Monitoring Parameters, Frequency and Duration**

- 6.7 **Table 6.3** summarises the monitoring parameters and frequencies of ambient arsenic during the clean-up processes of arsenic-containing soil and construction. The ambient arsenic monitoring schedule for the reporting month is shown in **Appendix D**.

**Table 6.3 Impact Ambient Arsenic Monitoring Parameters, Frequency and Duration**

Parameters	Frequency
24-hr RSP (Ambient Arsenic)	Once/ 6 days

**Monitoring Methodology and QA/QC Procedure*****24-hour RSP Monitoring*****Instrumentation**

- 6.8 High volume samplers (HVS) (GMW PM10 (TE6070X)) complete with appropriate sampling inlets was employed for 24-hour RSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).
- 6.9 The following guidelines were adopted during the installation of HVS:
- a horizontal platform with appropriate support to secure the samplers against gusty wind was provided;
  - no two samplers was placed less than 2 meters apart;
  - the distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler;
  - a minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samplers;
  - a minimum of 2 meters separation from any supporting structure, measured horizontally was required;
  - no furnace or incinerator flue was nearby;
  - airflow around the sampler was unrestricted;
  - the sampler was more than 20 meters from the dripline;
  - any wire fence and gate, to protect the sampler, were not cause any obstruction during monitoring;
  - permission was obtained to set up the samplers and to obtain access to the monitoring stations; and
  - a secured supply of electricity was needed to operate the samplers.

### Operating/analytical procedures for the operation of HVS

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m<sup>3</sup>/min. and 1.4 m<sup>3</sup>/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. The filter holding frame was then tightened to the filter holder with swing bolts. The applied pressure was sufficient to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the Wellab Ltd. for weighing. The elapsed time was also recorded.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature was between 25°C and 30°C and did not vary by more than  $\pm 3^{\circ}\text{C}$ ; the relative humidity (RH) was  $< 50\%$  and did not vary by more than  $\pm 5\%$ . A convenient working RH was 40%. Weighing results were further analysis of RSP concentrations collected by each filter.

### **Maintenance/Calibration**

6.10 The following maintenance/calibration was required for the HVS:

- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply were in good working condition.
- High volume samplers were calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the ambient arsenic monitoring.

### **Laboratory Measurement / Analysis**

- 6.11 Quartz filters of size 8" x 10" were labelled before sampling. A HOKLAS accredited laboratory, Wellab Ltd., was responsible for the preparation of 24-hour conditioned and pre-weighed filter papers for the monitoring team. The balance for weighting filter paper was regularly calibrated against a traceable standard.
- 6.12 All filters, which were prepared by Wellab Ltd., were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than  $\pm 3^{\circ}\text{C}$ ; the relative humidity (RH) was  $< 50\%$  and not variable by more than  $\pm 5\%$ . A convenient working RH was 40%.
- 6.13 Wellab Ltd. (HOKLAS Registration No. HOKLAS083), was responsible for the extraction and testing procedure for Arsenic and comprehensive quality assurance and quality control programmes were conducted.

**Results and Observations**

- 6.14 The ambient arsenic monitoring results are summarised in **Table 6.4**. Detailed monitoring results and test report are shown in **Appendix E**.

**Table 6.4 Summary Table of 24-hour RSP Monitoring Results (Ambient Arsenic) during the Reporting Month**

Monitoring Date	Monitoring Station	Concentration (ng/m <sup>3</sup> )	Action Level (ng/m <sup>3</sup> )	Limit Level, (ng/m <sup>3</sup> )
05/12/2023	KTN-DMS4(A)	6.11	9.36	11.7
11/12/2023		5.89		
15/12/2023		6.09		
21/12/2023		5.86		
27/12/2023		6.16		

- 6.15 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, 438m<sup>3</sup> of arsenic soil transported to soil treatment plant and 1,684m<sup>3</sup> treated. No Action/Limit Level exceedances were recorded.

**Event and Action Plan**

- 6.16 Should any non-compliance of the criteria occur, actions in accordance with the Event/Action Plan in **Appendix N** shall be carried out.

## 7. LANDFILL GAS MONITORING

### Monitoring Requirement

- 7.1 In accordance with the updated EM&A Manual, monitoring of landfill gas (LFG) is required for the construction works within the Ma Tso Lung Landfill (MTLL, close to KTN NDA) during the construction phase. This section presents the results of landfill gas measurements performed by the Contractor. **Appendix B** shows the Limit Levels for the monitoring works.
- 7.2 The MTLL is situated in the vicinity of the KTN NDA. A portion of the development falls within the MTLL and its 250m Consultation Zone.

### Monitoring Parameters and Frequency

- 7.3 Monitoring parameters for Landfill gas monitoring include Methane, Carbon dioxide and Oxygen.
- 7.4 According to the mitigation measures of the updated EM&A Manual, measurements of the following frequencies should be carried out according to the monitoring requirements and procedures specified in Paragraphs 8.23 to 8.28 of EPD's Guidance Note, "LANDFILL GAS HAZARD ASSESSMENT GUIDANCE NOTE".
- 7.5 The frequency of monitoring of LFG was made reference to the updated EM&A Manual - Monitoring of any LFG which may be migrated to the site should be undertaken during construction of the infrastructure and the development within the Consultation Zone and within MTLL when the works involve confined spaces. Routine gas monitoring should be undertaken during groundwork construction and in all excavations. Monthly gas monitoring should also be conducted for set up on site such as offices, stores etc.

### Monitoring Locations

- 7.6 Monitoring of oxygen, methane and carbon dioxide was performed for the construction of infrastructure and the development within the Consultation Zone and within MTLL when the works involved confined spaces. In this reporting month, the area required to be monitored for landfill gas are shown below and **Figure 6** shows the landfill gas monitoring locations.

- Excavation Locations: Portion 6b
- Manholes and Chambers: N/A
- Relocation of monitoring wells: N/A
- Any other Confined Spaces: Containers in Portion 6b

### Monitoring Equipment

- 7.7 **Table 7.1** summarises the equipment employed by the Contractor for the landfill gas monitoring.

**Table 7.1 Landfill Gas Monitoring Equipment**

Equipment	Model and Make	Quantity
Portable gas detector	Portable Biogas Analyzer IRCD4 (Serial No. M230814007)	1

### **Results and Observations**

- 7.8 In the reporting month, landfill gas monitoring was carried out by the Contractor on 1 occasion at 6 monitoring stations. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix J**. Copies of calibration certificates are attached in **Appendix C**.

### **Event and Action Plan**

- 7.9 Should any non-compliance of the criteria occur, actions in accordance with the Event/Action Plan in **Appendix N** would be carried out.



## 8. BUILT HERITAGE MONITORING

### Monitoring Requirement

- 8.1 In accordance with the updated EM&A Manual, baseline condition survey and baseline vibration impact assessment shall be conducted for identified built heritage prior to the commencement of construction works. Baseline condition survey and baseline vibration impact assessment shall be conducted by a qualified building surveyor or qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historical buildings and historical buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase to ensure the construction performance meets the vibration standard stated in the EIA report.
- 8.2 According to the condition survey report from cultural heritage condition survey for Castle Peak Road Diversion under EP-466/2013/A, Kwu Tung North New Development Area Road D1 to D5 under EP-468/2013/A, and Fanling Bypass Eastern Section under EP-473/2013/A, a vibration monitoring plan was proposed for the surveyed cultural heritage based on the Buildings Department's Practice Note (PNAP) APP-137. This section presents the results of built heritage monitoring performed by the Contractor according to the proposed monitoring plan in baseline condition survey report. **Appendix B** shows the Limit Levels for the monitoring works.

### Monitoring Location

- 8.3 In the reporting month, no construction vibration monitoring was conducted for built heritage when no pile driving operation was conducted within assessment area of the construction works. The location of the construction vibration monitoring stations was summarised in **Table 8.1** and shown in **Appendix K**.

**Table 8.1 Location of Construction Vibration Monitoring**

EP. No	Contract No.	Monitoring Station (s)	Nature of Cultural Heritage	Location (s)
NIL	NIL	NIL	NIL	NIL

### Monitoring Parameters and Frequency

- 8.4 **Table 8.2** summarises the vibration monitoring plan for surveyed cultural heritage under the Works Contracts. Vibration monitoring was conducted for surveyed built heritage when pile driving operation was conducted within the assessment area of construction works.

**Table 8.2 Vibration Monitoring Plan**

EP. No	Contract No.	Monitoring Stations	Distance with Construction Works	Monitoring Plan
NIL	NIL	NIL	Within 50m	Daily assessment is required
			Within 75m	Bi-daily assessment is required
			Within 100m	Weekly assessment is required

Remark:

[1] Baseline condition survey was conducted for built heritage features at G202, G203, G303, G308, HKT03 and KT57 under EP-468/2013/A, also HFL08, FL05, FL07, FL08, FL10, FL11, FL17, FL19, FL31 and FL33 under ND/2019/04, and HFL05, FL02, FL04, FL24, FL27 and FL36 under ND/2019/05 for EP-473/2013/A. As G202, G203, G303, G308, HKT03, KT57, HFL05, HFL08, FL02, FL04, FL05, FL07, FL08, FL10, FL11, FL17, FL19, FL24, FL27, FL31, FL33 and FL36 were not within the assessment area of the related construction work, no construction vibration monitoring was conducted for the built heritage in the reporting month.

- 8.5 The construction vibration monitoring is planned to be conducted throughout each event of the pile driving operation on a daily basis. The effect of ground-borne vibration from piling works on the surveyed built heritage was assessed by the maximum peak particle velocity (ppv), which was obtained from the maximum value of measurement of all pile driving operation events.

### Monitoring Equipment

- 8.6 No copies of calibration certificates of the monitoring equipment employed by the Contractor of the construction vibration monitoring are attached in **Appendix C** since no vibration monitoring was conducted in the reporting month.

### Results and Observations

- 8.7 In the reporting month, no construction vibration monitoring was carried out by the Contractor for the built heritage features when no pile driving operation was conducted within 50m of the construction work. No Limit Level exceedance for construction vibration monitoring was recorded in the reporting month. The monitoring results, if any, are provided in **Appendix K**.

### Event and Action Plan

- 8.8 **Table 8.3** summarises the vibration limits for construction vibration monitoring for surveyed cultural heritage.

**Table 8.3 Vibration Limits for Construction Vibration Monitoring**

Type of Building	Guide Values of Maximum ppv* (mm/Sec)	
	Transient Vibration	Continuous Vibration
Vibration-sensitive / dilapidated buildings <sup>#</sup>	7.5	3.0
Declared monuments/ Historical structures	3.0	

Remarks:

\* peak particle velocity

<sup>#</sup> as cultural heritages are sensitive receivers, vibration monitoring should be classified as vibration-sensitive

- 8.9 If any exceedance of limits is found or damage to either structural or non-structural elements of the historic buildings is identified, the construction works should be stopped immediately and structural engineer's advices should be sought for any remedial work.

## 9 ECOLOGICAL MONITORING

### Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley

#### Monitoring Requirements and Protocol

- 9.1 As required under Section 12.3.2.5 of the Updated EM&A Manual, where development under the NDAs project is undertaken within 200m (the maximum distance at which it is predicted there may be some disturbance, and hence a reduction in numbers of large waterbirds) of Sheung Yue River and Long Valley, weekly transect at both high and low tides should be followed (It is considered high tide when the tidal levels are above 1.5m and low tide when the tidal levels are below 1.5m at Tsim Bei Tsui Station).
- 9.2 The purpose of the survey is to identify and enumerate all bird species utilizing the river channels and Long Valley Nature Park (LVNP) and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period according to the methodology specified in Table 12.1 in the Updated EM&A Manual.
- 9.3 Monitoring in Long Valley followed the methodology adopted by the regular HKBWS bird monitoring programme in order to obtain comparable results and a complete coverage of the area in the shortest possible time.

#### Monitoring Frequency

- 9.4 High tide and low tide avifauna monitoring was required to be carried out on a weekly basis. Additional night-time avifauna monitoring in Long Valley was required to be carried out twice monthly from September to April.

Date of avifauna monitoring: 4, 7, 11, 15, 18, 21, 27 and 28 December 2023

Date of night-time monitoring: 11 and 18 December 2023

#### Monitoring Location

- 9.5 The avifauna monitoring was carried out at Ng Tung River, Sheung Yue River and Long Valley in the reporting month according to the construction programme. The transect routes in the reporting month were as follows:
- T1. Ng Tung River
  - T2. Ng Tung River
  - T3. Sheung Yue River
  - T5. Long Valley
- 9.6 As the sensitive receivers (large waterbirds) were easily visible, the transect route only needed to follow one bank of the rivers.
- 9.7 The location of Transects T1, T2, T3 and T5 is shown in **Figure 9** for reference.

### Monitoring Parameters

- 9.8 The monitoring parameters and survey methodology for each transect are described below:
- Abundance of birds
  - Types of habitat of which birds in use
  - Notable bird behaviours such as roosting, feeding, nesting and presence of juveniles
  - Birds heard through birdcalls that could not be located were marked as “heard”, while birds flying over the survey area were marked as “flight”. Species of conservation significance were specified.
- 9.9 Other information at the time of survey such as weather condition, tidal condition, tide level and noticeable natural or anthropogenic activities were documented.
- 9.10 For Avifauna survey, Ornithological nomenclature would make reference to The Avifauna of Hong Kong (Carey *et al.* 2001), The Birds of Hong Kong and South China (Viney *et al.* 2005), and the most recent updated list from other sources (e.g. Hong Kong Bird Watching Society).

### Monitoring Results

- 9.11 In total, 78 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 31 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendices L1m and L1n** respectively.
- 9.12 Among the four transects, transect T5 had a higher species diversity and abundance due to its diverse habitat types within Long Valley. Species such as *Ardeola bacchus* and *Egretta garzetta* were commonly found roosting and foraging at wetland habitats such as agricultural lands and shallow water habitats.
- 9.13 Along transect T5 in Long Valley, species with conservation interest such as *Himantopus himantopus*, which is a passage migrant, was commonly observed in shallow water habitats.
- 9.14 Construction works were observed in T5 in the reporting month.
- 9.15 Transect T3 was conducted along Sheung Yue River. Bird species such as *Ardeola bacchus* and *Egretta garzetta* were commonly observed feeding and roosting on the river bank and river bed. Construction works were observed beside Sheung Yue River.
- 9.16 Transects T1 and T2 are located at Ng Tung River. *Ardeola bacchus* and *Egretta garzetta* were commonly found feeding and roosting along the Ng Tung River. Fishing activities were observed at both T1 and T2. Potential anthropogenic sources of disturbance observed along T1 and T2 including the usage of remote control boats.
- 9.17 Avifauna monitoring in construction phase was conducted during the reporting month and the detailed results are attached in **Appendix L1**.
- 9.18 **Table 9.1** summarises the avifauna monitoring results during the reporting month.

**Table 9.1 Summary Table of Avifauna Monitoring Results to Corresponding Action and Limit Levels.**

Monitoring Parameter	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
Mean abundance of large water birds* using Ng Tung River, Sheung Yue River and Shek Sheung River	57	34	24	17
Mean abundance of <i>Ardeola bacchus</i> using Ng Tung River, Sheung Yue River and Shek Sheung River	14.5	11	7	5
Mean Abundance of Bird recorded in LVNP	1438.5	901	631	451
Mean Abundance of <i>Ardeola bacchus</i> recorded in LVNP	21	15	11	8
Environmental disturbance and damage from activities in LVNP	-	-	Activity likely to cause unacceptable environmental disturbance or damage noted in LVNP.	Activity causing unacceptable environmental disturbance or damage noted in LVNP.
*Note Large Waterbirds includes: <i>Ardea alba</i> , <i>Ardea cinerea</i> , <i>Egretta eulophotes</i> , <i>Egretta garzetta</i> , <i>Ardea intermedia</i> and <i>Phalacrocorax carbo</i>				

9.19 No Action or Limit Level exceedance in avifauna monitoring was recorded during the reporting month.

### **Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream, and Long Valley**

#### Monitoring Requirements and Protocol

9.20 As required under Section 12.3.2.14 of the Updated EM&A Manual, aquatic faunal monitoring should be carried out during the construction phase.

9.21 Larger organisms such as fish should be monitored by direct counting, while kick-netting and sweep-netting should be used for invertebrate sampling. There should be three replicates for invertebrate sampling at each sampling point. For kick-netting, the net should be placed with the opening facing the water current, and the substrate should be disturbed by kicking to dislodge organisms from the stream bed. Sweep-netting should be conducted when kick-netting is not feasible, such as in area with no water current. Small organisms that could not

be identified with naked eye should be brought to the laboratory for identification under the dissecting microscope.

#### Monitoring Frequency

- 9.22 Quantitative aquatic fauna replicate surveys of stream fauna was required to be carried out on a monthly basis only during wet season. Three replicates for invertebrates sampling and direct counting of fish fauna should be performed respectively.

#### Monitoring Location

- 9.23 During wet season, the monitoring locations required to be carried out in Ma Tso Lung Stream are as follow:

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| • MS_01 | • MS_02 | • MS_03 | • MS_04 | • MS_05 |
| • MS_06 | • MS_07 | • MS_08 | • MS_09 | • MS_10 |
| • MS_11 | • MS_12 | • MS_13 | • MS_14 | • MS_15 |

- 9.24 The location of monitoring stations is shown in **Figure 10** for reference.

#### Monitoring Parameters

- 9.25 The monitoring parameters and survey methodology for each monitoring station are described below:
- Species composition
  - Abundance
  - Distribution for invertebrates and fish fauna
  - Species of conservation significance would be specified

- 9.26 Other information at the time of survey such as weather conditions and noticeable natural or anthropogenic activities were recorded.

#### Monitoring Status

- 9.27 According to the Updated EM&A Manual, quantitative aquatic fauna replicate surveys of stream fauna is required to be carried out on monthly basis during wet season. During the reporting Month, no aquatic fauna replicate surveys was carried out.

### **Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution**

#### Monitoring Requirements and Protocol

- 9.28 As required under Section 12.3.2.17 of the Updated EM&A Manual, monitoring of measures to minimise impacts should be carried out during the construction phase.
- 9.29 The purpose of survey is to monitor the effectiveness of measures to minimise impacts on ecologically sensitive habitats from disturbance and pollution by standard faunal transect surveys.

#### *Mammal survey*

- 9.30 Mammal survey should be performed during both day and night times, in areas along the

transect routes which may potentially be utilized by terrestrial mammals. Field signs such as droppings, footprints, diggings and burrows left by larger terrestrial mammals should be observed. Mammals directly observed should be recorded, and identification should be made as accurate as possible from the field signs observed.

- 9.31 Bat survey should be conducted along the transect routes shortly after sunset, with the use of a bat detector to record the echolocation calls. The relative abundance of the species encountered should be estimated with reference to the baseline monitoring results, i.e. using a scale from one (species recorded within transect routes) to three (dominant species within transect routes), for comparison between baseline results and the current monitoring results. Nomenclature of mammal should be based on Shek (2006).

*Herpetofauna survey (Amphibians and Reptiles)*

- 9.32 Both day-time and night-time amphibian surveys should be conducted whenever possible following or during periods of rainfall, focusing on areas suitable for amphibians (e.g. forest, shrublands, grasslands, streams, ponds, marshes, etc.). Calling amphibians should be recorded, supplemented by visual observation of eggs, tadpoles, adult frogs, and toads.
- 9.33 Active searching of appropriate microhabitats such as stones, pond bunds, crevices and leaf debris should be performed mainly. Observation of exposed, basking and foraging reptiles should also be conducted. Nomenclature of amphibian and reptile should be based on Chan et al. (2005) and Karsen et al. (1998), respectively.

*Insect survey (Butterfly and Dragonfly)*

- 9.34 Butterflies and dragonflies observed along the transects should be identified and counted. Preferable habitats of the insects such as watercourses, fishponds, and vegetated areas should be observed with special attention. Nomenclature and protection status of the species should be based on Lo et al. (2005) for butterflies and Tam et al. (2011) for dragonflies.

Monitoring Frequency

- 9.35 Monitoring surveys of ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna was undertaken on a monthly bases.

Date of monitoring surveys of ecological sensitive receivers: 5, 12 December 2023

Monitoring Location

- 9.36 The transect routes in the reporting month according to the construction works are as follows:
- T1. Ma Tso Lung riparian zone and associated wetland habitats;
  - T1. Green belt areas E1-8, D1-8 and G1-3 in KTN NDA;
  - T1. AGR one C2-4 and C2-2 in KTN NDA;
  - T1. Area north of Ng Tung River;
  - T3. Area west of Siu Hang San Tsuen Stream;
  - T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au;
  - T5. Area west and east of the southern limit of the FLN NDA work area; and
  - T6. Areas in the western part of KTN.

- 9.37 The location of Transects is shown in **Figure 11** for reference.

Monitoring Parameters

9.38 The monitoring parameters and survey methodology for each transect are described below:-

- Species composition
- Abundance
- Distribution for fauna observed
- Species of conservation significance would be specified

#### Monitoring Results

##### *Mammal*

- 9.39 During the survey, a total of 5 mammal species were recorded from transects. Two (2) species of conservation importance were recorded, namely *Callosciurus erythraeus* and *Pipistrellus abramus*.
- 9.40 Domestic dogs, *Canis lupus familiaris*, were commonly found at transect T3, T4, T5 and T6, where associated with human settlements, whilst domestic cats, *Felis catus*, was found at T1.
- 9.41 Echolocation calls of bats were recorded with a bat detector. The bat detector would list out possible bat species having similar echolocation calls in pattern and frequency. The structure of the echolocation calls from the recordings was later analysed to identify species as far as possible (the lack of literature on echolocation call structure makes the field identification of some bat species in Hong Kong difficult, and some species could only be identified to genus level, or remain unidentified from the recordings).
- 9.42 Identification of bat species encountered in the surveys was made with consideration of the possible bat species suggested by the bat detector, the distribution of suggested bat species in Hong Kong, previous records of bat species in the EIA Report and Baseline Monitoring Report, and the structure of echolocation calls of the recordings (including call structure, frequency, duration, inter pulse interval etc., with reference to relevant literatures).
- 9.43 *Pipistrellus abramus* was recorded with FM/QCF call structure and frequency around 45 kHz to 68 kHz (Ma et al., 2010, p.319). The above characteristics were further compared with data from relevant literatures to confirm the identities. References were also made to Tong (2016).
- 9.44 Bat species, *Pipistrellus abramus* were recorded in flight at nighttime at transect T1, T4, T5 and T6.

##### *Herpetofauna (Amphibians and Reptiles)*

- 9.45 Among the transects, a total of 9 herpetofauna species were observed. Species including toads, frogs, skinks and geckos were recorded near wetland habitats and watercourse. Transects T5 had the highest species diversity among all transects.

##### *Insects (Butterfly and Dragonfly)*

- 9.46 During the insect survey, a total of 58 butterfly species were recorded from transects. Eight (8) species of butterfly recorded was of particular conservation interest, namely *Catochrysops Strabo*, *Charaxes marmax*, *Hasora badra*, *Horaga onyx*, *Jamides alecto*, *Jamides celeno*, *Pieris rapae*, and *Zizula hylax*. Transect T5 had recorded the highest butterfly diversity among all transects.
- 9.47 10 species of odonata were recorded in the reporting month. Transect T1 had recorded the highest odonatan diversity among all transect.



9.48 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna monitoring during construction phase was conducted in the reporting month and the results are attached in **Appendices L2 to L5**.

9.49 **Table 9.4** summarises the mammal monitoring results during the reporting month.

**Table 9.4 Summary Table of Mammal Monitoring Results to Corresponding Action and Limit Levels.**

Number of Native Species Recorded in each transect	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
T1	1	1	NA	NA
T3	0	1	NA	NA
T4	1	1	NA	NA
T5	2	1	NA	NA
T6	1	1	NA	NA

9.50 **Table 9.5** summarises the herpetofauna monitoring results during the reporting month.

**Table 9.5 Summary Table of Herpetofauna Monitoring Results to Corresponding Action and Limit Levels.**

Number of Native Species Recorded in each transect	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
T1	4	4	3	2
T3	1	1	NA	NA
T4	0	1	NA	NA
T5	6	3	2	1
T6	0	3	2	1

9.51 **Table 9.6** summarises the butterfly monitoring results during the reporting month.

**Table 9.6 Summary Table of Butterfly Monitoring Results to Corresponding Action and Limit Levels.**

Number of Species Recorded in each transect	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
T1	26	5	4	3
T3	17	1	NA	NA
T4	24	2	NA	1
T5	35	2	NA	1
T6	16	4	3	2

9.52 **Table 9.7** summarises the odonata monitoring results during the reporting month.

**Table 9.7 Summary Table of Odonata Monitoring Results to Corresponding Action and Limit Levels.**

Number of Native Species Recorded in each transect	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
T1	6	4	3	2
T3	1	4	3	2
T4	2	1	NA	NA
T5	5	4	3	2
T6	2	3	2	1

9.53 Two (2) Action Level exceedances and two (2) Limit Level exceedance was recorded in non-aquatic fauna monitoring during the reporting month.

9.54 For the monitoring conducted on 12 December 2023 at Transect T5, a section of the transect route was found located within a private property and hence not accessible. The inaccessible part are shown in **Photo 1** below. The adjusted accessible transect route is shown in **Figure 11**.



Photo 1. Inaccessible part of transect T5 located within a private property.

## Results and Observation

### Action and Limit Level Exceedance

- 9.55 Two (2) action level exceedance and two (2) limit level exceedance for non-aquatic fauna were recorded at T3 and T6. The exceedances were considered non-project related.
- 9.56 Large proportion of vegetative habitat along T3 (including some shrubs, wood and tall grass) were observed either removed, tarmacked, and concreted as haul road by construction works outside of project, first reported in the Monthly Monitoring Report in December 2021. The altered condition at transect might have been less favourable to inhabitation of odonates, as some species of these taxonomic groups prefers wet vegetated habitats that provides shelters, as opposed to open and dry habitat such as a tarmacked haul road. Previous odonate monitoring results see a drop in odonate records between summer of 2021 and 2022, during the period which construction activities outside of project were observed.
- 9.57 Herpetofauna surveys at T6 were mainly conducted by actively searching appropriate microhabitats such as stones, pond bunds, crevices, and leaf litter/debris. Besides the active searching, observations and noting down of exposed, basking, and foraging herpetofauna were conducted. The result of herpetofauna monitoring at T6 in reporting month also aligned with results in the previous year within the monitoring period, suggesting that environmental factors taking place. Monitoring result will be continuously reviewed for ongoing assessment.
- 9.58 For the transect of T3 & T6, necessary Ecological mitigation measures were provided by all nearby project-related sites. In addition, no exceedance in other environmental parameters was recorded around 5<sup>th</sup> & 12<sup>th</sup> December, suggesting that it is unlikely that the exceedance recorded during ecological monitoring in T3 & T6 was project-related. No evidence to suggest that the exceedance was related to project activities, as supported by environmental monitoring data. Future results of these transects will be continuously reviewed.

### Details of the Influencing Factors

#### *Major Activities*

- 9.59 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley, anthropogenic activities including soil turning with excavator and other construction activities were observed in Long Valley. Construction works were observed beside Sheung Yue River.
- 9.60 The anthropogenic activities affected only a small area of the habitat in Long Valley during monitoring and would only pose minor disturbances to the birds..
- 9.61 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, anthropogenic activities including construction works beside T2, recreational usage of remote control boats and helicopters at both T1 and T2, and recreational fishing by fishing rod at both T1 and T2 were observed.
- 9.62 During the survey of Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution, construction activities NOT under this Project were observed at T3 and T5.

#### *Weather Conditions*

- 9.63 According to the observation during survey, temperature and the rain flow records in the reporting month (Reference: <http://www.weather.gov.hk/wxinfo/pastwx/metob202312.htm>),

weather conditions might pose influence towards the monitoring results.

9.64 The detailed ecological monitoring results are attached in **Appendix L**.

### **References**

Ma, J., Jones, G., Zhu, G. J., & Metzner, W. (2010). Echolocation behaviours of the Japanese pipistrelle bat *Pipistrellus abramus* during foraging flight. *Acta Theriologica*, 55(4), 315-332.

Tong, C. F. (2016). Distribution and preference of landscape features and foraging sites of insectivorous bats in Hong Kong urban parks. (Master dissertation)

**10 ENVIRONMENTAL SITE INSPECTION****Site Audits**

- 10.1 Site audits were carried out by ET on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Contract site. Summary of the site audits are presented in **Table 10.1** and **Appendix P**.

**Table 10.1 Summary of Site Audits**

Environmental Site Inspection	Works Contracts						
	ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07
Weekly site audit with representative of the <i>Supervisor's</i> Representative and the Contractor	5, 12, 19 and 28 Dec 23	6, 14, 20 and 29 Dec 23	8, 15, 19 and 27 Dec 23	7, 12, 21 and 28 Dec 23	4, 14, 18 and 27 Dec 23	N/A	1, 8, 15, 22 and 29 Dec 23
Joint Site Audit with representative of the <i>Supervisor's</i> Representative, the Contractor and IEC	12 Dec 23	29 Dec 23	19 Dec 23	12 Dec 23	14 Dec 23	N/A	15 Dec 23

Remarks: The weekly site inspection for ND/2019/06 has been terminated starting from 19/10/2023 since the termination proposal was approved by EPD on the same day.

- 10.2 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarised in **Table 10.2**. Any outstanding and recurrence deficiencies are presented in **Table 10.3**.
- 10.3 All construction activities with significant environmental impact undertaken by Contract No. ND/2019/06 was substantially completed in March 2022 and the majority of outstanding works were also completed in April 2022 with defect rectification works remained. The outstanding installation works were the short-duration works which would be completed within 2 months during the 1-year defect correction period, originally estimated.
- 10.4 Due to problems in material deliveries from Mainland China in 2022, the completion date of the outstanding works would be extended to June 2023 tentatively. However, in June 2023, more defects were found during the handover inspection so the rectification works were undertaken until July 2023 when all works were completed.
- 10.5 The weekly site inspection and EM&A Reporting for ND/2019/06 were maintained until the termination proposal for ND/2019/06 has been endorsed by the IEC (17 Aug 23), the Engineer (26 Aug 23) and the Project Proponent (19 Sep 23) followed by approval from EPD (19 Oct 23) in accordance. The procedure for termination proposal for ND/2019/06 is in accordance with section 15.4.2 of updated EM&A Manual.

**Table 10.2 Observations and Recommendations during Site Audits**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Contract No.: ND/2019/01</b>			
<b>Water Quality</b>	19/12/2023	The litter in RC2 at Portion 1B should be cleared. RC2 should be maintained properly.	Improvement/Rectification was observed during follow-up audit session on 28 Dec 2023.
<b>Air Quality</b>	05/12/2023	Provide impervious sheeting for the dusty stockpile at portion 2.	Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
	05/12/2023	Provide valid NRMM label for the generator at portion 5.	Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
	12/12/2023	Review and enhance the condition of hydroseeding at Pak Shek Au.	Item remarked as 231219-R02. Follow-up action is needed to be review.
	19/12/2023		Improvement/Rectification was observed during follow-up audit session on 28 Dec 2023.
	19/12/2023	Review and enhance the condition of hydroseeding at Portion 1C.	Improvement/Rectification was observed during follow-up audit session on 28 Dec 2023.
<b>Waste / Chemical Management</b>	05/12/2023	Keep clean and tidy for the portion 9b.	Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
	12/12/2023	Fell trees and yard waste should be cleared at Pak Shek Au.	Improvement/Rectification was observed during follow-up audit session on 19 Dec 2023.
<b>Landscape and Visual</b>	12/12/2023	Tree protection zone should be provided for the retained trees at Portion 11b.	Improvement/Rectification was observed during follow-up audit session on 19 Dec 2023.
<b>Noise</b>	28/12/2023	The NEL of the air compressor at Portion 8a should be displayed.	Follow-up action is needed to be reported in the following month.
<b>Contract No.: ND/2019/02</b>			
<b>Water Quality</b>	29/11/2023	Provide maintenance for the water mitigation measure to prevent surface runoff.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	29/11/2023	Provide maintenance for the sandbags to prevent muddy water/ debris discharge onto cycling track.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	29/11/2023	Provide maintenance to the concrete bund to prevent wheel-washing wastewater discharge.	Item remarked as 231206-R02. Follow-up action is needed to be review.

Parameters	Date	Observations and Recommendations	Follow-up
	06/12/2023		Item remarked as 231214-R02. Follow-up action is needed to be review.
	14/12/2023		Improvement/Rectification was observed during follow-up audit session on 20 Dec 2023.
	29/11/2023	Exposed slope at Portion 5 should be properly covered by tarpaulin sheets.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	29/11/2023	Silt accumulating in the nullah near the water outlet at the material storage should be cleared continuously. Contractor was also reminded to enhance water mitigation measures to prevent further accumulation of silt.	Item remarked as 231206-R03. Follow-up action is needed to be review.
	06/12/2023		Item remarked as 231214-R03. Follow-up action is needed to be review.
	14/12/2023		Item remarked as 231220-R02. Follow-up action is needed to be review.
	20/12/2023		Item remarked as 231229-R02. Follow-up action is needed to be review.
	29/12/2023		Follow-up action is needed to be reported in the following month.
	29/11/2023	Muddy water in Portion 11 should be cleared immediately to avoid overflow.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	29/11/2023	Leakage of muddy water was observed at Portion 4. Contractor was reminded to repair the drainage system.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	29/11/2023	Leakage of untreated water was observed. Contractor was reminded to review the water treatment system of Portion 5.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	06/12/2023	The channel should be properly blocked to prevent contamination.	Improvement/Rectification was observed during follow-up audit session on 14 Dec 2023.
	06/12/2023	Provide maintenance to sandbags to prevent muddy water/ debris discharge in river.	Improvement/Rectification was observed during follow-up audit session on 14 Dec 2023.
	06/12/2023	Regular cleaning of the garbage in Portion 11 should be conducted.	Improvement/Rectification was observed during follow-up audit session on 14 Dec 2023.
	14/12/2023	Enhance the mitigation measures to prevent waste or surface runoff for the discharge point of Portion 1.	Item remarked as 231220-R04. Follow-up action is needed to be review.
	20/12/2023		Item remarked as 231229-R03. Follow-up action is needed to be review.

Parameters	Date	Observations and Recommendations	Follow-up
	29/12/2023		Follow-up action is needed to be reported in the following month.
	20/12/2023	Provide maintenance to impervious sheeting on the exposed slope at Portion 5.	Item remarked as 231229-R04. Follow-up action is needed to be review.
	29/12/2023		Follow-up action is needed to be reported in the following month.
	20/12/2023	Accumulated ground water should be pumped out to wastewater treatment facilities prior to discharge.	Improvement/Rectification was observed during follow-up audit session on 29 Dec 2023.
	20/12/2023	Provide impervious sheeting for the exposed slope at Portion 4.	Improvement/Rectification was observed during follow-up audit session on 29 Dec 2023.
	29/12/2023	Contractor was reminded to ensure the vehicles are properly cleaned of dirt and dust before leaving the site.	Follow-up action is needed to be reported in the following month.
<b>Air Quality</b>	14/12/2023	Provide impervious sheeting for the exposed slope at Portion 4.	Item remarked as 231220-R03 (Water Quality). Follow-up action is needed to be review.
	20/12/2023	Exposed works sites and haul roads should be sprayed with water as dust suppression.	Improvement/Rectification was observed during follow-up audit session on 29 Dec 2023.
	29/12/2023	Dusty stockpile and exposed slopes should be covered with tarpaulin sheets.	Follow-up action is needed to be reported in the following month.
<b>Landscape and Visual</b>	29/11/2023	The removed green hoarding along Sheung Yue River due to the construction works should be replaced and maintained properly as soon as possible.	Item remarked as 231206-R01. Follow-up action is needed to be review.
	06/12/2023		Item remarked as 231214-R01. Follow-up action is needed to be review.
	14/12/2023		Item remarked as 231220-R01. Follow-up action is needed to be review.
	20/12/2023		Item remarked as 231229-R01. Follow-up action is needed to be review.
	29/12/2023		Follow-up action is needed to be reported in the following month.
<b>Waste / Chemical Management</b>	29/11/2023	Provide drip tray for chemical/fuel container at visiting center.	Improvement/Rectification was observed during follow-up audit session on 6 Dec 2023.
	29/11/2023	Accumulation of general refuse should be avoided at the riverbank of Portion 11.	Item remarked as 231206-R04. Follow-up action is needed to be review.



Parameters	Date	Observations and Recommendations	Follow-up
	06/12/2023		Improvement/Rectification was observed during follow-up audit session on 14 Dec 2023.
	14/12/2023	Keep site clean and tidy at Portion 1.	Improvement/Rectification was observed during follow-up audit session on 20 Dec 2023.
<b>Permit / Licences</b>	20/12/2023	Construction Noise Permit should be available for inspection at site entrance.	Improvement/Rectification was observed during follow-up audit session on 29 Dec 2023.
<b>Contract No.: ND/2019/03</b>			
<b>Water Quality</b>	08/12/2023	Contractor was reminded to ensure vehicles are properly washed before leaving the site.	Improvement/Rectification was observed during follow-up audit session on 15 Dec 2023.
<b>Waste/Chemical Management</b>	15/12/2023	Provide drip tray for chemical/fuel containers.	Improvement/Rectification was observed during follow-up audit session on 19 Dec 2023.
<b>Contract No.: ND/2019/04</b>			
<b>Water Quality</b>	12/12/2023	Blue hoses should be kept away from the riverside near A3-03.	Item remarked as 231221-R02. Follow-up action is needed to be review.
	21/12/2023		Improvement/Rectification was observed during follow-up audit session on 28 Dec 2023.
<b>Ecology</b>	30/11/2023	The dull green barrier of the 10m buffer zone near Siu Hang San Tsuen should be maintained properly and regularly.	Item remarked as 231207-R02. Follow-up action is needed to be review.
	07/12/2023		Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
	30/11/2023	The silt curtain next to A3-01 should be maintained properly	Item remarked as 231207-R03. Follow-up action is needed to be review.
	07/12/2023		Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
	28/12/2023	The silt curtain at Bridge F should be maintained regularly and properly.	Follow-up action is needed to be reported in the following month.
<b>Air Quality</b>	30/11/2023	Stockpile of dusty material at A1-03 and Portion K should be covered by impervious sheets properly.	Improvement/Rectification was observed during follow-up audit session on 7 Dec 2023.
	07/12/2023	Exposed site area should be watered regularly as dust suppression at A1-03 and A3-03.	Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
	12/12/2023	Dusty stockpile should be covered by impervious sheets properly at Portion K.	Item remarked as 231221-R01. Follow-up action is needed to be review.

Parameters	Date	Observations and Recommendations	Follow-up
	21/12/2023	Dusty stockpile at Portion K should be covered properly or watered regularly as dust suppression.	Improvement/Rectification was observed during follow-up audit session on 28 Dec 2023.
<b>Waste / Chemical Management</b>	07/12/2023	Accumulation of general refuse should be avoided at A1-05.	Improvement/Rectification was observed during follow-up audit session on 12 Dec 2023.
<b>Contract No.: ND/2019/05</b>			
<b>Waste / Chemical Management</b>	04/12/2023	The construction site at On Lok Garden should be kept clean and tidy generally. The contractor was reminded to clear the waste regularly.	Improvement/Rectification was observed during follow-up audit session on 14 Dec 2023.
<b>Water Quality</b>	18/12/2023	Litter in the temporary drainage at B1-02a should be cleared and maintained properly.	Improvement/Rectification was observed during follow-up audit session on 27 Dec 2023.
<b>Contract No.: ND/2019/06</b>			
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<b>Contract No.: ND/2019/07</b>			
<b>Waste/Chemical Management</b>	22/12/2023	Ensure that the drip tray remains clear to maintain adequate capacity.	Improvement/Rectification was observed during follow-up audit session on 29 Dec 2023.

**Table 10.3 Summary Table for the Outstanding item(s) in the reporting month**

Contract No.	Outstanding deficiencies since last reporting month (Nov 2023)	Deficiencies recorded in the reporting month (Dec 2023)								Total deficiencies (including repeated deficiencies) in the reporting month	Deficiencies rectified in the reporting month	Outstanding deficiencies need to be Follow-up in the next month (Jan 2024)								Total outstanding deficiencies
		A	N	W	W/C	CH	L & V	E	P/L			A	N	W	W/C	CH	L & V	E	P/L	
ND/2019/01	/	5	1	1	2	/	1	/	/	10	8	/	1	/	/	/	/	/	/	1
ND/2019/02	11	3	/	17	2	/	4	/	1	27	17	1	/	4	/	/	1	/	/	6
ND/2019/03	/	/	/	1	1	/	/	/	/	2	2	/	/	/	/	/	/	/	/	/
ND/2019/04	3	3	/	2	1	/	/	3	/	9	7	/	/	/	/	/	/	1	/	1
ND/2019/05	/	/	/	1	1	/	/	/	/	2	2	/	/	/	/	/	/	/	/	/
ND/2019/06*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
ND/2019/07	/	/	/	/	1	/	/	/	/	1	1	/	/	/	/	/	/	/	/	/

Legends:

A = Air Quality

N = Construction Noise Impact

W = Water Quality

W/C = Waste / Chemical Management

CH = Cultural Heritage

L&amp;V = Landscape &amp; Visual

E = Ecology





P/L = Permit / Licences



\* The weekly site inspection for ND/2019/06 has been terminated starting from 19/10/2023 since the termination proposal was approved by EPD on the same day.

**Implementation Status of Environmental Mitigation Measures**

10.6 According to the EIA Report, EPs and the Updated EM&A Manual, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule is provided in **Appendix Q**. The photographic records of measures as stipulated in EPs to mitigate environmental impacts in the reporting month are presented in **Table 10.4**.

**Table 10.4 Photographic Records and Implementation Status of Measures**

EP No.	Condition	Photographic Record	Implementation Status
<u>EP-466/2013/A</u>	2.9	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	^ <sub>[1]</sub>
<u>EP-467/2013/A</u>	2.9	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	^ <sub>[1]</sub>
<u>EP-468/2013/A</u>	2.11	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	^ <sub>[1]</sub>
<u>EP-469/2013</u>	2.7	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	^ <sub>[1]</sub>

<p>EP- 473/2013/ A</p>	<p>2.13</p>	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	<p>^<sub>[1]</sub></p>
<p>EP- 475/2013/ A</p>	<p>2.7</p>	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	<p>^<sub>[1]</sub></p>
<p><b>Implementation status:</b></p>	<p>^ Mitigation measure was fully implemented          * Observation/reminder was made during site audit but improved/rectified by the contractor          # Observation/reminder was made during site audit but not yet improved/ rectified by the contractor          X Non-compliance of mitigation measure          • Non-compliance but rectified by the contractor          N/A Not Applicable at this stage as no such site activities were conducted in the reporting period</p>		

Remark:

[1]: Barrier fences might be subjected to change according to the phasing plan designed at detailed design stage

### Implementation Status of Water Quality Mitigation Measures







10.7 The water quality mitigation measures detailed in the EIA Report and the Updated EM&A Manual are recommended to be implemented during the construction phase. Water quality mitigation measures implemented by the contractors were closely monitored to prevent water pollution, especially during rainy season. An updated summary of the Environmental Mitigation Implementation Schedule is provided in **Appendix Q**. Specific water quality mitigation measures for major construction works in the reporting month are presented in **Table 10.4**.



**Table 10.5 Specific Water Quality Mitigation Measures for Major Construction Works in the Reporting Month**

Works Contracts	Photographic Records	
ND/2019/01	 <p>Hard paved exposed slope surface</p>	 <p>Hydroseeding for slope area</p>
ND/2019/02	 <p>Hard paved exposed haul road</p>	 <p>Hard paved exposed slope surface</p>
ND/2019/03	 <p>Hard paved exposed haul road</p>	 <p>Watering the main haul road regularly.</p>
ND/2019/04	 <p>Hard paved exposed slope surface</p>	 <p>Deployment of silt curtain around works area in Ng Tung River</p>



ND/2019/05	 <p>Covering dusty stockpile</p>	 <p>Provision of sand bags around works area</p>
ND/2019/07	 <p>Covering exposed slope surface with tarpaulin</p>	 <p>De-silting waste water before discharge</p>
<b>Water quality mitigation measures for site(s) in operation phase, remaining defect works</b>		
ND/2019/06	 <p>Hard paved exposed haul road</p>	 <p>Hard paved exposed haul road</p>

### Solid and Liquid Waste Management Status

- 10.8 Waste generated from Contract Nos. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05 and ND/2019/07 included inert construction and demolition (C&D) materials and non-inert C&D wastes in the reporting month. The site of ND/2019/06 was handed over to AFCD for operation since 4 April 2022.
- 10.9 The amount of wastes generated by the construction works of the Contract Nos. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05 and ND/2019/07 during the reporting month are shown in **Appendix R**. The site of ND/2019/06 was handed over to AFCD for operation since 4 April 2022.
- 10.10 The Contractors are advised to minimise the wastes generated through recycling or reusing. All mitigation measures stipulated in the Updated EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and








reduction measures are summited in **Appendix Q**.

### **Ecological Mitigation Measures – Creation of Long Valley Nature Park (LVNP)**

- 10.11 Based on the findings of the EIA Report, the area of Long Valley has been assessed as of high to very high ecological value and is the largest contiguous area of freshwater wetland habitats in Hong Kong. To safeguard the ecological value of Long Valley, about 37 hectares of land in Long Valley has been proposed to develop into Long Valley Nature Park (LVNP) for conserving and enhancing the ecologically important environment as well as for compensation of the wetland loss due to the NDA development.
- 10.12 LVNP is developed according to the approved Habitat Creation and Management Plan (HCMP) submitted under EP-468/2013/A. HCMP provides a framework and specifications for development and management of LVNP and guides the development to maintain and enhance the 37 hectares of low-lying wetland habitats.
- 10.13 Regarding the design, the zoning of land use in LVNP is intended to maintain the existing mosaic pattern of wet and dry agriculture, while controlling the activities that could potentially disturb target habitats and species. LVNP will be divided into three broad zones of land use as below:
- Biodiversity Zone of about 21 hectares largely designated for biodiversity conservation through cultivation of specified crops and habitat management.
  - Agricultural Zone of about 11 hectares designated for commercially focuses crop production and eco-friendly agricultural practice for farming.
  - Visitor Zone of about 5 hectares designed to accommodate visitors as well as storage and other facilities and for educational purposes.
- 10.14 The construction of LVNP started in late 2019 and was expected to be completed in 2023. During the construction period, the progress of construction and wetland enhancement works has been under observation by different stakeholders including AFCD and green groups. Close communication between AFCD and CEDD were conducted to exchange views on conservation, restoration and management of habitats as well as on the planning and design of the park. In addition, advices from green groups, Hong Kong Bird Watching Society (HKBWS) and The Conservancy Association (CA), have been taken on habitat management of Long Valley and potential effects on habitat and wildlife of each individual work conducted in Long Valley. The last meeting was held on 18 November 2022 to share the progress of LVNP with different stakeholders, including CEDD, AFCD, CA, HKBWS, Contractor, ET, IEC and farmers.
- 10.15 Proposals on wetland creation and restoration, dry agricultural land creation, pond creation, water treatment wetland and design of irrigation channel were submitted by the Contractor to achieve the objectives stated in HCMP and accepted by the Engineer with consent from AFCD before implementation. The Contractor would consult the stakeholders for recommendations and suggestions on mitigation measures to minimise the environmental impacts arising from construction works. The progress of works would be arranged to minimise impacts to avifauna and maintain the habitat for avifauna. The photographic records of site activities in LVNP are presented in **Table 10.5**.



**Table 10.6 Photographic Records of Site Activities in LVNP**

	
Continuing agricultural practice in existing farmland to maintain habitats in Long Valley	
	
<p><i>Open water Habitat</i>        Creation of wetland with designated habitat for biodiversity conservation</p>	
	
Planting of paddy rice to provide foraging ground for Yellow-breasted Bunting	
	
Enhancement of irrigation channel to provide reliable water source for farmland in Long Valley	





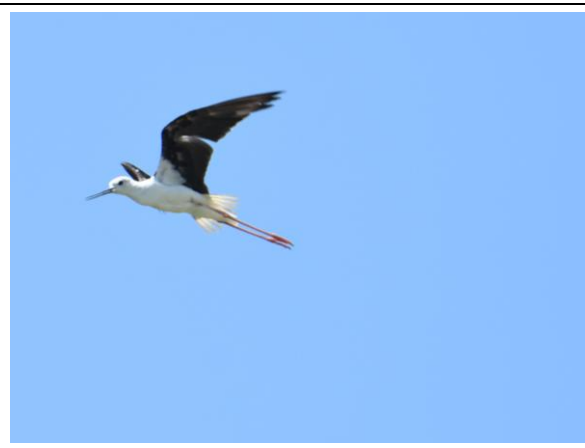
Provision of bird island (hidden area)



Restoring of water flea pond to provide food source to water birds



Construction of storage sheds for farmers



A *Himantopus himantopus* was recorded



Wet agricultural land

## **11 ENVIRONMENTAL NON-CONFORMANCE**

### **Summary of Exceedances**

- 11.1 No Action/Limit Level exceedance for air quality, water quality, construction noise, ambient arsenic, built heritage and landfill gas monitoring was recorded in the reporting month. The summary of exceedance record in the reporting month is shown in **Appendix O**.
- 11.2 Ecological monitoring was carried out in the reporting month. Two (2) action level exceedance and two (2) limit level exceedance for non-aquatic fauna were recorded at T3 & T6. The exceedance were considered non-project related.
- 11.3 Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that Action / Limit Levels are exceeded, the actions in accordance with the Event/Action Plan in **Appendix N** would be carried out.

### **Summary of Environmental Non-Compliance**

- 11.4 No environmental non-compliance was recorded in the reporting month.

### **Summary of Environmental Complaint**

- 11.5 No environmental complaint was received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in Appendix S.

### **Summary of Environmental Summon and Successful Prosecution**

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

## 12 FUTURE KEY ISSUES

### Key Issues in the Coming Three Months

12.1 The major site activities, potential environmental impacts and recommended mitigation measures for the coming three months are shown in **Table 12.1**.

**Table 12.1 Summary Table for Site Activities, Potential Environmental Impacts and Recommended Mitigation Measures in the Coming Months**

Contract No.	Major Site Activities (January to March 2024)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance / tree felling	Portion 13	<ul style="list-style-type: none"> <li>- Construction Dust impact</li> <li>- Noise Impact (Construction Phase)</li> <li>- Water Quality Impact (Construction Phase)</li> <li>- Waste Management (Construction Waste)</li> </ul>	<b>Air</b> <ul style="list-style-type: none"> <li>- Watering on exposed earth and haul road.</li> <li>- Cover the stockpiles or dusty materials.</li> <li>- Deploy water bowsers to water the haul road.</li> <li>- Deploy mist-cannon on site</li> <li>- Provide shelter with top and 3-sides for cement production activities.</li> <li>- Cover the Arsenic-containing soil.</li> <li>- Store the bulk cement in enclosed silo tank for soil treatment.</li> <li>- Close the mechanical cover of the vehicles used for transporting dusty materials.</li> <li>- Establish vehicle wheel washing facilities at vehicle exit points.</li> <li>- Speed control of site vehicles.</li> </ul> <b>Noise</b> <ul style="list-style-type: none"> <li>- Regular inspect of construction plants in good condition.</li> </ul>
	(b) GI works	NIL		
	(c) Excavation / Backfilling	Portion 3, 5, 7, 8a, 8b, 9b		
	(d) Construction of retaining wall	Portion 8a		
	(e) Construction of noise barrier	Portion 1c		
	(f) Site Formation	Portion 1c, 2, 13		
	(g) Removal of existing structure	Portion 11b, 13		
	(h) Construction of subway	Portion 2		
	(i) Operation of HAC treatment facility	Portion 6b		
	(j) Drainage works / watermains works	Portion 1a, 2, 3, 5, 6a, 7, 8a, 8b, 9b		

	(k) Road Construction	Portion 2, 5, 6a, 9b		<ul style="list-style-type: none"> <li>- Provide temporary noise screens if necessary.</li> <li>- Use of Quiet plants (QPME) and working methods if possible.</li> <li>- Sequencing operation of construction plants where practicable.</li> <li>- Shut down the machines and plant if not in use.</li> <li>- Only well-maintained plant to be operated on-site</li> <li>- Mobile plant to be sited as far away from NSRs as possible practicable.</li> <li>- Conduct noise monitoring regularly.</li> <li>- Erect silent-up noise barrier at portion 6b.</li> </ul> <p><b>Water</b></p> <ul style="list-style-type: none"> <li>- Set up wastewater treatment system (AquaSed) on site</li> <li>- Erect soil bund / temporary drain to divert /collect surface runoff.</li> <li>- Maintain the drainage and wastewater treatment facilities.</li> </ul> <p><b>Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>- Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions</li> <li>- Provide recycling bins on site, encourage reuse and recycle as much as possible.</li> <li>- Provide drip trays for chemical containers.</li> <li>- Chemical spill kit available on site.</li> <li>- Chemical waste cabinet available on site.</li> </ul>
	(l) Trenchless	Portion 5, 8b		
	(m) Construction of reservoir	Portions 8a		
	(n) Ground Treatment	Portion 8b		
	(o) Erection of hoarding	Portion 1c		
	(p) Sheet piling / ELS & pipe pile	Portion 1a, 2, 5, 7, 8a, 9b		

				<ul style="list-style-type: none"> <li>- Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste collector.</li> <li>- Delivery of yard waste to tree shredding facility for upcycling.</li> </ul>
<b>ND/2019/02</b>	(a) Pipe Jacking	Portions 1, 5	Air, Noise, Waste	<ul style="list-style-type: none"> <li>- Dusty works should be spray water. Idle stockpile or slop should be covered by Tarpaulin sheet properly.</li> <li>- Wheel washing should be carried out at every exit.</li> <li>- Plants should be well maintained to prevent dark smoke and oil leakage. Idle plant should be turned off.</li> <li>- Drip tray should be provided for all chemical and stationary plants.</li> <li>- No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is obtained.</li> <li>- Erect noise screen along site boundary.</li> <li>- Waste should be sorted and dispose according to the Waste Management Plan</li> <li>- No direct discharge of wastewater into storm drains is allowed. Wastewater must be de-silted before discharged in accordance with the water discharge license.</li> </ul>
	(b) Backfilling	Portion 4, 8	Air, Noise, Waste	
	(c) Concreting	Portions 7, 8, 9 & 10	Air, Noise, Water, Waste, Ecology	
	(d) Bedding & Pipe Laying	Portion 3, 4	Air, Noise, Water, Waste, Ecology	
	(e) ELS	Portions 1, 3, 4, 5, 10	Air, Noise, Water, Waste, Ecology	
	(f) Sheet Pile Removal	Portion 4	Air, Noise, Water, Waste	
	(g) Cut and Fill of Slope	Portion 3, 4	Air, Noise, Water, Waste	
	(h) Sheet pile installation	Portion 1		

				- Dull green barrier and ecological measures should be implemented according to the Ecological protection plan.
<b>ND/2019/03</b>	(a) Excavation & ELS	Portion 1, 1A, 2, 3, 4, 4A, 4B, 5, 5A	- Waste - Air pollution - Noise pollution	<ul style="list-style-type: none"> <li>- Dusty works should be sprayed with water or stockpile should be covered by Tarpaulin properly.</li> <li>- Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off.</li> <li>- Drip tray should be provided for all chemical and stationary plants.</li> <li>- No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted.</li> <li>- Waste should be sorted and disposed according to Waste Management Plan.</li> <li>- No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.</li> </ul>
	(b) Site Clearance	Sections 7, 8 and 9	- Waste - Air pollution - Noise pollution	
	(c) Tree Felling	Sections 6, 7, 8 and 9	- Waste - Air pollution - Noise pollution	
<b>ND/2019/04</b>	(a) Sheet piling	Bridge F, Portion J, K and Footbridge F4	- Air, Noise, Waste	<ul style="list-style-type: none"> <li>- Dusty works should be sprayed with water or stockpile should be covered by tarpaulin properly.</li> <li>- Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off.</li> <li>- Drip tray should be provided for all chemical and stationary plants.</li> <li>- No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted.</li> </ul>
	(b) Pile cap	Bridge A1, A3 and Portion J, K	- Air, Noise, Water, Waste	
	(c) Grouting	Bridge F, A2, A3 and Portion J, K, H	- Air, Noise, Water, Waste	
	(d) Bore pile	Portion J, Bridge G and Bridge F02, Footbridge F4	- Air, Noise, Water, Waste	

	(e) Excavation & ELS	Portion J, H, K, X, S, Bridge A1, A2 and A3	- Air, Noise, Waste	<ul style="list-style-type: none"> <li>- Waste should be sorted and disposed according to Waste Management Plan.</li> <li>- No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.</li> </ul>
	(f) Road works	Portion J, H, O, U and VY	- Air, Noise, Waste	
	(g) Pre-drilling	NIL	- Air, Noise, Water, Waste	
	(h) Tree pruning	Portion K	- Air, Noise, Waste	
	(i) UU diversion	Portion J and K	- Air, Noise, Waste	
<b>ND/2019/05</b>	(a) ELS & Pile Cap Construction	NB69 Bay 2~8 NB110 Bay 6~7	<ul style="list-style-type: none"> <li>- Construction Dust Impact</li> <li>- Noise Impact</li> <li>- Water Quality Impact (Construction Phase)</li> <li>- Waste Management (Construction Waste)</li> <li>- Landscape and Visual</li> <li>- Cultural Heritage</li> </ul>	<ul style="list-style-type: none"> <li>- Regular watering on exposed worksites and haul road.</li> <li>- Stockpiling area should be provided with covers and water spraying system.</li> <li>- Only well maintained plant to be operated on site.</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>- mobile plant to be sited as far away from NSRs as possible practicable.</li> <li>- All open stockpiles of construction materials of more than 50m3 to be covered with tarpaulin.</li> <li>- Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.</li> </ul>
	(b) Cap Construction	E3-04a, E3-04b, E4-01 and E4-02		
	(c) Cross head construction	B2-01, B2-02 and B2-03		
	(d) Pier / Pier head Construction	D2-01 and E305M		
	(e) Fabrication for segment	C2, C1, D1, D2, E1, E4		
	(f) Form Traveler	E3-01 construction 3 <sup>rd</sup> to 6 <sup>th</sup> pair E2-02 construction 14 <sup>th</sup> pair & dismantling of FT1 D2-02 construction 6 <sup>th</sup> to 8 <sup>th</sup> pair D2-03 construction 2 <sup>nd</sup> pair to 4 <sup>th</sup> pair		



		E2-01 erection of 5 <sup>th</sup> set of form traveler.		<ul style="list-style-type: none"> <li>- All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads.</li> <li>- Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> <li>- Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions.</li> <li>- Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling.</li> <li>- To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage.</li> <li>- Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>
	(g) Segment Erection by Launching Girder & Crane	bridges C3, C2		
	(h) SOP construction (precast & in-situ cast in type)	D2-01		
	(i) Road construction	TWSRW, TWSRE		
	(j) Road works	Jockey Club Rd, TWSRW		
	(k) Base slab construction	NB109 – bay 11~12		
	(l) Tree Works	All works areas		

				<ul style="list-style-type: none"> <li>- Conducting Construction Vibration Monitoring</li> <li>- Tree Protection &amp; Preservation Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004.</li> <li>- Tree Transplantation 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.</li> <li>- Erect 2m high dull green site boundary fence.</li> </ul>
<b>ND/2019/06</b>	N/A	N/A	N/A	N/A
<b>ND/2019/07</b>	(a) Road works	Portion 1, 4, 5	<ul style="list-style-type: none"> <li>- Construction Dust Impact</li> <li>- Noise Impact</li> <li>- Water Quality Impact (Construction Phase)</li> <li>- Waste Management (Construction Waste)</li> <li>- Landscape and Visual</li> </ul>	<ul style="list-style-type: none"> <li>- Regular watering on exposed worksites and haul road.</li> <li>- Stockpiling area should be provided with covers and water spraying system.</li> <li>- Only well-maintained plant to be operated on-site.</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>- mobile plant to be sited as far away from NSRs as possible practicable.</li> </ul>
	(b) C&D waste disposal	Portion 1, 2, 4, 5		
	(c) Construction of box culvert	Portions 2		
	(d) Filling works	Portions 1, 2, 4		
	(e) Construction of site haul road	Portions 4		
	(f) Drainage Works	Portion 2, 3, 4, 5		
	(g) Sewerage works	Portion 3, 4, 5		

	(h) Construction of Noise Barrier	Portion 5		<ul style="list-style-type: none"> <li>- All open stockpiles of construction materials of more than 50m<sup>3</sup> to be covered with tarpaulin.</li> <li>- Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.</li> <li>- All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads.</li> <li>- Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> <li>- Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions.</li> <li>- Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling.</li> <li>- To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage.</li> <li>- Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the</li> </ul>
	(i) Waterworks	Portion 1, 2, 4		

				<p>chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p> <ul style="list-style-type: none"> <li>- Tree Protection &amp; Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004.</li> <li>- Tree Transplantation – 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.</li> <li>- Erect 2m high dull green site boundary fence.</li> <li>- Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</li> </ul>
--	--	--	--	--

12.2 The major site activities in coming three months are shown in **Table IV**.

#### **Monitoring Schedule for the Next Month**

12.3 The tentative environmental monitoring schedule for the next month is shown in **Appendix D**.

#### **Construction Programme for the Next Month**

12.4 A tentative construction programme is provided in **Appendix A**.

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### 13 CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

- 13.1 This monthly EM&A Report presents the EM&A work undertaken in December 2023 in accordance with the Updated EM&A Manual.
- 13.2 No Action/Limit Level exceedance for air quality, water quality, construction noise, ambient arsenic, landfill gas monitoring and build heritage monitoring was recorded in the reporting month.
- 13.3 Two (2) non-project related action level exceedance and two (2) non-project related limit level exceedance for non-aquatic fauna were recorded.

Contract No. ND/2019/01

- 13.4 Environmental site inspections were conducted on 5, 12, 19 and 28 Dec 23 by ET in the reporting month.

Contract No. ND/2019/02

- 13.5 Environmental site inspections were conducted on 6, 14, 20 and 29 Dec 23 by ET in the reporting month.

Contract No. ND/2019/03

- 13.6 Environmental site inspections were conducted on 8, 15, 19 and 27 Dec 23 by ET in the reporting month.

Contract No. ND/2019/04

- 13.7 Environmental site inspections were conducted on 7, 12, 21 and 28 Dec 23 by ET in the reporting month.

Contract No. ND/2019/05

- 13.8 Environmental site inspections were conducted on 4, 14, 18 and 27 Dec 23 by ET in the reporting month.

Contract No. ND/2019/06

- 13.9 The construction phase EM&A Programme for Contract No. ND/2019/06 was terminated on 19 Oct 2023. No more environmental site inspection is required.

Contract No. ND/2019/07

- 13.10 Environmental site inspections were conducted on 1, 8, 15, 22 and 29 Dec 23 by ET in the reporting month.
- 13.11 No environmental complaint was received in the reporting month. No notification of summons or successful prosecutions was received in the reporting month.
- 13.12 The ET would keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

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## Recommendations

13.13 According to the environmental audits performed in the reporting month, the following recommendations were made:

### *Air Quality Impact*

- To regular water haul roads;
- To provide vehicle washing facilities with high pressure water jet at every discernible or designated vehicle exit point;
- To maintain the impervious material to entirely cover the stockpile of dusty materials; and
- To ensure all regulated machines displayed with valid Non-road Mobile Machinery (NRMM) labels.

### *Construction Noise Impact*

- To ensure compressor operated with doors closed.
- To ensure the noise barriers were fully enclosed.

### *Water Impact*

- To review and implement temporary drainage system;
- To prevent any surface runoff discharge into Sheung Yuen River, Ma Wat River or public road;
- To provide sandbags or construct berm to prevent any outflow of muddy water from site area;
- To ensure all vehicle clear of earth and mud before leaving the site areas;
- To ensure the drainage facilities would not be clogged with waste or sediment to avoid overflow;
- To regularly check the condition of desilting materials for proper function;
- To regularly maintain and ensure water treatment facilities proper operation and function;
- To divert all the water generated from the construction site to de-silting facilities with sufficient handling capacity before discharge; and
- To avoid or regularly clear the stagnant water in drip trays;

### *Waste/Chemical Management*

- To dispose of general refuse properly;
- To clear and avoid oil stains at site areas;
- To provide proper storage areas for chemical; and
- To maintain drip trays for chemical storage well.

### *Landfill Gas Hazard*

- “No Smoking” and “No Naked Flame” notices in Chinese and English should be posted prominently around the construction site.

### *Land Contamination*

- Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimise runoff.

*Ecology*

- Properly erect and maintain 2m high solid barriers for protecting Siu Hang San Tsuen Stream.

*Permit/ Licences*

- To display valid Permit or Licences at the site entrances.

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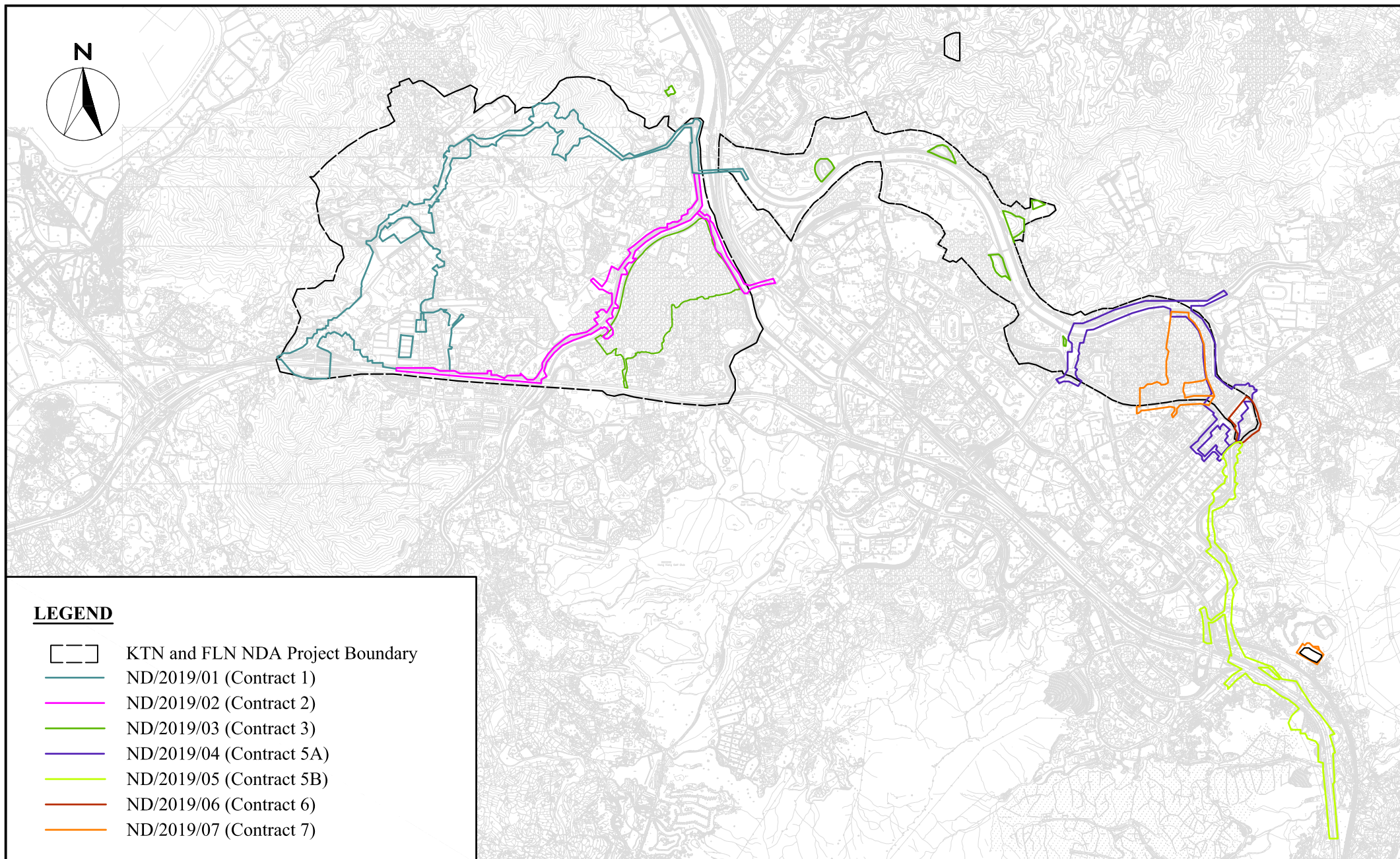
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**DRAWING(S)**

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# **LEGEND**

- KTN and FLN NDA Project Boundary
- ND/2019/01 (Contract 1)
- ND/2019/02 (Contract 2)
- ND/2019/03 (Contract 3)
- ND/2019/04 (Contract 5A)
- ND/2019/05 (Contract 5B)
- ND/2019/06 (Contract 6)
- ND/2019/07 (Contract 7)

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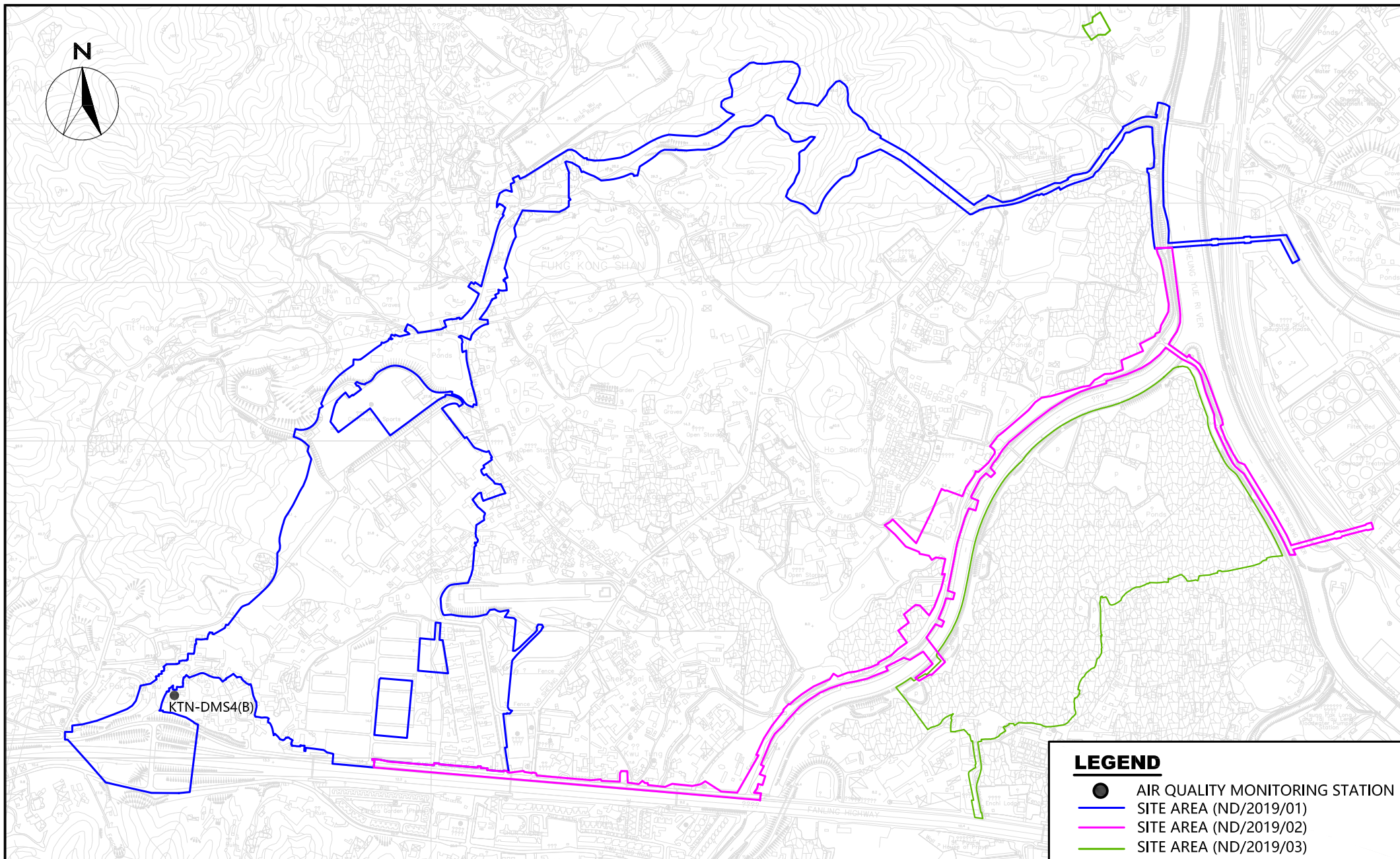
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**FIGURE(S)**

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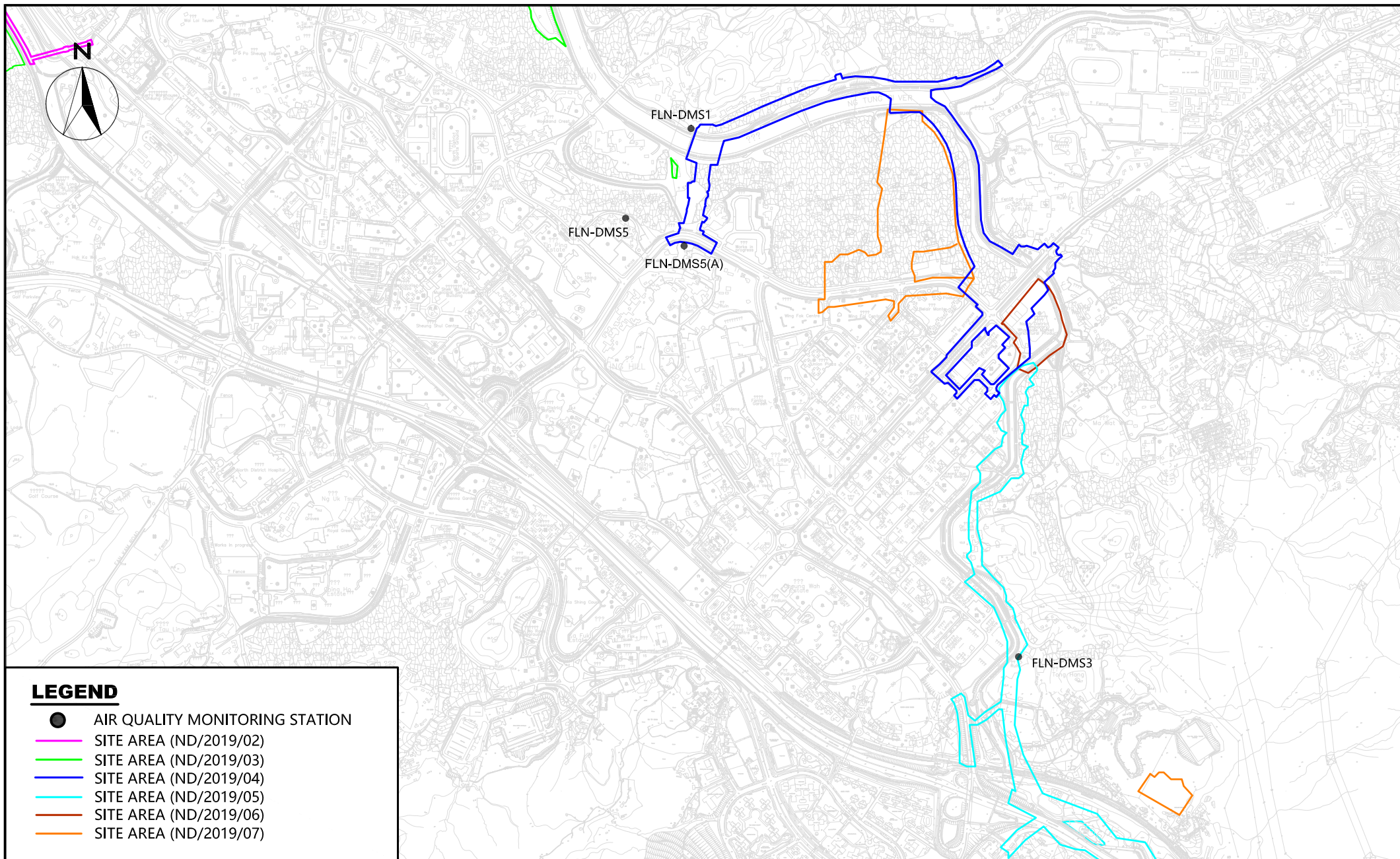




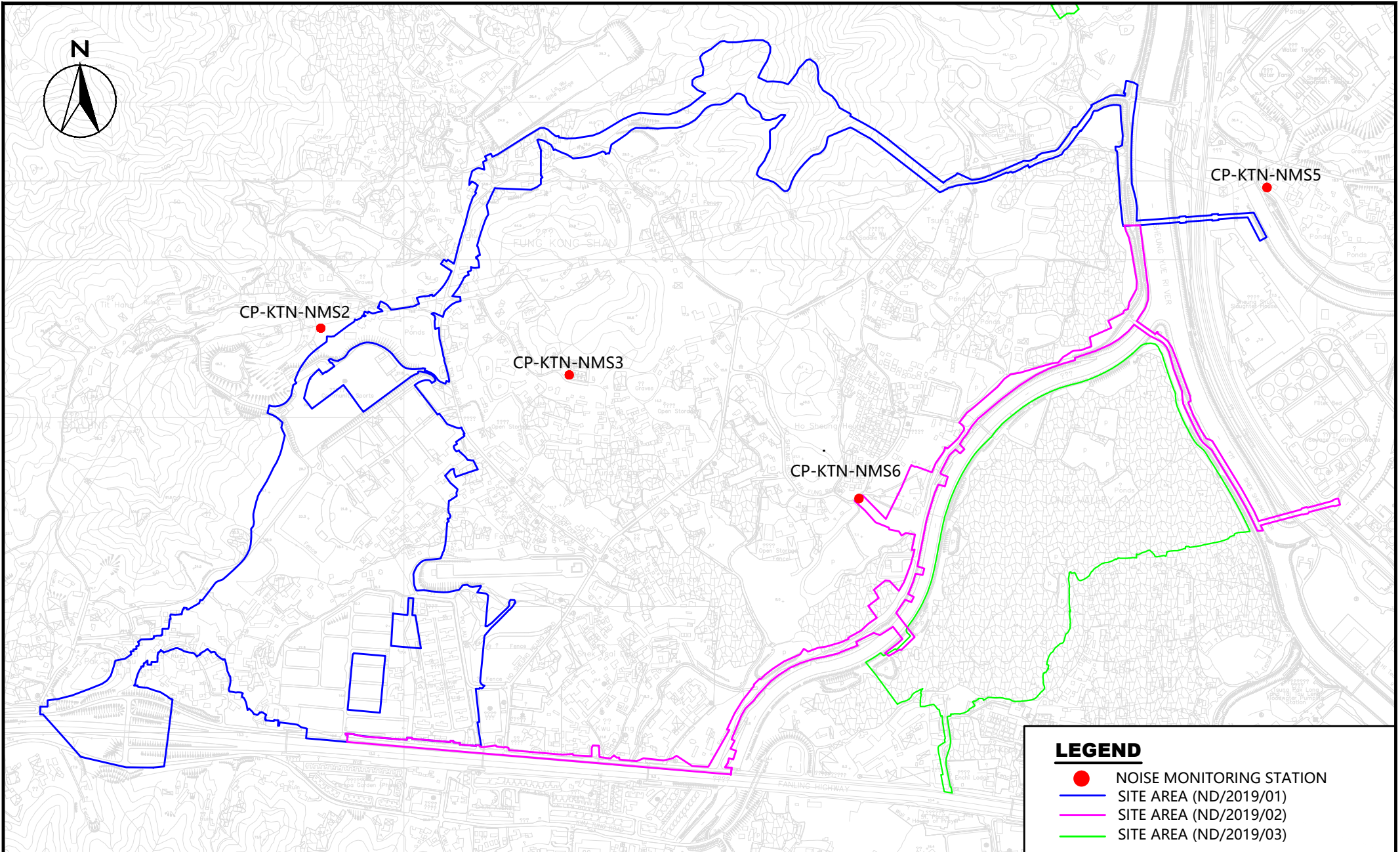
# LEGEND

- AIR QUALITY MONITORING STATION
- SITE AREA (ND/2019/01)
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)





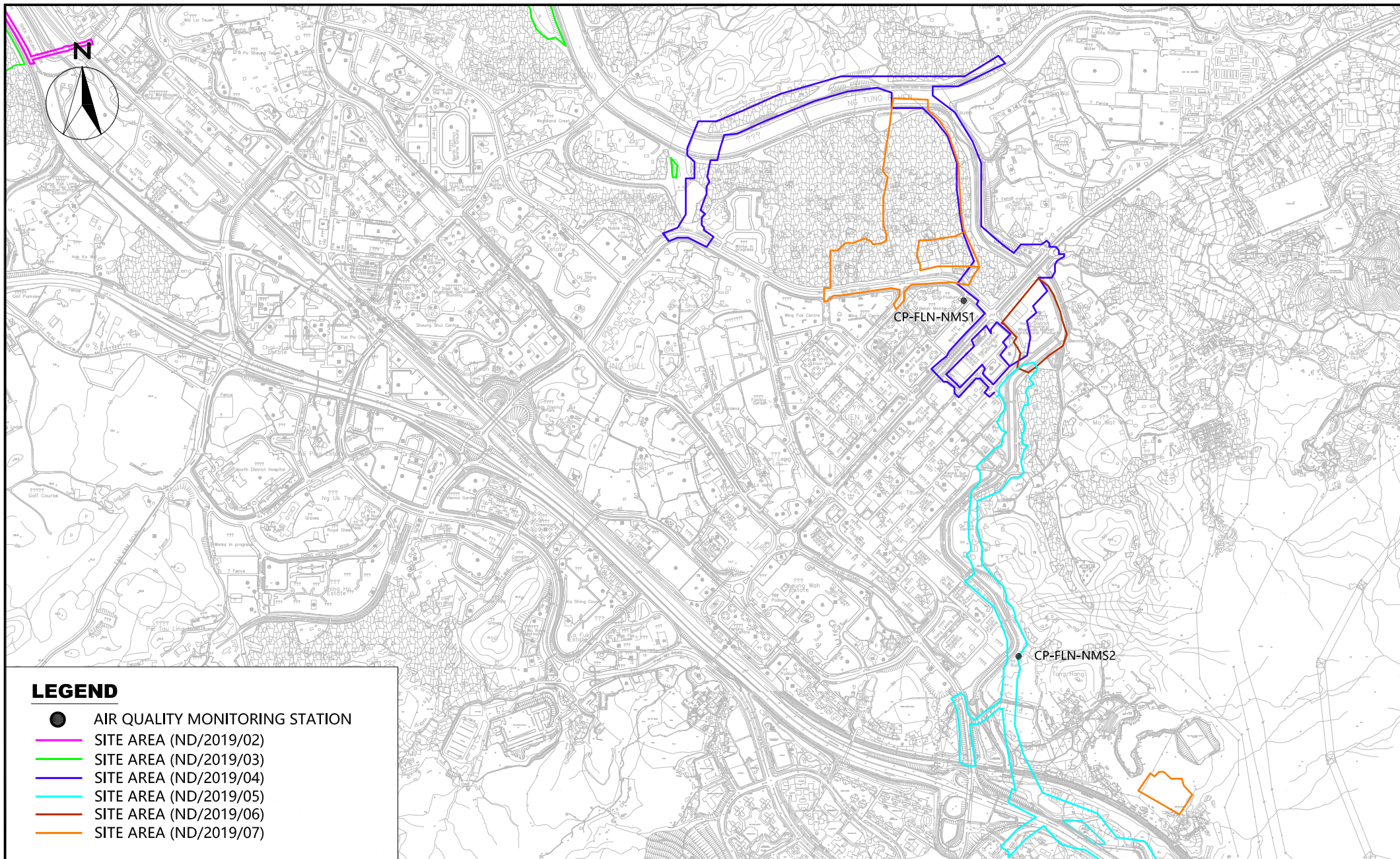




### LEGEND

- NOISE MONITORING STATION
- SITE AREA (ND/2019/01)
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)

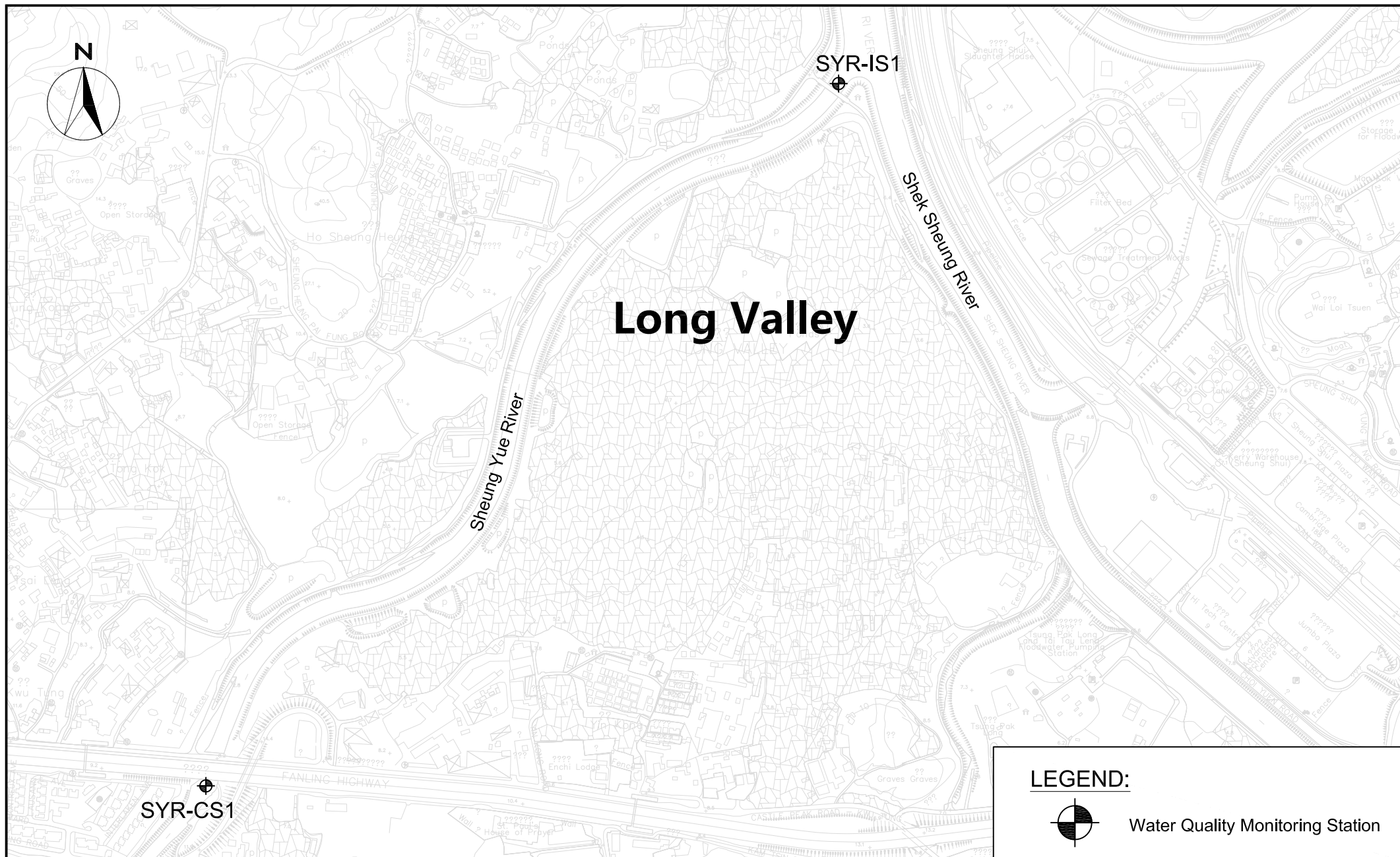




## LEGEND

- AIR QUALITY MONITORING STATION
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)
- SITE AREA (ND/2019/04)
- SITE AREA (ND/2019/05)
- SITE AREA (ND/2019/06)
- SITE AREA (ND/2019/07)





# LEGEND:



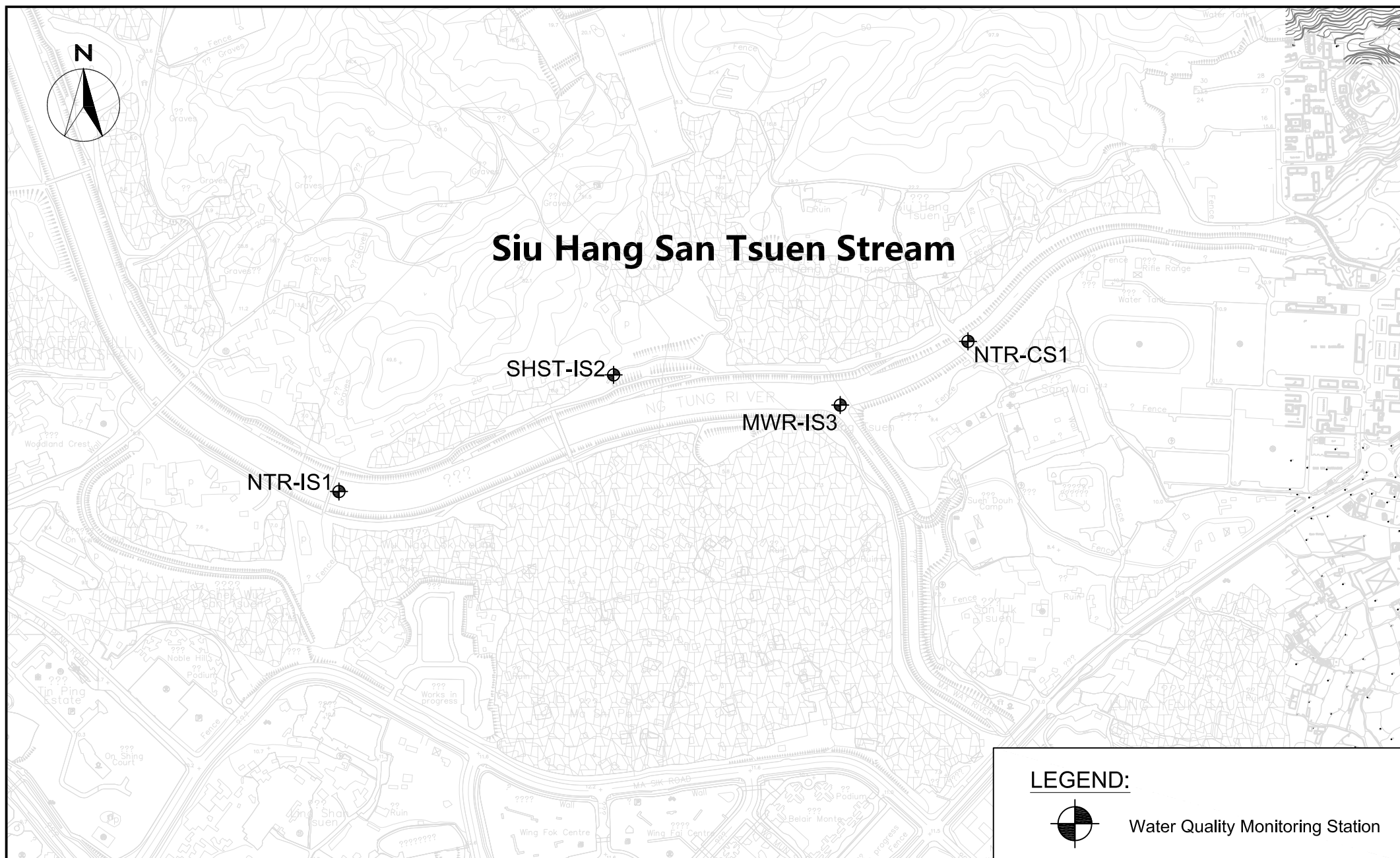
Water Quality Monitoring Station

**WELLAB 匯力**  
consulting . testing . research

Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction  
Phase for the First Phase Development of KTN and FLN NDAs

## Location of Additional Water Quality Monitoring Stations at River Beas

SCALE	A4 @ 1:20000	DATE	FEB 2021	
CHECK	KL	DRAWN	NL	
PROJECT No.	WMA20002	FIGURE NO.	5	REV —



# LEGEND:



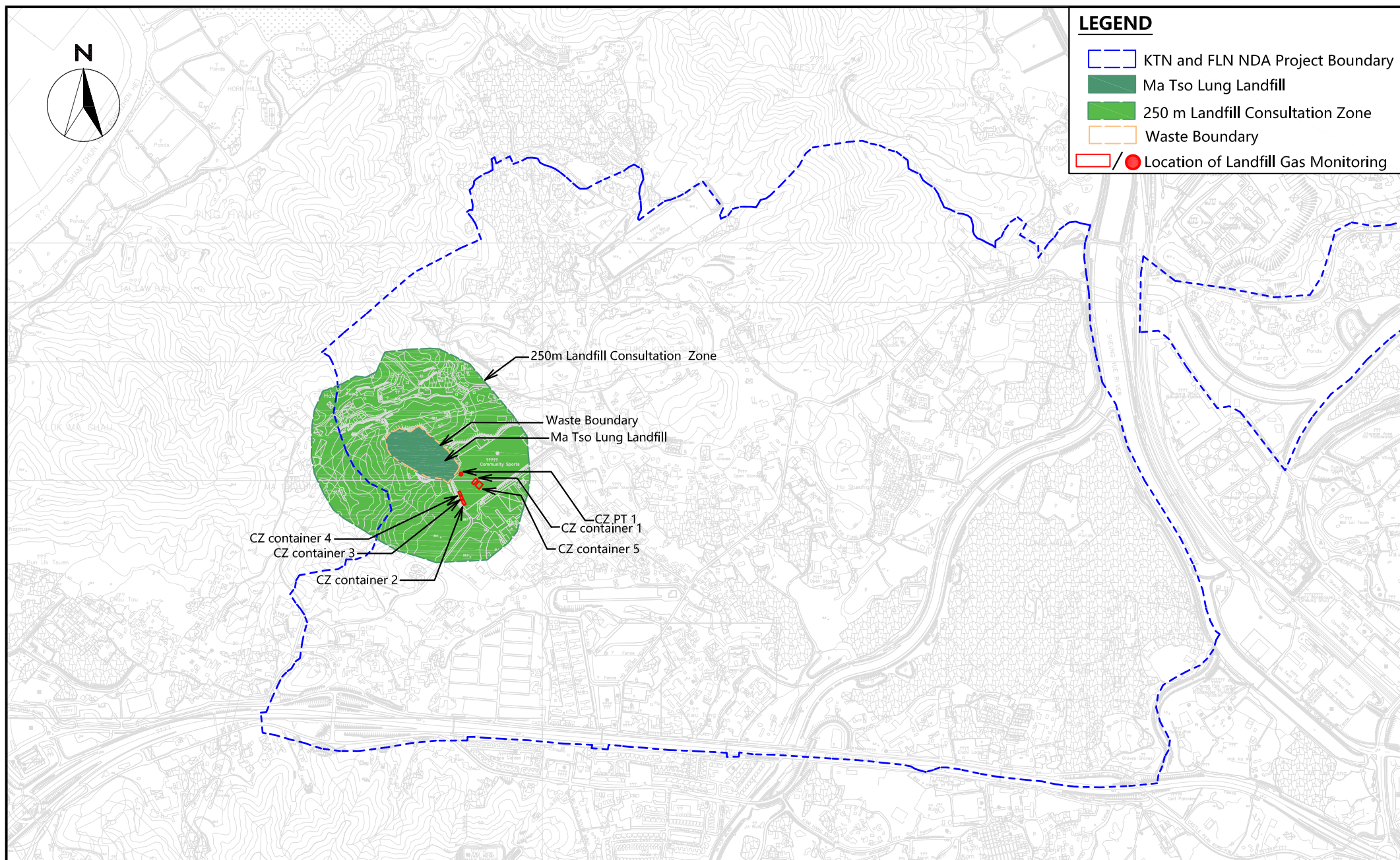
Water Quality Monitoring Station

SCALE	A4 @ 1:20000	DATE	FEB 2021
CHECK	KL	DRAWN	NL
PROJECT No.	WMA20002	FIGURE NO.	6
		REV	—

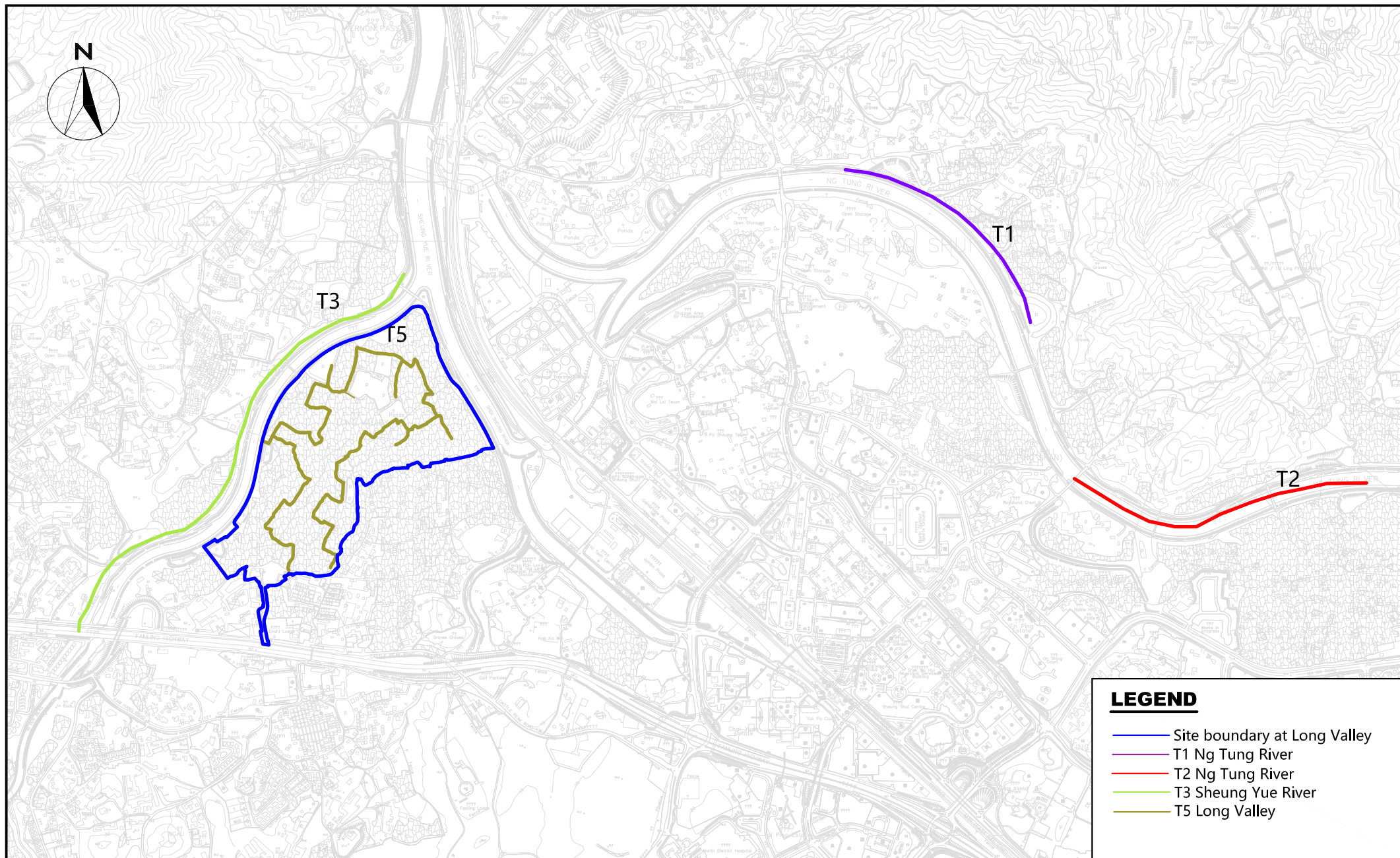
















# LEGEND

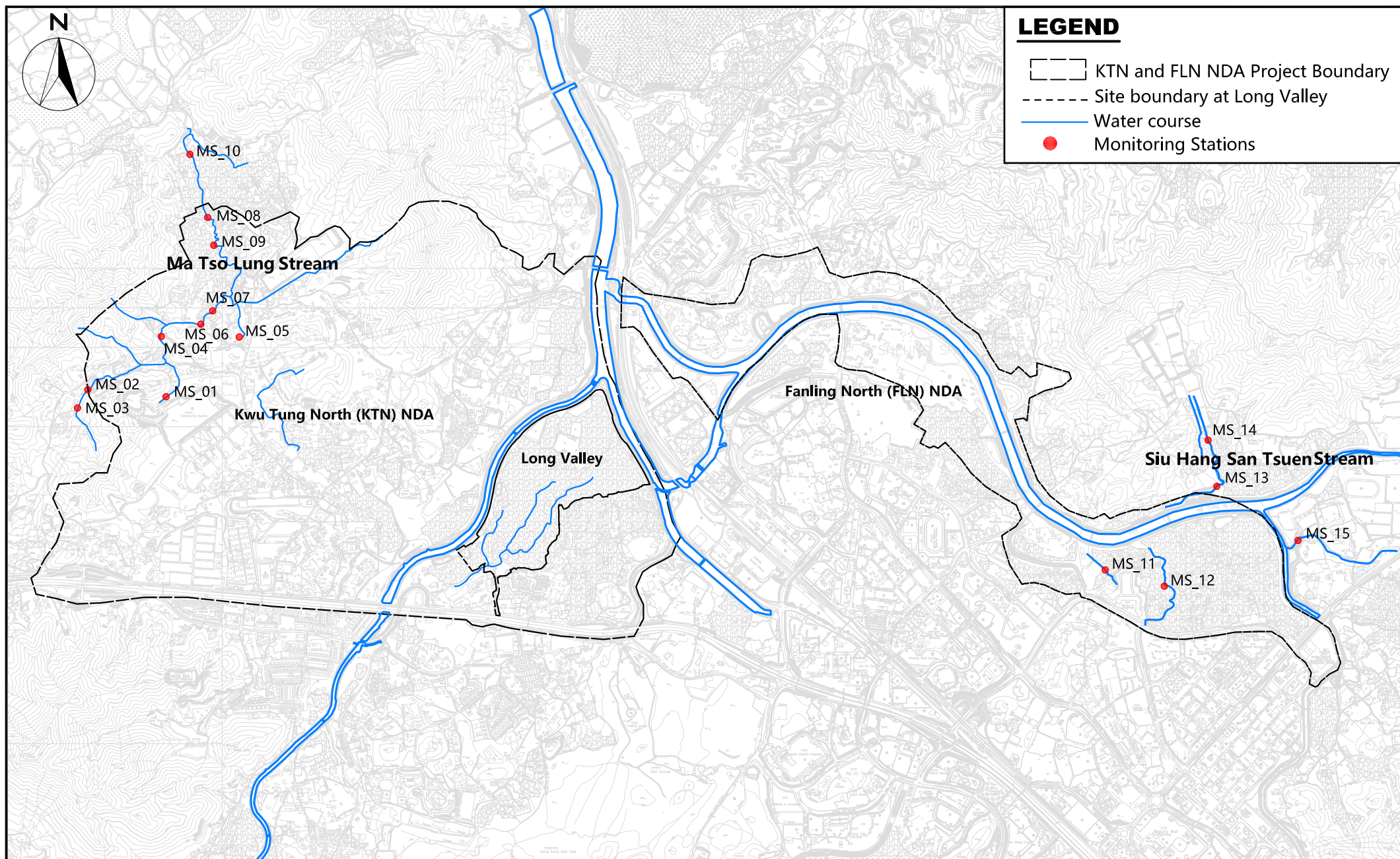
- Site boundary at Long Valley
- T1 Ng Tung River
- T2 Ng Tung River
- T3 Sheung Yue River
- T5 Long Valley



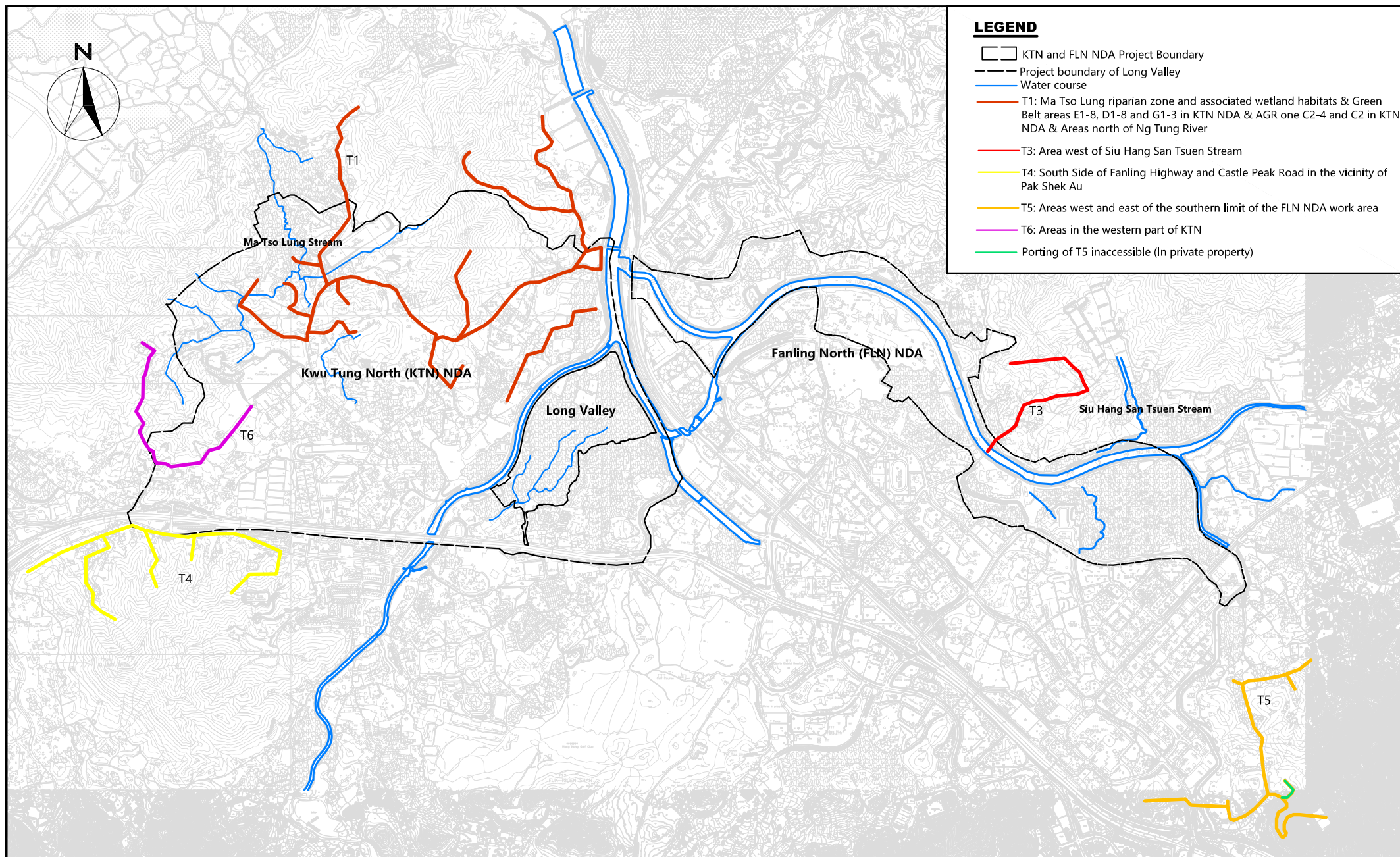


## LEGEND

-  KTN and FLN NDA Project Boundary
-  Site boundary at Long Valley
-  Water course
-  Monitoring Stations





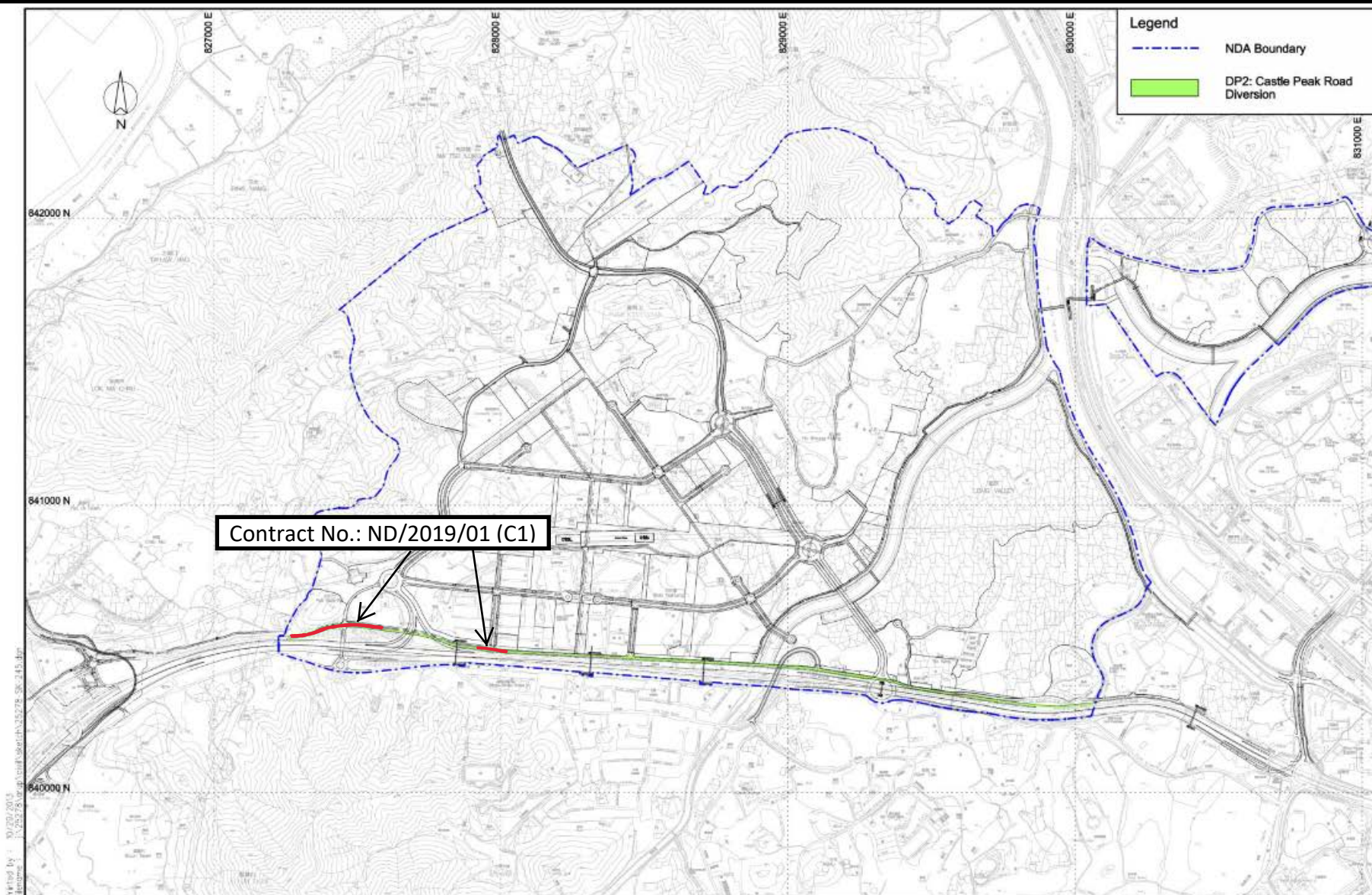


**Figure 12**

**Site Layout Plan of Contract ND/2019/01**

**under EP-466/2013/A**





**Project Title: Castle Peak Road Diversion**

**Figure 1: Location Plan for Castle Peak Road Diversion Project**

(Extracted from Drawing No. SK/245 of North East New Territories New Development Area Planning and Engineering Study)

**Environmental Permit No:  
EP-466/2013/A**

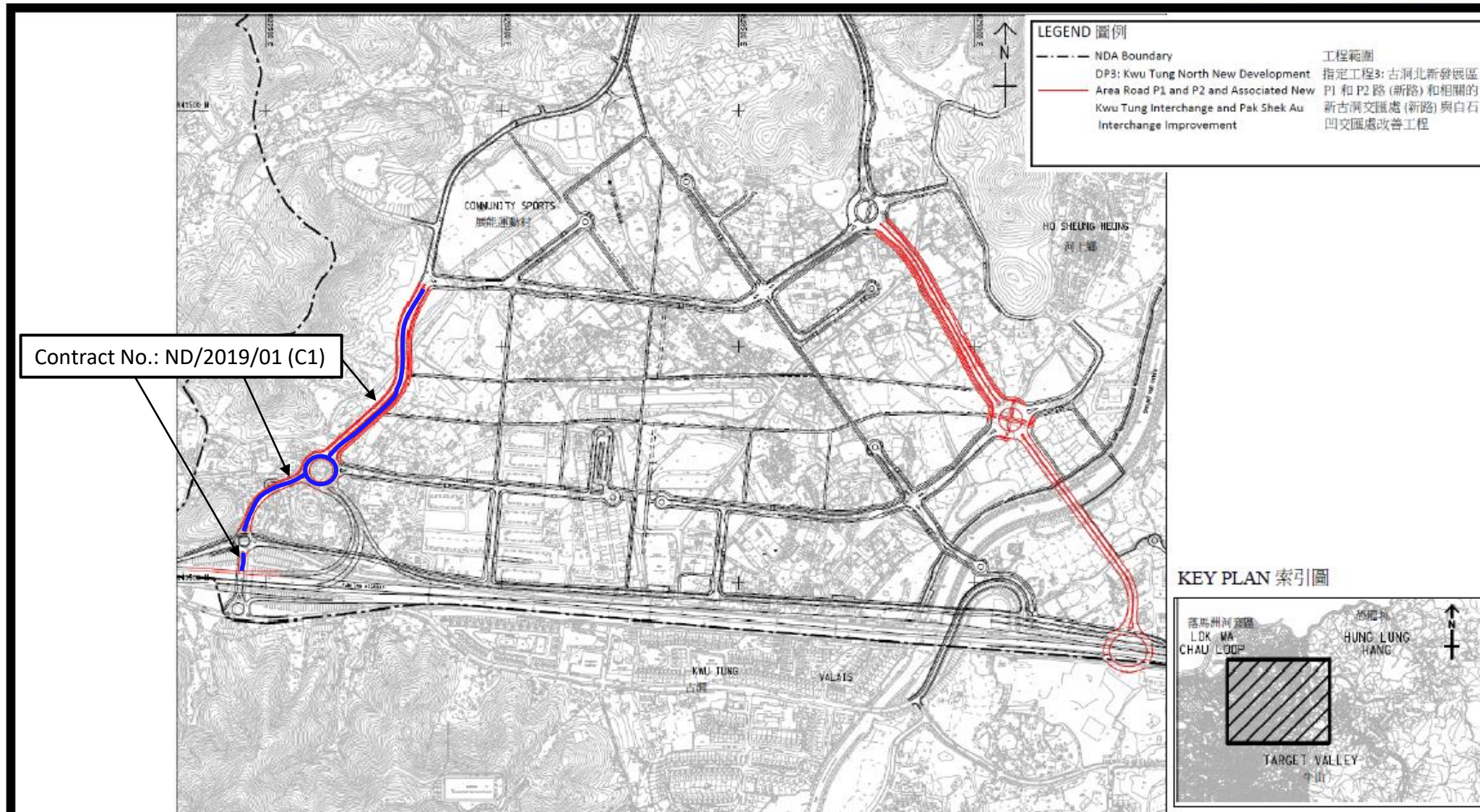


**Figure 13**

**Site Layout Plan of Contract ND/2019/01**

**under EP-467/2013/A**





**Project Title:** Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement  
**工程名稱:** 古洞北新發展區P1和P2路 (新路) 和相關的新古洞交匯處 (新路) 與白石凹交匯處改善工程

**Environmental Permit No:**  
**EP-467/2013/A**  
**環境許可證編號:**  
**EP-467/2013/A**



**Figure 1: Location Plan for Interchange Improvement (Indicative)**  
 (This figure was prepared based on Figure 1.2 of VEP application (No.: VEP-523/2016))

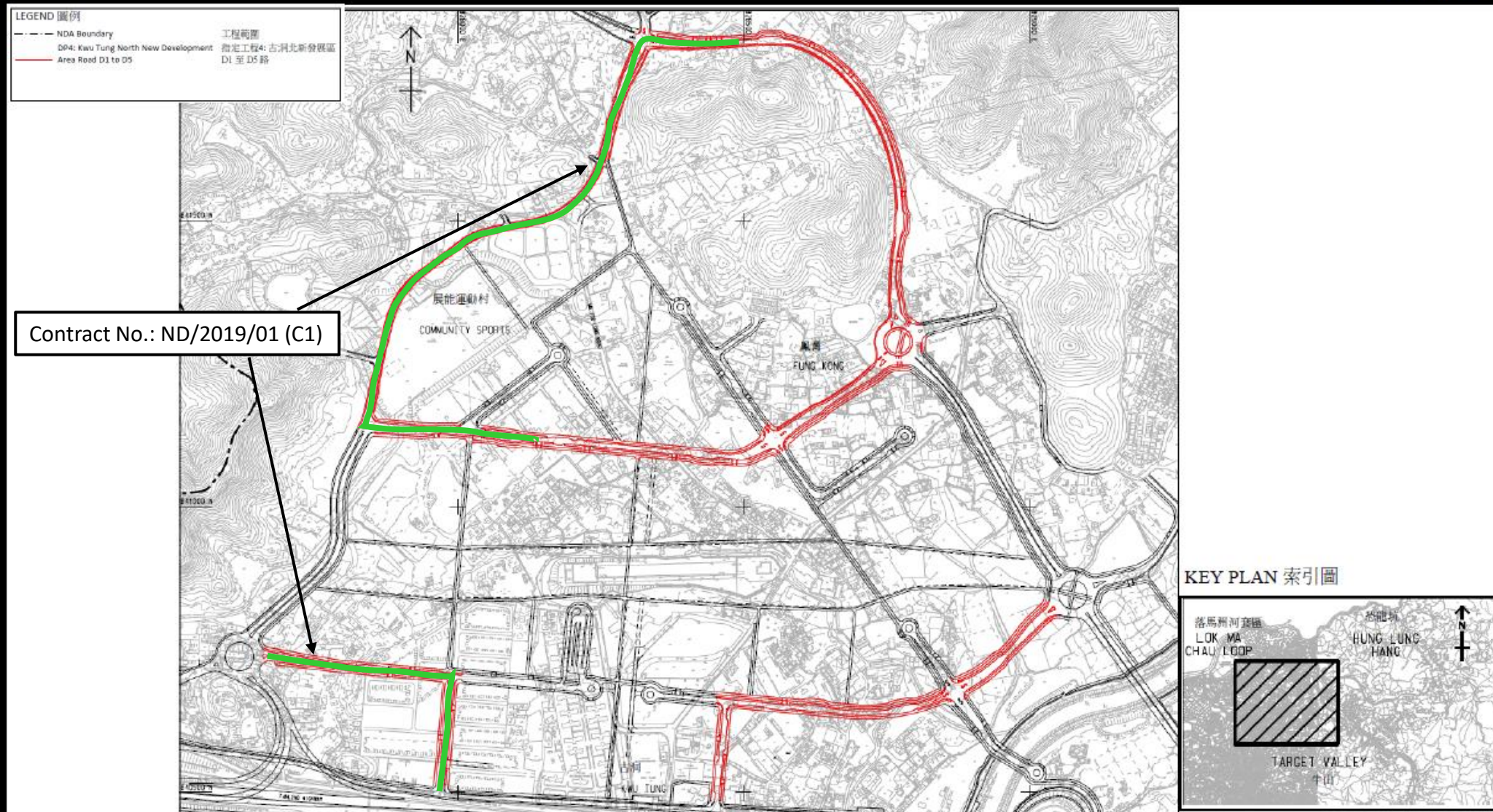
**圖1: 交匯處改善工程位置 (示意圖)**  
 (本圖是根據申請更改環境許可證(編號: VEP-523/2016)圖1.2編制)

**Figure 14**

**Site Layout Plan of Contract ND/2019/01**

**under EP-468/2013/A**





**Project Title:** Kwu Tung North New Development Area Road D1 to D5  
**工程名稱:** 古洞北新發展區D1至D5路

**Environmental Permit No:**  
 EP-468/2013/A  
**環境許可證編號:**  
 EP-468/2013/A



**Figure 1: Location Plan for The Project (Indicative)**

(This figure was prepared based on Figure 1.4 of VEP application (No.: VEP-524/2016))

**圖1：工程項目位置 (示意圖)**

(本圖是根據申請更改環境許可證(編號: VEP-524/2016)圖1.4編制)

**Figure 15**

**Site Layout Plan of Contract ND/2019/03**

**under EP-468/2013/A**



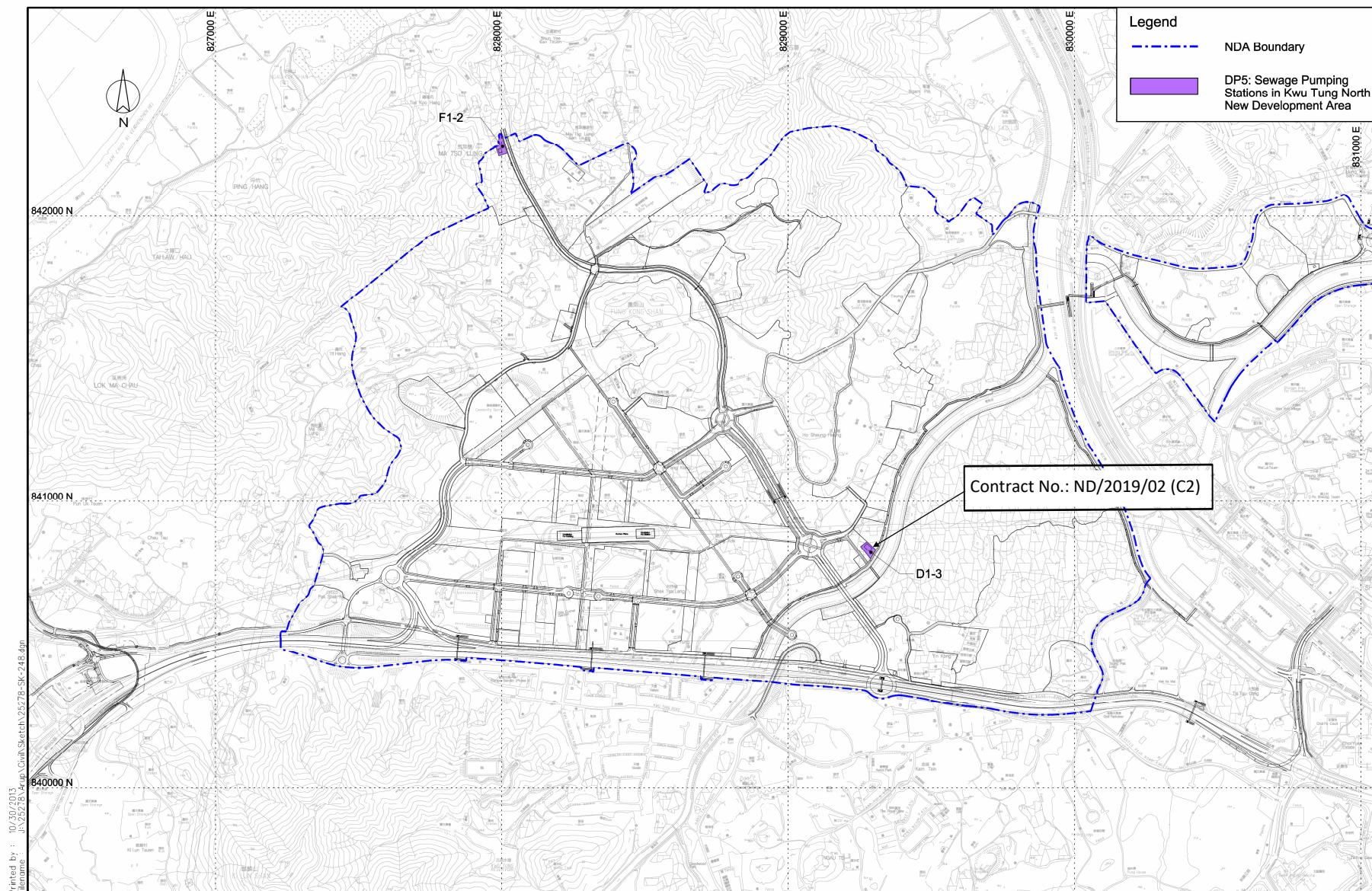




**Figure 16**

**Site Layout Plan of Contract ND/2019/02**

**under EP-469/2013**



**Project Title: Sewage Pumping Stations in Kwu Tung North New Development Area**

**Figure 1: Location Plan for the Proposed Pumping Stations**

(Extracted from Drawing No. SK/248 of North East New Territories New Development Area Planning and Engineering Study)

**Environmental Permit No:  
EP-469/2013**

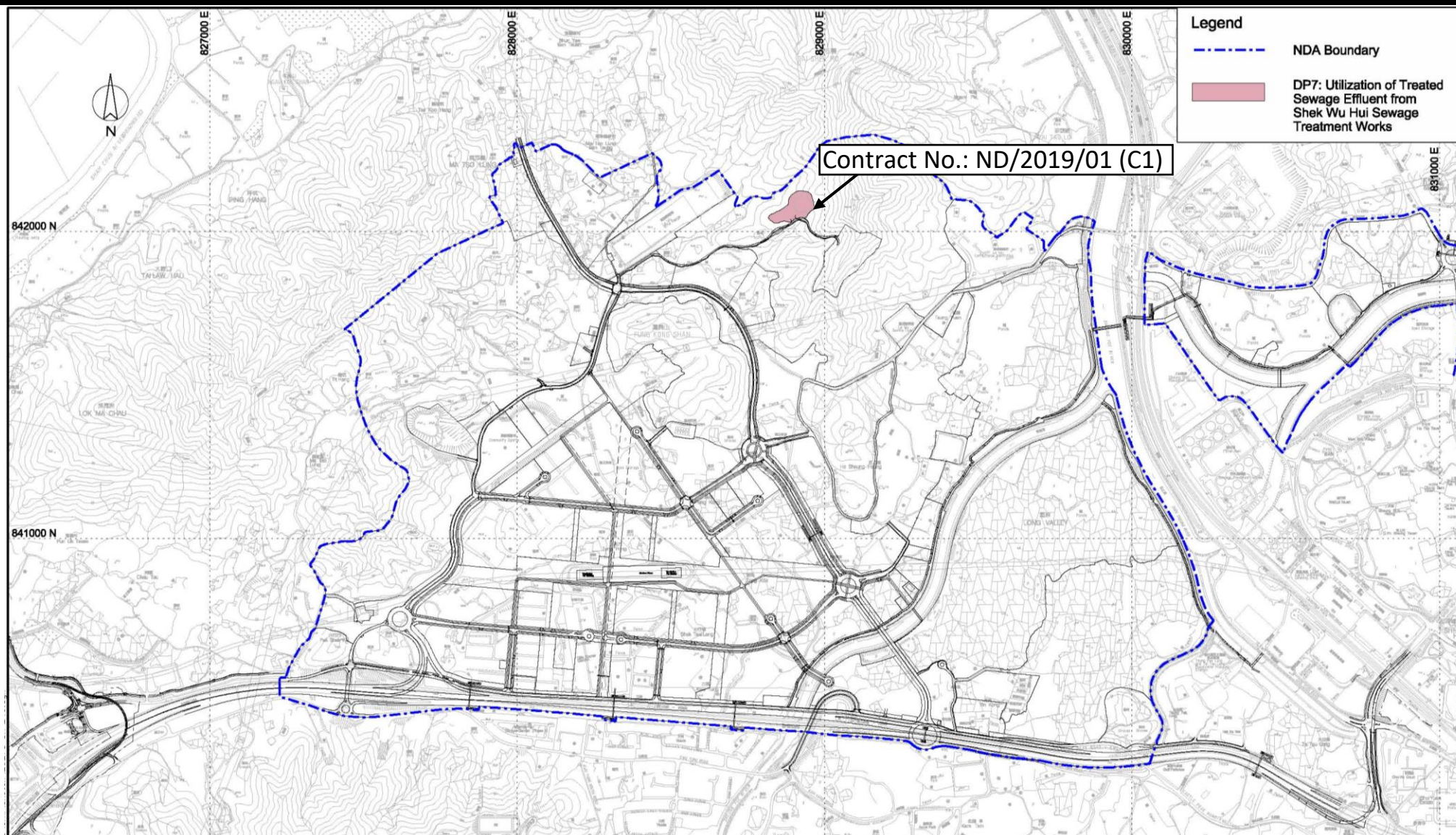


**Figure 17**

**Site Layout Plan of Contract ND/2019/01**

**under EP-470/2013/A**





**Project Title: Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works**

**Figure 1: Location Plan for the Project**

(Extracted from Drawing No. SK/249 of North East New Territories New Development Area Planning and Engineering Study)

**Environmental Permit No:  
EP-470/2013/A**

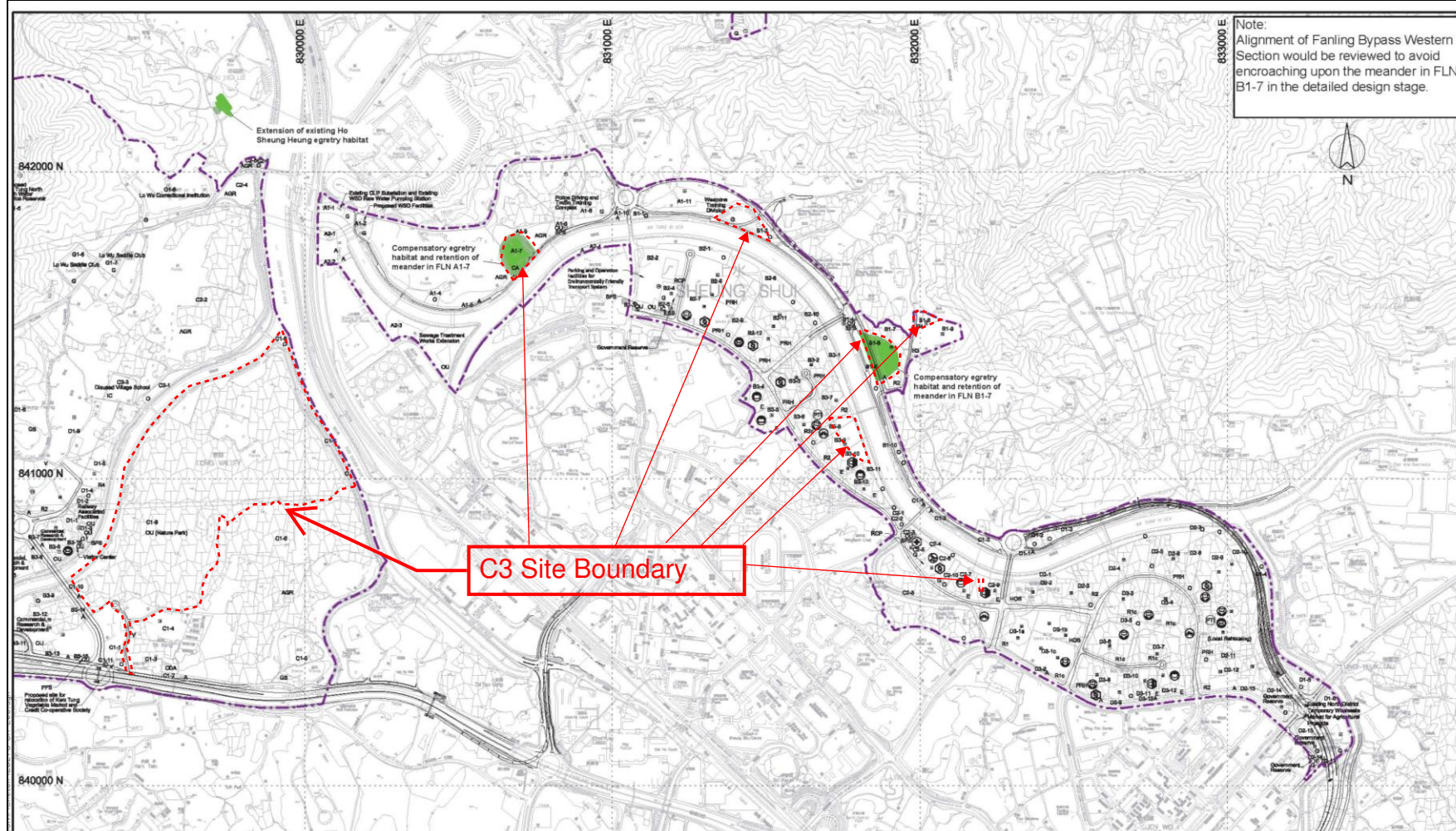


**Figure 18**

**Site Layout Plan of Contract ND/2019/03**

**under EP-473/2013/A**





**Project Title:** Fanling Bypass Eastern Section

**工程名稱:** 粉嶺繞道東段

**Figure 2:** Location of Alternative Egretty Sites and Retained Meanders

**圖 2:** 替代鷺鳥林選址和保留河曲的位置

(Extracted from Drawing No. SK/254 of North East New Territories New Development Area Planning and Engineering Study)

(摘錄自新界東北新發展區規劃及工程研究 圖: SK/254)

**Environmental Permit No:**

**EP-473/2013/A**

**環境許可證編號: EP-473/2013/A**

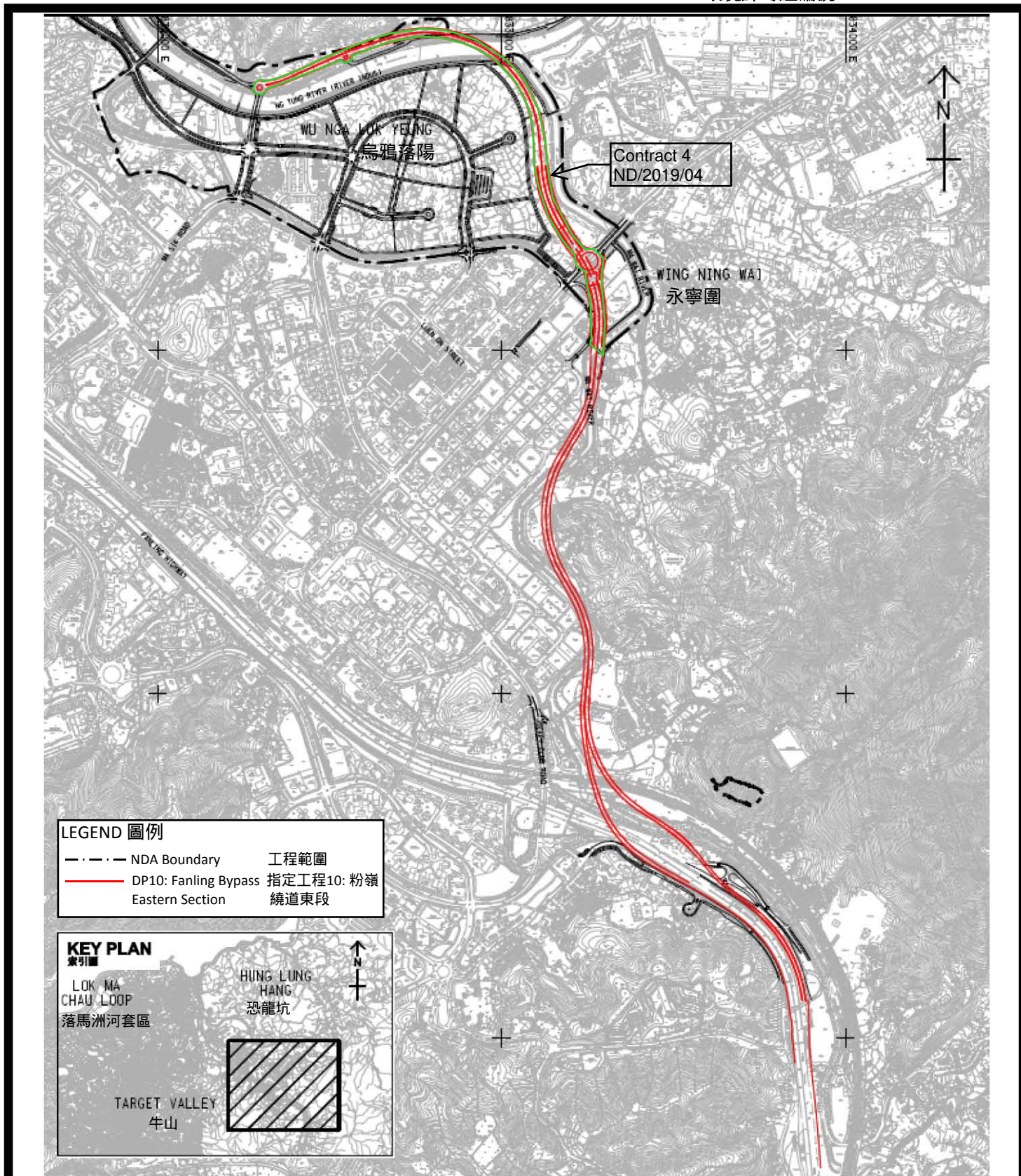


**Figure 19**

**Site Layout Plan of Contract ND/2019/04**

**under EP-473/2013/A**





**Project Title: Fanling Bypass Eastern Section**

**工程名稱: 粉嶺繞道東段**

**Figure 1: Location Plan for the Project (Indicative)**

**圖 1: 工程項目位置 (示意圖)**

This figure was prepared based on Figure 1.1 of VEP application (No.: VEP-526/2016)  
本圖是根據申請更改環境許可證(編號: VEP-526/2016)圖1.1編制

**Environmental Permit No:**

**EP-473/2013/A**

**環境許可證編號:**

**EP-473/2013/A**

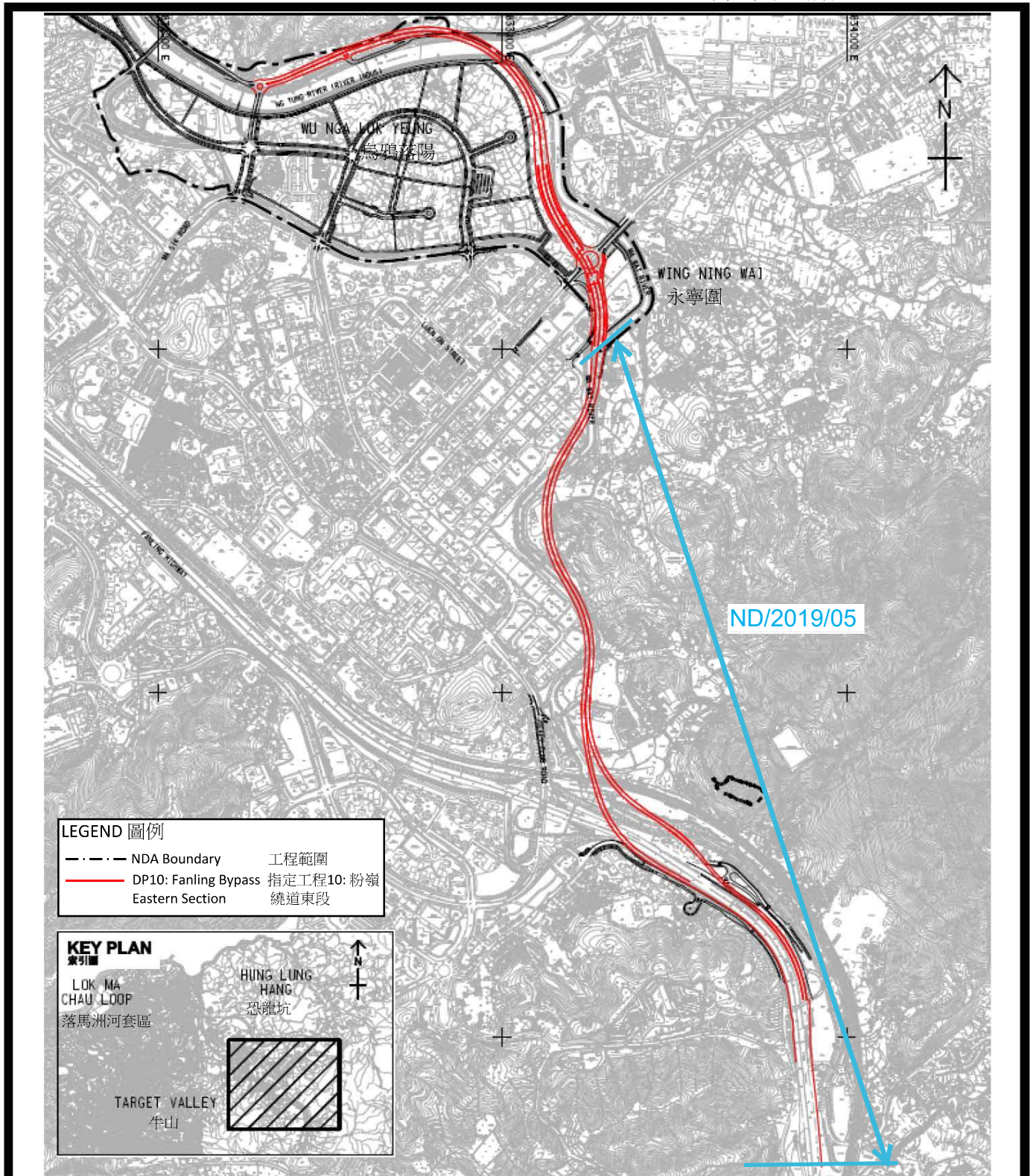


**Figure 20**

**Site Layout Plan of Contract ND/2019/05**

**under EP-473/2013/A**





**Project Title: Fanling Bypass Eastern Section**

工程名稱： 粉嶺繞道東段

**Figure 1: Location Plan for the Project (Indicative)**

圖 1： 工程項目位置 (示意圖)

This figure was prepared based on Figure 1.1 of VEP application (No.: VEP-526/2016)  
本圖是根據申請更改環境許可證(編號: VEP-526/2016)圖1.1編制

**Environmental Permit No:**

EP-473/2013/A

**環境許可證編號:**

EP-473/2013/A

EP-473/2013/A

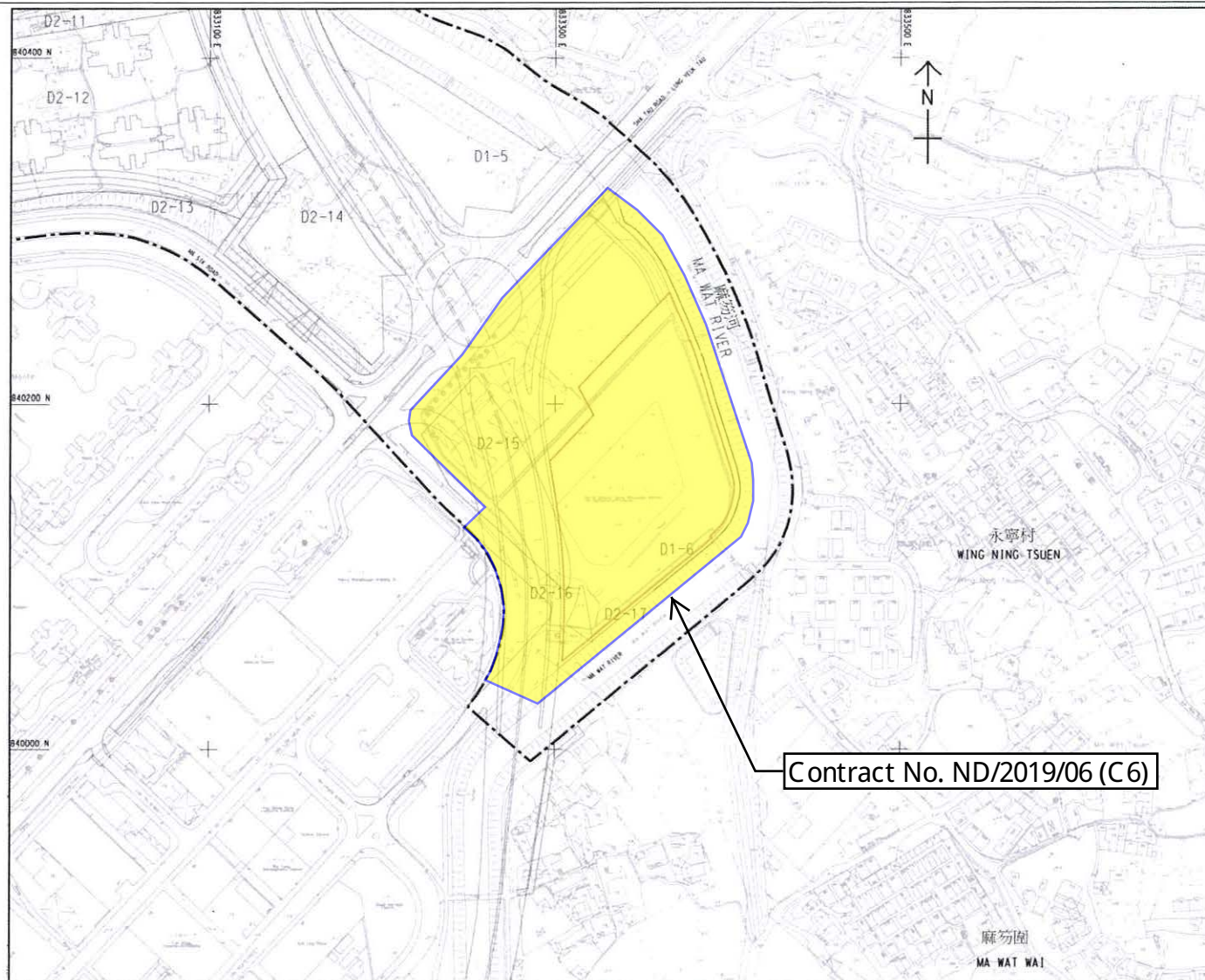


**Figure 21**

**Site Layout Plan of Contract ND/2019/06**

**under EP-475/2013/A**





圖例:

LEGEND:

- 新發展區項目邊界  
NDA PROJECT BOUNDARY
- 最新位置邊界  
LATEST SITE BOUNDARY



**Project Title: NENT - Reprovision of temporary Wholesale Market in Fanling North New Development Area**  
**工程名稱：粉嶺北新發展區重置臨時批發市場**

**Environmental Permit No.: EP-475/2013/A**  
**環境許可證編號：EP-475/2013/A**

### Figure 1: Project Location Plan (Indicative)

### 圖 1：工程項目位置圖（示意圖）

(This figure was prepared based on Figure 1.1 of VEP application (No.: VEP-516/2016))  
 (本圖是根據申請更改環境許可證(編號 VEP-516/2016) 圖 1.1 編制)

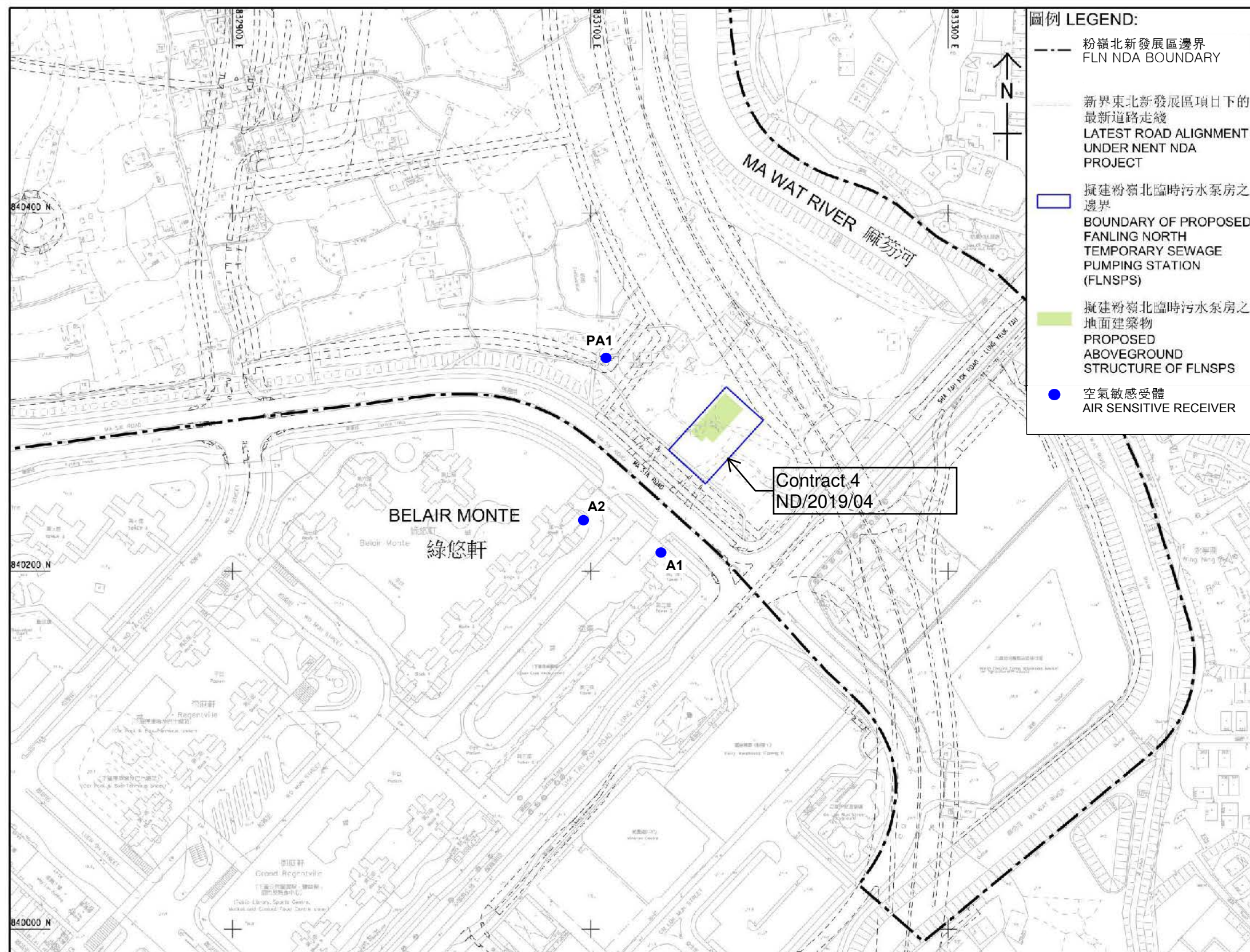


**Figure 22**

**Site Layout Plan of Contract ND/2019/04**

**under EP-546/2017**





**Project Title: Fanling North Temporary Sewage Pumping Station**  
**工程名稱：粉嶺北臨時污水泵房**

**Environmental Permit No.: EP-546/2017**  
**環境許可證編號：EP-546/2017**

**Figure 1: Project Location Plan (Indicative)**  
**圖 1：工程項目位置圖（示意圖）**

(This figure was prepared based on Figure 1.1 of Project Profile No: PP-557/2017  
 (本圖是根據工程項目簡介編號: PP-557/2017 圖 1.1 編制))



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**APPENDIX A**  
**CONSTRUCTION PROGRAMME**

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## **Construction Programme of ND/2019/01**



Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024					
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24	
Revised Programme (2023-11-25) Rev.0																							
2.0 - Site Access Dates																							
AD-1000	Poriton 1a	0	25-Dec-23*		-902	CD(7d)			◆	Poriton 1a													
AD-1020	Portion 1c	0	25-Dec-23*		-718	CD(7d)			◆	Portion 1c													
3.0 - Site Completion Dates																							
3.2 Planned Sectional Work Completeion																							
SC-1130	Section 9 - all works in Area F	0		02-Jan-24*	-483	CD(7d)				◆	Section 9 - all works in Area F												
6.0 - Prelimiaries and General Requirements																							
6.2 - General Submissions																							
GS-1290	Preparation and Submission of Fully Corodinated BIM	1054	21-Aug-20 A	12-Nov-26	-61	CD(7d)																	
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	04-Feb-24	309	CD(7d)																	
GS-1310	Water Supply to WSD for Irrigation System (Road D1-1) - VVW0542 Submission	15	23-Mar-24	06-Apr-24	403	CD(7d)																	
6.3 - Subletting Packages																							
SP-1210	Landscaping Works	18	05-Jun-23 A	11-Jan-24	226	CD(7d)																	
7.0 Construction																							
Section 1																							
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)																							
Remaining Road works in Area H																							
S1P10a-4000	DCS Works by Others (Commencement Date May-2023)	27	20-May-23 A	20-Jan-24	617	CD(7d)																	
Section 3																							
Portion 1a in Area E (Soil Treatment & Interface with HKHS's Contractors)																							
Soil Treatment																							
S3P1a-2020	Backfilling to the formation levels	48	11-Jan-24	09-Mar-24	540	WD(6d)																	
S3P1a-2000	Construct & maintain Temporary drainage	60	01-Mar-23 A	09-Mar-24	540	WD(6d)																	
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed , interim soil to be excavated / treated : 1260m3 / 400m3)	12	01-Mar-23 A	10-Jan-24	318	WD(6d)																	
Section 6B																							
Portion 11b in Area G2 (Soil Treatment)																							
Preparation work/Tree Survey/Site Clearance/GI																							
S6BP11b-1012	Approval & Acceptance of Tree Felling Application	30	19-Nov-23 A	23-Jan-24	201	CD(7d)																	
S6BP11b-1070	Notificatioan and Approval of Asbestos Abatement Programme	30	11-Jan-24	09-Feb-24	214	CD(7d)																	
S6BP11b-1060	Prepare and submit Asbestos Abatement Programme	12	06-Oct-23 A	10-Jan-24	172	WD(6d)																	
S6BP11b-1080	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	36	14-Feb-24	26-Mar-24	172	WD(6d)																	
S6BP11b-1020	Site Clearance & Tree Felling	54	02-Feb-24	12-Apr-24	161	WD(6d)																	
Section 6C																							
Portion 11b in Area G3 (Soil Treatment)																							
Preparation work/Tree Survey/Site Clearance/GI																							
S6CP11b-1012	Approval & Acceptance of Tree Felling Application	30	19-Nov-23 A	23-Jan-24	201	CD(7d)																	
S6CP11b-1070	Notificatioan and Approval of Asbestos Abatement Programme	30	11-Jan-24	09-Feb-24	146	CD(7d)																	
S6CP11b-1060	Prepare and submit Asbestos Abatement Programme	12	06-Oct-23 A	10-Jan-24	116	WD(6d)																	
S6CP11b-1080	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	36	14-Feb-24	26-Mar-24	114	WD(6d)																	

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024				
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
S6CP11b-1020	Site Clearance & Tree Felling	54	02-Feb-24	12-Apr-24	161	WD(6d)																
Section 8																						
S8-1022	Uncharted Artificial Hard Materials Encountered during Construction of Cut-Slope KS34 in Pak Shek (EWN 092) (CNE 128)	0		25-Dec-23	-741	CD(7d)																
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)																						
Soil Treatment																						
S8P2-2020	Backfilling to the formation levels	48	27-Jan-24	26-Mar-24	-513	WD(6d)																
S8P2-2010	Remove soil (original assumed 6898m3) (0/1 EGI completed, interim soil to be excavated / treated : 0m3/0m3) Clean Soil	26	27-Dec-23	26-Jan-24	-513	WD(6d)																
Civil Work																						
Construction of Pak Shek Au Junction																						
S8P2-4100.30	Cut slope KS34 - Construct Maintenance Access	24	28-Feb-24	26-Mar-24	-507	WD(6d)																
S8P2-4100.40	Cut slope KS34 - Construct Slope Drainage	24	28-Feb-24	26-Mar-24	-525	WD(6d)																
S8P2-4100.20	Cut slope KS34 - Row AC, AB & AA Soil Nail & Soil Nail head ( 36 + 55 + 59)	50	27-Dec-23	27-Feb-24	-557	WD(6d)																
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)																						
Preparation work																						
S8P1a-1040	Arsenic Treatment Plan	36	27-Dec-23	07-Feb-24	-531	WD(6d)																
S8P1a-0100	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034) (CE 108)	0		25-Dec-23	-902	CD(7d)																
S8P1a-1015	Ground investigation (4 / 7 GI completed)	12	05-Nov-22 A	10-Jan-24	-516	WD(6d)																
S8P1a-1030	Prepare Arsenic Assessment Report	36	27-Dec-23	07-Feb-24	-531	WD(6d)																
S8P1a-1010	Site clearance & Tree Felling	10	05-Oct-22 A	08-Jan-24	-516	WD(6d)																
S8P1a-0112	Strong Objection for a Grave on the Construction Works in the vicinity of the Road P1-1 and Roundabout C3 at 1 (CNE 109)	0		25-Dec-23	-605	CD(7d)																
S8P1a-0110	Unexpected Long Approval Process for Tech Submission for Works in MTRC Zone Portion 12, 1a & 1b (EWN 090) (CNE 115)	0		25-Dec-23	-621	CD(7d)																
S8P1a-1025	Verification of Ground Condition & Design Review by Project Manager	60	11-Jan-24	10-Mar-24	-636	CD(7d)																
Soil Treatment																						
S8P1a-2020	Backfilling to the formation levels	35	11-Mar-24	24-Apr-24	-355	WD(6d)																
S8P1a-2010	Remove soil (original assumed 10988m3) (0 / 6 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	08-Feb-24	09-Mar-24	-531	WD(6d)																
Civil Work																						
South of Roundabout C3																						
S8P1a-2340	Backfill to Road Formation	120	23-Jan-24	21-Jun-24	-217	WD(6d)																
S8P1a-2050.10	Construction of Drainage SMH KT 1106 to 1109 ( 0 / 4 M/H complete)	48	21-Feb-24	20-Apr-24	-203	WD(6d)																
S8P1a-2300	Construction of Drainage SMH KT 1103 to 1105 ( 2 / 3 M/H complete)	10	03-May-23 A	08-Jan-24	-210	WD(6d)																
S8P1a-2320	Construction of Sewerage FMH KT 3.01A to 3.01B ( 0 / 2 M/H complete)	17	28-Sep-23 A	16-Jan-24	-217	WD(6d)																
S8P1a-2330	Laying Fresh Watermains CHAA 150 to CH 266	36	17-Jan-24	01-Mar-24	-152	WD(6d)																
S8P1a-2332	Pressure test for Fresh watermains	18	02-Mar-24	22-Mar-24	-74	WD(6d)																
S8P1a-2050.00	Site Formation for Drainage Works SMH KT 1106 to 1109 ( 0 / 4 M/H complete)	18	27-Jan-24	20-Feb-24	-203	WD(6d)																
S8P1a-2070	Slopeworks for new feature KS34 - Slope Drainage and Maintenance Access	64	09-Mar-24	29-May-24	-132	WD(6d)																
S8P1a-2042	Slopeworks for new feature KS34 Lower Bench - Remaining Cut Slope	15	27-Jan-24	16-Feb-24	-203	WD(6d)																
S8P1a-2050	Slopeworks for new feature KS34 Lower Bench - Soil Nail Installation & Soil Nail Head Rows BC+BB+BA (7 + 7 +7 Nos)	18	17-Feb-24	08-Mar-24	-132	WD(6d)																
S8P1a-2032	Slopeworks for new feature KS34 Upper Bench - Soil Nail Installation & Soil Nail Head Rows BD+BE (30 + 32 Nos)	0	27-Oct-23 A	27-Dec-23	-203	WD(6d)																
Roundabout C3																						
S8P1a-5500	DCS Works by Others (Anticipated Start Date - 15-02-24)	150	15-Feb-24*	13-Jul-24	-115	CD(7d)																
S8P1a-5230	Laying Fresh Watermains CHA 365 to CHA 400	48	18-Jan-24	16-Mar-24	-105	WD(6d)																
S8P1a-5020	Retaining wall KW17 - Construction of retaining wall KW17 (0 / 7 bays complete)	124	11-Mar-24	10-Aug-24	-313	WD(6d)																
S8P1a-5010	Retaining wall KW17 - Excavation for retaining wall KW17	24	08-Feb-24	09-Mar-24	-313	WD(6d)																
S8P1a-5000	Site clearance	18	18-Jan-24*	07-Feb-24	-313	WD(6d)																
S8P1a-5220	Underground Roundabout Drainage M1.82 to M1.84 and Primary drainage pipe laying (0 / 6 Completed)	60	04-Mar-24	18-May-24	-207	WD(6d)																
S8P1a-5212	Underground Roundabout Drainage SMHKT 1011 and Pipe Laying to SKT 1103 (0 / 1 Completed)	36	18-Jan-24	02-Mar-24	-207	WD(6d)																



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Planned Work

Critical Work

Actual Work

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Milestone

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Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-12)


25-Dec-2331-Dec-2023

Project ID: ND201901-RP-46  
Lauyout: ND201901-3MRP with logo  
Page 2 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024				
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
S8P1a-5210	Underground Roundabout Drainage SMHKT 1013 and Pipe Laying to SKT 1103A (0 / 1 Completed)	18	01-Aug-23 A	17-Jan-24	-313	WD(6d)																
	Within MTRC Protection Zone																					
	S8P1a-4210	Construction of Sewerage FMH KT 3.01D to 3.01E ( 0 / 2 M/H complete)	48	18-Jan-24	16-Mar-24	-207	WD(6d)															
	S8P1a-6000	DCS Works by Others (Anticipated Start Date - 15-02-24)	150	15-Feb-24*	13-Jul-24	-175	CD(7d)															
	S8P1a-4020	New Formed Cut Slope KS53 to Road Formation level	24	11-Mar-24	11-Apr-24	-531	WD(6d)															
	S8P1a-4010	Site Clearance & Tree Felling	24	08-Feb-24	09-Mar-24	-531	WD(6d)															
	S8P1a-4220	Underground Roundabout Drainage M1.81 to M1.83 and Primary drainage pipe laying (0/ 3 Completed)	48	18-Mar-24	18-May-24	-207	WD(6d)															
	Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)																					
	Preparation work																					
	S8P3-0106	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	-61	CD(7d)															
Civil Work																						
S8P3-3002	Backfill to Road Formation Level	30	11-Jan-24	17-Feb-24	-346	WD(6d)																
S8P3-3000	Construct & maintain Temporary drainage	472	27-Dec-23	02-Aug-25	-452	WD(6d)																
S8P3-3005.	New Feature KS53 - Cut slope	68	19-Feb-24	13-May-24	-346	WD(6d)																
S8P3-3010.320	Underground Fresh watermain CHA 612 - CHA 620	12	27-Dec-23	10-Jan-24	-346	WD(6d)																
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S8P5-0102	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Dec-23	-483	CD(7d)																
S8P5-0108	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Dec-23	-448	CD(7d)																
S8P5-0110	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	-55	CD(7d)																
S8P5-0000	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0		25-Dec-23	-115	CD(7d)																
Construction according to CSD for Alternative on Bored Pile Wall																						
S8P5-2005	Construct & maintain Temporary drainage	417	25-Oct-23 A	28-May-25	-367	WD(6d)																
Civil Work																						
S8P5-4004.50	Backfill to Road Formation (South bound Carriageway CH 400 - CH 530)	24	15-Mar-24	16-Apr-24	-207	WD(6d)																
S8P5-4060	Pipe Jacking across DJ watermain - 2 Nos 1200 dia Conc Pipe	64	08-Mar-24	28-May-24	-367	WD(6d)																
S8P5-4048.20	Pipe Jacking across DJ watermain - Jacking Pit Excavation	28	27-Dec-23*	29-Jan-24	-367	WD(6d)																
S8P5-4050	Pipe Jacking across DJ watermain - Mobilization and Set Up Pipe Jacking Equipment (CNE 060, EC-1086)	30	30-Jan-24	07-Mar-24	-367	WD(6d)																
S8P5-4048.10	Pipe Jacking across DJ watermain - Received Instructions	0		27-Dec-23*	-706	WD(6d)																
S8P5-4004.40	Remaining Secondary Drainage (South bound Carriageway CH 400 - CH 530)	20	21-Feb-24	14-Mar-24	-207	WD(6d)																
S8P5-4004.30	Underground Fresh & Flushing watermains (South bound Carriageway) CHD 332 to 345 & CHQ 332 to 350	42	29-Dec-23	20-Feb-24	-207	WD(6d)																
S8P5-4012	Underground utilities (South bound CH 400 - CH 530)	48	15-Mar-24	16-May-24	-207	WD(6d)																
Portion 6a & 6b in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)																						
S8P6a-0002	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Dec-23	-483	CD(7d)																
S8P6a-0005	Further Changes to the Works Information for the Construction of DCS Pipes at Road D4-1 (PMI 155 CE 157) (CNE 095)	0		25-Dec-23	-483	CD(7d)																
Preparation work/Tree Survey/Site Clearance/GI																						
S8P6a-1010	Site Clearance & Tree Felling	7	15-Feb-20 A	04-Jan-24	-149	WD(6d)																
Construction according to CSD for Alternative on Bored Pile Wall																						
S8P6a-2004	Construct & maintain Temporary drainage	481	27-Dec-23	13-Aug-25	-395	WD(6d)																
Civil Work																						
S8P6a-7040	KB01 (Bay 1 to 12) - Backfilling to formation level	36	28-Sep-23 A	07-Feb-24	-76	WD(6d)																
S8P6a-7060	KB01 (Bay 1 to 12) - Construct Drainage & Maintenance Access	24	01-Feb-24	02-Mar-24	-76	WD(6d)																
S8P6a-7030	Road D4 - Backfill to Road Formation CH 290 to CH 400	71	24-Nov-23 A	22-Mar-24	-153	WD(6d)																
S8P6a-6010	Road D4 - Laying DCS Pipes (CH 156 to CH 168)	26	26-Jan-24	28-Feb-24	-395	WD(6d)																
S8P6a-7012	Road D4 - Testing and Commissioning (T&C) for DCS Works CH 230 to CH 550	50	31-Jan-24	20-Mar-24	-76	CD(7d)																
S8P6a-6012	Road D4 -Construct DCS Chamber @CH 164.7	25	22-Nov-23 A	25-Jan-24	-395	WD(6d)																



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Planned Work

Critical Work

Actual Work

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Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-12)

25-Dec-2331-Dec-2023


Project ID: ND201901-RP-46  
Lauyout: ND201901-3MRP with logo  
Page 3 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY



Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024					March 2024			
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
	S8P6a-6022	Road D4 Underground Fresh Watermain CHA 950 to CH 986	24	29-Feb-24	27-Mar-24	-387	WD(6d)															
	S8P6a-6020	Road D4 Underground Fresh Watermain Chamber Construction	22	29-Feb-24	25-Mar-24	-395	WD(6d)															
	S8P6a-6024	Road D4 Underground Secondary Drainage M2.40-1, M2.40, M2.41-1	14	29-Feb-24	15-Mar-24	-387	WD(6d)															
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)																						
	S8P9b-3128	Additional Sewerage Pipes clash with the Proposed Watermains along Road D4 and D5 (EWN 065)	0		25-Dec-23	-852	CD(7d)															
	S8P9b-3900	Additional Works for Installation of Watermains by Trenchless Construction Method along Road D4 (EWN 095) (CNE 136)	0		25-Dec-23	-208	CD(7d)															
	S8P9b-3112	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051) (CE 150)	0		25-Dec-23	-866	CD(7d)															
	S8P9b-3142	Delay to the Diversion of Existing Fresh Watermains along/near Ma Tso Lung Road at Portion 9b of the Site (EWN 076)	0		25-Dec-23	-846	CD(7d)															
	S8P9b-3150	Delay to the Diversion/ Modification of Existing HKT Pillar Boxes & Associated Ducts Ma Tso Lung Road Por. 9b (CNE 096)	0		25-Dec-23	-846	CD(7d)															
	S8P9b-3140	Delay to the Diversion/Modification of Existing HKT Pillar Boxes Ma Tso Lung Rd (EWN 075)	0		25-Dec-23	-846	CD(7d)															
	S8P9b-3144	Delay to the Relocation of Existing Fire Hydrant in Ma Tso Lung Road at Portion 9b of the Site (EWN 077) (CNE 129)	0		25-Dec-23	-846	CD(7d)															
	S8P9b-0004	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Dec-23	-852	CD(7d)															
	S8P9b-0003	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Dec-23	-703	CD(7d)															
	S8P9b-3148	Further Changes to the Works Information for the Construction of DCS Pipes at Road D4-1 (PMI 155 CE 157) (CNE 095)	0		25-Dec-23	-703	CD(7d)															
	S8P9b-3126	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Dec-23	-866	CD(7d)															
	S8P9b-3154	Late Provision of Add Work Area for the Construction of Drainages and Slopes Outside Site Boundary Portion 9b (CNE 098)	0		25-Dec-23	-322	CD(7d)															
	S8P9b-3130	Part of Portion 9b of the Site (near eastern end of Road D5) occupied by the Local Villagers (EWN 066)	0		25-Dec-23	-258	CD(7d)															
	S8P9b-3132	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	-367	CD(7d)															
	S8P9b-3156	Provision of Spare Pipes for the Proposed Watermains adopting Trenchless Construction Method at Road D4 (EWN 091)	0		25-Dec-23	-866	CD(7d)															
	S8P9b-3146	Revised Sewerage System along Road D4 and D5 at Portion 9b of the Site (CNE 083)	0		25-Dec-23	-846	CD(7d)															
	S8P9b-3124	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0		25-Dec-23	-549	CD(7d)															
	S8P9b-3158	Uncharted Watermain Encountered during Construction of Proposed UU along existing Ma Tso Lung Road (EWN 094) (CNE 135)	0		25-Dec-23	-549	CD(7d)															
	S8P9b-3152	Unrecognized Construction Works for Newly Underground Cables and Facilities conducted by CLP at Portion 9b (EWN 083)	0		25-Dec-23	-866	CD(7d)															
Preparation work/Tree Survey/Site Clearance/GI																						
	S8P9b-0005	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011) (CE 022)	0		25-Dec-23	-846	CD(7d)															
	S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Dec-23	-258	CD(7d)															
	S8P9b-1010	Site clearance & Tree Felling	9	25-Jun-22 A	06-Jan-24	-689	WD(6d)															
Civil Work																						
	S8P9b-3000	Construct & maintain Temporary drainage	786	27-Dec-23	21-Aug-26	-706	WD(6d)															
	S8P9b-3012.20	Duration of TTA	348	25-Jan-24	06-Jan-25	-408	CD(7d)															
	S8P9b-3101	Duration of TTA	129	27-Dec-23	05-Jun-24	-397	WD(6d)															
	S8P9b-3262.01	Jacking Pit - Driving pipe pile for jacking pipe	54	27-Dec-23	02-Mar-24	-706	WD(6d)															
	S8P9b-3262.02	Jacking Pit - Excavation & ELS works for cofferdam (11m depth)	80	04-Mar-24	12-Jun-24	-706	WD(6d)															
	S8P9b-3108	Ma Tso Lung Road D4-2 - Construction Underground Drainage M 3.91 pipe to KT 7110 and KT 7109 to M.395 (1/ 4 Complete)	23	03-Oct-23 A	23-Jan-24	-450	WD(6d)															
	S8P9b-3108.10	Ma Tso Lung Road D4-2 - Laying Watermains (CH 994 to Rd W1)	29	25-Sep-23 A	30-Jan-24	-456	WD(6d)															
	S8P9b-3108.20	Ma Tso Lung Road D4-2 -DCS Works by Others (CH 994 to Rd W1) (Anticipated Commencement Date Nov-2023)	90	31-Jan-24	29-Apr-24	-558	CD(7d)															
	S8P9b-3262.110	Receiving Pit - Approval of Watermain Chamber Design by WSD	0	27-Dec-23*		-670	WD(6d)															
	S8P9b-3262.11	Receiving Pit - Construct Temporary Road E2 and Implement TTA	17	27-Dec-23*	16-Jan-24	-687	WD(6d)															
	S8P9b-3262.12	Receiving Pit - Driving Pipe Pile	60	25-Jan-24	11-Apr-24	-694	WD(6d)															
	S8P9b-3262.111	Receiving Pit - Duration of TTA	833	17-Jan-24	28-Apr-26	-875	CD(7d)															
	S8P9b-3057.14	Road D4 (CH 400 - CH 630) - Backfill to Road Formation	48	05-Feb-24	08-Apr-24	-206	WD(6d)															
	S8P9b-3057.08	Road D4 (CH 400 - CH 630) - Underground Fresh Watermains	33	12-Jan-23 A	03-Feb-24	-206	WD(6d)															
	S8P9b-3057.10	Road D4 (CH 400 to CH 630) - Laying DCS Pipes	29	31-May-23 A	30-Jan-24	-202	WD(6d)															
	S8P9b-3010	Road D4 (CH 780 to CH 970) - Construction of Underground Drainage SMH KT5009 to SMH KT5014 (4/6 MH Complete)	0	28-Oct-23 A	27-Dec-23	-689	WD(6d)															
	S8P9b-3022.10	Road D4 (CH 780 to CH 970) - Construction of Underground Drainage SMH KT5015 to SMH KT5019 (0/7 MH Complete)	38	26-Feb-24	13-Apr-24	-218	WD(6d)															
	S8P9b-3012.10	Road D4 (CH 780 to CH 970) - Backfill & Construct Temp Road	19	03-Jan-24	24-Jan-24	-694	WD(6d)															
	S8P9b-3014	Road D4 (CH 780 to CH 970) - Implement TTA and Road Diversion	0		24-Jan-24	-694	WD(6d)															



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Actual Work

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Milestone

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Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-12)


25-Dec-2331-Dec-2023

Project ID: ND201901-RP-46  
Lauyout: ND201901-3MRP with logo  
Page 4 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY

Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024					March 2024			
								10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
	S8P9b-3016	Road D4 (CH 780 to CH 970) - Laying DCS Pipes	166	25-Jan-24	17-Aug-24	-329	WD(6d)																
	S8P9b-3022.00	Road D4 (CH 780 to CH 970) - Laying Sewerage Pipe FMH 7.13 to 7.14	38	25-Jan-24	12-Mar-24	-218	WD(6d)																
	S8P9b-3012	Road D4 (CH 780 to CH 970) - Laying Watermains Before TTA	16	13-Sep-23 A	15-Jan-24	-694	WD(6d)																
	S8P9b-6090	Road D4 - New Formed Sloping Ground KS21 Compact fill	48	05-Mar-24	04-May-24	-40	WD(6d)																
	S8P9b-3262	Road D4 Across DJ Watermain - Approval of Watermain Chamber Design by WSD	0	27-Dec-23*		-706	WD(6d)																
	S8P9b-3058.20	Road D5 - DCS Works by Others Portion A1 (Commencement Date Jul-2023)	28	13-Jul-23 A	21-Jan-24	-252	CD(7d)																
	S8P9b-3058.24	Road D5 - DCS Works by Others Portion A2 (Commencement Date Aug-2023)	28	07-Aug-23 A	21-Jan-24	-252	CD(7d)																
	S8P9b-3058.22	Road D5 - DCS Works by Others Portion B (Commencement Date Jul-2023)	27	13-Jul-23 A	20-Jan-24	-297	CD(7d)																
	S8P9b-3058.105	Road D5 - Laying Remaining Watermains (CH D & CH QB) After DCS Works	36	22-Jan-24	06-Mar-24	-241	WD(6d)																
	S8P9b-3058.100	Road D5 - Laying Watermains (CH PA, CH ZB & CH H)	25	25-Oct-23 A	25-Jan-24	-209	WD(6d)																
	S8P9b-6080	Road D5 - New Formed Sloping Ground KS20 Cut	48	27-Dec-23	24-Feb-24	-152	WD(6d)																
	S8P9b-7080	Road D5 - New Formed Sloping Ground KS20 Cut - Hydroseeding	12	26-Feb-24	09-Mar-24	-152	WD(6d)																
	S8P9b-3058.110	Road D5 - Underground Utilities by others	36	07-Mar-24	22-Apr-24	-241	WD(6d)																
	S8P9b-3036	Road W1 (CH100 to CH310) - Road Works	31	23-Nov-23 A	04-Mar-24	-208	WD(6d)																
	S8P9b-3030.04	Road W1 (CH100 to CH310) - Pressure test for Fresh & Flushing watermains	24	27-Dec-23	24-Jan-24	-208	WD(6d)																
	S8P9b-6100	Road W1 - New Formed Sloping Ground KS22 Compact fill	48	05-Mar-24	04-May-24	-107	WD(6d)																
	S8P9b-6110	Road W1 - New Formed Sloping Ground KS23 Compact fill	48	05-Mar-24	04-May-24	-107	WD(6d)																
	S8P9b-3001.04	Slopeworks for new feature KS19 - Berm, Stairs & Maintenance Access Construction	88	27-Dec-23	16-Apr-24	-184	WD(6d)																
	S8P9b-3262.100	Underground Primary Drainage Works SMHKT 5005 - KT 5007b (0 / 3 MH complete)	72	04-Mar-24	01-Jun-24	-250	WD(6d)																
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)																							
	S8P8a-1100	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005 (CE 019)	0		25-Dec-23	-611	CD(7d)																
	S8P8a-1106	Design Change on Road W1 (EWN 025)	0		25-Dec-23	-109	CD(7d)																
	S8P8a-3090	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0		25-Dec-23	-198	CD(7d)																
Preparation work/Tree Survey/Site Clearance/GI																							
	S8P8a-1035	Remaining Ground investigation (0/ 1 GI completed) to Fresh Water Service Reservoir	12	27-Dec-23	10-Jan-24	-297	WD(6d)																
Forming Site Access and Site Formation																							
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)																							
	S8P8a-1160	General excavation for remaining of Road W1	36	11-Jun-20 A	07-Feb-24	-321	WD(6d)																
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying & road																							
	S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-Dec-23	-611	CD(7d)																
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)																							
Civil Works																							
	S8K8-1040	Backfilling (6559m3)	108	01-Feb-24	17-Jun-24	-153	WD(6d)																
	S8K8-1005	Construct & maintain Temporary drainage	138	27-Dec-23	17-Jun-24	-153	WD(6d)																
	S8K8-1038	Install Watermains inside Chambers	30	22-Feb-23 A	31-Jan-24	-153	WD(6d)																
	S8K8-1160	Roof - Pond Roof for Roof & Draiange Water Tightness Test	12	29-Feb-24	13-Mar-24	-88	WD(6d)																
	S8K8-1170	Roof - Roof & Draiange Water Tightness Test	12	14-Mar-24	25-Mar-24	-110	CD(7d)																
	S8K8-1120	Tank No. 2 - Fill up Tank No. 2 for Water Tightness Test	0	16-Nov-23 A	25-Nov-23 A		WD(6d)																
	S8K8-1130	Tank No. 2 - Water Tightness Test	14	25-Dec-23*	07-Jan-24	-18	CD(7d)																
	S8K8-1140	Whole Structure - Fill up Tank No.1 & 2 for Water Tightness Test	30	08-Jan-24	14-Feb-24	-88	WD(6d)																
	S8K8-1150	Whole Structure - Tank No. 1 & 2 Water Tightness Test	14	15-Feb-24	28-Feb-24	-110	CD(7d)																
E&M Works																							
	S8K8-2010	Design and Approval for E&M works for KTN FLWSR	24	01-Feb-21 A	17-Jan-24	-160	CD(7d)																
	S8K8-2050	Installation of E&M equipment for KTN FLWSR	200	20-Jan-24	23-Sep-24	-175	WD(6d)																
	S8K8-2030	Procurement of E&M equipment for KTN FLWSR	54	15-Aug-22 A	03-Mar-24	-160	CD(7d)																
	S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	48	01-Feb-21 A	10-Feb-24	-160	CD(7d)																
	S8K8-2040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for KTN FLWSR	120	27-Dec-23	25-May-24	-175	WD(6d)																



Build King – Richwell Engineering  
Joint Venture

Planned Work

Critical Work

Actual Work

◆

Milestone

◆

Milestone Critical

Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-12)

25-Dec-23

31-Dec-2023

Project ID: ND201901-RP-46  
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Page 5 of 16

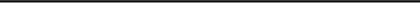
THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY



Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024							
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24			
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)																									
S8K8-6044	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)	0		25-Dec-23	-284	CD(7d)			◆	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)															
S8K8-6034	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0		25-Dec-23	-284	CD(7d)			◆	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)															
Civil Works																									
S8K8-1030	Back Filling for Construction of Inlet Chamber	12	27-Dec-23	10-Jan-24	-168	WD(6d)																			
S8K8-3000	Construct & maintain Temporary drainage	260	27-Dec-23	11-Nov-24	-168	WD(6d)																			
S8K8-1032	Construction of Inlet Chamber	48	11-Jan-24	09-Mar-24	-168	WD(6d)																			
S8K8-3056	Grout block work	6	02-Jan-24	08-Jan-24	-494	WD(6d)																			
S8K8-3038	Install Watermains inside Chambers	100	11-Mar-24	13-Jul-24	-168	WD(6d)																			
S8K8-3055	Pipe Pile construction (2 / 75 Completed)	0	24-Nov-23 A	02-Jan-24	-494	WD(6d)																			
S8K8-3052.40	Road W5 - Cut Slope & Install Soil Nail Row D & C (54 Nos) (Stage 2)	12	14-Jan-24	25-Jan-24	-562	CD(7d)																			
S8K8-3052.30	Road W5 - Cut Slope & Install Soil Nail Row F & E (44 Nos) (Stage 2)	12	02-Jan-24	13-Jan-24	-562	CD(7d)																			
S8K8-3052.20	Road W5 - Cut Slope & Install Soil Nail Row A (47 Nos) (Stage 1)	8	18-Nov-23 A	01-Jan-24	-611	CD(7d)																			
S8K8-3052.50	Road W5 - Cut Slope & Install Soil Nail Row A (54 Nos) (Stage 2)	12	26-Jan-24	06-Feb-24	-562	CD(7d)																			
S8K8-3250	Road W5 - Interface Slope between KS47 and Road W5 Slope	72	20-Mar-24	19-Jun-24	-397	WD(6d)																			
S8K8-3040.10	Tank No. 1 - Fill up Tank No. 1 for Water Tightness Test & Water Sterility Test	42	27-Dec-23	17-Feb-24	-99	WD(6d)																			
S8K8-3040.20	Tank No. 1 - Water Tightness Test & Water Sterility Test	14	18-Feb-24	02-Mar-24	-123	CD(7d)																			
S8K8-3040.30	Tank No. 2 - Fill up Tank No. 2 for Water Tightness Test & Water Sterility Test	42	04-Mar-24	25-Apr-24	-100	WD(6d)																			
S8K8-3060	Up Hill Redieving Pit - Excavation & Construction	62	09-Jan-24	23-Mar-24	-497	WD(6d)																			
E&M Works																									
S8K8-4010	Design and Approval for E&M works for KTN FWSR	24	20-Dec-21 A	17-Jan-24	-206	CD(7d)																			
S8K8-4050	Installation of E&M equipment for KTN FWSR	200	06-Feb-24	10-Oct-24	-189	WD(6d)																			
S8K8-4030	Procurement of E&M equipment for KTN FWSR	54	15-Aug-22 A	04-Apr-24	-230	CD(7d)																			
S8K8-4020	Submission and Approval of E&M plants & materials for KTN FWSR	48	15-Mar-22 A	10-Feb-24	-230	CD(7d)																			
S8K8-4040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for KTN FWSR	140	27-Dec-23	19-Jun-24	-189	WD(6d)																			
Remaining pipe laying work and roadworks within Road W1 & W2																									
S8K8-4100	Road W1 - Construction of Drainage Manhole SMH KT 8105 to 8103 ( 0 / 8 M/H complete)	72	15-May-23 A	23-Mar-24	-334	WD(6d)																			
S8K8-4200	Road W2 - Construction of Drainage Manhole SMH KT 8104A to 8002 ( 0 / 6 M/H complete)	120	03-Feb-24	04-Jul-24	-232	WD(6d)																			
Remaining Civil Work in Portion 8a Area A																									
S8P8a-2558	Construct & maintain Temporary drainage	13	27-Dec-23	11-Jan-24	-349	WD(6d)																			
S8P8a-3046	Construct & maintain Temporary drainage	476	27-Dec-23	07-Aug-25	-384	WD(6d)																			
S8P8a-2562	Construction of retaining wall KW06 bay 1 - bay 7 (bays 7/7 Base Slab & 6/7 Walls completed)	13	21-Jun-23 A	11-Jan-24	-349	WD(6d)																			
S8P8a-5032	Divert Traffic to Road A5	1	25-Jan-24	25-Jan-24	-57	WD(6d)																			
S8P8a-6020	KW05 at CH400 to CH500 - Backfilling to Formation Level For Drainage Construction SMH KT 7017A Connction - 7014 Conn	48	27-Dec-23	24-Feb-24	-384	WD(6d)																			
S8P8a-6022	KW05 at CH400 to CH500 - Construction of Drainage Manhole SMH KT 7017A Connectiontion 7014 Connection(0/4 M/H comp	96	26-Feb-24	24-Jun-24	-384	WD(6d)																			
S8P8a-6016	KW06 at CH500 to CH600 - Backfilling to Formation Level of Watermain (SMH KT 7014 to 7012 to 7011A Connection )	48	12-Mar-24	11-May-24	-277	WD(6d)																			
S8P8a-6014	KW06 at CH500 to CH600 - Construction of Drainage Manhole SMH KT 7014 to 7012 to 7011A Connection ( 0 / 4 M/H complet	48	12-Jan-24	11-Mar-24	-277	WD(6d)																			
S8P8a-6006	KW06 at CH600 to CH700 - Construction of Drainage Manhole SMH KT 7011A to 7009 to 7008A Connection ( 0 / 5 MH compl	72	27-Dec-23	23-Mar-24	-262	WD(6d)																			
S8P8a-6012	KW06 atCH500 to CH600 - Backfilling to Formation Level For Drainage Construction SMH KT 7014 to 7012 to 7011A Connecti	0	17-Nov-23 A	12-Jan-24	-277	WD(6d)																			
S8P8a-6000.10	KW11 at CH770 to CH785 - Backfill to level of utilities laying ( SMH KT 7006B to 7006 )	0	05-Oct-23 A	27-Dec-23	-164	WD(6d)																			
S8P8a-6002	KW11 at CH770 to CH785 - Backfilling to Formation Level of Watermain (SMH KT 7006B to 7004)	24	29-Dec-23	26-Jan-24	-164	WD(6d)																			
S8P8a-6004.10	KW11 at CH770 to CH785 - Backfilling to Road Formation Level	18	06-Mar-24	26-Mar-24	-164	WD(6d)																			
S8P8a-6001	KW11 at CH770 to CH785 - Construction of Drainage Manhole SMH KT 7006B to 7006 ( 0 / 2 M/H complete)	0	29-Dec-23	29-Dec-23	-164	WD(6d)																			
S8P8a-6004	KW11 at CH770 to CH785 - Laying Fresh and Flushing Watermains	30	27-Jan-24	05-Mar-24	-164	WD(6d)																			
S8P8a-5900	KW11 at CH785 to CH850 - Backfill to level of utilities laying (SMH KT 7006 Connection to 7004 )	0	16-Oct-23 A	27-Dec-23	-227	WD(6d)																			
S8P8a-5900.20	KW11 at CH785 to CH850 - Backfilling to Formation Level of Watermain (SMH KT 7006 Connection to 7004 )	30	17-Jan-24	23-Feb-24	-227	WD(6d)																			
S8P8a-5900.10	KW11 at CH785 to CH850 - Construction of Drainage Manhole SMH KT 7006 Connction to 7004 ( 0 / 2 M/H complete)	15	29-Dec-23	16-Jan-24	-227	WD(6d)																			

Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024				
								10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
		S8P8a-5900.30	KW11 at CH785 to CH850 - Laying Fresh and Flushing Watermains	60	24-Feb-24	09-May-24	-227	WD(6d)															
		S8P8a-2604	Retaining wall KW05 - Drainage Construction	90	27-Dec-23	18-Apr-24	-148	WD(6d)															
		S8P8a-2564	Retaining wall KW06 - Drainage Construction	90	12-Jan-24	04-May-24	-161	WD(6d)															
		S8P8a-2664	Retaining wall KW11 - Drainage Construction	72	27-Dec-23	23-Mar-24	-130	WD(6d)															
		S8P8a-5030	Road A5 - Road Works	24	27-Dec-23	24-Jan-24	-315	WD(6d)															
		S8P8a-5000	Road A5 - Site Formation Works	0	23-Mar-23 A	27-Dec-23	-315	WD(6d)															
		S8P8a-6040.20	Road W1 - Backfilling to Formation Level of Watermain (SMH KT 7001 to 7004 Connection)	48	25-Jan-24	23-Mar-24	-228	WD(6d)															
		S8P8a-6030	Road W1 - Backfilling to Formation Level of Watermain (SMH KT 7019A Connection to 7018A)	48	20-Mar-24	21-May-24	-272	WD(6d)															
		S8P8a-6040.10	Road W1 - Construction of Drainage Manhole SMH KT 7001 to 7004 Connection ( 0 / 4 M/H complete)	24	01-Jun-23 A	24-Jan-24	-228	WD(6d)															
		S8P8a-6034	Road W1 - Construction of Drainage Manhole SMH KT 7018A Connection to 7017A( 0 / 2 M/H complete)	72	08-Feb-24	10-May-24	-321	WD(6d)															
		S8P8a-6028	Road W1 - Construction of Drainage Manhole SMH KT 7019A Connection to 7018A( 0 / 2 M/H complete)	68	21-Oct-23 A	19-Mar-24	-272	WD(6d)															
		S8P8a-2090.20	Slopeworks for KS27 - Construct Remaining Slope Drainage	24	18-Mar-24	18-Apr-24	-148	WD(6d)															
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)																							
	S8P8b-1002	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005 (CE 019)	0		25-Dec-23	-612	CD(7d)																
	S8P8b-1008	Change of Road Layout of Ho Sheung Heung Road after the Works by DSD Contract DC/2019/06 (CNE 072b)	0		25-Dec-23	-736	CD(7d)																
	S8P8b-8174	Damage to the Micro-TBM and associated plants & equipment during the Red and Black Rainstorm at SYR (CNE 137a)	0		25-Dec-23	-188	CD(7d)																
	S8P8b-8170	Increased Risk for Suspension Pipe Jacking Flushing Watermains underneath MTRC Zone Portion 8b (EWN 080) (CNE 092, 0	0		25-Dec-23	-188	CD(7d)																
Construction of Watermains																							
Construction of watermains by trenchless method																							
	S8P8b-4000	Construct & maintain Temporary drainage	334	27-Dec-23	13-Feb-25	-264	WD(6d)																
	S8P8b-4012.22	GPR & Micrometeor Survey, Reporting & Approval from MTRC	13	27-Dec-22 A	11-Jan-24	-287	WD(6d)																
	S8P8b-4012.30	Inclined Drilling & Grouting 24 Nos holes (2 Rigs / 2 Working nights per week)	72	16-Jan-24	24-Sep-24	-265	WD(2d)																
	S8P8b-4013.06	SYR Rescue Pit - ELS & Excavation	50	01-Mar-24	03-May-24	-278	WD(6d)																
	S8P8b-4013.00	SYR Rescue Pit - Excavate Trial Pit	6	27-Dec-23	03-Jan-24	-278	WD(6d)																
	S8P8b-4013.02	SYR Rescue Pit - Mobilization & Set up for Pipe Piling Works	6	04-Jan-24	10-Jan-24	-278	WD(6d)																
	S8P8b-4013.04	SYR Rescue Pit - Pipe Piling Works	40	11-Jan-24	29-Feb-24	-278	WD(6d)																
	S8P8b-4013	SYR Rescue Pit - Prepare, Submit and Approval of Method Statement & Temp Design	0	01-Aug-23 A	27-Dec-23	-278	WD(6d)																
	S8P8b-4120	Up Hill Pipe Jacking - 2100 dia Pipe Sleeve For Flushing Water	35	30-Aug-23 A	06-Feb-24	-323	WD(6d)																
	S8P8b-4110	Up Hill Pipe Jacking - 2500 dia Pipe Sleeve For Fresh Water	9	02-Aug-23 A	06-Jan-24	-323	WD(6d)																
Construction of watermains by open trench method																							
	S8P8b-5002.2	DSD Maintenance Road - Construct Inspection Manhole (1 / 2 complete)	0	21-Aug-23 A	27-Dec-23	-419	WD(6d)																
	S8P8b-5002.3	DSD Maintenance Road - Construct Inspection Manhole - Backfilling and reinstatement	12	27-Dec-23	10-Jan-24	-416	WD(6d)																
	S8P8b-5004	DSD Maintenance Road - Stage 2 Laying flushing water main - CHY 1047 to 1143	110	11-Jan-24	28-May-24	-419	WD(6d)																
	S8P8b-8200	Ho Sheung Heung Road Fresh water main - Backfill and Reinstale Road	24	23-Feb-24	21-Mar-24	-530	WD(6d)																
	S8P8b-8180.10	Ho Sheung Heung Road Fresh water main - Demolish Pavement, Construct Temp Road(2nd Attempt)	10	27-Dec-23*	08-Jan-24	-530	WD(6d)																
	S8P8b-7104	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling (CHO 520 to 555 )	48	26-Feb-24	25-Apr-24	-597	WD(6d)																
	S8P8b-7102	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling (CHO 550 to 553)	48	27-Dec-23	24-Feb-24	-597	WD(6d)																
	S8P8b-7100	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling (CHO 553 to 569 )	0	30-Aug-23 A	27-Dec-23	-597	WD(6d)																
	S8P8b-7134	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling(CHO 635 to 665)	0	09-Oct-23 A	27-Dec-23	-393	WD(6d)																
	S8P8b-7132	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling(CHO 665 to 720)	72	04-Jan-24	03-Apr-24	-471	WD(6d)																
	S8P8b-7130	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling(CHO 720 to 761)	4	07-Nov-23 A	30-Dec-23	-471	WD(6d)																
	S8P8b-8190	Ho Sheung Heung Road Fresh water main - Expose existing Watermain Connection & Liase with WSD	24	23-Jan-24	22-Feb-24	-530	WD(6d)																
	S8P8b-8180.30	Ho Sheung Heung Road Fresh water main - Implement TTA to Expose existing Watermain for Connection (2nd Attempt)	12	09-Jan-24	22-Jan-24	-530	WD(6d)																
Section 9																							
	S9-1000	Planned Completion Date of Section 9	0		02-Jan-24	-483	CD(7d)																
	S9-1004	Unexpected Long Approval Process for Tech Submission for Works in MTRC Zone Portion 12, 1a & 1b (EWN 090) (CNE 115)	0		25-Dec-23	-597	CD(7d)																
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)																							



**Build King – Richwell Engineering  
Joint Venture**

Planned Work  
Critical Work  
Actual Work  
Milestone  
Milestone Critical  
Summary LOE  
Summary LOE Critical


## ND/2019/01 - 3 Month Rolling Programme (2023-12)

25-Dec-23                      31-Dec-2023

Project ID: ND201901-RP-46  
Layout: ND201901-3MRP with logo  
Page 7 of 16

THE 3-MONTH ROLLING PROGRAMME			
Date	Revision	Checked	Approved
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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024					February 2024					March 2024			
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24	
Soil Treatment																							
S9P12-3030	Approval of CIA, Tunnel Monitoring Proposal and Analysis	7	18-May-23 A	31-Dec-23	-601	CD(7d)																	
S9P12-2000	Construct & maintain Temporary drainage	52	27-Dec-23	29-Feb-24	-493	WD(6d)																	
S9P12-2025	Erect Chain Link Fence (Waiting for RFI Response for difference in level)	5	22-Nov-23 A	02-Jan-24	-470	WD(6d)																	
S9P12-3040	Installation of Tunnel Monitoring Instrumentation (176/268 installed) 2 nights per week	4	06-Oct-23 A	30-Dec-23	-493	WD(6d)																	
S9P12-3050	Remaining Remove Soil for Treatment After Set up for Tunnel Monitoring (EMSD Contractor)	48	02-Jan-24	29-Feb-24	-493	WD(6d)																	
S9P12-3060	Tunnel Monitoring during Construction Works within MTRC Protection Zone in Portion 1a	510	02-Jan-24	20-Sep-25	-493	WD(6d)																	
Interface with EMSD's Contractor to carry out GI																							
S9P12-3010	EMSD's Contractor to carry out GI	24	03-Jan-24	30-Jan-24	-470	WD(6d)																	
Section 11																							
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)																							
S11P6b-1002	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038)	0		25-Dec-23	270	CD(7d)																	
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																							
S11P6b-2005	Construct & maintain Temporary drainage	481	27-Dec-23	13-Aug-25	119	WD(6d)																	
Operation and Dismantling of the Soil Treatment Plant																							
S11P6b-3010	Provide treatment to high arsenic-containing soil	355	03-Dec-20 A	10-Mar-25*	-25	WD(6d)																	
S11P6b-3000	Provide treatment to Imported high arsenic-containing soil (Estimated Qty 90,000m3)	302	01-Mar-23 A	02-Jan-25	-25	WD(6d)																	
Section 12A																							
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)																							
Soil Treatment																							
S12P10b-2020	Backfilling to the formation levels	0	25-Mar-23 A	27-Dec-23	77	WD(6d)																	
Civil Work																							
S12P10b-3000	Construct & maintain Temporary drainage	265	27-Dec-23	16-Nov-24	-76	WD(6d)																	
S12P10b-3008	Remove and Replace DN900 pipe between SMH KT8006 to KT8008 after Installing Lead In Pipe at FMH KT4.03	30	27-Dec-23*	31-Jan-24	-73	WD(6d)																	
S12P10b-3004	Underground Sewerage - Lay Inlet Pipe to FMHKT 4.03	12	01-Feb-24	17-Feb-24	-73	WD(6d)																	
S12P10b-3006	Underground Sewerage - Laying DN450 Pipe from FMHKT 4.03 to 4.02 (Partial only)	18	19-Feb-24	09-Mar-24	-73	WD(6d)																	
S12P10b-3002	Underground Primary Drainage Laying DN900 Pipe between SMHKT 8008 to 8009	24	11-Mar-24	11-Apr-24	-73	WD(6d)																	
Portion 11b in Area L1 (Soil Treatment, Drainage & Roadwork)																							
Preparation work/Tree Survey/Site Clearance/GI																							
S14P11b-2054	Demolish Existing Building No.16 & 18	24	24-Feb-24	22-Mar-24	4	WD(6d)																	
S12P11b-1025	Ground investigation (0 / 1 GI completed)	10	19-Feb-24	29-Feb-24	5	WD(6d)																	
S12P11b-2040	Notification and Approval of Asbestos Abatement Programme	30	25-Dec-23	23-Jan-24	5	CD(7d)																	
S12P11b-2050	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	24	24-Jan-24	23-Feb-24	4	WD(6d)																	
S12P11b-1020	Site clearance	24	18-Jan-24	17-Feb-24	5	WD(6d)																	
S12P11b-1010	Tree survey and prepare tree felling and transplant report	18	09-Oct-23 A	17-Jan-24	5	WD(6d)																	
Soil Treatment																							
S12P11b-2020	Backfilling to the formation levels	30	23-Mar-24	02-May-24	4	WD(6d)																	
S12P11b-2010	Remove soil (original assumed 269m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	18	02-Mar-24	22-Mar-24	4	WD(6d)																	
Civil Work																							
S12P11b-3000	Construct & maintain Temporary drainage	114	02-Mar-24	22-Jul-24	4	WD(6d)																	
Section 12B																							
Portion 11b in Area L2 (Soil Treatment, Drainage & Roadwork)																							
Preparation work/Tree Survey/Site Clearance/GI																							
S12BP11b-1012	Approval & Acceptance of Tree Felling Application	30	18-Jan-24	16-Feb-24	37	CD(7d)																	
S12BP11b-2040	Notification and Approval of Asbestos Abatement Programme	30	25-Dec-23	23-Jan-24	148	CD(7d)																	



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Joint Venture

Planned Work

Critical Work

Actual Work

◆

Milestone

◆

Milestone Critical

Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-12)

25-Dec-2331-Dec-2023

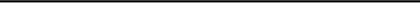
Project ID: ND201901-RP-46  
Lauyout: ND201901-3MRP with logo  
Page 8 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY



Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024			February 2024			March 2024						
								10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
	S12BP11b-2050	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	24	24-Jan-24	23-Feb-24	117	WD(6d)																
	S12BP11b-1020	Site Clearance & Tree Felling	48	26-Feb-24	25-Apr-24	29	WD(6d)																
	S12BP11b-1010	Tree survey and prepare tree felling and transplant report	18	09-Oct-23 A	17-Jan-24	29	WD(6d)																
Section 13																							
	S13-1015	Late Possession of remaining part of Portion 2 for soil nail works (CNE No. 008) (EWN No. 006) (CE 014)	0		25-Dec-23	304	CD(7d)																
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)																							
Civil Works																							
	S13P2- 4054	East Quadrant - Construct Temp Road To Divert Exit Road 9A	10	25-Sep-23 A	08-Jan-24	0	WD(6d)																
	S13P2- 4052.00	East Quadrant - Construct Temp Road To Divert Kwu Tung Road	48	16-Feb-24	16-Apr-24	0	WD(6d)																
	S13P2- 4054.02	East Quadrant - Construction of Road Drainage M6.42 to 6.44 (0 / 3 MH Completed)	66	09-Jan-24	28-Mar-24	0	WD(6d)																
	S13P2- 4030.00	Retaining Wall KW37 - Backfill to Formation level	0	26-Jun-23 A	27-Dec-23	65	WD(6d)																
	S13P2- 4054.00	Traffic diversion to Temp Road	0		08-Jan-24	0	CD(7d)																
	S13P2- 4048	West Quadrant - Remaining Installation of smart road lightings system	12	30-Dec-23	13-Jan-24	65	WD(6d)																
	S13P2- 4034.06	West Quadrant - Construction of Footpath (After Remaining Drainge & Backfilling KW37)	12	30-Dec-23	13-Jan-24	65	WD(6d)																
	S13P2- 4049	West Quadrant - Road Widening Works along Kwu Tung Road	60	15-Jan-24	27-Mar-24	65	WD(6d)																
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)																							
Preparation work/Tree Survey/Site Clearance/GI																							
	S13P1a-0102	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	588	CD(7d)																
Soil Treatment																							
	S13P1a-2020	Backfilling to the formation levels	2	22-Nov-23 A	28-Dec-23	90	WD(6d)																
Civil Work																							
	S13P1a-3000	Construct & maintain Temporary drainage	582	27-Dec-23	12-Dec-25	-42	WD(6d)																
	S13P1a-4000	Road D1 - DCS Works by Others (Anticipated Commencement Date Feb-2023)	120	16-Feb-24*	14-Jun-24	-54	CD(7d)																
	S13P1a-3012	Underground Primary Drainage work SMH KT1015 - KT1013A pipe connection ( 0 / 4 MH Completed)	40	20-Apr-23 A	15-Feb-24	-40	WD(6d)																
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)																							
	S13P7-0010	Late Completion for the EMSD's District Cooling System (DCS) Works (Contract No. 1330EM20A) along Road D1-2 (CNE 122)	0		25-Dec-23	744	CD(7d)																
	S13P7-0000	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	588	CD(7d)																
Civil Work																							
Underground Utilities																							
	S13P7-3000	Construct & maintain Temporary drainage	588	27-Dec-23	19-Dec-25	-44	WD(6d)																
	S13P7-4020	DCS Works by Others - Area Adjacent to Junction of Road D1-1 & Road L1 (Commencement Date 27-Sep-2023)	17	27-Sep-23 A	10-Jan-24	380	CD(7d)																
	S13P7-3010	Underground Primary drainage SMHKT 1015C and Pipe Laying	18	27-Dec-23	17-Jan-24	255	WD(6d)																
	S13P7-4010	Underground Secondary drainage (0 / 5 M/H completed)	48	18-Jan-24	16-Mar-24	255	WD(6d)																
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)																							
Civil Work																							
	S13P1b-3000	Construct & maintain Temporary drainage	672	27-Dec-23	07-Apr-26	-132	WD(6d)																
	S13P1b-4000	DCS Works by Others (Anticipated Commencement Date Sep-2023)	67	03-Oct-23 A	29-Feb-24	166	CD(7d)																
	S13P1b-3014	Laying of Fresh Watermain CH I & Flushing Watermain CH DA	90	15-Mar-24	06-Jul-24	134	WD(6d)																
	S13P1b-3012.10	Laying Remainig Sewerage Pipe	12	01-Mar-24	14-Mar-24	134	WD(6d)																
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																							
Preparation work/Tree Survey/Site Clearance/GI																							
	S13P6a-1003	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Dec-23	-151	CD(7d)																
	S13P6a-1004	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Dec-23	-151	CD(7d)																
	S13P6a-1005	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	528	CD(7d)																
Soil Treatment																							



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Joint Venture**

Planned Work  
 Critical Work  
 Actual Work  
 Milestone  
 Milestone Critical  
 Summary LOE  
 Summary LOE Critical

## ND/2019/01 - 3 Month Rolling Programme (2023-12)


25-Dec-23
31-Dec-2023

Project ID: ND201901-RP-46  
 Layout: ND201901-3MRP with logo  
 Page 9 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY

Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024				
								10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
	S13P6a-2020	Backfilling to the formation levels	60	01-Feb-24	18-Apr-24	-120	WD(6d)																
	S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	30	27-Dec-23	31-Jan-24	-160	WD(6d)																
Civil Work																							
	S13P6a-3000	Construct & maintain Temporary drainage	700	27-Dec-23	11-May-26	-160	WD(6d)																
	S13P6a-4000	DCS Works by Others (Anticipated Commencement Date Mar-2024)	365	16-Mar-24*	15-Mar-25	297	CD(7d)																
	S13P6a-3012	Pipe Jacking across DJ watermain (CNE 060, EC-1086) - Jacking Pit ELS & Excavation	48	06-Feb-24	09-Apr-24	-160	WD(6d)																
	S13P6a-3010.0	Trial pit for DJ watermain	13	22-Jan-24	05-Feb-24	-160	WD(6d)																
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)																							
	S13P1c-0002	Revised Noise Barrier Works at Road D3 in Portion 1C of the Site (EWN 081)	0		25-Dec-23	-64	CD(7d)																
Preparation work/Tree Survey/Site Clearance/GI																							
	S13P1c-0102	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	-164	CD(7d)																
	S13P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058) (CE 175)	0		25-Dec-23	744	CD(7d)																
Civil Work																							
	S13P1c-3000	Construct & maintain Temporary drainage	629	27-Dec-23	09-Feb-26	-119	WD(6d)																
	S13P1c-5000.10	Construct Underground Secondary Drainage M2.27 to M2.28 (0 / 3 MH Complete)	48	14-Mar-24	14-May-24	179	WD(6d)																
	S13P1c-5000	DCS Works by Others CH D3 66 to 122 (Anticipated Commencement Sep 2023)	80	05-Oct-23 A	13-Mar-24	-24	CD(7d)																
	S13P1c-3050	Laying of Fresh Watermain CH J & Flushing Watermain CH T (After DCS Works CH D3 122 to 186)	48	14-Mar-24	14-May-24	227	WD(6d)																
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																							
	S13P9a-0100	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0		25-Dec-23	513	CD(7d)																
Civil Work																							
	S13P9a-3084	Additional Noise barrier NB04 - Footing Construction (0 / 5 bays complete)	48	27-Dec-23	24-Feb-24	-137	WD(6d)																
	S13P9a-3082.20	Additional Noise barrier NB04 - Pile Head welding & Proof Drilling	0	04-Nov-23 A	25-Nov-23 A		WD(6d)																
	S13P9a-3086	Additional Noise barrier NB04 - Stem wall Construction (0 / 5 bays complete)	36	26-Feb-24	11-Apr-24	-137	WD(6d)																
	S13P9a-3000	Construct & maintain Temporary drainage	647	27-Dec-23	05-Mar-26	-107	WD(6d)																
	S13P9a-3012	Construct Underground Sewerage FMH 1.07	4	15-May-23 A	30-Dec-23	158	WD(6d)																
Section 14																							
Portion 7 in Area P (Soil Treatment & KD3 - Tree Felling, General Site Clearance)																							
KD3 - Tree felling, general site clearance (including the berm removal / levelling and general site)																							
Soil Treatment																							
	S14P7P-2020	Backfill with treated soil	140	22-Mar-24	10-Sep-24	342	WD(6d)																
	S14P7P-2000	Construct & maintain Temporary drainage	258	27-Dec-23	08-Nov-24	342	WD(6d)																
	S14P7P-2010	Remove soil (original assumed 17368m3) (2 / 2 EGI completed, interim soil to be exca vated / treated : 0 m3 / 0m3)	70	27-Dec-23	21-Mar-24	342	WD(6d)																
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)																							
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																							
	S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4) (CSD for Treated soil Stock pile)	4	06-Oct-20 A	30-Dec-23	159	WD(6d)																
Operation and Dismantling of the Soil Treatment Plant																							
	S14P7S3-3010	Stock Pile of Treated Soil	239	20-Nov-20 A	22-Oct-24	159	WD(6d)																
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)																							
Preparation work/Tree Survey/Site Clearance/GI																							
	S14P7T-1012	Ground investigation (0 / 1 GI completed) (Area T1)	30	02-Feb-24	11-Mar-24	539	WD(6d)																
	S14P7T-1020	Site clearance (Area T1)	30	28-Dec-23	01-Feb-24	539	WD(6d)																
	S14P7T-1024	Tree felling works (Area T1)	30	28-Dec-23	01-Feb-24	539	WD(6d)																
Portion 1b in Area S2 (Soil Treatment)																							
Soil Treatment																							
	S14P1b-2040	DCS Works by Others (Commencement Jan 2024)	134	25-Jan-24*	06-Jun-24	579	CD(7d)																

 <p><b>Build King – Richwell Engineering Joint Venture</b></p>	<p> <span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black;"></span> Planned Work  <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF0000; border: 1px solid black;"></span> Critical Work  <span style="display: inline-block; width: 15px; height: 10px; background-color: #0000FF; border: 1px solid black;"></span> Actual Work  <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid black;"></span> Milestone  <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid red;"></span> Milestone Critical  <span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black;"></span> Summary LOE  <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF0000; border: 1px solid black;"></span> Summary LOE Critical         </p>	<h2>ND/2019/01 - 3 Month Rolling Programme (2023-12)</h2> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <span>25-Dec-23</span> <span>31-Dec-2023</span> </div>	<p>Project ID: ND201901-RP-46          Layout: ND201901-3MRP with logo          Page 10 of 16</p>	THE 3-MONTH ROLLING PROGRAMME			
				Date	Revision	Checked	Approved
					Rev. 0	SC	BY



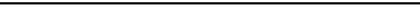
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024					March 2024			
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
S14P1b-2038	Erect Site Hoarding	22	18-Oct-23 A	22-Jan-24	469	WD(6d)																
S14P1b-2020	Site Formation Works	24	03-Apr-23 A	24-Jan-24	467	WD(6d)																
Portion 1c & 9a in Area S2 (Soil Treatment)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S14P1c-1003	Additional Reqmts for Demolition of Temp Structures Existing Sawmill Area S2 Portion 1C (CNE 091) (CE 259)	0		25-Dec-23	412	CD(7d)																
S14P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058) (CE 175)	0		25-Dec-23	412	CD(7d)																
S14P1c-1001	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 52)	0		25-Dec-23	412	CD(7d)																
Soil Treatment																						
S14P1c-2020	Backfilling to the formation level	104	27-Jan-23 A	06-May-24	496	WD(6d)																
S14P1c-2030	Permanent Stock Pile for Clean Soil from other Projects	104	31-Jul-23 A	06-May-24	496	WD(6d)																
Portion 6a in Area S2 (Soil Treatment)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S14P6a-1050	Arsenic Treatment Plan	36	08-Feb-24	23-Mar-24	234	WD(6d)																
S14P6a-1040	Prepare Arsenic Assessment Report	36	27-Dec-23	07-Feb-24	234	WD(6d)																
Portion 6b in Area S2 (Soil Treatment)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S14P6b-2160	Approval & Acceptance of Tree felling Application	30	18-Jan-24	16-Feb-24	287	CD(7d)																
S14P6b-2150	Prepare & Submit Tree Felling and Transplant Report	18	18-Sep-23 A	17-Jan-24	232	WD(6d)																
S14P6b-1017	Tree felling	30	17-Feb-24	22-Mar-24	235	WD(6d)																
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S14P1f-1050	Arsenic Treatment Plan	36	08-Feb-24	23-Mar-24	294	WD(6d)																
S14P1f-1040	Prepare Arsenic Assessment Report	36	27-Dec-23	07-Feb-24	294	WD(6d)																
Interim Community Liaison Centre (CLC)																						
S14P1f-2040	Dismantling of interim CLC	12	27-Dec-23	10-Jan-24	294	WD(6d)																
Portion 9c in Area S1 (Soil Treatment)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S14P9c-1001	Suspension of Works at Portions 9c (CNE No. 010) (CE 030)	0		25-Dec-23	59	CD(7d)																
S14P9c-1014	Tree felling	15	19-Jul-21 A	13-Jan-24	301	WD(6d)																
Portion 13 in Area S4 (Soil Treatment)																						
Preparation work/Tree Survey/Site Clearance/GI																						
S14P13-1050	Arsenic Treatment Plan	36	05-Jan-24	19-Feb-24	-1	WD(6d)																
S14P13-1032	Environmental ground investigation and laboratory test After Tree Felling (0 / 1 EGI completed) Relocated	6	28-Dec-23	04-Jan-24	-1	WD(6d)																
S14P13-1025	Ground investigation After Tree Felling (0 / 1 GI completed)	6	28-Dec-23	04-Jan-24	-1	WD(6d)																
S14P13-1040	Prepare Arsenic Assessment Report	36	05-Jan-24	19-Feb-24	-1	WD(6d)																
S14P13-1020	Remaining Site clearance & Tree felling	1	19-Oct-23 A	27-Dec-23	-1	WD(6d)																
Soil Treatment																						
S14P13-2000	Construct & maintain Temporary drainage	558	20-Feb-24	07-Jan-26	-1	WD(6d)																
S14P13-2010	Remove soil (original assumed 68755m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	234	20-Feb-24	30-Nov-24	-1	WD(6d)																
Cycle Track from Area H to Area N																						
S14CT-0100	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0		25-Dec-23	-104	CD(7d)																
Underground Utilities underneath Cycle Track																						
S14CT-1000	Construct & maintain Temporary drainage	645	27-Dec-23	03-Mar-26	-45	WD(6d)																
S14CT-1010	Construct Underground Primary Drainage in Portion 7 (0 / 1 MH completed) SMHKT 3008 and Pipe Laying	21	12-Jun-23 A	20-Jan-24	-86	WD(6d)																
S14CT-1010.04	Construct Underground Sewerage in Portion 7 (0 / 2 MH completed) FMH KT1.17 to 1.16	60	22-Jan-24	08-Apr-24	-86	WD(6d)																

Activity ID			Activity Name		Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024					February 2024				March 2024						
										10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24			
		S14CT-1100	Laying Underground Utilities by Others in Portion 5 (Stage 1), 7 & 9a			90	26-Feb-24	17-Jun-24	276	WD(6d)																		
		S14CT-1028.30	Laying Underground Watermain in Portion 5 - Stage 1 (After Repairing of Damaged Hoarding)			24	25-Jan-24	24-Feb-24	276	WD(6d)																		
		S14CT-1046	Laying Underground Watermain in Portion 9a (After Repairing Damaged Hoarding)			24	25-Jan-24	24-Feb-24	21	WD(6d)																		
		S14CT-1028.20	Repair Damaged Hoarding Adjacent to 19 W			48	27-Dec-23	24-Feb-24	21	WD(6d)																		
	Underground Utilities underneath Cycle Track (within MTRC Protection Zone)																											
	S14CT-1060	Construct Underground Primary Drainage in Portion 5 - Stage 2 (only Pipe laying) 'Inside MTRC Protection Zone'			48	26-Feb-24	25-Apr-24	21	WD(6d)																			
	Portion 1b (Soil Treatment & Civil Works)																											
	Preparation work/Tree Survey/Site Clearance/GI																											
	S14P1b-1004	Unexpected Long Approval Process for Tech Submission for Works in MTRC Zone Portion 12, 1a & 1b (EWN 090) (CNE 115)			0		25-Dec-23	561	CD(7d)	Unexpected Long Approval Process for Tech Submission for Works in MTRC Zone Portion 12, 1a & 1b (EWN 090) (CNE 115)																		
	S14P1b-1006	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)			0		27-Dec-23	896	WD(6d)	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)																		
	Civil Works																											
	S14P1b-1318	Construct Underground Watermain Wash Out			24	22-Jan-24	21-Feb-24	428	WD(6d)																			
	S14P1b-1316	Laying Remaining Underground Watermain CHX and CHL 198 - 222			24	22-Jan-24	21-Feb-24	428	WD(6d)																			
	S14P1b-1320	Pressure test for Fresh & Flushing watermains			30	22-Feb-24	22-Mar-24	535	CD(7d)																			
	Portion 3 (Soil Treatment & Civil Works)																											
S14P3-0010	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)			0		27-Dec-23	600	WD(6d)	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)																			
Civil Works																												
S14P3-1200	Construct & maintain Temporary drainage			60	27-Dec-23	09-Mar-24	540	WD(6d)													Construct & maintain Temp							
S14P3-4000	DCS Works by Others (Anticipated Commencement Date Sep-2023) "To be Confirmed"			120	25-Dec-23	22-Apr-24	624	CD(7d)																				
S14P3-1304	Pressure test for Fresh & Flushing watermains			30	01-Feb-24	09-Mar-24	540	WD(6d)																				
S14P3-4010	Underground Flushing watermains CHX (around 300m)			18	10-Jul-23 A	31-Jan-24	540	WD(6d)																				
S14P3-4020	Underground Fresh watermains CHA 0 to 30 (Waiting for RFI Response)			24	25-Oct-23 A	24-Jan-24	546	WD(6d)																				
Portion 5 (Soil Treatment & Civil Works)																												
S14P5-0020	Red and Black Rainstorm Warning Signals hoisted from 07 September 2023 (CNE 137)			0		25-Dec-23	542	CD(7d)	Red and Black Rainstorm Warning Signals hoisted from 07 September 2023 (CNE 137)																			
S14P5-0010	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)			0		25-Dec-23	744	CD(7d)	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)																			
Soil Treatment																												
S14P5-1190	Construct & maintain Temporary drainage			69	27-Dec-23	20-Mar-24	531	WD(6d)													Construct &							
Civil Works																												
S14P5-4000	DCS Works by Others (Anticipated Commencement Date Nov-2023)			180	15-Feb-24*	12-Aug-24	512	CD(7d)																				
S14P5-1304	Pressure test for Fresh & Flushing watermains			30	15-Feb-24	20-Mar-24	531	WD(6d)																				
S14P5-1300	Underground Drainage ( 1 / 2 MH completed) Including Repair ELS Damaged by Black Storm			21	16-Dec-22 A	20-Jan-24	413	WD(6d)																				
S14P5-1302	Underground Fresh & Flushing watermains (around 100m)			18	22-Jan-24	14-Feb-24	413	WD(6d)																				
Portion 1e (Soil Treatment)																												
Soil Treatment																												
S14P1e-2080	Backfilling to the formation levels			90	06-Feb-24	30-May-24	476	WD(6d)																				
S14P1e-3000	Construct & maintain Temporary drainage			124	27-Dec-23	30-May-24	476	WD(6d)																				
S14P1e-2070	Remove soil (original assumed 860m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)			34	27-Dec-23	05-Feb-24	296	WD(6d)																				
Portion 11b (Soil Treatment)																												
Preparation work/Tree Survey/Site Clearance/GI																												
S14P11b-2010	Approval & Acceptance of Tree felling Application			30	23-Jan-24	21-Feb-24	197	CD(7d)																				
S14P11b-3110	Notification and Approval of Asbestos Abatement Programme			30	18-Jan-24	16-Feb-24	80	CD(7d)																				
S14P11b-3100	Prepare and submit Asbestos Abatement Programme (No Asbestos)			18	06-Oct-23 A	17-Jan-24	62	WD(6d)																				
S14P11b-3120	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works			60	17-Feb-24	02-May-24	63	WD(6d)																				
S14P11b-2020	Site clearance & Tree felling			60	22-Feb-24	07-May-24	161	WD(6d)																				
S14P11b-2000	Tree survey and prepare tree felling and transplant report			22	09-Oct-23 A	22-Jan-24	158	WD(6d)																				
Ha Wong Yi Au Tai Po																												

Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024				
								10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24
	TPHW-1020	Design Approval from Client	30	07-Jan-24	05-Feb-24	671	CD(7d)																
	TPHW-1030	Design Approval from Relevant Govt. Departments	30	06-Feb-24	06-Mar-24	671	CD(7d)																
	TPHW-1010	Prepare and Submit Design to Client	9	11-Sep-23 A	06-Jan-24	543	WD(6d)																
	TPHW-1110	Prepare and Submit Tree Protection & Reservation Proposal (TPRP)	14	04-Oct-23 A	07-Jan-24	730	CD(7d)																
Section 15																							
	S15-1000	Presevation and protection of tree	747	06-Dec-19 A	09-Jan-26	-3	CD(7d)																
Section 18 (Subject to excision)																							
	S18-1040	Watermain laying work in Portion 5	217	20-Sep-21 A	20-Sep-24	-76	WD(6d)																
	S18-1050	Watermain laying work in Portion 6a & 6b	179	18-Jul-22 A	04-Sep-24	-63	WD(6d)																
	S18-1020	Watermain laying work in Protion 1a	264	07-Jul-23 A	15-Nov-24	-122	WD(6d)																
Section 20 (Subject to excision)																							
	S20-1022	Increased Difficulty for the Construction of Pak Shek Au Pedestrian Subway Cum Cycle Track (EWN 068) (CNE 116)	0		25-Dec-23	-779	CD(7d)																
	S20-1030	Unexpected Underground Conditions Encountered during Construction of Pak Shek Au Pedestrian Subway (EWN 093) (CNE 130)	0		25-Dec-23	-755	CD(7d)																
Construction of Pedestrian Subway cum Cycle Track Stage 2 (South of Castle Peak Road)																							
Civil and Structural Works																							
	S20S2-7540	Bay No. 1 - RC Structure	80	24-Feb-24	03-Jun-24	-634	WD(6d)																
	S20S2-7462.10	Bay No. 10 - Waterproofing Membrane & Mass Concrete Fill To walls	10	27-Dec-23	08-Jan-24	-297	WD(6d)																
	S20S2-7462.20	Bay No. 10 - Waterproofing Membrane & 120mm Brick Work To walls	10	09-Jan-24	19-Jan-24	-297	WD(6d)																
	S20S2-7482.20	Bay No. 11 - Waterproofing Membrane & 120mm Brick Work To walls	10	09-Jan-24	19-Jan-24	-298	WD(6d)																
	S20S2-7482.10	Bay No. 11 - Waterproofing Membrane & Mass Concrete Fill To walls	10	27-Dec-23	08-Jan-24	-298	WD(6d)																
	S20S2-7510	Bay No. 12 - Excavation, Blinding & Waterproofing	6	03-Feb-24	09-Feb-24	-355	WD(6d)																
	S20S2-7520	Bay No. 12 - RC Structure	30	14-Feb-24	19-Mar-24	-355	WD(6d)																
	S20S2-7520.10	Bay No. 12 - Waterproofing Membrane & Mass Concrete Fill To walls	10	20-Mar-24	03-Apr-24	-355	WD(6d)																
	S20S2-7430.10	Bay No. 13 - Waterproofing Membrane & Mass Concrete Fill To walls	10	10-Jan-24	20-Jan-24	-298	WD(6d)																
	S20S2-7430.20	Bay No. 13 - Waterproofing Membrane & 120mm Brick Work To walls	10	22-Jan-24	01-Feb-24	-298	WD(6d)																
	S20S2-7820.10	Bay No. 14 - Waterproofing Membrane & 120mm Brick Work To walls	12	26-Feb-24	09-Mar-24	-555	WD(6d)																
	S20S2-7820	Bay No. 14 - RC Structure	48	27-Dec-23	24-Feb-24	-555	WD(6d)																
	S20S2-7820.20	Bay No. 14 - Waterproofing Membrane & 50mm Screeding To Roof Slab	8	11-Mar-24	19-Mar-24	-555	WD(6d)																
	S20S2-7840.10	Bay No. 15 - Waterproofing Membrane & Mass Concrete Fill To walls	12	26-Feb-24	09-Mar-24	-555	WD(6d)																
	S20S2-7840	Bay No. 15 - RC Structure	48	27-Dec-23	24-Feb-24	-555	WD(6d)																
	S20S2-7840.20	Bay No. 15 - Waterproofing Membrane & 120mm Brick Work To walls	8	11-Mar-24	19-Mar-24	-555	WD(6d)																
	S20S2-7860.10	Bay No. 16 - Waterproofing Membrane & 120mm Brick Work To walls	12	28-Feb-24	12-Mar-24	-533	WD(6d)																
	S20S2-7860	Bay No. 16 - RC Structure	50	27-Dec-23	27-Feb-24	-533	WD(6d)																
	S20S2-7860.20	Bay No. 16 - Waterproofing Membrane & 50mm Screeding To Roof Slab	8	13-Mar-24	21-Mar-24	-533	WD(6d)																
	S20S2-7560	Bay No. 2 - RC Structure	75	01-Mar-24	03-Jun-24	-634	WD(6d)																
	S20S2-7580	Bay No. 3 - RC Structure	80	23-Jan-24	03-May-24	-617	WD(6d)																
	S20S2-7740	Bay No. 5 - RC Structure	54	02-Mar-24	09-May-24	-618	WD(6d)																
	S20S2-7780	Bay No. 7 - RC Structure	60	24-Feb-24	09-May-24	-618	WD(6d)																
	S20S2-7508.10	Bay No. 9a & 9b - Waterproofing Membrane & 120mm Brick Work To walls	12	03-Feb-24	20-Feb-24	-319	WD(6d)																
	S20S2-7508.20	Bay No. 9a & 9b - Waterproofing Membrane & 50mm Screeding To Roof Slab	8	21-Feb-24	29-Feb-24	-319	WD(6d)																
	S20S2-7506	Bay No. 9a - RC Structure (Base Slab)	2	01-Nov-23 A	28-Dec-23	-355	WD(6d)																
	S20S2-7508	Bay No. 9a - RC Structure (Walls)	30	29-Dec-23	02-Feb-24	-355	WD(6d)																
	S20S2-7502	Bay No. 9b - RC Structure (Walls)	30	27-Dec-23	31-Jan-24	-354	WD(6d)																
	S20S2-7320.30	Subway Bay (1 & 2) South Face - Driving Sheet Pile	20	16-Nov-23 A	19-Jan-24	-634	WD(6d)																
	S20S2-7320.40	Subway Bay (1 & 2) South Face - ELS & Excavation	20	20-Jan-24	15-Feb-24	-634	WD(6d)																
	S20S2-6060	Subway Bay (3 - 8) - ELS & Excavation	48	16-Jan-24	14-Mar-24	-618	WD(6d)																
	S20S2-6050	Subway Bay (3 - 8) North Face - Driving Sheet Pile	32	27-Dec-23	02-Feb-24	-634	WD(6d)																




Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024				February 2024				March 2024							
								10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24			
8.0 - PMI / CE	S20S2-6040	Subway Bay (3 - 8) North Face - Preboring for Sheet Pile	40	22-Sep-23 A	15-Feb-24	-634	WD(6d)																			
	S20S2-6030	Subway Bay (3 - 8) South Face - (Remaining) Driving Sheet Pile	8	16-Feb-24	24-Feb-24	-602	WD(6d)																			
	S20S2-6010	Subway Bay 8 (Remaining) South Face - Preboring for Sheet Pile	24	30-Dec-23	27-Jan-24	-589	WD(6d)																			
	E&M, Lift Installation and Finishing Work for Pedestrian Subway																									
	S20ELF-1010	Design and Approval for Lift, Lighting and E&M works	72	25-Oct-22 A	05-Mar-24	309	CD(7d)																			
	S20ELF-1030	Procurement of Lighting, E&M equipment	60	14-Mar-24	12-May-24	301	CD(7d)																			
	S20ELF-1020	Submission and Approval of Lighting, E&M plants & materials	80	17-Feb-23 A	13-Mar-24	301	CD(7d)																			
	Section 21 (Subject to excision)																									
	S21-1013	Change to the Area of Area M (PMI 160, CE 168)	0		25-Dec-23	127	CD(7d)				◆ Change to the Area of Area M (PMI 160, CE 168)															
	Portion 1b in Area M (Soil Treatment)																									
	Preparation work																									
	S21P1b-1012	Approval & Acceptance of Tree felling Application	30	01-Feb-24	09-Mar-24	99	WD(6d)																			
	S21P1b-1020	Site Clearance & Tree Felling	60	11-Mar-24	25-May-24	99	WD(6d)																			
	S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	27-Dec-23	31-Jan-24	99	WD(6d)																			
	Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)																									
	Preparation work																									
	S21P1d-1012	Approval & Acceptance of Tree felling Application	30	01-Feb-24	09-Mar-24	99	WD(6d)																			
	S21P1d-1020	Site Clearance & Tree Felling	60	11-Mar-24	25-May-24	99	WD(6d)																			
	S21P1d-1010	Tree survey and prepare tree felling and transplant report	30	27-Dec-23	31-Jan-24	99	WD(6d)																			
	Portion 11a in Area M (Soil Treatment)																									
	Preparation work																									
	S21P11a-1012	Approval & Acceptance of Tree felling Application	30	01-Feb-24	09-Mar-24	94	WD(6d)																			
	S21P11a-1020	Site Clearance & Tree Felling	60	11-Mar-24	25-May-24	94	WD(6d)																			
	S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	27-Dec-23	31-Jan-24	94	WD(6d)																			
	8.0 - PMI / CE																									
PC-1012	Change to the Area of Area M (PMI 160, CE 168)	0	22-Dec-21 A	25-Dec-23	127	CD(7d)																				
9.0 - Major EWN / CNE																										
EC-1186	Additional detailed land contamination assessment for the remaining areas within the site boundary (CNE 142)	5	25-Dec-23	29-Dec-23	1104	CD(7d)																				
EC-1194	Additional DN600 watermain between FLWSR and FWSR via Road W1 at Portion 8b (CNE 147)	5	25-Dec-23	29-Dec-23	1104	CD(7d)																				
EC-1120	Additional Reqmts for Demolition of Temp Structures Existing Sawmill Area S2 Portion 1C (CNE 091) (CE 259)	0	25-Oct-22 A	25-Dec-23	412	CD(7d)																				
EC-1129	Additional Requirements for all the Lifting Operations within the Working Areas (EWN 086)	0	13-Feb-23 A	25-Dec-23	1109	CD(7d)																				
EC-1089	Additional Sewerage Pipes clash with the Proposed Watermains along Road D4 and D5 (EWN 065)	0	27-Apr-22 A	25-Dec-23	-852	CD(7d)																				
EC-1156	Additional Works for Installation of Watermains by Trenchless Construction Method along Road D4 (EWN 095) (CNE 136)	0	02-Aug-23 A	25-Dec-23	-208	CD(7d)																				
EC-1192	Amendment of charges for disposal of construction waste from 01st April 2024 (CNE 145)	5	25-Dec-23	29-Dec-23	1104	CD(7d)																				
EC-1087	Change of Road Layout of Ho Sheung Heung Road after the Works by DSD Contract DC/2019/06 (CNE 072b)	0	20-Apr-22 A	25-Dec-23	-736	CD(7d)																				
EC-1204	Changes to the design & alignment of the section of DN600 flusing watermain CHQ at Road D4 in Portion 9b (CNE 152)	5	25-Dec-23	29-Dec-23	1104	CD(7d)																				
EC-1067	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051) (CE 150)	0	29-Nov-21 A	25-Dec-23	-866	CD(7d)																				
EC-1068	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0	02-Dec-21 A	25-Dec-23	-251	CD(7d)																				
EC-1178	Damage to the Micro-TBM and associated plants & equipment during the Red and Black Rainstorm at SYR (CNE 137a)	0	07-Sep-23 A	25-Dec-23	-188	CD(7d)																				
EC-1079	Delay in Supply of Precast Concrete Pipe due to the Severe Outbreak of Omicron (EWN 056)	0	16-Feb-22 A	25-Dec-23	1109	CD(7d)																				
EC-1046	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034) (CE 108)	0	06-Jul-21 A	25-Dec-23	-902	CD(7d)																				
EC-1101	Delay to the Diversion of Existing Fresh Watermains along/near Ma Tso Lung Road at Portion 9b of the Site (EWN 076)	0	19-Jul-22 A	25-Dec-23	-846	CD(7d)																				
EC-1125	Delay to the Diversion/ Modification of Existing HKT Pillar Boxes & Associated Ducts Ma Tso Lung Road Por. 9b (CNE 096)	0	14-Nov-22 A	25-Dec-23	-846	CD(7d)																				
EC-1100	Delay to the Diversion/Modificaton of Existing HKT Pillar Boxes & Associated ducts in Ma Tso Lung Rd (EWN 075) (CNE 096)	0	15-Jul-22 A	25-Dec-23	-846	CD(7d)																				
EC-1102	Delay to the Relocation of Existing Fire Hydrant in Ma Tso Lung Road at Portion 9b of the Site (EWN 077) (CNE 129)	0	19-Jul-22 A	25-Dec-23	-846	CD(7d)																				
EC-1099	Delayed to the Removal and or Diversion of Existing CLP Cable and Facilities in Portion 9b of the Site (EWN 073)	0	31-Mar-22 A	25-Dec-23	-866	CD(7d)																				

	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Planned Work</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #FF0000; border: 1px solid black; margin-right: 5px;"></span> Critical Work</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #0000FF; border: 1px solid black; margin-right: 5px;"></span> Actual Work</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid black; margin-right: 5px;"></span> Milestone</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid red; margin-right: 5px;"></span> Milestone Critical</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Summary LOE</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #FF0000; border: 1px solid black; margin-right: 5px;"></span> Summary LOE Critical</li> </ul>	<h2 style="margin: 0;">ND/2019/01 - 3 Month Rolling Programme (2023-12)</h2> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <span>25-Dec-23</span> <span>31-Dec-2023</span> </div>	<p>Project ID: ND201901-RP-46</p> <p>Layout: ND201901-3MRP with logo</p> <p>Page 14 of 16</p>	THE 3-MONTH ROLLING PROGRAMME			
				Date	Revision	Checked	Approved
					Rev. 0	SC	BY



Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024					February 2024					March 2024			
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24	
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-Dec-23	-109	CD(7d)	<div></div>																
EC-1088	Design Changes to the Permanent Street Lighting Works (CNE 074)	0	04-Mar-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-Dec-23	-852	CD(7d)	<div></div>																
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-Dec-23	-703	CD(7d)	<div></div>																
EC-1170	Existing Fire Hydrants SN4399 on the existing Po Lai Road in Area M at Portion 1b of the Site (CNE 132)	0	07-Jul-23 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-Dec-23	-167	CD(7d)	<div></div>																
EC-1122	Further Changes to the Works Information for the Construction of DCS Pipes at Road D4-1 (PMI 155 CE 157) (CNE 095)	0	08-Nov-22 A	25-Dec-23	-703	CD(7d)	<div></div>																
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1027	Handling of Unlawful Occupied Property Affected by the Works within the Site (CNE No. 015)	0	31-Aug-20 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1106	Indemant Weather in June 2022 (CNE 080) (CE 216)	0	02-Jun-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1112	Indement Weather in August 2022 (CNE 087) (CE 236)	0	03-Aug-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1108	Indement Weather in July 2022 (CNE 082) (CE 227)	0	02-Jul-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1104	Indement Weather in May 2022 (CNE 078) (CE 212)	0	11-May-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1116	Indement Weather in October 2022 (CNE 093) (CE 273)	0	07-Oct-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1114	Indement Weather in September 2022 (CNE 089) (CE 244)	0	19-Sep-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1056	Indement Weather on 8th October 2021 (CNE 036) (CE 163)	0	08-Oct-21 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1092	Increased Difficulty for the Construction of Pak Shek Au Pedestrian Subway Cum Cycle Track (EWN 068) (CNE 116)	0	25-May-22 A	25-Dec-23	-779	CD(7d)	<div></div>																
EC-1086	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0	31-Mar-22 A	25-Dec-23	-866	CD(7d)	<div></div>																
EC-1118	Increased Risk for Suspension Pipe Jacking Flushing Watermains underneath MTRC Zone Portion 8b (EWN 080) (CNE 092, 0	0	18-Oct-22 A	25-Dec-23	-188	CD(7d)	<div></div>																
EC-1070	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0	04-Jan-22 A	25-Dec-23	-198	CD(7d)	<div></div>																
EC-1162	Late Completion for the EMSD's District Cooling System (DCS) Works (Contract No. 1330EM20A) along Road D1-2 (CNE 122)	0	11-Jul-23 A	25-Dec-23	744	CD(7d)	<div></div>																
EC-1188	Late completion for the EMSD's District Cooling System (DCS) works in road D3 at Portion 1c (CNE 143)	5	25-Dec-23	29-Dec-23	1104	CD(7d)	<div></div>																
EC-1007	Late Possession of remaining part of Portion 2 for soil nail works (CNE No. 008) (EWN No. 006) (CE 014)	0	06-Jan-20 A	25-Dec-23	304	CD(7d)	<div></div>																
EC-1005	Late Possession of Site of Portion 3 (CNE No. 005) (CE 015)	0	06-Apr-20 A	25-Dec-23	-423	CD(7d)	<div></div>																
EC-1013	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011) (CE 014) (CE 022)	0	06-Jul-20 A	25-Dec-23	-846	CD(7d)	<div></div>																
EC-1131	Late Provision of Add Work Area for the Construction of Drainages and Slopes Outside Site Boundary Portion 9b (CNE 098)	0	03-Jan-23 A	25-Dec-23	-322	CD(7d)	<div></div>																
EC-1090	Part of Portion 9b of the Site (near eastern end of Road D5) occupied by the Local Villagers (EWN 066)	0	03-May-22 A	25-Dec-23	-258	CD(7d)	<div></div>																
EC-1080	Possible Suspension of Concrete Supply due to the Severe Outbreak of COVID-19 (EWN 059)	0	02-Mar-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1094	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0	23-May-22 A	25-Dec-23	-367	CD(7d)	<div></div>																
EC-1123	Potential Delay due to Aggregate Supply Chain Shortage before Chinese New Year 2023 (EWN 082)	0	22-Nov-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1128	Potential Delay due to Shortage Supply of Manpower after Chinese New Year 2023 (EWN 085)	0	18-Jan-23 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1124	Potential Delay due to the Increased Difficulties and Uncertainties in Conc Supply in Coming Years (EWN 084) (CNE 100)	0	14-Dec-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0	06-Oct-21 A	25-Dec-23	744	CD(7d)	<div></div>																
EC-1076	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)	0	18-Feb-22 A	25-Dec-23	-284	CD(7d)	<div></div>																
EC-1062	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058) (CE 175)	0	13-Dec-21 A	25-Dec-23	412	CD(7d)	<div></div>																
EC-1110	Provision of Fill Materials for Contract Nos. ND/2019/05 and ND/2019/07 (CNE 084)	0	17-Aug-22 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1144	Provision of Spare Pipes for the Proposed Watermains adopting Trenchless Construction Method at Road D4 (EWN 091)	0	20-Jun-23 A	25-Dec-23	-866	CD(7d)	<div></div>																
EC-1148	Re-provision of Temporary Noise Barriers along Castle Peak Road - Chau Tau in Area K at Portion 4 of the Site (CNE 114)	0	21-Jun-23 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1176	Red and Black Rainstorm Warning Signals hoisted from 07 September 2023 (CNE 137)	0	07-Sep-23 A	25-Dec-23	542	CD(7d)	<div></div>																
EC-1085	Requesting for Additional Concrete Vehicular Access by the Local Villager adjacent 9b of the Site (EWN 064)	0	25-Apr-22 A	25-Dec-23	-834	CD(7d)	<div></div>																
EC-1071	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0	14-Dec-21 A	25-Dec-23	-284	CD(7d)	<div></div>																
EC-1138	Revised Drawings for the Construction of Street Furniture in various Positions of the Site (CNE 108)	0	15-Mar-23 A	25-Dec-23	1109	CD(7d)	<div></div>																
EC-1198	Revised longitudinal profile & layout for the watermains & DN150 branch pipes to the fire hydrants Road D4,D5 (CNE 149)	5	25-Dec-23	29-Dec-23	1104	CD(7d)	<div></div>																
EC-1196	Revised longitudinal profile and layout for the watermains CHA, CHD & CHQ along Road D4 in Portion 9b (CNE 148)	5	25-Dec-23	29-Dec-23	1104	CD(7d)	<div></div>																
EC-1119	Revised Noise Barrier Works at Road D3 in Portion 1C of the Site (EWN 081)	0	19-Oct-22 A	25-Dec-23	-64	CD(7d)	<div></div>																
EC-1200	Revised pre-determined alignment of DN600 flushing watermains (CHY 1022-1040) at DSD maintenance road (CNE 150)	5	25-Dec-23	29-Dec-23	1104	CD(7d)	<div></div>																
EC-1109	Revised Sewerage System along Road D4 and D5 at Portion 9b of the Site (CNE 083)	0	02-Aug-22 A	25-Dec-23	-846	CD(7d)	<div></div>																
EC-1066	Shortage of Aggregate Supply before Chinese New Year 2022 (CNE 048) (EWN 001.6, 001.8)	0	29-Nov-21 A	25-Dec-23	1109	CD(7d)	<div></div>																



Build King – Richwell Engineering  
Joint Venture

◆ Milestone

◆ Milestone Critical

Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-12)

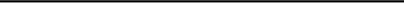
25-Dec-2331-Dec-2023

Project ID: ND201901-RP-46  
Lauyout: ND201901-3MRP with logo  
Page 15 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2023			January 2024					February 2024					March 2024					
							10	17	24	31	07	14	21	28	04	11	18	25	03	10	17	24			
EC-1052	Shortage of Cement Supply due to "Energy Consumption Dual Control Policy" (EWN 039) (CNE 049)	0	06-Oct-21 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1139	Strong Objection for a Grave on the Construction Works in the vicinity of the Road P1-1 and Roundabout C3 at 1 (CNE 109)	0	20-Mar-23 A	25-Dec-23	-605	CD(7d)	<div></div>																		
EC-1043	Strong Objection on the Construction of Fresh and Flushing Reservoir at Portions 8a and 8b (EWN 031) Maintenance Access	0	09-Jun-21 A	25-Dec-23	-611	CD(7d)	<div></div>																		
EC-1006	Strong Objection on the Construction of Service Reservoirs at Portions 8a & 8b (CNE No. 006) (EWN No. 005) (CE 019)	0	18-Mar-20 A	25-Dec-23	-612	CD(7d)	<div></div>																		
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1081	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0	14-Mar-22 A	25-Dec-23	-549	CD(7d)	<div></div>																		
EC-1022	Suspension of Works at Part of Portions 9c (CNE no. 010) (CE 030)	0	21-Jul-20 A	25-Dec-23	59	CD(7d)	<div></div>																		
EC-1065	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 052)	0	04-Jan-22 A	25-Dec-23	412	CD(7d)	<div></div>																		
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-Dec-23	-115	CD(7d)	<div></div>																		
EC-1105	Tropical Cyclone Warning Signal No.8 from 1st to 2nd July 2022 (CNE 079) (CE 214)	0	01-Jul-22 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1113	Tropical Cyclone Warning Signal No.8 from 24th to 25th August 2022 (CNE 086) (CE 232)	0	24-Aug-22 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1121	Tropical Cyclone Warning Signal No.8 from 2nd to 3rd November 2022 (CNE 094) (CE 274)	0	02-Nov-22 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040) (CE 165)	0	12-Oct-21 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039) (CE 164)	0	09-Oct-21 A	25-Dec-23	1109	CD(7d)	<div></div>																		
EC-1072	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0	29-Dec-21 A	25-Dec-23	-352	CD(7d)	<div></div>																		
EC-1150	Uncharted Artificial Hard Materials Encountered during Construction of Cut-Slope KS34 in Pak Shek (EWN 092) (CNE 128)	0	28-Jul-23 A	25-Dec-23	-741	CD(7d)	<div></div>																		
EC-1154	Uncharted Watermain Encountered during Construction of Proposed UU along existing Ma Tso Lung Road (EWN 094) (CNE 130)	0	14-Aug-23 A	25-Dec-23	-549	CD(7d)	<div></div>																		
EC-1135	Unexpected Long Approval Process for Tech Submission for Works in MTRC Zone Portion 12, 1a & 1b (EWN 090) (CNE 115)	0	29-Mar-23 A	25-Dec-23	-621	CD(7d)	<div></div>																		
EC-1152	Unexpected Underground Conditions Encountered during Construction of Pak Shek Au Pedestrian Subway (EWN 093) (CNE 117)	0	24-Jul-23 A	25-Dec-23	-755	CD(7d)	<div></div>																		
EC-1202	Unexpected unsuitable excavated materials encountered during construction of DN900 Freshwater main CHO (CNE 151)	5	25-Dec-23	29-Dec-23	1104	CD(7d)	<div></div>																		
EC-1127	Unrecognized Construction Works for Newly Underground Cables and Facilities conducted by CLP at Portion 9b (EWN 083)	0	03-Jan-23 A	25-Dec-23	-866	CD(7d)	<div></div>																		
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038) (CNE 049)	0	27-Sep-21 A	25-Dec-23	270	CD(7d)	<div></div>																		
EC-1168	Waste & Muddy Water Discharged from the Construction Site operated by the Contractor in Area C1 in Portion 5 (CNE 127)	0	01-Jun-23 A	25-Dec-23	744	CD(7d)	<div></div>																		
EC-1075	Works affected by the Sever Outbreak of Omicron (CNE 073) (EWN 058)	0	25-Feb-22 A	25-Dec-23	1109	CD(7d)	<div></div>																		



**Build King – Richwell Engineering  
Joint Venture**

Planned Work  
 Critical Work  
 Actual Work  
 Milestone  
 Milestone Critical  
 Summary LOE  
 Summary LOE Critical

## ND/2019/01 - 3 Month Rolling Programme (2023-12)

25-Dec-23
31-Dec-2023

Project ID: ND201901-RP-46  
 Layout: ND201901-3MRP with logo  
 Page 16 of 16

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
	Rev. 0	SC	BY



# ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work

- Portion 8a**
- 1.Construction of Retaining Wall
  - 2.RC construction of Flushing/ Fresh water service Reservoir
  3. Excavation at WSD's maintenance access
  - 4.Backfilling
  - 5.Drainage works
  - 6.Soil nailing
  - 7.Pipe pile wall installation

- Portion 6b**
1. Operation of HAC treatment facility

- Portion 6a**
- 1.Drainage works
  - 2.Backfilling
  - 3.Road works
  4. Watermain works

- Portion 5**
1. Watermain works
  - 2.Excavation
  - 3.Backfilling
  - 4.Road works
  - 5.Sheet piling
  - 6.Pipe jacking

- Portion 3**
- 1.Excavation
  - 2.Backfilling
  - 3.Drainage
  4. Watermain works

- Portion 1a**
- 1.Drainage works
  - 2.Sheet pile

- Portion 2**
- 1.Site formation works
  - 2.Construction of subway
  - 3.Road works
  - 4.Drainage works

- Portion 13**
- 1.Site Clearance
  - 2.Tree felling
  - 3.Removal of existing structure
  4. Stockpile of soil

- Portion 9b**
- 1.Sheet piling
  - 2.Excavation
  - 3.Road works
  - 4.Drainage works
  5. Watermain works

**Portion 9c**

- Portion 1c**
- 1.Site formation
  2. Stockpile of soil
  - 3.Erection of hoarding
  - 4.Construction of noise barrier

**Portion 1b**

- Portion 7**
- 1.Sheet piling
  - 2.Excavation
  3. Stockpile of soil
  - 4.Drainage works
  5. Watermain works

- Portion 11b**
1. Removal of existing structure

- Portion 8b**
- 1.Trenchless works
  - 2.Excavation
  3. Watermain works
  4. Ground treatment

Portion	Legend	Portion	Legend
1a		7	
1b		8a	
1c		8b	
2		9b	
3		9c	
4		11b	
5		13	
6a			
6b			

(Dec 2023 – Mar 2024)

## **Construction Programme of ND/2019/02**



Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

4 Months Rolling Programme

(Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 1 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)



Page No. 2 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5)



Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

**4 Months Rolling Programme**  
(Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 3 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)



<div style="display: flex; justify-content: space-between;"> <div> <span style="background-color: orange; width: 20px; height: 10px; margin-bottom: 2px;"></span> Project Baseline Bar  <span style="background-color: yellow; width: 20px; height: 10px; margin-bottom: 2px;"></span> Primary Baseline  <span style="background-color: blue; width: 20px; height: 10px; margin-bottom: 2px;"></span> Actual Work  <span style="background-color: green; width: 20px; height: 10px; margin-bottom: 2px;"></span> Remaining Work  <span style="background-color: red; width: 20px; height: 10px; margin-bottom: 2px;"></span> Critical Remaining Work </div> <div> <span style="color: yellow; font-size: 1.2em;">◆</span> Baseline Milestone  <span style="color: red; font-size: 1.2em;">◆</span> Critical Milestone  <span style="color: black; font-size: 1.2em;">◆</span> Non-Critical Milestone  <span style="font-weight: bold;">▼</span> Summary </div> </div>	<p>Data Date: 30-Nov-2023  Project Start: 03-Feb-2020  Project End: 28-Dec-2026  Baseline: Rev. 2.5</p>	<h2 style="margin: 0;">4 Months Rolling Programme (Dec 2023 to Mar 2024)</h2>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th><th>Revision</th><th>Checked</th><th>Approved</th></tr> </thead> <tbody> <tr> <td>28-Dec-2023</td><td>0</td><td>RP</td><td>EW</td></tr> <tr> <td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Page No. 4 of 28  TASK filter: DD+4M Lookahead.  ND/2019/02_MPU with Baseline (2.5)</p>	Date	Revision	Checked	Approved	28-Dec-2023	0	RP	EW				
Date	Revision	Checked	Approved												
28-Dec-2023	0	RP	EW												



Page No. 5 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5)



Project Baseline Bar  
 Primary Baseline  
 Actual Work  
 Remaining Work  
 Critical Remaining Work

Summary

Data Date: 30-Nov-2023  
 Project Start: 03-Feb-2020  
 Project End: 28-Dec-2026  
 Baseline: Rev. 2.5

## 4 Months Rolling Programme (Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

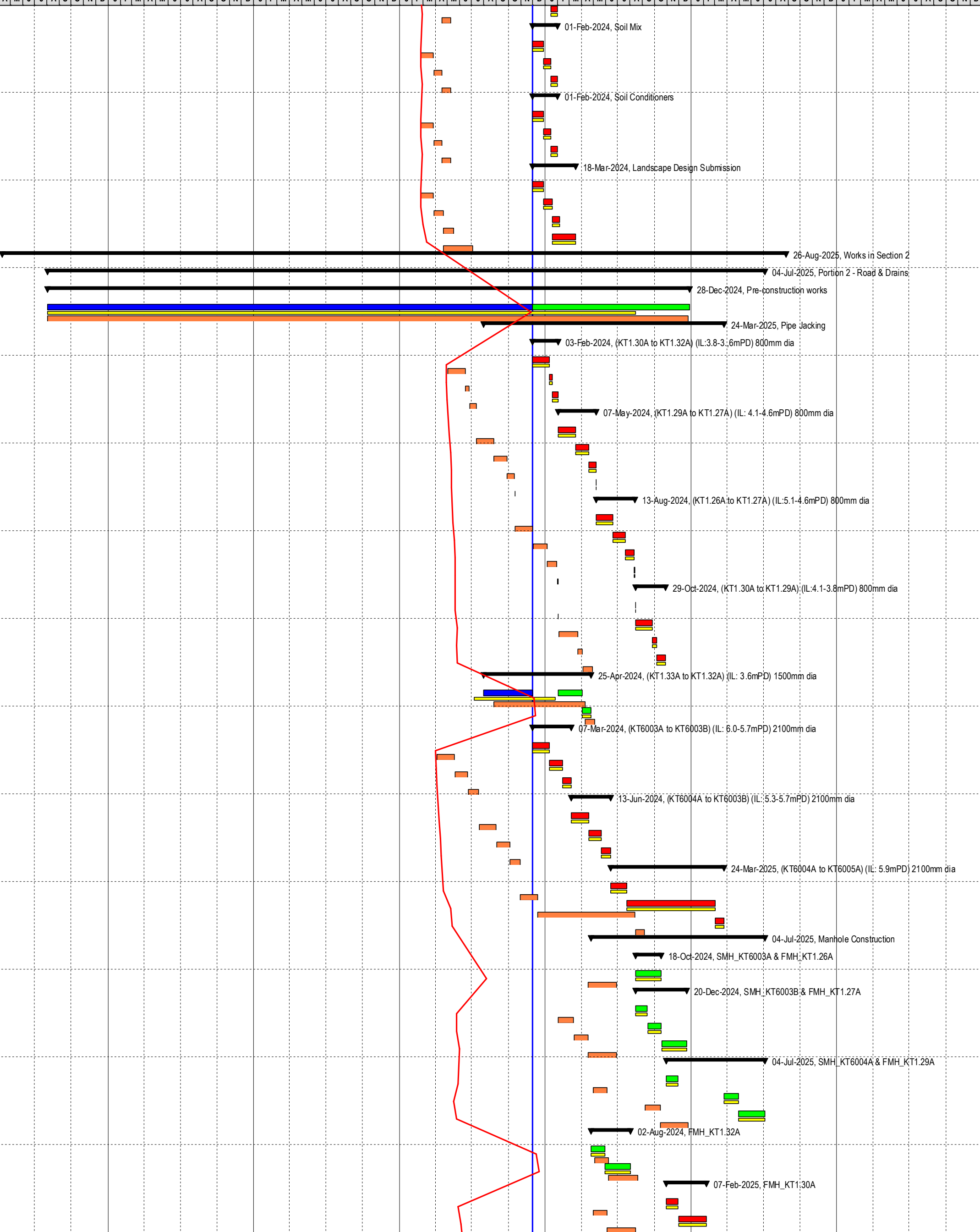
Page No. 6 of 28

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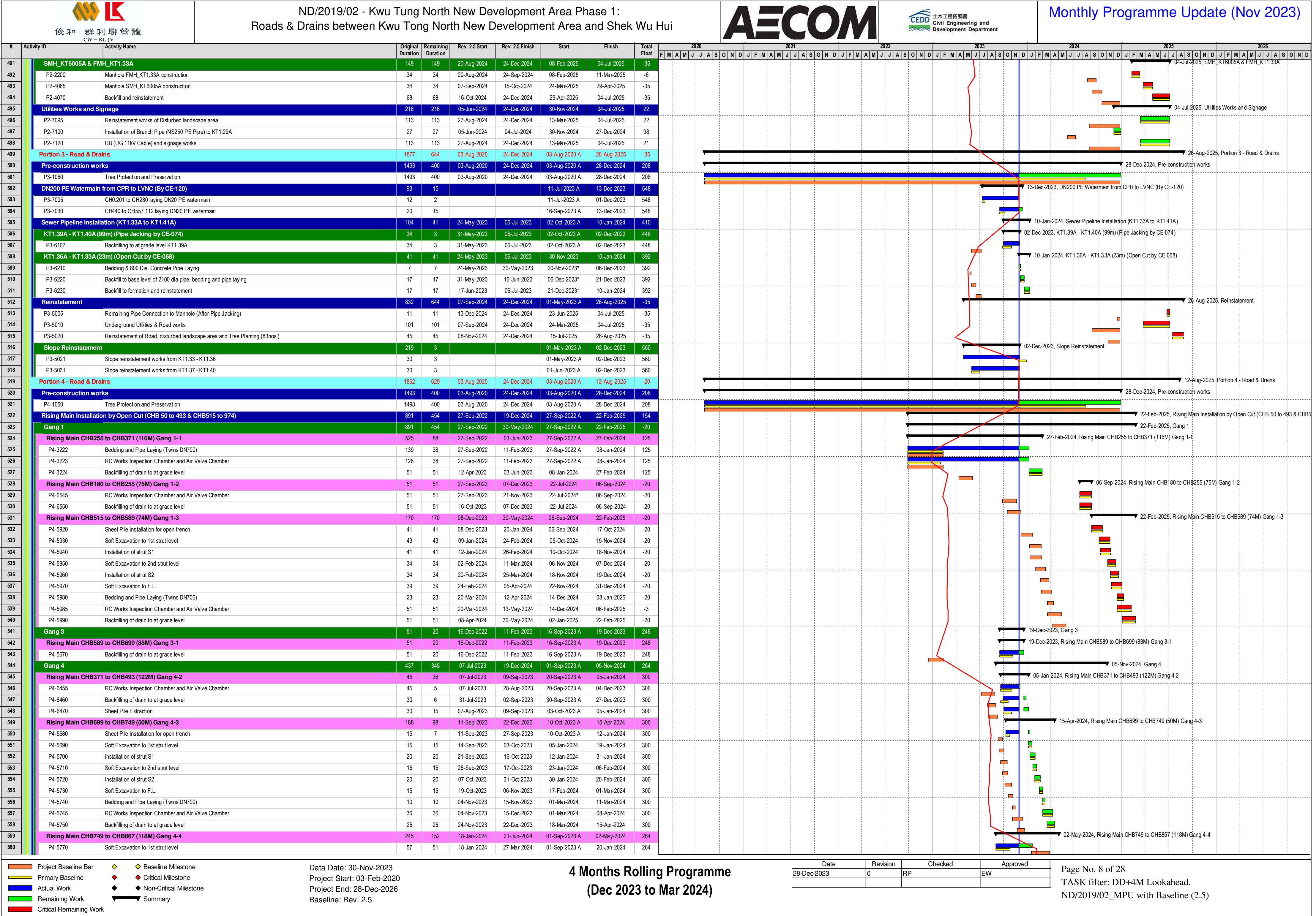
ND/2019/02\_MPU with Baseline (2.5)



Page No. 7 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5x)







Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5



Project Baseline Bar
  Baseline Milestone

Primary Baseline
  Critical Milestone

Actual Work
  Non-Critical Milestone

Remaining Work
  Critical Remaining Work

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

## 4 Months Rolling Programme (Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 9 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)

Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

4 Months Rolling Programme

(Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 10 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)





Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

**4 Months Rolling Programme**  
(Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 12 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

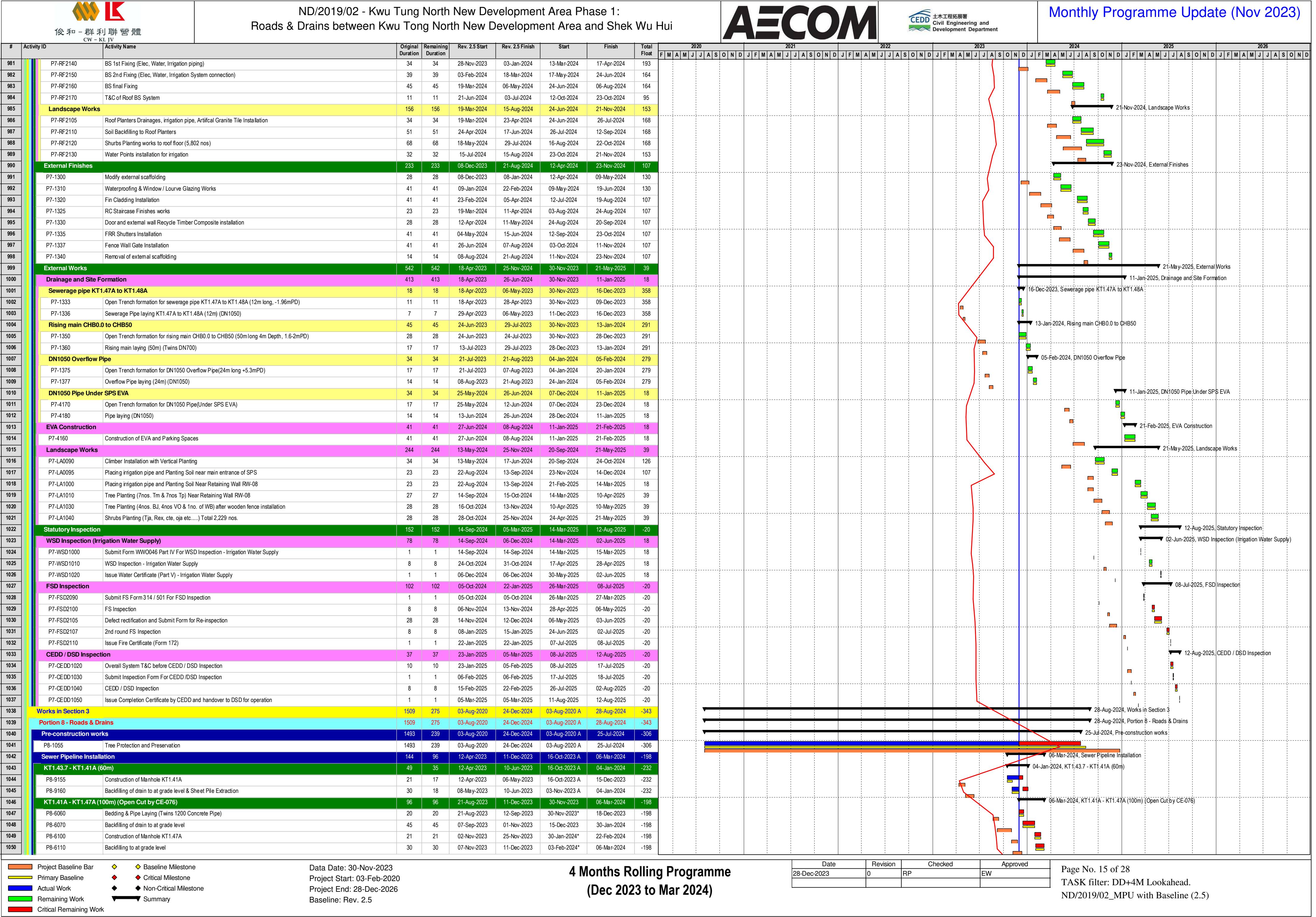
Baseline: Rev. 2.5



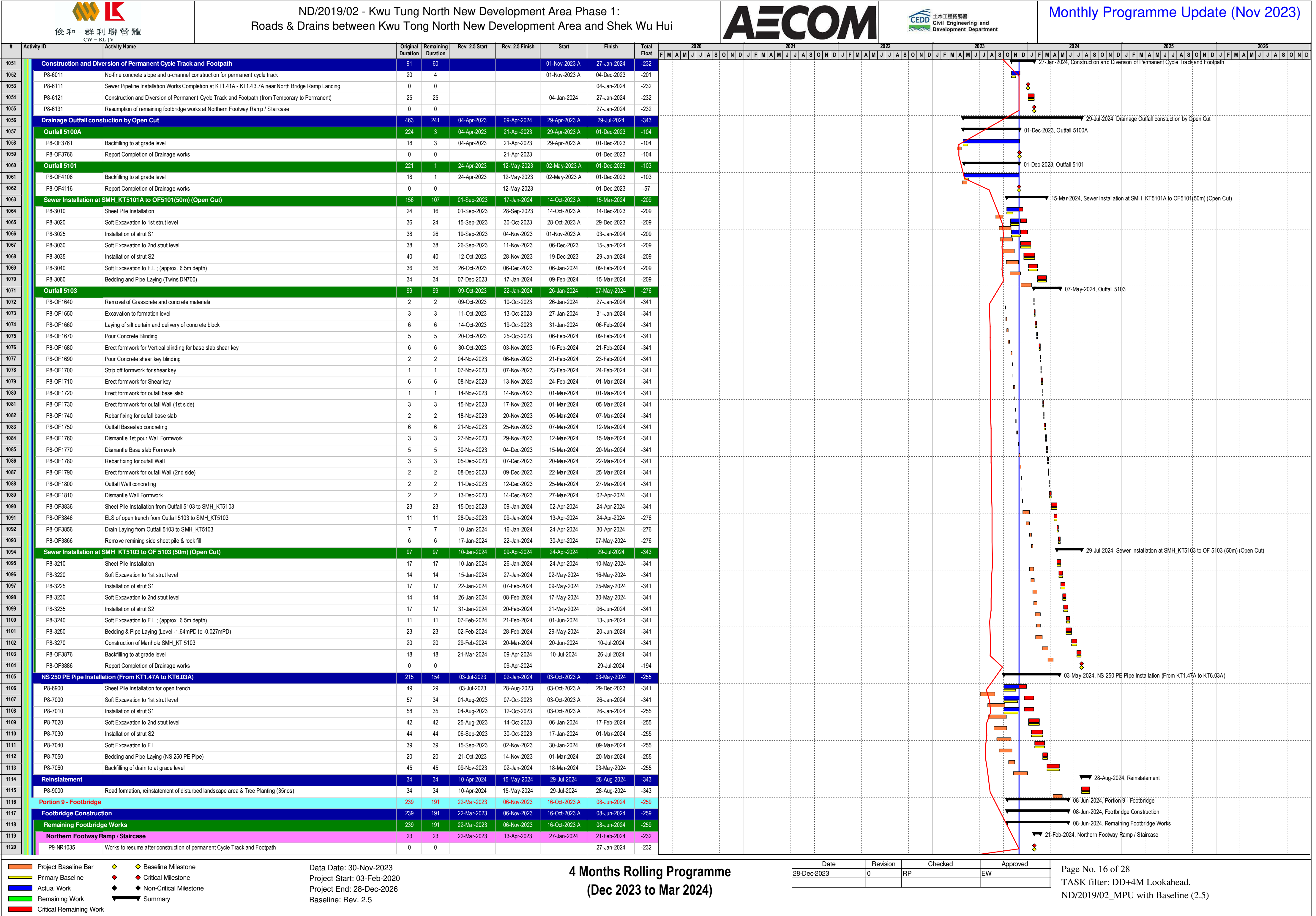
Page No. 13 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5x)











Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

4 Months Rolling Programme  
(Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 16 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)



Project Baseline Bar  
 Primary Baseline  
 Actual Work  
 Remaining Work  
 Critical Remaining Work

Summary

Data Date: 30-Nov-2023  
 Project Start: 03-Feb-2020  
 Project End: 28-Dec-2026  
 Baseline: Rev. 2.5

## 4 Months Rolling Programme (Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 17 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)

Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

◆ Baseline Milestone

◆ Critical Milestone

◆ Non-Critical Milestone

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

4 Months Rolling Programme

(Dec 2023 to Mar 2024)

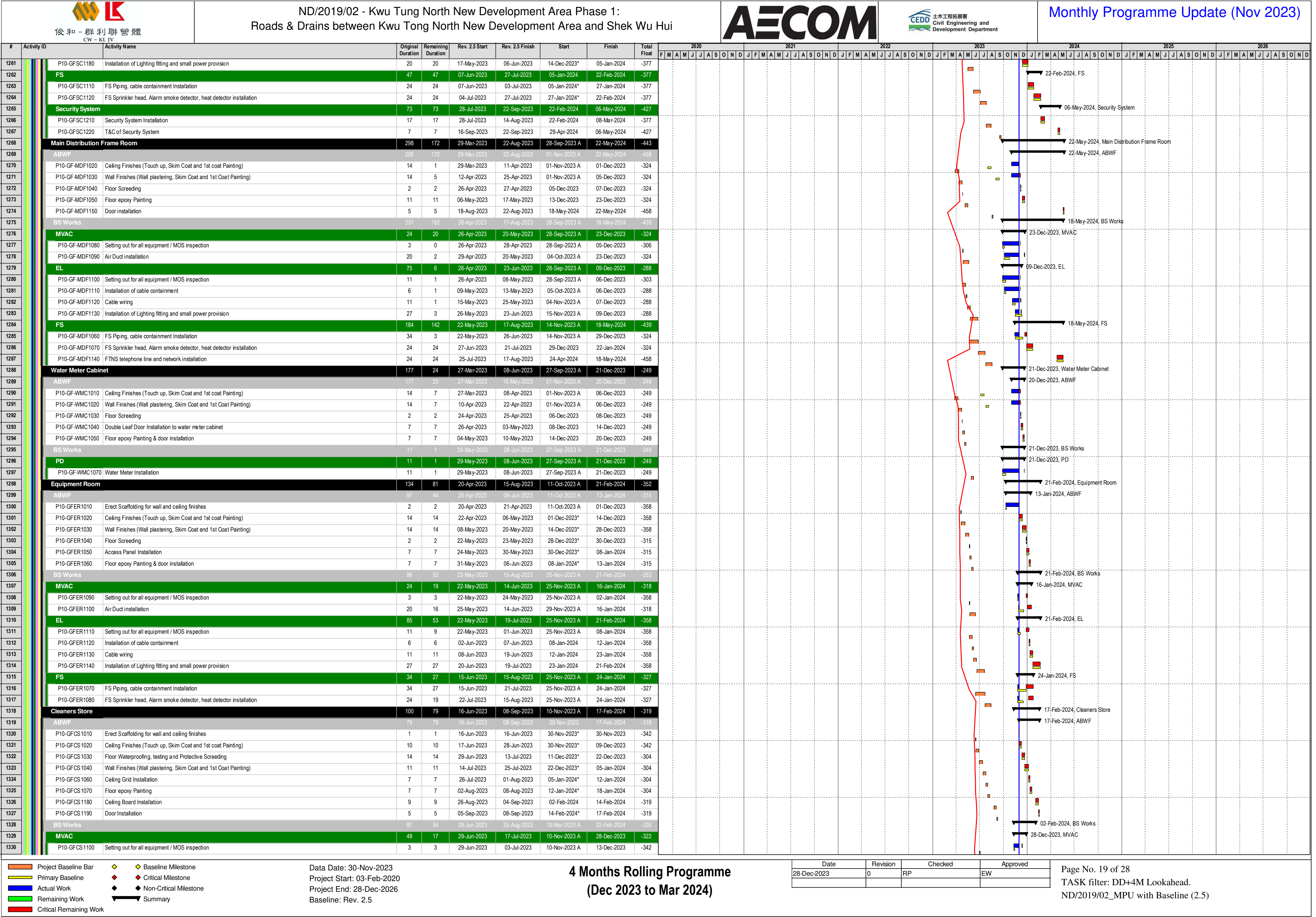
Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 18 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)





<div></div> Project Baseline Bar	<div></div> Baseline Milestone	Data Date: 30-Nov-2023	<div>4 Months Rolling Programme (Dec 2023 to Mar 2024)</div>	<div></div> Date	<div></div> Revision	<div></div> Checked	<div></div> Approved	<div>Page No. 20 of 28</div> <div>TASK filter: DD+4M Lookahead.</div> <div>ND/2019/02_MPU with Baseline (2.5)</div>
<div></div> Primary Baseline	<div></div> Critical Milestone	Project Start: 03-Feb-2020		<div></div> 28-Dec-2023	<div></div> 0	<div></div> RP	<div></div> EW	
<div></div> Actual Work	<div></div> Non-Critical Milestone	Project End: 28-Dec-2026						
<div></div> Remaining Work	<div></div> Summary	Baseline: Rev. 2.5						
<div></div> Critical Remaining Work								



Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

## 4 Months Rolling Programme (Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 21 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)

Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

**4 Months Rolling Programme**  
(Dec 2023 to Mar 2024)

Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 22 of 28

TASK filter: DD+4M Lookahead.

ND/2019/02\_MPU with Baseline (2.5)

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5





Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

◆ Baseline Milestone

◆ Critical Milestone

◆ Non-Critical Milestone

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

4 Months Rolling Programme

(Dec 2023 to Mar 2024)

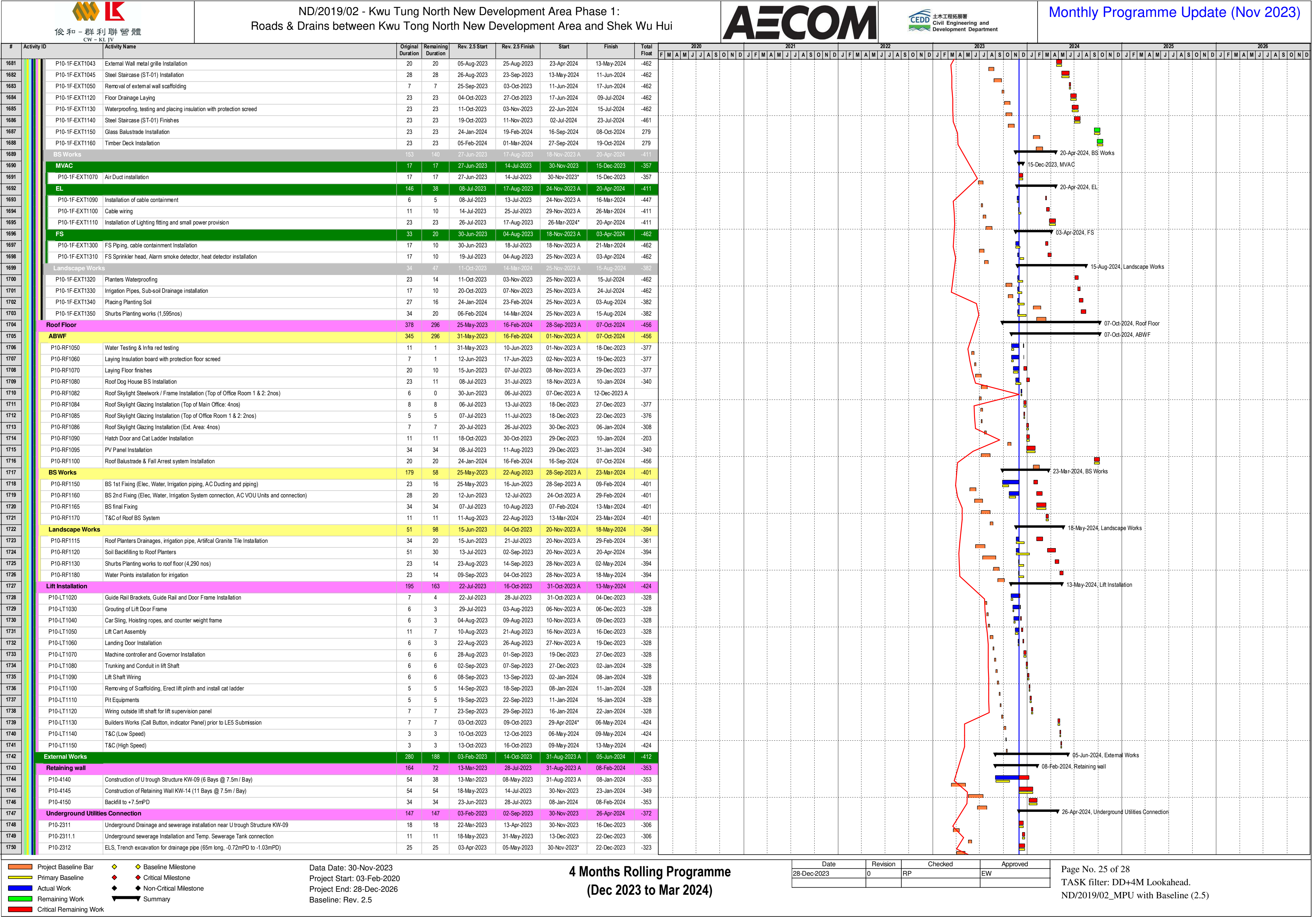
Date	Revision	Checked	Approved
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Page No. 24 of 28

TASK filter: DD+4M Lookahead.

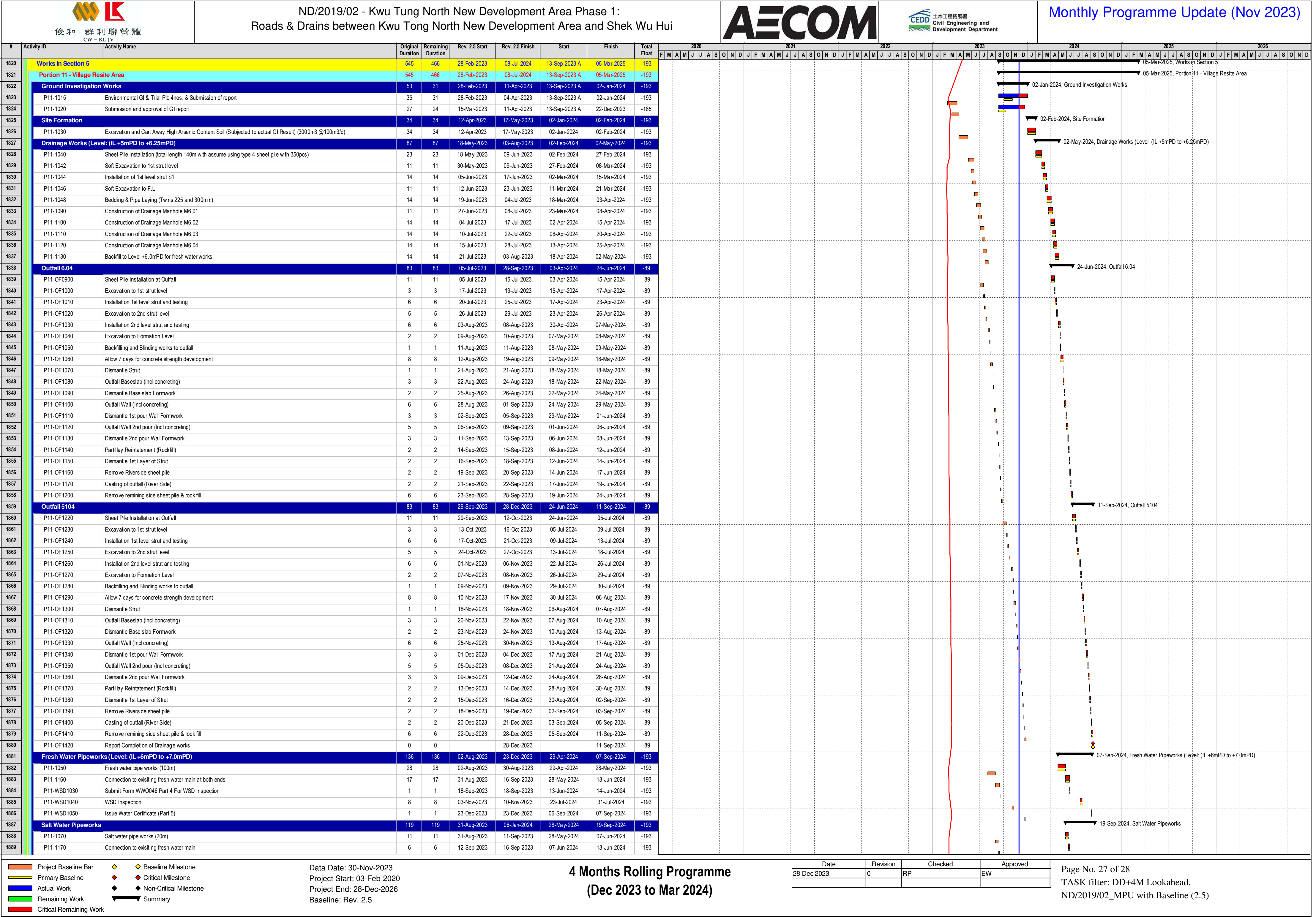
ND/2019/02\_MPU with Baseline (2.5)





Page No. 26 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5)





Project Baseline Bar

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical Milestone

Non-Critical Milestone

Summary

Data Date: 30-Nov-2023

Project Start: 03-Feb-2020

Project End: 28-Dec-2026

Baseline: Rev. 2.5

4 Months Rolling Programme  
(Dec 2023 to Mar 2024)

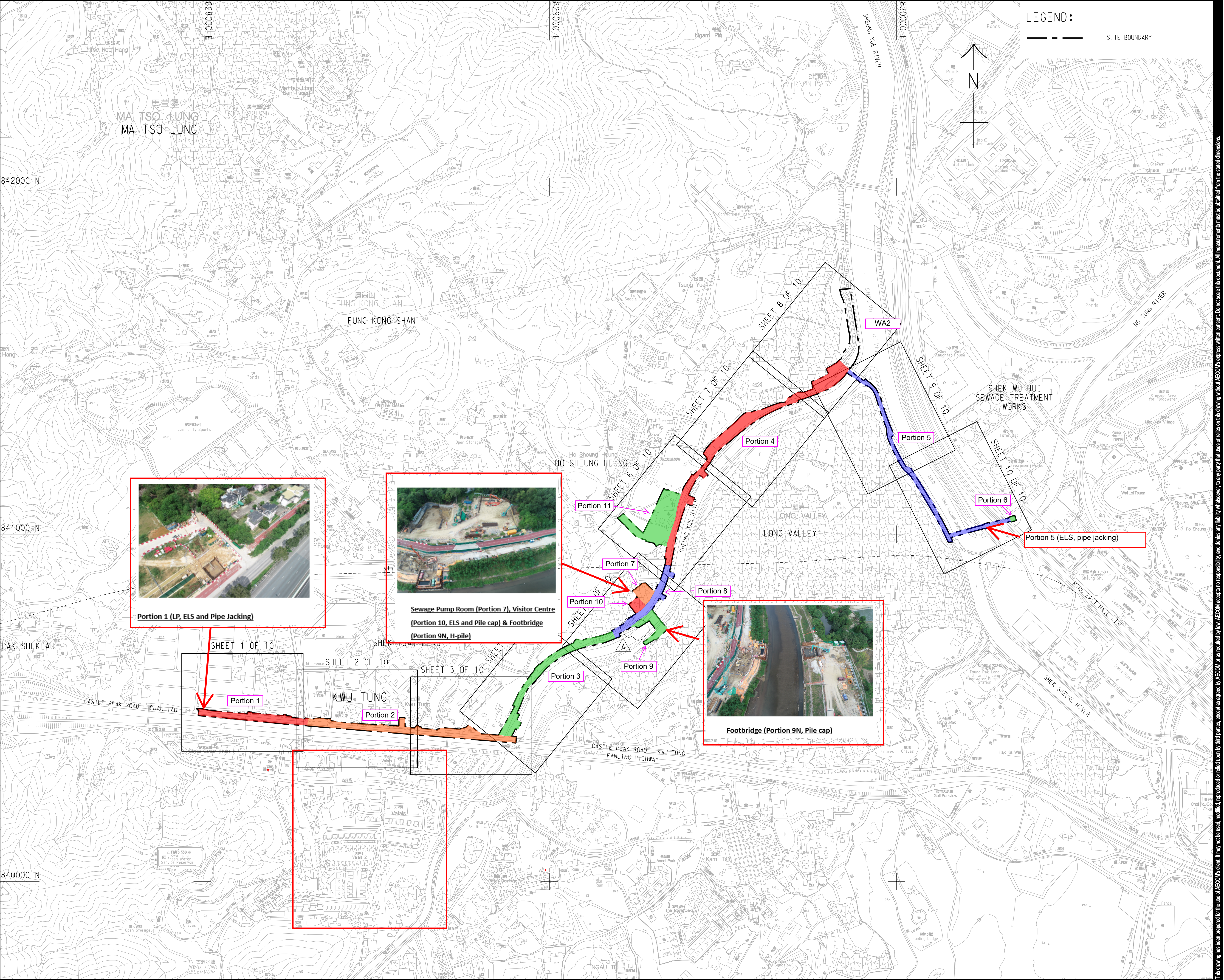
Date	Revision	Checked	Approved
28-Dec-2023	0	RP	EW

Page No. 27 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5)

Page No. 28 of 28  
TASK filter: DD+4M Lookahead.  
ND/2019/02\_MPU with Baseline (2.5x)



ISO A1 594mm x 841mm  
Approved: IHWL  
Checked: CYCH  
Designer: ELHY  
Project Management Initials:  
Pld File by: ZENGJLY2 2019/10/25  
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**AECOM**

PROJECT  
項目

**DEVELOPMENT OF  
KWU TUNG NORTH AND  
FANLING NORTH  
NEW DEVELOPMENT  
AREAS, PHASE 1**

CONTRACT TITLE:

**KWU TUNG NORTH NEW  
DEVELOPMENT AREA, PHASE 1:  
ROADS AND DRAINS BETWEEN  
KWU TUNG NORTH  
NEW DEVELOPMENT AREA  
AND SHEK WU HUI**

CLIENT  
業主

**CEDD** 土木工程拓展署  
Civil Engineering and  
Development Department

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SUB-CONSULTANTS  
分判工程顧問公司

ISSUE/REVISION  
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	OCT-19	TENDER ADDENDUM NO. 2	CYCH
-	SEP-19	TENDER DRAWING	CYCH

STATUS  
階段

SCALE  
比例  
A1 1: 5000

DIMENSION UNIT  
尺寸單位  
METRES

KEY PLAN  
索引圖

PROJECT NO.  
項目編號  
60335576

CONTRACT NO.  
合約編號  
ND/2019/02

SHEET TITLE  
圖紙名稱  
KEY PLAN

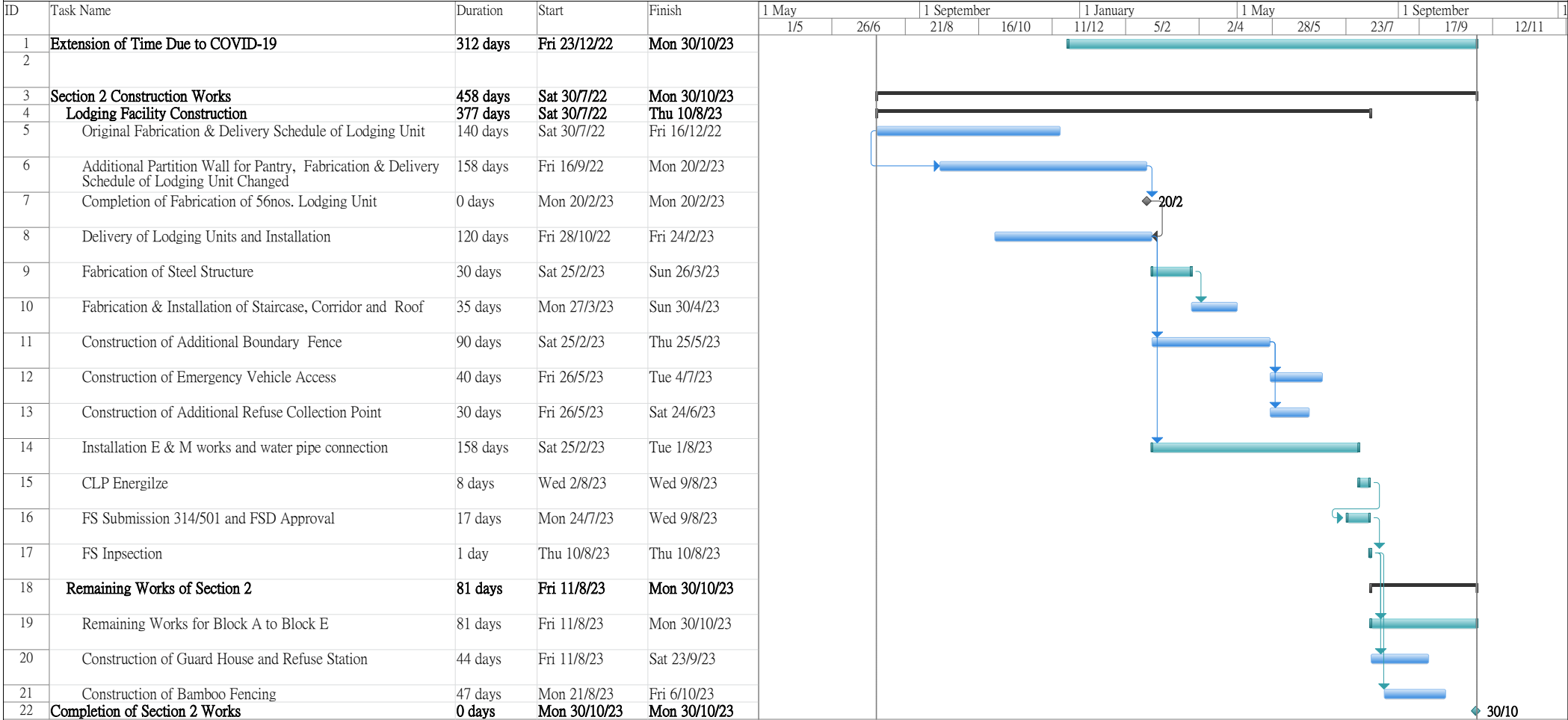
SHEET NUMBER  
圖紙編號  
60335576/C2/C00/1000A

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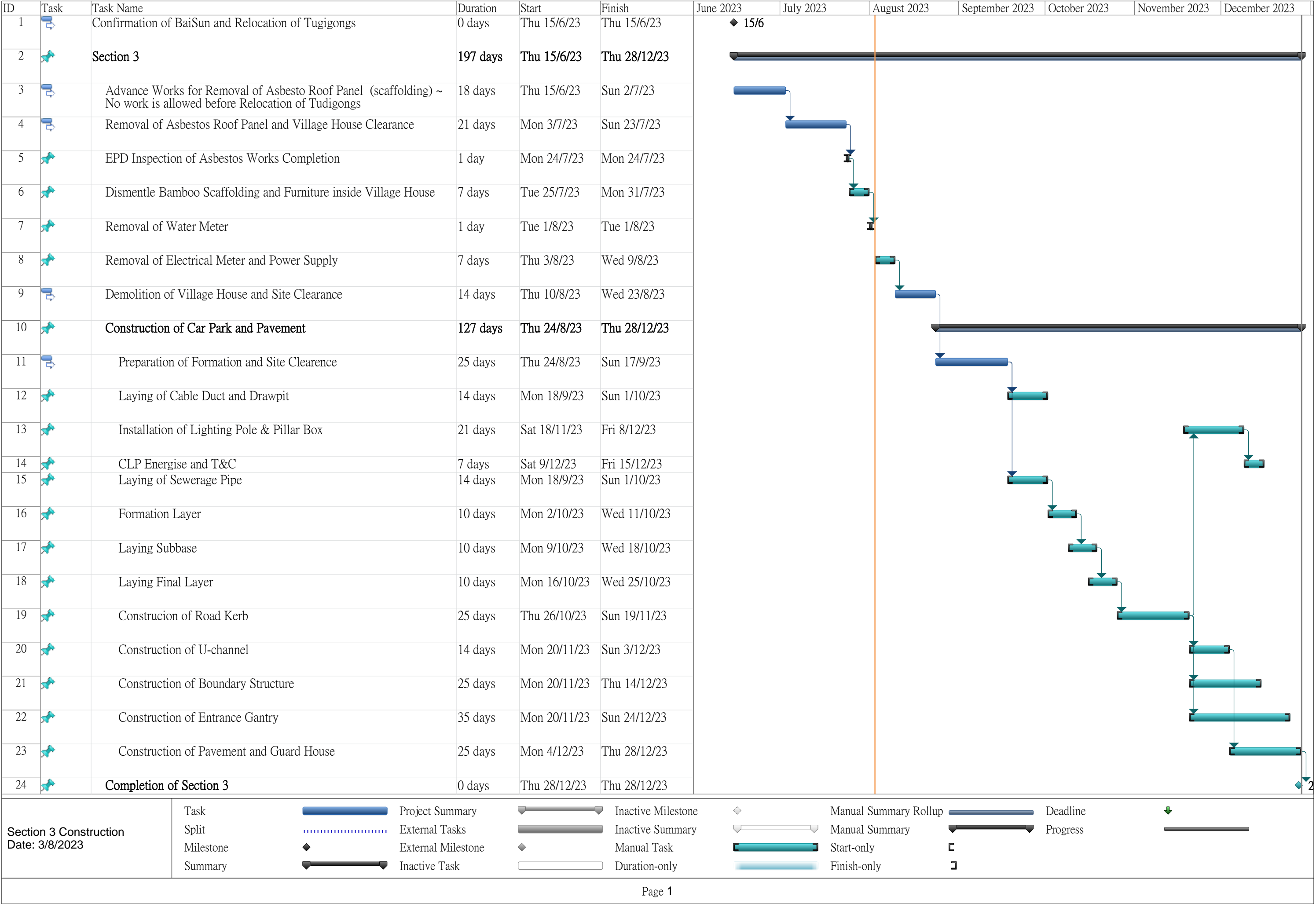


## **Construction Programme of ND/2019/03**

ND/2019/03  
Programme for Construction in Section 2



Section 2 Remaining Works	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
	Summary		Inactive Task		Duration-only		Finish-only			







# Legend

WWS	Intensive Wet Agricultural Land - Watercress/Water Spinach	Mitigation Plantation
WC/CA	Less Intensive Wet Agricultural Land - Water Chestnut/ Chinese Arrowhead	Village Area/ Urban/Residential Area
LWL	Less Intensive Wet Agricultural Land - Lotus/Water Lily	Water Treatment Wetland
PA	Intensive Wet Agricultural Land - Paddy Field	Irrigation Channel
Marsh - Open Water		Flow direction
Marsh		
Marsh - Reedbed		
Pond		
Water Flea Pond		
Mitigation Wetland		
Dry Agricultural Land		
Plantation		

(\*) Habitat planted with low density of wet crops (<20% coverage) that concentrate at the centre











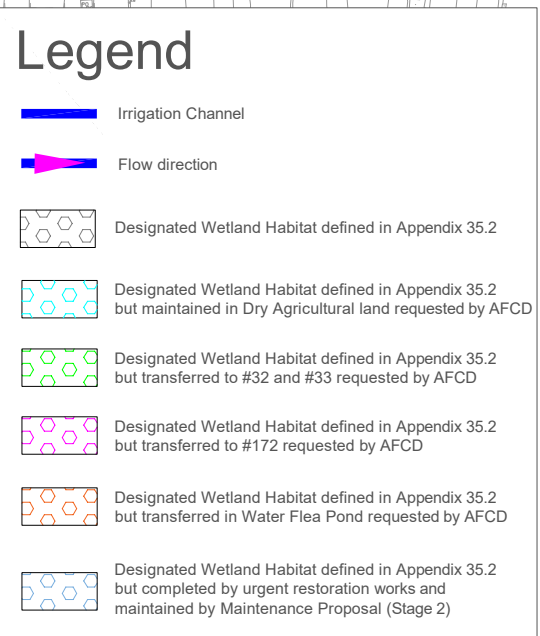
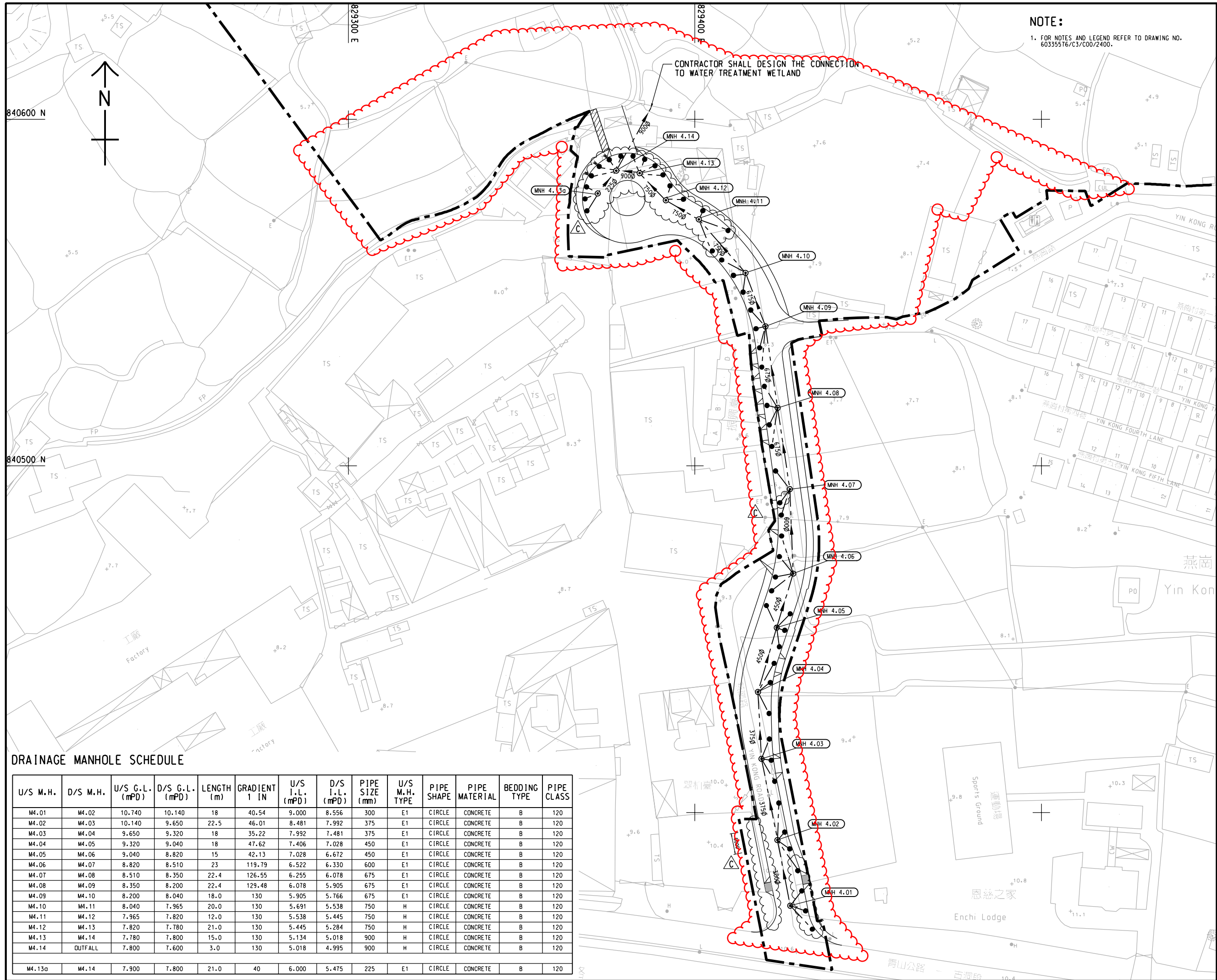




Figure 3c. Designated wetland habitats in Appendix 35.2









C	21/05/21	LAYOUT AMENDED	HLH	DT	WT
B	7/12/20	ROAD ALIGNMENT AMENDED	KLC	DT	WT
A	15/07/20	RUN IN ADDED AND MANHOLE RE-ARRANGED	KLC	DF	PY
REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
CLIENT					
		<b>土木工程拓展署</b> <b>Civil Engineering and Development Department</b>			
CONSULTANT					
					
PROJECT					
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1					
CONTRACT TITLE					
KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1: DEVELOPMENT OF LONG VALLEY NATURE PARK					
REMARK:					
1. SUPERSEDE DRG NO. 60335576/C3/C00/2410					
TITLE					
YIN KONG ROAD - ROAD DRAINAGE LAYOUT					
PROJECT NO. 60335576			CONTRACT NO. ND/2019/03		
SCALE 1:500 (A1)			DATE 4-JUN-20		
DRAWN KLC		PREPARED DF		APPROVED PY	
SKETCH NO. ND/2019/03/R10/130/0052					REV. C



## **Construction Programme of ND/2019/04**



DCK JV

Remaining Work

Milestone

Baseline Milestone

Project Baseline

Critical Remaining Work

Crit Milestone

Actual Work

Actual Milestone

Project ID: RP07-7-MU11-2023

Three Months Rolling Programme (08 December 2023 to 31 March 2024)

Page 1 of 12

Data Date: 08-Dec-23

Printed: 19-Dec-23 10:36

Layout: 3 MRP Layout

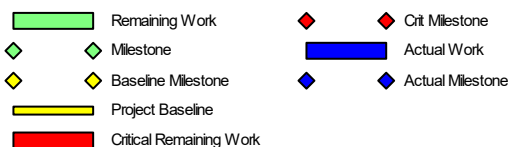
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Baseline Programme RP07 Accepted on 31 October 2023

Date	Revision	Ch...	Approved
08-Dec-23	Data Date		



Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP07	BL Finish RP07	Total Float	Activity % Complete	2023		2024					
										Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
OTH-2020a	Relocation of Traffic System- Siu Wan Road Junctional works (road realignment)	40	28	26-Oct-23 A	13-Jan-24	26-Oct-23	11-Dec-23	-109	30%								
OTH-2020b	Relocation of Traffic System- Siu Wan Road Junctional works (paving works etc)	40	40	15-Jan-24	04-Mar-24	12-Dec-23	30-Jan-24	-109	0%								
Portion Q																	
Portion Q Additional Work																	
OTH-1032-1c	Additional ducting	30	30	09-Dec-23	16-Jan-24	06-Sep-23	12-Oct-23	-161	0%								
Portion R																	
Portion R Additional Work (Ducting Works)																	
OTH-1046-7d	Additional ducting	30	30	17-Jan-24	23-Feb-24	30-Oct-23	02-Dec-23	-161	0%								
Portion S																	
OTH-1050a	Excavation & lateral support works (Stage 1)	60	3	15-May-23 A	12-Dec-23	15-May-23	11-Oct-23	-104	95%								
OTH-1050b	Excavation & lateral support works (Stage 2)	60	60	13-Dec-23	27-Feb-24	12-Oct-23	21-Dec-23	-104	0%								
OTH-1050b10	Demolition of Existing Structure (RHS)	5	1	04-Sep-23 A	09-Dec-23	04-Sep-23	06-Sep-23	-126	80%								
OTH-1050b20	Subway Extension - Base Slab (RHS)	8	8	11-Dec-23	19-Dec-23	07-Sep-23	15-Sep-23	-126	0%								
OTH-1050b30	Demolition of Existing Structure (LHS)	10	10	20-Dec-23	03-Jan-24	16-Sep-23	27-Sep-23	-126	0%								
OTH-1050b40	Subway Extension - Base Slab (LHS)	8	8	04-Jan-24	12-Jan-24	28-Sep-23	09-Oct-23	-126	0%								
OTH-1050b50	Erection of Working Platform and erection of Falsework and Gantry	18	18	13-Jan-24	02-Feb-24	10-Oct-23	31-Oct-23	-126	0%								
OTH-1050b60	Subway Extension - Wall and top slab	17	17	03-Feb-24	26-Feb-24	01-Nov-23	20-Nov-23	-126	0%								
OTH-1050b70	Removal of ELS and Backfilling	23	23	27-Feb-24	23-Mar-24	21-Nov-23	16-Dec-23	-126	0%								
Portion U																	
Area 2 (Traffic Island)																	
OTH-1070-2f	Set back the existing traffic island	26	13	04-Sep-23 A	23-Dec-23	04-Sep-23	20-Sep-23	-122	50%								
Area 4																	
OTH-1070-2g	Demolition of existing central divider	15	15	27-Dec-23	13-Jan-24	21-Sep-23	10-Oct-23	-122	0%								
OTH-1070-2h	Drainage	22	22	15-Jan-24	08-Feb-24	11-Oct-23	06-Nov-23	-122	0%								
OTH-1070-2i	Construction of new central divider	15	15	09-Feb-24	29-Feb-24	07-Nov-23	23-Nov-23	-122	0%								
OTH-1070-2i	Relocate public light	15	15	01-Mar-24	18-Mar-24	24-Nov-23	11-Dec-23	-122	0%								
OTH-1070-2i	Relocate traffic signal post	15	15	01-Mar-24	18-Mar-24	24-Nov-23	11-Dec-23	-122	0%								
OTH-1070-2i	Road marking	1	1	19-Mar-24	19-Mar-24	12-Dec-23	12-Dec-23	-122	0%								
Area 3																	
OTH-1070-3a	Subway extension	60	13	11-Aug-23 A	23-Dec-23	11-Aug-23	06-Oct-23	-71	78.33%								
OTH-1070-3c	Set back road kerb	10	2	10-Oct-23 A	28-Dec-23	10-Oct-23	09-Oct-23	-71	80%								
OTH-1070-3d	Street furniture	15	15	29-Dec-23	16-Jan-24	10-Oct-23	27-Oct-23	-71	0%								
OTH-1070-3e	Construction of carriageway and road marking	18	5	21-Oct-23 A	05-Jan-24	21-Oct-23	16-Oct-23	-61	70%								
Portion U Additional Works																	
OTH-1070-4a	XP, TTA and RA	0	0	03-May-23 A	09-Dec-23	03-May-23	06-Sep-23	-101	0%								
OTH-1070-4c	Additional ducting	30	30	24-Feb-24	02-Apr-24	04-Dec-23	10-Jan-24	-161	0%								
Portion V,Y																	
Area 1 (New Footpath Area)																	
OTH-1080-1b	Relocate Fire Hydrant	30	12	04-Sep-23 A	22-Dec-23	04-Sep-23	09-Oct-23	-176	60%								
OTH-1080-1c	Drainage	20	15	20-Jun-23 A	12-Jan-24	20-Jun-23	16-Oct-23	-176	25%								
OTH-1080-1d	Carriageway	19	19	13-Jan-24	03-Feb-24	17-Oct-23	08-Nov-23	-176	0%								
Area 2 (Pedestrian Crossing)																	
OTH-1080-2c	Demolish existing central divider	20	6	10-Aug-23 A	14-Feb-24	10-Aug-23	15-Nov-23	-176	70%								
OTH-1080-2c	Roadworks	28	28	15-Feb-24	18-Mar-24	16-Nov-23	18-Dec-23	-176	0%								
OTH-1080-2c	Drainage	7	7	19-Mar-24	26-Mar-24	19-Dec-23	28-Dec-23	-176	0%								
OTH-1080-2c	Road lighting	7	7	27-Mar-24	08-Apr-24	29-Dec-23	06-Jan-24	-169	0%								
OTH-1080-2c	Traffic signal system	14	14	27-Mar-24	16-Apr-24	29-Dec-23	15-Jan-24	-176	0%								
Area 3 (New Pedestrian Crossing Island)																	
OTH-1080-2c	Trial Pit	10	10	05-Feb-24	19-Feb-24	09-Nov-23	20-Nov-23	-149	0%								
OTH-1080-2c	Site Clearance	4	4	20-Feb-24	24-Feb-24	21-Nov-23	25-Nov-23	-149	0%								



Project ID: RP07-7-MU11-2023

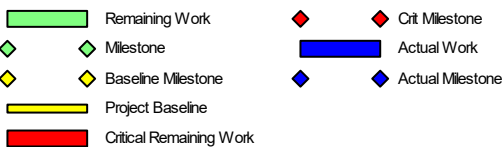
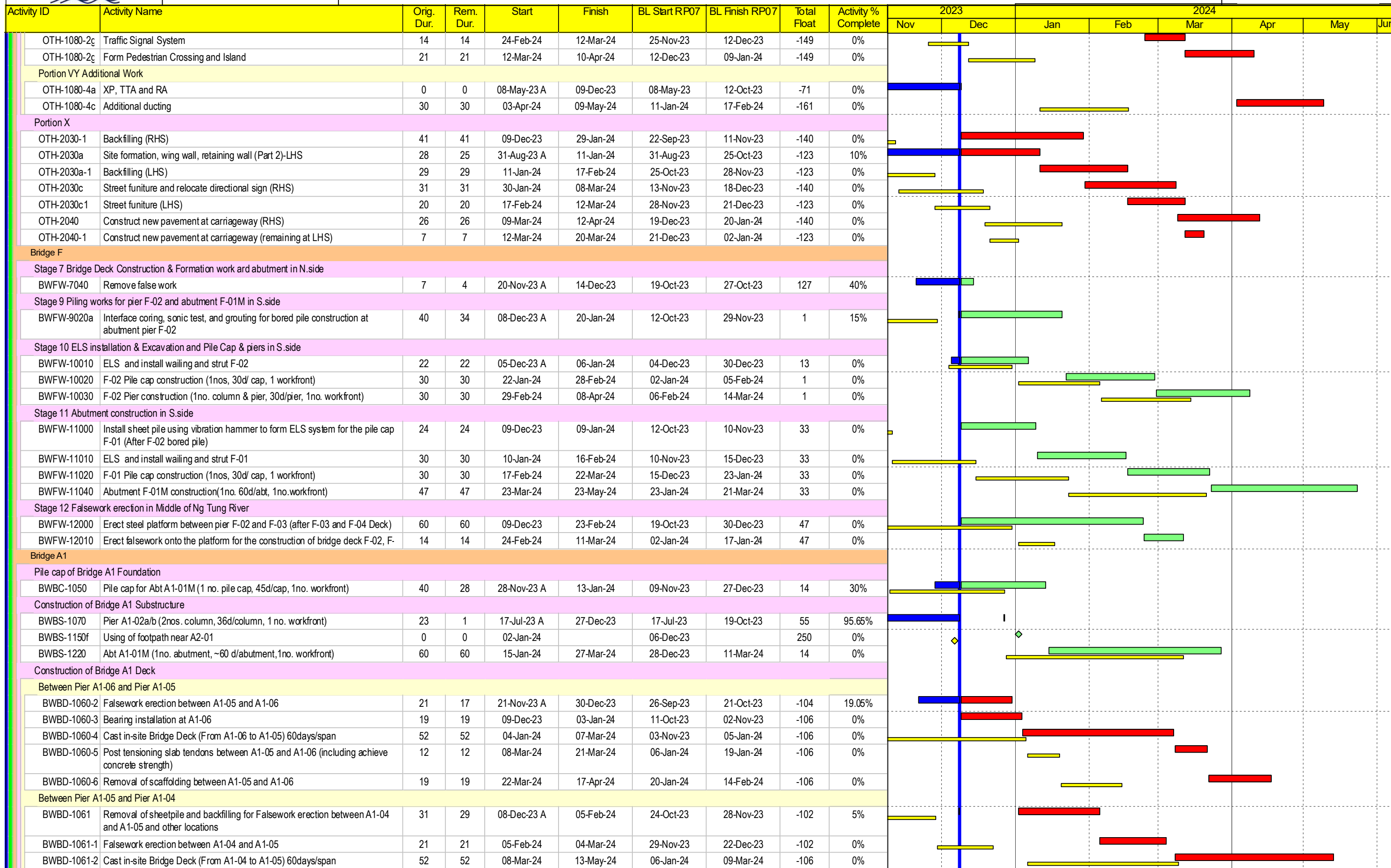
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TASK filter: 3 Months  
Lookahead.

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08-Dec-23	Data Date		





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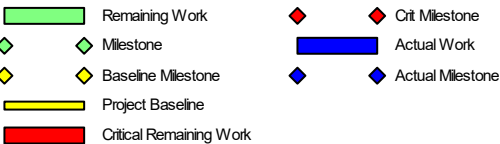
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										Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Between Pier A1-02 and Pier A1-01																		
BWBD-1064-1	Bearing installation at A1-01	19	19	28-Mar-24	23-Apr-24	12-Mar-24	06-Apr-24	14	0%									
Bridge A1 (Stitching and Parapet)																		
BWF-1040-1	Long. Stitch (Bridge A1)- 1 span, between A1-06 and A1-05, 14 d/ span	14	14	22-Mar-24	11-Apr-24	20-Jan-24	05-Feb-24	-26	0%									
Bridge A2																		
Construction of Bridge A2 Substructure																		
BWBS-1020	Pier A2-02a/b (2nos. column, 36d/column, 1no. workfronts, 2 nos. pier mould)	36	13	20-Jun-23 A	23-Dec-23	20-Jun-23	03-Oct-23	-44	63.89%									
BWBS-1060	Pier A2-01a/b (2nos. column, 36d/column, 1no. workfronts, 2 nos. pier mould)	36	3	24-Jun-23 A	30-Dec-23	24-Jun-23	06-Nov-23	189	91.67%									
BWBS-1140a	Pier A2-05M (1no. crosshead, 26d RMD + 52d Crosshead,1no. workfront)	78	29	09-Jul-23 A	15-Jan-24	09-Jul-23	08-Nov-23	52	62.82%									
Construction of Bridge A2 Deck																		
Construction of Pier Table																		
A2-02																		
BWBD-1021a	Bridge A2 cast-in-situ pier table at A2-02	52	30	04-Dec-23 A	31-Jan-24	04-Dec-23	05-Feb-24	-44	42.31%									
A2-03																		
BWBD-1023	Falsework Erection for A2 cast in-situ portal - A2-03l and A2-03r (include RMD platform)	90	29	26-Jun-23 A	15-Jan-24	26-Jun-23	27-Dec-23	-16	67.78%									
BWBD-1023a	Bridge A2 cast-in-situ portal at A2-03l and A2-03r	65	65	16-Jan-24	08-Apr-24	28-Dec-23	16-Mar-24	-16	0%									
A2-05																		
BWBD-1024	Falsework Erection for A2 cast in-situ pier table - A2-05 (include RMD platform)	60	17	09-Nov-23 A	03-Feb-24	09-Nov-23	20-Jan-24	52	71.67%									
BWBD-1024	Bearing installation at A2-05 and temporary fixity	30	30	05-Feb-24	13-Mar-24	22-Jan-24	28-Feb-24	52	0%									
BWBD-1024a	Bridge A2 cast-in-situ pier table at A2-05	60	60	14-Mar-24	29-May-24	29-Feb-24	14-May-24	52	0%									
Form Traveller and Segment Erection Works																		
BWBD-1041	Bridge A2 by Form Traveler - Stage 1 (at Pier A2-04), Team A	76	31	17-Oct-23 A	17-Jan-24	17-Oct-23	17-Jan-24	-32	59.21%									
BWBD-1140	Bridge A2 by Form Traveler - Stage 2 (at Pier A2-02), Team A	79	79	01-Feb-24	11-May-24	06-Feb-24	17-May-24	-44	0%									
Bridge A3																		
ELS of Bridge A3 Foundation																		
BWBF-1340a	ELS for Pier A3-01r	25	29	16-Sep-23 A	15-Jan-24	16-Sep-23	17-Oct-23	-83	0%									
Pile cap of Bridge A3 Foundation																		
BWBC-3000	Pile cap for A3-01l (2nos. pile cap, 25d/cap, 1nos. workfronts)	25	17	27-Nov-23 A	30-Dec-23	03-Oct-23	01-Nov-23	-72	32%									
BWBC-3000a	Pile cap for A3-01r (1nos. pile cap, 25d/cap, 1 workfronts)	25	25	16-Jan-24	16-Feb-24	18-Oct-23	16-Nov-23	-83	0%									
BWBC-3020	Pile cap for A3-03r (1no. pile cap, 30d/cap, 1no. workfront)	30	9	23-Nov-23 A	19-Dec-23	20-Sep-23	27-Oct-23	-90	70%									
Construction of Bridge A3 Substructure																		
BWBS-1195	Pier A3-01l (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)- Stage 1	26	26	23-Jan-24	24-Feb-24	28-Nov-23	29-Dec-23	-90	0%									
BWBS-1195a	Pier A3-01r (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)- Stage 2	26	26	26-Feb-24	26-Mar-24	30-Dec-23	30-Jan-24	-90	0%									
BWBS-1210	Pier A3-03r (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)-stage 1	26	26	20-Dec-23	22-Jan-24	28-Oct-23	27-Nov-23	-90	0%									
BWBS-1260	Pier A3-03l (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)-stage 2	26	13	27-Nov-23 A	15-Apr-24	31-Jan-24	04-Mar-24	-13	50%									
Construction of Bridge A3 Deck																		
Construction of Pier table																		
BWBD-1084-1	Fabrication of FWK and Falsework Erection for A3 cast in-situ pier table (A3-01 & A3-03)	46	39	01-Dec-23 A	26-Jan-24	01-Dec-23	26-Jan-24	-42	15.22%									
BWBD-1086	Falsework Erection for A3 cast in-situ pier table (A3-01)	16	16	27-Mar-24	18-Apr-24	31-Jan-24	21-Feb-24	-90	0%									
Form Traveller and Segment Erection Works and Cast insitu Decking																		
BWBD-2110	Bridge A3 by Form Traveler Stage 5 (at Pier A3-02), Team B	114	114	11-Jan-24	01-Jun-24	16-Jan-24	06-Jun-24	-79	0%									
BWBD-2150	Setup traveler	25	25	09-Dec-23	10-Jan-24	14-Dec-23	15-Jan-24	-79	0%									
Between Pier A3-06 and Pier A3-05																		
BWBD-1091	Cast in Bridge Deck (From A3-05 to A3-06) 60days/span, include falsework	60	17	15-Oct-23 A	30-Dec-23	26-Oct-23	06-Jan-24	159	71.67%									
BWBD-1091b	Post tensioning slab tendons between A3-05 and A3-06 (including achieve concrete strength)	12	12	02-Jan-24	15-Jan-24	08-Jan-24	20-Jan-24	167	0%									



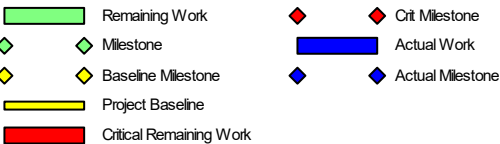
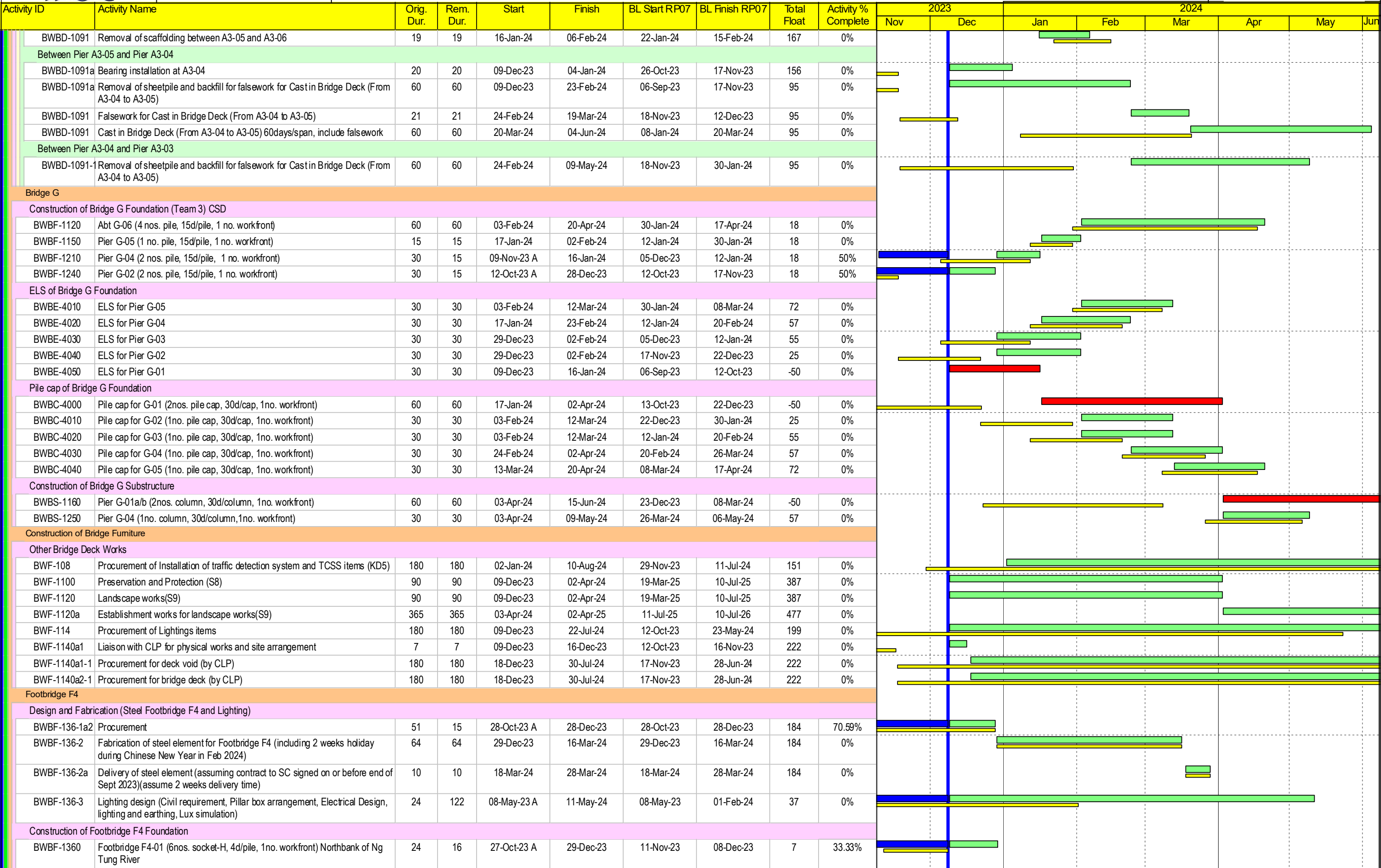
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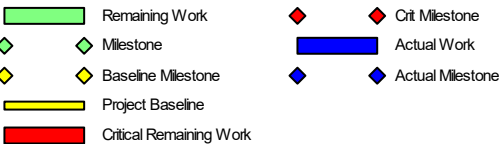
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Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP07	BL Finish RP07	Total Float	Activity % Complete	2023		2024					
										Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
BWBF-1370	Footbridge F4-02 (6nos. socket-H, 4d/pile, 1no. workfront) Southbank of Ng Tung River	24	16	03-Nov-23 A	18-Jan-24	16-Dec-23	16-Jan-24	91	33.33%								
BWBF-170a	ELS for Footbridge F4-02	30	15	29-Sep-23 A	28-Dec-23	11-Nov-23	15-Dec-23	92	50%								
ELS of Bridge F4 Foundation																	
BWBE-5000	ELS for Pier F4-01	20	20	30-Dec-23	23-Jan-24	09-Dec-23	04-Jan-24	7	0%								
BWBE-5010	ELS for Pier F4-02	20	20	19-Jan-24	14-Feb-24	17-Jan-24	08-Feb-24	101	0%								
Pile cap of Bridge F4 Foundation																	
BWBC-5000	Pile cap for F4-01 (1no. pile cap, 30d/cap, 1no. workfront)	30	30	24-Jan-24	01-Mar-24	05-Jan-24	08-Feb-24	7	0%								
BWBC-5010	Pile cap for F4-02 (1no. pile cap, 30d/cap, 1no. workfront)	30	30	15-Feb-24	20-Mar-24	09-Feb-24	18-Mar-24	101	0%								
Construction of Footbridge F4 Substructure																	
BWBS-1180	Footbridge F4-01 (1no. abutment, 60d/abutment,1no. workfront)	60	60	02-Mar-24	17-May-24	09-Feb-24	26-Apr-24	57	0%								
Footbridge F6 Cum Cycle Track																	
Design, Procurement and Fabrication (S960 Footbridge F6 and Lift)																	
INTS2-1450	Design and Approval of steel element and canopy for Footbridge F6	339	20	11-Apr-23 A	04-Jan-24	11-Apr-23	28-Sep-23	-37	94.1%								
INTS2-1450-0	Fabrication and delivery of steel element an canopy for Footbridge F6	99	21	29-Sep-23 A	29-Jan-24	29-Sep-23	29-Jan-24	13	78.79%								
INTS2-1450-1b	Fabrication for lift	165	132	01-Nov-23 A	24-May-24	01-Nov-23	24-May-24	11	20%								
INTS2-1450-1c	Design and Approval of bearing for Footbridge F6	90	12	29-Sep-23 A	18-Jan-24	29-Sep-23	18-Jan-24	-37	86.67%								
INTS2-1450-1d	Procurement of bearing	75	75	19-Jan-24	23-Apr-24	19-Jan-24	23-Apr-24	-37	0%								
INTS2-1450-2	Lighting design(Civil requirement,Pillar box arrangement,Electrical Design,lighting&earthing,Lux simulation)KD3-F6&SE	146	43	08-May-23 A	31-Jan-24	08-May-23	28-Oct-23	-50	70.55%								
INTS2-1450-2a	Procurement of lighting items and E&M items	144	144	01-Feb-24	30-Jul-24	30-Oct-23	25-Apr-24	-50	0%								
Footbridge F6 (Part C)																	
INTS1-9120	ELS for F6 (Part C)- Pier C04 and Lift	52	52	03-Feb-24	11-Apr-24	01-Nov-23	03-Jan-24	-108	0%								
Footbridge F6 (Part D)																	
INTS1-9020	ELS for F6 Part D- Pier C05 and Lift	40	34	08-Nov-23 A	15-Apr-24	25-Nov-23	13-Jan-24	-98	15%								
Lift Tower and Footbridge F6 (Portion J)																	
EM/BS/ABWF of Footbridge F6																	
INTS2-1450a	Preassembly the steel element for installation according to method statement and lifting plan	30	30	23-Mar-24	02-May-24	30-Jan-24	07-Mar-24	-30	0%								
Part A (Cable D)																	
INTS2-1310a	Loading test of socketed H pile	18	18	29-Nov-23 A	02-Jan-24	29-Nov-23	19-Dec-23	8	0%								
INTS2-1320	F6 pile cap and pier (Part A)- 1 pile cap (P01), pile cap (abutment) and 1 pier (P01)	52	52	03-Jan-24	06-Mar-24	20-Dec-23	24-Feb-24	8	0%								
INTS2-1330	F6 Falsework Erection (Part A)	14	14	07-Mar-24	22-Mar-24	26-Feb-24	12-Mar-24	8	0%								
INTS2-3000c	F6 pier works C01, C02 (2 Piers), 1WF	60	48	10-Nov-23 A	04-Mar-24	29-Sep-23	11-Dec-23	13	20%								
Part B (Some part After Cable D)																	
INTS2-1060a	ELS for pile cap and pier at P07, P08, C03 (3 locations)	60	60	09-Dec-23	23-Feb-24	06-Nov-23	17-Jan-24	-89	0%								
INTS2-1100	Pile caps, Abutment Construction, 3 nos. of cap, 1WF, Stage 1	40	40	24-Feb-24	15-Apr-24	18-Jan-24	07-Mar-24	-89	0%								
Part D																	
INTS2-1080a	Construction of Footbridge F6 Pier P06 after TTA no.2 (ELS, 1 cap, 1 pier)(Part D)	90	90	09-Dec-23	02-Apr-24	06-Sep-23	22-Dec-23	-15	0%								
Depressed Road A																	
Depressed Rd A Bay 1-10																	
UTRA-1003	Excavation and ELS Installation (5-9)	26	7	30-May-23 A	16-Dec-23	30-May-23	07-Oct-23	13	73.08%								
UTRA-1004	Structure (5-9)	78	42	01-Nov-23 A	07-Feb-24	09-Oct-23	11-Jan-24	13	46.15%								
UTRA-1006	Excavation and ELS Installation (10-12)	77	25	08-Jul-23 A	10-Jan-24	08-Jul-23	07-Dec-23	-51	67.53%								
UTRA-1007	Structure (10-12) including all wall construction and backfill, removal of strut	88	88	31-Jan-24	22-May-24	08-Dec-23	26-Mar-24	-68	0%								
Underpass at Portions H, J, K																	
Underpass - ELS Works																	
ELSW for Underpass Bays 9 - 11																	
INTS2-4120	Install 1st layer of strut	9	7	09-Dec-23 A	08-Jan-24	28-Oct-23	07-Nov-23	-150	20%								
INTS2-4130	Excavation to below 2nd layer of strut	18	18	11-Jan-24	31-Jan-24	08-Nov-23	28-Nov-23	-153	0%								
INTS2-4140	Install 2nd layer of strut	9	9	01-Feb-24	14-Feb-24	29-Nov-23	08-Dec-23	-153	0%								



Project ID: RP07-7-MU11-2023

Three Months Rolling Programme (08 December 2023 to 31 March 2024)

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INTS2-4150	Excavate to founding level	18	18	15-Feb-24	06-Mar-24	09-Dec-23	02-Jan-24	-153	0%								
INTS2-4160	Formation and blinding	2	2	07-Mar-24	08-Mar-24	03-Jan-24	04-Jan-24	-153	0%								
INTS2-4160a	Waterproofing (Base slab and wall)	3	3	09-Mar-24	12-Mar-24	05-Jan-24	08-Jan-24	-153	0%								
ELSW for Underpass Bays 12 - 13																	
INTS2-4170	Excavation to below 1st layer of strut	12	8	01-Nov-23 A	13-Jan-24	10-Nov-23	23-Nov-23	-142	30%								
INTS2-4180	Install 1st layer of strut	9	9	13-Jan-24	24-Jan-24	24-Nov-23	04-Dec-23	-142	0%								
INTS2-4190	Excavation to below 2nd layer of strut	12	12	24-Jan-24	07-Feb-24	05-Dec-23	18-Dec-23	-142	0%								
INTS2-4200	Install 2nd layer of strut	9	9	07-Feb-24	21-Feb-24	19-Dec-23	30-Dec-23	-142	0%								
INTS2-4200a	Excavate to founding level	12	12	21-Feb-24	06-Mar-24	02-Jan-24	15-Jan-24	-141	0%								
INTS2-4210	Formation and blinding	2	2	06-Mar-24	08-Mar-24	16-Jan-24	17-Jan-24	-141	0%								
INTS2-4220	Waterproofing (Base slab and wall)	3	3	08-Mar-24	12-Mar-24	18-Jan-24	20-Jan-24	-141	0%								
Underpass - Structural Works																	
Underpass Bays C1 to C8 at Portion H																	
Underpass - Bay C1																	
INTS1-1s1	Structure Works for Bay C1 - Wall	33	20	27-Sep-23 A	04-Jan-24	04-Oct-23	11-Nov-23	-68	39.39%								
INTS1-1s2	Structure Works for Bay C1 - Roof	22	22	05-Jan-24	30-Jan-24	13-Nov-23	07-Dec-23	-68	0%								
Underpass - Waterproofing and Backfilling																	
INTS1-1300	Waterproofing to Structure Works for Bay C1 to C4	12	12	31-Jan-24	16-Feb-24	08-Dec-23	21-Dec-23	-30	0%								
INTS1-1300-2	Backfilling to Structure Works for Bay C1 to C4	30	30	17-Feb-24	22-Mar-24	22-Dec-23	29-Jan-24	-30	0%								
Underpass - Bays C9 - C15 at Portions H, J and K																	
Underpass C9-C11 Structure (assume hanging UUs and concurrent with UUs diversion)																	
INTS2-3100	Combined Bay C10 & C11 - Base Slab	20	20	13-Mar-24	09-Apr-24	09-Jan-24	31-Jan-24	-153	0%								
Underpass C12-C13 Structure (assume hanging UUs and concurrent with UUs diversion)																	
INTS2-3130	Bay C13 - Base Slab	20	20	12-Mar-24	09-Apr-24	22-Jan-24	16-Feb-24	-141	0%								
Underpass C14-C15																	
INTS2-1010-1	ELS for Bay C14 to C15 (13m/bay, 60days/bay, 2no. workfronts)-Part 2	50	13	08-Aug-23 A	06-Mar-24	08-Aug-23	15-Jan-24	-142	75%								
INTS2-1010-2	Formation and blinding	2	2	06-Mar-24	08-Mar-24	16-Jan-24	17-Jan-24	-142	0%								
INTS2-1010-3	Waterproofing (Base Slab)	3	3	08-Mar-24	12-Mar-24	18-Jan-24	20-Jan-24	-142	0%								
INTS2-1090	Structure Works for Bay C15- Base slab (including removal of FWk and backfill)	28	28	12-Mar-24	18-Apr-24	22-Jan-24	26-Feb-24	-142	0%								
BS, E&M Works and Remaining Road Works in Underpass and Depressed Roads																	
INTS3-101	Lighting, E&M and BS Procurement	200	200	11-Jan-24	12-Sep-24	08-Dec-23	13-Aug-24	-38	0%								
Depressed Road B																	
B1-B3																	
UTR-1000	U trough B (27 nos. socket-H piles, 4 day/pile, 1 workfronts) for B1 to B3, Assume CSD approved - omitted socked H pile	0	0	08-May-23 A	09-Dec-23	08-May-23	06-Sep-23	-22	0%								
UTR-1040	Construction of U-trough B (3 bays, 15m/bay, 30d/bay,1workfronts)	90	81	13-Dec-23 A	19-Mar-24	19-Feb-24	08-Jun-24	21	10%								
B4-B10																	
UTR-1050c	ELS for U-trough B (B4 - B10, 7 bays, 2 workfronts)-Part 3 (Sheet pile after UUs diverted)	18	14	24-Nov-23 A	13-Mar-24	20-Nov-23	09-Dec-23	-97	20%								
UTR-1100	ELS for U-trough B (B4 - B10, 7 bays, 2 workfronts)-Part 4 (Excavation and installation of strut & kingpost)	100	100	13-Mar-24	17-Jul-24	11-Dec-23	16-Apr-24	-97	0%								
Remaining Works at Depressed road and Slip Road at both side of Depressed Road B																	
Slip Road from Interchange to Fanling Highway																	
UTR-3100a	Retaining Wall FW9 (13 bays, 15d/bay,2 teams)-Part 2	48	48	08-Feb-24	11-Apr-24	18-Nov-23	17-Jan-24	-115	0%								
Slip Road from Fanling Highway to Interchange																	
UTR-3010	FW-10(~75m, ~10bay, 15d/bay, 2 team) (after 11kV, town gas and other UUs)-Bay 1-5 & 8-10	60	60	19-Feb-24	03-May-24	14-Nov-23	25-Jan-24	-143	0%								
UTR-3010a	FW-10(~75m, ~10bay, 15d/bay, 2 team) (after 11kV, town gas and other UUs)-Bay 6 & 7	30	30	21-Mar-24	29-Apr-24	16-Feb-24	21-Mar-24	-95	0%								
Underground Utilities (UUs) Works																	
Drainage Works																	
North of Sha Tau Kok Road																	



Project ID: RP07-7-MU11-2023

Three Months Rolling Programme (08 December 2023 to 31 March 2024)

Page 7 of 12

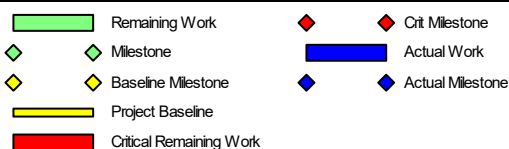
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Temporary Diversion (for ELSW of Underpass C9-C13)																		
INTS1-1130d	Temp support / diversion of existing 1350 stormwater pipe at Sha Tau Kok Road	36	25	09-Nov-23 A	10-Jan-24	06-Sep-23	19-Oct-23	-153	30.56%									
Stormwater 1350mm dia																		
INTS1-1130a	1350 stormwater pipe near junction of STK Rd/Ma Sik rd (from existing to SMH 2002c to downstream at Ma Sik Rd, C7)	83	39	18-Apr-23 A	26-Jan-24	18-Apr-23	23-Nov-23	-132	53.01%									
INTS1-1130b	Testing of 1350 stormwater pipe at Ma Sik rd	15	15	27-Jan-24	16-Feb-24	24-Nov-23	11-Dec-23	-132	0%									
INTS1-1130c	Connection of 1350 stormwater pipe at Ma Sik rd to downstream pipeworks (constructed by other contract C7)	15	15	17-Feb-24	05-Mar-24	12-Dec-23	30-Dec-23	-132	0%									
INTS1-1130c1	Downstream stormwater pipework available for connection (constructed by other contract C7)	0	0	02-Jan-24*		02-Jan-24		-80	0%									
INTS1-1130c1	Downstream stormwater pipework available for connection (constructed by other contract C7)	0	0	02-Apr-24*		02-Apr-24		684	0%									
INTS1-1130c1	Removal of existing 1350SW (near Underpass Bay 11) including existing manhole and temporary support	5	5	06-Mar-24	11-Mar-24	02-Jan-24	06-Jan-24	-132	0%									
Stormwater 900mm dia																		
INTS1-1130a1	Excavation for 900 stormwater pipe near On Kui St (undemeath CLP132 Ping Che joint bay)	20	20	09-Dec-23	04-Jan-24	06-Nov-23	28-Nov-23	-95	0%									
INTS1-1130a2	Install 900 stormwater pipe near On Kui St (undemeath CLP132 Ping Che joint bay)	62	62	05-Jan-24	20-Mar-24	29-Nov-23	15-Feb-24	-95	0%									
Along Sha Tau Road																		
INTS2-1040	UU Works (drainage) - Northbound of Sha Tau Kok Road (after TTA2)-Part 1	60	60	27-Jan-24	13-Apr-24	27-Dec-23	09-Mar-24	-89	0%									
Rising Main																		
From Sewerage Pumping Station to downstream via Ma Sik Road and On Kui Street																		
INTS1-1120a	Rising Main on Ma Sik Rd (Part 2- Ma Sik Rd Via Sha Tau Kok Rd to downstream at On Kui St)	70	59	11-Feb-23 A	22-Feb-24	11-Feb-23	16-Nov-23	-92	15.71%									
INTS1-1400	Rising Main installation (undemeath CLP 132 Ping Che joint bay) (South of STK Rd)	20	20	23-Feb-24	16-Mar-24	17-Nov-23	09-Dec-23	-92	0%									
From Sha Tau Kok Road to downstream via Ma Sik Road																		
INTS1-1120b1	Rising Mains on Ma Sik Rd (From STK Rd to Ma Sik Rd down stream near C7)	70	70	27-Jan-24	25-Apr-24	27-Dec-23	21-Mar-24	-65	0%									
Sewerage Works																		
North of Sha Tau Kok Road																		
INTS1-1140	Remaining sewerage at Ma Sik Rd (Part 1) Ma Sik Road (from rising main of STK Rd to C7) (North of STK Rd)	90	67	08-Dec-22 A	09-Jul-24	08-Dec-22	15-Jun-24	-44	25.56%									
South of Sha Tau Kok Road																		
INTS1-1300a2	Construct manhole FMH_FL5.07	32	19	06-Sep-23 A	03-Jan-24	06-Sep-23	07-Oct-23	-87	40.63%									
INTS1-1300a	Sewerage pipe between FMH 5.06 and FMH5.07	14	14	04-Jan-24	19-Jan-24	09-Oct-23	25-Oct-23	-87	0%									
INTS1-1300a	Construct manhole FMH_FL5.08	27	27	20-Jan-24	23-Feb-24	26-Oct-23	25-Nov-23	-87	0%									
INTS1-1300a	Sewerage pipe between FMH 5.07 and FMH5.08	14	14	24-Feb-24	11-Mar-24	27-Nov-23	12-Dec-23	-87	0%									
INTS1-1300a	Sewerage pipe between FMH 5.08 and FMH5.09	14	14	12-Mar-24	27-Mar-24	13-Dec-23	30-Dec-23	-16	0%									
INTS1-1300a3	ELSW for sewerage works from FMH_FL5.09 to FMH5.10	60	12	08-Dec-22 A	22-Dec-23	08-Dec-22	19-Sep-23	-72	80%									
INTS1-1300a4	Construct manhole FMH_FL5.10	24	24	23-Dec-23	23-Jan-24	20-Sep-23	19-Oct-23	-72	0%									
INTS1-1300a	Construct manhole FMH_FL5.09	24	24	24-Jan-24	23-Feb-24	20-Oct-23	17-Nov-23	-72	0%									
INTS1-1300a	Sewerage pipe between FMH 5.09 and FMH5.10	24	24	24-Feb-24	22-Mar-24	18-Nov-23	15-Dec-23	-72	0%									
INTS1-1300a4	Sewerage pipe between FMH 5.10 and FMH1004470 (including TTA and excavation)	30	30	23-Mar-24	02-May-24	16-Dec-23	23-Jan-24	-72	0%									
INTS1-1300b3	Sewerage works including ELSW (Portion K), from FMH_FL5.05 to FMH_FL5.06	93	49	08-Dec-22 A	07-Feb-24	08-Dec-22	04-Nov-23	-115	47.31%									
INTS1-1300b3	Sewerage works including ELSW (Portion K), from FMH_FL5.05 to FMH_FL5.06 (at temporary run in/out of wholesale market))	12	12	25-Jan-24	07-Feb-24	21-Oct-23	04-Nov-23	-115	0%									
INTS1-1300c1	Sewerage works including ELSW (STK Road), FMH5.00 and pipe from FMH5.00 to FMH5.01	50	11	14-Jan-23 A	21-Dec-23	14-Jan-23	18-Sep-23	-142	78%									
INTS1-1300c2	Sewerage works including ELSW (STK Road), FMH5.01 and pipe from FMH5.01 to FMH5.02	84	8	29-May-23 A	03-Jan-24	29-May-23	31-Oct-23	-142	90.48%									



Project ID: RP07-7-MU11-2023

Three Months Rolling Programme (08 December 2023 to 31 March 2024)

Page 8 of 12

Data Date: 08-Dec-23  
Printed: 19-Dec-23 10:37  
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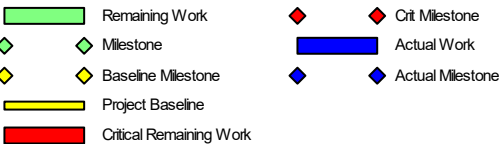
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Temporary diversion (for ELWS of Underpass C9-C13)																	
INTS1-1300c2	Temporary sewerage diversion from FMH5.05 to new sewerage manhole and then existing manhole (Construction)	28	14	31-Jul-23 A	27-Dec-23	31-Jul-23	21-Sep-23	-137	50%								
Waterworks																	
INTS1-1220	Watermain at STK Rd (Part 1) near Part C of Footbridge F6- 600DI	34	36	09-Aug-23 A	23-Jan-24	09-Aug-23	19-Oct-23	-139	0%								
INTS1-1220.1	Watermain at STK Rd (Part 1) near Part C of Footbridge F6- 600MS and temp connection point - 600MS	34	45	09-Aug-23 A	02-Feb-24	09-Aug-23	31-Oct-23	-128	0%								
INTS1-1220.2	Watermain at STK Rd (Part 1) near Part C of Footbridge F6- 300DI and temp connection point - 300DI	34	45	09-Aug-23 A	02-Feb-24	09-Aug-23	31-Oct-23	-128	0%								
INTS1-1220a	Watermain at STK Rd (Part 2) near Part D of Footbridge F6- 600DI	30	30	24-Jan-24	01-Mar-24	20-Oct-23	24-Nov-23	-139	0%								
INTS1-1220a11	Watermain at STK Rd (Part 2) near Part D of Footbridge F6 and temp connection point - 600MS	21	21	03-Feb-24	01-Mar-24	01-Nov-23	24-Nov-23	-128	0%								
INTS1-1220a21	Watermain at STK Rd (Part 2) near Part D of Footbridge F6 and temp connection point - 300DI	21	21	03-Feb-24	01-Mar-24	01-Nov-23	24-Nov-23	-128	0%								
INTS1-1220b	Watermain (from STK Rd to connection point at On Kui ST) (Part 3) - 600DI and final connection	15	15	02-Mar-24	19-Mar-24	25-Nov-23	12-Dec-23	-139	0%								
Temporary connection (for ELSW of Underpass C9-C13)																	
INTS1-1220a1	Temporary connection - 600MS and 300DI (including all testing)	15	15	02-Mar-24	19-Mar-24	25-Nov-23	12-Dec-23	-128	0%								
Existing UU Diversion																	
CLP																	
CLP 132kV and 11kV Cable Works at Bridge and interchange area																	
CLP-1040	ESS by CLP at portion I	0	0		28-Mar-24*		30-Dec-23	-73	0%								
Cable D (Blue) Fanling- Ping Che Circuit 132KV- by CLP (Bridge A3 and Interchange Area)																	
CLP-4000	Diversion of CLP 163m cable D1 (At portion H)(after C5 to C8)	45	45	11-Jan-24	06-Mar-24	09-Oct-23	30-Nov-23	-54	0%								
CLP-4005	Diversion of CLP 163m cable D1 (At portion H)(outside Underpass)	50	25	08-Dec-22 A	10-Jan-24	08-Dec-22	07-Oct-23	-54	50%								
CLP-4010a	Diversion of CLP 270m cable D2 (At portion I,J,N)-at STK Rd (after TTA 2)	10	10	18-Mar-24	28-Mar-24	11-Dec-23	21-Dec-23	-73	0%								
CLP-4020	Diversion of CLP 180m cable D3 -after TTA 2	75	16	08-Aug-23 A	29-Dec-23	08-Aug-23	27-Nov-23	0	78.67%								
CLP-4030	Abandon of Cable D (At portion H,I,J,N)	38	38	02-Apr-24	18-May-24	02-Jan-24	17-Feb-24	-73	0%								
CLP 11kV Cables works at Interchange area (tentative scheme)																	
CLP-5020	Abandon 11kV cables in F6 & underpass area (portion K/H) (after C5 to C8)	15	15	09-Nov-23 A	28-Dec-23	16-Sep-23	05-Oct-23	-150	0%								
CLP-5040	Abandon 11kV cables in Underpass and Uthrough B area (portion K)	15	15	09-Dec-23	28-Dec-23	02-Nov-23	18-Nov-23	-51	0%								
CLP-5060	Abandon 11kV cables at STK Road and MS Road (portion J)	15	15	09-Dec-23	28-Dec-23	15-Sep-23	04-Oct-23	-103	0%								
Gasmain (Towngas by Others)																	
TG-1000	IPA gas main laying (Above Underpass C8 and along STK Rd)	45	25	11-Apr-23 A	10-Jan-24	11-Apr-23	06-Oct-23	-142	44.44%								
TG-1000a	IPA gas main laying (after pipe pile underpass C9-C10)	25	25	11-Jan-24	08-Feb-24	06-Oct-23	06-Nov-23	-142	0%								
TG-1010a	MP gas main laying-stage 1 (after pipe pile underpass C9-C10)	25	25	09-Dec-23	10-Jan-24	06-Oct-23	06-Nov-23	-117	0%								
TG-1020	MP gas main laying-stage 2 (portion J/K, near Toilet/ RCP)	35	14	10-Jun-23 A	28-Dec-23	10-Jun-23	24-Oct-23	-106	59.29%								
TG-1040	LBG gas main laying-stage 1(Above Underpass C8 and along STK Rd)	47	26	11-Apr-23 A	11-Jan-24	11-Apr-23	07-Oct-23	-143	44.68%								
TG-1040a	LBG gas main laying-stage 1 (after pipe pile underpass C9-C10)	25	25	12-Jan-24	09-Feb-24	07-Oct-23	07-Nov-23	-143	0%								
TG-1050	LBG gas main laying-stage 2 (portion J/K, near Toilet/ RCP)	35	13	10-Jun-23 A	27-Jan-24	10-Jun-23	24-Oct-23	-131	62.43%								
TG-1070	Abandon existing gas main	4	4	14-Feb-24	17-Feb-24	09-Nov-23	13-Nov-23	-143	0%								
Telecom (by Others)																	
HGC/HKBN/HKBNESHK/PCCW																	
TL-1000	HGC/HKBN/HKBNES/PCCW diversion -stage 1 (after C5-C8)	23	23	09-Dec-23	08-Jan-24	06-Sep-23	04-Oct-23	-89	0%								
TL-1010	HGC/HKBN/HKBNES/PCCW diversion -stage 2 (after TTA)	22	22	09-Dec-23	06-Jan-24	06-Sep-23	03-Oct-23	-88	0%								
TL-1020	HGC/HKBN/HKBNES/PCCW diversion -stage 3 (after RW9, near existing market and new playground)	31	31	09-Dec-23	17-Jan-24	06-Sep-23	13-Oct-23	-97	0%								
TL-1030	HGC/HKBN/HKBNES/PCCW diversion -stage 4 (near Portion M)	31	31	09-Dec-23	17-Jan-24	06-Sep-23	13-Oct-23	-97	0%								
TL-1040	PCCW diversion-stage 5 (near the toilet and RCP)	23	23	09-Dec-23	08-Jan-24	06-Sep-23	04-Oct-23	-89	0%								
TL-1050	PCCW diversion-stage 6 (near the On Luk Min St playground)	31	31	09-Dec-23	17-Jan-24	06-Sep-23	13-Oct-23	-97	0%								
TL-1060	Abandon of existing cables of UUs	30	30	18-Jan-24	24-Feb-24	14-Oct-23	18-Nov-23	-97	0%								
Towngas/telecom																	
TL-3000	Towngas telecom diversion -stage 1 (after C5 to C8)	50	15	01-Aug-23 A	28-Dec-23	01-Aug-23	22-Sep-23	-107	70%								



Project ID: RP07-7-MU11-2023

Three Months Rolling Programme (08 December 2023 to 31 March 2024)

Page 9 of 12

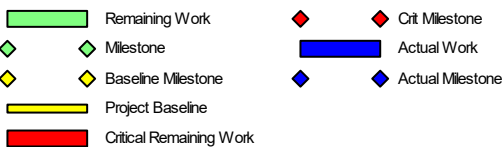
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Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP07	BL Finish RP07	Total Float	Activity % Complete	2023		2024					
										Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
TL-3010	HGC/HKBN/HKBNES diversion -stage 2 (after TTA)	49	15	01-Aug-23 A	28-Dec-23	01-Aug-23	22-Sep-23	-81	70%								
Stormwater Pumping Station (SWPS)																	
Statutory Submission and Design																	
INTS3-103	FS design (Stormwater pumping station)	268	140	08-May-23 A	03-Jun-24	08-May-23	02-May-24	34	47.76%								
INTS3-103-1	Submersible pump design (Stormwater pumping station)	268	140	08-May-23 A	03-Jun-24	08-May-23	02-May-24	34	47.76%								
INTS3-103-2	Scada design (Stormwater pumping station)	268	140	08-May-23 A	03-Jun-24	08-May-23	02-May-24	34	47.76%								
INTS3-103-4	Lighting and E&M for Stormwater Pumping Station	153	101	08-May-23 A	16-Apr-24	08-May-23	12-Mar-24	-13	33.99%								
INTS3-104	Flood alarm system design (Underpass)	196	68	08-May-23 A	04-Mar-24	08-May-23	30-Jan-24	-12	65.31%								
INTS3-104-1	Flood alarm system civil requirement (Underpass)	196	68	08-May-23 A	04-Mar-24	08-May-23	30-Jan-24	-12	65.31%								
INTS3-104-2	FS radio communication system (Underpass)	196	68	08-May-23 A	04-Mar-24	08-May-23	30-Jan-24	-12	65.31%								
INTS3-104-3	Submission and Approval of DDA to DSD&HyD (Underpass)	152	152	05-Mar-24	06-Sep-24	31-Jan-24	07-Aug-24	-12	0%								
INTS3-104-4	Lighting system and E&M (underpass)	153	25	08-May-23 A	10-Jan-24	08-May-23	07-Dec-23	-38	83.66%								
INTS3-200	Meeting with HyDs about the design of stormwater pumping station	72	8	06-Sep-23 A	16-Dec-23	06-Sep-23	16-Nov-23	10	88.89%								
INTS3-2000	Submission and approval of WWO 542	269	269	17-Dec-23	10-Sep-24	17-Nov-23	11-Aug-24	10	0%								
Sewage Pumping Station (SEWPS)																	
Statutory Submission and Design																	
SPS-103	Submission and approval of DDA to DSD	152	112	30-Oct-23 A	29-Mar-24	30-Oct-23	29-Mar-24	7	26.32%								
SPS-106	Mega Link Application	180	150	29-Nov-23 A	06-May-24	29-Nov-23	26-May-24	67	16.67%								
SPS-107	Direct Link Application	180	150	29-Nov-23 A	06-May-24	29-Nov-23	26-May-24	67	16.67%								
Sewage Pumping Station in Portion N (After TTA2 Northbound)																	
Excavation and ELS																	
SPS-1010e	Excavate (-1.65mPD to -3.985 mPD) between PP2 and PP3 to FEL (Qty: 485m3 @ 175m3/d)	9	5	08-Dec-23 A	14-Dec-23	02-Nov-23	11-Nov-23	-68	44.44%								
SPS-1010e10	Welding of Lagging plate	9	9	15-Dec-23	27-Dec-23	13-Nov-23	22-Nov-23	-68	0%								
Structural Works																	
SPS-1030a	Construct Base Slab plus kicker (Wet Well) and remove L3 strut	20	20	28-Dec-23	20-Jan-24	04-Dec-23	28-Dec-23	-68	0%								
SPS-1030b	Construct Wall (wet well) up to +3.5	14	14	22-Jan-24	06-Feb-24	29-Dec-23	15-Jan-24	-68	0%								
SPS-1030c	Construct base slab (inlet chamber)	14	14	22-Jan-24	06-Feb-24	29-Dec-23	15-Jan-24	-68	0%								
SPS-1030d	Construct wall (inlet chamber and wet well) up to +3.5 and removal L2 strut	20	20	07-Feb-24	04-Mar-24	16-Jan-24	07-Feb-24	-68	0%								
SPS-1030d1	Construct Base Slab plus kicker (Valve chamber) and remove L1 strut	14	14	05-Mar-24	20-Mar-24	08-Feb-24	27-Feb-24	-68	0%								
SPS-1030d2	Construct Wall (Inlet chamber and wet well) up to +7.35 and removal L1 strut	14	14	05-Mar-24	20-Mar-24	08-Feb-24	27-Feb-24	-68	0%								
SPS-1030e	Construct Wall (valve chamber, inlet chamber and wetwell) to GL	20	20	21-Mar-24	17-Apr-24	28-Feb-24	21-Mar-24	-68	0%								
Transformer Room, Switch Room																	
SPS-1020	Transformer room civil requirement and Tx room and LV switch room electrical layout design (by CLP)	122	19	08-May-23 A	03-Jan-24	08-May-23	27-Sep-23	-54	84.43%								
Tx and Switch Rooms - Structures																	
SPS-1020-01	Construct Base Slab for Tx Room and Switch Room	15	15	04-Jan-24	20-Jan-24	04-Dec-23	20-Dec-23	-54	0%								
SPS-1020-02	Construct Wall and Columns for Tx Room and Switch Room	21	21	22-Jan-24	17-Feb-24	21-Dec-23	17-Jan-24	-54	0%								
SPS-1020-03	Construct Roof Slab (Erect falsework, scaffolding, formworks, Rebars and Concreting)	26	26	19-Feb-24	19-Mar-24	18-Jan-24	20-Feb-24	-54	0%								
SPS-1020-0	Allow time to achieve concrete strength before falseworks removal	21	21	20-Mar-24	17-Apr-24	21-Feb-24	15-Mar-24	-54	0%								
ABWF and E&M Works (Remaining Parts of Sewage PS)																	
SPS-103.5	Pump systems and associated E&M Plants (for Sewerage Pumping station) submission	317	59	08-Aug-22 A	22-Feb-24	08-Aug-22	16-Nov-23	5	81.39%								
SPS-1035	E&M, BS and ABWF Procurement	227	128	07-Nov-22 A	20-May-24	07-Nov-22	08-Feb-24	-64	43.61%								
Reprovision of On Luk Mun Street Playground (S3)																	
Sublet and Design for Skateboard Park																	
OLMSP-100a-4	Mock up and other submission	13	2	26-Jun-23 A	11-Dec-23	26-Jun-23	07-Sep-23	-167	84.62%								
Works in Portion K1																	
Permanent Access between Wholesale Market and STK Road																	
OLMSP-500a	Construction of remaining permanent access & EVA, water main, UUs & direct link (under D204 road)	30	37	08-Dec-22 A	24-Jan-24	08-Dec-22	20-Oct-23	-144	0%								



Project ID: RP07-7-MU11-2023

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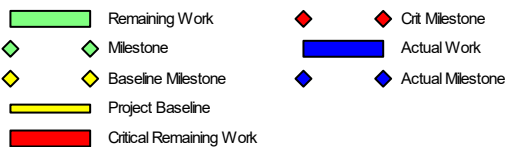
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08-Dec-23	Data Date		



Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP07	BL Finish RP07	Total Float	Activity % Complete	2023		2024					
										Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
OLMSP-500b	Dismantle existing water main supply to wholesale market (for subsequent construction of Depressed Rd B - Bay 4-10)	30	30	25-Jan-24	02-Mar-24	21-Oct-23	25-Nov-23	-89	0%								
Public Area																	
OLMSP-600	Construction of fence wall (Part 1)	40	17	26-Nov-23 A	30-Dec-23	06-Sep-23	25-Oct-23	-139	57.5%								
OLMSP-600a	Construction of fence wall (Part 2)	7	7	09-Dec-23	16-Dec-23	06-Sep-23	13-Sep-23	-152	0%								
OLMSP-610a	Cabling (by CLP)	38	38	23-Dec-23	08-Feb-24	01-Nov-23	14-Dec-23	-157	0%								
OLMSP-610a	Energization to Services block, Ancillary block, skateboard park	0	0		08-Feb-24		14-Dec-23	-157	0%								
OLMSP-620	Backfilling works	10	10	02-Jan-24	12-Jan-24	01-Nov-23	11-Nov-23	-116	0%								
OLMSP-630	U channel and catchpit	21	21	13-Jan-24	06-Feb-24	13-Nov-23	06-Dec-23	-116	0%								
OLMSP-640	Staircase	21	21	13-Jan-24	06-Feb-24	13-Nov-23	06-Dec-23	-116	0%								
OLMSP-650	Granite tiling	21	21	13-Jan-24	06-Feb-24	13-Nov-23	06-Dec-23	-116	0%								
OLMSP-670	Builder works (Gate, railing, footpath, harbour, signage etc)	21	21	13-Jan-24	06-Feb-24	13-Nov-23	06-Dec-23	-116	0%								
New Skateboard Park																	
Site Formation and UUs																	
OLMSP-100	Stormwater drainage and sewerage works within the park	90	17	08-Dec-22 A	30-Dec-23	08-Dec-22	05-Oct-23	-96	81.11%								
Construction of Skateboard Park (by California)																	
OLMSP-1010	Rough grading and drainage (floor drain and its connection pipe to main stormwater drainage system)	25	25	21-Aug-23 A	10-Jan-24	21-Aug-23	06-Oct-23	-190	1%								
OLMSP-101	Install vertical wall	14	14	10-Jan-24	26-Jan-24	06-Oct-23	24-Oct-23	-190	0%								
OLMSP-101	Install steps	8	8	26-Jan-24	05-Feb-24	24-Oct-23	02-Nov-23	-190	0%								
OLMSP-101	Install transition and banks	18	18	05-Feb-24	29-Feb-24	02-Nov-23	23-Nov-23	-190	0%								
OLMSP-101	Install flat works	12	12	29-Feb-24	14-Mar-24	23-Nov-23	07-Dec-23	-190	0%								
OLMSP-101	All other remaining works (inspection and rectify defect)	6	6	14-Mar-24	21-Mar-24	07-Dec-23	14-Dec-23	-190	0%								
OLMSP-101	BS works (lighting installation by Kum Shing)	15	15	02-Jan-24	18-Jan-24	28-Nov-23	14-Dec-23	-139	0%								
Landscape Area																	
OLMSP-102	Construction of fence wall	33	33	09-Dec-23	19-Jan-24	06-Sep-23	16-Oct-23	-190	0%								
OLMSP-102	Backfilling for fence wall	12	12	20-Jan-24	02-Feb-24	17-Oct-23	31-Oct-23	-190	0%								
OLMSP-102	Construction of concrete access	27	27	03-Feb-24	08-Mar-24	01-Nov-23	01-Dec-23	-189	0%								
OLMSP-102	Irrigation works	27	27	03-Feb-24	08-Mar-24	01-Nov-23	01-Dec-23	-151	0%								
OLMSP-1020	Landscaping Softworks with acceptance by clients (S3)	11	11	09-Mar-24	21-Mar-24	02-Dec-23	14-Dec-23	-151	0%								
OLMSP-102	Establishment works	365	365	22-Mar-24	21-Mar-25	15-Dec-23	13-Dec-24	-186	0%								
OLMSP-103	Lamp post fooring, drawpit and ducting for lamp post	28	28	03-Feb-24	09-Mar-24	01-Nov-23	02-Dec-23	-190	0%								
OLMSP-1030	BS works (lighting installation by Kum Shing)	10	10	11-Mar-24	21-Mar-24	04-Dec-23	14-Dec-23	-190	0%								
Ancillary Block & Service Block and other facility																	
Ancillary Block																	
OLMSP-124	Bearing wall construction and pump room main structure	15	1	23-Aug-23 A	09-Dec-23	23-Aug-23	06-Sep-23	-157	93.33%								
OLMSP-124	BS work (Lightng, flushing/cleansing pump, plumbing, hose reel)	36	14	11-Oct-23 A	05-Jan-24	11-Oct-23	22-Nov-23	-127	60%								
OLMSP-1240	ABWF(connect to footing, late cast of internal tiles and E&M services, parapet and trench at roof and waterproof work)	12	5	25-Sep-23 A	15-Dec-23	25-Sep-23	10-Oct-23	-127	60%								
Service Block																	
OLMSP-123	BS work (Lighting, FS pump, plumbing, AC for switch room and call point)	36	31	28-Oct-23 A	31-Jan-24	03-Nov-23	14-Dec-23	-150	13.89%								
OLMSP-1230	ABWF(connect to footing, late cast of internal tiles and E&M services, parapet and trench at roof and waterproof work)	13	11	28-Oct-23 A	22-Dec-23	18-Oct-23	02-Nov-23	-150	15.38%								
OLMSP-1230	Works required by CLP at Meter room (meter board and lock for the door of meter room)	11	11	11-Dec-23	22-Dec-23	18-Oct-23	31-Oct-23	-157	0%								
Testing & Commissioning																	
OLMSP-1260	T&C (S3)	39	39	22-Mar-24	11-May-24	15-Dec-23	01-Feb-24	-190	0%								
OLMSP-1260	Submission and Approval of General Building Plan (GBP)	105	0	08-May-23 A	09-Dec-23	08-May-23	10-Oct-23	-121	100%								
OLMSP-1260	Submission of Form 501	14	14	09-Dec-23	27-Dec-23	11-Oct-23	27-Oct-23	-121	0%								
OLMSP-1270	FS inspection (S3)	39	39	22-Mar-24	11-May-24	15-Dec-23	01-Feb-24	-190	0%								
Works in Portion P																	



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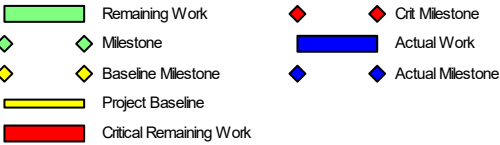
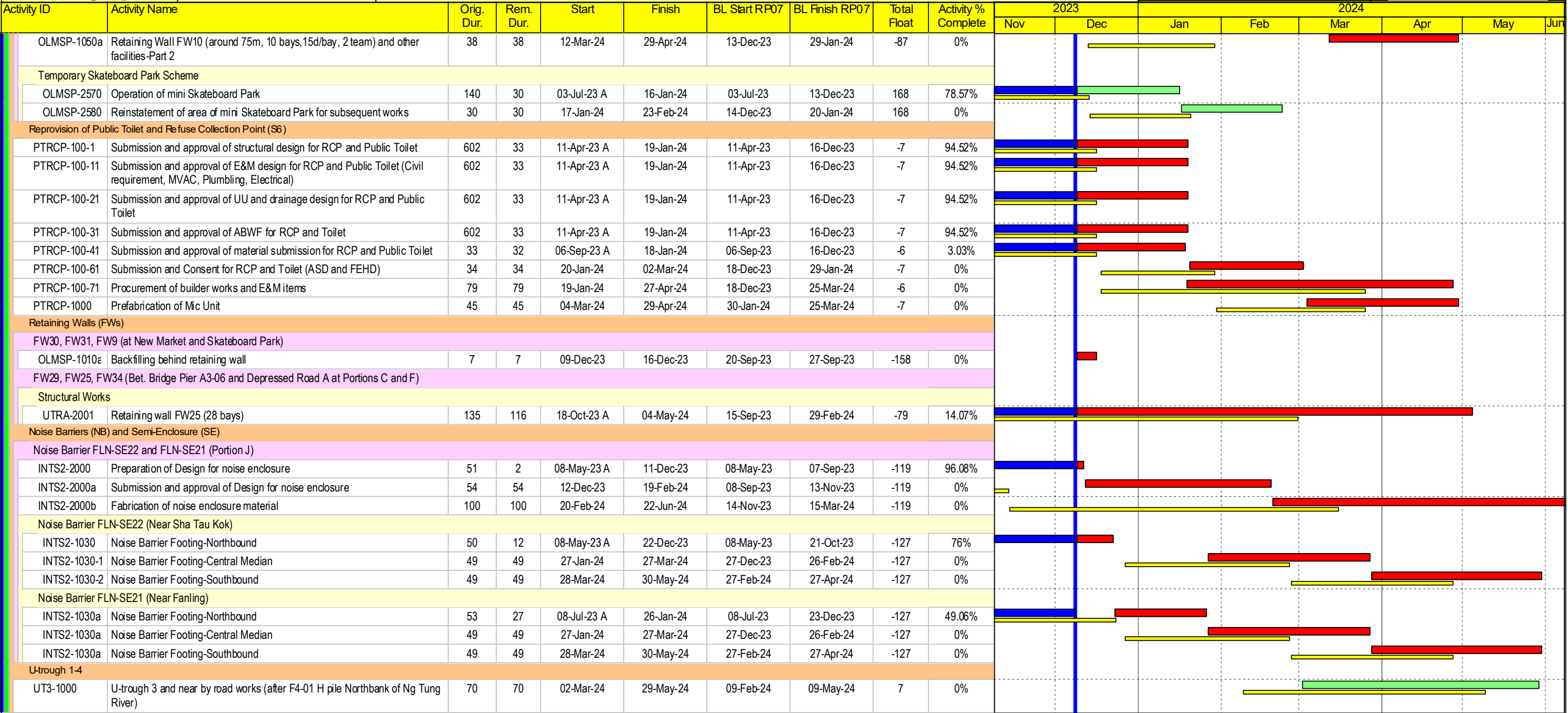
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**AECOM**

## PROJECT

# DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

**CONTRACT TITLE:**

**FANLING NORTH NEW  
DEVELOPMENT AREA, PHASE 1:  
FANLING BYPASS  
EASTERN SECTION  
(SHEK WU SAN TSUEN NORTH  
TO LUNG YEUK TAU)**

**CLIENT**



土木工程拓展署  
Civil Engineering and  
Development Department

**CONSULTANT**

**AECOM Asia Company Ltd.**  
**www.aecom.com**

### SUB-CONSULTANTS

**ISSUE/REVISION**

-	NOV-19	TENDER DRAWING	RPCM
NR.	DATE	DESCRIPTION	CHK.

**STATUS**  
**RE**

SCALE		DIMENSION UNIT	
比例		尺寸单位	
A1 1:7000		METRES	
KEY PLAN			
索引图			

## PROJECT NO.

60335576

**CONTRACT NO.**

ND/2019/04

**SHEET TITLE**

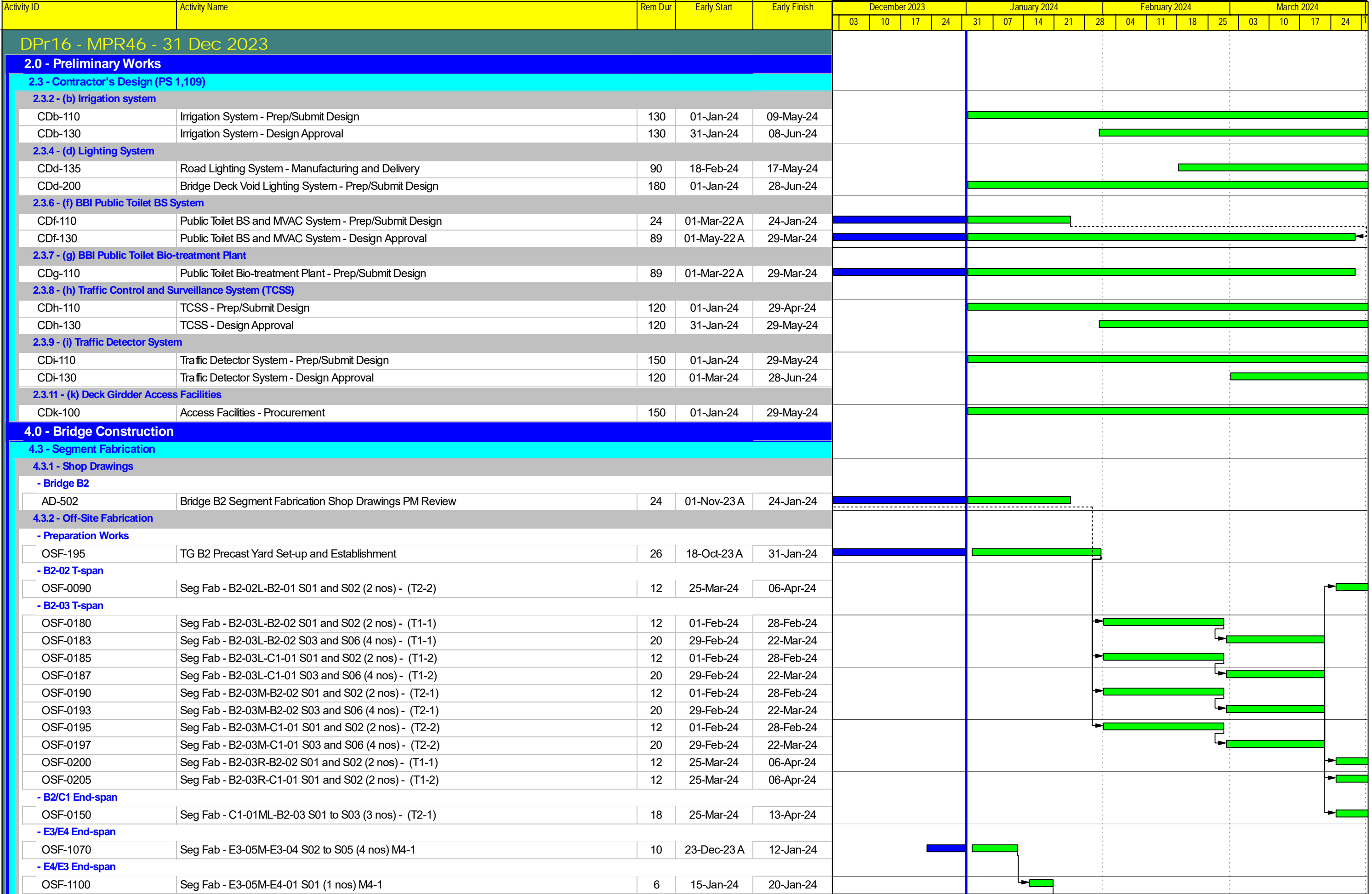
## KEY PLAN AND LOCATION PLAN

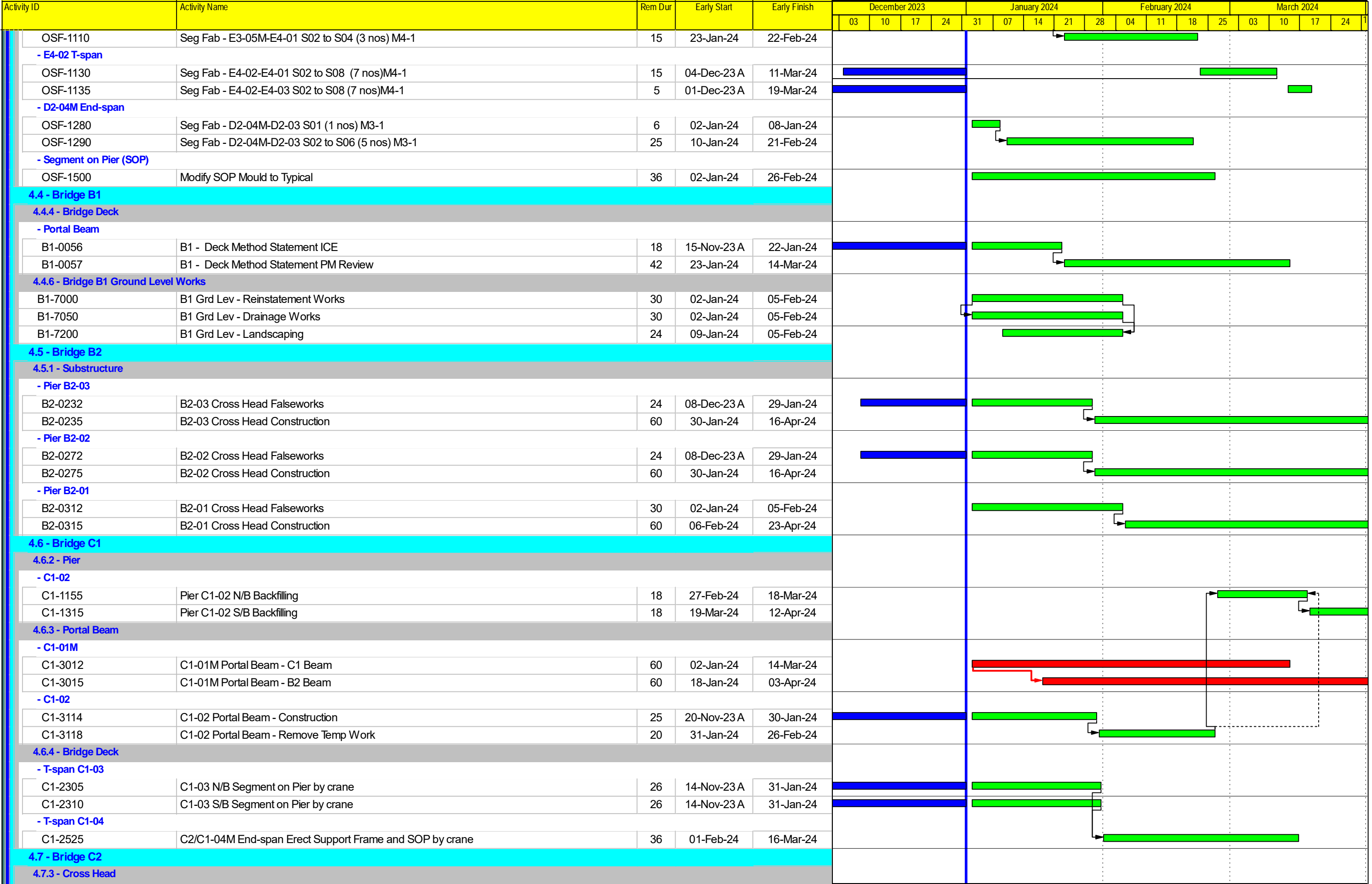
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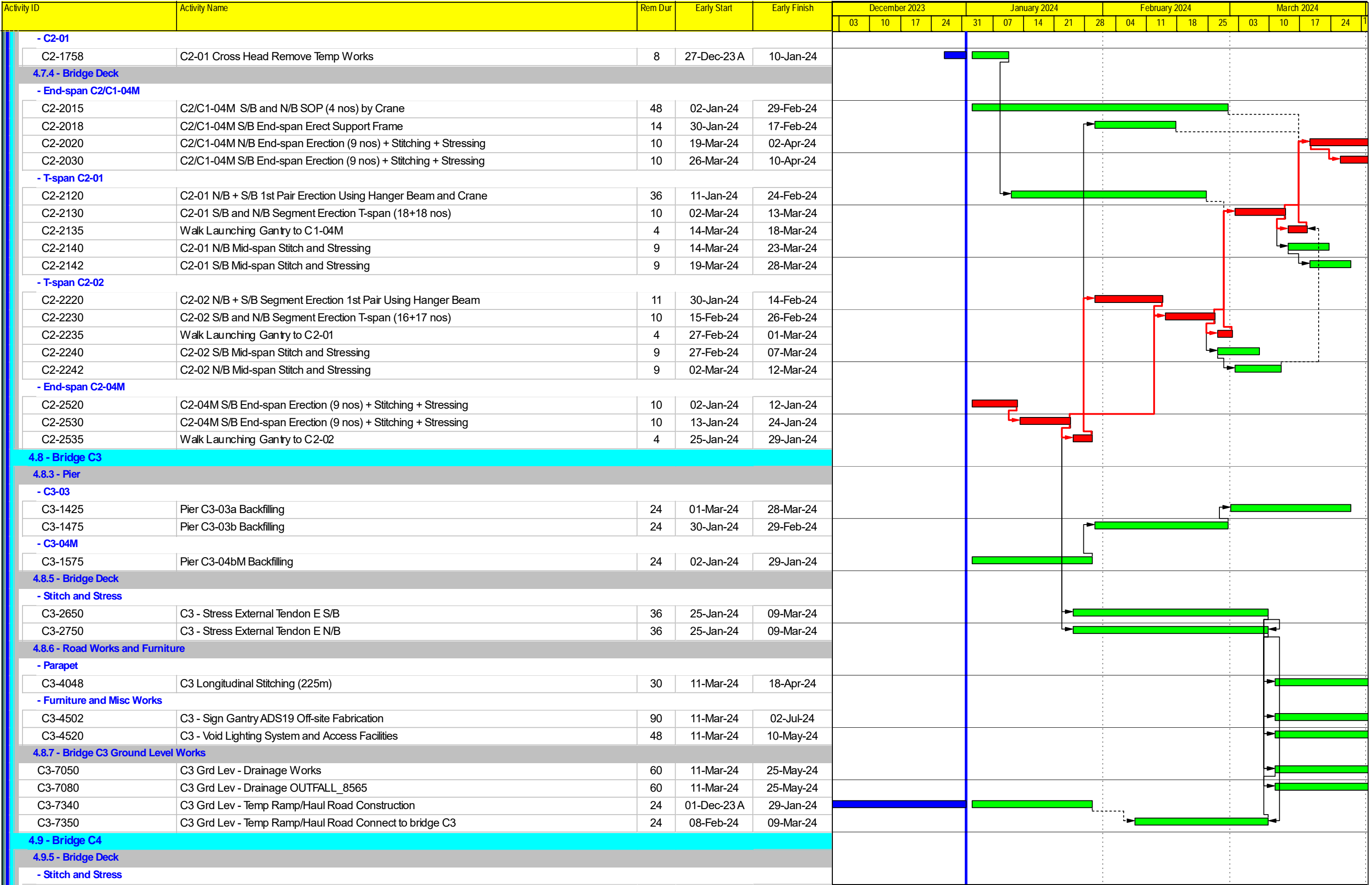
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## **Construction Programme of ND/2019/05**

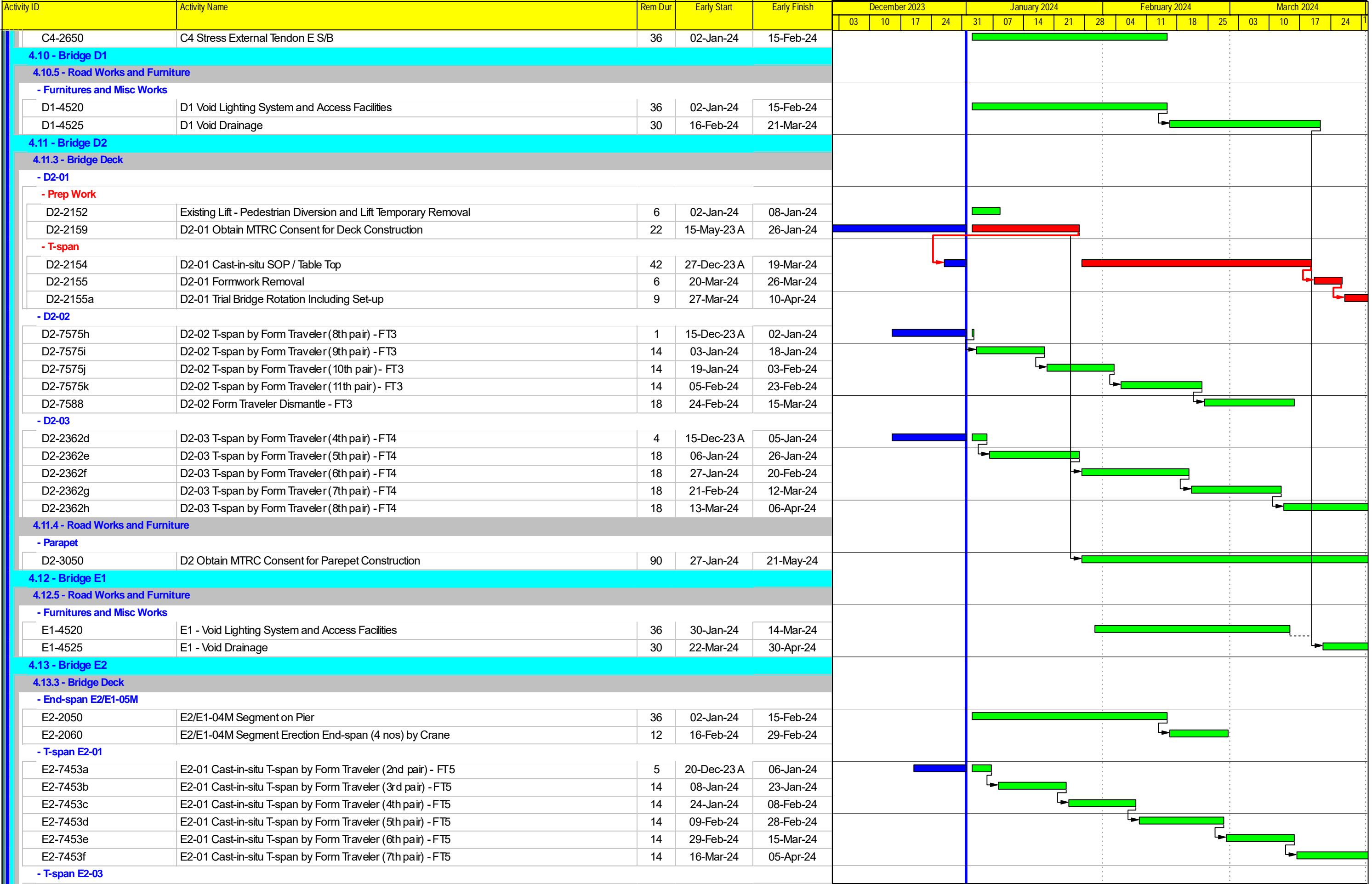


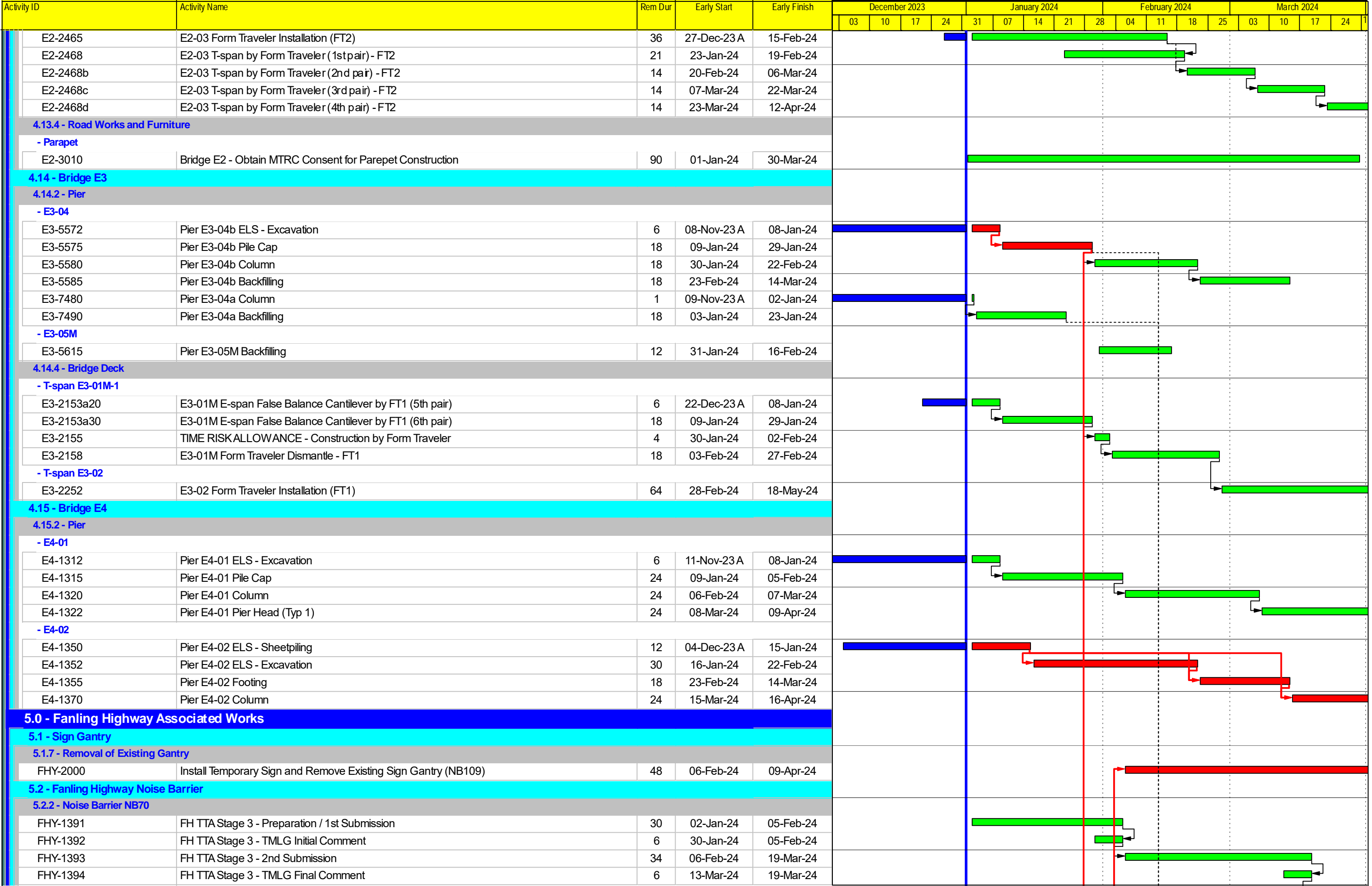


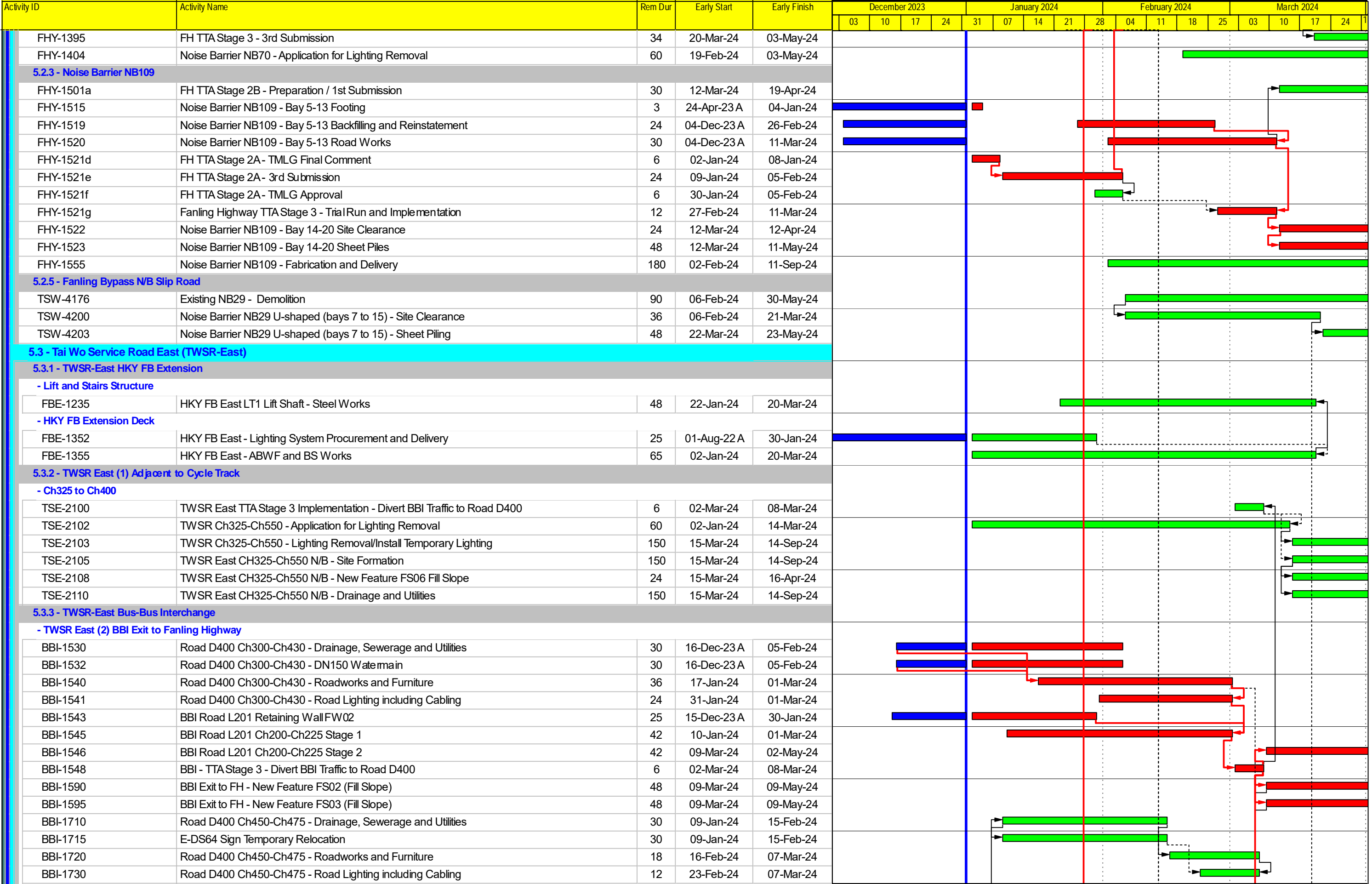




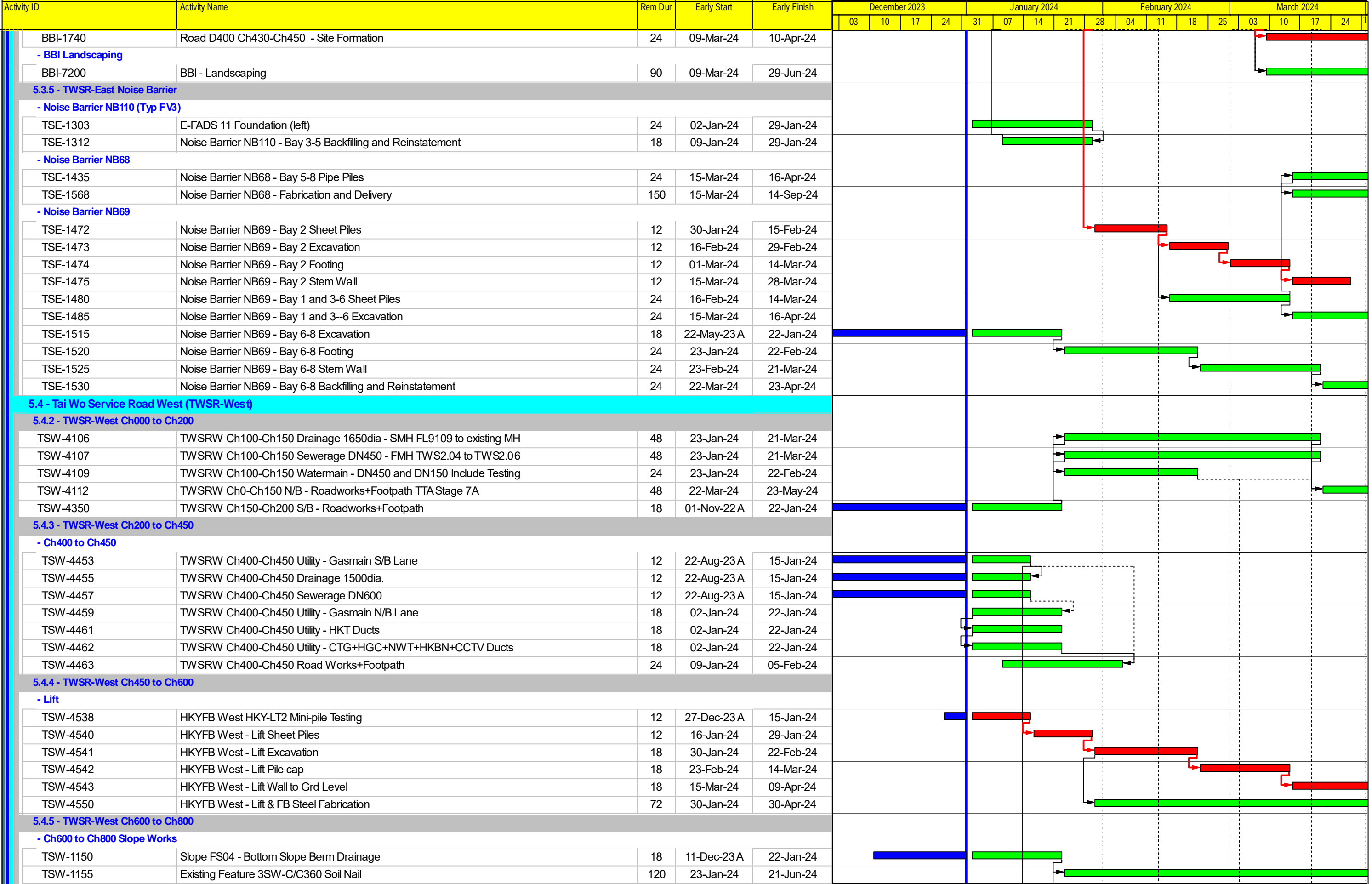


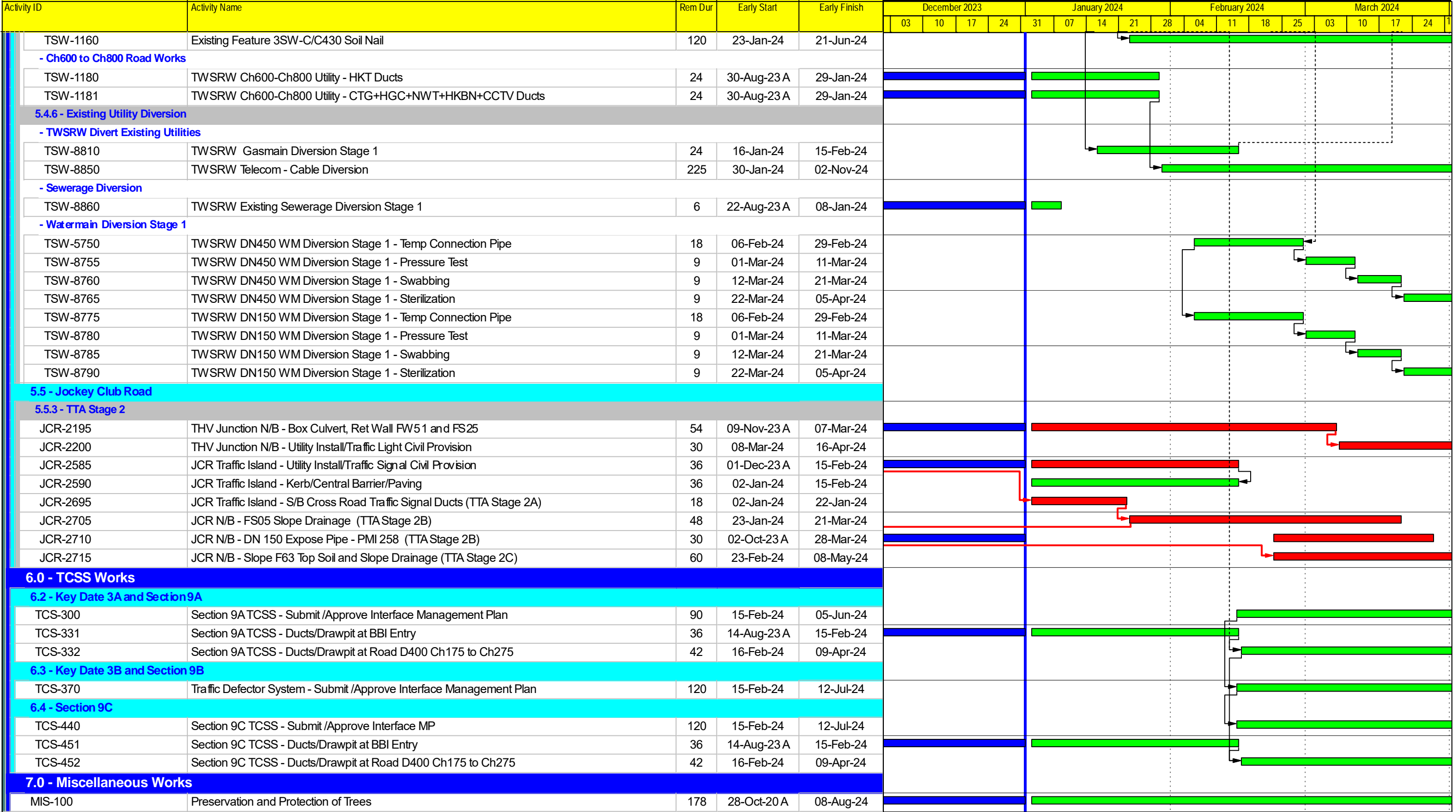




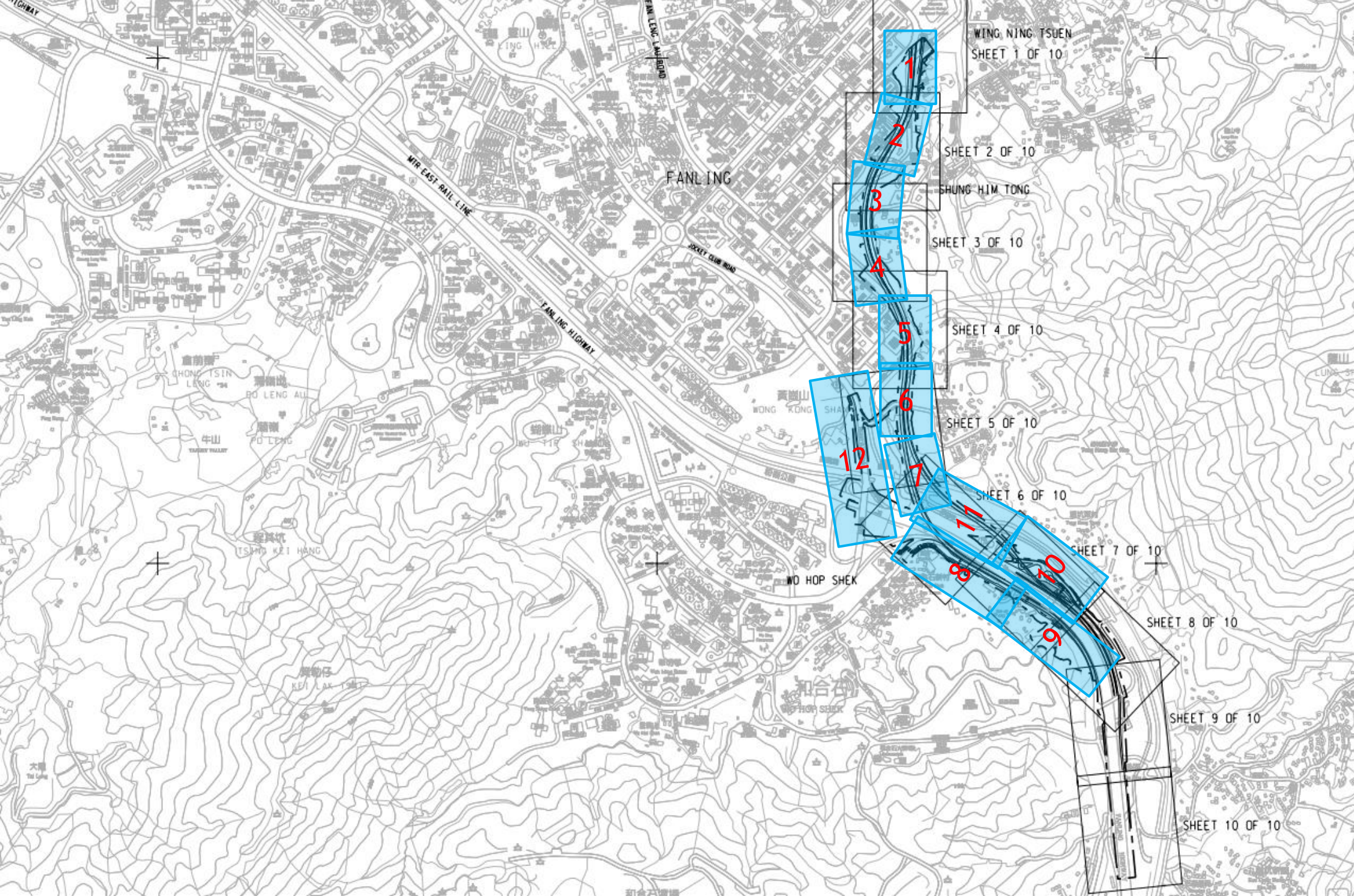












**CONSULTANT**  
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**SUB-CONSULTANTS**  
AECOM

**ISSUE/REVISION**

NO.	DATE	DESCRIPTION	CHKD BY
1	JUN-19	TENDER DRAWING	P/PCM

**STATUS**  
FOR ISSUE

**SCALE**  
A1:1:7000

**DIMENSION UNIT**  
METRES

**KEY PLAN**

**PROJECT NO.**  
60335576

**CONTRACT NO.**  
ND/2019/05

**SHEET TITLE**  
KEY PLAN AND LOCATION PLAN



# 1 North Team



Sheet pile extraction (near C4) completed on 04/12/23



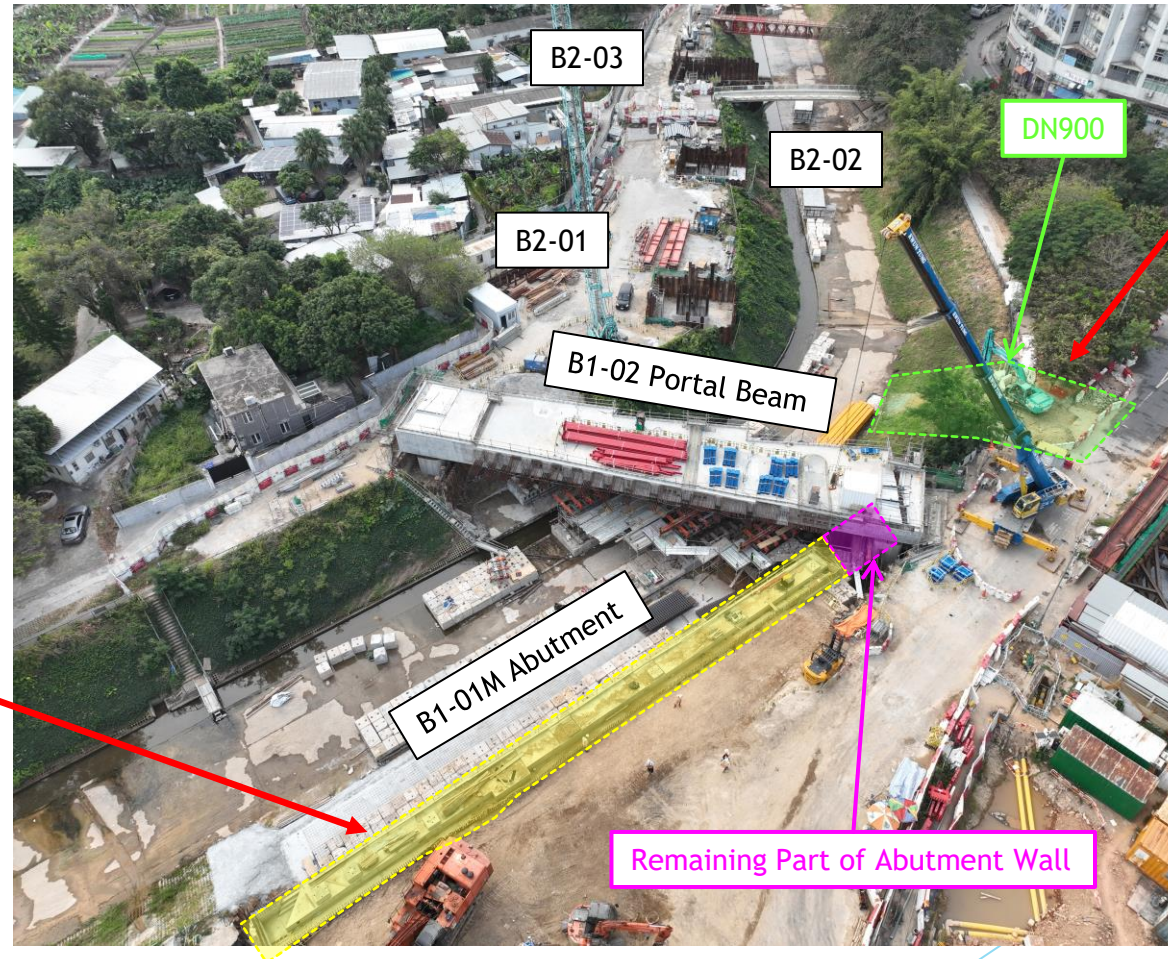
Site clearance completed on 04/12/23, works area handover to Viaduct Team on 05/12/23

## B1-01M (On Kui St)

- Sheet pile extraction (near C4) and site clearance completed on 04/12/23, works area handover to Viaduct Team on 05/12/23
- Remaining part of abutment wall target to commence on Late Dec.

## DN900 drain pipe and manhole SMH\_FL8701 (On Kui St)

- Excavation for DN900 and manhole SMH\_FL8701 in progress



Excavation for DN900 and Outfall FL8701 in progress.



Excavation for Manhole SMH\_FL8701 in progress.



1

► Pier & Portal Team  
Area Highlighted - B1-02 Portal Beam

Portion 1 (On Kui St)  
- Dismantling of steel beam completed  
- ES:28/08/23 EF:26/10/24  
- LS:15/07/24 LF:19/11/24  
- Ahead against R16

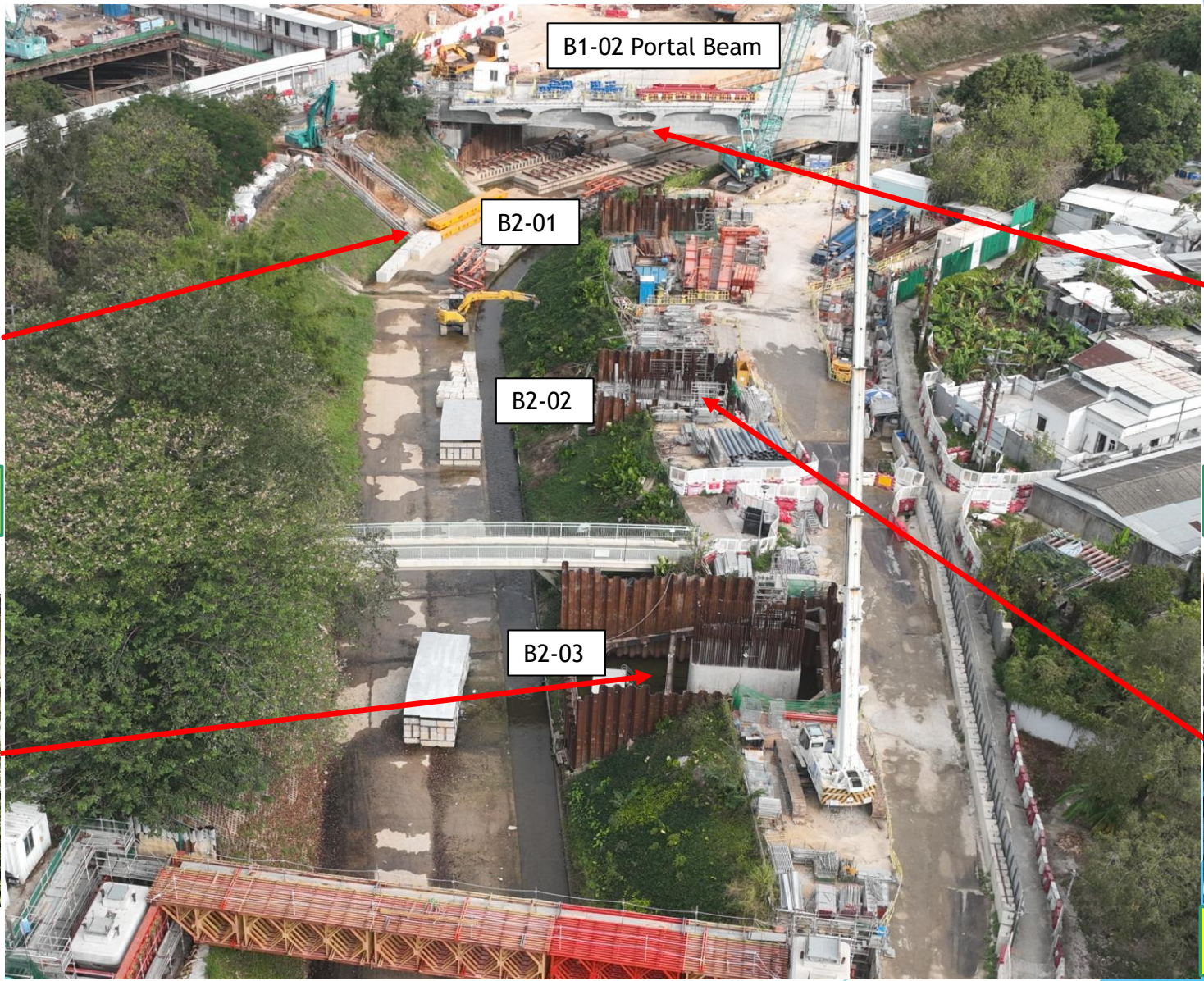
Portion 1 (On Kui St)  
- B2-02 Cross head in progress  
- ES:03/11/23 EF: 07/12/23  
- LS:06/03/24 LF: 13/04/24  
- Ahead against R16



Dismantling of soffit & steel beam at B1-02 portal beam completed on 12/12/23.



Mass concrete for B2-03 cross head construction completed.



Dismantling of soffit & steel beam at B1-02 portal beam completed on 12/12/23.



Falsework erection for B2-02 cross head construction in progress



## ▶ Viaduct

- Precast cell at C1-03



Precast cell at C1-03 erected on 14 Nov 2013



Construction the diaphragm of C1-03 in progress



► Pier & Portal Team

Area Highlighted - C1-02 Portal Beam

C1-01 MJ Portal

- C1-02 Portal Beam
- Soffit erection completed on 26/11/23
  - ES: 01/08/23 EF: 16/12/24
  - LS: 24/01/24 LF: 18/06/24
  - Target concreting by 30/01/24
  - On Track against R16

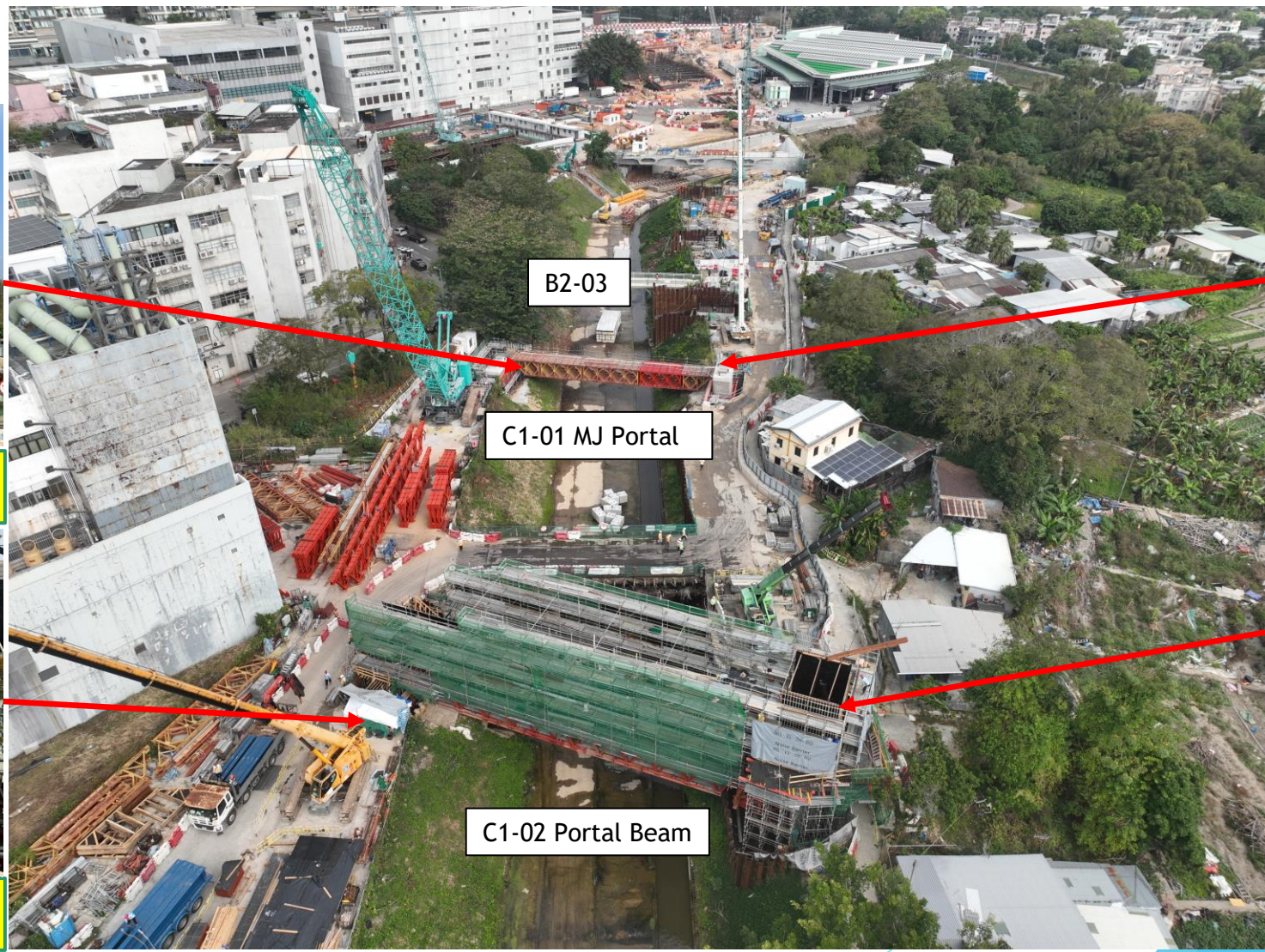
- C1-01 MJ Portal Beam
- ES: 22/08/23 EF: 05/02/24
  - LS: 29/01/24 LF: 19/07/24
  - Target truss erection by 27/12/23
  - On Track against R16



Truss erection at C1-01 MJ portal is progress



Soffit formwork for C1-02 portal beam construction completed 08/12/23



Truss erection at C1-01 MJ portal is progress



Side formwork erection at C1-02 portal in progress



# 3 ▶ Pier & Portal Team

## Portion 4

C2-01 cross head construction

1<sup>st</sup> pour concreting completed on 30/11/23

- Cross head - ES: 31/08/23 EF: 10/01/24

- LS: 01/11/23 LF: 23/01/24

- Target 2<sup>nd</sup> pour concreting by 20/12/23

- Ahead against R16



1<sup>st</sup> Concreting for C2-01 cross head completed on 30/11/23



Rebar fixing for 2<sup>nd</sup> pour in progress



## ▶ Viaduct Launching Girder

- Total 321 segments erected by LG up to 15 Dec 2023.



End Span C2-04 to C301 completed on 12 Dec 2023



LG launched to Pier C2-03 on 16 Dec 2023



# 4 North Team

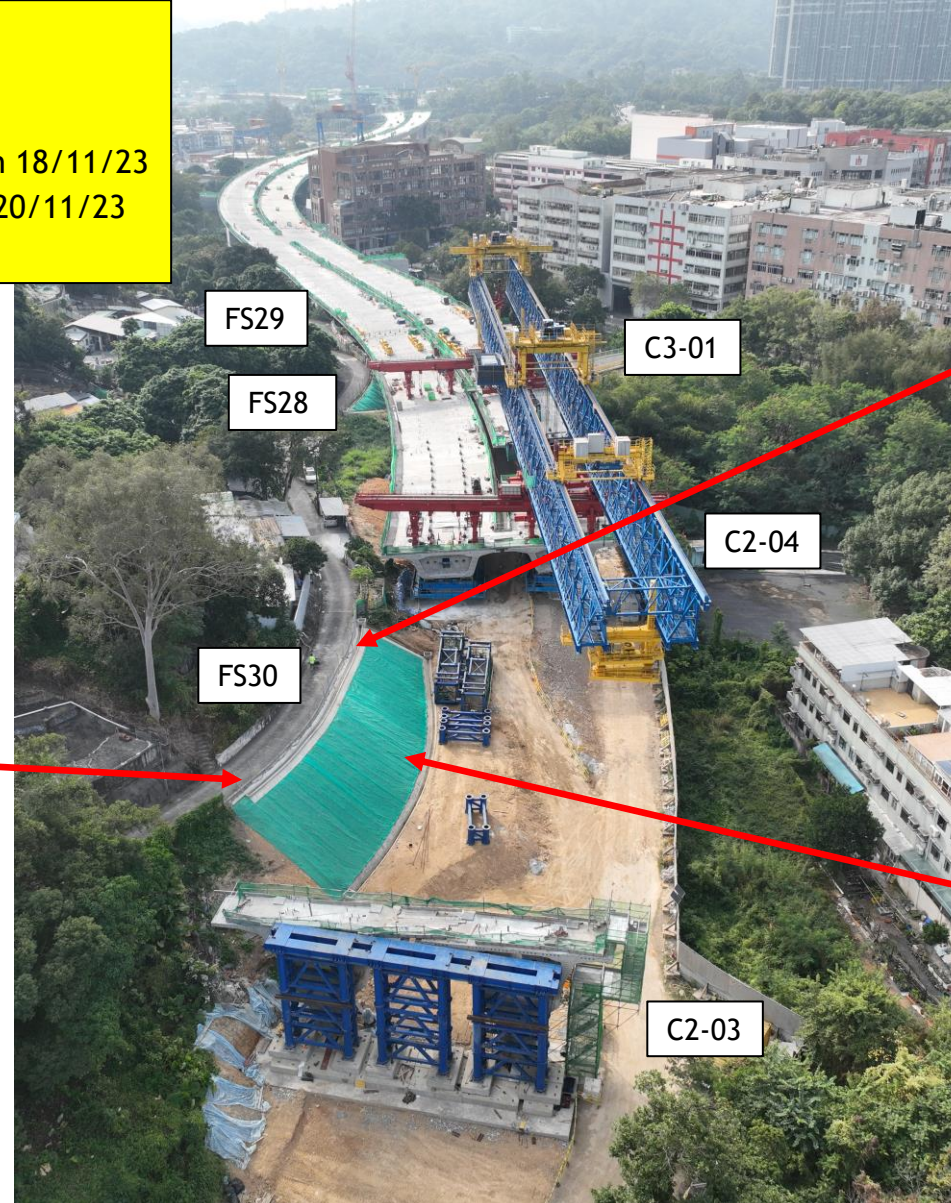
## Portion 5 (On Lok Garden)

### FS30

- Laying erosion control mat completed on 18/11/23
- Chain link fence erection completed on 20/11/23
- Hydroseeding completed on 29/11/23



Hydroseeding at slope FS30 completed on 29/11/23



Chain link fence erection at slope FS30 completed on 20/11/23



Laying erosion control mat at slope FS30 completed on 18/11/23



# 5 North Team

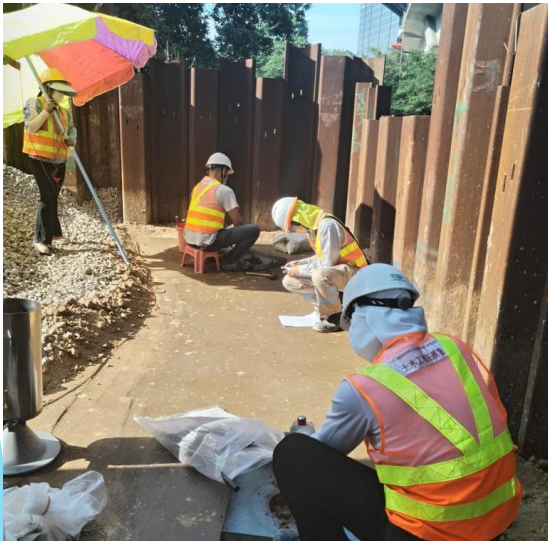
Portion VI (Lincoln Centre)

C3-03b

- Backfilling and SRT in progress

C3-04b

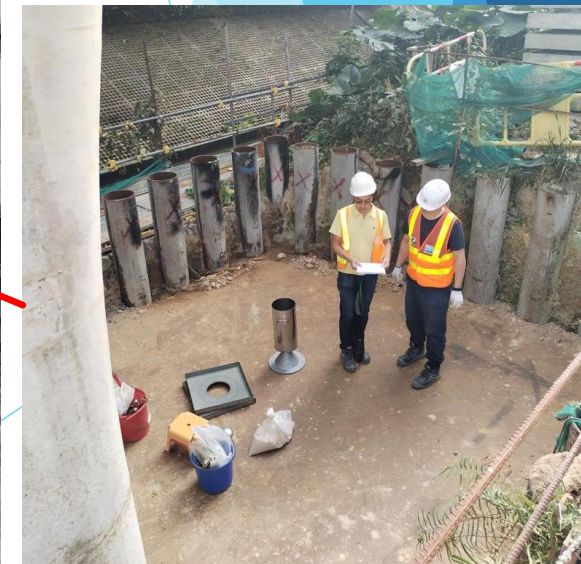
- Trimming pipe pile (18 nos.) completed on 05/12/23
- Backfilling and SRT in progress



Backfilling in progress. SRT at +11.0mPD pass.



Trimming pipe pile (18 nos.) completed on 05/12/23



Backfilling in progress. SRT at +10.5mPD pass.



5 North Team



Site clearance at C4-01b cofferdam before backfilling



Backfilling at C4-02 ELS cofferdam in progress. SRT at +10.4mPD passed.

Portion VI (Tai Wong Yeh)

C4-01a & C4-02

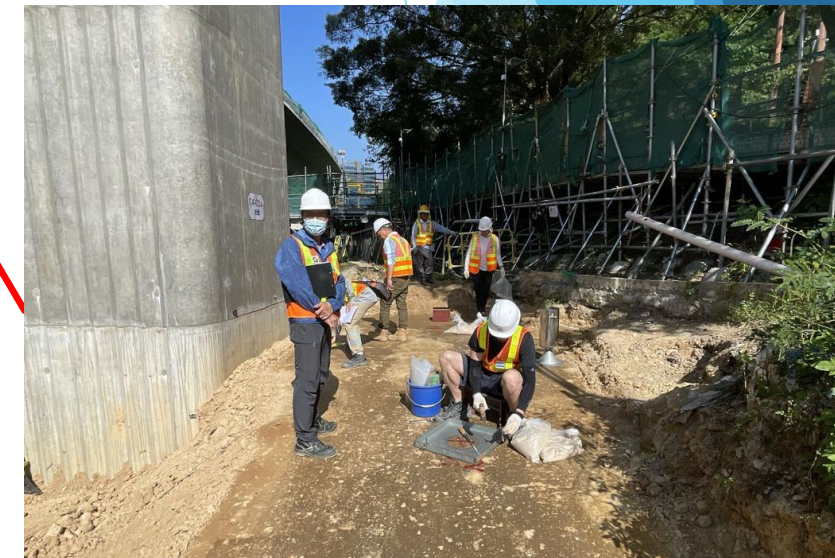
- Backfilling in progress

C4-01b

- Site clearance before backfilling



Trimming pipe pile and cut slope profile completed on 15/11/23



SRT at +13.7mPD completed. Target to complete footpath reinstatement in Dec 2023.



## ▶ Viaduct

### Type A Segment Precast Works- Up to 16 Dec 2023

Fabricated	Delivery to Site	Erected
756	492	423





# 7 North Team

Additional request from DSD to clear debris at downstream

- Clearance works completed on 17/11/23



Removal of debris from Ma Wat River (Downstream) completed on 17/11/23



► Pier & Portal Team

Area Highlighted - D2-01 Pier & Pier head

D2-01 pier & pier head construction:  
2nd pour pier concreting completed on 08/11/23  
Pier head concreting completed on 08/12/23  
- Pier & Pier head - ES: 25/10/23 EF: 28/12/23  
- LS: 25/10/23 EF: 28/12/23

Target hand over to SOP construction 22/12/23

Ahead against R16



Pier head at D2-01 completed on 08/12/23



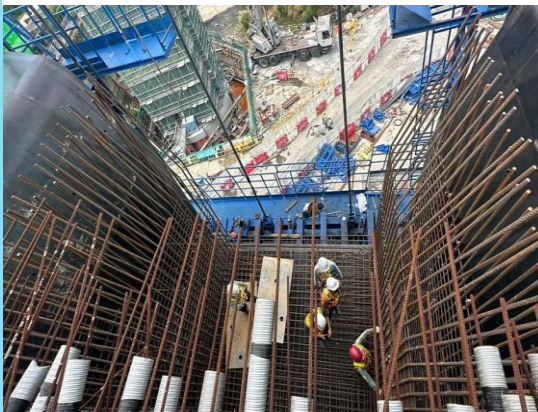
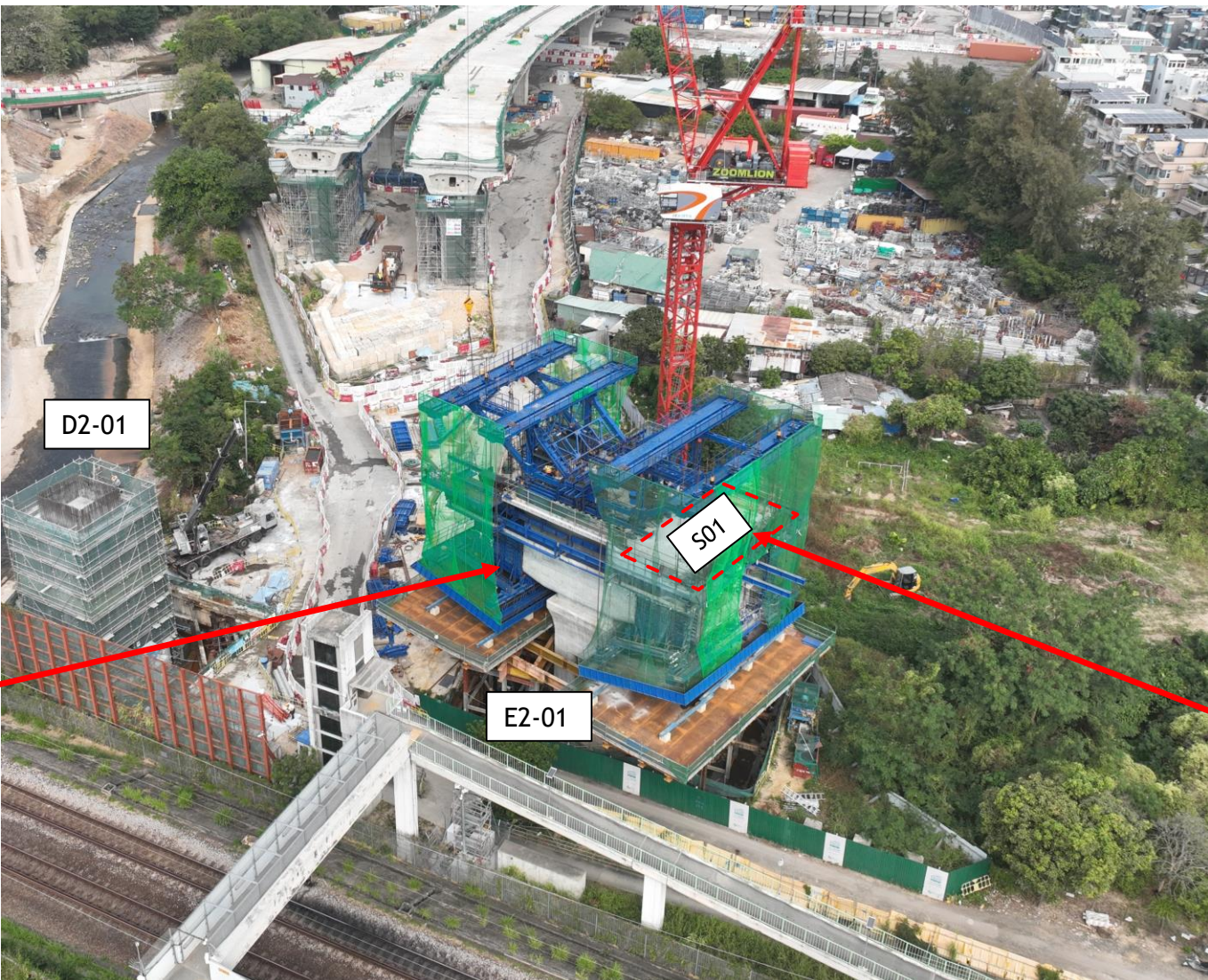
2<sup>nd</sup> pour at D2-01 completed on 08/11/23



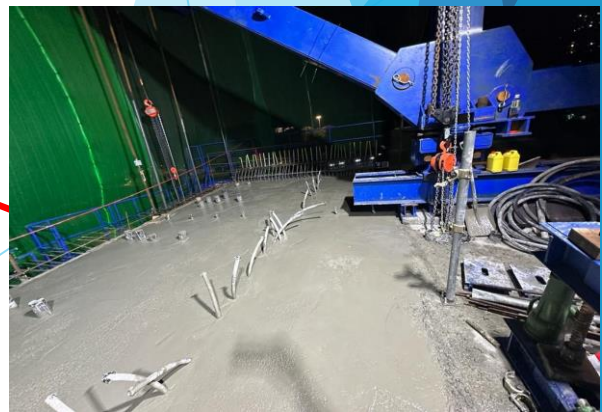
7

▶ Form Traveller Team  
Area Highlighted  
- FT5 (E2-01 T -Span)

FT5: E2-01  
- S01 segment (up) completed on 09/12/23  
- ES: 25/11/23 EF: 09/09/24  
LS: 25/11/23 LF: 09/09/24  
-Target S01 segment (down) concreting by 19/12/23  
- On track against R16



Rebar fixing at S01 segment (Down Chainage) in progress



S01 segment (Up Chainage) completed on 09/12/23



## ▶ Viaduct

- Bridge Rotation



Construction of D2-01 SOP will be commenced at end of December 2023

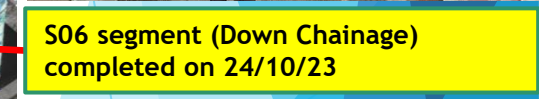
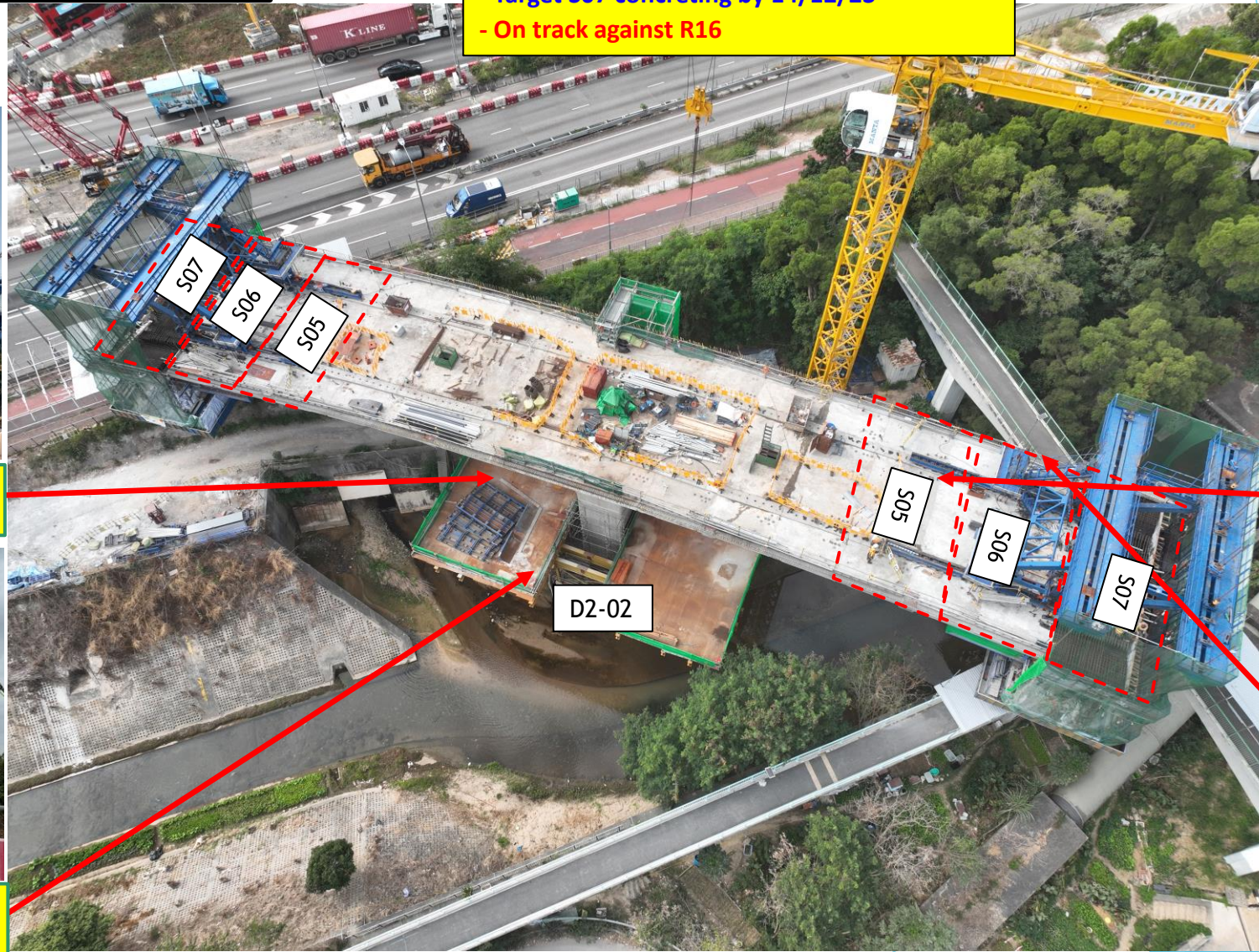


Trimming of top portion of lift tower NF83A will be commenced after CNY



- FT3 (D2-02 T -Span)

- S05 segment completed on 18/11/23
- S06 segment completed on 01/12/23
- S07 segment completed on 14/12/23
  - ES: 11/08/23 EF: 21/02/24
  - LS: 11/08/23 EF: 21/02/24
- **Target S07 concreting by 14/12/23**
- **On track against R16**





# South Team

## 11. D204 Bored Piles

D2-1280 (R16) ES:12/09/23 EF:07/12/23

- Bored Piles completed on 22/11
- Interface Core completed



Interface Core completed



D2-04M-P4 concreted on 22/11

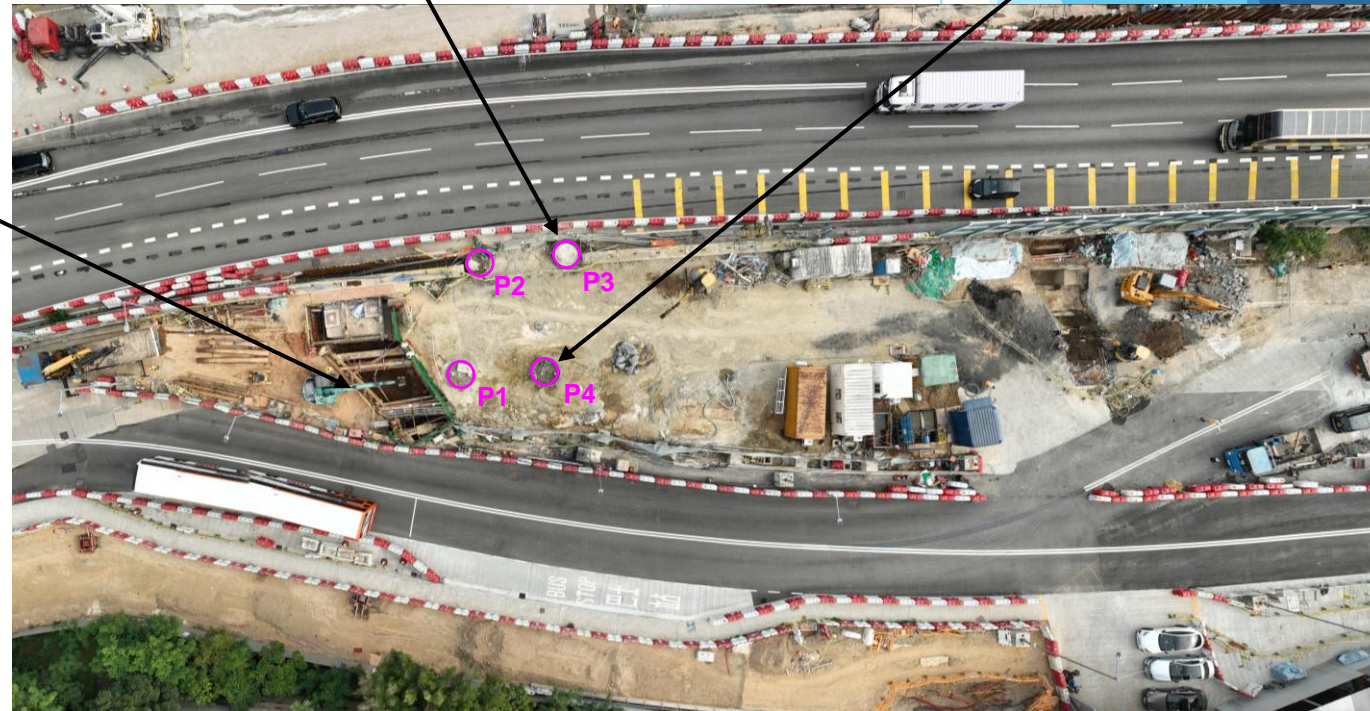
## 12. Drainage 2x1200Dia Connection SMH FL9110

TWRSW (R16) ES:01/11/23 EF:28/12/23

- Excavation in Progress



Installation of 2xD1200 Stormwater Pipe completed on 14/12





### 13. FS04 Bottom Berm Drainage

TSW 1150 (R16) ES: 31/08/22 EF:27/09/23

- Remaining Slope and drainage work (CH680 – CH720) resumed work. Target 15/01/24



Casted 600UC between CP8 and CP9  
CP10 is in progress



Remaining Raking Drain at FS04 completed

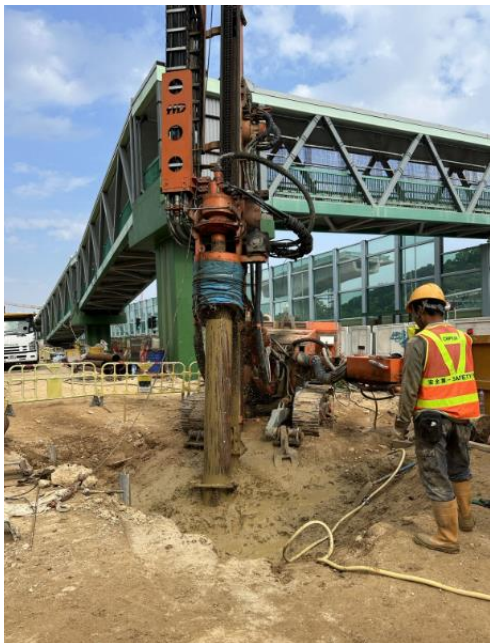


Erected working platform for berm and rock mapping



Laying DN600 Sewerage Pipe at FW06





#### 14. HKY LT2 Minipiles

TSW 4537 (R16) ES: 26/09/23 EF:09/11/23

- Total 13 Mini-Piles Completed
- 14/12 Grouted LT2-1, 3, 6, 7, 11
- 30/11 Grouted LT2-12, 16, 17, 18, 19
- 21/11 Grouted LT2-2, 4, 8
- Hole Collapsed LT2-12, 16, 15

LT2 Piling Works in Progress (12 out of 19 Minipiles completed) Target Completion 23/12

CLP laying ducting for 11kV



TownGas laying DN600 pipeline



**15. NB29 U-Trough Bay 7-15 Base Slab**  
TSW 4205 (R16) ES: 02/05/24 EF:17/08/24

- 3 Trial Pits Completed
- Site Clearance in Bay11/12



TTA 325 implemented on 22/11



► Form Traveller Team  
Area Highlighted  
- FT2 (E3-01 T -Span)

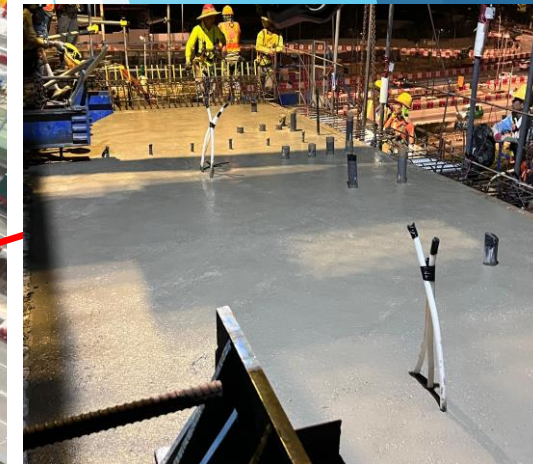
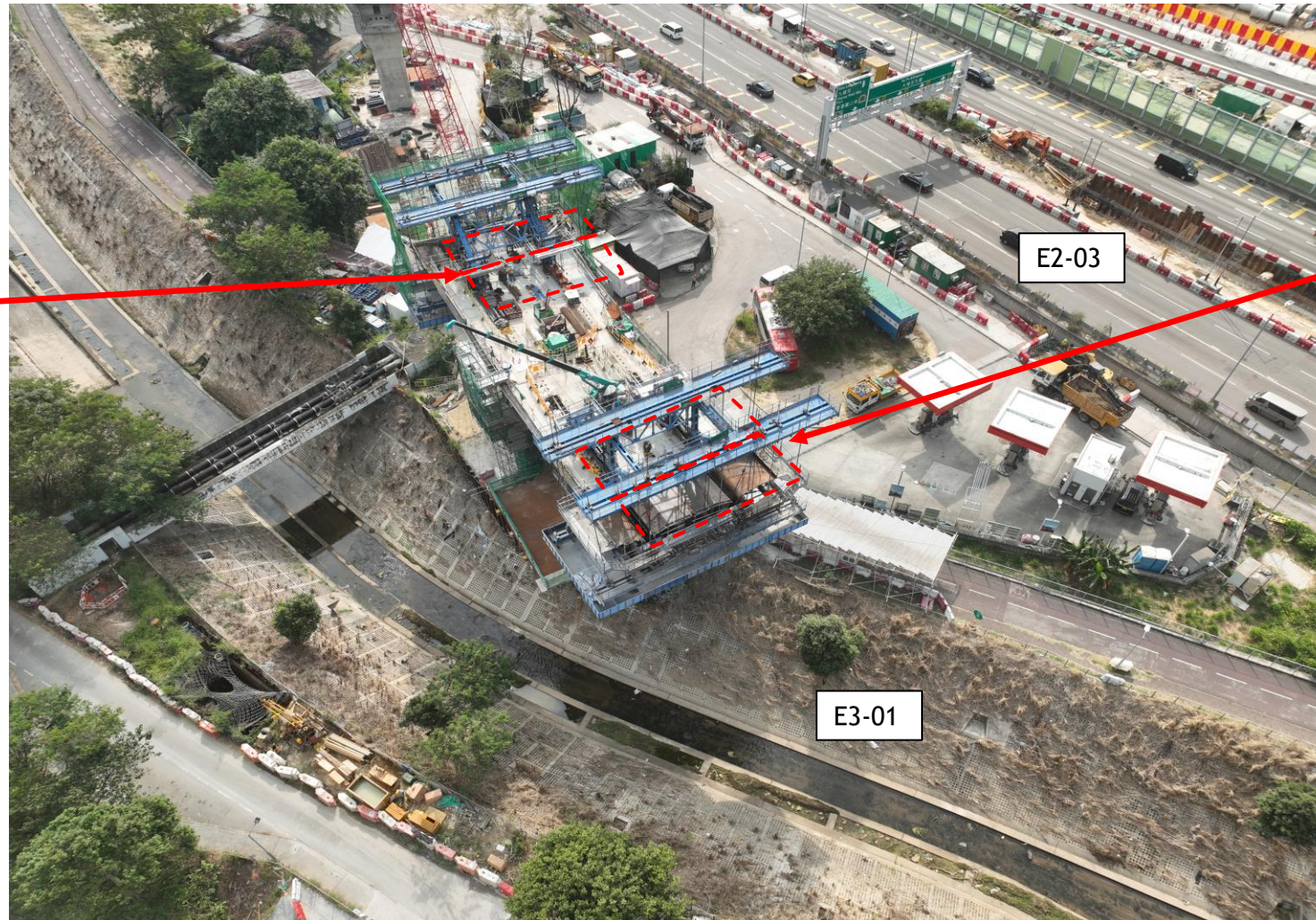
- FT2: E3-01 (5 pairs)
- S02 segment completed on 11/11/23
  - S03 segment completed on 28/11/23
  - ES: 09/08/23 EF: 25/10/23  
LS: 05/01/24 LF: 22/03/24
  - Target S04 segment concreting by 18/12/23
  - On track against R16



S03 segment (Up Chainage)  
completed on 28/11/23



S02 segment (Up Chainage)  
completed on 11/11/23



S03 segment (Down Chainage)  
completed on 28/11/23



S02 segment (Down Chainage)  
completed on 11/11/23



1. HKY FB East – Open to Public  
FBE-1360 (R16) ES:15/07/24 EF:24/07/24
  - Temporary Railing completed
  - TTA to be implemented on 28/12

2. BBI Public Toilet – Wall and Roof  
BBI-1030 (R16) ES:08/11/23 EF:02/02/24
  - Base Slab casted on 8/12



Temporary Railing completed on 4/12



Temporary Lighting completed on 5/12



L201 to D300 - SRT of Subbase on 12/12



BBI Toilet - Base Slab casted on 8/12



**3. Demolition of Existing NB74**  
BBI1505 (R16) ES:09/09/23 EF:07/11/23

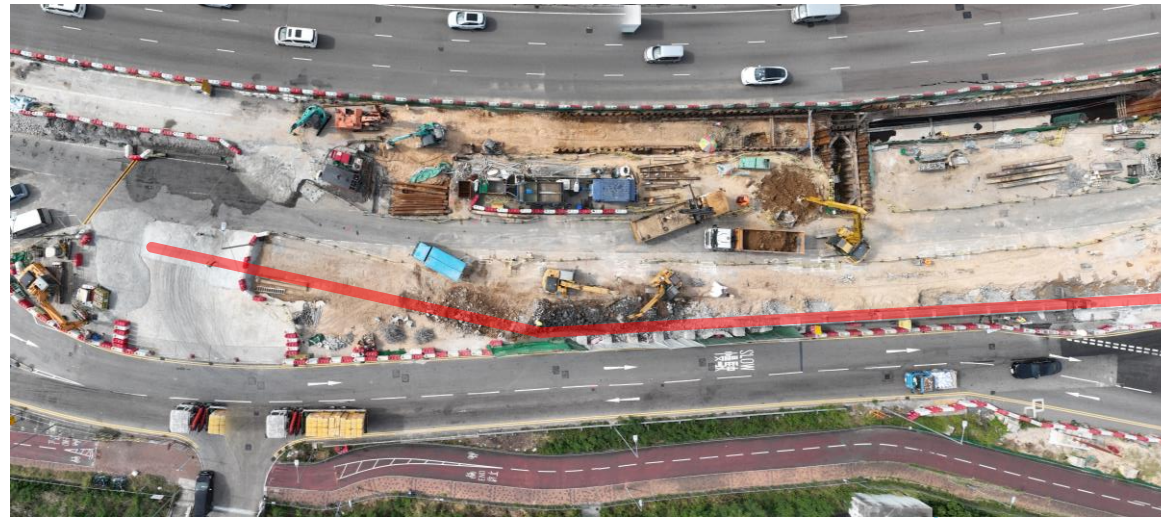
- Demolition completed 100m out of 130m



NB74 Stem wall removed by saw cut on 11/12.



80m out of 130m was removed on 11/12





# 10 South Team



E3-04b Excavation in Progress.  
Pilecap Target 13/1



E4-01 Excavation in Progress.  
Pilecap Target 30/12



E3-04a 1<sup>st</sup> Pour casted 14/12  
2<sup>nd</sup> Pour Target 28/12



4. E3-05M Pier Head  
E3-5612 (R16) ES:22/08/23 EF:18/09/23  
• Pier Head Target 15/01/24

6. E3-04a Column  
E3-7480 (R16) ES:12/09/23 EF:11/10/23  
• 1<sup>st</sup> Pour casted on 14/12/23  
• Pier Target Completion 28/12 /23

5. E4-01 Pilecap  
E4-1315 (R16) ES:29/11/23 EF:28/12/23  
• 2<sup>nd</sup> Layer of Strut installed 15/12/23

7. E3-04b Pilecap  
E3-5575 (R16) ES:25/10/23 EF:14/11/24  
• Excavation in Progress  
• Obstruction encountered



E3-05M Pierhead Steel Mould Erection in Progress



E4-02 Pipe pile wall in progress

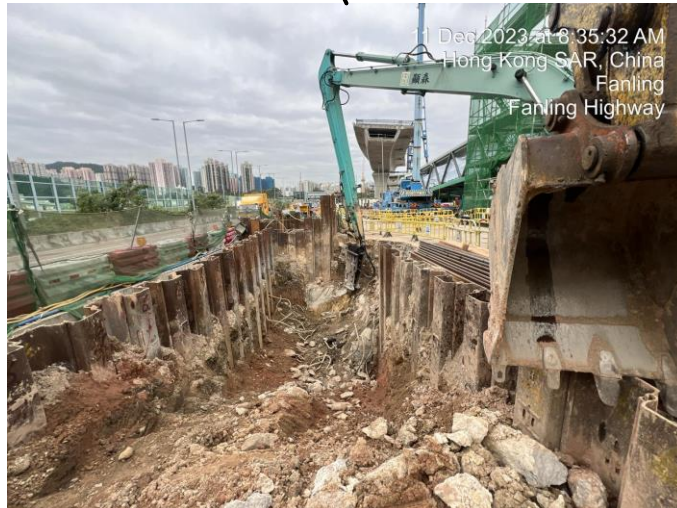
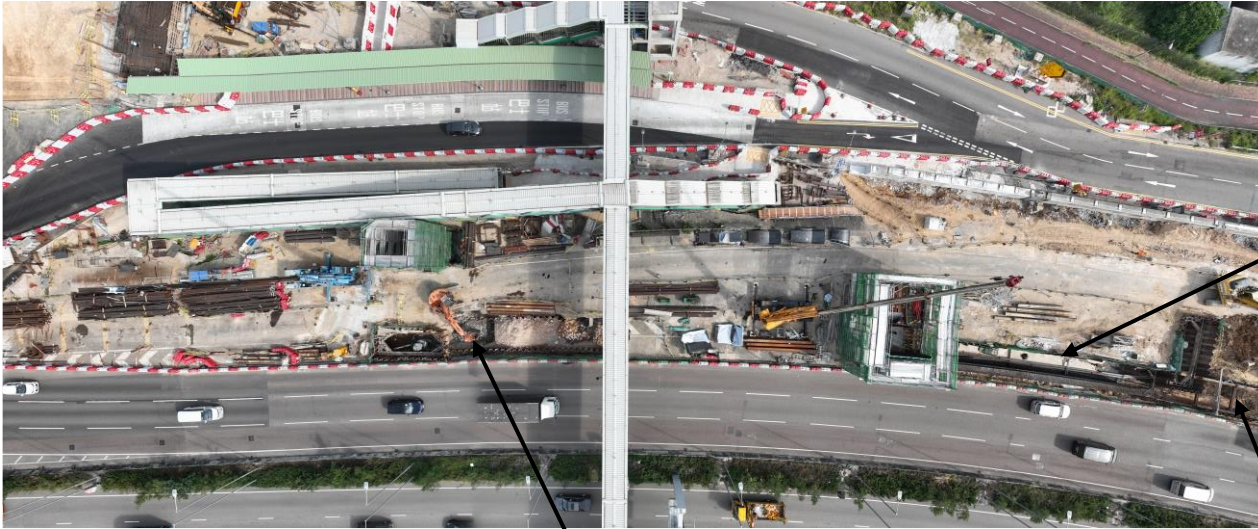


► South Team

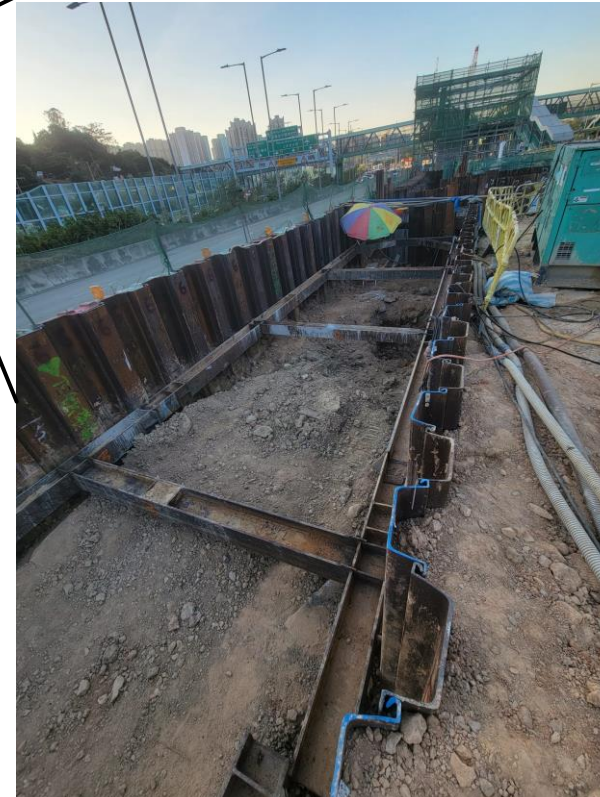
8. Noise Barrier NB 69 Bay 6-8 Footing

TSE-1534 (R16) ES: 28/02/23 EF:26/03/23

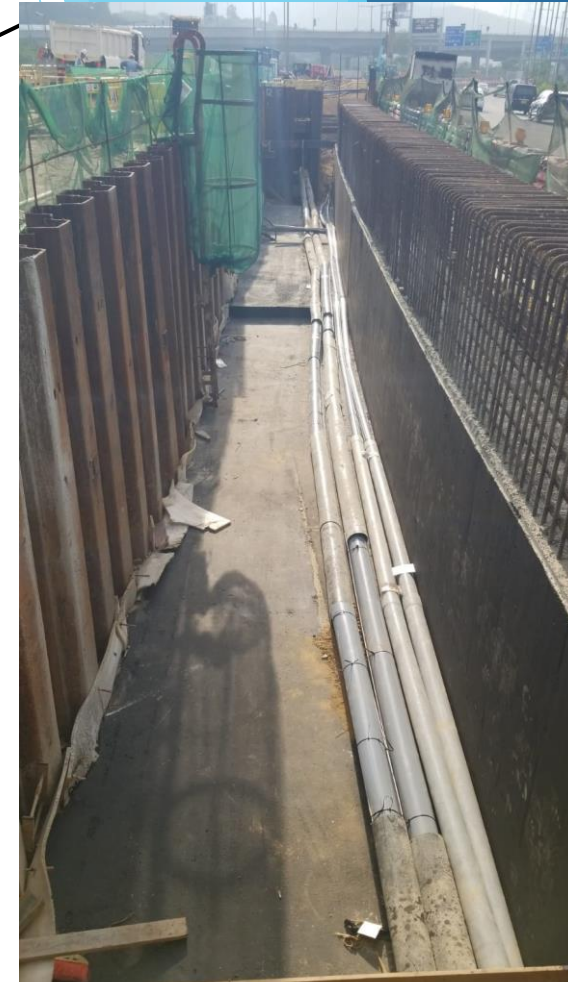
- Bay 5, 6 Bottom Wall completed, backfilling in progress
- Bay 2, 3 Sheetpiling in progress. Abandoned Pilecap encountered.
- Bay 6, 7, 8 Sheetpiling in progress. Unknown watermain and concrete encountered.



NB69 Bay 2,3 - Excavation in progress.  
Abandoned pile caps encountered.



NB69 Bay 6,7,8 - Excavation in Progress



NB69 Bay 5,6 - Backfilling in Progress



## Form Traveller Team

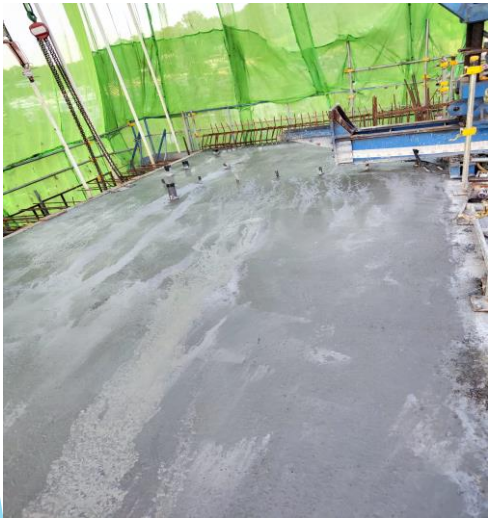
### Area Highlighted

- FT1 (E2-02 T -Span)

FT1: E2-02 (13.5 pairs)

- S13 segment completed on ??/11/23
- S14 segment completed on 30/11/23
- E2-02 T-Span (S01 to S014)  
ES: 02/11/22 EF: 14/11/23  
LS: 02/11/22 LF: 22/11/23

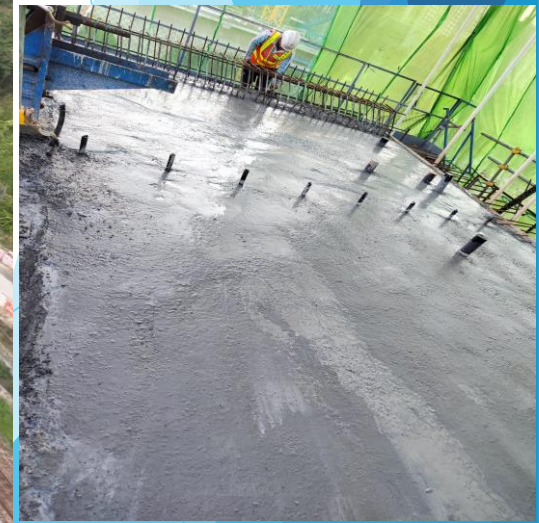
- On track against R16



S13 segment (Down Chainage)  
completed on 16/11/23



S14 segment (Up Chainage)  
completed on 30/11/23



S13 segment (Down Chainage)  
completed on 16/11/23



**10. Noise Barrier NB 110 Bay 6-9 Footing**  
TSE-1358 (R16) ES: 03/12/24 EF:16/01/25  
• Bay 8 Wall casted on 10/11

► South Team



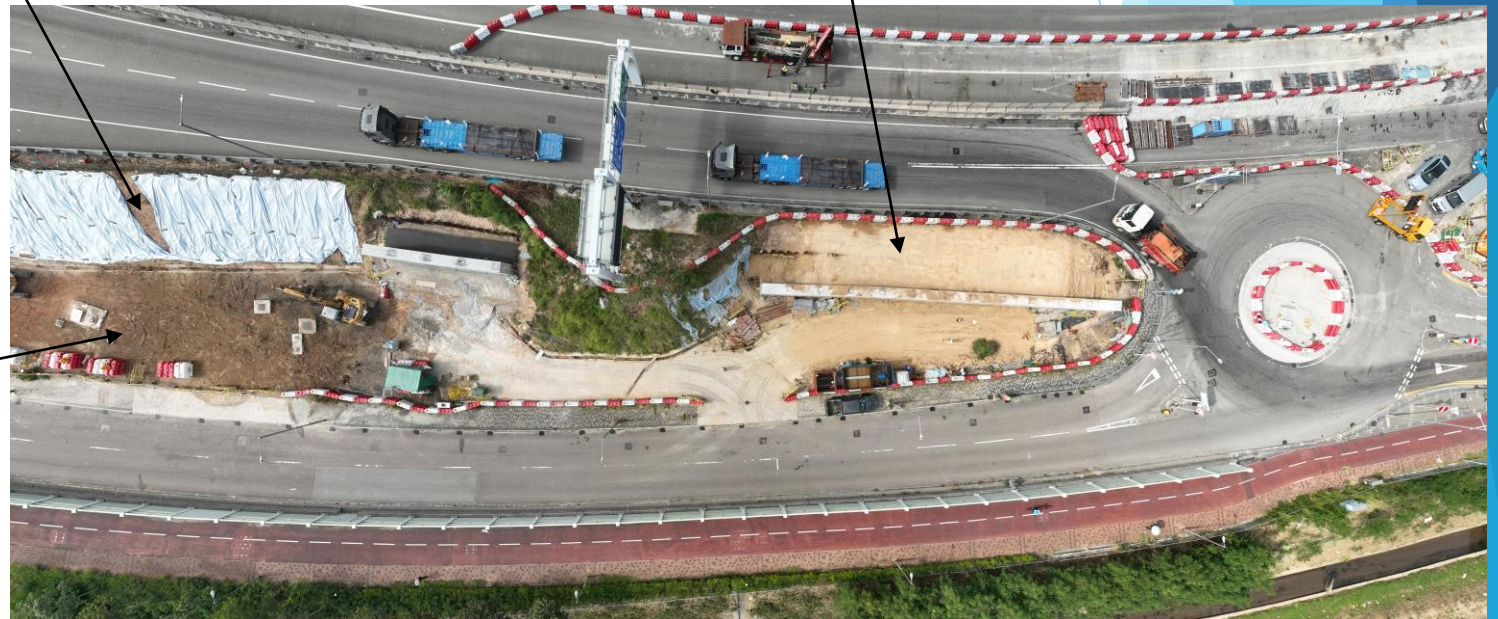
NB110 Bay 9 sheetpiling in Progress



NB110 Bay 3-5 Backfilled to Formation



WSD/5 handover the remaining area on 27/11





► South Team

9. Noise Barrier NB 109 Bay5-13 Stem Wall  
FHY 1517 (R16) ES: 08/08/23 EF:04/10/23

- Bay 09, 10, 11 Bottom Wall casted. Backfilling in Progress
- Bay 12 Footing casted. Bottom Wall Target 23/12
- Bay 05, 07 Top Wall casted 18/11
- Bay 06, 08 Top Wall Target 23/11



NB109 Bay 6-8 extracted remaining sheetpiles



NB109 Bay 12 Wall - Rebar fixing completed



NB109 Bay 5,7 - Top Wall casted 27/11



NB109 Bay 6,8 - Noise Barrier HDBs installed on 8/12



▶ Form Traveler Team  
Area Highlighted  
- FT4 (D2-03 T -Span)

- FT4: D2-03 (8.5 pairs)
- S01 segment completed on 09/11/23
  - S02 segment completed on 28/11/23
  - S03 segment completed on 14/12/23
    - ES: 05/10/23 EF: 30/04/24
    - LS: 05/10/23 EF: 30/04/24
  - Target S03 concreting by 14/12/23
  - On Track against R16

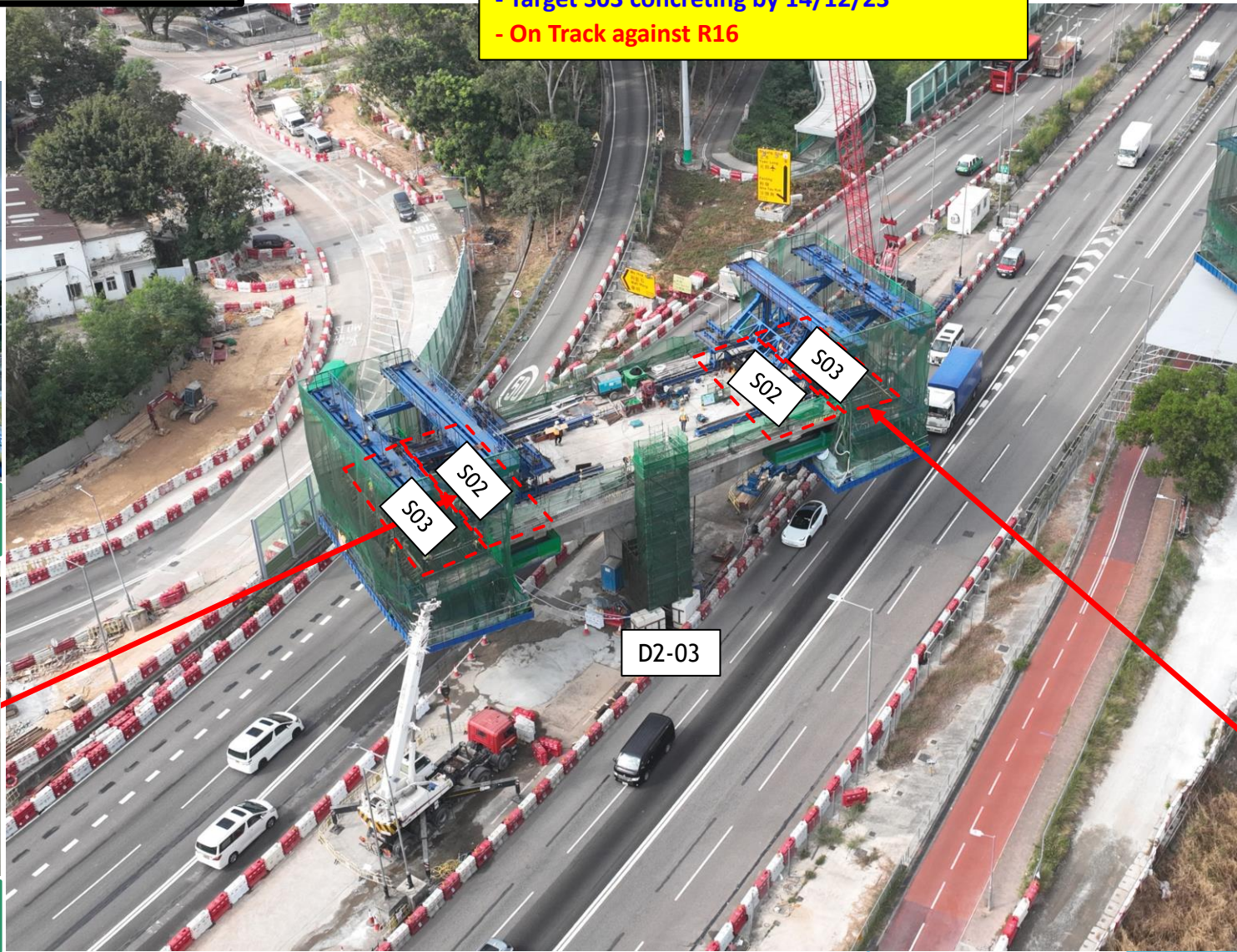


S02 segment (Up Chainage) completed on 28/11/23



2023年12月14日 20:31:42

S03 segment (Up Chainage) completed on 14/12/23



S02 segment (Down Chainage) completed on 28/11/23



S03 segment (Down Chainage) completed on 14/12/23



# 12 North Team

## Jockey Club Road

Jockey Club Road - northbound

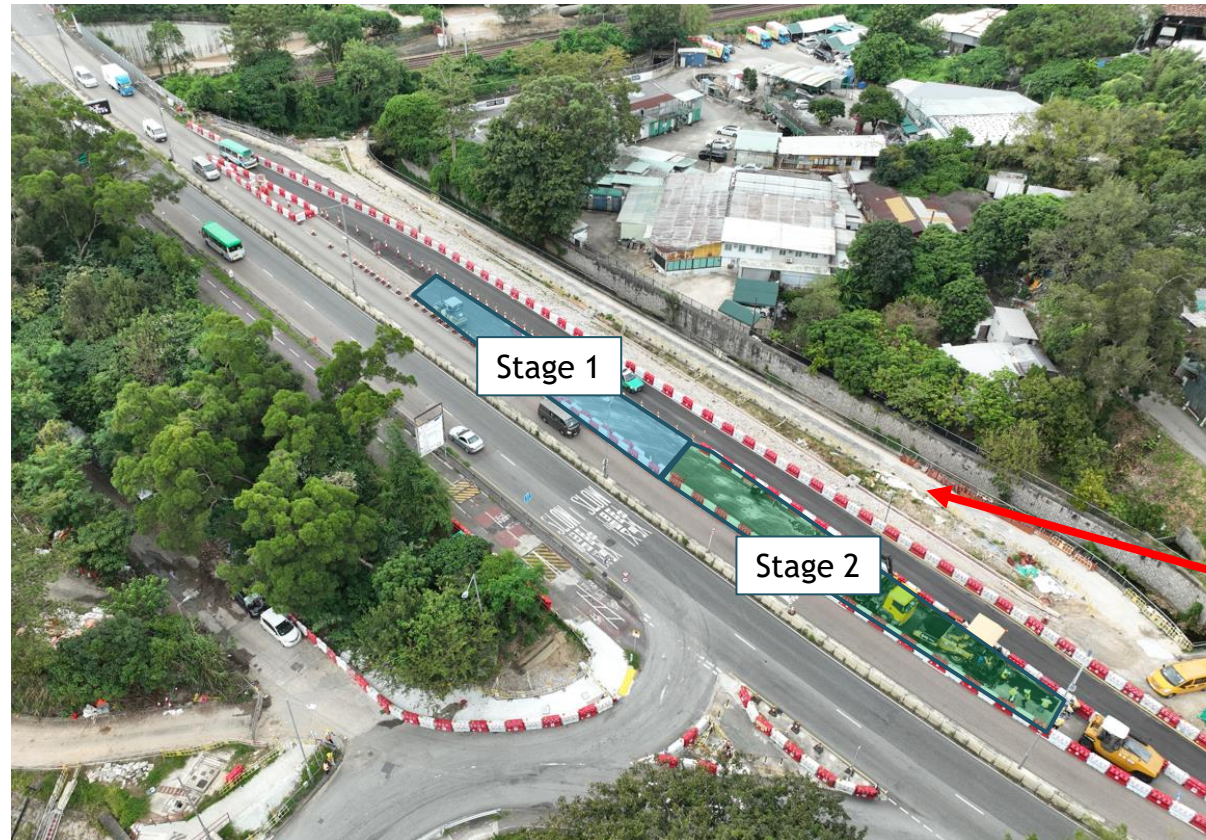
- Permanent Road works -Stage 2 completed on 14/11/23.
- Traffic diversion for new road opening to Tong Hang Village implemented on 24/11/23.
- ES: 06/03/24; EF: 19/03/24
- LS: 06/03/24 ; LF : 19/03/24
- **Ahead R16**
- Construction of DN 150 exposed pipe concrete footing in progress.
- Trench excavation for WSD FWM in progress.



Coring of bitumen pavement sample completed on 14/11/2023



TTA 241 ( traffic diversion) implemented on 24/11/2023



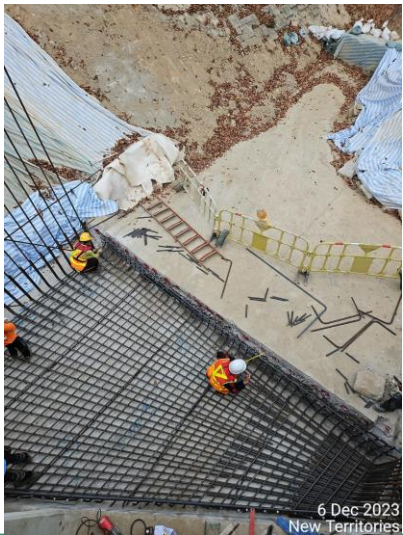
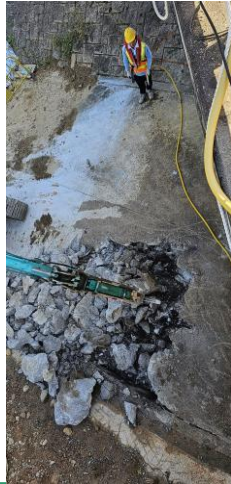
Excavation for WSD fresh watermain laying in progress.



# 12 North Team



Excavation for box culvert extension & breaking of base slab completed.

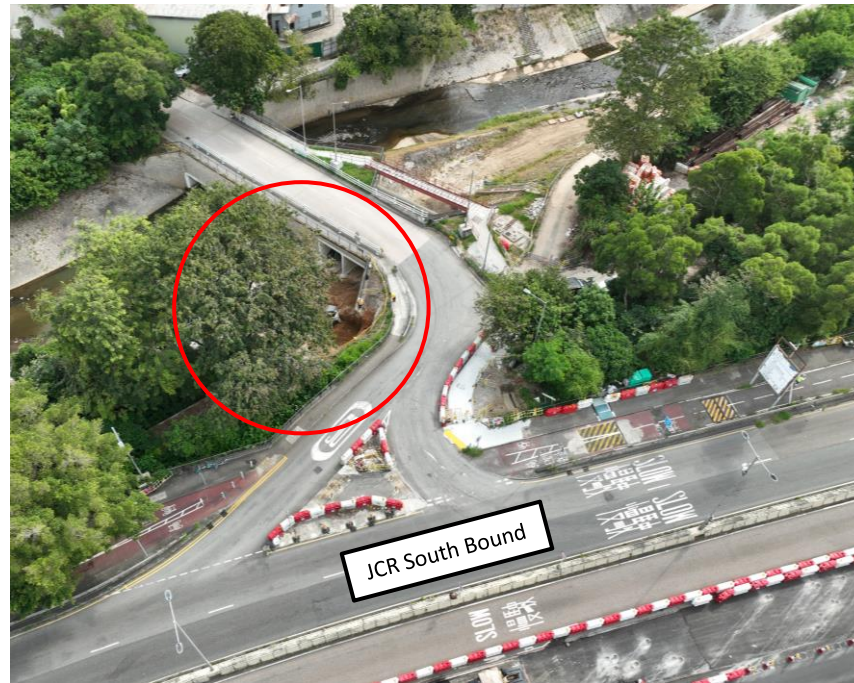


Rebar fixing for 1<sup>st</sup> pour of box culvert extension in progress (target to be casted on 11/12/23)

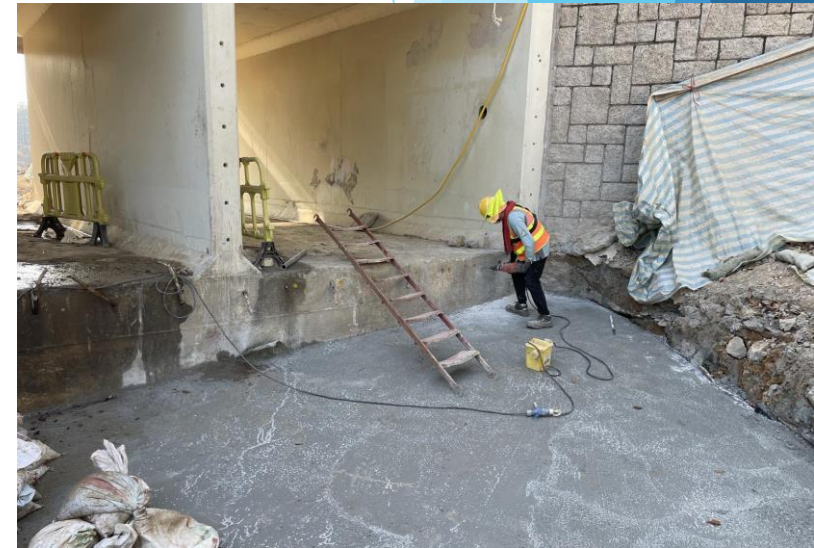
## Jockey Club Road

Jockey Club Road (THV J/O improvement)

- Construction works for box-culvert & RW:
- Excavation for box culvert extension completed.
- Casting of blinding layer for Box Culvert completed on 27/11/23.
- Drilling holes for dowel bar completed on 28/11/23. Rebar fixing in progress.
- ES: 5/9/23 EF:2/11/23
- LS: 13/9/23 LF: 10/11/23
- Slippage against R16



Casting of blinding layer for box culvert extension completed. (27/11/2023)



Drilling holes for dowel bar completed. (28/11/2023)



## **Construction Programme of ND/2019/07**

Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2023 Dec	Jan	2024 Feb	Mar	Apr
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works										
Project Commencement and Completion										
PCC1020	Completion Date	0.0	13-Jan-24	13-Jan-24*	0.0			◆ Completion Date		
Key Dates and Sectional Completion of the Works										
Contractual Key Dates										
KDS1000	KD1 - Completion of all works within Portion V of the Site necessary for the opening of partial Road L1	0.0	08-Dec-23*	08-Dec-23*	-77.0					
Planned Completed Key Dates										
KDS1005	Planned achievement of Key Date 1	0.0	17-Feb-24	17-Feb-24	-149.0				◆ Planned achievement of Key Date 1	
Contractual Sectional Completion of the Works										
KDS1200	Section 10- Completion of site formation and infrastructure works in Works Area E2	0.0		20-Feb-24*	0.0				◆ Section 10- Completion of site formation and infrastructure works in Works Area E2	
KDS1210	Section 11- Completion of site formation and infrastructure works in Works Area E3	0.0		21-Dec-23*	0.0		◆ Section 11- Completion of site formation and infrastructure works in Works Area E3			
Planned Sectional Completion of the Works										
KDS1240	Planned completion of the Section 11 of the Works	0.0	16-Feb-24	16-Feb-24	-57.0				◆ Planned completion of the Section 11 of the Works	
Preliminaries, Contractor's Design, Method Statement Submission and Approval										
General Submission										
PGS1260	Preparation and approval of TTA for Warer Main&Road Works along MSK Road/Wo Tai Street	90.0	15-Nov-23 A	15-Feb-24	-206.0					
Contractor's Design Submission and Approval										
Permanent Works Design										
PWD1040	Design for noise barrier panel	90.0	23-Nov-22 A	08-Dec-23	-79.0		■ Design for noise barrier panel			
PWD1045	Time risk allowance for Design for noise barrier panel	7.0	09-Dec-23	16-Dec-23	-79.0		■ Time risk allowance for Design for noise barrier panel			
Tendering and Procurement for Major Subcontractor										
Procurement for NB Post and Panel										
TDS1170-1	Place Order and Delivery for fabrication of NB steel posts	364.0	10-Aug-22 A	08-Apr-24	-58.0					
TDS1180-1	Fabrication and Delivery to site - NB63 steel post and panel for mock up (1st)	12.0	23-Dec-23	03-Jan-24	-145.0					
TDS1180-2	Fabrication and Delivery to site - NB63 post and panel (Bay18 - Bay21)	36.0	28-Jan-24	03-Mar-24	-98.0					
TDS1180-3	Fabrication and Delivery to site - NB62 post and panel (remaining)	24.0	04-Jan-24	27-Jan-24	-98.0					
TDS1180-4	Fabrication and Delivery to site - NB63 post and panel (Bay13 - Bay17)	36.0	04-Mar-24	08-Apr-24	-58.0					
Section 1- Site Formation and Infrastructure Works in Area A										
Site Formation (Portion I- Area A 11042m2)										
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2										
S1-SF1185	Removal of temporary works, haul road and temporary accesses (Access for HD contractor, after Road L1 - P	30.0	07-Feb-24	15-Mar-24	-15.0					
Site Formation (Portion II- Area A 21900m2)										
Site Formation Works in South Part of Portion II										
S1-SF1417	Site formation works part 3 (12577m3) and Removal of temporary works, haul road and temporary accesses	78.0	16-May-23 A	07-Feb-24	-14.0					
S1-SF1420	Construction of open channel (180m)	60.0	08-Feb-24	25-Apr-24	145.0					
Site Formation (Portion III- Area A 4900m2)										
S1-SF1546	Removal of existing feature 3SW-A/F85	15.0	08-Dec-23	27-Dec-23	195.0					
Site Formation (Portion IV- Area A 3800m2)										
S1-SF1870	Site formation works (2391m3) (after site formation in Area D)	30.0	08-Dec-23	15-Jan-24	183.0					
Slope Works										
S1-SW1010	Forming new slope feature FS06 and construction of slope drainage	42.0	16-Jan-24	07-Mar-24	183.0					
Box Culvert BC3 and Outfall 10										
Box Culvert BC3 (CH264 to CH282.799) and Outfall 10										
Revised Outfall										
S1-BC1340	Outfall - Reinstate over-cut portions of Outfall	24.0	27-Dec-23	24-Jan-24	196.0					
Bay 22 to 24										
S1-BC1105	Excavation and construction of the box culvert base slab Bay 22	10.0	20-Jan-24	31-Jan-24	-2.0					
S1-BC1110	Construction of the box culvert side wall and top slab Bay 22	30.0	01-Feb-24	09-Mar-24	-2.0					
S1-BC1130-1	Sheet piling, excavation, hanging of twin sewers and excavation to formation level	27.0	16-Oct-23 A	23-Dec-23	-2.0					
S1-BC1180	Laying of geotextile filter, grade 200 rockfill, polythene sheet	10.0	27-Dec-23	08-Jan-24	-2.0					
S1-BC1190	Concreting for the blinding layer	10.0	09-Jan-24	19-Jan-24	-2.0					
S1-BC1200-1	Construction of the base slab box culvert Bay 23 & Bay 24	20.0	01-Feb-24	27-Feb-24	8.0					
S1-BC1210-1	Construction of wall and top slab for box culvert Bay 23	30.0	11-Mar-24	18-Apr-24	-2.0					
Drainage, Sewerage, Waterworks and Road Works										
Along Ma Sik Road										
TTA - Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary										
S1-CS1240	Implement TTA	1.0	19-Feb-24	19-Feb-24	-170.0					
S1-CS1260	UU detection and trial pit	10.0	20-Feb-24	01-Mar-24	-170.0					
S1-CS1270	Utility works by others	21.0	02-Mar-24	26-Mar-24	-170.0					
S1-CS1293	Fresh water main works (10m) (In dry season)	21.0	02-Mar-24	26-Mar-24	-170.0					
S1-CS1295	Flushing water main works (10m) (In dry season)	21.0	02-Mar-24	26-Mar-24	-170.0					
Modification of Signalized Junction at Ma Sik Road and Wo Tai Street										
S1-CS2180	Construction of Footpath near Wing Fai Centre(Including draw pit)	21.0	08-Sep-23 A	16-Dec-23	-138.0					
S1-CS2190	Construction of Footpath near Belair Monte(Including draw pit)	21.0	18-Aug-23 A	14-Dec-23	-138.0					
S1-CS2220	Construction of Traffic Island at MSR (Eastern, Including draw pit)	14.0	07-Oct-23 A	27-Dec-23	-138.0					
S1-CS2230	Construction of Traffic Island at MSR (Western, Including draw pit)	14.0	10-Oct-23 A	08-Jan-24	-138.0					
Along Proposed Cycletrack and Footpath										
Works in Portion I										
Works in Portion I CT73 (Ch400 to Ch649)										
S1-CS1472	Irrigation system (CT73 Ch400 to Ch649 total 249m)	85.0	08-Dec-23	22-Mar-24	-42.0					
S1-CS1473	Fresh water main works (CT73 Ch400 to Ch649 total 249m)	85.0	04-Jan-23 A	12-Dec-23	-42.0					
S1-CS1474	Flushing water main works (CT73 Ch400 to Ch649 total 249m)	85.0	04-Jan-23 A	12-Dec-23	-42.0					
S1-CS1475	U-Channel along the Cycletrack(CT73 Ch400 to Ch649 total 249m)	85.0	08-Dec-23	22-Mar-24	-42.0					
S1-CS1480	Construction of cycle track and footpath (249m)	40.0	06-Mar-24	25-Apr-24	18.0					
Works in Portion I CT74										
S1-CS1493	Fresh water main works (CT74 Ch100 to Ch281 total 181m)	80.0	13-Dec-23	21-Mar-24	9.0					
Legend										
Actual Work										
Remaining Work										
Critical Remaining Work										
Milestone										
Three Month Rolling Programme (Data Date : 08-Dec-23)										
Page : 1 of 3										
Date										
Revision										
Checked										
Approved										
08-Dec-23										
RDWPD										
ST										
CLX										








Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2023 Dec	Jan	2024 Feb	Mar	Apr
S1-CS1495	Flushing water main works (CT74 Ch100 to Ch281 total 181m)	80.0	13-Dec-23	21-Mar-24	9.0					Flushing water main works (CT74 Ch100 to Ch281 total 181m)
Works in Portion I CT73 (Ch100 to Ch400)		29.0	07-Feb-24	14-Mar-24	15.0					
S1-CS1477	Drainage work (MNH_FL5.34 to MNH_FL5.31 232m) (Access for HD contractor, after Road L1 - P600 complet	29.0	07-Feb-24	14-Mar-24	15.0					Drainage work (MNH_FL5.34 to MNH_FL5.31 232m) (Access for HD contractor, after Road L1 - P600 complet
Works in Portion II CT71 (Ch100 to Ch369.376)		161.0	09-Jan-23 A	27-Jun-24	31.0					
S1-CS1520	Drainage work (MNH_FL5.29 to MNH_FL5.26 229m) After box culvert back filling Bay1 to Bay22	85.0	09-Jan-23 A	13-Jan-24	107.0					Drainage work (MNH_FL5.29 to MNH_FL5.26 229m) After box culvert back filling Bay1 to Bay22
S1-CS1530	Fresh water main works (269m)	85.0	10-Jul-23 A	27-Jun-24	31.0					
S1-CS1540	Flushing water main works (269m)	85.0	10-Jul-23 A	27-Jun-24	31.0					
Works in Portion III CT76 (Ch100 to Ch298.277)		115.0	13-Nov-23 A	26-Mar-24	6.0					
Sewerage		96.0	13-Nov-23 A	26-Mar-24	-3.0					
S1-CS1820-3	CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.19	48.0	13-Nov-23 A	29-Jan-24	-3.0					CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.19
S1-CS1820-4	CE149 - Sewerage DN600 - Removal of sheetpiles and backfilling at FMH_FL1.19	12.0	30-Jan-24	15-Feb-24	-2.0					CE149 - Sewerage DN600 - Removal of sheetpiles and backfilling at FMH_FL1.19
S1-CS1820-5	CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.19A	48.0	02-Dec-23 A	26-Mar-24	-3.0					CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.19A
Remaining Works (next to Portion V - approx 64m)		33.0	16-Feb-24	25-Mar-24	-2.0					
S1-CS1575-1	Drainage work (SMH_FL2005 to SMH_FL2008 Remaining 64m) (CE027 Original:1nos Manhole)	33.0	16-Feb-24	25-Mar-24	-2.0					Drainage work (SMH_FL2005 to SMH_FL2008 Remaining 64m) (CE027 Original:1nos Manhole)
Remaining Works (after KD1)		33.0	13-Nov-23 A	12-Mar-24	18.0					
S1-CS1576-1	Diversion the entry path to One Innovale	18.0	19-Feb-24	09-Mar-24	18.0					Diversion the entry path to One Innovale
S1-CS1576-2	Installation of sheet piles	14.0	13-Nov-23 A	12-Mar-24	18.0					Installation of sheet piles
Section 4- Site Formation and Infrastructure Works in Area D		70.0	08-Dec-23	05-Mar-24	528.0					
S4-SF1125	Construction of open channel (257m)	70.0	08-Dec-23	05-Mar-24	528.0					Construction of open channel (257m)
S4-SF1140	Erection of chain link fence (382m)	50.0	08-Dec-23	07-Feb-24	87.0					Erection of chain link fence (382m)
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		469.9	14-Nov-22 A	01-Jun-24	-119.0					
Road L1		210.0	23-Feb-23 A	05-Mar-24	-49.0					
Road L1 in Portion V (P600 CH100 to CH194)		84.0	11-Aug-23 A	17-Feb-24	-119.0					
S1-CS2250	Construction of controller concrete plinth	21.0	11-Aug-23 A	09-Dec-23	-170.0					Construction of controller concrete plinth
S1-CS2260	Construction of temporary E&M ducting at Road L1	10.0	11-Nov-23 A	14-Dec-23	-170.0					Construction of temporary E&M ducting at Road L1
S1-CS2262	Construction of Steel pole, mini draw pit and duct	10.0	27-Nov-23 A	15-Dec-23	-170.0					Construction of Steel pole, mini draw pit and duct
S1-CS2262a	Construction of mini draw pit and duct by HKT	10.0	27-Nov-23 A	15-Dec-23	-170.0					Construction of mini draw pit and duct by HKT
S1-CS2265	Inspection of duct and relevant works by EMSD/TDC	14.0	30-Nov-23 A	18-Dec-23	-170.0					Inspection of duct and relevant works by EMSD/TDC
S1-CS2270	Cable laying by EMSD	28.0	04-Dec-23 A	20-Jan-24	-170.0					Cable laying by EMSD
S1-CS2275	Road Commissioning&Traffic sign changeover	21.0	22-Jan-24	17-Feb-24	-170.0					Road Commissioning&Traffic sign changeover
S5-RD1360	Construction of irrigation system (184m)	21.0	08-Dec-23	04-Jan-24	-108.0					Construction of irrigation system (184m)
S5-RD1380	Utility service by others	24.0	12-Oct-23 A	13-Dec-23	-108.0					Utility service by others
S5-RD1390	Construction of planters	24.0	05-Jan-24	01-Feb-24	-108.0					Construction of planters
S5-RD1395	Construction of road pavement works	28.0	19-Dec-23	23-Jan-24	-170.0					Construction of road pavement works
S5-RD1400	Construction of cycle track and footpath	24.0	18-Jan-24	17-Feb-24	-170.0					Construction of cycle track and footpath
S5-RD1420	Street furniture, road marking and road lighting	14.0	15-Nov-23 A	06-Feb-24	-170.0					Street furniture, road marking and road lighting
S5-RD1440	Planned achievement of Key Date 1	0.0		17-Feb-24	-119.0					Planned achievement of Key Date 1
Road L1 in Portion IV (P600 CH194 to CH393, P700 CH100 to CH175)		210.0	23-Feb-23 A	05-Mar-24	-49.0					
S5-RD1185	Construction of irrigation system (489m)	70.0	08-Dec-23	05-Mar-24	-119.0					Construction of irrigation system (489m)
S5-RD1200	Fresh water main works (489m)	70.0	23-Feb-23 A	19-Dec-23	11.0					Fresh water main works (489m)
S5-RD1210	Flushing water main works (489m)	70.0	23-Feb-23 A	19-Dec-23	11.0					Flushing water main works (489m)
Road L2		318.0	13-Dec-22 A	01-Jun-24	-119.0					
S5-RD1500	Construction of drainage works (13nos manholes 320m)	80.0	13-Dec-22 A	08-Dec-23	-50.0					Construction of drainage works (13nos manholes 320m)
S5-RD1505	Construction of irrigation system (298m)	70.0	06-Mar-24	01-Jun-24	-119.0					Construction of irrigation system (298m)
S5-RD1535	Construction of planters	30.0	27-Jan-24	06-Mar-24	-49.0					Construction of planters
Noise Barrier NB62		439.9	14-Nov-22 A	25-Apr-24	-118.0					
S5-NB1060	Excavation and construction of base slabs and wall stems (Bay 1 - Bay 6)	70.0	14-Nov-22 A	27-Dec-23	-166.0					Excavation and construction of base slabs and wall stems (Bay 1 - Bay 6)
S5-NB1080	Installation of noise barrier steel posts	60.0	08-Feb-24	25-Apr-24	-118.0					Installation of noise barrier steel posts
S5-NB1080-1	Installation of noise barrier steel posts and panel for mock up	30.0	04-Jan-24	07-Feb-24	-118.0					Installation of noise barrier steel posts and panel for mock up
Noise Barrier NB63		247.0	10-May-23 A	08-May-24	-100.0					
Noise Barrier NB63 (Bay 18 to Bay 21)		153.0	09-Aug-23 A	11-Apr-24	-78.0					
S1-NB1275	Excavation and construction of base slab (Bay 18 - Bay 21)	42.0	09-Aug-23 A	08-Feb-24	-61.0					Excavation and construction of base slab (Bay 18 - Bay 21)
S1-NB1280	Construction of wall stem (Bay 18 - Bay 21)	30.0	04-Mar-24	11-Apr-24	-78.0					Construction of wall stem (Bay 18 - Bay 21)
Noise Barrier NB63 (Bay 13 to Bay 17)		107.0	08-Nov-23 A	18-Mar-24	-61.0					
S1-NB1200	Installation of sheet piles (Bay 13 - Bay 17)	50.0	08-Nov-23 A	09-Jan-24	-110.0					Installation of sheet piles (Bay 13 - Bay 17)
S1-NB1210	Excavation and installation of lateral support (Bay13 - Bay17)	50.0	13-Nov-23 A	07-Feb-24	-70.0					Excavation and installation of lateral support (Bay13 - Bay17)
S1-NB1220	Construction of base slab (Bay 13 - Bay 17)	30.0	09-Feb-24	18-Mar-24	-61.0					Construction of base slab (Bay 13 - Bay 17)
Noise Barrier NB63 (Bay 7 to Bay 12)		85.0	14-Dec-23	28-Mar-24	-70.0					
S1-NB1205	Installation of sheet piles (Bay 7 - Bay 12)	40.0	14-Dec-23	01-Feb-24	-110.0					Installation of sheet piles (Bay 7 - Bay 12)
S1-NB1215	Excavation and installation of lateral support (Bay 7 - Bay 12)	40.0	08-Feb-24	28-Mar-24	-70.0					Excavation and installation of lateral support (Bay 7 - Bay 12)
Noise Barrier NB63 (Bay 1 to Bay 6)		247.0	10-May-23 A	08-May-24	-135.0					
S1-NB1050	Installation of Mini Piles Bay 1 to Bay 6 (32 nos) (CSD) (after trees transplanted) (Original:36nos H-pile, 72days)	90.0	10-May-23 A	22-Feb-24	-135.0					Installation of Mini Piles Bay 1 to Bay 6 (32 nos) (CSD) (after trees transplanted) (Original:36nos H-pile, 72days)
S1-NB1100	Installation of sheet piles	60.0	23-Feb-24	08-May-24	-135.0					Installation of sheet piles
Section 6- Completion of Preservation And Protection Of Existing Trees		1146.0	31-Aug-20 A	03-Jan-25	-62.0					
S6-CS1000	Preservation and protection of trees	1146.0	31-Aug-20 A	03-Jan-25	-62.0					Preservation and protection of trees
Section 7- Completion of All Landscape Softworks		246.0	19-Feb-24	13-Dec-24	-70.0					
S7-CS1000	Landscape softwork concurrent with other civil works	246.0	19-Feb-24	13-Dec-24	-70.0					Landscape softwork concurrent with other civil works
Section 10- Site Formation and Infrastructure Works in Area E2		148.5	01-Sep-23 A	26-Mar-24	-30.0					
Footpath L1 in Portion I (P700 CH175 to CH245)		148.5	01-Sep-23 A	26-Mar-24	-30.0					
S5-RD1072	Utility service by others	39.0	01-Sep-23 A	21-Dec-23	-30.0					Utility service by others
S5-RD1100	Construction of footpath	30.5	20-Feb-24	26-Mar-24	-30.0					Construction of footpath
S5-RD1120	Installation of road lighting	45.0	22-Dec-23	19-Feb-24	-30.0					Installation of road lighting
Section 11- Site Formation and Infrastructure Works in Area E3		45.5	19-Dec-23	16-Feb-24	-43.0					
Junction of Road L1&L2		45.5	19-Dec-23	16-Feb-24	-43.0					
S1-NB1395	Construction of road pavement works	35.0	19-Dec-23	31-Jan-24	-43.0					Construction of road pavement works
S11-NB1120	Construction of street furniture, road marking	10.5	01-Feb-24	16-Feb-24	-43.0					Construction of street furniture, road marking

Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2023				2024			
						Dec				Jan			
S11-NB1130	Planned completion of the Section 11 of the Works	0.0		16-Feb-24	-43.0							◆ Planned completion of the Section 11 of the Works	



Portion	Legend
I	
II	
III	
IV	
V	

**PORTION II**

1. C&D waste disposal
2. Construction of box culvert
3. Filling works
4. Waterworks
5. Drainage works

**PORTION I**

1. C&D waste disposal
2. Drainage works
3. Road works
4. Waterworks

**PORTION IV**

1. Drainage works
2. Sewerage works
3. C&D waste disposal
4. Filling works
5. Construction of site haul road
6. Construction of noise barrier
7. Road works
8. Waterworks

**PORTION V**

1. C&D waste disposal
2. Construction of noise barrier
3. Construction of site haul road
4. Drainage works
5. Sewerage works
6. Road works

**PORTION III**

1. Drainage works
2. Sewerage works

**ND/2019/07**

**– FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1:  
SITE FORMATION AND INFRASTRUCTURE WORKS**

**Working Activities (Dec 2023 – Mar 2024)**

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**APPENDIX B**  
**ACTION AND LIMIT LEVELS**

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**Appendix B - Action and Limit Levels****Table B-1 Action and Limit Levels for 1-hour TSP**

Monitoring station	Action Level (ug/m <sup>3</sup> )	Limit Level (ug/m <sup>3</sup> )
FLN-DMS1	303	500
FLN-DMS3	301	
FLN-DMS5	279	
KTN-DMS4	297	

**Table B-2 Action and Limit Levels for 24-hour TSP**

Monitoring station	Action Level (ug/m <sup>3</sup> )	Limit Level (ug/m <sup>3</sup> )
FLN-DMS1	150	260
FLN-DMS3	165	
FLN-DMS5A	153	
KTN-DMS4	192	

**Table B-3 Action and Limit Levels for Construction Noise**

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

Noted:

If works are to be carried during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

(\*) reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

**Table B-4.1 Action and Limit Levels for Water Quality Monitoring<sup>(1)</sup>**

Parameters	Action Level	Limit Level
DO in mg/L (depth average) <sup>#+</sup>	5 percentile of baseline data.	4 mg/L or 1 percentile of baseline data.
SS in mg/L (depth averaged) <sup>*&amp;</sup>	95 percentile of baseline data or 120% of upstream control station.	20 mg/L or 99 percentile of baseline data or 130% of upstream control station.
Turbidity in NTU (depth averaged) <sup>*^</sup>	95 percentile of baseline data or 120% of upstream control station.	99 percentile of baseline data or 130% of upstream control station.
Unionized ammonia in mg/L (depth averaged) <sup>*~</sup>	95 percentile of baseline data or 120% of upstream control station.	0.021mg/L or 99 percentile of baseline data or 130% of upstream control station.

Nitrate nitrogen in mg/L (depth averaged)*^	95 percentile of baseline data or 120% of upstream control station.	99 percentile of baseline data or 130% of upstream control station.
Orthophosphate in mg/L (depth averaged)*^	95 percentile of baseline data or 120% of upstream control station.	99 percentile of baseline data or 130% of upstream control station.

Remarks:

# AL of DO is 5 percentile of baseline data or level at control station at same tide of the same day (whichever lower) and LL of DO is 4.0 mg/L or level at control station at same tide of the same day (whichever lower);

+ 1 percentile of baseline data were adopted for LL for DO as those levels were greater than 4 mg/L;

\* AL is 120% of control station's level at the same tide of the same day when depth average greater than 95 percentile of baseline data;

^ LL is 130% of control station's level at the same tide of the same day when depth average greater than 99 percentile of baseline data.

~ LL is 130% of control station's level at the same tide of the same day when depth average greater than 99 percentile of baseline data or 0.021mg/L.

& LL is 130% of control station's level at the same tide of the same day when depth average greater than 99 percentile of baseline data or 20mg/L.

**Table B-4.2 Summary of Baseline Water Quality Monitoring Results (KTN NDA)<sup>(1)</sup>**

Monitoring Parameter					
Location  Parameter	KTN-CS1				
	Max	Min	Average	5 Percentile	1 Percentile
DO in mg/L	7.79	6.28	6.82	6.32	6.28
	Max	Min	Average	95 Percentile	99 Percentile
Turbidity in NTU	72.4	4.59	10.88	62.2	72.2
Suspended Solid in mg/L	74	2	9	60	73
Unionized ammonia in mg/L	0.0005	0.0001	0.0003	0.0004	0.0005
Nitrate nitrogen in mg/L	0.52	0.09	0.27	0.50	0.52
Orthophosphate in mg/L	0.19	0.01	0.10	0.17	0.19

Monitoring Parameter					
Location  Parameter	KTN-IS1				
	Max	Min	Average	5 Percentile	1 Percentile
DO in mg/L	8.08	4.71	6.83	6.14	5.02
	Max	Min	Average	95 Percentile	99 Percentile
Turbidity in NTU	44.56	4.57	8.63	38.98	44.56



Suspended Solid in mg/L	35	2	6	31	35
Unionized ammonia in mg/L	0.0006	0.0001	0.0004	0.0005	0.0006
Nitrate nitrogen in mg/L	0.57	0.09	0.29	0.54	0.57
Orthophosphate in mg/L	0.14	0.03	0.09	0.13	0.14

Note:

(1) The Action and Limit Levels for Water Quality Monitoring and the Summary of Baseline Water Quality Monitoring Results are according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA).

**Table B-4.3 Action and Limit Levels for Additional Water Quality Monitoring**

Parameters	Action Level	Limit Level
<b>River Beas (SYR-IS1)</b>		
DO in mg/L (depth average) <sup>[1]</sup>	SYR-IS1: <u>6.1</u> <sup>[2]</sup>	SYR-IS1: <u>6.0</u> <sup>[2]</sup>
SS in mg/L (depth average) <sup>[1]</sup>	SYR-IS1: <u>75.6</u> or 120% of upstream control station, whichever is higher <sup>[3]</sup>	SYR-IS1: <u>83.1</u> or 130% of upstream control station, whichever is higher <sup>[3]</sup>
Turbidity in NTU (depth average) <sup>[1]</sup>	SYR-IS1: <u>48.2</u> or 120% of upstream control station, whichever is higher <sup>[3]</sup>	SYR-IS1: <u>50.9</u> or 130% of upstream control station, whichever is higher <sup>[3]</sup>
Arsenic in µg/L (depth average) <sup>[2]</sup>	SYR-IS1: <u>5.4</u> or 120% of upstream control station, whichever is higher <sup>[3]</sup>	SYR-IS1: 50 µg/L <sup>[4]</sup>
<b>River Indus and near Siu Hang San Tsuen Stream (NTR-IS1, SHST-IS2, MWR-IS3)</b>		
DO in mg/L (depth average) <sup>[1]</sup>	NTR-IS1: <u>5.8</u> <sup>[2]</sup> SHST-IS2: <u>7.0</u> <sup>[2]</sup> MWR-IS3: <u>8.6</u> <sup>[2]</sup>	NTR-IS1: <u>5.7</u> <sup>[2]</sup> SHST-IS2: <u>6.8</u> <sup>[2]</sup> MWR-IS3: <u>8.5</u> <sup>[2]</sup>
SS in mg/L (depth average) <sup>[1]</sup>	NTR-IS1: <u>8.9</u> SHST-IS2: <u>4.0</u> MWR-IS3: <u>14.0</u> or 120% of upstream control station, whichever is higher <sup>[3]</sup>	NTR-IS1: <u>9.0</u> SHST-IS2: <u>4.0</u> MWR-IS3: <u>14.4</u> or 130% of upstream control station, whichever is higher <sup>[3]</sup>
Turbidity in NTU (depth average) <sup>[1]</sup>	NTR-IS1: <u>6.0</u> SHST-IS2: <u>4.4</u> MWR-IS3: <u>10.1</u> or 120% of upstream control station, whichever is higher <sup>[3]</sup>	NTR-IS1: <u>6.1</u> SHST-IS2: <u>4.7</u> MWR-IS3: <u>11.1</u> or 130% of upstream control station, whichever is higher <sup>[3]</sup>

Remarks:

[1] "Depth-averaged" is calculated by taking the arithmetic mean of reading of all three depths.

[2] For DO, non-compliance occurs when monitoring results is lower than the limits.

[3] For turbidity, SS and arsenic, non-compliance occurs when monitoring results is larger than the limits.

[4] There is no local criterion for heavy metal. Limit Level of heavy metal is adopted from Category III Surface Water Quality Standards (GB3838-2002) (地表水環境質量標準), which applicable for Shenzhen River on mainland side.

**Table B-5 Action and Limit Levels for Ambient Arsenic Monitoring**

Parameter	Action Level	Limit Level
Ambient Arsenic Concentration	<b>9.36ng/m<sup>3</sup></b> - 80% of 11.7ng/m <sup>3</sup> – the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented)	<b>11.7ng/m<sup>3</sup></b> - the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented

**Table B-6 Action level in the event of LFG being detected**

Parameter	Monitoring Results	Actions
O <sub>2</sub>	<19% v/v	Increase underground ventilation to restore O <sub>2</sub> to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O <sub>2</sub> level to >19%
CH <sub>4</sub>	>10% LEL	Prohibit hot works, increase ventilation to restore CH <sub>4</sub> to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH <sub>4</sub> to <10% LEL
CO <sub>2</sub>	>0.5% v/v	Increase ventilation to restore C O <sub>2</sub> to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO <sub>2</sub> to <0.5%

**Table B-7 Vibration Limit for Construction Vibration Monitoring**

Type of Building	Guide Values of Maximum PPV* (mm/Sec)	
	Transient Vibration	Continuous Vibration
Vibration-sensitive / dilapidated buildings#	7.5	3.0
Declared monuments/ Historical structures	3.0	



**Table B-8.1 Action and Limit Levels for Avifauna Monitoring and General Site Inspection in the LVNP during Construction Phase – December**

Monitoring Parameter	Action Level	Limit Level
Mean abundance of bird	631	451
Mean abundance of <i>Ardeola bacchus</i>	11	8
General site inspection	Activity likely to cause unacceptable environmental disturbance or damage	Activity causing unacceptable environmental disturbance or damage

**Table B-8.2 Action and Limit Levels of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers – December**

Monitoring Parameter	Action Level	Limit Level
Mean abundance of birds*	24	17
Mean abundance of <i>Ardeola bacchus</i>	7	5
*Large waterbirds: <i>Ardea alba</i> , <i>Ardea cinerea</i> , <i>Ardea intermedia</i> , <i>Egretta eulophotes</i> , <i>Egretta garzetta</i> and <i>Phalacrocorax carbo</i>		

**Table B-8.3 Action and Limit Levels of Declines in the Seasonal Non-aquatic Fauna (Herpetofauna, Butterfly and Odonates) in Ecologically Sensitive Habitats – December**

Monitoring Parameter	Transect	Action Level	Limit Level
Monthly species richness of native species of herpetofauna	T1	3	2
	T3	NA	NA
	T4	NA	NA
	T5	2	1
	T6	2	1
Monthly species richness of butterflies	T1	4	3
	T3	NA	NA
	T4	NA	1
	T5	NA	1
	T6	3	2
Month species richness of native species of odonates	T1	3	2
	T3	3	2
	T4	NA	NA
	T5	3	2
	T6	2	1

**Table B-8.4 Action and Limit Levels of Declines in the Non-seasonal Non-aquatic Fauna (Mammals) in Ecologically Sensitive Habitats – December**

Monitoring Parameter	Transect	Action Level	Limit Level
Monthly species richness of native species of mammals	T1	NA	NA
	T3	NA	NA
	T4	NA	NA
	T5	NA	NA
	T6	NA	NA



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**APPENDIX C  
COPIES OF CALIBRATION  
CERTIFCATES**

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## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39318
Date of Issue:	2023-11-13
Date Received:	2023-11-11
Date Tested:	2023-11-11
Date Completed:	2023-11-13
Next Due Date:	2024-01-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23807
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-01

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.164
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

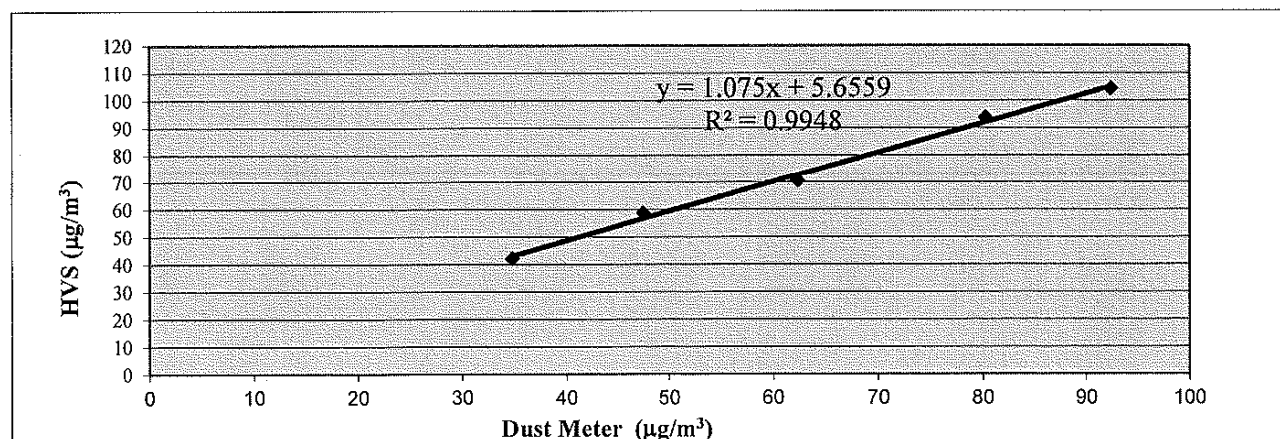
### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-01	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23807	2203
Calibration Date:	11-Nov-23	11-Nov-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	35	42
2	48	59
3	62	71
4	80	94
5	92	104
Average	63.5	73.9
By Linear Regression of Y on X Slope , mw = <u>1.0750</u> Intercept, bw = <u>5.6559</u> Correlation coefficient* = <u>0.9974</u>		

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	73.9
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	63.5
Measuring time, (min)	60
Set Correlation Factor , SCF SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] <u>1.164</u>	



QC Reviewer:

Lab Man 1/12/23

Signature:

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Date:

11/11/2023

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39318A
Date of Issue:	2023-11-13
Date Received:	2023-11-11
Date Tested:	2023-11-11
Date Completed:	2023-11-13
Next Due Date:	2024-01-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23808
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-02

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.154
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\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

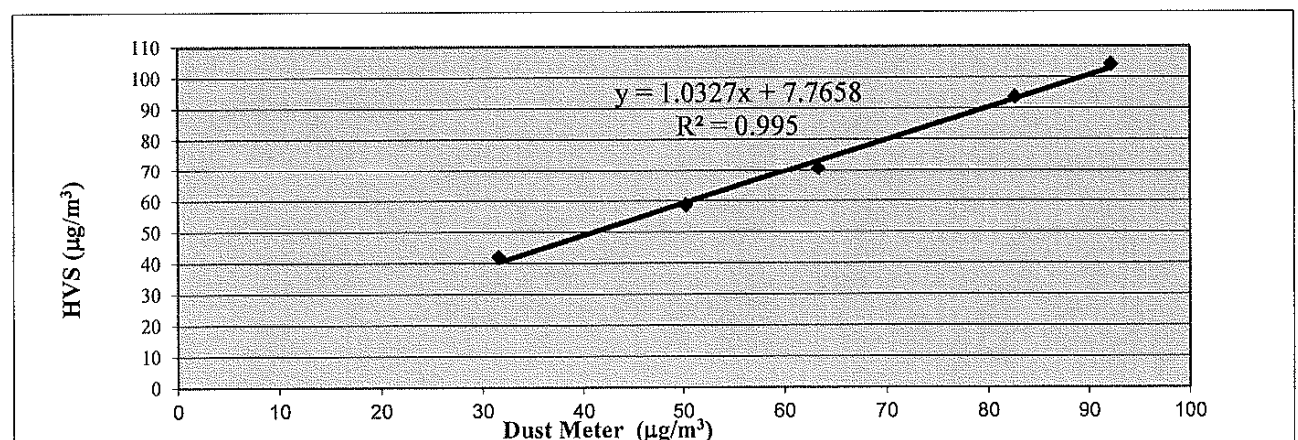
### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-02	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23808	2203
Calibration Date:	11-Nov-23	11-Nov-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	32	42
2	50	59
3	63	71
4	83	94
5	92	104
Average	64.0	73.9
By Linear Regression of Y on X Slope, mw = <u>1.0327</u> Intercept, bw = <u>7.7658</u> Correlation coefficient* = <u>0.9975</u>		

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	73.9
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	64.0
Measuring time, (min)	60
Set Correlation Factor, SCF SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] <u>1.154</u>	



QC Reviewer: UJE MBW UJE Signature: hej Date: 11/11/23

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39318B
Date of Issue:	2023-11-13
Date Received:	2023-11-11
Date Tested:	2023-11-11
Date Completed:	2023-11-13
Next Due Date:	2024-01-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23809
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-03

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.143
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-03	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23809	2203
Calibration Date:	11-Nov-23	11-Nov-23
Location:	Wellab Office (Calibration Room)	

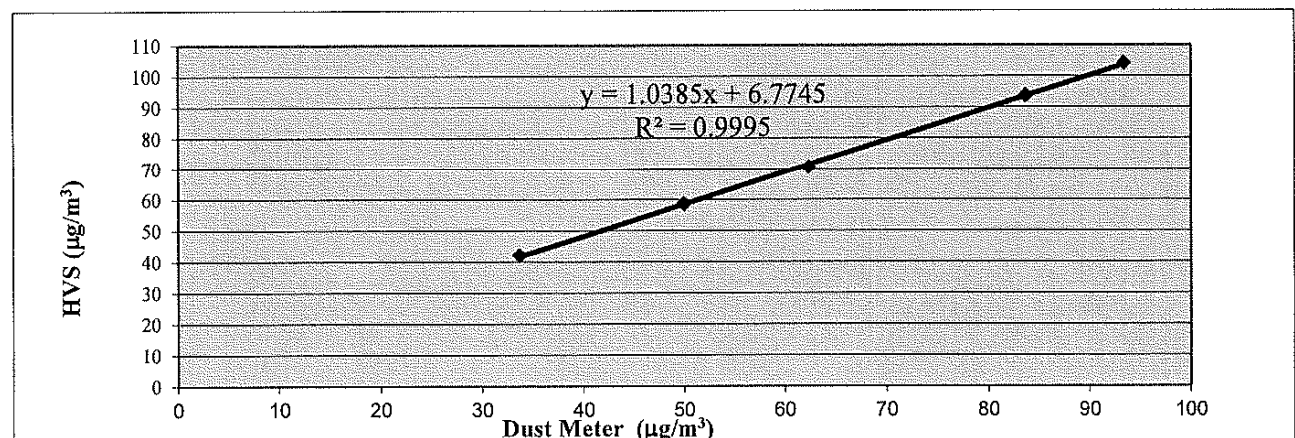
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	34	42
2	50	59
3	62	71
4	84	94
5	93	104
Average	64.6	73.9

By Linear Regression of Y on X  
 Slope,  $m_w =$  1.0385      Intercept,  $b_w =$  6.7745  
 Correlation coefficient\* = 0.9997

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	73.9
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	64.6
Measuring time, (min)	60

Set Correlation Factor, SCF  
 $\text{SCF} = [K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$  1.143



QC Reviewer:

LBB MAN H720

Signature:

hei

Date:

11/11/2023

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39318C
Date of Issue:	2023-11-13
Date Received:	2023-11-11
Date Tested:	2023-11-11
Date Completed:	2023-11-13
Next Due Date:	2024-01-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23810
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-04

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.179
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-04	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23810	2203
Calibration Date:	11-Nov-23	11-Nov-23
Location:	Wellab Office (Calibration Room)	

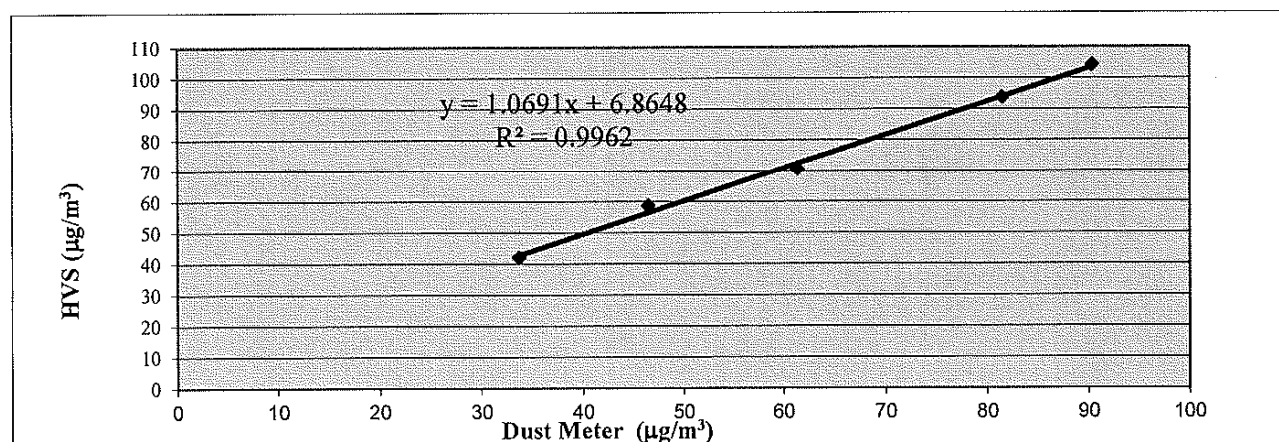
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	34	42
2	47	59
3	61	71
4	82	94
5	90	104
Average	62.7	73.9

By Linear Regression of Y on X  
 Slope, mw = 1.0691 Intercept, bw = 6.8648  
 Correlation coefficient\* = 0.9981

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	73.9
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	62.7
Measuring time, (min)	60

Set Correlation Factor, SCF  
 SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] 1.179



QC Reviewer:

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Signature:

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Date:

11/11/2023

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39078
Date of Issue:	2023-10-24
Date Received:	2023-10-21
Date Tested:	2023-10-21
Date Completed:	2023-10-24
Next Due Date:	2023-12-23

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24476
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-05

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.100
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-05	WA-12-09
Model No.:	AEROCET-831	TE-5170
Serial No.	X24476	2203
Calibration Date:	21-Oct-23	21-Oct-23
Location:	Wellab Office (Calibration Room)	

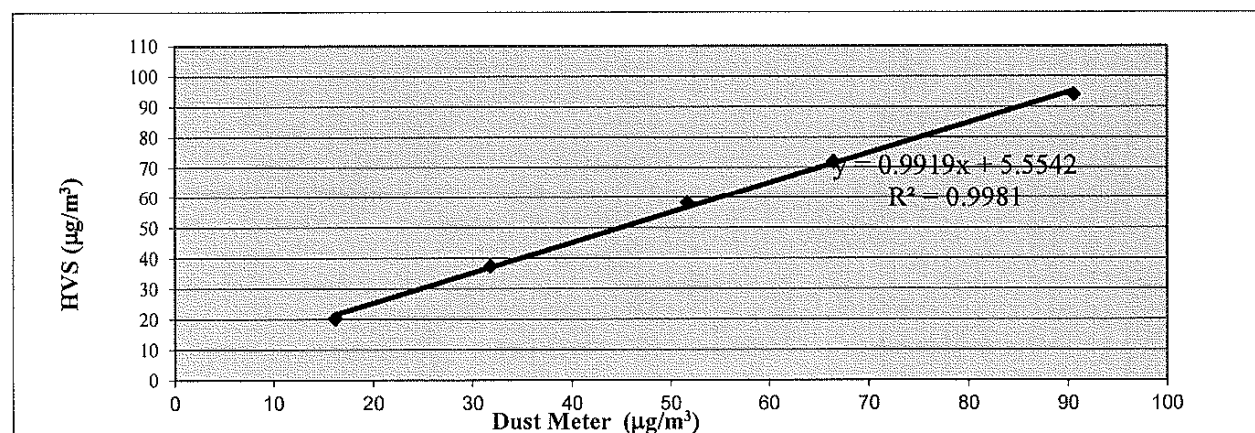
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	16	20
2	32	38
3	52	58
4	67	72
5	91	94
Average	51.4	56.5

By Linear Regression of Y on X  
Slope, mw = 0.9919 Intercept, bw = 5.5542  
Correlation coefficient\* = 0.9991

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	56.5
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	51.4
Measuring time, (min)	60

Set Correlation Factor, SCF  
SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] 1.100



QC Reviewer:

LEE MIN YEE

Signature:

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Date:

21/10/23

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39078A
Date of Issue:	2023-10-24
Date Received:	2023-10-21
Date Tested:	2023-10-21
Date Completed:	2023-10-24
Next Due Date:	2023-12-23

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24477
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-06

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.117
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

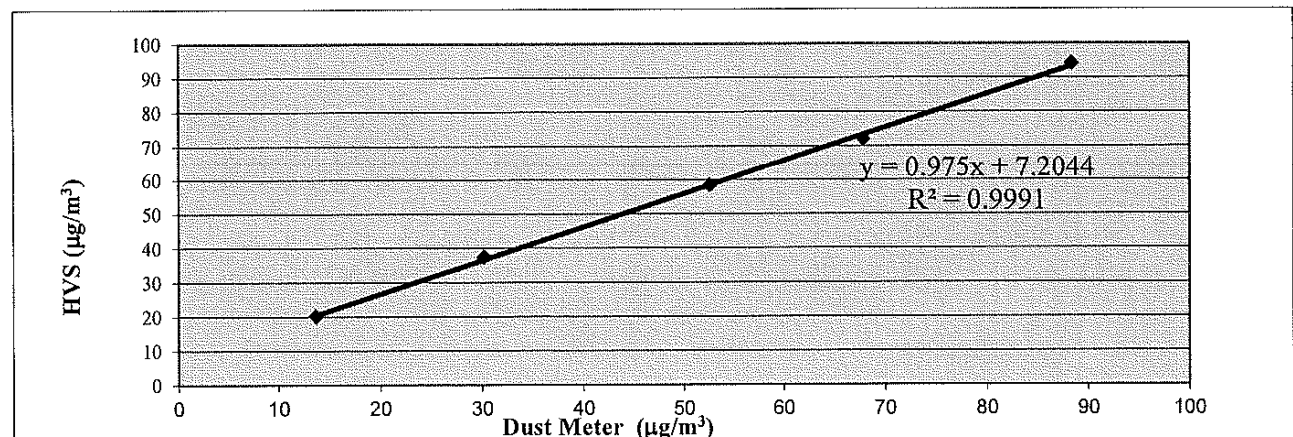
### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-06	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24477	2203
Calibration Date:	21-Oct-23	21-Oct-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	14	20
2	30	38
3	53	58
4	68	72
5	88	94
Average	50.6	56.5
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>0.9750</u> Intercept, bw = <u>7.2044</u></p> <p>Correlation coefficient* = <u>0.9995</u></p>		

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	56.5
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	50.6
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = [ K=High Volume Sampler / Dust Meter, (<math>\mu\text{g}/\text{m}^3</math>) ] <u>1.117</u></p>	



QC Reviewer: Lbz Mm Mm Signature: kei Date: 21/10/23

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39476A
Date of Issue:	2023-12-27
Date Received:	2023-12-23
Date Tested:	2023-12-23
Date Completed:	2023-12-27
Next Due Date:	2024-02-26

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24477
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-06

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.156
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



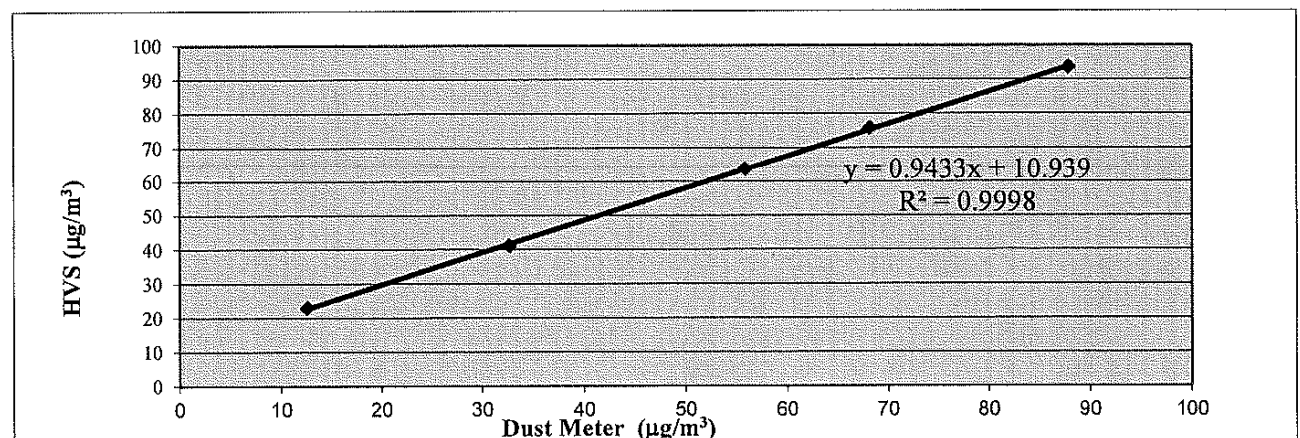
## TSP - Total Suspended Particulates (1 hr Dust Meter) Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-06	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24477	2203
Calibration Date:	23-Dec-23	23-Dec-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	13	23
2	33	41
3	56	64
4	68	76
5	88	94
Average	51.5	59.5
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>0.9433</u> Intercept, bw = <u>10.9385</u></p> <p>Correlation coefficient* = <u>0.9999</u></p>		

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	59.5
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	51.5
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = [ K=High Volume Sampler / Dust Meter, (<math>\mu\text{g}/\text{m}^3</math>) ] <u>1.156</u></p>	



QC Reviewer: LEE KUN HUI Signature: hei Date: 23/12/23

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39318D
Date of Issue:	2023-11-13
Date Received:	2023-11-11
Date Tested:	2023-11-11
Date Completed:	2023-11-13
Next Due Date:	2024-01-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24475
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-07

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.132
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

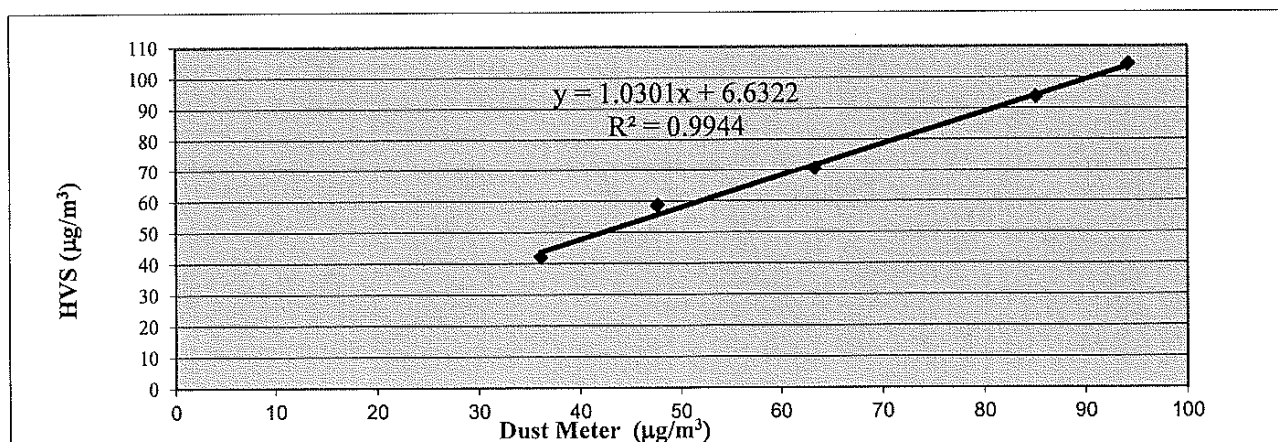
### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-07	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24475	2203
Calibration Date:	11-Nov-23	11-Nov-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	36	42
2	48	59
3	63	71
4	85	94
5	94	104
Average	65.3	73.9
By Linear Regression of Y on X Slope, mw = <u>1.0301</u> Intercept, bw = <u>6.6322</u> Correlation coefficient* = <u>0.9972</u>		

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	73.9
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	65.3
Measuring time, (min)	60
Set Correlation Factor, SCF SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] <u>1.132</u>	



QC Reviewer: LBB MAN 11/11/23 Signature: hei Date: 11/11/2023

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39078B
Date of Issue:	2023-10-24
Date Received:	2023-10-21
Date Tested:	2023-10-21
Date Completed:	2023-10-24
Next Due Date:	2023-12-23

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24479
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-08

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.123
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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**

General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	21-Oct-23	21-Oct-23
Location:	Wellab Office (Calibration Room)	

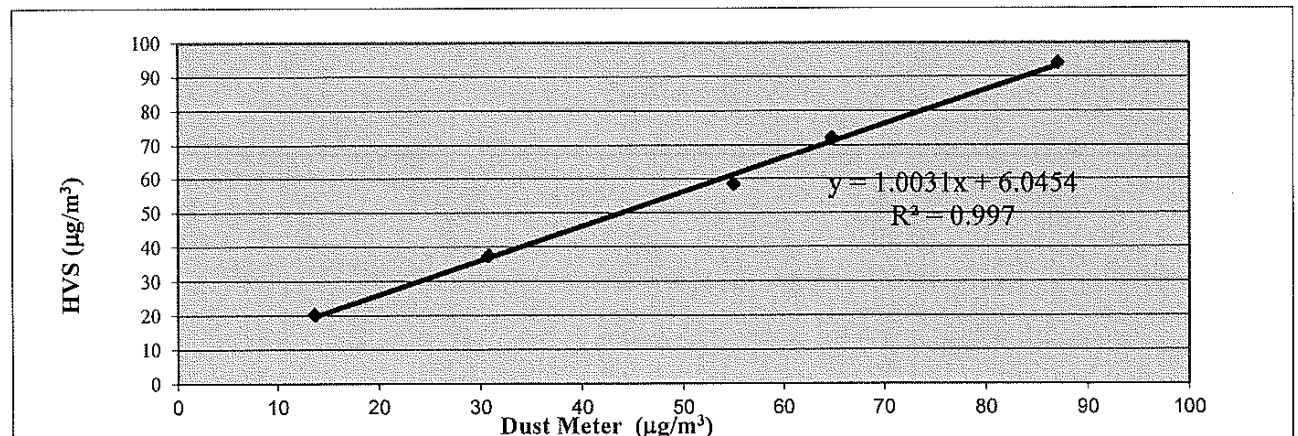
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	14	20
2	31	38
3	55	58
4	65	72
5	87	94
Average	50.3	56.5

By Linear Regression of Y on X  
 Slope, mw = 1.0031 Intercept, bw = 6.0454  
 Correlation coefficient\* = 0.9985

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	56.5
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	50.3
Measuring time, (min)	60

Set Correlation Factor, SCF  
 SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] 1.123



QC Reviewer: LEE MWS 1/12 Signature: hee Date: 21/10/23

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39078D
Date of Issue:	2023-10-24
Date Received:	2023-10-21
Date Tested:	2023-10-21
Date Completed:	2023-10-24
Next Due Date:	2023-12-23

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24478
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-10

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.139
-------------------------	-------

\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**

General Manager



## TSP - Total Suspended Particulates (1 hr Dust Meter)

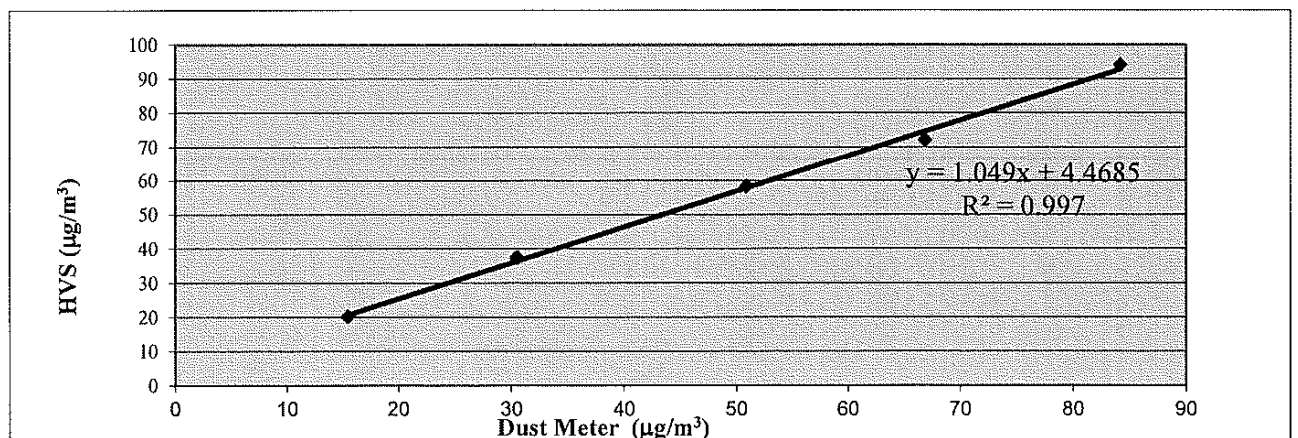
### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	21-Oct-23	21-Oct-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	16	20
2	31	38
3	51	58
4	67	72
5	84	94
Average	49.6	56.5
By Linear Regression of Y on X Slope, mw = <u>1.0490</u> Intercept, bw = <u>4.4685</u> Correlation coefficient* = <u>0.9985</u>		

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	56.5
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	49.6
Measuring time, (min)	60
Set Correlation Factor, SCF SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] <u>1.139</u>	



QC Reviewer: LEE KIM HAN Signature: his Date: 21/10/23

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	39476D
Date of Issue:	2023-12-27
Date Received:	2023-12-23
Date Tested:	2023-12-23
Date Completed:	2023-12-27
Next Due Date:	2024-02-26

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24478
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-10

**Test Conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.185
-------------------------	-------

\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**

*General Manager*



## TSP - Total Suspended Particulates (1 hr Dust Meter)

### Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	23-Dec-23	23-Dec-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Mass concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	17	23
2	36	41
3	55	64
4	63	76
5	81	94
Average	50.2	59.5

By Linear Regression of Y on X

Slope, mw = 1.1325

Intercept, bw = 2.6512

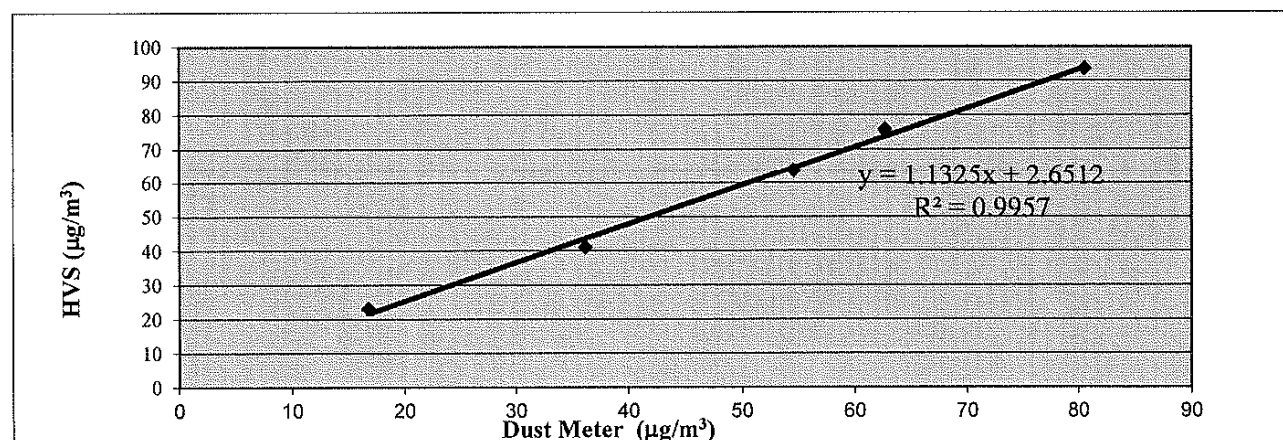
Correlation coefficient\* = 0.9979

\*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )	59.5
Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )	50.2
Measuring time, (min)	60

Set Correlation Factor, SCF

SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ] 1.185



QC Reviewer:

L22 MAN L22 Signature: he

Date:

23/12/23

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

File No. Cal/231021

Equipment No.: WA-12-09  
Model No. TE-5170  
Operator: HL

Serial No. 2203  
Cal. Date: 21-Oct-23

Ambient Condition			
Temperature, Ta (K)	293.6	Pressure, Pa (mmHg)	764.7

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	16-Jan-24	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.7	3.46	60.93	8.0	2.86
2	9.7	3.15	55.54	6.6	2.60
3	8.4	2.93	51.74	5.8	2.43
4	6.5	2.58	45.60	4.5	2.14
5	3.9	2.00	35.49	2.8	1.69

### By Linear Regression of Y on X

Slope, mw = 0.0458

Intercept, bw = 0.0619

Correlation coefficient\* = 0.9999

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  4.04

Remarks:

Conducted by: LEE MMY HBY  
Checked by: Ho Ka Chu

Signature: [Signature]  
Signature: [Signature]

Date: 21/10/2023  
Date: 21/10/23



# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

File No. Cal./231111

Equipment No.: WA-12-09  
Model No. TE-5170  
Operator: HL

Serial No. 2203  
Cal. Date: 11-Nov-23

Ambient Condition			
Temperature, Ta (K)	299.2	Pressure, Pa (mmHg)	765.4

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	16-Jan-24	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.3	3.37	59.36	7.6	2.76
2	10.2	3.20	56.43	6.5	2.55
3	8.6	2.94	51.88	5.8	2.41
4	6.4	2.53	44.86	4.4	2.10
5	4.0	2.00	35.62	2.8	1.68

### By Linear Regression of Y on X

Slope, mw = 0.0443

Intercept, bw : 0.1043

Correlation coefficient\* = 0.9976

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  4.02

Remarks:

Conducted by: Lee Man Hei  
Checked by: Ho Ka Chun

Signature: [Signature]  
Signature: [Signature]

Date: 11/11/2023  
Date: 11/11/2023

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

File No. Cal./231223

Equipment No.: WA-12-09  
Model No. TE-5170  
Operator: HL

Serial No. 2203  
Cal. Date: 23-Dec-23

Ambient Condition			
Temperature, Ta (K)	291.5	Pressure, Pa (mmHg)	776.3

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	16-Jan-24	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.2	3.57	62.89	7.9	2.87
2	10.0	3.23	57.00	6.6	2.63
3	8.8	3.03	53.52	5.7	2.44
4	6.9	2.68	47.48	4.6	2.19
5	4.2	2.09	37.21	3.0	1.77

By Linear Regression of Y on X

Slope, mw = 0.0431

Intercept, bw : 0.1573

Correlation coefficient\* = 0.9993

\*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 43 CFM	
From the Regression Equation, the "Y" value according to	
$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$	
Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>3.86</u>	

Remarks: \_\_\_\_\_

Conducted by: EE MMS HBR  
Checked by: Go Ica chu

Signature: [Signature]  
Signature: [Signature]

Date: 23/12/2023  
Date: 23/12/2023

## Certificate of Calibration

**Calibration Certification Information**

Cal. Date: January 16, 2023      Rootsmeter S/N: 438320      Ta: 293 °K  
 Operator: Jim Tisch      Pa: 749.0 mm Hg  
 Calibration Model #: TE-5025A      Calibrator S/N: 0993

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3860	3.2	2.00
2	3	4	1	0.9880	6.4	4.00
3	5	6	1	0.8810	8.0	5.00
4	7	8	1	0.8410	8.8	5.50
5	9	10	1	0.6950	12.8	8.00

**Data Tabulation**

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.7201	1.4159	0.9957	0.7184	0.8845
0.9938	1.0059	2.0024	0.9915	1.0035	1.2509
0.9917	1.1257	2.2388	0.9893	1.1230	1.3985
0.9906	1.1779	2.3480	0.9883	1.1751	1.4668
0.9853	1.4177	2.8318	0.9829	1.4143	1.7690
<b>QSTD</b>	m=	2.02881	<b>QA</b>	m=	1.27041
	b=	-0.04292		b=	-0.02681
	r=	0.99998		r=	0.99998

**Calculations**

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
<b>For subsequent flow rate calculations:</b>			
Qstd=	$1/m \left( \left( \sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left( \left( \sqrt{\Delta H \left( \frac{Ta}{Pa} \right)} \right) - b \right)$

**Standard Conditions**

Tstd:	298.15 °K
Pstd:	760 mm Hg
<b>Key</b>	
ΔH:	calibrator manometer reading (in H2O)
ΔP:	rootsmeter manometer reading (mm Hg)
Ta:	actual absolute temperature (°K)
Pa:	actual barometric pressure (mm Hg)
b:	intercept
m:	slope

**RECALIBRATION**

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



# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

Station FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark  
Date: 30-Nov-23  
Model No. TE-5170  
Equipment No.: WA-12-20

File No. WMA20002/20/0022  
Next Due Date: 29-Jan-24  
Operator: HL  
Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	297.6	Pressure, Pa (mmHg)	765.4

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	16-Jan-24	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	14.0	3.76	66.16	10.0	3.18
2	11.9	3.46	61.06	8.5	2.93
3	9.6	3.11	54.92	6.9	2.64
4	6.3	2.52	44.63	4.3	2.08
5	3.7	1.93	34.38	2.8	1.68

By Linear Regression of Y on X

Slope, mw = 0.0478

Intercept, bw : 0.0026

Correlation coefficient\* = 0.9986

\*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 43 CFM	
From the Regression Equation, the "Y" value according to	
$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$	
Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>4.21</u>	

Remarks:

Conducted by: Liz Mon Lpr Signature: \_\_\_\_\_

Date: 30/11/2023

Checked by: Chica da Signature: \_\_\_\_\_

Date: 30/11/2023

## High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Station FLN-DMS3 - House near Tong Hang  
Date: 30-Nov-23  
Model No. TE-5170  
Equipment No.: WA-12-17

File No. WMA20002/17/0022  
Next Due Date: 29-Jan-24  
Operator: HL  
Serial No. 3218

Ambient Condition			
Temperature, Ta (K)	297.5	Pressure, Pa (mmHg)	765.5

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	16-Jan-24	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	14.8	3.86	68.02	9.9	3.16
2	11.2	3.36	59.27	7.3	2.71
3	8.9	3.00	52.92	6.3	2.52
4	6.4	2.54	44.99	4.2	2.06
5	3.5	1.88	33.46	2.4	1.56

By Linear Regression of Y on X

Slope, mw = 0.0464

Intercept, bw : 0.0013

Correlation coefficient\* = 0.9979

\*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 43 CFM	
From the Regression Equation, the "Y" value according to	
$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$	
Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>3.95</u>	

Remarks: \_\_\_\_\_

Conducted by: Let Man Hui Signature: \_\_\_\_\_

Date: 30/11/2023

Checked by: Ua Ca Chu Signature: \_\_\_\_\_

Date: 30/11/2023

# RSP - Respirable Suspended Particulates Sampler (PM 10) Field Calibration Report

Station KTN-DMS4A - Temporary Structure at Pak Shek Au  
Date: 3-Nov-23  
Model No. TE-6070X  
Equipment No.: WA-11-03

File No. WMA20002/03/0021  
Next Due Date: 2-Jan-24  
Operator: HL  
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	301.1	Pressure, Pa (mmHg)	764.5

Orifice Transfer Standard Information					
Serial No.:	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	Next Calibration Date:	16-Jan-24		

Calibration of RSP Sampler							
Calibration Point	ORIFICE					HVS	
	$\Delta H$ (orifice), in. of water	Del Hc <sup>(1)</sup>	Qstd <sup>(2)</sup> (CFM)	Qa <sup>(3)</sup> (CFM) X-axis	Qa <sup>(3)</sup> (m <sup>3</sup> /min) X-axis	$\Delta W$ (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ Y-axis
1	11.5	11.45	59.65	59.92	1.70	8.8	1.95
2	9.4	9.36	54.00	54.24	1.54	6.9	1.73
3	6.9	6.87	46.38	46.58	1.32	5.2	1.50
4	5.4	5.38	41.11	41.30	1.17	4.4	1.38
5	2.2	2.19	26.51	26.63	0.75	1.9	0.91

By Linear Regression of Y on X

Slope, mw = 0.0307 Intercept, bw = 0.0907  
Correlation coefficient\* = 0.9983

(1) DEL Hc =  $\Delta H \times (Pa/760 \times 298/Ta)$

(2) Qstd =  $\{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\}/mc$  (m<sup>3</sup>/min)

(3) Qa = Qstd x (Ta / Pa) x (760 / 298) (m<sup>3</sup>/min)

\*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
Set Point Flow Rate., SFR	
SFR = $1.13 \times (760/Pa) \times (Ta/298) =$	<u>40.11</u>
Sampler Well - Type Manometer Set Point, SSP	
SSP = $[(mw \times SFR + bw)^2 \times Pa] / (Ta + 30) =$	<u>4.03</u>

Remarks:

Conducted by: LEE MAN YAN  
Checked by: HOLCA CHAN

Signature: [Signature]  
Signature: [Signature]

Date: 3/11/2023  
Date: 3/11/2023



## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	37893B
Date of Issue:	2023-03-06
Date Received:	2023-03-03
Date Tested:	2023-03-03
Date Completed:	2023-03-06
Next Due Date:	2024-03-05

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580005
Equipment No.	: WN-01-03

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	37893C
Date of Issue:	2023-03-06
Date Received:	2023-03-03
Date Tested:	2023-03-03
Date Completed:	2023-03-06
Next Due Date:	2024-03-05

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580006
Equipment No.	: WN-01-04

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	37893E
Date of Issue:	2023-03-06
Date Received:	2023-03-03
Date Tested:	2023-03-03
Date Completed:	2023-03-06
Next Due Date:	2024-03-05

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580008
Equipment No.	: WN-01-06

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	37894
Date of Issue:	2023-03-13
Date Received:	2023-03-10
Date Tested:	2023-03-10
Date Completed:	2023-03-13
Next Due Date:	2024-03-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580011
Equipment No.	: WN-01-08

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.: 37894A  
Date of Issue: 2023-03-13  
Date Received: 2023-03-10  
Date Tested: 2023-03-10  
Date Completed: 2023-03-13  
Next Due Date: 2024-03-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description : Sound Level Meter  
Manufacturer : BSWA  
Model No. : BSWA 308  
Serial No. : 580013  
Equipment No. : WN-01-09

**Test conditions:**

Room Temperature : 17-22 degree Celsius  
Relative Humidity : 40-70%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	37894B
Date of Issue:	2023-03-13
Date Received:	2023-03-10
Date Tested:	2023-03-10
Date Completed:	2023-03-13
Next Due Date:	2024-03-12

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580017
Equipment No.	: WN-01-10

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	38981
Date of Issue:	2023-10-03
Date Received:	2023-09-29
Date Tested:	2023-09-29
Date Completed:	2023-10-03
Next Due Date:	2024-10-02

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24803
Equipment No.	: N-09-03

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

**TEST REPORT**

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1808, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.: 38750A  
Date of Issue: 2023-08-21  
Date Received: 2023-08-18  
Date Tested: 2023-08-18  
Date Completed: 2023-08-21  
Next Due Date: 2024-08-20

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

**Certificate of Calibration****Item for calibration:**

Description : Acoustical Calibrator  
Manufacturer : SVANTEK  
Model No. : SV30A  
Serial No. : 24791  
Equipment No. : N-09-04

**Test conditions:**

Room Temperature : 17-22 degree Celsius  
Relative Humidity : 40-70%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited  
(EM&A Department)  
Room 1801, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	38981A
Date of Issue:	2023-10-03
Date Received:	2023-09-29
Date Tested:	2023-09-29
Date Completed:	2023-10-03
Next Due Date:	2024-10-02

Page: 1 of 1

**ATTN:** Ms. Meiling Tang

### Certificate of Calibration

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24780
Equipment No.	: N-09-05

**Test conditions:**

Room Temperature	: 17-22 degree Celsius
Relative Humidity	: 40-70%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Test Report No.:	39225A
Date of Issue:	2023-10-20
Date Received:	2023-10-19
Date Tested:	2023-10-19 to 2023-10-20
Date Completed:	2023-10-20

**ATTN:** Miss Mei Ling Tang

Page: 1 of 2

### Certificate of Calibration

**Item for calibration:**

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-83	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	17A104735
- EXO Optical DO Sensor, Ti	599100-01	17B102220
- EXO conductivity/Temperature Sensor, Ti	599870	17B100808
- EXO Turbidity Sensor, Ti	599101-01	18C101823
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103644

**Test conditions:**

Room Temperature : 17-22 degree Celsius  
Relative Humidity : 40-70%

**Test Specifications:**

Performance checking for Conductivity, Temperature, pH, Dissolved oxygen (D.O.)  
and Turbidity

**Methodology:**

According to manufacturer instruction manual, APHA 20e 4500-O C

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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

Test Report No.:	39225A
Date of Issue:	2023-10-20
Date Received:	2023-10-19
Date Tested:	2023-10-19 to 2023-10-20
Date Completed:	2023-10-20

Page: 2 of 2

### Certificate of Calibration

#### Results:

#### Conductivity performance checking

	Instrument Readings ( $\mu\text{S}/\text{cm}$ )	Acceptance Criteria	Comment
KCl stock solution (12890 $\mu\text{S}/\text{cm}$ )	13100	12246-13534	Pass

#### Temperature performance checking

Reference thermometer- E431 Readings ( $^{\circ}\text{C}$ )	Instrument Readings ( $^{\circ}\text{C}$ )	Correction ( $^{\circ}\text{C}$ )	Comment
20.0	20.001	-0.001	N/A

#### pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	4.02	$4.00 \pm 0.10$	Pass
pH QC buffer 6.86	6.87	$6.86 \pm 0.10$	Pass
pH QC buffer 9.18	9.23	$9.18 \pm 0.10$	Pass

#### D.O. performance checking

	Instrument Readings (mg/L)	Acceptance Criteria	Comment
Zero DO solution	0.08	$<0.1\text{mg/L}$	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
7.96	8.13	Difference between Titration value and instrument reading $<0.2\text{mg/L}$	Pass

#### Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.28	9.0-11.0	Pass
50 NTU	50.97	45.0-55.0	Pass
100 NTU	102.8	90.0-110.0	Pass

#### Depth performance checking

Water Depth	Instrument Readings (m)	Acceptance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass

\*\*\*\*\*END OF REPORT\*\*\*\*\*

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Test Report No.:	38985D
Date of Issue:	2023-09-22
Date Received:	2023-09-21
Date Tested:	2023-09-21 to 2023-09-22
Date Completed:	2023-09-22

**ATTN:** Miss Mei Ling Tang

Page: 1 of 2

### Certificate of Calibration

**Item for calibration:**

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-129	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	17B101455
- EXO Optical DO Sensor, Ti	599100-01	17M101337
- EXO conductivity/Temperature Sensor, Ti	599870	17B100784
- EXO Turbidity Sensor, Ti	599101-01	16J101112
- EXO pH Sensor Assembly, Guarded, Ti	599701	16J100565

**Test conditions:**

Room Temperature : 17-22 degree Celsius  
Relative Humidity : 40-70%

**Test Specifications:**

Performance checking for Conductivity, Temperature, pH, Dissolved oxygen (D.O.)  
and Turbidity

**Methodology:**

According to manufacturer instruction manual, APHA 20e 4500-O C

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*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

Test Report No.:	38985D
Date of Issue:	2023-09-22
Date Received:	2023-09-21
Date Tested:	2023-09-21 to 2023-09-22
Date Completed:	2023-09-22
Page:	2 of 2

### Certificate of Calibration

#### Results:

#### Conductivity performance checking

	Instrument Readings ( $\mu\text{S}/\text{cm}$ )	Acceptance Criteria	Comment
KCl stock solution (12890 $\mu\text{S}/\text{cm}$ )	12900	12246-13534	Pass

#### Temperature performance checking

Reference thermometer- E431 Readings ( $^{\circ}\text{C}$ )	Instrument Readings ( $^{\circ}\text{C}$ )	Correction ( $^{\circ}\text{C}$ )	Comment
20.0	19.999	+0.001	N/A

#### pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	4.01	$4.00 \pm 0.10$	Pass
pH QC buffer 6.86	6.87	$6.86 \pm 0.10$	Pass
pH QC buffer 9.18	9.16	$9.18 \pm 0.10$	Pass

#### D.O. performance checking

	Instrument Readings (mg/L)	Acceptance Criteria	Comment
Zero DO solution	0.08	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
8.24	8.13	Difference between Titration value and instrument reading <0.2mg/L	Pass

#### Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.03	9.0-11.0	Pass
50 NTU	50.41	45.0-55.0	Pass
100 NTU	101.2	90.0-110.0	Pass

#### Depth performance checking

Water Depth	Instrument Readings (m)	Acceptance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass

\*\*\*\*\*END OF REPORT\*\*\*\*\*

# CALIBRATION CERTIFICATE

**Product Name:** Portable Biogas Analyzer

**Model:** IRCD4 **Serial:** M230814007

**Ambient Temperature:** 25℃ **Ambient Humidity:** 45%

**Atmospheric Pressure:** 1018hpa **Calibration Date:** 08.24.2023

**Recommended calibration period:** CH<sub>4</sub>, CO<sub>2</sub>: 6-12 months; H<sub>2</sub>S, O<sub>2</sub>: 3-6 months

**Calibration result:**

Notice: Uncertainty of standard gases CH<sub>4</sub>:±2%, CO<sub>2</sub>:±2%, H<sub>2</sub>S:±2%, O<sub>2</sub>:±1%

Content	Standard gas	Testing result	Qualification “√” or “×”	Standards for each gas
CH <sub>4</sub> (%vol)	50	49	√	(1-100)%vol: ±0.5%vol of displayed value
	70	69	√	
	100	100	√	
CO <sub>2</sub> (%vol)	30	29	√	(0-100)%vol: ±5%vol of standard gas
	50	49	√	
	100	100	√	
O <sub>2</sub> (%vol)	5.0	5.1	√	0.0-5.0:±0.5%vol 5.0-30.0:±0.9%vol
	15.0	15.1	√	
	25.0	24.9	√	
H <sub>2</sub> S (ppm)	50	50	√	0-49:±3ppm 50-100:±10% (0-2000)ppm:±5FS
	80	81	√	
	199	199	√	

**Calibration carried out by:** Zhang Lu **Result reviewed by:** He Yang

**Note:**

1. The device should be calibrated immediately once it is repaired well
2. During using, if any doubts regarding technical parameter are aroused, please calibration it again.

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**APPENDIX D  
ENVIRONMENTAL MONITORING  
SCHEDULES**

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Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  
Impact Air Quality and Noise Monitoring Schedule (December 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Dec	2-Dec
3-Dec	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec
		<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> <u>KTN-DMS4(B), FLN-DMS5A</u> <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			
10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
	<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> <u>KTN-DMS4(B), FLN-DMS5A</u> <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> <u>KTN-DMS4(B), FLN-DMS5A</u> <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	
17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec
	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> <u>KTN-DMS4(B), FLN-DMS5A</u> <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3	
24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec
			<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> <u>KTN-DMS4(B), FLN-DMS5A</u> <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2		
31-Dec						

Remarks:

\*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013/A EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>1hr TSP and 24hr TSP</u> KTN-DMS4(B) - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013/A EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>24hr RSP (Arsenic)</u> KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A <sup>(1)</sup>	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A <sup>(2)</sup>	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013 <sup>(3)</sup>	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013/A	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A <sup>(4)</sup>	ND/2019/03	<u>1hr TSP and 24hr TSP</u> FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A <sup>(5)</sup>	ND/2019/05	<u>1hr TSP and 24hr TSP</u> FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A <sup>(6)</sup>	ND/2019/03	<u>1hr TSP</u> FLN-DMS5 - Noble Hill	--
	ND/2019/04	<u>24hr TSP</u> FLN-DMS5A - Good View New Village	--
EP-473/2013/A <sup>(7)</sup>	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A <sup>(8)</sup>	ND/2019/04	--	CP-FLN-NMS1 - Belair Monte
	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	
Remarks: 1. Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 3. Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02 4. Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04. 8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.			

**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Impact Water Quality Monitoring Schedule (December 2023)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Dec	2-Dec
					<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream	
3-Dec	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec
	<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream	
10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
	<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream	
17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec
	<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream	
24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec
			<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream		<b><u>Water Quality Monitoring</u></b> River Beas, River Indus and near Siu Hang San Tsuen Stream	
31-Dec						

**Water Quality Monitoring Stations**

River Beas: SYR-CS1 - Upstream of river, SYR-IS1 - Downstream of river

River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream,

MWR-IS3 - Water sensitive receiver at near Ma Wat River



Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	<b><u>River Beas</u></b> SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	<b><u>River Indus and near Siu Hang San Tsuen Stream</u></b> NTR-CS1 - Upstream of river NTR-IS1 - Downstream of river SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream MWR-IS3 - Water sensitive receiver at near Ma Wat River

**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Impact Ecological Monitoring Schedule (December 2023)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Dec	2-Dec
<b>3-Dec</b>	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5</u></b> High tide: Start time: 15:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution <b><u>T1, T6</u></b>		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 16:00 Low tide: Start time: 09:00		
<b>10-Dec</b>	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5#</u></b> High tide: Start time: 09:00 Low tide: Start time: 13:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution <b><u>T3, T4, T5</u></b>			Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 13:00 Low tide: Start time: 09:00	
<b>17-Dec</b>	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5#</u></b> High tide: Start time: 15:00 Low tide: Start time: 09:00			Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 16:00 Low tide: Start time: 09:00		
<b>24-Dec</b>	<b>25-Dec</b>	<b>26-Dec</b>	27-Dec	28-Dec	29-Dec	30-Dec
			Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5</u></b> High tide: Start time: 10:30 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 12:00 Low tide: Start time: 15:00		
<b>31-Dec</b>						

#Night-time avifauna monitoring in Long Valley

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts to Aquatic Fauna in Ma Tso Lung Stream and Siu Hang San Tsuen Stream	MS_01, MS_02, MS_03, MS_04, MS_05, MS_06, MS_07, MS_08, MS_09, MS_10, MS_11, MS_12, MS_13, MS_14, MS_15
3	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	T1. Ma Tso Lung riparian zone and associated wetland habitats
		T1. Green belt areas E1-8,D1-8 and G1-3 in KTN NDA
		T1. AGR one C2-4 and C2-2 in KTN NDA
		T1. Areas north of Ng Tung River
		T3. Area west of Siu Hang San Tsuen Stream
		T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au
		T5. Area west and east of the southern limit of the FLN NDA work area
		T6. Areas in the western part of KTN



**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Weekly Site Inspection Schedule for December 2023**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Dec	2-Dec
					Site Inspection (ND/2019/07)	
3-Dec	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
		Site Inspection (ND/2019/01) Site Inspection (ND/2019/04)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01) Site Inspection (ND/2019/03)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04)	Site Inspection (ND/2019/07)	
24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec
			Site Inspection (ND/2019/03) Site Inspection (ND/2019/05)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02) Site Inspection (ND/2019/07)	
31-Dec						

**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Tentative Impact Air Quality and Noise Monitoring Schedule (January 2024)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan
		<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> KTN-DMS4(B), FLN-DMS5A <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			
7-Jan	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan
	<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> KTN-DMS4(B), FLN-DMS5A <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> KTN-DMS4(B), FLN-DMS5A  <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	
14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan
	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> KTN-DMS4(B), FLN-DMS5A <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3	
21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan
			<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> KTN-DMS4(B), FLN-DMS5A <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2		
28-Jan	29-Jan	30-Jan	31-Jan			
		<b>1hr TSP* X3</b> KTN-DMS4(B), FLN-DMS5 <b>24hr TSP*</b> KTN-DMS4(B), FLN-DMS5A <b>Noise</b> CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 <b>24hr RSP (Arsenic)</b> KTN-DMS4A <b>24hr TSP</b> FLN-DMS1, FLN-DMS3	<b>1hr TSP* X3</b> FLN-DMS1, FLN-DMS3 <b>Noise</b> CP-FLN-NMS1, CP-FLN-NMS2			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Remarks:

\*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013/A EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>1hr TSP and 24hr TSP</u> KTN-DMS4(B) - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013/A EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>24hr RSP (Arsenic)</u> KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A <sup>(1)</sup>	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A <sup>(2)</sup>	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013 <sup>(3)</sup>	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013/A	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A <sup>(4)</sup>	ND/2019/03	<u>1hr TSP and 24hr TSP</u> FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A <sup>(5)</sup>	ND/2019/05	<u>1hr TSP and 24hr TSP</u> FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A <sup>(6)</sup>	ND/2019/03	<u>1hr TSP</u> FLN-DMS5 - Noble Hill	--
	ND/2019/04	<u>24hr TSP</u> FLN-DMS5A - Good View New Village	--
EP-473/2013/A <sup>(7)</sup>	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A <sup>(8)</sup>	ND/2019/04	--	CP-FLN-NMS1 - Belair Monte
	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	
Remarks: 1. Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 3. Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02 4. Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04. 8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.			



**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Tentative Impact Water Quality Monitoring Schedule (January 2024)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>1-Jan</b>	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan
		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream
<b>7-Jan</b>	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan
	<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream	
<b>14-Jan</b>	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan
	<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream	
<b>21-Jan</b>	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan
	<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream	
<b>28-Jan</b>	29-Jan	30-Jan	31-Jan			
	<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u><b>Water Quality Monitoring</b></u> River Beas, River Indus and near Siu Hang San Tsuen Stream			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

**Water Quality Monitoring Stations**

River Beas: SYR-CS1 - Upstream of river, SYR-IS1 - Downstream of river

River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream,

MWR-IS3 - Water sensitive receiver at near Ma Wat River

Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	<b><u>River Beas</u></b> SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	<b><u>River Indus and near Siu Hang San Tsuen Stream</u></b> NTR-CS1 - Upstream of river NTR-IS1 - Downstream of river SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream MWR-IS3 - Water sensitive receiver at near Ma Wat River

**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Tentative Impact Ecological Monitoring Schedule (January 2024)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>1-Jan</b>	<b>2-Jan</b>	<b>3-Jan</b>	<b>4-Jan</b>	<b>5-Jan</b>	<b>6-Jan</b>
		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5#</u></b> High tide: Start time: 14:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 14:00 Low tide: Start time: 09:00			
<b>7-Jan</b>	<b>8-Jan</b>	<b>9-Jan</b>	<b>10-Jan</b>	<b>11-Jan</b>	<b>12-Jan</b>	<b>13-Jan</b>
	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 16:00 Low tide: Start time: 13:00		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5</u></b> High tide: Start time: 10:30 Low tide: Start time: 14:00			
<b>14-Jan</b>	<b>15-Jan</b>	<b>16-Jan</b>	<b>17-Jan</b>	<b>18-Jan</b>	<b>19-Jan</b>	<b>20-Jan</b>
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5#</u></b> High tide: Start time: 13:00 Low tide: Start time: 09:00			Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 14:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution <b><u>T1, T6</u></b>	
<b>21-Jan</b>	<b>22-Jan</b>	<b>23-Jan</b>	<b>24-Jan</b>	<b>25-Jan</b>	<b>26-Jan</b>	<b>27-Jan</b>
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5</u></b> High tide: Start time: 15:00 Low tide: Start time: 09:00		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 11:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution <b><u>T3, T4, T5</u></b>		
<b>28-Jan</b>	<b>29-Jan</b>	<b>30-Jan</b>	<b>31-Jan</b>			
		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <b><u>T1 T2</u></b> High tide: Start time: 13:00 Low tide: Start time: 10:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <b><u>T3 T5</u></b> High tide: Start time: 14:00 Low tide: Start time: 09:00			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

#Night-time avifauna monitoring in Long Valley



Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts to Aquatic Fauna in Ma Tso Lung Stream and Siu Hang San Tsuen Stream	MS_01, MS_02, MS_03, MS_04, MS_05, MS_06, MS_07, MS_08, MS_09, MS_10, MS_11, MS_12, MS_13, MS_14, MS_15
3	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	T1. Ma Tso Lung riparian zone and associated wetland habitats
		T1. Green belt areas E1-8,D1-8 and G1-3 in KTN NDA
		T1. AGR one C2-4 and C2-2 in KTN NDA
		T1. Areas north of Ng Tung River
		T3. Area west of Siu Hang San Tsuen Stream
		T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au
		T5. Area west and east of the southern limit of the FLN NDA work area
		T6. Areas in the western part of KTN

**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Tentative Weekly Site Inspection Schedule for January 2024**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>1-Jan</b>	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan
		Site Inspection (ND/2019/01) Site Inspection (ND/2019/05)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
<b>7-Jan</b>	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
<b>14-Jan</b>	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
<b>21-Jan</b>	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
<b>28-Jan</b>	29-Jan	30-Jan	31-Jan			
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc.)

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**APPENDIX E**  
**AIR QUALITY AND AMBIENT ARSENIC**  
**MONITORING RESULTS AND**  
**GRAPHICAL PRESENTATION**

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## Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
6-Dec-23	13:00	Cloudy	90.5
6-Dec-23	14:00	Cloudy	82.8
6-Dec-23	15:00	Cloudy	76.3
12-Dec-23	9:00	Sunny	102.8
12-Dec-23	10:00	Sunny	110.3
12-Dec-23	11:00	Sunny	86.2
18-Dec-23	13:00	Cloudy	201.0
18-Dec-23	14:00	Cloudy	204.5
18-Dec-23	15:00	Cloudy	187.8
22-Dec-23	13:00	Cloudy	155.6
22-Dec-23	14:00	Cloudy	177.5
22-Dec-23	15:00	Cloudy	147.7
28-Dec-23	9:00	Sunny	68.5
28-Dec-23	10:00	Sunny	44.8
28-Dec-23	11:00	Sunny	46.9
Minimum			44.8
Maximum			204.5
Average			118.9

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
6-Dec-23	13:15	Cloudy	109.8
6-Dec-23	14:15	Cloudy	95.4
6-Dec-23	15:15	Cloudy	96.7
12-Dec-23	13:00	Sunny	88.7
12-Dec-23	14:00	Sunny	94.1
12-Dec-23	15:00	Sunny	96.2
18-Dec-23	13:00	Cloudy	176.9
18-Dec-23	14:00	Cloudy	157.2
18-Dec-23	15:00	Cloudy	148.1
22-Dec-23	13:00	Cloudy	117.4
22-Dec-23	14:00	Cloudy	136.9
22-Dec-23	15:00	Cloudy	141.0
28-Dec-23	13:00	Sunny	51.3
28-Dec-23	14:00	Sunny	55.7
28-Dec-23	15:00	Sunny	56.0
Minimum			51.3
Maximum			176.9
Average			108.1

## Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
5-Dec-23	14:30	Sunny	73.5
5-Dec-23	15:30	Sunny	115.1
5-Dec-23	16:30	Sunny	134.3
11-Dec-23	13:00	Cloudy	26.8
11-Dec-23	14:00	Cloudy	37.0
11-Dec-23	15:00	Cloudy	33.7
15-Dec-23	13:00	Sunny	80.4
15-Dec-23	14:00	Sunny	45.9
15-Dec-23	15:00	Sunny	48.2
21-Dec-23	8:00	Cloudy	57.0
21-Dec-23	10:00	Cloudy	43.8
21-Dec-23	11:00	Cloudy	42.4
27-Dec-23	13:00	Sunny	55.1
27-Dec-23	14:00	Sunny	43.9
27-Dec-23	15:00	Sunny	55.7
Minimum			26.8
Maximum			134.3
Average			59.5

Location KTN-DMS4(B) - Temporary Structure at Pak Shek Au			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
5-Dec-23	13:00	Sunny	156.6
5-Dec-23	14:00	Sunny	129.1
5-Dec-23	15:00	Sunny	142.7
11-Dec-23	9:00	Cloudy	33.8
11-Dec-23	10:00	Cloudy	30.2
11-Dec-23	11:00	Cloudy	22.2
15-Dec-23	13:00	Sunny	47.0
15-Dec-23	14:00	Sunny	41.6
15-Dec-23	15:00	Sunny	45.0
21-Dec-23	13:00	Cloudy	62.4
21-Dec-23	14:00	Cloudy	76.0
21-Dec-23	15:00	Cloudy	110.9
27-Dec-23	13:00	Sunny	88.9
27-Dec-23	14:00	Sunny	36.4
27-Dec-23	15:00	Sunny	38.6
Minimum			22.2
Maximum			156.6
Average			70.8

## Appendix E - 24-hour TSP Monitoring Results

### Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
			Initial	Final		Initial	Final		Initial	Final			
5-Dec-23	Cloudy	293.3	2.9685	3.1394	0.1709	8690.9	8714.9	24.0	1.23	1.23	1.23	1766.1	96.8
11-Dec-23	Sunny	295.7	2.9778	3.1086	0.1308	8714.9	8738.9	24.0	1.22	1.22	1.22	1755.2	74.5
15-Dec-23	Cloudy	295.9	2.9152	3.1255	0.2103	8738.9	8762.9	24.0	1.22	1.22	1.22	1759.4	119.5
21-Dec-23	Cloudy	282.9	3.0097	3.2284	0.2187	8762.9	8786.9	24.0	1.25	1.26	1.25	1804.9	121.2
27-Dec-23	Sunny	285.3	2.9636	3.1753	0.2117	8786.9	8810.9	24.0	1.26	1.24	1.25	1797.9	117.7
												Min	74.5
												Max	121.2
												Average	105.9

### Location FLN-DMS3 - House near Tong Hang

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
			Initial	Final		Initial	Final		Initial	Final			
5-Dec-23	Cloudy	293.3	2.9607	3.0581	0.0974	9877.4	9901.4	24.0	1.23	1.23	1.23	1776.7	54.8
11-Dec-23	Sunny	295.7	2.9700	3.0329	0.0629	9901.4	9925.4	24.0	1.23	1.23	1.23	1765.7	35.6
15-Dec-23	Cloudy	295.9	2.9329	3.0036	0.0707	9925.6	9949.6	24.0	1.23	1.23	1.23	1769.9	39.9
21-Dec-23	Cloudy	282.9	3.0239	3.1405	0.1166	9949.6	9973.6	24.0	1.26	1.27	1.26	1815.6	64.2
27-Dec-23	Sunny	285.3	2.8824	2.9252	0.0428	9973.6	9997.6	24.0	1.26	1.25	1.26	1808.6	23.7
												Min	23.7
												Max	64.2
												Average	43.7

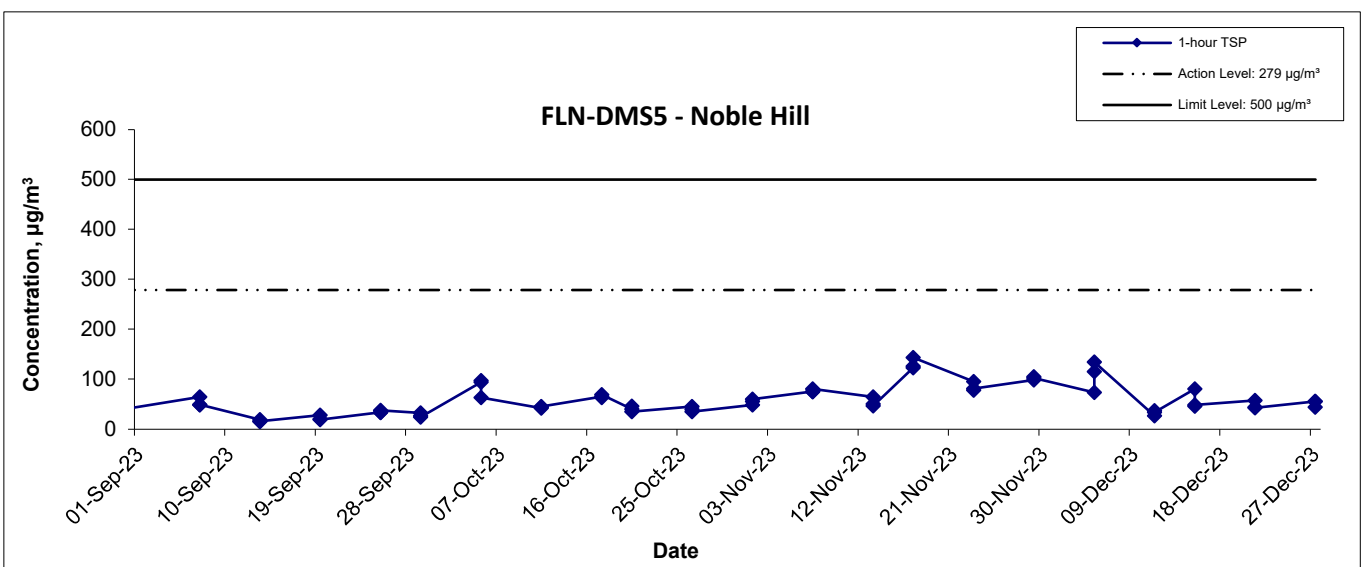
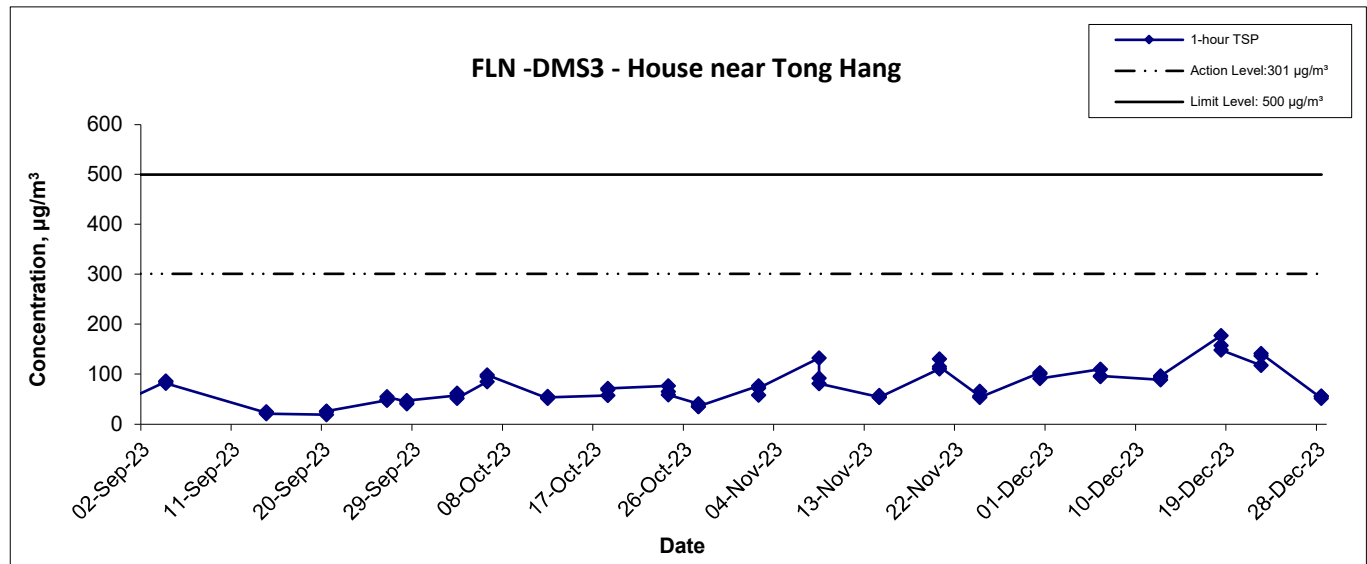
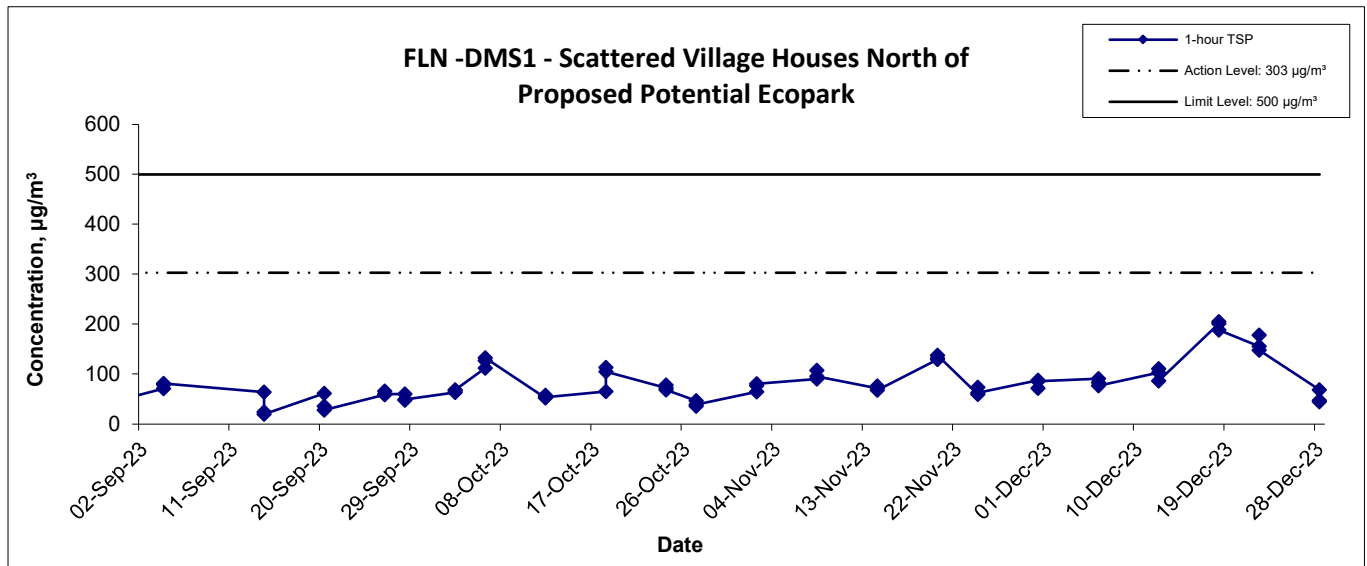



## Appendix E - 24-hour TSP Monitoring Results

Location FLN-DMS5A - Good View New Village			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
5-Dec-23	10:00	Sunny	87.4
11-Dec-23	9:00	Cloudy	36.7
15-Dec-23	10:00	Sunny	51.5
21-Dec-23	9:00	Cloudy	122.2
27-Dec-23	10:00	Sunny	79.6
Minimum			36.7
Maximum			122.2
Average			75.5

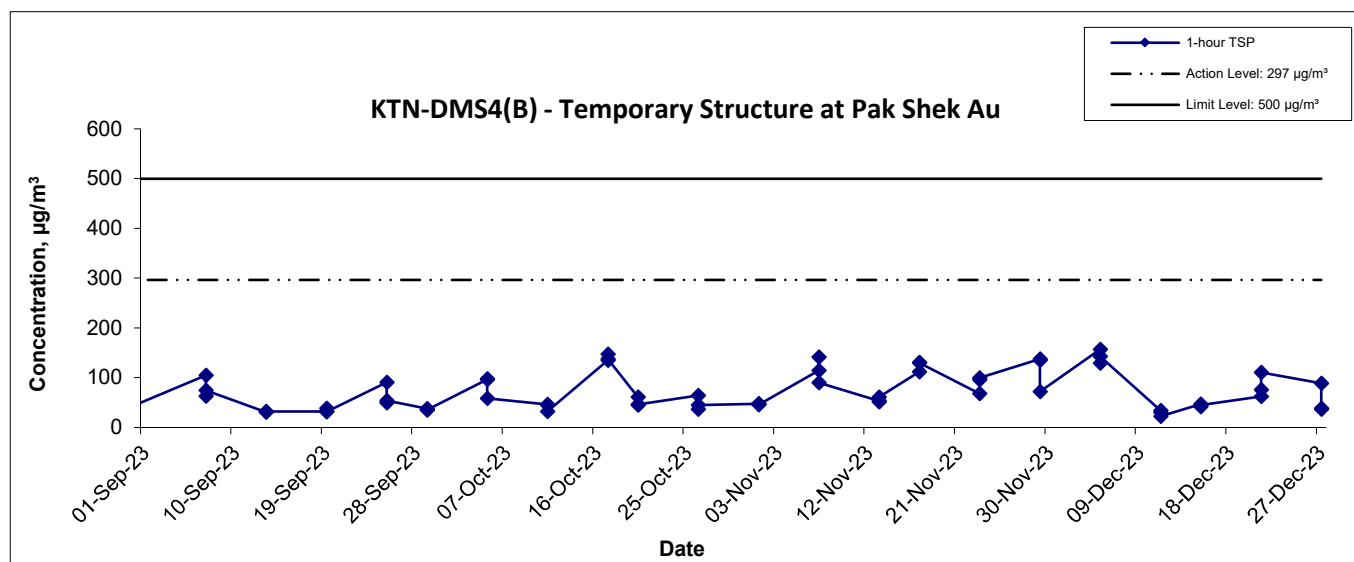
Location KTN-DMS4(B) - Temporary Structure at Pak Shek Au			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
5-Dec-23	9:30	Sunny	120.1
11-Dec-23	9:00	Cloudy	37.5
15-Dec-23	9:30	Sunny	56.3
21-Dec-23	11:50	Cloudy	140.3
27-Dec-23	9:00	Sunny	71.3
Minimum			37.5
Maximum			140.3
Average			85.1


## 1-hr TSP Concentration Levels



Title	Service Contract No. NDO 04/2019	Scale	Project No.	 consulting . testing . research
	Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas	N.T.S	WMA20002	
	Graphical Presentation of 1-hour TSP Monitoring Results	Date Dec 23	Appendix E	

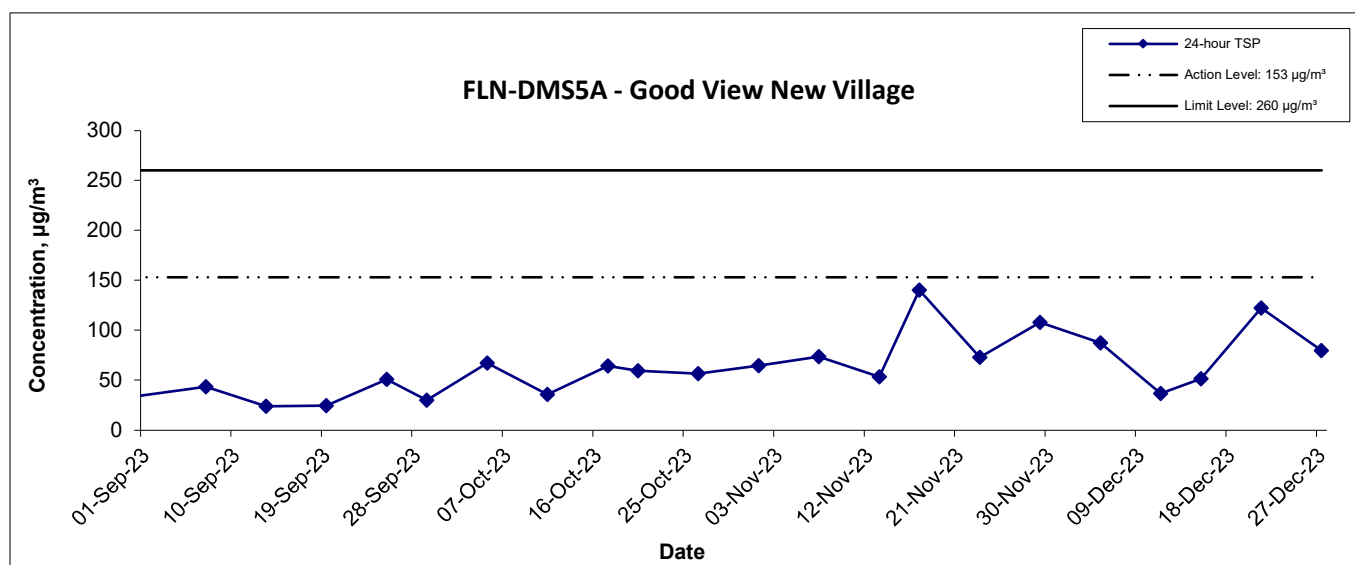
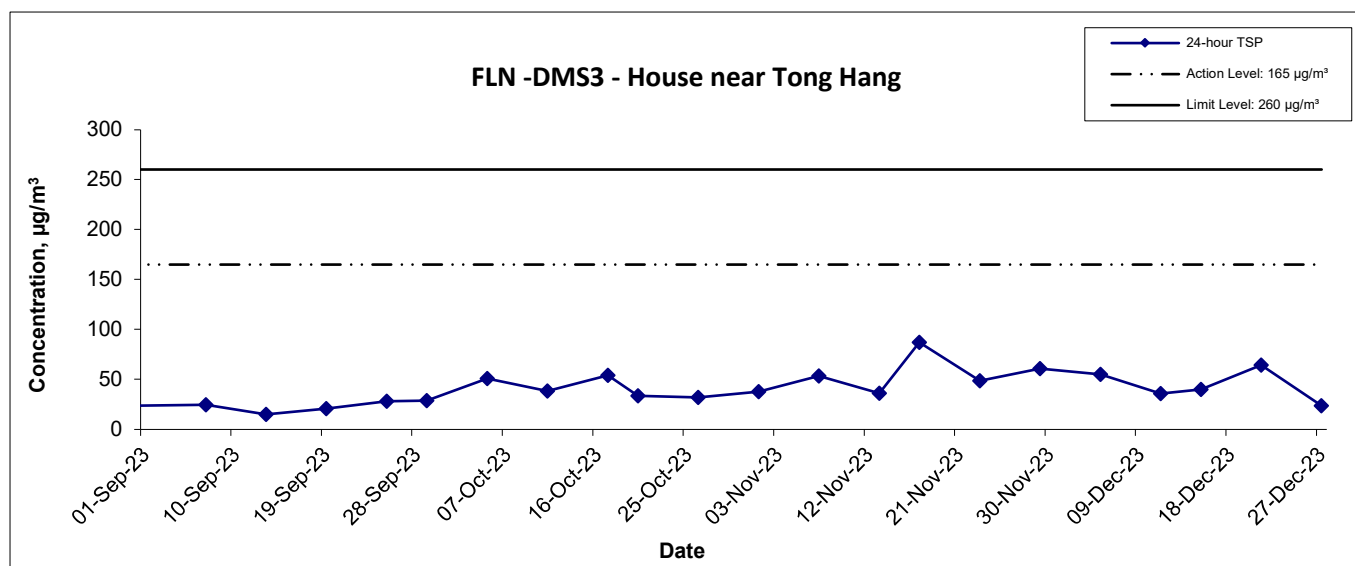
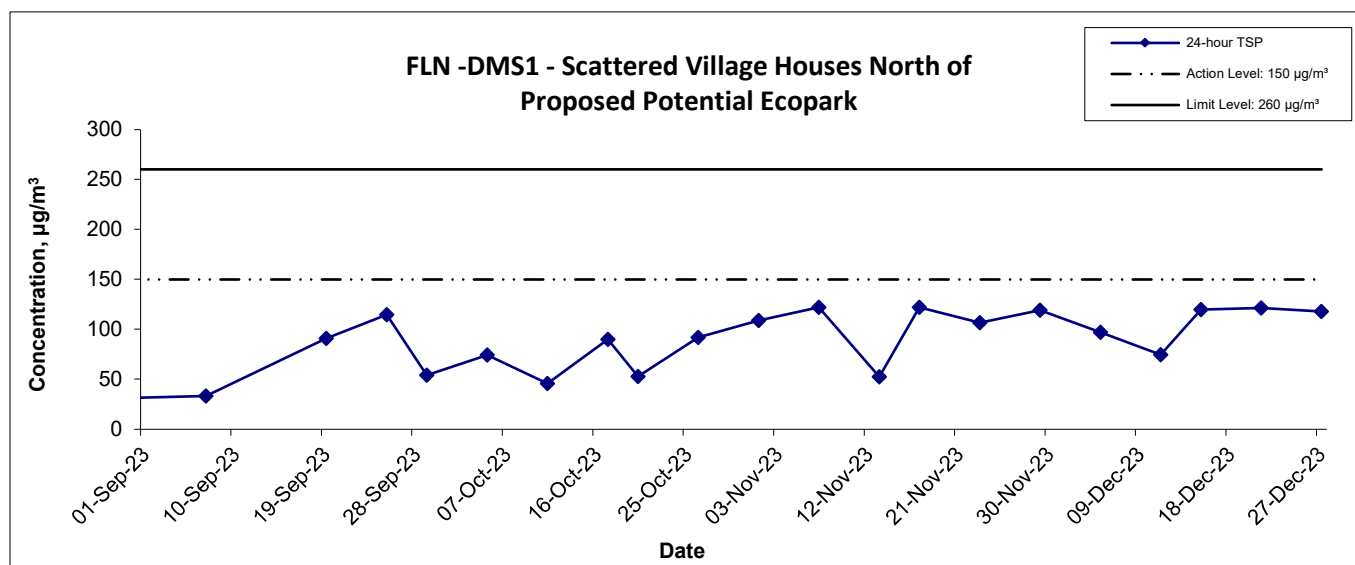
# 1-hr TSP Concentration Levels




<b>Title</b> Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale	Project No.	
	N.T.S	WMA20002	
	Date	Appendix	
	Dec 23	E	

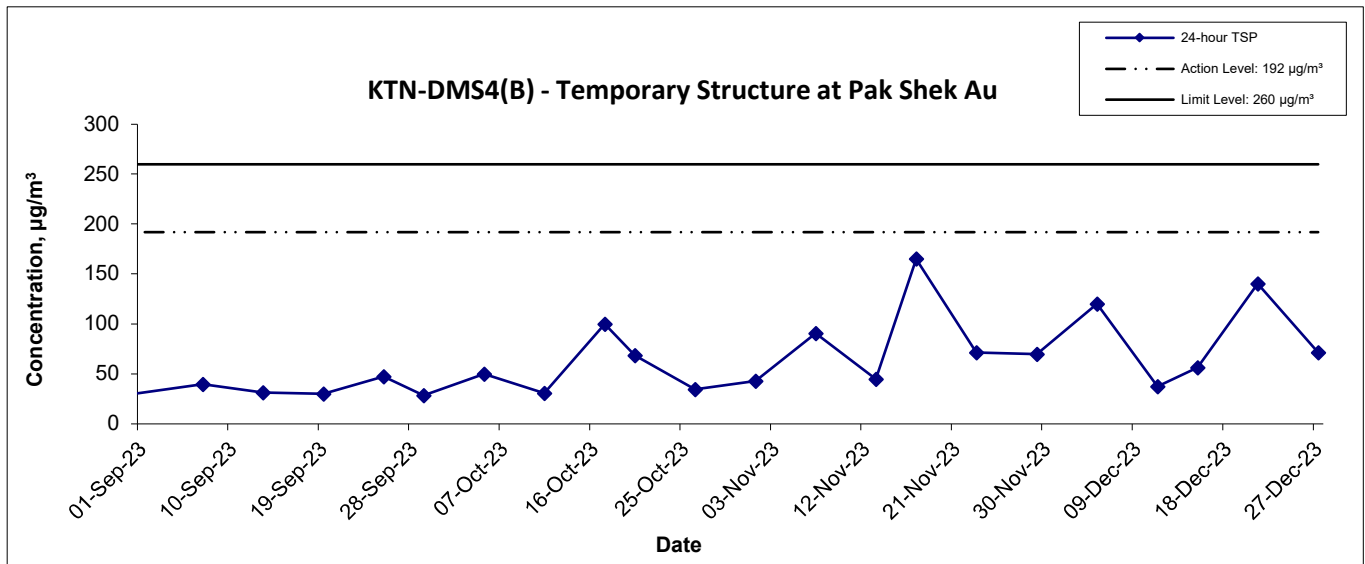


## 24-hr TSP Concentration Levels



Title	Service Contract No. NDO 04/2019		
	Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas		
	Graphical Presentation of 24-hour TSP Monitoring Results		
Scale	N.T.S		Project No.
	Date		WMA20002
Dec 23		Appendix	E
			

## 24-hr TSP Concentration Levels



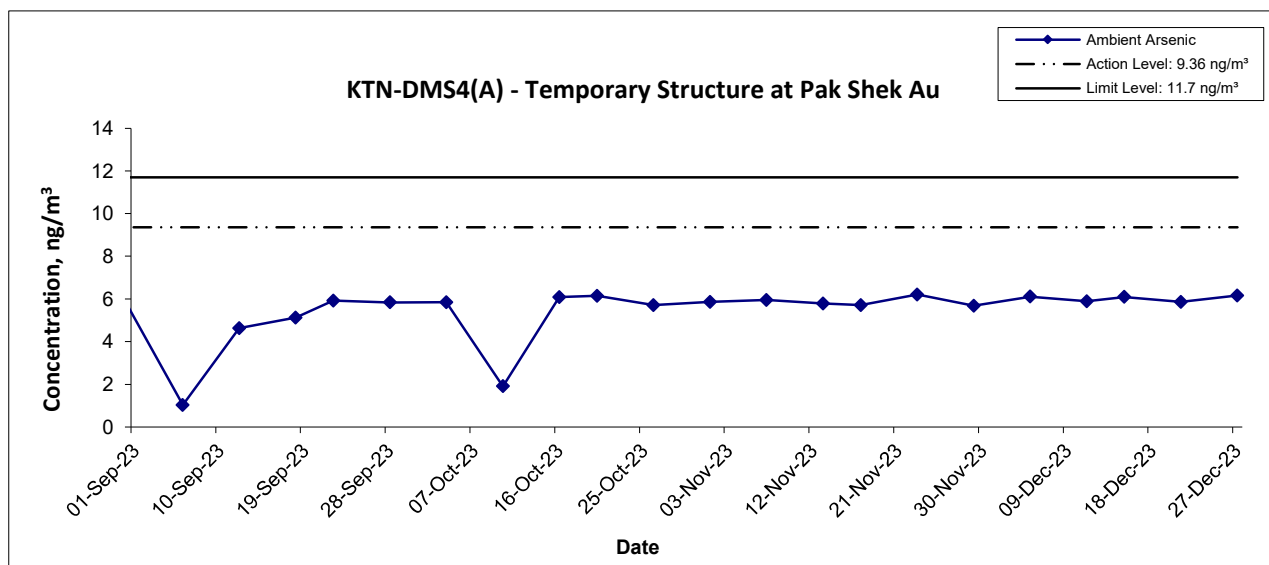
Title	Service Contract No. NDO 04/2019		Scale	Project No.
	Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas		N.T.S	WMA20002
	Graphical Presentation of 24-hour TSP Monitoring Results		Date	Appendix
			Dec 23	E


## Appendix E - Ambient Arsenic Monitoring Results

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au			
Date	Arsenic ( $\mu\text{g}$ )	Standard Volume, Vstd ( $\text{m}^3$ )	Ambient Arsenic Concentration ( $\text{ng}/\text{m}^3$ )
5-Dec-23	9.8	1604.1	6.11
11-Dec-23	9.5	1614.2	5.89
15-Dec-23	9.8	1608.0	6.09
21-Dec-23	9.2	1570.1	5.86
27-Dec-23	9.7	1575.9	6.16



## Ambient Arsenic



<b>Title</b> Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas  Graphical Presentation of Ambient Arsenic Monitoring Results	<b>Scale</b> N.T.S	<b>Project No.</b> WMA20002	 consulting . testing . research
	<b>Date</b> Dec 23	<b>Appendix</b> E	

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	39353
Date of Issue:	2023-12-12
Date Received:	2023-12-06
Date Tested:	2023-12-06
Date Completed:	2023-12-12

**ATTN:** Ms Ivy Tam

Page: 1 of 1

**Sample Description :** 1 sample as received from customer said to be quartz filter  
**Laboratory No. :** 39353  
**Project No. :** WMA 20002  
**Project Title:** Service Contract No. NDO 04/2019  
Environmental Team for Environmental Monitoring and Audit Works in  
Construction Phase for the First Phase Development of Kwu Tung North  
and Fanling North New Development Areas

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

### Results:

Sample ID	230525/022
Sample No.	39353-1
Arsenic (µg)	9.8

Remarks: 1) < = less than

2) Results for the test material reported as received

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	QC39353
Date of Issue:	2023-12-12
Date Received:	2023-12-06
Date Tested:	2023-12-06
Date Completed:	2023-12-12

**ATTN:** Ms Ivy Tam

Page: 1 of 2

**QC report:**

**Method Blank**

Parameter	Method Blank	Acceptance
Arsenic (µg)	<0.036	<0.036

**Filter Lot Blank**

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.06	N/A

**Laboratory control spike/ Method QC**

Parameter	MQC	Acceptance
Arsenic (%)	104	80-120

**Calibration check**

Parameter	CCV	Acceptance
Arsenic (%)	91	90-110

**Interference check solution A**

Parameter	ICS A	Acceptance
Arsenic (µg)	<0.036	<0.036

**Interference check solution AB**

Parameter	ICS AB	Acceptance
Arsenic (%)	103	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39353

\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

Report No.:	QC39353
Date of Issue:	2023-12-12
Date Received:	2023-12-06
Date Tested:	2023-12-06
Date Completed:	2023-12-12
Page:	2 of 2

### QC report: Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	98	75-125

### Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	4	RPD <sub>≤</sub> 20%

### Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	103	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39353

\*\*\*\*\*END OF REP ORT\*\*\*\*\*

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	39499
Date of Issue:	2023-12-18
Date Received:	2023-12-12
Date Tested:	2023-12-12
Date Completed:	2023-12-18

**ATTN:** Ms Ivy Tam

Page: 1 of 1

**Sample Description :** 1 sample as received from customer said to be quartz filter  
**Laboratory No. :** 39499  
**Project No. :** WMA 20002  
**Project Title:** Service Contract No. NDO 04/2019  
Environmental Team for Environmental Monitoring and Audit Works in  
Construction Phase for the First Phase Development of Kwu Tung North  
and Fanling North New Development Areas

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

### Results:

Sample ID	230525/023
Sample No.	39499-1
Arsenic (µg)	9.5

Remarks: 1) <= less than

2) Results for the test material reported as received

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	QC39499
Date of Issue:	2023-12-18
Date Received:	2023-12-12
Date Tested:	2023-12-12
Date Completed:	2023-12-18

**ATTN:** Ms Ivy Tam

Page: 1 of 2

**QC report:  
Method Blank**

Parameter	Method Blank	Acceptance
Arsenic (µg)	<0.036	<0.036

**Filter Lot Blank**

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.06	N/A

**Laboratory control spike/ Method QC**

Parameter	MQC	Acceptance
Arsenic (%)	112	80-120

**Calibration check**

Parameter	CCV	Acceptance
Arsenic (%)	103	90-110

**Interference check solution A**

Parameter	ICS A	Acceptance
Arsenic (µg)	<0.036	<0.036

**Interference check solution AB**

Parameter	ICS AB	Acceptance
Arsenic (%)	89	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39499

\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

Report No.:	QC39499
Date of Issue:	2023-12-18
Date Received:	2023-12-12
Date Tested:	2023-12-12
Date Completed:	2023-12-18
Page:	2 of 2

### QC report: Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	93	75-125

### Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	4	RPD $\leq$ 20%

### Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	101	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39499

\*\*\*\*\*END OF REP ORT\*\*\*\*\*

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	39452
Date of Issue:	2023-12-22
Date Received:	2023-12-18
Date Tested:	2023-12-18
Date Completed:	2023-12-22

**ATTN:** Ms Ivy Tam

Page: 1 of 1

**Sample Description :** 1 sample as received from customer said to be quartz filter  
**Laboratory No. :** 39452  
**Project No. :** WMA 20002  
**Project Title:** Service Contract No. NDO 04/2019  
Environmental Team for Environmental Monitoring and Audit Works in  
Construction Phase for the First Phase Development of Kwu Tung North  
and Fanling North New Development Areas

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

### Results:

Sample ID	230525/024
Sample No.	39452-1
Arsenic (µg)	9.8

Remarks: 1) < = less than

2) Results for the test material reported as received

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	QC39452
Date of Issue:	2023-12-22
Date Received:	2023-12-18
Date Tested:	2023-12-18
Date Completed:	2023-12-22

**ATTN:** Ms Ivy Tam

Page: 1 of 2

### QC report:

#### Method Blank

Parameter	Method Blank	Acceptance
Arsenic (μg)	<0.036	<0.036

#### Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.06	N/A

#### Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	112	80-120

#### Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	98	90-110

#### Interference check solution A

Parameter	ICS A	Acceptance
Arsenic (μg)	<0.036	<0.036

#### Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	96	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39452

\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

Report No.:	QC39452
Date of Issue:	2023-12-22
Date Received:	2023-12-18
Date Tested:	2023-12-18
Date Completed:	2023-12-22

Page: 2 of 2

### QC report:

#### Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	95	75-125

#### Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	104	RPD $\leq$ 20%

#### Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	101	90-110

Remarks: 1)  $\leq$  less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39452

\*\*\*\*\*END OF REP ORT\*\*\*\*\*

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	39453
Date of Issue:	2024-01-02
Date Received:	2023-12-22
Date Tested:	2023-12-22
Date Completed:	2024-01-02

**ATTN:** Ms Ivy Tam

Page: 1 of 1

**Sample Description :** 1 sample as received from customer said to be quartz filter  
**Laboratory No. :** 39453  
**Project No. :** WMA 20002  
**Project Title:** Service Contract No. NDO 04/2019  
Environmental Team for Environmental Monitoring and Audit Works in  
Construction Phase for the First Phase Development of Kwu Tung North  
and Fanling North New Development Areas

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

### Results:

Sample ID	230525/025
Sample No.	39453-1
Arsenic (µg)	9.2

Remarks: 1) < = less than

2) Results for the test material reported as received

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

**TEST REPORT****APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	QC39453
Date of Issue:	2024-01-02
Date Received:	2023-12-22
Date Tested:	2023-12-22
Date Completed:	2024-01-02

Page: 1 of 2

**ATTN:** Ms Ivy Tam**QC report:****Method Blank**

Parameter	Method Blank	Acceptance
Arsenic ( $\mu\text{g}$ )	<0.036	<0.036

**Filter Lot Blank**

Parameter	Filter Lot Blank	Acceptance
Arsenic ( $\mu\text{g}$ )	0.06	N/A

**Laboratory control spike/ Method QC**

Parameter	MQC	Acceptance
Arsenic (%)	107	80-120

**Calibration check**

Parameter	CCV	Acceptance
Arsenic (%)	94	90-110

**Interference check solution A**

Parameter	ICS A	Acceptance
Arsenic ( $\mu\text{g}$ )	<0.036	<0.036

**Interference check solution AB**

Parameter	ICS AB	Acceptance
Arsenic (%)	96	70-130

Remarks: 1) &lt; = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39453

\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**  
**PATRICK TSE**  
General Manager



## TEST REPORT

Report No.:	QC39453
Date of Issue:	2024-01-02
Date Received:	2023-12-22
Date Tested:	2023-12-22
Date Completed:	2024-01-02

Page: 2 of 2

## QC report:

## Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	86	75-125

## Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	99	RPD $\leq$ 20%

## Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	100	90-110

Remarks: 1)  $\leq$  less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39453

\*\*\*\*\*END OF REP ORT\*\*\*\*\*

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	39454
Date of Issue:	2024-01-02
Date Received:	2023-12-24
Date Tested:	2023-12-24
Date Completed:	2024-01-02

**ATTN:** Ms Ivy Tam

Page: 1 of 1

**Sample Description :** 1 sample as received from customer said to be quartz filter  
**Laboratory No. :** 39454  
**Project No. :** WMA 20002  
**Project Title:** Service Contract No. NDO 04/2019  
Environmental Team for Environmental Monitoring and Audit Works in  
Construction Phase for the First Phase Development of Kwu Tung North  
and Fanling North New Development Areas

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

### Results:

Sample ID	230525/026
Sample No.	39454-1
Arsenic (µg)	9.7

Remarks: 1) < = less than

2) Results for the test material reported as received

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab (EM&A)  
RM 1808, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Report No.:	QC39454
Date of Issue:	2024-01-02
Date Received:	2023-12-24
Date Tested:	2023-12-24
Date Completed:	2024-01-02

Page: 1 of 2

**ATTN:** Ms Ivy Tam

**QC report:**

**Method Blank**

Parameter	Method Blank	Acceptance
Arsenic (µg)	<0.036	<0.036

**Filter Lot Blank**

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.06	N/A

**Laboratory control spike/ Method QC**

Parameter	MQC	Acceptance
Arsenic (%)	93	80-120

**Calibration check**

Parameter	CCV	Acceptance
Arsenic (%)	101	90-110

**Interference check solution A**

Parameter	ICS A	Acceptance
Arsenic (µg)	<0.036	<0.036

**Interference check solution AB**

Parameter	ICS AB	Acceptance
Arsenic (%)	96	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39454

\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

Report No.:	QC39454
Date of Issue:	2024-01-02
Date Received:	2023-12-24
Date Tested:	2023-12-24
Date Completed:	2024-01-02

Page: 2 of 2

### QC report:

#### Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	99	75-125

#### Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	8	RPD $\leq$ 20%

#### Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	104	90-110

Remarks: 1)  $\leq$  less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39454

\*\*\*\*\*END OF REP ORT\*\*\*\*\*

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**APPENDIX F**  
**NOISE MONITORING RESULTS AND**  
**GRAPHICAL PRESENTATION**

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## Appendix F - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
6-Dec-23	Cloudy	11:00	71.4	72.9	61.8	68.9	69.9
		11:05	68.5	71.3	64.2		
		11:10	68.8	72.5	61.2		
		11:15	67.4	70.6	60.6		
		11:20	67.6	70.8	60.8		
		11:25	68.3	70.7	62.4		
12-Dec-23	Sunny	09:30	67.6	71.0	56.6	66.7	
		09:35	66.0	69.3	52.8		
		09:40	67.7	71.6	54.8		
		09:45	65.1	70.4	55.0		
		09:50	66.5	70.4	56.7		
		09:55	66.7	69.0	54.2		
18-Dec-23	Cloudy	13:30	69.1	72.5	60.3	68.8	
		13:35	67.4	70.7	61.0		
		13:40	69.8	73.5	61.1		
		13:45	66.7	70.5	59.7		
		13:50	69.4	71.2	62.9		
		13:55	69.3	72.6	63.3		
28-Dec-23	Sunny	11:15	65.3	69.5	59.1	67.1	
		11:20	65.0	68.7	58.6		
		11:25	66.7	69.8	60.8		
		11:30	69.6	72.1	61.8		
		11:35	66.0	70.3	58.2		
		11:40	67.9	71.0	59.6		

Location CP-FLN-NMS2 - Scattered Village House in Tong Hang (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
6-Dec-03	Cloudy	13:40	62.1	63.2	55.9	65.3	59.6
		13:45	65.6	67.0	58.1		
		13:50	67.7	69.9	64.9		
		13:55	65.0	66.1	63.7		
		14:00	64.5	65.1	63.8		
		14:05	65.1	65.9	64.3		
12-Dec-23	Sunny	13:15	62.0	66.9	51.7	58.6	
		13:20	55.7	56.7	50.7		
		13:25	55.9	60.5	50.7		
		13:30	56.3	60.2	51.8		
		13:35	57.8	60.9	52.3		
		13:40	59.7	61.4	53.1		
18-Dec-23	Cloudy	14:20	67.7	68.5	66.9	67.9	
		14:25	67.7	68.5	66.8		
		14:30	68.0	68.9	67.1		
		14:35	67.8	68.4	67.2		
		14:40	68.3	69.2	67.4		
		14:45	67.9	68.6	67.1		
28-Dec-23	Sunny	13:15	67.1	67.9	66.4	66.9	
		13:20	66.9	67.6	66.3		
		13:25	66.7	67.4	66.1		
		13:30	66.9	67.8	66.2		
		13:35	66.8	67.4	66.1		
		13:40	66.7	67.4	66.0		



## Appendix F - Noise Monitoring Results

Location CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5-Dec-23	Sunny	10:15	54.2	54.8	53.5	54.0	58.6
		10:20	53.8	54.4	53.3		
		10:25	53.9	54.4	53.4		
		10:30	53.8	54.3	53.3		
		10:35	54.1	54.6	53.4		
		10:40	54.3	54.9	53.5		
11-Dec-23	Cloudy	09:50	62.1	63.7	54.2	59.6	
		09:55	64.1	62.3	53.2		
		10:00	58.8	60.4	54.1		
		10:05	54.2	55.1	52.8		
		10:10	53.2	55.5	45.6		
		10:15	48.7	50.7	45.8		
21-Dec-23	Cloudy	14:00	52.0	56.9	41.1	48.5	
		14:05	45.7	46.4	39.7		
		14:10	45.7	50.6	38.4		
		14:15	46.3	50.2	39.0		
		14:20	47.8	50.9	41.8		
		14:25	49.7	51.4	42.4		
27-Dec-23	Sunny	09:00	57.4	58.1	56.9	57.3	
		09:05	57.0	57.6	56.6		
		09:10	57.3	57.9	56.6		
		09:15	56.9	57.4	56.5		
		09:20	56.8	57.3	56.4		
		09:25	58.2	59.5	56.4		

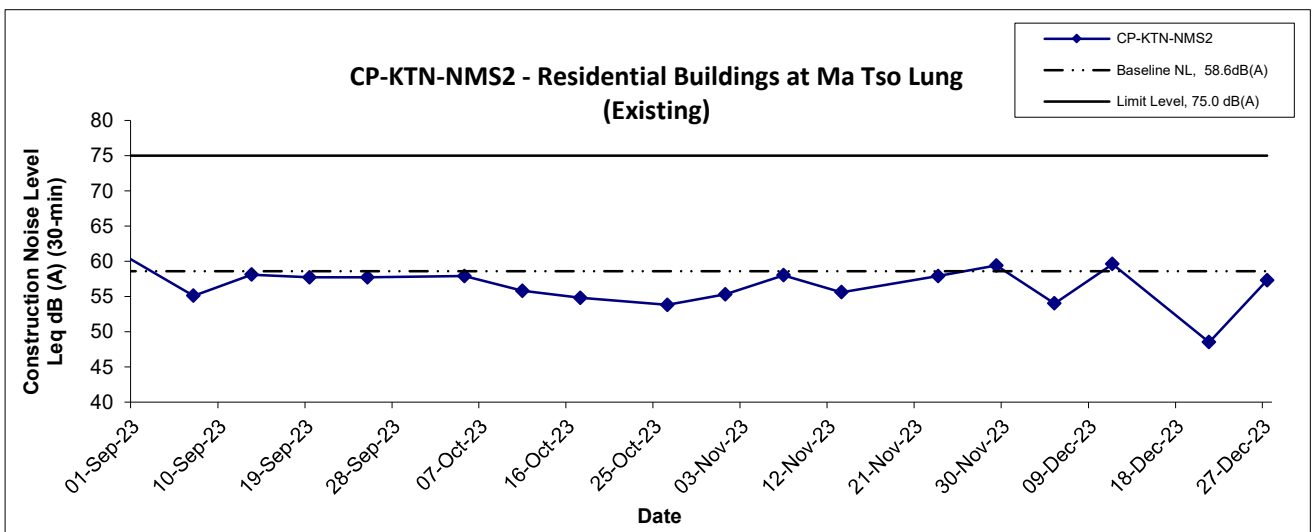
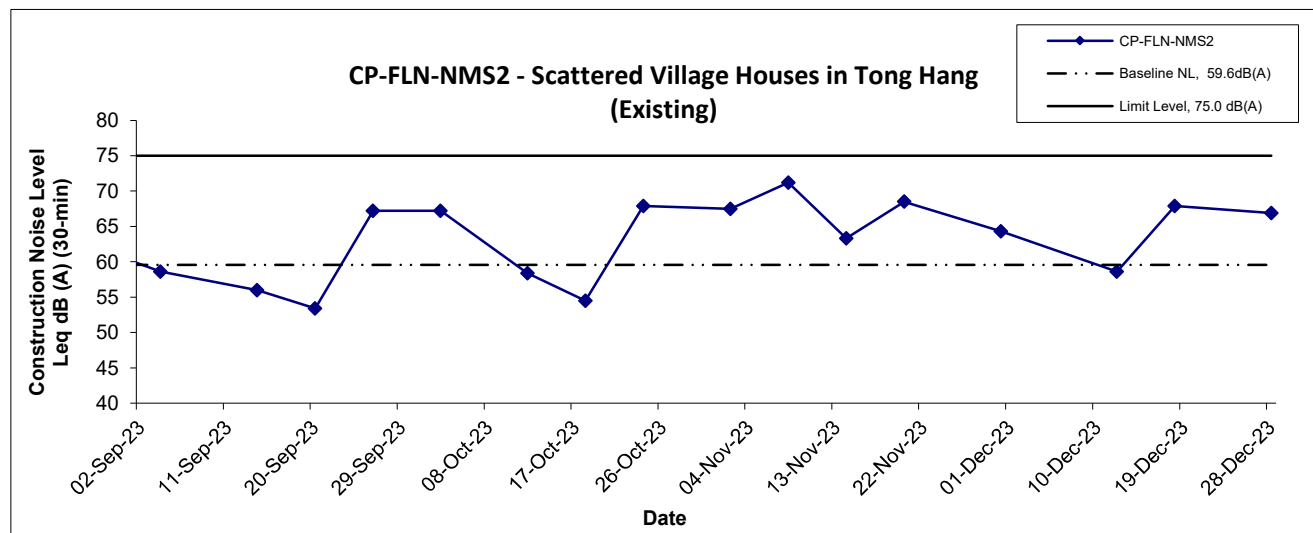
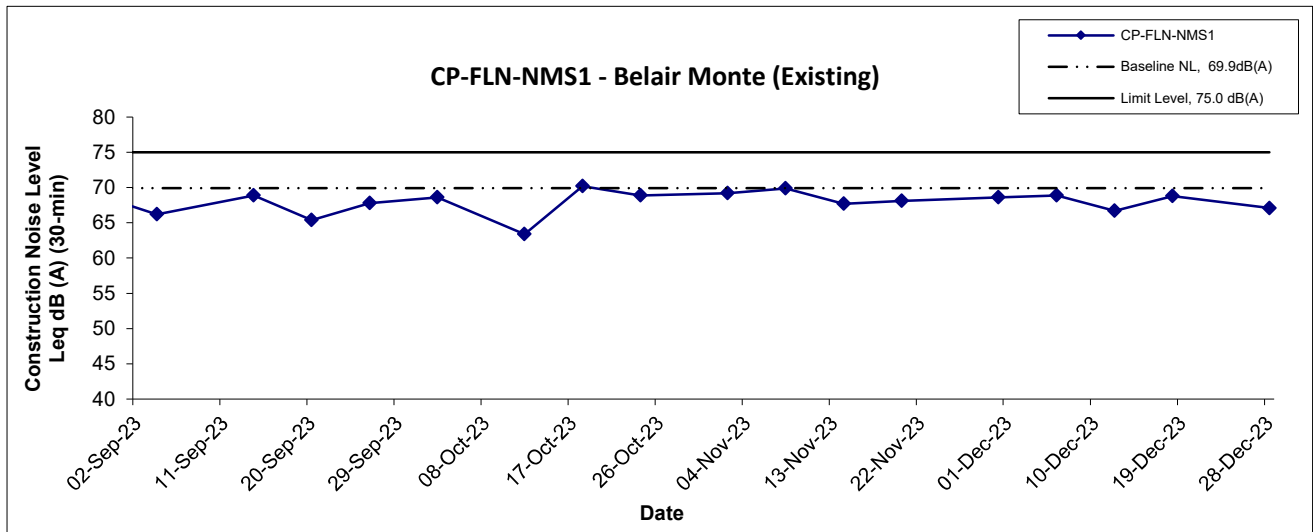
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5-Dec-23	Sunny	11:05	50.2	50.7	49.4	51.7	51.6
		11:10	49.9	50.4	49.4		
		11:15	54.1	54.9	49.7		
		11:20	53.1	54.8	50.2		
		11:25	49.4	50.0	48.9		
		11:30	51.2	53.0	49.5		
11-Dec-23	Cloudy	09:50	49.5	50.7	48.6	49.0	
		09:55	48.9	50.4	47.4		
		10:00	49.7	50.9	44.3		
		10:05	48.8	50.4	47.2		
		10:10	48.9	49.2	45.0		
		10:15	48.0	50.6	44.8		
21-Dec-23	Cloudy	13:15	50.8	53.3	49.4	52.1	
		13:20	51.6	54.0	50.8		
		13:25	51.3	54.0	50.6		
		13:30	52.5	54.9	50.8		
		13:35	53.8	56.9	52.6		
		13:40	51.9	54.2	50.6		
27-Dec-23	Sunny	09:45	48.1	49.0	47.0	49.8	
		09:50	49.0	49.4	47.6		
		09:55	48.7	49.9	47.5		
		10:00	49.4	51.4	48.1		
		10:05	51.4	54.8	48.1		
		10:10	51.2	54.5	47.5		


## Appendix F - Noise Monitoring Results

Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5-Dec-23	Sunny	09:10	62.1	65.9	55.5	61.3	57.2
		09:15	60.8	64.6	54.8		
		09:20	62.3	66.6	54.4		
		09:25	61.8	64.9	57.3		
		09:30	60.7	63.9	55.4		
		09:35	59.1	61.5	54.5		
11-Dec-23	Cloudy	16:35	57.3	59.7	54.0	58.1	
		16:40	57.9	59.2	54.2		
		16:45	58.3	61.0	54.7		
		16:50	58.7	61.0	55.6		
		16:55	58.6	61.2	55.8		
		17:00	57.8	60.1	55.3		
21-Dec-23	Cloudy	15:20	62.4	64.8	59.8	59.7	
		15:25	60.4	62.8	58.8		
		15:30	59.7	62.6	56.8		
		15:35	58.6	63.7	58.4		
		15:40	57.9	63.4	56.7		
		15:45	56.4	62.8	55.7		
27-Dec-23	Sunny	11:20	54.3	56.4	48.9	53.7	
		11:25	57.5	60.5	47.2		
		11:30	51.1	53.7	47.9		
		11:35	51.5	54.6	47.7		
		11:40	52.0	55.2	48.4		
		11:45	51.8	54.3	48.1		

Location CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5-Dec-23	Sunny	13:00	59.3	60.0	49.9	57.0	55.1
		13:05	55.7	58.9	49.7		
		13:10	56.6	59.1	52.5		
		13:15	56.5	59.4	52.6		
		13:20	58.6	62.4	51.1		
		13:25	52.8	55.7	49.2		
11-Dec-23	Cloudy	09:05	56.5	59.0	48.3	56.8	
		09:10	53.1	55.5	48.2		
		09:15	57.3	58.8	49.1		
		09:20	57.2	59.3	47.9		
		09:25	58.6	59.5	46.6		
		09:30	56.4	60.1	47.8		
21-Dec-23	Cloudy	14:45	67.7	71.6	54.8	66.5	
		14:50	65.1	70.4	55.2		
		14:55	66.5	70.4	56.7		
		15:00	66.6	70.0	55.6		
		15:05	66.0	69.3	52.8		
		15:10	66.7	69.0	54.2		
27-Dec-23	Sunny	10:30	55.8	58.1	52.8	59.3	
		10:35	57.4	57.7	52.5		
		10:40	58.1	60.7	52.3		
		10:45	57.2	59.9	53.2		
		10:50	61.2	63.2	54.0		
		10:55	62.3	63.7	54.4		

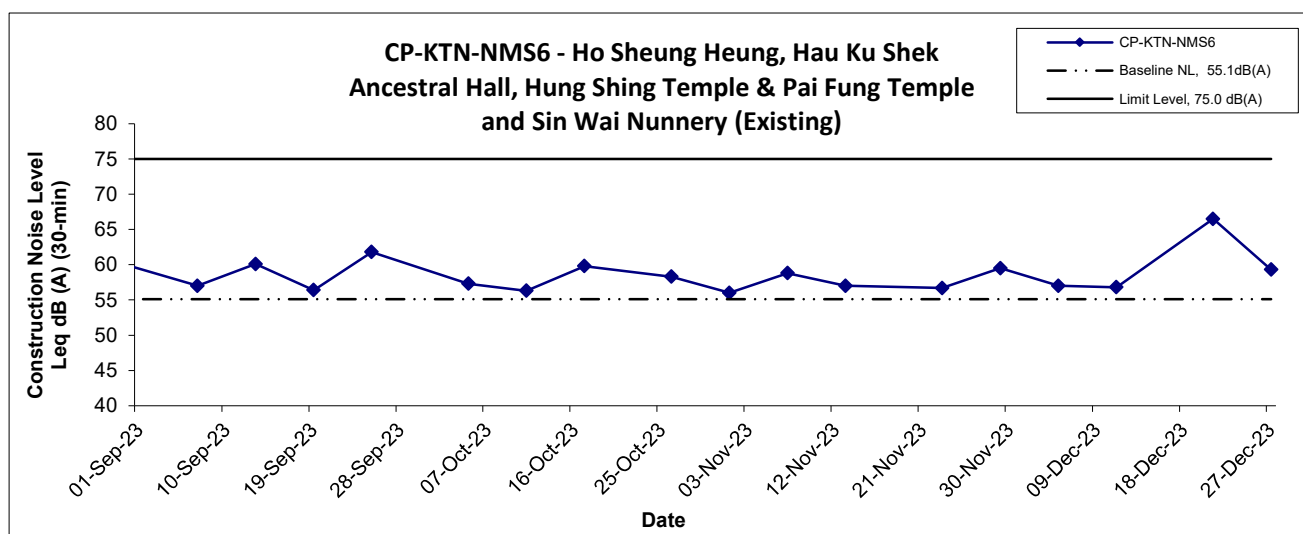
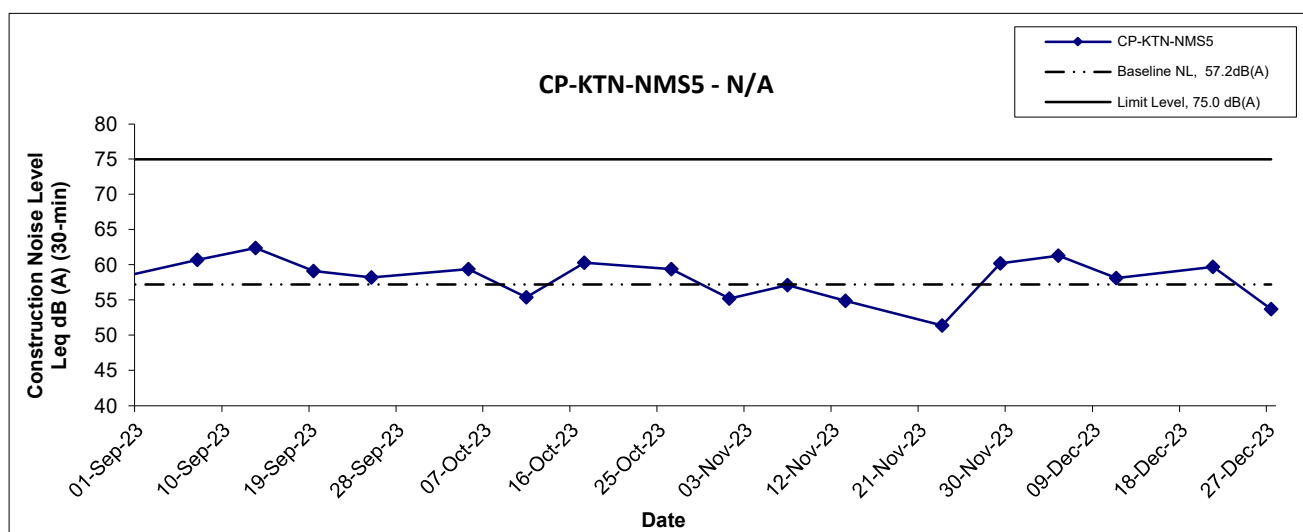
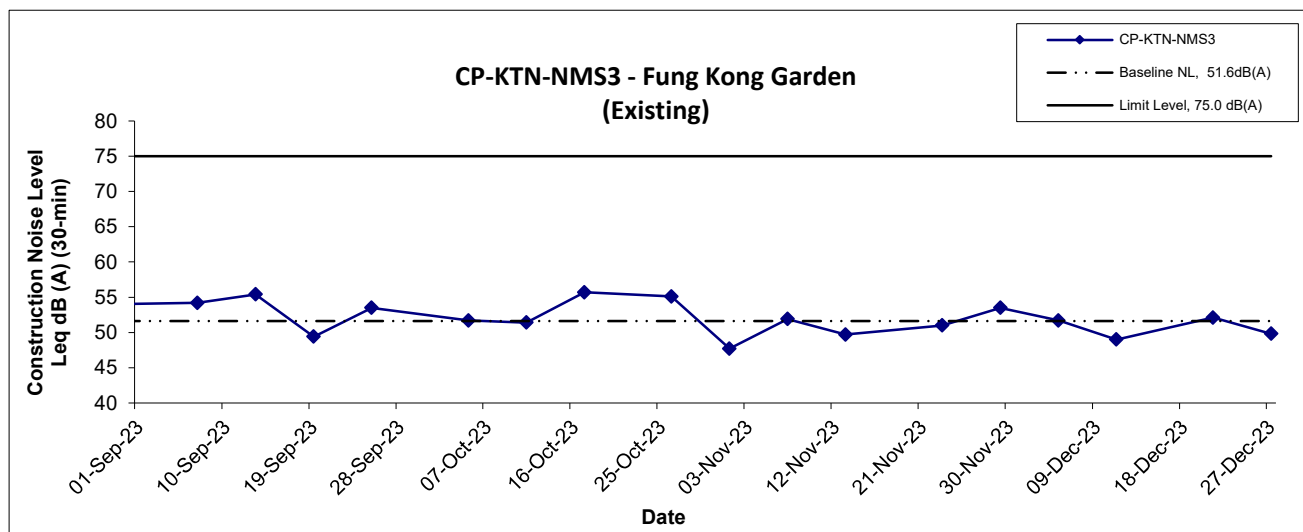
## Noise Levels




<b>Title</b> Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	<b>Scale</b> N.T.S	<b>Project No.</b> WMA20002	
	<b>Date</b> Dec 23	<b>Appendix</b> F	



## Noise Levels



<b>Title</b> Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	<b>Scale</b> N.T.S	<b>Project No.</b> WMA20002	 consulting . testing . research
	<b>Date</b> Dec 23	<b>Appendix</b> F	

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**APPENDIX G**  
**WATER QUALITY MONITORING**  
**RESULTS AND GRAPHICAL**  
**PRESENTATIONS**

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Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  
Water Quality Monitoring Results

Location: SYR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (µg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-23	Cloudy	10:07	Middle	0.2	20.7 20.7	20.7	7.7 7.7	7.7	0.1 0.1	0.1	85.9 85.6	85.8	7.7 7.7	7.7	6.9 7.1	7.0	7 7	7.0	5 5	5.0
4-Dec-23	Sunny	12:42	Middle	0.2	25.2 25.2	25.2	8.3 8.3	8.3	0.1 0.1	0.1	143.5 143.7	143.6	11.8 11.8	11.8	4.3 4.1	4.2	7 7	7.0	5 5	5.0
6-Dec-23	Cloudy	10:07	Middle	0.2	21.2 21.2	21.2	8.0 8.0	8.0	0.1 0.1	0.1	68.7 68.4	68.6	6.1 6.1	6.1	6.4 6.6	6.5	8 9	8.5	5 6	5.5
8-Dec-23	Sunny	10:46	Middle	0.2	19.1 19.1	19.1	8.5 8.5	8.5	0.1 0.1	0.1	58.6 57.2	57.9	5.4 5.3	5.4	4.6 4.6	4.6	6 7	6.5	5 6	5.5
11-Dec-23	Cloudy	13:03	Middle	0.1	26.1 26.1	26.1	7.4 7.4	7.4	0.2 0.2	0.2	71.9 71.8	71.9	5.8 5.8	5.8	6.2 6.0	6.1	11 10	10.5	6 7	6.5
13-Dec-23	Cloudy	10:42	Middle	0.2	23.3 23.3	23.3	8.2 8.1	8.2	0.2 0.2	0.2	47.6 46.0	46.8	4.1 3.9	4.0	10.1 10.2	10.2	18 16	17.0	8 7	7.5
15-Dec-23	Sunny	15:06	Middle	0.1	26.2 26.2	26.2	7.4 7.4	7.4	0.1 0.1	0.1	73.2 72.9	73.1	5.9 5.9	5.9	11.2 10.7	11.0	19 17	18.0	6 6	6.0
18-Dec-23	Cloudy	12:06	Middle	0.1	18.8 18.8	18.8	7.1 7.1	7.1	0.2 0.2	0.2	32.1 31.7	31.9	3.0 3.0	3.0	20.1 20.5	20.3	23 24	23.5	11 9	10.0
20-Dec-23	Cloudy	10:24	Middle	0.2	16.7 16.7	16.7	8.2 8.2	8.2	0.1 0.1	0.1	67.5 67.4	67.5	6.6 6.6	6.6	5.9 5.9	5.9	6 6	6.0	7 7	7.0
22-Dec-23	Cloudy	11:00	Middle	0.1	13.1 13.1	13.1	7.2 7.2	7.2	0.4 0.4	0.4	68.0 67.9	68.0	7.1 7.1	7.1	12.3 12.3	12.3	5 5	5.0	7 6	6.5
27-Dec-23	Sunny	12:24	Middle	0.2	17.5 17.5	17.5	8.8 8.7	8.8	0.1 0.1	0.1	73.3 72.3	72.8	7.0 6.9	7.0	4.3 4.6	4.5	4 5	4.5	7 7	7.0
29-Dec-23	Sunny	12:26	Middle	0.2	20.2 20.2	20.2	7.6 7.6	7.6	0.1 0.1	0.1	65.2 64.9	65.1	5.9 5.9	5.9	8.4 8.5	8.5	12 11	11.5	7 8	7.5



Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  
Water Quality Monitoring Results

Location: SYR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (µg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-23	Cloudy	10:24	Middle	0.1	20.5 20.5	20.5	7.6 7.6	7.6	0.1 0.1	0.1	90.5 90.4	90.5	8.1 8.1	8.1	13.7 14.6	14.2	16 15	15.5	6 5	5.5
4-Dec-23	Sunny	12:59	Middle	0.1	26.5 26.5	26.5	7.9 7.9	7.9	0.1 0.1	0.1	102.4 102.4	102.4	8.2 8.2	8.2	31.7 31.7	31.7	32 35	33.5	4 4	4.0
6-Dec-23	Cloudy	10:23	Middle	0.1	21.0 21.0	21.0	7.7 7.7	7.7	0.1 0.1	0.1	71.1 73.5	72.3	6.3 6.6	6.5	15.0 15.4	15.2	14 15	14.5	4 4	4.0
8-Dec-23	Sunny	11:00	Middle	0.3	19.8 19.8	19.8	8.2 8.2	8.2	0.1 0.1	0.1	75.8 75.2	75.5	6.9 6.9	6.9	16.9 16.8	16.9	17 14	15.5	6 6	6.0
11-Dec-23	Cloudy	13:21	Middle	0.2	26.8 26.8	26.8	7.4 7.4	7.4	0.1 0.1	0.1	79.7 79.7	79.7	6.4 6.4	6.4	37.4 37.0	37.2	33 34	33.5	7 7	7.0
13-Dec-23	Cloudy	10:54	Middle	0.3	23.5 23.4	23.5	7.7 7.6	7.7	0.2 0.2	0.2	75.1 75.5	75.3	6.4 6.4	6.4	21.7 21.9	21.8	32 32	32.0	3 3	3.0
15-Dec-23	Sunny	15:20	Middle	0.2	28.6 28.6	28.6	7.3 7.3	7.3	0.3 0.3	0.3	93.6 93.6	93.6	7.2 7.2	7.2	33.8 33.6	33.7	40 36	38.0	3 3	3.0
18-Dec-23	Cloudy	12:23	Middle	0.2	18.2 18.2	18.2	7.4 7.4	7.4	0.1 0.1	0.1	92.4 92.4	92.4	8.7 8.7	8.7	24.2 23.8	24.0	52 45	48.5	8 7	7.5
20-Dec-23	Cloudy	10:40	Middle	0.1	15.8 15.8	15.8	8.2 8.1	8.2	0.1 0.1	0.1	94.1 94.1	94.1	9.3 9.3	9.3	25.1 25.5	25.3	53 44	48.5	5 6	5.5
22-Dec-23	Cloudy	11:17	Middle	0.1	13.1 13.1	13.1	7.6 7.6	7.6	0.1 0.1	0.1	97.1 97.0	97.1	10.2 10.2	10.2	7.1 7.1	7.1	8 8	8.0	7 7	7.0
27-Dec-23	Sunny	12:39	Middle	0.4	19.7 19.7	19.7	7.7 7.7	7.7	0.2 0.2	0.2	72.5 71.8	72.2	6.6 6.6	6.6	24.2 23.7	24.0	37 36	36.5	5 6	5.5
29-Dec-23	Sunny	12:09	Middle	0.2	22.3 22.4	22.4	7.6 7.6	7.6	0.2 0.2	0.2	74.1 73.6	73.9	6.4 6.4	6.4	20.4 21.0	20.7	39 42	40.5	6 6	6.0

**Contract No. NDO 04/2019**  
**Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas**  
**Water Quality Monitoring Results**

**Location: NTR-CS1**

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-23	Cloudy	11:33	Middle	0.2	21.4 21.4	21.4	7.7 7.7	7.7	0.1 0.1	0.1	115.4 115.5	115.5	10.2 10.2	10.2	9.7 9.7	9.7	6 6	6.0
4-Dec-23	Sunny	14:09	Middle	0.2	24.9 24.9	24.9	7.7 7.6	7.7	0.1 0.1	0.1	120.5 120.6	120.6	10.0 10.0	10.0	9.4 9.5	9.5	5 5	5.0
6-Dec-23	Cloudy	11:42	Middle	0.2	21.5 21.5	21.5	7.5 7.5	7.5	0.1 0.1	0.1	93.6 93.5	93.6	8.3 8.3	8.3	10.5 10.8	10.7	9 9	9.0
8-Dec-23	Sunny	12:10	Middle	0.2	21.3 21.3	21.3	7.8 7.8	7.8	0.1 0.1	0.1	110.1 110.1	110.1	9.7 9.8	9.8	10.7 10.7	10.7	5 5	5.0
11-Dec-23	Cloudy	15:04	Middle	0.2	25.8 25.8	25.8	7.4 7.4	7.4	0.1 0.1	0.1	106.7 106.8	106.8	8.7 8.7	8.7	8.7 8.9	8.8	9 10	9.5
13-Dec-23	Cloudy	12:13	Middle	0.2	23.1 23.1	23.1	7.4 7.4	7.4	0.1 0.1	0.1	100.4 100.4	100.4	8.6 8.6	8.6	18.0 17.9	18.0	25 26	25.5
15-Dec-23	Sunny	17:01	Middle	0.2	25.9 25.9	25.9	7.4 7.4	7.4	0.1 0.1	0.1	86.1 85.9	86.0	7.0 7.0	7.0	13.1 13.0	13.1	11 11	11.0
18-Dec-23	Cloudy	13:44	Middle	0.2	17.8 17.8	17.8	7.3 7.3	7.3	0.04 0.04	0.04	103.1 103.1	103.1	9.8 9.8	9.8	9.6 9.6	9.6	7 7	7.0
20-Dec-23	Cloudy	11:53	Middle	0.2	16.8 16.8	16.8	7.9 7.9	7.9	0.1 0.1	0.1	106.5 106.7	106.6	10.3 10.4	10.4	8.6 8.7	8.7	5 4	4.5
22-Dec-23	Cloudy	12:22	Middle	0.2	15.2 15.3	15.3	8.1 8.1	8.1	0.4 0.4	0.4	110.2 110.2	110.2	11.0 11.0	11.0	5.0 5.0	5.0	5 5	5.0
27-Dec-23	Sunny	14:28	Middle	0.2	20.4 20.4	20.4	7.9 7.9	7.9	0.1 0.1	0.1	115.0 115.4	115.2	10.4 10.4	10.4	9.5 9.7	9.6	6 6	6.0
29-Dec-23	Sunny	11:16	Middle	0.2	20.5 20.5	20.5	7.6 7.6	7.6	0.1 0.1	0.1	109.8 109.8	109.8	9.9 9.9	9.9	8.7 8.9	8.8	5 5	5.0

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas

Water Quality Monitoring Results

Location: NTR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-23	Cloudy	10:46	Middle	0.3	21.2 21.2	21.2	7.7 7.7	7.7	0.1 0.1	0.1	70.5 70.4	70.5	6.3 6.3	6.3	9.6 9.7	9.7	7 7	7.0
4-Dec-23	Sunny	13:17	Middle	0.4	24.4 24.4	24.4	7.9 7.9	7.9	0.1 0.1	0.1	105.2 105.1	105.2	8.8 8.8	8.8	9.5 9.5	9.5	6 5	5.5
6-Dec-23	Cloudy	10:47	Middle	0.4	20.9 20.8	20.9	7.8 7.8	7.8	0.1 0.1	0.1	73.5 72.9	73.2	6.6 6.5	6.6	7.9 7.7	7.8	8 7	7.5
8-Dec-23	Sunny	11:22	Middle	0.4	20.4 20.4	20.4	8.1 8.1	8.1	0.1 0.1	0.1	71.1 70.9	71.0	6.4 6.4	6.4	7.5 7.4	7.5	7 8	7.5
11-Dec-23	Cloudy	14:07	Middle	0.3	25.1 25.1	25.1	7.5 7.5	7.5	0.1 0.1	0.1	81.9 81.8	81.9	6.8 6.7	6.8	5.7 5.6	5.7	7 7	7.0
13-Dec-23	Cloudy	11:26	Middle	0.1	22.9 22.9	22.9	7.8 7.8	7.8	0.1 0.1	0.1	89.9 89.8	89.9	7.7 7.7	7.7	20.6 20.3	20.5	24 27	25.5
15-Dec-23	Sunny	16:13	Middle	0.1	27.6 27.6	27.6	7.4 7.4	7.4	0.2 0.2	0.2	115.4 115.4	115.4	9.1 9.1	9.1	8.7 8.7	8.7	11 11	11.0
18-Dec-23	Cloudy	12:49	Middle	0.3	16.9 16.9	16.9	7.7 7.7	7.7	0.1 0.1	0.1	68.2 67.5	67.9	6.6 6.5	6.6	7.8 7.9	7.9	7 7	7.0
20-Dec-23	Cloudy	11:01	Middle	0.5	16.0 16.0	16.0	8.4 8.4	8.4	0.1 0.1	0.1	77.5 77.0	77.3	7.7 7.6	7.7	8.7 8.8	8.8	7 8	7.5
22-Dec-23	Cloudy	11:55	Middle	0.2	13.0 13.0	13.0	7.4 7.4	7.4	0.1 0.1	0.1	84.0 83.4	83.7	8.9 8.8	8.9	5.5 5.5	5.5	5 6	5.5
27-Dec-23	Sunny	13:45	Middle	0.5	18.7 18.7	18.7	7.7 7.7	7.7	0.1 0.1	0.1	76.1 76.0	76.1	7.1 7.1	7.1	5.3 5.1	5.2	5 5	5.0
29-Dec-23	Sunny	11:50	Middle	0.2	20.5 20.5	20.5	7.6 7.6	7.6	0.1 0.1	0.1	68.5 68.2	68.4	6.2 6.2	6.2	9.3 9.3	9.3	6 5	5.5



Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas

Water Quality Monitoring Results

Location: SHST-IS2

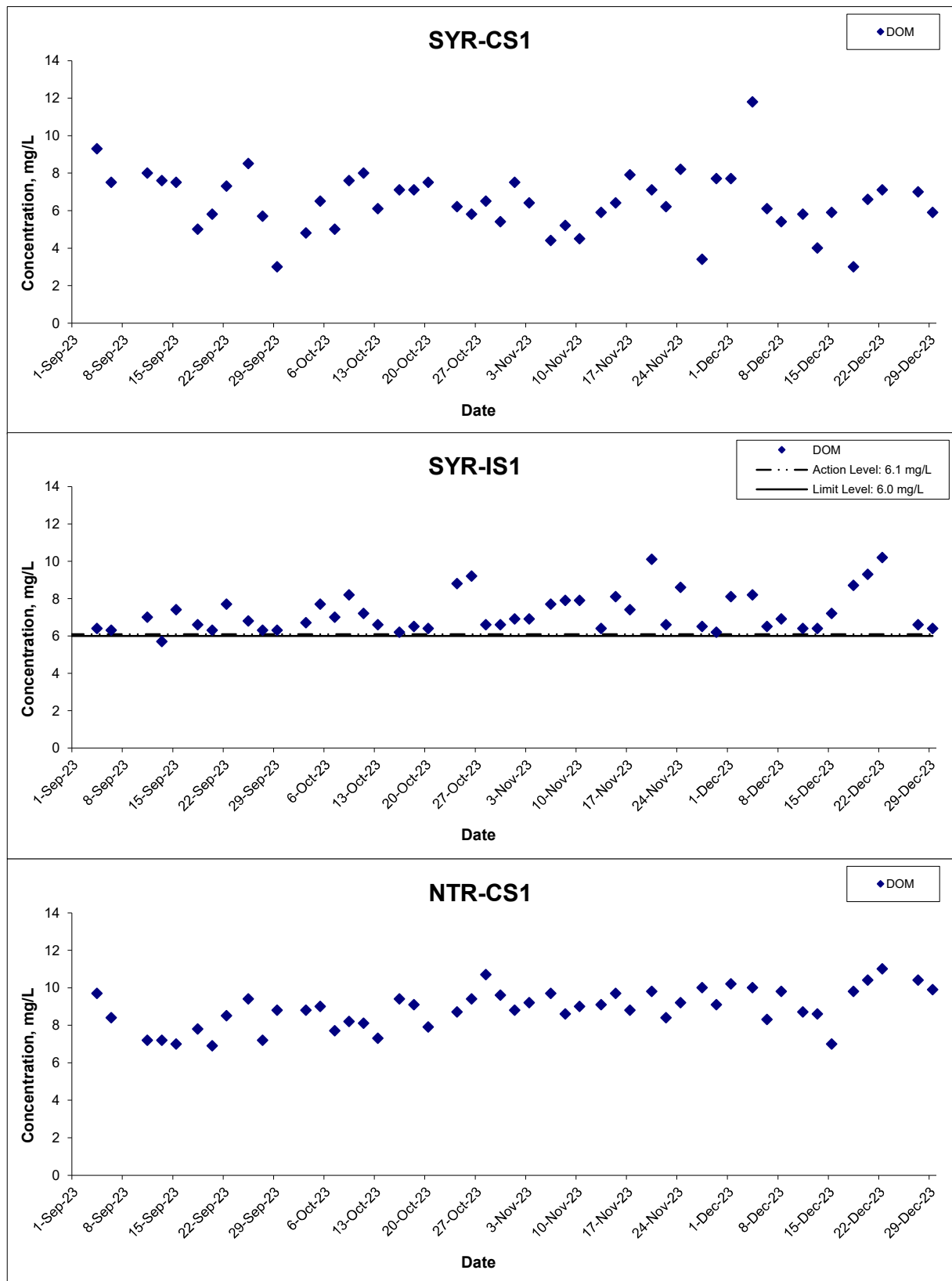
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-23	Cloudy	11:02	Middle	0.2	21.3 21.3	21.3	7.6 7.6	7.6	0.1 0.1	0.1	82.8 82.6	82.7	7.3 7.3	7.3	10.0 10.0	10.0	6 5	5.5
4-Dec-23	Sunny	13:44	Middle	0.2	22.6 22.6	22.6	8.2 8.2	8.2	0.1 0.1	0.1	95.8 95.8	95.8	8.3 8.3	8.3	9.2 9.2	9.2	4 4	4.0
6-Dec-23	Cloudy	11:02	Middle	0.2	20.5 20.4	20.5	8.1 8.1	8.1	0.1 0.1	0.1	84.0 83.7	83.9	7.6 7.5	7.6	12.4 12.3	12.4	5 5	5.0
8-Dec-23	Sunny	11:33	Middle	0.2	18.6 18.6	18.6	8.2 8.2	8.2	0.1 0.1	0.1	88.3 88.1	88.2	8.3 8.2	8.3	8.5 8.4	8.5	4 5	4.5
11-Dec-23	Cloudy	13:50	Middle	0.2	23.8 23.8	23.8	7.5 7.5	7.5	0.1 0.1	0.1	87.5 87.0	87.3	7.4 7.4	7.4	6.7 6.4	6.6	6 5	5.5
13-Dec-23	Cloudy	11:37	Middle	0.2	22.4 22.4	22.4	7.8 7.7	7.8	0.1 0.1	0.1	82.4 82.0	82.2	7.2 7.1	7.2	9.4 9.4	9.4	8 7	7.5
15-Dec-23	Sunny	15:47	Middle	0.2	24.0 24.0	24.0	7.5 7.5	7.5	0.1 0.1	0.1	86.9 87.8	87.4	7.3 7.4	7.4	15.1 15.1	15.1	9 10	9.5
18-Dec-23	Cloudy	13:05	Middle	0.2	16.2 16.2	16.2	7.9 7.9	7.9	0.1 0.1	0.1	89.8 89.1	89.5	8.8 8.8	8.8	11.2 11.1	11.2	8 8	8.0
20-Dec-23	Cloudy	11:16	Middle	0.2	15.7 15.7	15.7	8.1 8.0	8.1	0.1 0.1	0.1	71.1 71.0	71.1	7.1 7.0	7.1	6.3 6.3	6.3	3 3	3.0
22-Dec-23	Cloudy	11:41	Middle	0.2	12.7 12.7	12.7	7.8 7.8	7.8	0.1 0.1	0.1	95.8 95.7	95.8	10.2 10.2	10.2	5.1 5.0	5.1	5 6	5.5
27-Dec-23	Sunny	13:52	Middle	0.2	17.1 17.1	17.1	8.0 8.0	8.0	0.1 0.1	0.1	89.0 88.9	89.0	8.6 8.6	8.6	6.5 6.5	6.5	3 3	3.0
29-Dec-23	Sunny	11:38	Middle	0.2	19.5 19.5	19.5	7.7 7.7	7.7	0.1 0.1	0.1	88.9 88.9	88.9	8.2 8.2	8.2	7.1 7.1	7.1	5 6	5.5


Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  
Water Quality Monitoring Results

Location: MWR-IS3

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-23	Cloudy	11:23	Middle	0.2	21.7 21.7	21.7	7.9 7.9	7.9	0.1 0.1	0.1	103.4 103.4	103.4	9.1 9.1	9.1	9.6 9.5	9.6	11 11	11.0
4-Dec-23	Sunny	14:00	Middle	0.2	24.7 24.8	24.8	7.9 7.8	7.9	0.1 0.1	0.1	104.4 104.5	104.5	8.7 8.7	8.7	10.5 10.6	10.6	12 10	11.0
6-Dec-23	Cloudy	11:30	Middle	0.2	21.5 21.5	21.5	7.8 7.8	7.8	0.1 0.1	0.1	100.1 100.3	100.2	8.8 8.9	8.9	10.1 10.3	10.2	10 10	10.0
8-Dec-23	Sunny	11:59	Middle	0.2	22.0 21.9	22.0	8.0 8.0	8.0	0.1 0.1	0.1	101.3 101.3	101.3	8.9 8.9	8.9	10.6 10.9	10.8	10 12	11.0
11-Dec-23	Cloudy	14:50	Middle	0.2	25.6 25.6	25.6	7.4 7.4	7.4	0.2 0.2	0.2	106.9 108.2	107.6	8.7 8.8	8.8	10.0 9.2	9.6	11 13	12.0
13-Dec-23	Cloudy	12:04	Middle	0.2	23.2 23.2	23.2	7.6 7.6	7.6	0.1 0.1	0.1	101.4 102.5	102.0	8.7 8.8	8.8	14.7 14.3	14.5	20 18	19.0
15-Dec-23	Sunny	16:49	Middle	0.2	25.7 25.7	25.7	7.4 7.4	7.4	0.1 0.1	0.1	107.9 108.3	108.1	8.8 8.8	8.8	8.1 8.1	8.1	10 11	10.5
18-Dec-23	Cloudy	13:34	Middle	0.2	18.4 18.4	18.4	7.3 7.2	7.3	0.1 0.1	0.1	92.1 92.1	92.1	8.7 8.6	8.7	9.9 10.1	10.0	10 11	10.5
20-Dec-23	Cloudy	11:44	Middle	0.2	16.7 16.7	16.7	8.1 8.0	8.1	0.1 0.1	0.1	105.6 105.5	105.6	10.3 10.3	10.3	6.9 6.8	6.9	6 7	6.5
22-Dec-23	Cloudy	12:40	Middle	0.2	15.5 15.5	15.5	7.5 7.5	7.5	0.6 0.6	0.6	109.0 109.2	109.1	10.8 10.9	10.9	5.2 5.2	5.2	<2.5 <2.5	<2.5
27-Dec-23	Sunny	14:13	Middle	0.2	20.8 20.8	20.8	7.9 7.9	7.9	0.1 0.1	0.1	98.6 98.5	98.6	8.8 8.8	8.8	10.0 10.0	10.0	6 7	6.5
29-Dec-23	Sunny	10:59	Middle	0.2	20.5 20.5	20.5	7.6 7.6	7.6	0.1 0.1	0.1	105.7 105.8	105.8	9.5 9.5	9.5	6.9 7.0	7.0	11 12	11.5

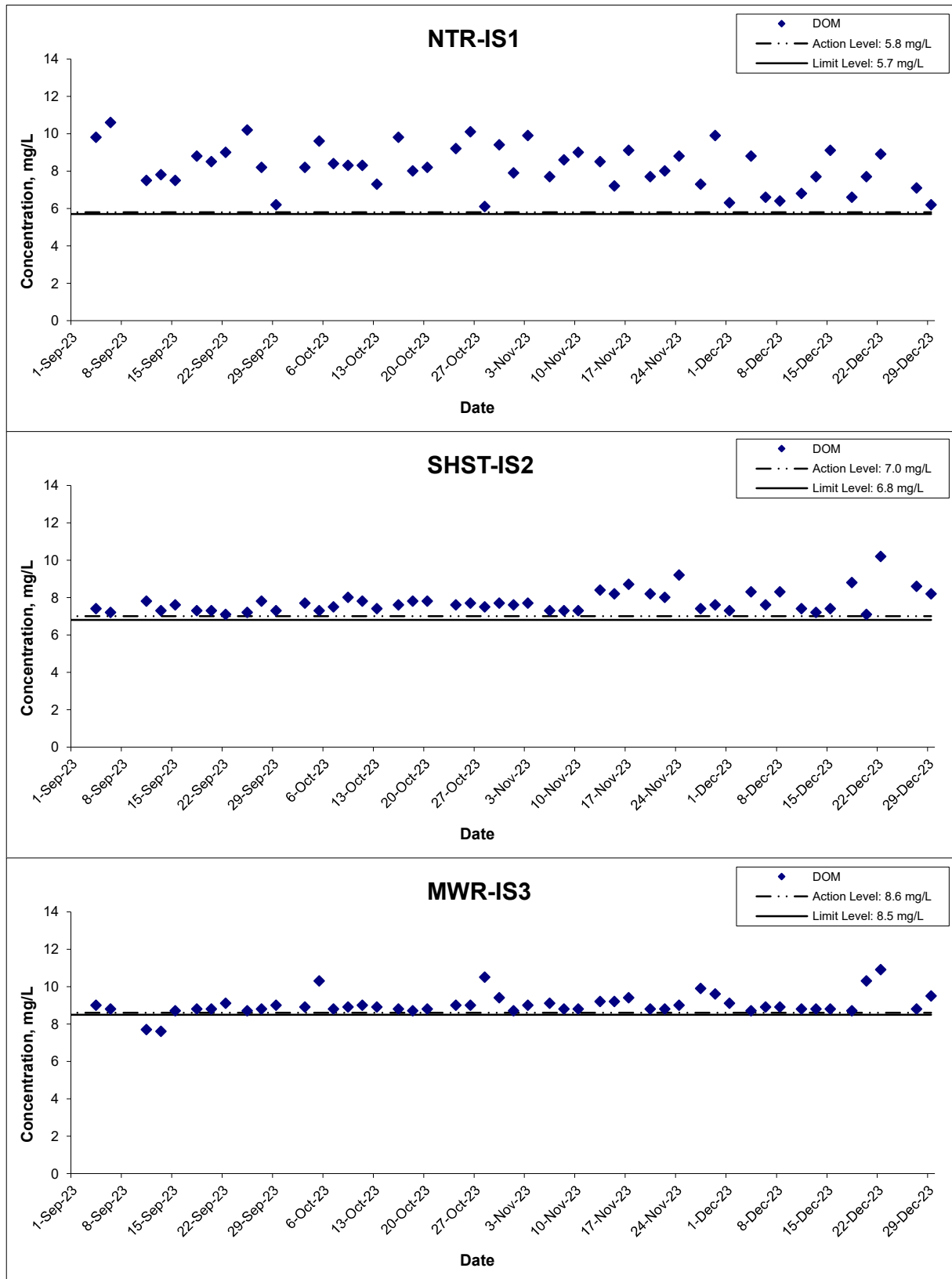
## Dissolved Oxygen (Middle)




<b>Title</b> Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	<b>Scale</b> N.T.S	<b>Project No.</b> WMA20002	 consulting . testing . research
	<b>Date</b> Dec 23	<b>Appendix</b> G	

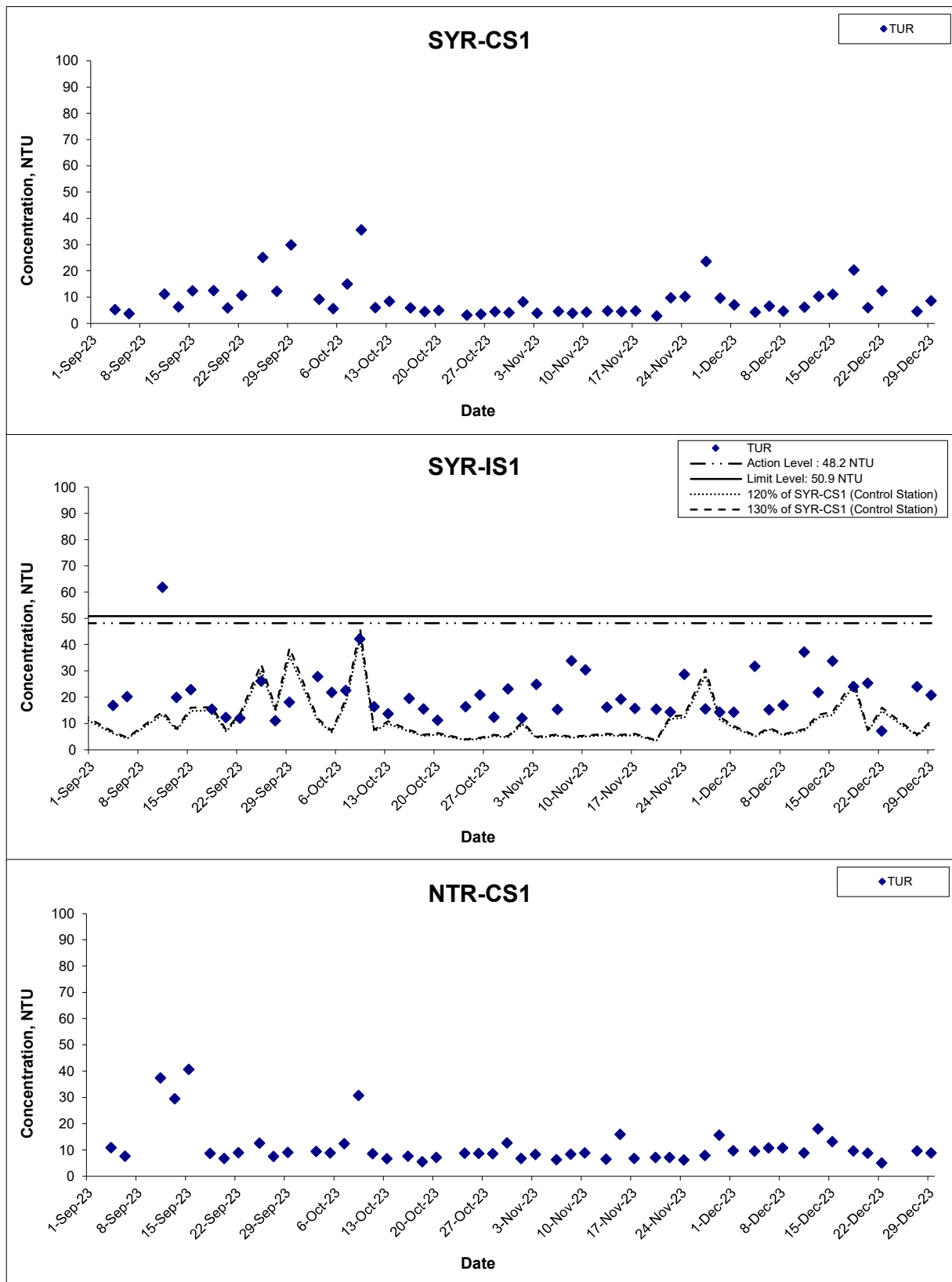



## Dissolved Oxygen (Middle)



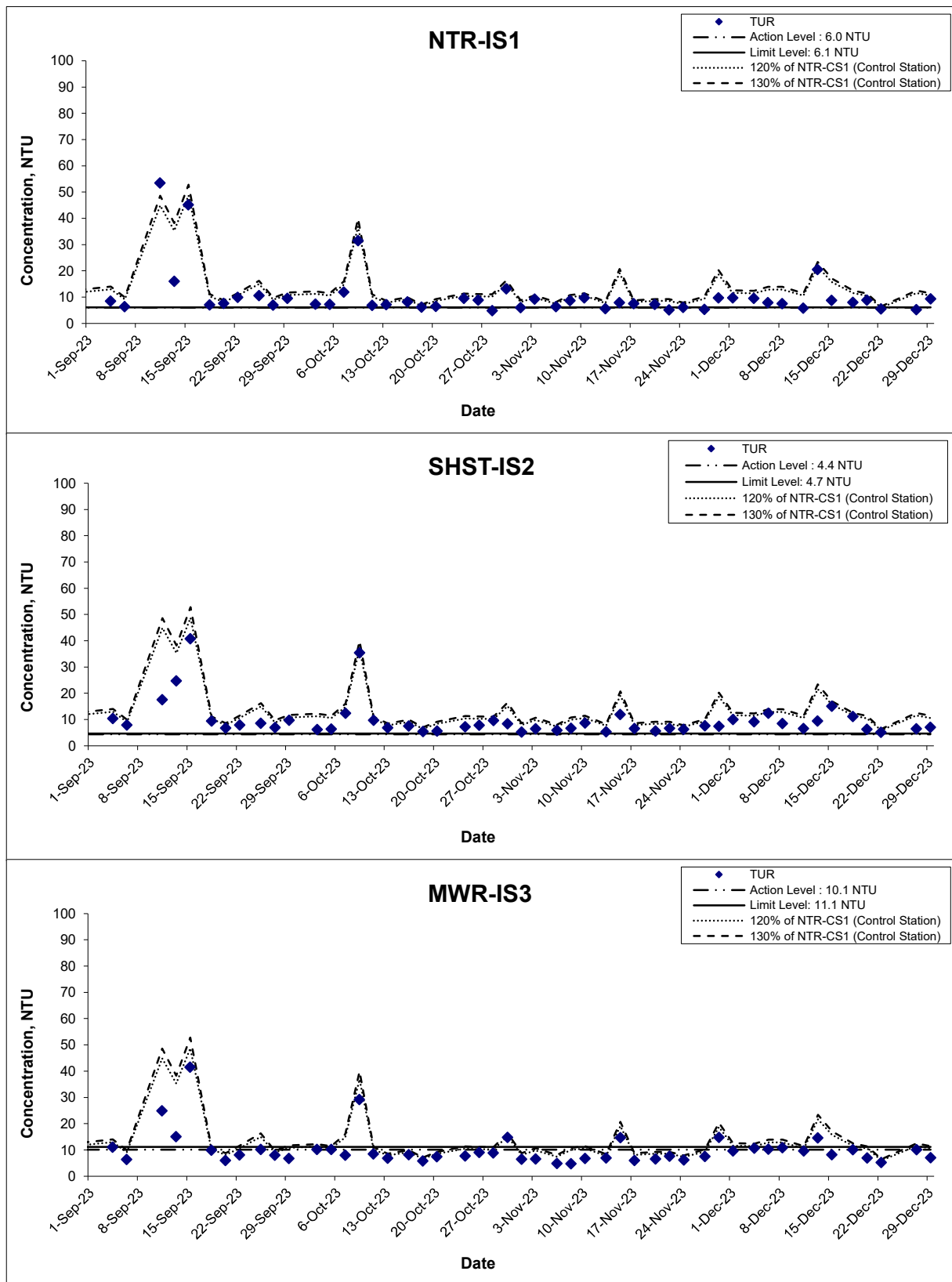
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas	Scale N.T.S	Project No. WMA20002	
	Graphical Presentation of Water Quality Monitoring Results	Date Dec 23	Appendix G	


## Turbidity (Depth-averaged)



Title	Contract No. NDO 04/2019	Scale	Project	 consulting . testing . research
	Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas	N.T.S	No. WMA20002	
	Graphical Presentation of Water Quality Monitoring Results	Date Dec 23	Appendix G	

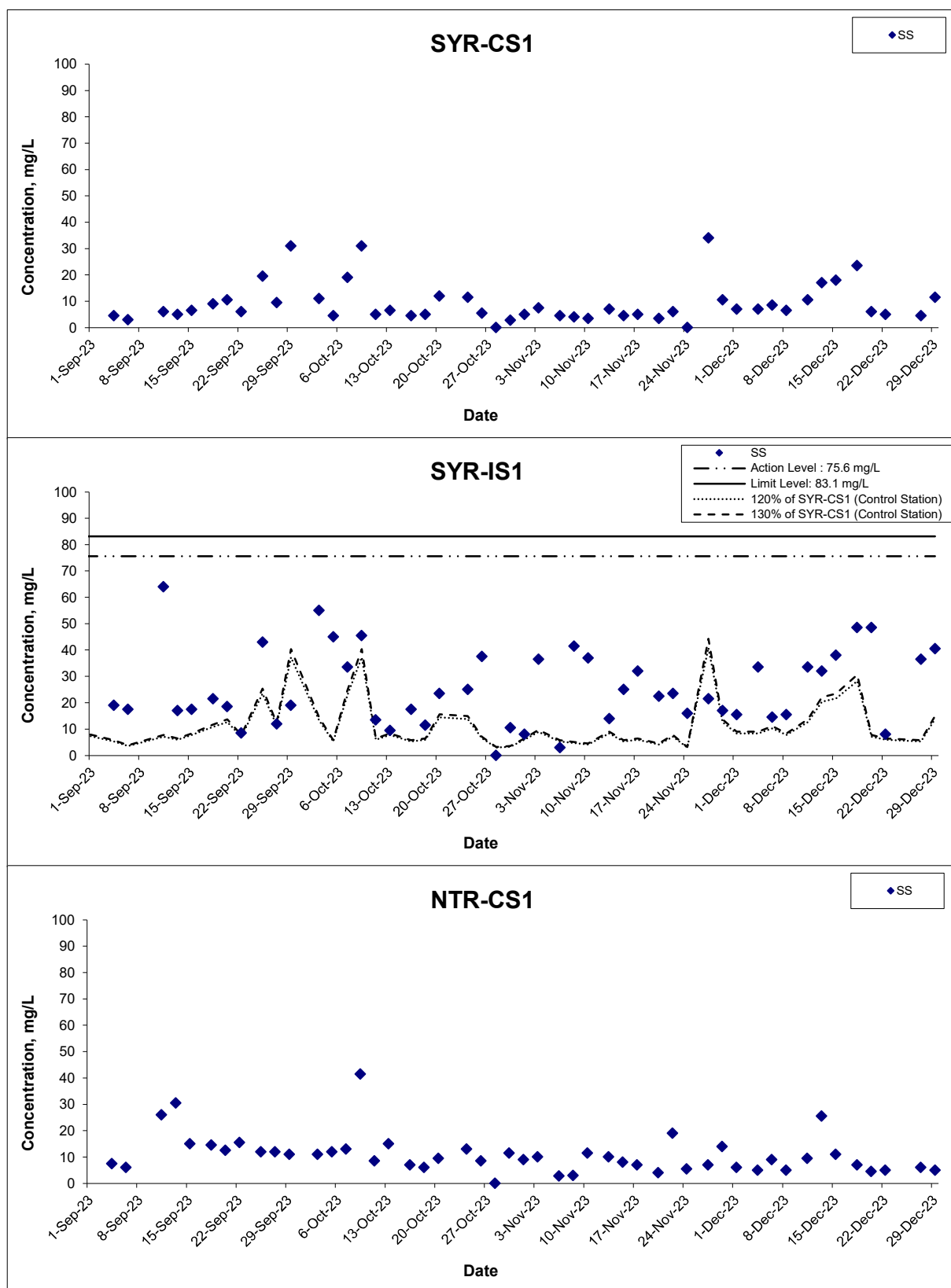
## Turbidity (Depth-averaged)




<b>Title</b> Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  Graphical Presentation of Water Quality Monitoring Results	<b>Scale</b> N.T.S	<b>Project No.</b> WMA20002	 consulting . testing . research
	<b>Date</b> Dec 23	<b>Appendix</b> G	



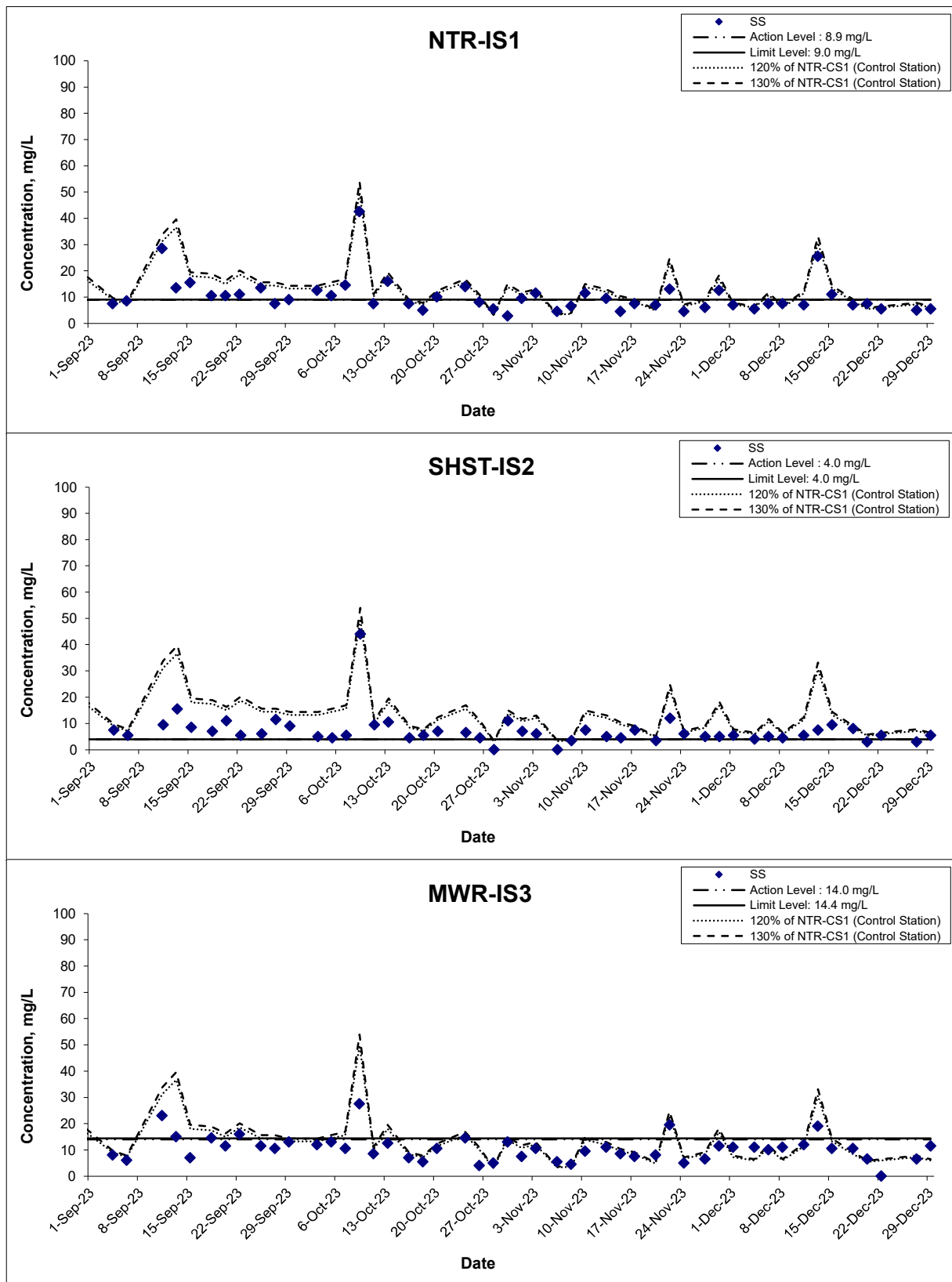
## Suspended Solids (Depth-averaged)




Remark: The graphical point at zero concentration is presented as <2.5 mg/L

Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	 consulting . testing . research
	Date Dec 23	Appendix G	

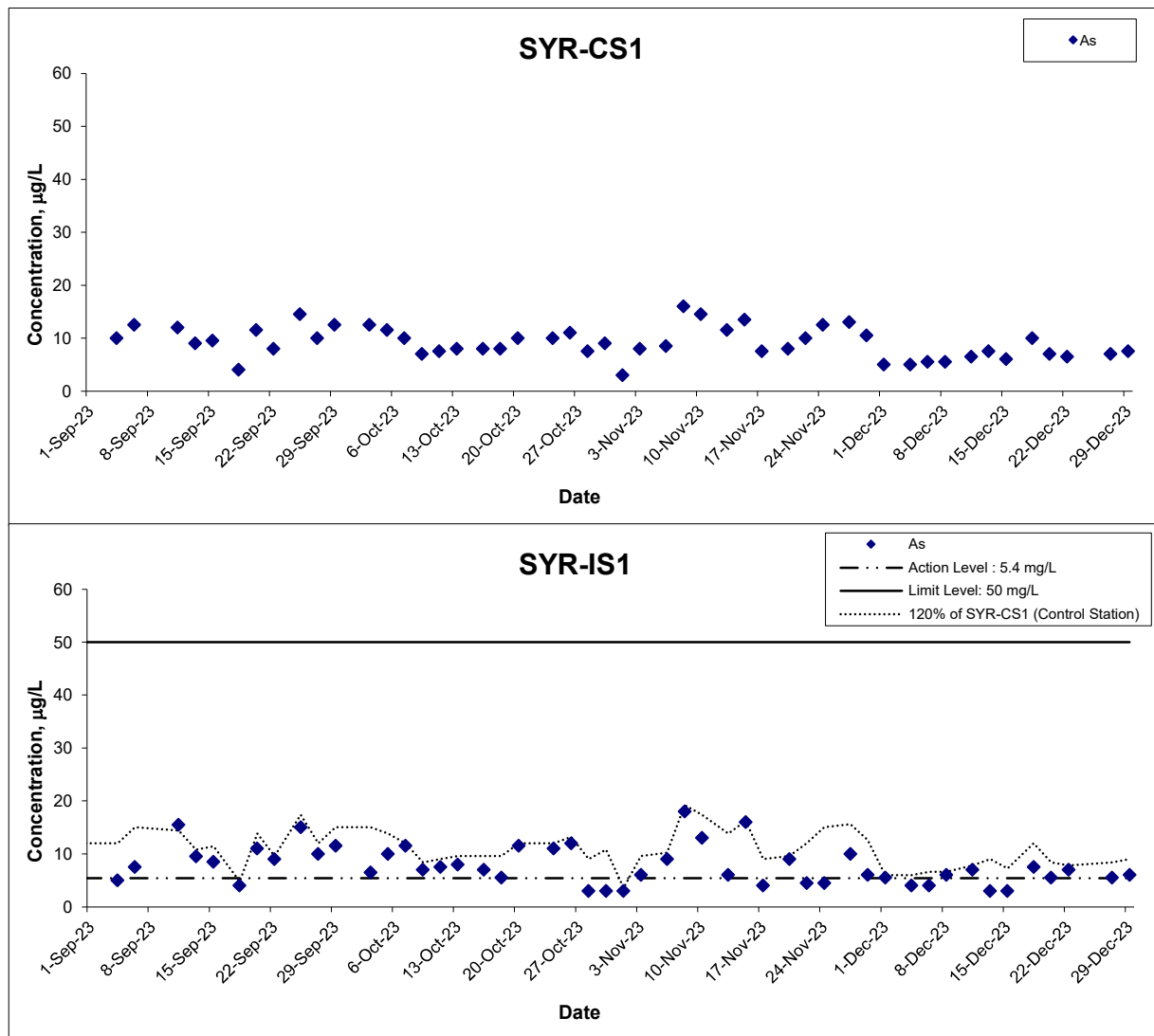
## Suspended Solids (Depth-averaged)




Remark: The graphical point at zero concentration is presented as <2.5 mg/L

<b>Title</b> Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  Graphical Presentation of Water Quality Monitoring Results	<b>Scale</b> N.T.S	<b>Project No.</b> WMA20002	 consulting . testing . research
	<b>Date</b> Dec 23	<b>Appendix</b> G	

## Arsenic (Depth-averaged)



Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas  Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No.	WMA20002	
		Date	Dec 23	Appendix	G	



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**APPENDIX H**  
**LABORATORY TESTING REPORTS FOR**  
**LABORATORY ANALYSIS**

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## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39249
Date of Issue:	2023-12-07
Date Received:	2023-12-01
Date Tested:	2023-12-01
Date Completed:	2023-12-07

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39249  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231201  
**Sampling Date :** 2023-12-01

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39249-2	39249-3	39249-5	39249-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	16	15
Arsenic (µg/L)	5	5	6	5

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39249A
Date of Issue:	2023-12-07
Date Received:	2023-12-01
Date Tested:	2023-12-01
Date Completed:	2023-12-07

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 8 liquid samples as received from client said to be water  
**Laboratory No. :** 39249A  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231201  
**Sampling Date :** 2023-12-01

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39249-8	39249-9	39249-11	39249-12
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	7	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39249-14	39249-15	39249-17	39249-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	5	11	11

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39276
Date of Issue:	2023-12-08
Date Received:	2023-12-04
Date Tested:	2023-12-04
Date Completed:	2023-12-08

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39276  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231204  
**Sampling Date :** 2023-12-04

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39276-2	39276-3	39276-5	39276-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	32	35
Arsenic (µg/L)	5	5	4	4

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

**TEST REPORT**

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39276A
Date of Issue:	2023-12-08
Date Received:	2023-12-04
Date Tested:	2023-12-04
Date Completed:	2023-12-08

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
**Laboratory No.** : 39276A  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231204  
**Sampling Date** : 2023-12-04

**Tests Requested & Methodology:**

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

**Results:**

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39276-8	39276-9	39276-11	39276-12
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	6	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39276-14	39276-15	39276-17	39276-18
Total Suspended Solids dried at 103-105°C (mg/L)	4	4	12	10

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

**TEST REPORT**

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39286
Date of Issue:	2023-12-12
Date Received:	2023-12-06
Date Tested:	2023-12-06
Date Completed:	2023-12-12

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39286  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231206  
**Sampling Date :** 2023-12-06

**Tests Requested & Methodology:**

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

**Results:**

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39286-2	39286-3	39286-5	39286-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	9	14	15
Arsenic (µg/L)	5	6	4	4

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



**TEST REPORT**

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39286A
Date of Issue:	2023-12-12
Date Received:	2023-12-06
Date Tested:	2023-12-06
Date Completed:	2023-12-12

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
Laboratory No. : 39286A  
Project No. : WMA20002  
Project Name : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
Custody No. : WMA20002/231206  
Sampling Date : 2023-12-06

**Tests Requested & Methodology:**

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

**Results:**

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39286-8	39286-9	39286-11	39286-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	9	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39286-14	39286-15	39286-17	39286-18
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	10	10

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39298
Date of Issue:	2023-12-14
Date Received:	2023-12-08
Date Tested:	2023-12-08
Date Completed:	2023-12-14

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39298  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231208  
**Sampling Date :** 2023-12-08

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39298-2	39298-3	39298-5	39298-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	17	14
Arsenic (µg/L)	5	6	6	6

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39298A
Date of Issue:	2023-12-14
Date Received:	2023-12-08
Date Tested:	2023-12-08
Date Completed:	2023-12-14

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
**Laboratory No.** : 39298A  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231208  
**Sampling Date** : 2023-12-08

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39298-8	39298-9	39298-11	39298-12
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	7	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39298-14	39298-15	39298-17	39298-18
Total Suspended Solids dried at 103-105°C (mg/L)	4	5	10	12

Remarks: 1) <= less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39322
Date of Issue:	2023-12-15
Date Received:	2023-12-11
Date Tested:	2023-12-11
Date Completed:	2023-12-15

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 4 liquid samples as received from client said to be water  
**Laboratory No.** : 39322  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231211  
**Sampling Date** : 2023-12-11

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39322-2	39322-3	39322-5	39322-6
Total Suspended Solids dried at 103-105°C (mg/L)	11	10	33	34
Arsenic (µg/L)	6	7	7	7

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39322A
Date of Issue:	2023-12-15
Date Received:	2023-12-11
Date Tested:	2023-12-11
Date Completed:	2023-12-15

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 8 liquid samples as received from client said to be water  
**Laboratory No. :** 39322A  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231211  
**Sampling Date :** 2023-12-11

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39322-8	39322-9	39322-11	39322-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	10	7	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39322-14	39322-15	39322-17	39322-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	5	11	13

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39332
Date of Issue:	2023-12-19
Date Received:	2023-12-13
Date Tested:	2023-12-13
Date Completed:	2023-12-19

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 4 liquid samples as received from client said to be water  
**Laboratory No.** : 39332  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231213  
**Sampling Date** : 2023-12-13

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39332-2	39332-3	39332-5	39332-6
Total Suspended Solids dried at 103-105°C (mg/L)	18	16	32	32
Arsenic (µg/L)	8	7	3	3

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39332A
Date of Issue:	2023-12-19
Date Received:	2023-12-13
Date Tested:	2023-12-13
Date Completed:	2023-12-19

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 8 liquid samples as received from client said to be water  
**Laboratory No. :** 39332A  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231213  
**Sampling Date :** 2023-12-13

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39332-8	39332-9	39332-11	39332-12
Total Suspended Solids dried at 103-105°C (mg/L)	25	26	24	27

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39332-14	39332-15	39332-17	39332-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	7	20	18

Remarks: 1) <= less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39342
Date of Issue:	2023-12-20
Date Received:	2023-12-15
Date Tested:	2023-12-15
Date Completed:	2023-12-20

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39342  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231215  
**Sampling Date :** 2023-12-15

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39342-2	39342-3	39342-5	39342-6
Total Suspended Solids dried at 103-105°C (mg/L)	19	17	40	36
Arsenic (µg/L)	6	6	3	3

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39342A
Date of Issue:	2023-12-20
Date Received:	2023-12-15
Date Tested:	2023-12-15
Date Completed:	2023-12-20

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
**Laboratory No.** : 39342A  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231215  
**Sampling Date** : 2023-12-15

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39342-8	39342-9	39342-11	39342-12
Total Suspended Solids dried at 103-105°C (mg/L)	11	11	11	11

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39342-14	39342-15	39342-17	39342-18
Total Suspended Solids dried at 103-105°C (mg/L)	9	10	10	11

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39360
Date of Issue:	2023-12-22
Date Received:	2023-12-18
Date Tested:	2023-12-18
Date Completed:	2023-12-22

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39360  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231218  
**Sampling Date :** 2023-12-18

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39360-2	39360-3	39360-5	39360-6
Total Suspended Solids dried at 103-105°C (mg/L)	23	24	52	45
Arsenic (µg/L)	11	9	8	7

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39360A
Date of Issue:	2023-12-22
Date Received:	2023-12-18
Date Tested:	2023-12-18
Date Completed:	2023-12-22

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 8 liquid samples as received from client said to be water  
**Laboratory No. :** 39360A  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231218  
**Sampling Date :** 2023-12-18

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39360-8	39360-9	39360-11	39360-12
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	7	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39360-14	39360-15	39360-17	39360-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	10	11

Remarks: 1) <= less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39371
Date of Issue:	2023-12-28
Date Received:	2023-12-20
Date Tested:	2023-12-20
Date Completed:	2023-12-28

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39371  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231220  
**Sampling Date :** 2023-12-20

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39371-2	39371-3	39371-5	39371-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	53	44
Arsenic (µg/L)	7	7	5	6

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39371A
Date of Issue:	2023-12-28
Date Received:	2023-12-20
Date Tested:	2023-12-20
Date Completed:	2023-12-28

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
**Laboratory No.** : 39371A  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231220  
**Sampling Date** : 2023-12-20

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39371-8	39371-9	39371-11	39371-12
Total Suspended Solids dried at 103-105°C (mg/L)	5	4	7	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39371-14	39371-15	39371-17	39371-18
Total Suspended Solids dried at 103-105°C (mg/L)	3	3	6	7

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39382
Date of Issue:	2024-01-02
Date Received:	2023-12-22
Date Tested:	2023-12-22
Date Completed:	2024-01-02

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39382  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231222  
**Sampling Date :** 2023-12-22

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39382-2	39382-3	39382-5	39382-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	8	8
Arsenic (µg/L)	7	6	7	7

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39382A
Date of Issue:	2024-01-02
Date Received:	2023-12-22
Date Tested:	2023-12-22
Date Completed:	2024-01-02

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
**Laboratory No.** : 39382A  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231222  
**Sampling Date** : 2023-12-22

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39382-8	39382-9	39382-11	39382-12
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	5	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39382-14	39382-15	39382-17	39382-18
Total Suspended Solids dried at 103-105°C (mg/L)	5	6	<2.5	<2.5

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39382
Date of Issue:	2024-01-03
Date Received:	2023-12-27
Date Tested:	2023-12-27
Date Completed:	2024-01-03

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 4 liquid samples as received from client said to be water  
**Laboratory No. :** 39382  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231227  
**Sampling Date :** 2023-12-27

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39382-2	39382-3	39382-5	39382-6
Total Suspended Solids dried at 103-105°C (mg/L)	4	5	37	36
Arsenic (µg/L)	7	7	5	6

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: 39382A  
Date of Issue: 2024-01-03  
Date Received: 2023-12-27  
Date Tested: 2023-12-27  
Date Completed: 2024-01-03

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 8 liquid samples as received from client said to be water  
**Laboratory No.** : 39382A  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231227  
**Sampling Date** : 2023-12-27

**Tests Requested & Methodology:**

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

**Results:**

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39382-8	39382-9	39382-11	39382-12
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39382-14	39382-15	39382-17	39382-18
Total Suspended Solids dried at 103-105°C (mg/L)	3	3	6	7

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39408
Date of Issue:	2024-01-03
Date Received:	2023-12-29
Date Tested:	2023-12-29
Date Completed:	2024-01-03

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description** : 4 liquid samples as received from client said to be water  
**Laboratory No.** : 39408  
**Project No.** : WMA20002  
**Project Name** : Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No.** : WMA20002/231229  
**Sampling Date** : 2023-12-29

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	39408-2	39408-3	39408-5	39408-6
Total Suspended Solids dried at 103-105°C (mg/L)	12	11	39	42
Arsenic (µg/L)	7	8	6	6

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	39408A
Date of Issue:	2024-01-03
Date Received:	2023-12-29
Date Tested:	2023-12-29
Date Completed:	2024-01-03

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**Sample Description :** 8 liquid samples as received from client said to be water  
**Laboratory No. :** 39408A  
**Project No. :** WMA20002  
**Project Name :** Contract No. NDO 04/2019  
Advance and First Stage Works of Kwu Tung North and Fanling North New  
Development Areas  
**Custody No. :** WMA20002/231229  
**Sampling Date :** 2023-12-29

### Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	39408-8	39408-9	39408-11	39408-12
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	6	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	39408-14	39408-15	39408-17	39408-18
Total Suspended Solids dried at 103-105°C (mg/L)	5	6	11	12

Remarks: 1) < = less than

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
General Manager

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**APPENDIX I  
QUALITY CONTROL REPORTS FOR SS  
AND ARSENIC LABORATORY  
ANALYSIS**

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## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	QC39249
Date of Issue:	2023-12-07
Date Received:	2023-12-01
Date Tested:	2023-12-01
Date Completed:	2023-12-07

Page: 1 of 1

**ATTN:** Mr. Marco Ma

### QC report

#### Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

#### Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	111	106	80-120
Arsenic (%)	104	N/A	80-120

#### Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	106	N/A	80-120

#### Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	4	RPD ≤ 5%
Arsenic (%)	10	N/A	RPD ≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39249.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager



**TEST REPORT**

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39276  
Date of Issue: 2023-12-08  
Date Received: 2023-12-04  
Date Tested: 2023-12-04  
Date Completed: 2023-12-08

Page: 1 of 1

**ATTN:** Mr. Marco Ma

**QC report****Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	104	95	80-120
Arsenic (%)	98	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	107	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	5	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39276.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

**TEST REPORT**

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39286  
Date of Issue: 2023-12-12  
Date Received: 2023-12-06  
Date Tested: 2023-12-06  
Date Completed: 2023-12-12

Page: 1 of 1

**ATTN:** Mr. Marco Ma

**QC report****Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	104	101	80-120
Arsenic (%)	88	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	93	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39286.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

**TEST REPORT**

APPLICANT: **Wellab Limited (EM&A Department)**  
**Rm 1714, Technology Park,**  
**18 On Lai Street,**  
**Shatin, N.T.**

Report No.: QC39298  
Date of Issue: 2023-12-14  
Date Received: 2023-12-08  
Date Tested: 2023-12-08  
Date Completed: 2023-12-14

Page: 1 of 1

ATTN: **Mr. Marco Ma**

**QC report****Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	97	109	80-120
Arsenic (%)	102	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	89	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	11	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39298.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39322  
Date of Issue: 2023-12-15  
Date Received: 2023-12-11  
Date Tested: 2023-12-11  
Date Completed: 2023-12-15

**ATTN:** Mr. Marco Ma

Page: 1 of 1

**QC report****Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	114	108	80-120
Arsenic (%)	112	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	94	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	4	RPD≤5%
Arsenic (%)	18	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39322.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39332  
Date of Issue: 2023-12-19  
Date Received: 2023-12-13  
Date Tested: 2023-12-13  
Date Completed: 2023-12-19

Page: 1 of 1

**ATTN:** Mr. Marco Ma

**QC report****Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	89	109	80-120
Arsenic (%)	102	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	101	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	1	RPD ≤ 5%
Arsenic (%)	9	N/A	RPD ≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39332.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39342  
Date of Issue: 2023-12-20  
Date Received: 2023-12-15  
Date Tested: 2023-12-15  
Date Completed: 2023-12-20

Page: 1 of 1

**ATTN:** Mr. Marco Ma

**QC report****Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	103	113	80-120
Arsenic (%)	108	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	94	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	1	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39342.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	QC39360
Date of Issue:	2023-12-22
Date Received:	2023-12-18
Date Tested:	2023-12-18
Date Completed:	2023-12-22

Page: 1 of 1

**ATTN:** Mr. Marco Ma

### QC report

#### Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

#### Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	102	100	80-120
Arsenic (%)	104	N/A	80-120

#### Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	88	N/A	80-120

#### Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	1	RPD≤5%
Arsenic (%)	10	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39360.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	QC39371
Date of Issue:	2023-12-28
Date Received:	2023-12-20
Date Tested:	2023-12-20
Date Completed:	2023-12-28

Page: 1 of 1

**ATTN:** Mr. Marco Ma

### QC report

#### Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

#### Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	104	99	80-120
Arsenic (%)	97	N/A	80-120

#### Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	101	N/A	80-120

#### Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	2	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39371.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.:	QC39382
Date of Issue:	2024-01-02
Date Received:	2023-12-22
Date Tested:	2023-12-22
Date Completed:	2024-01-02

Page: 1 of 1

**ATTN:** Mr. Marco Ma

**QC report**

**Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	99	97	80-120
Arsenic (%)	96	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	112	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	1	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39382.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager



## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39382  
Date of Issue: 2024-01-03  
Date Received: 2023-12-27  
Date Tested: 2023-12-27  
Date Completed: 2024-01-03

Page: 1 of 1

**ATTN:** Mr. Marco Ma

**QC report**

**Method Blank**

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

**Method QC**

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	97	104	80-120
Arsenic (%)	109	N/A	80-120

**Sample Spike**

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	98	N/A	80-120

**Sample Duplicate**

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	1	RPD≤5%
Arsenic (%)	12	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39382.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

## TEST REPORT

**APPLICANT:** Wellab Limited (EM&A Department)  
Rm 1714, Technology Park,  
18 On Lai Street,  
Shatin, N.T.

Report No.: QC39408  
Date of Issue: 2024-01-03  
Date Received: 2023-12-29  
Date Tested: 2023-12-29  
Date Completed: 2024-01-03

**ATTN:** Mr. Marco Ma

Page: 1 of 1

### QC report

#### Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

#### Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	92	102	80-120
Arsenic (%)	103	N/A	80-120

#### Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	100	N/A	80-120

#### Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	1	RPD≤5%
Arsenic (%)	5	N/A	RPD≤20%

Remarks: 1) < = less than


2) N/A = Not applicable

3) This report is the summary of quality control data for report number 39408.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICIK TSE**  
General Manager

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**APPENDIX J  
LANDFILL GAS MONITORING  
RESULTS**

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**Contract No. ND/2019/01**

**Development of Kwu Tung North & Fanling North New Development Area, Phase 1:  
Kwu Tung North New Development Area, Phase 1: Site formation & Infrastructure works**

堆填區附近區域(Consultation Zone)每月氣體監察記錄

日期及時間	位置	氣體及安全標準	氧氣 O <sub>2</sub> >19%	甲烷 CH <sub>4</sub> <10% LEL	二氧化碳 CO <sub>2</sub> <0.5%
21-12-2023 14:20	CZ PT 1		20.60	0.00	0.00
21-12-2023 14:28	CZ container 1		20.60	0.00	0.00
21-12-2023 14:22	CZ container 2		20.50	0.00	0.00
21-12-2023 14:24	CZ container 3		20.60	0.00	0.00
21-12-2023 14:26	CZ container 4		20.50	0.00	0.00
21-12-2023 14:30	CZ container 5		20.50	0.00	0.00

Prepared by : Y L Chan (Safety Officer)

Date : 21-12-2023

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**APPENDIX K  
BUILT HERITAGE MONITORING  
RESULTS**

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**No construction vibration monitoring was conducted for built heritage when no pile driving operation was conducted within assessment area of the construction works.**



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**APPENDIX L**  
**ECOLOGICAL MONITORING RESULTS**

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**Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 7 & 4 December 2023, High Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date					7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)				
					Weather Condition					Fine, Fine				
					Tidal Condition					High				
					Tide Level (m)					1.52, 1.54				
					Start Time					1600, 1500				
					Abundance									
					Transect Walk									
T1	T2	T3	T5											
			WAL	DAL	SWH	P	Heard	Flight						
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				1	1	3					
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			6	1							
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586	1								1	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		3				5					
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			5	27		94			2	
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵯	SPM	LC				3						
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R				2							
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	4	8	2	2	1			2	
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R				3							
Common Greenshank	<i>Tringa nebularia</i>	青腳鵯	PM, WV	RC			1	2		10				
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R		1				1					
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R						1					
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						4					
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鵯	WV, PM			2	1		1					
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					14	1				6	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)				
					Weather Condition				Fine, Fine				
					Tidal Condition				High				
					Tide Level (m)				1.52, 1.54				
					Start Time				1600, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R		2		3						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			3			70				
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV						2				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)				9	1				
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV				1	7	20				
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					6	80			
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			15		100					
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC						10			
Garganey	<i>Spatula querquedula</i>	白眉鴨	PM							2			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	3								2
Great Egret	<i>Ardea alba</i>	大白鶯	R, WV	PRC(RC)	2	2	2			3			2
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶿	UPM, WV				1	1	2				
Grey Heron	<i>Ardea cinerea</i>	蒼鶯	WV	PRC	1	1	1			2			1
Large-billed Crow	<i>Corvus macrorhynchus</i>	大嘴烏鴉	R				2						
Little Bunting	<i>Emberiza pusilla</i>	小鵪鶉	CPM, WV						3				
Little Egret	<i>Egretta garzetta</i>	小白鶯	R	PRC(RC)	3	4	7		2	2			3
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鶿	WV, PM	LC			5	5	2				2



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			1.52, 1.54					
					Start Time			1600, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R					2					
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鷸	PM, WV	RC				2		2			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R		5				2				
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC						10			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV		3		8		7				
Oriental Magpie	<i>Pica serica</i>	喜鵲	R						2				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC				1	2	78			3
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					2					
Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	紅咀藍鵲	R				2						
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC					4				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R				10						
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM					2					
Rock Dove	<i>Columba livia</i>	原鴿	R			14			22				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					60					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R						1				
White Wagtail	<i>Motacilla alba</i>	白鵲鶇	PM, WV		2	2	3	1	7				7
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1		2				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)				
					Weather Condition				Fine, Fine				
					Tidal Condition				High				
					Tide Level (m)				1.52, 1.54				
					Start Time				1600, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
White-rumped Munia	<i>Lonchura striata</i>	白腰文鳥	R					6					
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)	1		1						
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	PM, WV	LC			1	13	2	2			
Yellow-breasted Bunting	<i>Emberiza aureola</i>	黃胸鵪	PM	CR, RC				1					
Total No. of Species					13	10	23	20	28	13	0	0	11
Total No. of Conservation Interest Species					7	4	9	10	8	12	0	0	9

Note:

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; SaM - Scarce autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor

Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)

CR: Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

**Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 7 & 4 December 2023, Low Tide**

Appendix B: Wading Species Recorded for Water Birds Monitoring, 7 to 1 December 2023, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.35, 0.74					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				2			1			
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R				5						18
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			6	119					18
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	6	2	8	1				1
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1	4		8			
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R				1						2
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R					5					
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			1	2	3					
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					4					2
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			5			36				88
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			2	9	1				1
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV										3
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						68			
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			20			46				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	3	1	3	5					
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV			1		3					



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)				
					Weather Condition				Fine, Fine				
					Tidal Condition				Low				
					Tide Level (m)				1.35, 0.74				
					Start Time				0900, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	2	2	2					4
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R			12							
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	6	9	3					6
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鷸	PM, WV	RC				4					
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV		5								
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R		1	1			2				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC				57					
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵯	R		2				7				5
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM										13
Rock Dove	<i>Columba livia</i>	原鴿	R			11			17				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		4	5	2		4				
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV		1		5		16				7
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1	3					
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)		1			2				
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	PM, WV	LC				3					
Total No. of Species					9	13	14	15	10	3	0	0	13

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		7/12/2023 (T1 & T2), 4/12/2023 (T3 & T5)						
					Weather Condition		Fine, Fine						
					Tidal Condition		Low						
					Tide Level (m)		1.35, 0.74						
					Start Time		0900, 0900						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Total No. of Conservation Interest Species					4	5	7	10	3	2	0	0	5

Note:  
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; SaM - Scarce autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor  
Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))  
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance  
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)  
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)  
WAL: Wet Agricultural Land  
DAL: Dry Agricultural Land  
SWH: Shallow Water Habitat  
P: Pond

**Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 15 & 11 December 2023, High Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				High				
					Tide Level (m)				1.68, 1.6				
					Start Time				1300, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV		1				3				
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv			2			1				1
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R		5		2	5	4				2
Black-winged Kite	<i>Elanus caeruleus</i>	黑翅鳶	OV	LC, (VU)									1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			4	36	6	104			
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵯	SPM	LC					4				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R						3				3
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	2	4	3	3	2			4
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU	2		3		2				
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			3			5			
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R		1								1
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						2				
Common Redshank	<i>Tringa totanus</i>	紅腳鷸	PM	RC			1		1				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			3	2	1					
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2					11



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				High				
					Tide Level (m)				1.68, 1.6				
					Start Time				1300, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			4	4		24				11
Daurian Redstart	<i>Phoenicurus aureoreus</i>	北紅尾鵲	WV				1						
Eastern Buzzard	<i>Buteo japonicus</i>	普通鵟	WV	Cap.586									1
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				9					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV					5	4				
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					13		40		
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		2	14			30				
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC					14		5		
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	CWV	PRC			3						
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2	3						2
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)									1
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵲	UPM, WV			3	1						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC		4	3		1				
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R										13
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV						6				3
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	6	4	2	3	7			3
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	R	LC							1		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.68, 1.6					
					Start Time			1300, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	WV, PM	LC						6			
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1				
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵒	PM, WV	RC						3			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵒	R						6				
Northern Pintail	<i>Anas acuta</i>	針尾鴨	WV	RC							1		
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC					3	6			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵒	WV			1	6	4	3				5
Oriental Turtle Dove	<i>Streptopelia orientalis</i>	山斑鳩	WV, PM						2				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵒	WV	RC					2	47	3		
Red-rumped Swallow	<i>Cecropis daurica</i>	金腰燕	UPM										4
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵒	CPM, WV	RC					3				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵒	R			7	2						
Richard's Pipit	<i>Anthus richardi</i>	理氏鵒	WV, PM						2				
Rock Dove	<i>Columba livia</i>	原鵒	R			10							
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						46				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R						16				11
White Wagtail	<i>Motacilla alba</i>	白鵒鵒	PM, WV		3	2			5				2

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.68, 1.6					
					Start Time			1300, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)					1				1
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				22					
Yellow-breasted Bunting	<i>Emberiza aureola</i>	黃胸鵪	PM	CR, RC					1				
Total No. of Species					8	13	16	10	31	8	5	0	19
Total No. of Conservation Interest Species					3	4	9	5	14	8	5	0	7

Note:  
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; UR – Uncommon resident; SWV –CWV - Common Winter Visitor;  
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)  
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance  
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)  
VU: Vulnerable in IUCN Red List Status  
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)  
WAL: Wet Agricultural Land  
DAL: Dry Agricultural Land  
SWH: Shallow Water Habitat  
P: Pond



**Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 15 & 11 December 2023, Low Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				0.4, 1.38				
					Start Time				0900, 1300				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				4	4					
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv									3	
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv			1		1					
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2	3		2					
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			6	24		120			
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R			3							
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)			5		5	2		6	
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R										
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		2	5					1	
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC		3	2			4		1	
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R				2	1					
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR				1						
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM		1	3	1		1				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					1		18		7	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						2			80	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				0.4, 1.38				
					Start Time				0900, 1300				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鵯	WV			1			1				
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV					1	1				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)				7					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵯鵯	PM, WV				2	10	3				
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					28	34			
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			11							
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC					1	14			
Garganey	<i>Spatula querquedula</i>	白眉鴨	PM							2			
Great Egret	<i>Ardea alba</i>	大白鶯	R, WV	PRC(RC)		4	2	1					
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶯	UPM, WV		1	2	2			1			
Grey Heron	<i>Ardea cinerea</i>	蒼鶯	WV	PRC		4	2		1				
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵯鵯	WV				1						
Large-billed Crow	<i>Corvus macrorhynchus</i>	大嘴烏鴉	R										2
Little Bunting	<i>Emberiza pusilla</i>	小鶯	CPM, WV					1					
Little Egret	<i>Egretta garzetta</i>	小白鶯	R	PRC(RC)	2	6	7	3	4	5			1
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鶯	WV, PM	LC			16						
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鶯	PM, WV	RC	2	3				5			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				0.4, 1.38				
					Start Time				0900, 1300				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC					3	9			
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC				1		60			
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					5					
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM			4			2				
Rock Dove	<i>Columba livia</i>	原鴿	R		2	6			13				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					50					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			3	4		5				
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		4	2	2	2	11				1
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R			1			3				1
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)			1		1				
Total No. of Species					7	18	16	14	21	12	0	0	10
Total No. of Conservation Interest Species					2	6	9	5	7	9	0	0	4



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/12/2023 (T1 & T2), 11/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.4, 1.38					
					Start Time			0900, 1300					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					

Note:  
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant;; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; OV - Occasional visitor  
Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))  
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance  
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)  
(VU): Vulnerable in China Red Data Book Status  
NT: Near Threatened in IUCN Red List Status  
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)  
WAL: Wet Agricultural Land  
DAL: Dry Agricultural Land  
SWH: Shallow Water Habitat  
P: Pond

**Appendix L1g. Avifauna Species Recorded for Water Birds Monitoring, 21 & 18 December 2023, High Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)						
					Weather Condition			Cloudy, Fine						
					Tidal Condition			High						
					Tide Level (m)			1.72, 1.61						
					Start Time			1600, 1500						
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
WAL	DAL	SWH	P	Heard				Flight						
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT, Cap. 586										3
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV					3	2					1
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv			2								
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap. 586										1
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2				6					3
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC						5				
Black-winged Kite	<i>Elanus caeruleus</i>	黑翅鳶	OV	LC, (VU)										1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			7	34		54				3
Buff-bellied Pipit	<i>Anthus rubescens</i>	黃腹鵯	UPM, WV							2				
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵯	SPM	LC				3						
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		2	1		4					3
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		3								
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			2			3		1		5
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R				1		1					

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Fine				
					Tidal Condition				High				
					Tide Level (m)				1.72, 1.61				
					Start Time				1600, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R					1					
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						2				3
Common Redshank	<i>Tringa totanus</i>	紅腳鷸	PM	RC			1						
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			3	1	1					1
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					6	6	1			7
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		3				52				30
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鴝	WV			1							
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV					2	1				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				1					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV					16					2
Eurasian Spoonbill	<i>Platalea leucorodia</i>	白琵鷺	UWV	Cap.586, NT						3			
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						78			
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			8			100				
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC				1		10			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	2	5							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	3	1			3			1
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					1				



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Fine				
					Tidal Condition				High				
					Tide Level (m)				1.72, 1.61				
					Start Time				1600, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				3	1	1	2			1
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	4	3		1	1			2
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R										9
Little Bunting	<i>Emberiza pusilla</i>	小鵪	CPM, WV					2					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	2	3	1	4	7			2
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵐	WV, PM	LC						7			1
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						2				
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵐	PM, WV	RC				1	1	3			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵐	R						1				
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC						23			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵐	WV			2	2	13	20				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵲	R						1				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵐	WV	RC					4	53			4
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)			1						
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R							1			
Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	紅咀藍鵲	R			2			3				
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵐	CPM, WV	RC					7				1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Fine				
					Tidal Condition				High				
					Tide Level (m)				1.72, 1.61				
					Start Time				1600, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鸛	R					1					
Richard's Pipit	<i>Anthus richardi</i>	理氏鸛	WV, PM			6							
Rock Dove	<i>Columba livia</i>	原鴿	R		2	7			14				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R										
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		2	2		60					57
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV		3	2	2		2	1			11
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1		3				1
White-rumped Munia	<i>Lonchura striata</i>	白腰文鳥	R					1					
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				14		4			1
Yellow-breasted Bunting	<i>Emberiza aureola</i>	黃胸鵲	PM	CR, RC				1					
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM				2						
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC				1					
Total No. of Species					9	16	15	20	25	19	0	1	25
Total No. of Conservation Interest Species					4	6	8	9	7	14	0	1	13

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Fine					
					Tidal Condition			High					
					Tide Level (m)			1.72, 1.61					
					Start Time			1600, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

Note:

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; SaM - Scarce autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor

Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)

CR: Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond



**Appendix L1h. Avifauna Species Recorded for Water Birds Monitoring, 21 & 18 December 2023, Low Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.26, 0.33					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT, Cap. 586									7
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				2	1	3				1
Asian Brown Flycatcher	<i>Muscicapa dauurica</i>	北灰鶇	PM, WV				2						
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV				1						1
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R			2			1				2
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC						5			
Black-winged Kite	<i>Elanus caeruleus</i>	黑翅鳶	OV	LC, (VU)					1				
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			5	23	1	77			4
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵯	SPM	LC				2					
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R			2	4		3				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3		4		12	1			5
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R				3						
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU					1				3

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.26, 0.33					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Common Greenshank	<i>Tringa nebularia</i>	青腳鵲	PM, WV	RC				1		1			
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R					2					
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR				1		3				
Common Redshank	<i>Tringa totanus</i>	紅腳鵲	PM	RC			1						
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鵲	WV, PM		2		3		1				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					8	11	3			2
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R						1				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			4			60				
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鴝	WV				1	1					
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV					1	3				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)			1	10	5				1
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV					6	20				2
Eurasian Spoonbill	<i>Platalea leucorodia</i>	白琵鶯	UWV	Cap.586, NT						3			
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					40	29			
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R						50				50
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC						3			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	1	3							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.26, 0.33					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	2	4	2			3			
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				2			3			1
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			2						1
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鵲	WV				1						
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R										44
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV					12					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	9	10		2	8			3
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵲	WV, PM	LC			4		1	6			
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵲	PM, WV	RC				2		4			
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC						11			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV			4	3		10				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵲	R			1	2					1	
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC						44			6
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					3				1	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC					10				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R		3		5		6				
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						3				



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Fine				
					Tidal Condition				Low				
					Tide Level (m)				1.26, 0.33				
					Start Time				0900, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Rock Dove	<i>Columba livia</i>	原鴿	R			13			17				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					5	6				53
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R				3	20	21				
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R				4						
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		4		5	4					14
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R			1	1	1	4	1			
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)			1						
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC			1	9		2			4
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R					1				1	
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM				2						
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC				2					
Total No. of Species					7	10	28	20	27	17	0	3	19
Total No. of Conservation Interest Species					4	3	10	7	9	14	0	0	9

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/12/2023 (T1 & T2), 18/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.26, 0.33					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

Note:

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; SaM - Scarce autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor

Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)

CR: Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

**Appendix L1i. Avifauna Species Recorded for Water Birds Monitoring, 28 & 27 December 2023, High Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.65, 1.50					
					Start Time			1200, 1030					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV		1		2		5				
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			3							2
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv		2								
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap. 586									2
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R			4			2				
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			9	46	5	47			2
Bluethroat	<i>Luscinia svecica</i>	藍喉歌鵯	CWV					1					
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵯	SPM	LC				6					
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R			2							
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		3	2		5	2			3
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU	3								
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			3			4			2
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR				3						
Common Redshank	<i>Tringa totanus</i>	紅腳鷸	PM	RC			3						
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			4	2						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2	2	4		1	1



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				High				
					Tide Level (m)				1.65, 1.50				
					Start Time				1200, 1030				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R		1								
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				46		3				
Daurian Redstart	<i>Phoenicurus aureoreus</i>	北紅尾鵯	WV						1				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				1	5				
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鸝鵡	PM, WV				1		8	1			7
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					43	14			5
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			8			100				
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC					5				
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	4								
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)			7		1				1
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵯	UPM, WV				6	1		1			
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	2	5						1
Grey-headed Lapwing	<i>Vanellus cinereus</i>	灰頭麥雞	WV, PM	LC					1				
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R										7
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2		8	1	2	2			1
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵯	WV, PM	LC			2		2				
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R		1				2				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.65, 1.50					
					Start Time			1200, 1030					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鷸	PM, WV	RC			1		1	1			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R				5					1	
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	NT, LC						1			
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC					17	13			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				4		3				
Oriental Magpie	<i>Pica serica</i>	喜鵲	R						1				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵲	R				2		1				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC				4	1	45			5
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					3	3			3	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC				6	9				
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						2				
Rock Dove	<i>Columba livia</i>	原鴿	R				4		20				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					50					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R				4	15	21				
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R				2						4
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV		2	1	5		9				5
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R			1	2	1	1				
White-rumped Munia	<i>Lonchura striata</i>	白腰文鳥	R					3					

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.65, 1.50					
					Start Time			1200, 1030					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)			1						
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				7		4			
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC				6					
Total No. of Species					9	9	24	16	30	13	0	3	15
Total No. of Conservation Interest Species					4	2	10	8	13	10	0	0	9

Note:  
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; OV - Occasional visitor  
Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))  
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance  
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)  
VU: Vulnerable in IUCN Red List Status  
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)  
WAL: Wet Agricultural Land  
DAL: Dry Agricultural Land  
SWH: Shallow Water Habitat  
P: Pond



**Appendix L1j. Avifauna Species Recorded for Water Birds Monitoring, 28 & 27 December 2023, Low Tide**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.33, 1.40					
					Start Time			1500, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				1		3				
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			3							
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2				4				
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				126					12
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵯	SPM	LC									4
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	2		5					2
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			2	3					
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R			2	1		2				
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R					7					
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM		2	4							
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM										3
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			4			38				49
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				8					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV						12				2
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					39				3

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.33, 1.40					
					Start Time			1500, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		6				137				
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC					3				
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC		2							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)				4				2	
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV			1							
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	2	3					2	
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	7	7	5				2	
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC				16					
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1				
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鷸	PM, WV	RC				4					
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R			6	10	10					
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC					12				
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						2			6	
Oriental Magpie	<i>Pica serica</i>	喜鵲	R			1			2			2	
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R		2								
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC				46					
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R				3		59				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)				
					Weather Condition				Cloudy, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				1.33, 1.40				
					Start Time				1500, 1400				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM										10
Rock Dove	<i>Columba livia</i>	原鵠	R		2	6			46				7
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R										109
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			2			4				
Spotted Redshank	<i>Tringa erythropus</i>	鶴鵲	SpM	RC				3					
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV		1	2	3	16					8
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1	3					
White-rumped Munia	<i>Lonchura striata</i>	白腰文鳥	R										68
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)			1						
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				4		3			
Total No. of Species					8	15	10	15	11	4	0	0	17
Total No. of Conservation Interest Species					3	4	4	11	2	2	0	0	7



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/12/2023 (T1 & T2), 27/12/2023 (T3 & T5)				
					Weather Condition			Cloudy, Sunny				
					Tidal Condition			Low				
					Tide Level (m)			1.33, 1.40				
					Start Time			1500, 1400				
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				
			WAL	DAL	SWH	P	Heard	Flight				
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce Passage Migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor.</p> <p>Status was decided according to AFCD biodiversity website (<a href="http://www.hkbiodiversity.net">www.hkbiodiversity.net</a>)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586: Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>												

**Appendix L1k. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 11 December 2023, T5**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 11/12/2023					
					Start Time: 18:00					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R			3				1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC	12		78			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		5				3
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R		1					
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM		6					
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			80				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)	5					
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC		28	21			
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC		7				
Garganey	<i>Spatula querquedula</i>	白眉鴨	PM				2			
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)						3
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)		1				
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				2			
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			3			
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)						13
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC			2			
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鷸	PM, WV	RC			1			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R			3				
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC		7	5			
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC	17		43			
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R		5					
Rock Dove	<i>Columba livia</i>	原鴿	R			7				
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV			5				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1			
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	PM, WV	LC			11			
Total No. of Species					6	10	11	0	0	4

Total No. of Conservation Interest Species	3	5	8	0	0	3
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant;; SpM – Spring migrant; UR – Uncommon resident; CWV - Common Winter Visitor</p> <p>Status was decided according to AFCD biodiversity website (<a href="http://www.hkbiodiversity.net">www.hkbiodiversity.net</a>)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>CR: Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land; DAL: Dry Agricultural Land; SWH: Shallow Water Habitat; P: Pond.</p>						



**Appendix L1I. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 18 December 2023, T5**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 18/12/2023					
					Start Time: 18:00					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Besra	<i>Accipiter virgatus</i>	松雀鷹	R, CPM	Cap.586		1				
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	R, WV	LC			2			3
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC	6		33			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		1				
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			2		3	
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM		3				6	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			30				
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC	3	20	14			1
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC		5				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2				
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				3			
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			4			1
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)		41				
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鷸	WV, PM	LC			6			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						1	
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC		9	6			
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC			43			
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1			
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	PM, WV	LC			2			1
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	R, WV	LC			2			3
Total No. of Species					3	8	12	0	3	5
Total No. of Conservation Interest Species					2	7	10	0	1	5
Note: R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon										

Summer visitor; SpM – Spring migrant;; CWV - Common Winter Visitor.  
Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))  
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance  
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)  
EN: Endangered in IUCN Red List Status  
(EN): Endangered in China Red Data Book Status  
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)  
WAL: Wet Agricultural Land; DAL: Dry Agricultural Land; SWH: Shallow Water Habitat; P: Pond.

# Appendix L1m, Waterbirds Recorded in December 2023

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	T5: Shallow Water Habitat	Common winter visitor. Found in Deep Bay area.
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	RC	T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in Hong Kong.
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	RC	T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Heard, In flight	Abundant winter visitor and migrant. Found in Deep Bay area.
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥		T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Dry Agricultural Land, in flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R	T5: Wet Agricultural Land, Dry Agricultural Land	Common winter visitor, resident and migrant. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Redshank	<i>Tringa totanus</i>	紅腳鷸	RC	T3: River bank	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸		T1: River bank, In flight T2: River bank T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.



Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐		T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Heard, In flight	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	(LC)	T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, In flight	Resident and common passage migrant. Widely distributed in Hong Kong.
Eurasian Spoonbill	<i>Platalea leucorodia</i>	白琵鷺	UWV	T5: Shallow Water Habitat	Uncommon winter visitor. Found in Deep Bay area.
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	T5: Dry Agricultural Land, Shallow Water Habitat, In flight	Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, urban parks.
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	Winter visitor. Found in Deep Bay area, Tai Lam Chung.
Garganey	<i>Spatula querquedula</i>	白眉鴨	PM	T5: Shallow Water Habitat	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	PRC	T1: River bed, In flight T2: River bed T5: In flight	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong.
Great Egret	<i>Ardea alba</i>	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸		T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common migrant and winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Shek Kong, Ho Chung.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	PRC	T1: River bank, In flight T2: River bank, River bed, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Grey-headed Lapwing	<i>Vanellus cinereus</i>	灰頭麥雞	WV, PM	T5: Dry Agricultural Land	Locally common winter visitor and migrant. Found in Kam Tin, Tsim Bei Tsui, Lo Wu, Tai Long Wan, Shuen Wan, Castle Peak coast, Chek Lap Kok.
Little Egret	<i>Egretta garzetta</i>	小白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	LC	T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Resident, common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵲	RC	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat,	Abundant winter visitor and migrant. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Sai Kung.
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	T5: Shallow Water Habitat	Scarce winter visitor. Found in Mai Po, Long Valley, Chek Lap Kok, Ho Chung, Tai Long Wan, Tai Po, Castle Peak coast.
Northern Pintail	<i>Anas acuta</i>	針尾鴨	WV	T5: Pond	Abundant winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin.
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	T5: Dry Agricultural Land, Shallow Water Habitat,	Abundant winter visitor. Found in Deep Bay area.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	RC	T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Abundant winter visitor. Found in Deep Bay area.
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	(LC)	T3: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
Spotted Redshank	<i>Tringa erythropus</i>	鶴鷸	SpM	T5: Wet Agricultural Land	Common spring passage migrant. Found in Deep Bay area.
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥		T2: River bank T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	(LC)	T3: River bank, River bed, In flight T5: Dry Agricultural Land	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	LC	T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.

**Note:**

Status was decided according to AFCD biodiversity website ([www.hkbiodiversity.net](http://www.hkbiodiversity.net))

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

\*Source: Hong Kong Biodiversity Database, AFCD (<https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php>)



# Appendix L1n. Birds Recorded in December 2023

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT, Cap. 586
Amur Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV	
Asian Brown Flycatcher	<i>Muscicapa dauurica</i>	北灰鶇	PM, WV	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv	
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap. 586
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R	
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC
Black-winged Kite	<i>Elanus caeruleus</i>	黑翅鳶	OV	LC, (VU)
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC
Bluethroat	<i>Luscinia svecica</i>	藍喉歌鵲	CWV	
Buff-bellied Pipit	<i>Anthus rubescens</i>	黃腹鵲	UPM, WV	
Chestnut-eared Bunting	<i>Emberiza fucata</i>	栗耳鵲	SPM	LC
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R	
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R	
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R	
Common Redshank	<i>Tringa totanus</i>	紅腳鷸	PM	RC
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM	
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM	
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鴝	WV	
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV	
Eastern Buzzard	<i>Buteo japonicus</i>	普通鵟	WV	Cap.586
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV	
Eurasian Spoonbill	<i>Platalea leucorodia</i>	白琵鶯	UWV	Cap.586, NT
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R	
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC
Garganey	<i>Spatula querquedula</i>	白眉鴨	PM	
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC
Great Egret	<i>Ardea alba</i>	大白鶯	R, WV	PRC(RC)
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶿	UPM, WV	
Grey Heron	<i>Ardea cinerea</i>	蒼鶯	WV	PRC
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵪鶉	WV	
Grey-headed Lapwing	<i>Vanellus cinereus</i>	灰頭麥雞	WV, PM	LC
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R	
Large-billed Crow	<i>Corvus macrorhynchus</i>	大嘴烏鴉	R	
Little Bunting	<i>Emberiza pusilla</i>	小鵪	CPM, WV	
Little Egret	<i>Egretta garzetta</i>	小白鶯	R	PRC(RC)
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鶿	WV, PM	LC
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R	
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鶿	PM, WV	RC
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鶿	R	
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	NT, LC
Northern Pintail	<i>Anas acuta</i>	針尾鴨	WV	RC

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV	
Oriental Magpie	<i>Pica serica</i>	喜鵲	R	
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R	
Oriental Turtle Dove	<i>Streptopelia orientalis</i>	山斑鳩	WV, PM	
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)
Plain Prinia	<i>Prinia inornata</i>	純色鷦鶯	R	
Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	紅咀藍鵲	R	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R	
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM	
Rock Dove	<i>Columba livia</i>	原鴿	R	
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R	
Spotted Redshank	<i>Tringa erythropus</i>	鶴鷸	SpM	RC
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R	
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R	
White-rumped Munia	<i>Lonchura striata</i>	白腰文鳥	R	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R	
Yellow-breasted Bunting	<i>Emberiza aureola</i>	黃胸鵲	PM	CR, RC
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM	
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC



Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; UR – Uncommon resident; SPM - Scarce Passage Migrant; SpM – Spring Migrant; ; USV - Uncommon Summer visitor; Sv – Summer Visitor; SSv – Spring &amp; Summer Visitor; SWV – Scarce winter visitor;</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>VU: Vulnerable on IUCN Red List of Threatened Species.</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>(EN): Endangered in China Red Data Book Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>				

**Appendix L2. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 5 & 12 December 2023**

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	<i>Felis catus</i>	野貓		Introduced	+				
Domestic Dog	<i>Canis lupus familiaris</i>	野狗		Introduced		+	+++	+	++
Eurasian Wild Pig	<i>Sus scrofa</i>	野豬		Native				+	
Japanese Pipistrelle	<i>Pipistrellus abramus</i>	東亞家蝠	Cap. 170	Native	+++		+++	+	+++
Pallas's Squirrel	<i>Callosciurus erythraeus</i>	赤腹松鼠	Cap. 170	Introduced	+		+		
Total No. of species					3	1	3	3	2
Total No. of Conservation Interest Species					2	0	2	1	1
Total No. of Native Species					1	0	1	2	1
<p>Note:</p> <p>Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)</p> <p>(NT): Near Threatened in the Red List of China's Vertebrates</p> <p>Occurrence Status was according to The IUCN Red List of Threatened Species website (<a href="https://www.iucnredlist.org">https://www.iucnredlist.org</a>)</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++ : dominant species within transect routes</p> <p>Local Restrictedness Column has been removed as said information is no longer available.</p>									

**Appendix L3. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 5 & 12 December 2023**

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Amphibian									
Asian Common Toad	<i>Bufo melanostictus</i>	黑眶蟾蜍	-	Native				++	
Asiatic Painted Forg	<i>Kaloula pulchra pulchra</i>	花狹口蛙	-	Native				+	
Butler's Pigmy Frog	<i>Microhyla butleri</i>	粗皮姬蛙	-	Native				+	
Greenhouse Frog	<i>Eleutherodactylus planirostris</i>	溫室蟾	-	Native				+++	
Paddy Frog	<i>Fejervarya limnocharis</i>	澤蛙	-	Native				+	
Bowring’s Gecko	<i>Hemidactylus bowringii</i>	原尾蜥虎	-	Native	+				
Changeable Lizard	<i>Calotes versicolor</i>	變色樹蜥	-	Native	+				
Chinese gecko	<i>Gekko chinensis</i>	中國壁虎	-	Native	+	+		++	
Long-tailed Skink	<i>Eutropis longicaudata</i>	長尾南蜥	-	Native	+				
Total No. of species					4	1	0	6	0
Total No. of Conservation Interest Species					0	0	0	0	0
Total No. of Native Species					4	1	0	6	0



Note:

Occurrence Status was according to The IUCN Red List of Threatened Species website (<https://www.iucnredlist.org>)

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

**Appendix L4. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 5 & 12 December 2023**

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Angled Castor	<i>Ariadne ariadne</i>	波蛺蝶						++	
Banded Tree Brown	<i>Lethe confusa</i>	白帶黛眼蝶						+	
Black Prince	<i>Rohana parisatis</i>	羅蛺蝶			++			+	+
Blue Tiger	<i>Tirumala limniace</i>	青斑蝶						+	
Blue-spotted Crow	<i>Euploea midamus</i>	藍點紫斑蝶							+
Chocolate Pansy	<i>Junonia iphita</i>	鉤翅眼蛺蝶			+			+	
Chocolate Royal	<i>Remelana jangala</i>	萊灰蝶			+				
Common Archduke	<i>Lexias pardalis</i>	小豹律蛺蝶						+	
Common Awl	<i>Hasora badra</i>	三斑趾弄蝶	VR, LC					+	
Common Cerulean	<i>Jamides celeno</i>	錫冷雅灰蝶	R				+	+++	++
Common Evening Brown	<i>Melanitis leda</i>	暮眼蝶						+	
Common Five-ring	<i>Ypthima baldus</i>	矍眼蝶			++	+		+	+
Common Grass Yellow	<i>Eurema hecabe</i>	寬邊黃粉蝶			+++	+	++	++	
Common Jester	<i>Symbrenthia lila</i>	散紋盛蛺蝶					+	+	
Common Lineblue	<i>Prosotas nora</i>	娜拉波灰蝶						+	
Common Mapwing	<i>Cyrestis thyodamas</i>	網絲蛺蝶					+		
Common Mormon	<i>Papilio polytes</i>	玉帶鳳蝶				+	++	+	+
Common Onyx	<i>Horaga onyx</i>	斑灰蝶	R		+				

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Common Palmfly	<i>Elymnias hypermnestra</i>	翠袖鋸眼蝶					+		
Common Sailer	<i>Neptis hylas</i>	中環蛺蝶			+	+	+	+	+
Common Sergeant	<i>Athyma perius</i>	玄珠帶蛺蝶				+			+
Dark Brand Bush Brown	<i>Mycalesis mineus</i>	小眉眼蝶						+++	+
Dark Cerulean	<i>Jamides bochus</i>	雅灰蝶			+++		+	+	
Five-dot Sergeant	<i>Parathyma sulphitia</i>	殘鏢線蛺蝶							+
Fluffy Tit	<i>Zeltus amasa</i>	珍灰蝶					+		
Forget-me-not	<i>Catochrysops strabo strabo</i>	咖灰蝶	VR						+
Great Egg-fly	<i>Hypolimnas bolina</i>	幻紫斑蛺蝶			+		+	++	
Great Mormon	<i>Papilio memnon</i>	美鳳蝶			+			+	
Great Orange Tip	<i>Hebomoia glaucippe</i>	鶴頂粉蝶					+		+
Grey Pansy	<i>Junonia atlites</i>	波紋眼蛺蝶						+	
Indian Cabbage White	<i>Pieris canidia</i>	東方菜粉蝶				+			
Indian Palm Bob	<i>Suastus gremius</i>	素弄蝶					+		
Lemon Emigrant	<i>Catopsilia pomona</i>	遷粉蝶			+	++	+		+
Lemon Pansy	<i>Junonia lemonias</i>	蛇眼蛺蝶						+	
Lesser gull	<i>Cepora nadina</i>	青園粉蝶			+				
Metallic Cerulean	<i>Jamides alecto</i>	素雅灰蝶	VR		+++			++	
Painted Jezebel	<i>Delias hyparete</i>	優越斑粉蝶			++	+	+	+++	



Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Paris Peacock	<i>Papilio paris</i>	巴黎翠鳳蝶			+				
Plum Judy	<i>Abisara echerius</i>	蛇目褐蛱蝶				+	+	++	+++
Punchinello	<i>Zemeros flegyas</i>	波蛱蝶				+			
Purple Sapphire	<i>Heliophorus epicles</i>	彩灰蝶					+	+	
Quaker	<i>Neopithecops zalmora</i>	一點灰蝶			+				
Red Ring Skirt	<i>Hestina assimilis</i>	黑脈蛱蝶					+	+	
Red-base Jezebel	<i>Delias pasithoe</i>	報喜斑粉蝶			+++	+	++	+	
Rustic	<i>Cupha erymanthis</i>	黃襟蛱蝶			+		+	+	
Short-banded Sailer	<i>Phaedyra columella</i>	柱菲蛱蝶			+				+
Slate Flash	<i>Rapala manea</i>	燕灰蝶			+	+		+	
Small White	<i>Pieris rapae</i>	菜粉蝶	R		++	+++		+++	+
South China Bush Brown	<i>Mycalesis mineus</i>	平頂眉眼蝶						+	
Spangle	<i>Papilio protenor</i>	藍鳳蝶				+	+	++	+
Tailed Jay	<i>Graphium agamemnon</i>	統帥青鳳蝶						+	
Tailless Line Blue	<i>Prosotas dubiosa</i>	疑波灰蝶				+			
Tawny Rajah	<i>Charaxes bernardus</i>	白帶螯蛱蝶					+	+	
Three-spot Grass Yellow	<i>Eurema blanda</i>	槲黃粉蝶			+++		++	++	
Tiny Grass Blue	<i>Zizula hylax</i>	長腹灰蝶	VR		+	+			
Transparent 6-line Blue	<i>Nacaduba kurava</i>	古樓娜灰蝶			++				

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
White-edged Blue Baron	<i>Euthalia phemius</i>	尖翅翠蛱蝶			++	+	+		
Yellow Rajah	<i>Charaxes marmax</i>	螯蛱蝶	LC		+		+		
Total No. of species					26	17	24	35	16
Total No. of Conservation Interest Species					5	2	2	4	3
<p>Note:</p> <p>*Very limited data are available for the occurrence status (being native to Hong Kong) of butterflies</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++: dominant species within transect routes</p> <p>LC: Local Concern (Fellowes et al., 2002)</p> <p>R: Rare (Chan et al. (2011))</p> <p>VR: Very Rare (Chan et al. (2011))</p>									

**Appendix L5. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring, 5 & 12 December 2023**

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Common Blue Skimmer	<i>Orthetrum glaucum</i>	黑尾灰蜻		Native				+	
Common Red Skimmer	<i>Orthetrum pruinosum</i>	赤褐灰蜻		Native				+	
Green Skimmer	<i>Orthetrum sabina</i>	狹腹灰蜻		Native	+				
Blue Percher	<i>Diplacodes trivialis</i>	紋藍小蜻		Native	+				
Marsh Skimmer	<i>Orthetrum luzonicum</i>	呂宋灰蜻		Native			+		
Red-faced Skimmer	<i>Orthetrum chrysis</i>	華麗灰蜻		Native	+				
Russet Percher	<i>Neurothemis fulvia</i>	網脈蜻		Native	+			+	
Saddlebag Glider	<i>Tramea virginia</i>	華斜痣蜻		Native	+				+
Wandering Glider	<i>Pantala flavescens</i>	黃蜻		Native	+++	++	+++	+++	+++
Yellow Featherlegs	<i>Copera marginipes</i>	黃狹扇螳		Native				+	
Total No. of species					6	1	2	5	2
Total No. of Conservation Interest Species					0	0	0	0	0
Total No. of Native Species					6	1	2	5	2

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stausts	Date: 5/12/2023 (T1,6), 12/12/2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
<p>Note:</p> <p>Occurrence Status was according to The IUCN Red List of Threatened Species website (<a href="https://www.iucnredlist.org">https://www.iucnredlist.org</a>)</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++: dominant species within transect routes</p>									



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**APPENDIX M**  
**WEATHER CONDITION**

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**APPENDIX M –  
 GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD**

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
<b>1 December 23</b>	<b>21.5</b>	<b>69</b>	<b>0</b>
<b>2 December 23</b>	<b>20</b>	<b>70</b>	<b>0</b>
<b>3 December 23</b>	<b>21.4</b>	<b>73</b>	<b>Trace</b>
<b>4 December 23</b>	<b>21.9</b>	<b>76</b>	<b>Trace</b>
<b>5 December 23</b>	<b>21.7</b>	<b>73</b>	<b>0</b>
<b>6 December 23</b>	<b>21.5</b>	<b>67</b>	<b>Trace</b>
<b>7 December 23</b>	<b>21</b>	<b>47</b>	<b>0</b>
<b>8 December 23</b>	<b>21.4</b>	<b>68</b>	<b>0</b>
<b>9 December 23</b>	<b>22.9</b>	<b>80</b>	<b>0</b>
<b>10 December 23</b>	<b>23.9</b>	<b>80</b>	<b>Trace</b>
<b>11 December 23</b>	<b>24.2</b>	<b>85</b>	<b>0.3</b>
<b>12 December 23</b>	<b>24.7</b>	<b>80</b>	<b>0.3</b>
<b>13 December 23</b>	<b>22.3</b>	<b>82</b>	<b>Trace</b>
<b>14 December 23</b>	<b>23.1</b>	<b>81</b>	<b>Trace</b>
<b>15 December 23</b>	<b>24.4</b>	<b>81</b>	<b>0</b>
<b>16 December 23</b>	<b>18.9</b>	<b>71</b>	<b>0.1</b>
<b>17 December 23</b>	<b>13.4</b>	<b>69</b>	<b>0</b>

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
<b>18 December 23</b>	<b>17.3</b>	<b>80</b>	<b>Trace</b>
<b>19 December 23</b>	<b>16.8</b>	<b>75</b>	<b>0</b>
<b>20 December 23</b>	<b>13.6</b>	<b>65</b>	<b>0</b>
<b>21 December 23</b>	<b>10.9</b>	<b>65</b>	<b>0</b>
<b>22 December 23</b>	<b>10.5</b>	<b>51</b>	<b>0</b>
<b>23 December 23</b>	<b>11</b>	<b>58</b>	<b>0.2</b>
<b>24 December 23</b>	<b>13.3</b>	<b>52</b>	<b>0</b>
<b>25 December 23</b>	<b>14.9</b>	<b>51</b>	<b>0</b>
<b>26 December 23</b>	<b>16.6</b>	<b>63</b>	<b>0</b>
<b>27 December 23</b>	<b>18.7</b>	<b>62</b>	<b>Trace</b>
<b>28 December 23</b>	<b>20.1</b>	<b>73</b>	<b>Trace</b>
<b>29 December 23</b>	<b>19.4</b>	<b>79</b>	<b>0</b>
<b>30 December 23</b>	<b>20.7</b>	<b>70</b>	<b>Trace</b>
<b>31 December 23</b>	<b>21.8</b>	<b>73</b>	<b>0</b>

\* The above information was extracted from the daily weather summary by Hong Kong Observatory.

\*\*Trace means rainfall less than 0.05 mm.

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**APPENDIX N**  
**EVENT ACTION PLANS**

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**Appendix N:****Table N-1: Event / Action Plan for Air Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the

	to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	Implementation of remedial measures.		agreed proposals; and 4. Amend proposal if appropriate.
<b>LIMIT LEVEL</b>				
1.Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.

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

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

**Table N-2: Event / Action Plan for Construction Noise**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss jointly with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of Contractor's working procedures with the ER and Contractor to determine possible mitigation to be implemented; 6. Inform IEC, ER and Contractor the causes and actions taken for the exceedances;	1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions; 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify the Contractor; 3. Require the Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the ER and copy to the ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problems still not under control; 5. Stop the relevant portion of works as



EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	7. Assess effectiveness of Contractor's remedial actions and keep IEC informed of the results;  8. If exceedance stops, cease additional monitoring.		Contractor to stop that portion of work until the exceedance is abated.	determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

**Table N-3: Event / Action Plan for Water Quality**

EVENT	ACTION				
	ET		IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Conduct addition site investigation on the same day;	1. Discuss with ET, ER and Contractor on the implemented mitigation measures;	1. Review proposals on remedial measures submitted by Contractor;	1. Identify source(s) of impact;	
	2. Inform IEC, Contractor and ER;	2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and	2. Discuss with IEC, ET and Contractor on the Implemented mitigation measures;	2. Inform the ER and confirm notification of the noncompliance in writing;	
	3. Check monitoring data, all plant, equipment, Contractor’s working methods and other relative information;	3. Review submit proposal and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	3. Make agreement on the remedial measures to be implemented; and	3. Rectify unacceptable practice;	
	4. Review proposals on remedial measures submitted by Contractor;		4. Supervise the implementation of agreed remedial measures.	4. Check all plant and equipment;	
	5. Discuss remedial measures with IEC and Contractor and ER; and			5. Consider changes of working methods;	
	6. Review submit proposal and ensure the effectiveness of the implemented mitigation measures.			6. Discuss with ER, ET and IEC and submit proposal of remedial measures to ER and IEC; and	
				7. Implement the agreed mitigation measures.	
Action level being exceeded by more than one consecutive sampling days	1. Conduct addition site investigation on the same day;	1. Discuss with ET, Contractor and ER on the implemented mitigation measures;	1. Discuss with ET, IEC and Contractor on the proposed mitigation measures;	1. Identify source(s) of impact;	
	2. Inform IEC, Contractor and ER;	2. Review the proposed remedial measures submitted by Contractor and advise	2. Make agreement on the remedial measures to be implemented; and	2. Inform the ER and confirm notification of the non-compliance in writing;	
	3. Check monitoring data, all plant, equipment,			3. Rectify unacceptable	

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	<p>Contractor's working methods and other relative information;</p> <p>4. Discuss remedial measures with IEC, contractor and ER; and</p> <p>5. Review submit proposal and ensure the agreed remedial measures are implemented</p>	<p>the ER accordingly; and</p> <p>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</p>	<p>3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures</p>	<p>practice;</p> <p>4. Check all plant and equipment and consider changes of working methods;</p> <p>5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and</p> <p>6. Implement the agreed mitigation measures.</p>
Limit level being exceeded by one sampling day	<p>1. Conduct addition site investigation on the same day;</p> <p>2. Inform IEC, Contractor and ER;</p> <p>3. Rectify unacceptable practice;</p> <p>4. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information;</p> <p>5. Consider changes of working methods;</p> <p>6. Discuss mitigation measures with IEC, ER and Contractor;</p> <p>7. Review the submit</p>	<p>1. Discuss with ET, Contractor and ER on the implemented mitigation measures;</p> <p>2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</p> <p>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</p>	<p>1. Discuss with ET, IEC and Contractor on the implemented remedial measures;</p> <p>2. Request Contractor to critically review the working methods;</p> <p>3. Make agreement on the remedial measures to be implemented; and</p> <p>4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.</p>	<p>1. Identify source(s) of impact;</p> <p>2. Inform the ER and confirm notification of the noncompliance in writing;</p> <p>3. Rectify unacceptable practice;</p> <p>4. Check all plant and equipment and consider changes of working methods;</p> <p>5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of</p>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	proposal and ensure the agreed remedial measures are implemented;			notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> <li>1. Conduct addition site investigation on the same day;</li> <li>2. Inform IEC, contractor and ER;</li> <li>3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information;</li> <li>4. Discuss mitigation measures with IEC, ER and Contractor; and</li> <li>5. Review the submit proposal and ensure the agreed remedial measures are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, Contractor and ER on the implemented mitigation measures;</li> <li>2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, IEC and Contractor on the implemented remedial measures</li> <li>2. Request Contractor to critically review the working methods;</li> <li>3. Make agreement on the remedial measures to be implemented;</li> <li>4. Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and</li> <li>5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the dredging activities until no exceedance of Limit level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Inform the ER and confirm notification of the noncompliance in writing;</li> <li>3. Rectify Unacceptable practice;</li> <li>4. Check all plant and equipment and consider changes of working methods;</li> <li>5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and</li> <li>6. Implement the agreed remedial measures.</li> <li>7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of Limit level.</li> </ol>



Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

**Table N-4: Actions in the event of LFG being detected**

Parameter	Monitoring Results	Actions
O <sub>2</sub>	<19% v/v	Increase underground ventilation to restore O <sub>2</sub> to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O <sub>2</sub> level to >19%
CH <sub>4</sub>	>10% LEL	Prohibit hot works, increase ventilation to restore CH <sub>4</sub> to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH <sub>4</sub> to <10% LEL
CO <sub>2</sub>	>0.5% v/v	Increase ventilation to restore C O <sub>2</sub> to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO <sub>2</sub> to <0.5%

Note: Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or another appropriately qualified person. As a minimum these should encompass those actions specified in the above table.

**Table N-5: Event / Action Plan for Ambient Arsenic Monitoring**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.

	actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.			
<b>LIMIT LEVEL</b>				
1.Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;

	<p>procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p>	<p>their effectiveness and advise the ER accordingly;</p> <p>3. Supervise the implementation of remedial measures</p>	<p>remedial measures to be implemented;</p> <p>4. Supervise and ensure remedial measures properly implemented; and</p> <p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>3. Implement the agreed proposals;</p> <p>4. Resubmit proposals if problem still not under control;</p> <p>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</p>
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Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative



**Table N-6.1 Action and Limit Levels and Responses for Avifauna Monitoring and General Site Inspection in the LVNP during Construction Phase.**

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
<b>AVIFAUNA MONITORING</b>				
Action Level exceeded.	1. Check monitoring data and repeat data analysis to confirm findings;  2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;  3. Identify potential source(s) of impact;  4. Immediately inform IEC, Contractor and PP.  5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and  6. Conduct necessary site inspections/audits to ensure all remedial	1. Check monitoring data, analysis and investigation by ET;  2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and  3. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.	1. Confirm receipt of notification of the exceedance of Action Level in writing; and  2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	1. Check the monitoring results and findings from ET and IEC;  2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and  3. Supervise the instigated further mitigation measure(s).

	measures are properly implemented by the Contractor, as agreed with the PP.			
Limit Level exceeded.	<ol style="list-style-type: none"> <li>1. Check monitoring data and repeat data analysis to confirm findings;</li> <li>2. Identify potential source(s) of impact;</li> <li>3. Immediately inform IEC, Contractor and PP.</li> <li>4. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</li> <li>5. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</li> <li>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data, analysis and investigation by ET;</li> <li>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</li> <li>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</li> <li>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</li> <li>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</li> <li>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</li> <li>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the monitoring results and findings from ET and IEC;</li> <li>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</li> <li>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</li> <li>4. Supervise the instigated further mitigation measure(s).</li> </ol>

	implemented by the Contractor, as agreed with the PP.	feedback the audit results to the PP.		
<b>General Site Inspection</b>				
Action Level exceeded.	1. Investigate if the activity identified is related to the construction works;  2. Immediately inform IEC, Contractor and PP.  3. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and  4. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.	1. Check the investigation and findings of the ET;  2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and  3. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.	1. Confirm receipt of notification of the exceedance of Action Level in writing; and  2. Propose and implement the remedial measures(s) to mitigate the impact(s) of the activity identified.	1. Check the investigation and findings of the ET and IEC;  2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and  3. Supervise the instigated further mitigation measure(s).
Limit Level exceeded	1. Investigate if the activity identified is related to the construction works;	1. Check the investigation and findings or the ET;  2. Discuss with the PP,	1. Confirm receipt of notification of the exceedance of Limit Level in writing;	1. Check the monitoring results and findings from ET and IEC;  2. Discuss the need for

	<p>2. Immediately inform IEC, Contractor and PP.</p> <p>3. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>4. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>5. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
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**Table N-6.2 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers**

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
<b>Construction Phase</b>				
Action Level	1. Check monitoring	1. Check monitoring data,	1. Confirm receipt of	1. Check the monitoring



exceeded.	<p>data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>
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Limit Level Exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Identify potential source(s) of impact;</p> <p>3. Immediately inform IEC, Contractor and PP.</p> <p>4. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>5. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p> <p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
<b>Operational Phase</b>				
Action Level	1. Check monitoring	1. Check monitoring	1. Confirm receipt of	1. Check the monitoring

exceeded.	<p>data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>
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Limit Level exceeded.	<ol style="list-style-type: none"> <li>1. Check monitoring data and repeat data analysis to confirm findings;</li> <li>2. Identify potential source(s) of impact;</li> <li>3. Immediately inform IEC, Contractor and PP.</li> <li>4. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</li> <li>5. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</li> <li>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data, analysis and investigation by ET;</li> <li>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</li> <li>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</li> <li>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</li> <li>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</li> <li>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</li> <li>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the monitoring results and findings from ET and IEC;</li> <li>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</li> <li>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</li> <li>4. Supervise the instigated further mitigation measure(s).</li> </ol>
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**Table N-6.3 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna**  
WMA20002\App N - Event Action Plan



EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
<b>Construction Phase</b>				
Action Level exceeded.	1. Check monitoring data and repeat data analysis to confirm findings;  2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;  3. Identify potential source(s) of impact;  4. Immediately inform IEC, Contractor and PP.  5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and  6. Conduct necessary site inspections/audits to ensure all remedial measures are properly	1. Check monitoring data, analysis and investigation by ET;  2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and  3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.	1. Confirm receipt of notification of the exceedance of Action Level in writing; and  2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	1. Check the monitoring results and findings from ET and IEC;  2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and  3. Supervise the instigated further mitigation measure(s).

	implemented by the Contractor, as agreed with the PP.			
Limit Level exceeded.	<ol style="list-style-type: none"> <li>1. Check monitoring data and repeat data analysis to confirm findings;</li> <li>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</li> <li>3. Identify potential source(s) of impact;</li> <li>4. Immediately inform IEC, Contractor and PP.</li> <li>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</li> <li>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data, analysis and investigation by ET;</li> <li>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</li> <li>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</li> <li>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</li> <li>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</li> <li>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</li> <li>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the monitoring results and findings from ET and IEC;</li> <li>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</li> <li>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</li> <li>4. Supervise the instigated further mitigation measure(s).</li> </ol>

	7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.	results to the PP.		
<b>Operational Phase</b>				
Action Level exceeded.	1. Check monitoring data and repeat data analysis to confirm findings;  2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;  3. Identify potential source(s) of impact;  4. Immediately inform IEC, Contractor and PP.  5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;	1. Check monitoring data, analysis and investigation by ET;  2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and  3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.	1. Confirm receipt of notification of the exceedance of Action Level in writing; and  2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	1. Check the monitoring results and findings from ET and IEC;  2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and  3. Supervise the instigated further mitigation measure(s).

	and  6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.			
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p> <p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>



	<p>impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>		
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**Table N-6.4 Action and Limit Levels and Responses to Evidence of Declines in the Seasonal Non-aquatic Fauna (Herptofauna, Butterfly and Odonates) in Ecologically Sensitive Habitats**

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
<b>Construction Phase</b>				
Action Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p>	<p>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p>

	<p>construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>		<p>3. Supervise the instigated further mitigation measure(s).</p>
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p> <p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s),</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the</p>

	<p>natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
<b>Operational Phase</b>				

Action Level exceeded.	<ol style="list-style-type: none"> <li>1. Check monitoring data and repeat data analysis to confirm findings;</li> <li>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</li> <li>3. Identify potential source(s) of impact;</li> <li>4. Immediately inform IEC, Contractor and PP.</li> <li>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</li> <li>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data, analysis and investigation by ET;</li> <li>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</li> <li>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</li> <li>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the monitoring results and findings from ET and IEC;</li> <li>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</li> <li>3. Supervise the instigated further mitigation measure(s).</li> </ol>
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Limit Level exceeded.	<ol style="list-style-type: none"> <li>1. Check monitoring data and repeat data analysis to confirm findings;</li> <li>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</li> <li>3. Identify potential source(s) of impact;</li> <li>4. Immediately inform IEC, Contractor and PP.</li> <li>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</li> <li>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</li> <li>7. Conduct necessary</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data, analysis and investigation by ET;</li> <li>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</li> <li>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</li> <li>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</li> <li>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</li> <li>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</li> <li>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the monitoring results and findings from ET and IEC;</li> <li>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</li> <li>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</li> <li>4. Supervise the instigated further mitigation measure(s).</li> </ol>

	<p>site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>			
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**Table N-6.5 Action and Limit Levels and Responses to Evidence of Declines in the Non-seasonal Non-aquatic Fauna (Mammals) in Ecologically Sensitive Habitats**

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
<b>Construction Phase</b>				
Action Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit</p>	<p>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>

	<p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	results to the PP.		
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p> <p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>

	<p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>		
<b>Operational Phase</b>				
Action Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and</p>	<p>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit</p>



	<p>check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>remedial measures(s) to mitigate the impact(s) identified.</p>	<p>frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p>

	<p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed</p>	<p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
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	with the PP.			
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**APPENDIX O**  
**SUMMARY OF EXCEEDANCE**

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## **Appendix O: Exceedance Report**

### **(A) Exceedance Report for Air Quality**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Air Quality	1-hr TSP	0	0	0	0
	24-hr TSP	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0

### **(B) Exceedance Report for Construction Noise**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Noise	$L_{eq}(30 \text{ min.}) \text{ dB(A)}$	0	0	0	0

### **(C) Exceedance Report for Water Quality**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Water Quality	DO	0	0	0	0
	Turbidity	0	0	0	0
	SS	0	0	0	0
	Arsenic	0	0	0	0

**(D) Exceedance Report for Landfill Gas**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Landfill Gas	O <sub>2</sub> (% v/v) CH <sub>4</sub> (% LEL) CO <sub>2</sub> (% v/v)	0	0	0	0

**(E) Exceedance Report for Built Heritage Monitoring**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Cultural Heritage	Built Heritage Monitoring	0	0	0	0

**(F) Exceedance Report for Ecological Monitoring**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Ecological	Avifauna	0	0	0	0
	Non-Aquatic Fauna	2	2	0	0
	General Site Inspection (LVNP)	0	0	0	0

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**APPENDIX P**  
**SITE AUDIT SUMMARY**

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

**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231205
Date	5 December 2023 (Wednesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
231205-R01	• Provide impervious sheeting for the dusty stockpile at portion 2.	B 2
231205-R02	• Provide valid NRMM label for the generator at portion 5.	B 24
	<b>C. Noise</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
231205-R03	• Keep clean and tidy for the portion 9b.	E 12
	<b>F. Land Contamination</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landfill Gas Hazard</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Landscape and Visual</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>J. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>K. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>L. Others</b>	
	• Follow-up on previous audit section (Ref. No.:231129), no major environmental deficiency was observed/identified during the site inspection.	

	Name	Signature	Date
Recorded by	Him Ng		5 December 2023
Checked by	Dr. Priscilla Choy		5 December 2023



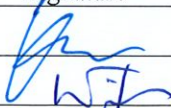

**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231212
Date	12 December 2023 (Tuesday)
Time	09:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
231212-R02	• Review and enhance the condition of hydroseeding at Pak Shek Au.	B 17
	<b><i>C. Noise</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
231212-R01	• Fell trees and yard waste should be cleared at Pak Shek Au.	E 1iii
	<b><i>F. Land Contamination</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landfill Gas Hazard</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Landscape and Visual</i></b>	
231212-R03	• Tree protection zone should be provided for the retained trees at Portion 11b.	I 1
	<b><i>J. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>K. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>L. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.:231205), all of the environmental deficiencies were observed improved/identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		13 December 2023
Checked by	Dr. Priscilla Choy		13 December 2023

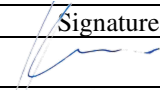
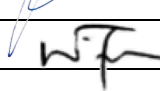
**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231219
Date	19 December 2023 (Tuesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
231219-R01	• Review and enhance the condition of hydroseeding at Portion 1C.	B 17
231219-R02	• Review and enhance the condition of hydroseeding at Pak Shek Au.	B 17
	<b>C. Noise</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
231219-R03	• The litter in RC2 at Portion 1B should be cleaned. RC2 should be maintained properly.	D 6
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Land Contamination</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landfill Gas Hazard</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Landscape and Visual</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>J. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>K. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>L. Others</b>	
	• Follow-up on previous audit section (Ref. No.:231212), item no. 231212-R01 and 231212-R03 were observed improved/rectified by the Contractor during the site inspection. 231212-R02 was remarked as 231219-R02. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Marco Ma		19 December 2023
Checked by	Dr. Priscilla Choy		19 December 2023



**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231228
Date	28 December 2023 (Thursday)
Time	09:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Noise</b>	
231228-R01	• The NEL of the air compressor at Portion 8a should be displayed.	C 8
	<b>D. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Land Contamination</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landfill Gas Hazard</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Landscape and Visual</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>J. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>K. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>L. Others</b>	
	• Follow-up on previous audit section (Ref. No.:231219), all the environmental deficiencies were observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		28 December 2023
Checked by	Dr. Priscilla Choy		28 December 2023



**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/02 – Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development and Shek Wu Hui**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231206
Date	6 December 2023 (Wednesday)
Time	9:30 – 11:10

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
231206-R02	• Provide maintenance to the concrete bund to prevent wheel-washing wastewater discharge.	D 12ii
231206-R03	• Silt accumulating in the nullah near the water outlet at the material storage area should be cleared continuously. Contractor was also reminded to enhance water mitigation measure to prevent further accumulation of silt.	D 1
231206-R05	• The channel should be properly blocked to prevent contamination.	D 6
231206-R06	• Provide maintenance to sandbags to prevent muddy water/ debris discharge in river.	D 3
231206-R07	• Regular cleaning of the garbage in Portion 11 should be conducted.	D 6
	<b>E. Waste / Chemical Management</b>	
231206-R04	• Accumulation of general refuse should be avoided at the riverbank of Portion 11.	E 1i
	<b>F. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landscape and Visual</b>	
231206-R01	• The removed green hoarding along Sheung Yue River due to the construction works should be replaced and maintained properly as soon as possible.	G 2
	<b>H. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>L. Others</b>	
	• Follow-up on previous audit section (Ref. No.:231129), item no 231129-R02, 231129-R03, 231129-R04, 231129-R06, 231129-R08, 231129-O01, 231129-O02 was rectified/improved by the contractor. Item no. 231129-R01, 231129-R05, 231129-R07, 231129-R09 were remarked as 231206-R01, 231206-R02, 231206-R03, 231206-R04 respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Rico Chan		12 December 2023
Checked by	Dr. Priscilla Choy		12 December 2023




**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/02 – Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development and Shek Wu Hui**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231214
Date	14 December 2023 (Thursday)
Time	9:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
231214-R05	• Provide impervious sheeting for the exposed slope at Portion 4.	B 1
	<b>C. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
231214-R02	• Provide maintenance to the concrete bund to prevent wheel-washing wastewater discharge.	D 12ii
231214-R03	• Silt accumulating in the nullah near the water outlet at the material storage area should be cleared continuously. Contractor was also reminded to enhance water mitigation measure to prevent further accumulation of silt.	D 1
231214-R06	• Enhance the mitigation measure to prevent waste or surface runoff for the discharge point of Portion 1.	D 4
	<b>E. Waste / Chemical Management</b>	
231214-R04	• Keep site clean and tidy at Portion 1.	E 12
	<b>F. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landscape and Visual</b>	
231214-R01	• The removed green hoarding along Sheung Yue River due to the construction works should be replaced and maintained properly as soon as possible.	G 2
	<b>H. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>L. Others</b>	
	• Follow-up on previous audit section (Ref. No.:231206), item no 231206-R04, 231206-R05, 231206-R06 and 231206-R07 was rectified/improved by the contractor. Item no. 231206-R01, 231206-R02 and 231206-R03 were remarked as 231214-R01, 231214-R02 and 231214-R03, respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Him Ng		14 December 2023
Checked by	Dr. Priscilla Choy		14 December 2023

***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/02 – Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development and Shek Wu Hui***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231220
Date	20 December 2023 (Wednesday)
Time	9:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
231220-R06	• Exposed works sites and haul roads should be sprayed with water as dust suppression.	B 1
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
231220-R02	• Silt accumulating in the nullah near the water outlet at the material storage area should be cleared continuously. Contractor was also reminded to enhance water mitigation measure to prevent further accumulation of silt.	D 1
231220-R03	• Provide impervious sheeting for the exposed slope at Portion 4.	D 7
231220-R04	• Enhance the mitigation measure to prevent waste or surface runoff for the discharge point of Portion 1.	D 4
231220-R07	• Accumulated ground water should be pumped out to wastewater treatment facilities prior to discharge.	D 5
231220-R08	• Provide maintenance to impervious sheeting on the exposed slope at Portion 5.	D 7
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landscape and Visual</i></b>	
231220-R01	• The removed green hoarding along Sheung Yue River due to the construction works should be replaced and maintained properly as soon as possible.	G 2
	<b><i>H. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Permits/Licences</i></b>	
231220-R05	• Construction Noise Permit should be available for inspection at site entrance.	I 1
	<b><i>L. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.:231214), item no 231214-R02, and 231214-R04 were rectified/improved by the contractor. Item no. 231214-R01, 231214-R03 231214-R05 and 231214-R06 were remarked as 231220-R01, 231220-R02, 231220-R03 and 231220-R04, respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Adrian Lam		21 December 2023
Checked by	Dr. Priscilla Choy		21 December 2023

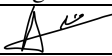

**Service Contract No. NDO 04/2919 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2919/02 – Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development and Shek Wu Hui**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231229
Date	29 December 2023 (Wednesday)
Time	9:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
231229-R05	• Dusty stockpile and exposed slopes should be covered with tarpaulin sheets.	B 2
	<b>C. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
231229-R02	• Silt accumulating in the nullah near the water outlet at the material storage area should be cleared continuously. Contractor was also reminded to enhance water mitigation measure to prevent further accumulation of silt.	D 1
231229-R03	• Enhance the mitigation measure to prevent waste or surface runoff for the discharge point of Portion 1.	D 4
231229-R04	• Provide maintenance to impervious sheeting on the exposed slope at Portion 5.	D 7
231229-R06	• Contractor are reminded to ensure the vehicles are properly cleaned of dirt and dust before leaving the site.	D 11
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landscape and Visual</b>	
231229-R01	• The removed green hoarding along Sheung Yue River due to the construction works should be replaced and maintained properly as soon as possible.	G 2
	<b>H. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>L. Others</b>	
	• Follow-up on previous audit section (Ref. No.:231220), item no. 231220-R01, 231220-R02 231220-R04 and 231220-R08 were remarked as 231229-R01, 231229-R02, 231229-R03 and 231229-R04, respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Adrian Lam		30 December 2023
Checked by	Dr. Priscilla Choy		30 December 2023



***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231208
Date	8 December 2023 (Friday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
231208-R01	• Contractor was reminded to ensure vehicles are properly washed before leaving the site	D 11
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape &amp; Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	Follow-up on previous audit section (Ref. No.:231128), no major environmental deficiency was identified during site inspection..	

	Name	Signature	Date
Recorded by	Adrian Lam		8 December 2023
Checked by	Dr. Priscilla Choy		8 December 2023





***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231215
Date	15 December 2023 (Friday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
231215-R01	• Provide drip tray for chemical/fuel containers.	E 14
	<b><i>F. Landscape &amp; Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	Follow-up on previous audit section (Ref. No.:231208), all environmental deficiency was improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Him Ng		15 December 2023
Checked by	Dr. Priscilla Choy		15 December 2023



***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231219
Date	19 December 2023 (Tuesday)
Time	14:00 – 15:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape &amp; Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	Follow-up on previous audit section (Ref. No.:231215), all environmental deficiency was improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		20 December 2023
Checked by	Dr. Priscilla Choy		20 December 2023


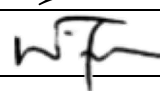
***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231227
Date	27 December 2023 (Wednesday)
Time	14:00 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape &amp; Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	Follow-up on previous audit section (Ref. No.:231219), no major environmental deficiency was identified during site inspection..	

	Name	Signature	Date
Recorded by	Rico Chan		28 December 2023
Checked by	Dr. Priscilla Choy		28 December 2023

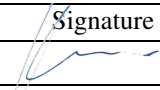
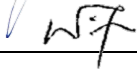
**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231207
Date	7 December 2023 (Thursday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
231207-R01	• Exposed site area should be watered regularly as dust suppression at A1-03 and A3-03	B 1
	<b>C. Noise</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
231207-R04	• Accumulation of general refuse should be avoided at A1-05.	E 1i
	<b>F. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landscape and Visual</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Ecology</b>	
231207-R02	• The dull green barrier of the 10m buffer zone near Siu Hang San Tsuen should be maintained properly and regularly.	H 3
231207-R03	• The silt curtain next to A3-01 should be maintained properly.	H 5
	<b>I. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>J. Others</b>	
	• Follow-up on previous audit section (Ref. No.: 231130), item no. 231130-R01 was observed improved/rectified by the Contractor during the site inspection. Item 231130-R02 and 231130-R03 were remarked as 231207-R02 and 231207-R03 respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Marco Ma		7 December 2023
Checked by	Dr. Priscilla Choy		7 December 2023


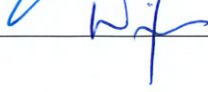


***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***  
***ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231212
Date	12 December 2023 (Tuesday)
Time	14:00 – 16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
231212-R01	• Dusty stockpile should be covered by impervious sheets properly at Portion K.	B 2
	<b><i>C. Noise</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
231212-R02	• Blue hoses should be kept away from the riverside near A3-03.	D 6
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>J. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.: 231205), all of the environmental deficiencies were observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		13 December 2023
Checked by	Dr. Priscilla Choy		13 December 2023

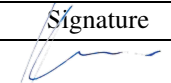
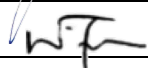
**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231221
Date	21 December 2023 (Thursday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
231221-R01	<ul style="list-style-type: none"> <li>Dusty stockpile at Portion K should be covered properly or watered regularly as dust suppression.</li> </ul>	B 2
	<b>C. Noise</b>	
	<ul style="list-style-type: none"> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<b>D. Water Quality</b>	
231221-R02	<ul style="list-style-type: none"> <li>Blue hoses should be kept away from the riverside near A3-03.</li> </ul>	D 6
	<b>E. Waste / Chemical Management</b>	
	<ul style="list-style-type: none"> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<b>F. Cultural Heritage</b>	
	<ul style="list-style-type: none"> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<b>G. Landscape and Visual</b>	
	<ul style="list-style-type: none"> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<b>H. Ecology</b>	
	<ul style="list-style-type: none"> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<b>I. Permits/Licences</b>	
	<ul style="list-style-type: none"> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<b>J. Others</b>	
	<ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 231212), item no. 231212-R01 was observed improved/rectified by the Contractor during the site inspection. Item no. 231212-R02 was remarked as 231221-R02. Follow-up action is needed to be reviewed.</li> </ul>	

	Name	Signature	Date
Recorded by	Marco Ma		21 December 2023
Checked by	Dr. Priscilla Choy		21 December 2023

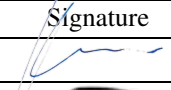

**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231228
Date	28 December 2023 (Thursday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Noise</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>F. Cultural Heritage</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Landscape and Visual</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Ecology</b>	
231228-R01	• The silt curtain at Bridge F should be maintained regularly and properly.	H 5
	<b>I. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>J. Others</b>	
	• Follow-up on previous audit section (Ref. No.: 231221), all the environmental deficiencies were observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		28 December 2023
Checked by	Dr. Priscilla Choy		28 December 2023

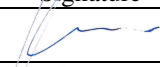

***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231204
Date	4 December 2023 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Noise</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
231204-R01	• The construction site at On Lok Garden should be kept clean and tidy generally. The contractor was reminded to clear the waste regularly.	E 12
	<b><i>F. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>J. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.: 231127), no environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		4 December 2023
Checked by	Dr. Priscilla Choy		4 December 2023



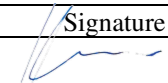

***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231214
Date	14 December 2023 (Thursday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Noise</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>J. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.: 231204), item 231204-R01 was observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		14 December 2023
Checked by	Dr. Priscilla Choy		14 December 2023

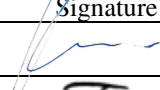
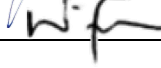
***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231218
Date	18 December 2023 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Noise</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
231218-R01	• Litter in the temporary drainage at B1-02a should be cleared and maintained properly.	D 6
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>J. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.: 231214), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		18 December 2023
Checked by	Dr. Priscilla Choy		18 December 2023

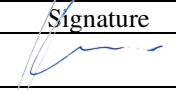
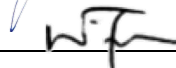
***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231227
Date	27 December 2023 (Wednesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Noise</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Cultural Heritage</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>J. Others</i></b>	
	• Follow-up on previous audit section (Ref. No.: 231218), item 231218-R01 was observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		27 December 2023
Checked by	Dr. Priscilla Choy		27 December 2023

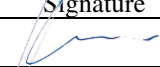

***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231201
Date	1 December 2023 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	<ul style="list-style-type: none"> <li>• Follow-up on previous audit section (Ref. No.: 231124), no major environmental deficiency was identified during the site inspection..</li> <li>• The stockpiles of dusty material within ND/2019/07 which is not covering properly were observed during the site inspection. AECOM declared that is ND/2019/04's temporary storage. Supporting documents will be supplemented for record, if needed.</li> </ul>	

	Name	Signature	Date
Recorded by	Marco Ma		1 December 2023
Checked by	Dr. Priscilla Choy		1 December 2023



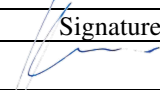
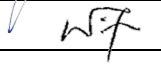
***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231208
Date	8 December 2023 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	<ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 231201), no major environmental deficiency was identified during the site inspection..</li> <li>The stockpile of dusty material within ND/2019/07 which is only partially covered was observed during the site inspection. AECOM declared that is ND/2019/04's temporary storage. Supporting documents will be supplemented for record, if needed.</li> </ul>	

	Name	Signature	Date
Recorded by	Marco Ma		8 December 2023
Checked by	Dr. Priscilla Choy		8 December 2023

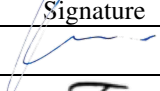
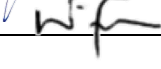
***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231215
Date	15 December 2023 (Friday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	<ul style="list-style-type: none"> <li>• Follow-up on previous audit section (Ref. No.: 231208), no major environmental deficiency was identified during the site inspection..</li> <li>• The stockpile of dusty material within ND/2019/07 near Ma Sik Road was observed covered properly on site. AECOM declared that is ND/2019/04's temporary storage. The Contractor of ND/2019/04 was reminded to review and maintain regularly to prevent dust generation.</li> </ul>	

	Name	Signature	Date
Recorded by	Marco Ma		15 December 2023
Checked by	Dr. Priscilla Choy		15 December 2023



**Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas**

**ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works**

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231222
Date	22 December 2023 (Friday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b>B. Air Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>C. Construction Noise Impact</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>D. Water Quality</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>E. Waste / Chemical Management</b>	
231222-R01	• Ensure that the drip tray remains clear to maintain adequate capacity.	E 14
	<b>F. Landscape and Visual</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>G. Ecology</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>H. Permits/Licences</b>	
	• No environmental deficiency was identified during site inspection.	
	<b>I. Others</b>	
	<ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 231215), no major environmental deficiency was identified during the site inspection..</li> <li>The stockpile of dusty material within ND/2019/07 near Ma Sik Road was observed covered properly on site. AECOM declared that is ND/2019/04's temporary storage. The Contractor of ND/2019/04 was reminded to review and maintain regularly to prevent dust generation.</li> </ul>	

	Name	Signature	Date
Recorded by	Him Ng		22 December 2023
Checked by	Dr. Priscilla Choy		22 December 2023

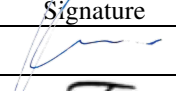
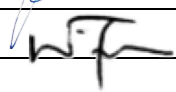
***Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas***

***ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works***

**Weekly Site Inspection Record Summary**

Checklist Reference Number	231229
Date	29 December 2023 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<b><i>B. Air Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>C. Construction Noise Impact</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>D. Water Quality</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>E. Waste / Chemical Management</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>F. Landscape and Visual</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>G. Ecology</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>H. Permits/Licences</i></b>	
	• No environmental deficiency was identified during site inspection.	
	<b><i>I. Others</i></b>	
	<ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 231222), item 231222-R01 was observed improved/rectified by the Contractor during the site inspection.</li> <li>The stockpile of dusty material within ND/2019/07 near Ma Sik Road was observed covered properly on site. AECOM declared that is ND/2019/04's temporary storage. The Contractor of ND/2019/04 was reminded to review and maintain regularly to prevent dust generation.</li> </ul>	

	Name	Signature	Date
Recorded by	Marco Ma		29 December 2023
Checked by	Dr. Priscilla Choy		29 December 2023



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**APPENDIX Q**  
**ENVIRONMENTAL MITIGATION**  
**IMPLEMENTATION SCHEDULE (EMIS)**

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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
<b>Construction Dust Impact</b>							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m <sup>2</sup> to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D3	<p>Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase</p> <ul style="list-style-type: none"> <li>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</li> <li>Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones;</li> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</li> <li>Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</li> <li>When there are open excavation and reinstatement works,</li> </ul>	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	#  ^  ^  ^  ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.</p> <ul style="list-style-type: none"> <li>• The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;</li> <li>• Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;</li> <li>• Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;</li> <li>• Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;</li> <li>• Any skip hoist for material transport should be totally enclosed by impervious sheeting;</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> <li>• Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;</li> <li>• Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</li> </ul>					<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>^</p>

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<ul style="list-style-type: none"> <li>Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul>					^
SURFACE S3.8	D4	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction phase	^
<b>Noise Impact (Construction Phase)</b>							
S4.9	N1	Implement the following good site management practices: <ul style="list-style-type: none"> <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, 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</li> </ul>	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;</p> <ul style="list-style-type: none"> <li>• Mobile plant should be sited as far away from NSRs as possible and practicable;</li> <li>• Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>					<p>^</p> <p>^</p>
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N4	Use of “Quiet” Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected	Contractor	Selected representative	Construction phase	^

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			representative locations		noise monitoring stations		
<b>Water Quality Impact (Construction Phase)</b>							
S5.7	W1	<p><u>Construction Runoff and Site Drainage</u></p> <p>In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. where appropriate, should include the following:</p> <p><b>Stormwater Pollution Control Plan</b></p> <ul style="list-style-type: none"> <li>At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction.</li> <li>Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m<sup>3</sup> capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple</li> </ul>	Control construction runoff	Contractor	All construction sites	Construction phase	<p>^</p> <p>#</p>

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		<p>inputs from a variety of sources and suited to applications where the influent is pumped.</p> <ul style="list-style-type: none"> <li>The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates.</li> <li>The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction.</li> <li>Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.</li> <li>All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas.</li> <li>Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or</li> </ul>					<p>^</p> <p>^</p> <p>#</p> <p>*</p> <p>^</p>

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		<p>foundation excavations should be discharged into storm drains via silt removal facilities.</p> <ul style="list-style-type: none"> <li>All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m<sup>3</sup> should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.</li> <li>Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.</li> <li>Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.</li> <li>All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to</li> </ul>					<p>^</p> <p>^</p> <p>^</p> <p>#</p>



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		<p>public roads and drains.</p> <ul style="list-style-type: none"> <li>Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain.</li> <li>Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.</li> <li>All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby.</li> <li>Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.</li> </ul>					<p>N/A</p> <p>^</p> <p>^</p> <p>^</p>
S5.7	W2	<p><u>Stream Diversion</u></p> <ul style="list-style-type: none"> <li>In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition.</li> </ul>	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	#

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S5.7	W3	<u>Groundwater from Contaminated Area</u> <ul style="list-style-type: none"> <li>For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found.</li> <li>If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters.</li> <li>If recharged well method were used, the groundwater quality in the recharged well should not be affected by recharging operation, i.e. the pollution levels of the recharged groundwater should not be higher than that in the recharging wells.</li> <li>If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the WPCO through the Regional Offices of EPD.</li> </ul>	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A
							N/A
							N/A
							N/A
S5.7	W4	<u>Sewage from Workforce</u> Portable chemical toilets and sewage holding tanks should be provided for	Handling of site sewage	Contractor	All construction sites	Construction Phase	^

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		<p>handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.</p>					
<b>Waste Management (Construction Waste)</b>							
S7.6	WM1	<p><u>Waste Reduction Measures</u></p> <p>Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction:</p> <ul style="list-style-type: none"> <li>segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>proper storage and site practices to minimize the potential for</li> </ul>	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	<p>^</p> <p>^</p>

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		<p>damage and contamination of construction materials;</p> <ul style="list-style-type: none"> <li>plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;</li> <li>sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc);</li> <li>provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.</li> </ul>					<p>^</p> <p>N/A</p> <p>^</p>
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^
S7.6	WM3	<p><u>Good Site Practice</u></p> <p>The following good site practices are recommended throughout the construction activities:</p> <ul style="list-style-type: none"> <li>Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;</li> </ul>	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p>



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		<ul style="list-style-type: none"> <li>Provision of sufficient waste disposal points and regular collection for disposal;</li> <li>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> </ul>					^  ^  *
S7.6	WM4	<u>Storage of Waste</u> The following recommendation should be implemented to minimize the impacts: <ul style="list-style-type: none"> <li>Waste such as soil should be handled and stored well to ensure secure containment;</li> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away;</li> <li>Different locations should be designated to stockpile each material to enhance reuse;</li> </ul>	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	^  ^  ^
S7.6	WM5	<u>Collection and Transportation of Waste</u> The following recommendation should be implemented to minimize the	Minimize waste impact	Contractor	All construction	Construction	

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		impacts: <ul style="list-style-type: none"> <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>Disposal of waste should be done at licensed waste disposal facilities.</li> </ul>	from storage		sites	phase	^ ^ ^ ^
S7.6	WM6	<u>Excavated and C&amp;D Material</u> Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: <ul style="list-style-type: none"> <li>Maintain temporary stockpiles and reuse excavated fill material for backfilling;</li> <li>Carry out on-site sorting;</li> <li>Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products;</li> <li>Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and</li> <li>Implement a recording system for the amount of waste generated,</li> </ul>	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^ ^ N/A N/A N/A ^

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		<p>recycled and disposed of for checking;</p> <p>Standard formwork should be used as far as practicable in order to minimize the arising of C&amp;D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.</p> <p>Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.</p>					N/A  ^
S7.6	WM7	<p><u>Contaminated Soil</u></p> <p>As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of river measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.</p>	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	^
S7.6	WM8	<p><u>Chemical Waste</u></p> <p>If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed</p>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^

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		chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.					
S7.6	WM9	<u>General Waste</u> <ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling.</li> <li>Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.</li> <li>A reputable waste collector should be employed to remove general refuse on a daily basis.</li> </ul>	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^   ^   ^
S7.6	WM10	<u>Sewage</u> <ul style="list-style-type: none"> <li>The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities.</li> <li>Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.</li> </ul>	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	N/A   N/A



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S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
<b>Land Contamination</b>							
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially contaminated sites in 2 NDAs	Verify the land contamination potential before the commencement of construction	Project Proponent Detailed Design Consultant Contractor	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	After the land is resumed and handed over to the Project Proponent	N/A
S 8.5	LC3	Preparation and submission of supplementary Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for all inaccessible potentially contaminated sites in 2 NDAs to EPD for agreement if land contamination is confirmed	Present the findings of SI and evaluate the potential environmental and human health impacts Recommend appropriate mitigation measures for the contaminated soil and groundwater identified in the assessment if	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed and remediation is required	N/A

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			remediation is required				
S 8.5	LC4	Preparation and submission of Remediation Report to EPD for agreement	Demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed supplementary CAR and RAP	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed and remediation is required	N/A
S 8.6	LC5	Re-appraisal of surveyed sites (if they become part of the land requirement for NDA development) that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey	Verify the land contamination potential due to potential change of land uses before the commencement of construction	Project Proponent/ Detailed Design Consultant	All surveyed sites (if they become part of the land requirement for NDA development (that were not identified as potentially	After the land is resumed and handed over to the Project Proponent.	N/A

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					contaminated or could not be accessed for visual inspection during the site survey as listed in the CAP		
S 8.7.2 and Appendix 8.4	LC6	Treatment of arsenic-containing soil “Solidification/Stabilization” (S/S) treatment method was proposed for the treatment of arsenic-containing soil. Toxicity Characteristic Leaching Procedure (TCLP) test should be undertaken after S/S in order to ensure that the contaminant will not leach to the environment. Unconfined Compressive Strength (UCS) test should be conducted, and not less than 1MPa should be met prior to the backfilling or stockpiled for future reuse within the study area.	To treat the arsenic containing soil	Government Developer/ Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A
S 8.7.2 and Appendix 8.4	LC7	Excavation and Transportation <ul style="list-style-type: none"> <li>Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> <li>In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table;</li> <li>Excavation should be carried out during dry season as far as</li> </ul>	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A

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		<p>possible to minimize runoff from excavated soils;</p> <ul style="list-style-type: none"> <li>Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimize runoff;</li> <li>Supply of suitable backfill material after excavation, if require; Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season;</li> <li>Speed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used.</li> </ul>					^
S 8.7.2 and Appendix 8.4	LC8	<p>Solidification/Stabilization</p> <ul style="list-style-type: none"> <li>The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system;</li> <li>Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission;</li> <li>The mixing facilities should be sited as far apart as</li> </ul>	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	<p>N/A</p> <p>^</p> <p>^</p>



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		<p>practicable from the nearby noise sensitive receivers;</p> <ul style="list-style-type: none"> <li>Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching;</li> <li>Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;</li> <li>If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and</li> </ul> <p>If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.</p>					<p>^</p> <p>^</p> <p>*</p>
S 8.7.2 and Appendix 8.4	LC9	<p><u>Safety Measures</u></p> <ul style="list-style-type: none"> <li>Set up a list of safety measures for site workers;</li> <li>Provide written information and training on safety for site workers;</li> <li>Keep a log-book and plan showing the zones requiring treatment and clean zones;</li> <li>Maintain a hygienic working environment;</li> <li>Avoid dust generation;</li> <li>Provide face and respiratory protection gear to site workers if</li> </ul>	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A

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		<p>necessary;</p> <ul style="list-style-type: none"> <li>• Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers if necessary;</li> <li>• Provide first aid training and materials to site worker;</li> <li>• Bulk earth moving equipment should be utilized as much as possible to minimize worker</li> </ul> <p>Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.</p>					
<b>Landfill Gas Hazard</b>							
S10.6	LFG1	<ul style="list-style-type: none"> <li>• Underground rooms or void should be avoided as far as practicable in the proposed developments within the Consultation Zone and should be avoided totally in the proposed developments within the MTLL.</li> <li>• Buildings or structures within the MTLL should be at ground level with raised floor slabs which are less prone to gas ingress.</li> <li>• For the high risk category, the use of active control of gas, including barriers and detection systems are recommended. These measures include the control of gas by mechanical means e.g. ventilation of spaces with air to dilute gas, or extraction of gas using fans or blowers.</li> <li>• For the low risk category, the provision of barriers to the movement of gas is recommended. Measures recommended</li> </ul>	To minimize the risk of LFG hazards to occupants within MTLL and its 250m Consultation Zone	Government / Developer/ Detailed Design Consultant within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Detailed design phase	N/A

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		<p>include the use of membranes in floors or walls, or in trenches, coupled with high permeability vents such as nofines gravel in trenches or voids/permeable layers below structures.</p> <ul style="list-style-type: none"> <li>The need and practicality of incorporating such measures should be reviewed in the detailed Qualitative LFG Hazards Assessment (QLFGHA) during the detailed design stage for developments within the 250m Consultation Zone and within MTLL. Recommendations on the detailed precautionary and protection measures to be adopted should be given in the QLFGHA.</li> <li>The design and construction method of the proposed development within MTLL (i.e. the proposed recreational area in site E1-1) should be provided to EPD for agreement in the design stage to ensure compatibility with the landfill restoration facilities and aftercare works within MTLL, such that these facilities and works will not be affected by the construction or operation of the proposed development.</li> </ul>					
S10.6	LFG2	<ul style="list-style-type: none"> <li>During all works, safety procedures should be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater.</li> <li>Safety officers, specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in</li> </ul>	To minimize the risk of LFG hazards to the staff and visitors within MTLL and its 250m Consultation Zone	Contractor	Construction sites within MTLL and its 250m Consultation Zone	Construction phase	<p>^</p> <p>^</p>

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		<p>adverse circumstances, should be present on all worksites throughout the works.</p> <ul style="list-style-type: none"> <li>All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it.</li> <li>Those staff who work in, or have responsibility for “at risk” areas, including bore pilling and excavation works, should receive appropriate training on working in areas susceptible to LFG.</li> <li>Enhanced personal hygiene practices including washing thoroughly after working and eating only in “clean” areas should be adopted where contact may have been made with any groundwater which is thought to be contaminated with leachate.</li> <li>Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premises, e.g. shipping containers, where this is not possible should be well ventilated prior to entry.</li> <li>Adequate precautions to prevent the accumulation of LFG under site buildings and within storage shed should be taken by raising buildings off the ground where appropriate and “airing” storage containers prior to entry by personnel and ensuring adequate ventilation at all times.</li> </ul>					<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>



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		<ul style="list-style-type: none"> <li>Smoking and naked flames should be prohibited within confined spaces. “No Smoking” and “No Naked Flame” notices in Chinese and English should be posted prominently around the construction site. Safety notices should be posted warning of the potential hazards.</li> <li>Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a “permit to work” procedure, properly authorized by the Safety Officer. The permit to work procedure should set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas.</li> <li>During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use.</li> </ul>					<p>^</p> <p>N/A</p> <p>^</p>

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		<ul style="list-style-type: none"> <li>Ongoing gas monitoring should be considered for offices, stores etc set up on site.</li> </ul>					^
S10.6	LFG3	<p>Utility Companies</p> <ul style="list-style-type: none"> <li>The developers should make the utility companies aware of the location and features of the site within the Consultation Zone during the respective detailed design stage as part of the QLFCHA.</li> <li>The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times when entering enclosed spaces or plant rooms.</li> <li>Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTLL.</li> </ul> <p>Building Management</p> <ul style="list-style-type: none"> <li>The management committee of the building estate will hold a special responsibility to ensure that the occupants of the building, its staff and maintenance workers are protected from LFG and that visitors to the site are also made aware as to the dangers and the</li> </ul>	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users within MTLL and its 250m Consultation Zone	Government / Developer within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

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		<p>precautions required to be taken.</p> <ul style="list-style-type: none"> <li>Of primary importance to satisfactorily upholding this responsibility will be to ensure that strict procedures for maintaining control over all temporary and /or permanent works proposed at the site are reviewed with regard to the LFG hazard. This needs to be accompanied by a comprehensive contingency plan in case of incidents, including liaison with EPD officers, Fire Services Department, Landfill Restoration Contractors and others, as necessary.</li> <li>All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of LFG and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on LFG hazards and the designs and procedural means by which these hazards are being minimized on site. In addition, entry to confined spaces such as refuse/store rooms, drainage manholes etc. should be preceded by a period of “airing” the space by opening the door widely allowing fresh air to enter. Where appropriate, monitoring of gas should also precede entry.</li> <li>Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard,</li> </ul>					

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		<p>particularly in areas where a gas membrane has been installed.</p> <p>Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products.</p> <ul style="list-style-type: none"> <li>The building management company should also make arrangement with Landfill Restoration Contractor so that they are advised of all situations which may potentially threaten the safety of the building occupants resulting from any accidents or failures at the landfill site. The building management company should also have available suitable gas monitoring equipment for any ad hoc investigations necessary relating to LFG and be in a position to undertake any future routine monitoring of gas which may be considered necessary soloing completion of the defects correction period.</li> <li>To ensure that all the above protection and precautionary measures and issues pertaining to LFG are properly and consistently addressed by future users and owners of the site, it is recommended that a comprehensive LFG hazard management system be developed by the owner of the building or its property management agency. The system should be developed by the developers of the sites as part of the QLFGHA before the occupation of the building and implemented during its operational</li> </ul>					



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		phase.					
<b><i>Cultural Heritage (Pre-construction Phase)</i></b>							
S11.6.1	CH1	<p><u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u></p> <p>Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located in the areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.</p>	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located in the areas within Areas D1-11, A3-5, A3-6, B1-1, and B1-7,	After land resumption but before construction	N/A

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S11.6.1	CH2	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of the zone	N/A
S11.6.1	CH3	<u>Undertaking Preservation in-situ for Site 7</u> Preservation in-situ of the cultivation deposits in Site 7 is proposed. If disturbance to the site by the design of the Central Park is unavoidable, further archaeological survey should be conducted after land resumption prior to the pre-construction stage to assess the feasibility to incorporate Site 7 into the design of the development plan of the proposed zone. Appropriate followup actions, including preservation of the significant archaeological deposits in-situ in the Central Park, would then be considered with the consent of AMO.  The recommended mitigation measure of preservation in-situ with further archaeological survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the	To preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Site 7 in FLN NDA	After land resumption prior to preconstruction stage of the proposed Central Park (Area C2-8, Zoning O)	N/A

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		Authority under the AM Ordinance.					
S11.6.1	CH4	<u>Undertaking Induction Training</u> Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spots A, D, F to H. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spots A, D, F to H	Before the commencement of the excavation works and before site staff are deployed on site	N/A
S11.6.1	CH5	<u>Undertaking Archaeological Impact Assessment before Construction at A1</u> It is recommended that an Archaeological Impact Assessment to be conducted in the impacted area in Area B1-8 and B1-9 at A1 (Sheung	To define the precise archaeological deposits extent and to preserve the archaeological resources as	Project Proponent/ Contractor/ Qualified	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A

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		Shui Wa Shan Site of Archaeological Interest) after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	far as possible	Archaeologist			
S11.6.1	CH6	<u>Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9</u>  Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 &R3 zoning	After land resumption but before construction	N/A
S11.6.2	CH7	<u>Undertaking baseline condition survey and baseline vibration impact assessment</u>  In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s could be adopted for graded historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	G303 and G308	Preconstruction stage before commencement of construction works during Schedule 3 study	N/A



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		construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.					
S11.6.2	CH8	<u>Undertaking baseline condition survey and baseline vibration impact assessment</u>  In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	KT57, FL05, FL18, and FL2	Preconstruction stage before commencement of construction works	N/A
S11.6.2	CH9	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u>  Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Ancillary structures of G303, HKT01, HKT02, Entrance	Prior to Removal / Relocation of features before commencement of construction	N/A

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		records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out the Project Proponent.			Gate of HKT03, HKT04, KT01 to KT10, KT13, KT36, KT39, KT40, KT41, KT43, KT45, KT47, KT50, KT54, KT62 to KT63, KT69, FL01, FL16, and FL35	works during Schedule 3 study	
S11.6.2	CH10	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u> Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of	N/A

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						construction works	
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
<b>Cultural Heritage (Construction Phase)</b>							
S11.6.1	CH13	<u>Inform Upon Archaeological Discovery</u> Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	<u>Watertable Monitoring</u> Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A

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S11.6.2	CH15	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	^
<b><i>Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)</i></b>							
S.12.9	LV1	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.  With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available, to achieve early establishment	N/A



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S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized 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 minimize 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	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A

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		light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S12.9 MM14.4	LV 4	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.  For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern	Prior to Construction and Construction Phase	^

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		final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.  Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.			Section		
<b>Landscape and Visual (Construction)</b>							
S.12.9 MM3	LV5	Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.	Reprovision of open space.  Enhance visual amenity of the area and improve the overall landscape character	Government  Developer/ Detailed Design  Consultant/ Contractor/	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	Prior to Construction and Construction Phas	N/A
S.12.9 MM4	LV6	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.	Protect and Preserve Trees	Government / Detailed Design  Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

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		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					
S.12.9 MM5	LV7	<p>Tree Transplantation – 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.</p> <p>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.</p> <p>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.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted,</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A



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		HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.9 MM6	LV8	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding 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.</p> <p>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.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government / Detailed Design  Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM7	LV9	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as</p>	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design  Consultant/ Contractor	Onsite where possible.  Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		<p>open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>					
S.12.9 MM8	LV10	<p>Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 &amp; E27 also).</p> <p>Native tree species are suggested for planting in the appropriate</p>					N/A

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		<p>locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>.</p> <p>In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					

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S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A



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S.12.9 MM12	LV14	<p>Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.</p> <p>For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)</p>	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM13 & EIA Annex 13	LV15	<p>Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also)</p> <p>Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.</p>	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM14.1	LV16	<p>Reprovision of Natural Stream – 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.</p> <p>Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.</p> <p>At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)</p>	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S12.9 MM14.2	LV17	Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation.	Protect natural streams	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		<p>For the stream at Ma Tso Lung in KTN NDA, the middle and upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream.</p> <p>For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)</p>			San Tsuen		
S12.9 MM14.3	LV18	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Developer/ Detailed Design Consultant/ Contractor	Channelized watercourse, particularly the Ma Wat River Channel Diversion	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
S12.9 MM15	LV19	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.</p> <p>All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	^



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S.12.9 MM17	LV21	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government /  Developer/  Contractor	Throughout  NDAs	Construction and  Operation Phases	N/A
<b><i>Ecology (Prior to Construction Phase or throughout the project)</i></b>							
S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry.  Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/  Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation).  KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A

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S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at-grade section  Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S13.9	E3	Detailed design, implementation and management of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space zone D1-3, Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	PlanD, Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	FLN area D1-3.	Detailed design, construction and operation phases.	N/A
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation.	Compensate for wetland loss arising from the project and protection of	Project Proponent/ Detailed Design	Long Valley KTN area C1-9 and any suitable areas to	Detailed design phase	N/A

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		Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	Long Valley from adverse ecological impacts including provision of additional/alternative habitat for large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Consultant (Long Valley Nature Park Habitat Creation & Management Plan)	be identified during the planning stage		
S13.9	E5	Stringent planning control requirements in Long Valley north and west of Sheung Yue River, including Ho Sheung Heung egrettry.	Protect these wetland areas from indirect impacts to habitats and fauna especially breeding ardeids foraging in these areas and utilizing flight-lines from Ho Sheung Heung egrettry. Avoid habitat loss and disturbance to fauna of conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance	PlanD.	KTN areas C2-1 and C2-2 , Ho Sheung Heung egrettry and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design phase	N/A

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			of severance of these linkages, especially for waterbirds				
S13.9	E6	Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.	Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.  Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A
S13.9	E7	Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).	Minimization of disturbance impacts to fauna using Long Valley.	PlanD	KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along	Detailed design phase	N/A



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					northern and northeastern boundaries.		
S13.9	E8	<p>Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna.</p> <p>Guidelines to address the following measures:</p> <p>Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project.</p> <p>Measures to include the following:</p> <ul style="list-style-type: none"> <li>Fritting, or the placement of ceramic lines or dots on glass, which creates a visual barrier to birds and reduces air conditioning loads by lowering heat gain, while still allowing light transmission for interior spaces. It is most successful when the frits are applied on the outside surface. Frosted glass has similar effects;</li> <li>Angled glass to be used only for smaller panes in buildings with a limited amount of glass;</li> <li>The use of glass that reflects UV light (primarily visible to birds, but not to humans) to reduce collisions;</li> <li>Film and art treatment allow glass surfaces to be used a medium of expression, often related to the nature and use of the building, as well indicating to birds their impenetrability;</li> </ul>	Minimize mortality and disturbance impacts on fauna, especially mammals and birds.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant	Near Long Valley	Detailed design phase	N/A

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		<ul style="list-style-type: none"> <li>Lightweight external screens can be added to windows or become a façade element of larger buildings, and are suitable where non-operable windows are prevalent, which is often the case in modern buildings in HK</li> </ul>					
	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed developments in KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and shrubland at Crest Hill.	Minimize loss of secondary woodland and shrubland of ecological value.	Project Proponent/Detailed Design Consultant	KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and Crest Hill	Detailed design phase	N/A

S13.9	E11	<p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8.</p> <p>Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna.</p> <p>No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.</p>	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/ Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/ construction phase.	^
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<b>Ecology (Construction Phase)</b>							
S13.9	E12	Compensatory egret habitat provision and establishment.  Review condition and location of egretries before commencement of works. Formulate and implement additional mitigation measures as appropriate.  Phasing of works near and within Man Kam To Road Egret habitat outside breeding season	Compensate for loss of Man Kam To Road egret habitat.  Avoid mortality of breeding egrets	Project Proponent/ Detailed Design Consultant/ Contractor	FLN area A1-7 500m from Man Kam To Road Egret habitat.	Construction phase.	^
S13.9	E13	Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna.  No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season (1 March to 31 July)  Provision of alternative foraging habitat along main river channels for large waterbirds.	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna	Project Proponent/ Detailed Design Consultant/ Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	^



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S13.9	E14	<p>Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer.</p> <p>Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road.</p> <p>Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.</p>	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor. (Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas H1-1, F12 and F1-3 and Lok Ma Chau Loop Eastern Connection Road.	Detailed design and construction phases.	N/A

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S.13.9	E15	Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.	Compensate for wetland loss arising from the project	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)	Long Valley, (KTN area C1-9).	Construction phase.	^
S13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors;  Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers.  Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.	Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Detailed Design Consultant/ Contractor	Ng Tung, Sheung Yue and Shek Sheung Rivers	Detailed design and Construction phases.	#

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S13.9	E17	<p>Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.</p> <p>Erection of a 2m high dull green site barrier fence at the edge of the works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.</p>	<p>Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight- line impacts to birds, especially breeding ardeids.</p>	Contractor	<p>Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3, C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1-3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the Fanling Bypass and north of the Ng Tung River west of the western terminus</p>	Construction phase.	^

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					of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.		
S13.9	E18	Compensatory woodland planting, management and maintenance.	Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for all construction sites.  Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Contractor	All construction sites	Construction phase.	^
S13.9	E20	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species.  Formulate and implement mitigation measures to	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A



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		<p>Pre-site clearance check on all construction sites and pre –works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works,</p> <p>Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, translocation and translocation.</p> <p>Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p> <p>Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.</p>	<p>avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, translocation and translocation.</p>				
S13.9	E21	Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of flora or fauna of conservation significance and bat roosts. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, translocation and	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Consider	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

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		<p>translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p> <p>Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement</p> <p>Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and <i>Somaniathelphusa zanklon</i>. Capture any <i>Somaniathelphusa zanklon</i> found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP</p>	<p>and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation</p>				
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
<b>Specific Mitigation Measures for Designated Projects</b>							
<b>DP2- Castle Peak Road Diversion (Major Improvement)</b>							
<b>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</b>							

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.A9	LV1-DP2	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.  With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.A9 MM14.4	LV4-DP2	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.  For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	N/A
S.12.A9 MM4	LV5-DP2	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.	Protect and Preserve Trees	Government/ Detailed	Onsite	Prior to Construction	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>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.</p>		Design Consultant/ Contractor		and Construction Phase	
S.12.A9 MM5	LV6- DP2	<p>Tree Transplantation – 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.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible, otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.					
S.12.A9 MM6	LV7- DP2	Slope Landscaping – Site formation should be reduced as far as possible. Seeding 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 avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9- DP2	Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 &amp; E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.A9	LV10-	Vertical Greening – Planting of climbers to grow up vertical surfaces were	Soften hard surfaces and	Government	<i>On appropriate</i>	Prior to	N/A

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MM9	DP2	appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed Design Consultant/ Contractor	<i>structures</i>	Construction, Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM11	LV11- DP2	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12- DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	<i>On viaducts or along roads.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		forms and textural finishes which improve aesthetics.  For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)					
S.12.A9 MM13 & EIA Annex 13	LV13- DP2	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also)  Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible.  Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	<i>Channelized watercourse, particularly the Ma Wat River Channel Diversion</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A



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		<p>maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>					
S.12.A9 MM15	LV15- DP2	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.</p> <p>All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>	<p>Reprovision for ponds lost due to the Project.</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority</p>	<p><i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i></p>	<p>Prior to Construction, Construction Phase Maintenance in Operation Phase</p>	N/A
<b><i>Landscape and Visual (Construction)</i></b>							
S.12.A9 MM16	LV16- DP2	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	<p>To screen undesirable views of the works site.</p>	<p>Contractor</p>	<p><i>Throughout NDAs</i></p>	<p>Construction Phase</p>	^

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S.12.A9 MM17	LV17-DP2	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	^
<b>Ecology (Detailed Design, Construction and Operational Phases)</b>							
S13.9	E2-DP2	Use opaque, non-transparent, non-reflective noise barriers.  Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor/ Maintenance Authority	Within NDA.	Detailed design phase, Construction phase and Operation phase.	^
<b>Ecology (Construction Phase)</b>							
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN area B1-3) and works areas.	Construction phase.	^
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of	Project	KTN NDA areas	Construction	N/A

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			plantation of ecological significance.	Proponent / Contractor	E1-8 and G1-3.	phase.	
<b>Cultural Heritage (Construction Phase)</b>							
S11.6.2	CH5-DP2	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
<b>DP3- KTN NDA Road P1 and P2 (New Road) and associated new Kwu Tung Interchange (New Road) and Pak Shek Au Interchange Improvement (Major Improvement)</b>							
<b>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</b>							
S.12.A9	LV1-DP3	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. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.A9	LV4-	Avoid affecting Watercourses – In the detailed design, consideration should	Avoid direct impacts to	Detailed	All watercourses,	Prior to Construction	^

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MM14.4	DP3	<p>be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc.</p> <p>Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass.</p> <p>In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	watercourses	Design Consultant/ Contractor	<i>particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section</i>	And Construction Phase	
S.12.A9 MM4	LV5- DP3	<p>Tree Protection &amp; Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>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</p>	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction and Construction Phase	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV6- DP3	<p>Tree Transplantation – 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.</p> <p>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.</p> <p>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.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible.</i> <i>Otherwise consider offsite locations.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7- DP3	<p>Slope Landscaping – Site formation should be reduced as far as possible.</p> <p>Seeding 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</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and</p>	Government Detailed Design Consultant/	<i>Onsite</i>	Prior to Construction, Construction Phase &	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>slope gradient and site conditions allow.</p> <p>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.</p>	<p>subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Contractor		Maintenance in Operation Phase	
S.12.A9 MM7	LV8-DP3	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensate orytrees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible.</i> <i>Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9	LV9-	Woodland Compensatory Planting –Specific Woodland compensatory	Reprovide areas of	Project	<i>In areas</i>	Prior to	N/A

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MM8	DP3	<p>planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 &amp; E27 also). Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for</p>	woodland to compensate for those areas of quality woodland lost.	Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i>	Construction, Construction Phase & Maintenance in Operation Phase	

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10- DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11- DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9	LV12-	Road Greening –For viaducts, soft landscaping should be provided to soften	To soften the hard,	Government	<i>On viaducts or</i>	Prior to	N/A



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MM12	DP3	the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.  For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	straight edges and provide greening along roads.	Detailed Design Consultant/ Contractor	<i>along roads.</i>	Construction, Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM13 EIA Annex 13	LV13- DP3	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also)  Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel	Minimize the necessity of watercourse modification,	Government / Detailed Design	<i>Channelized watercourse, particularly the</i>	Prior to Construction, Construction	N/A

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		Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible.  Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	protect watercourses where possible and enhance channelized watercourses	Consultant/  Contractor	<i>Ma Wat River Channel Diversion</i>	Phase & Maintenance in Operation Phase	
S.12.A9 MM15	LV15- DP3	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.  All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Project Proponent/  Detailed Design Consultant/  Contractor/  Maintenance Authority	<i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i>	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
<b>Landscape and Visual (Construction)</b>							
S.12.A9 MM16	LV16- DP3	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically	To screen undesirable views	Contractor	<i>Throughout NDAs</i>	Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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, nonreflective, recessive colours be used.  Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	of the works site.				
S.12.A9 MM17	LV17-DP3	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A
<b>Ecology (Detailed Design, Construction and Operational Phases)</b>							
S13.9	E3-DP3	Use opaque, non-transparent, non-reflective noise barriers.  Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Detailed design, Construction and Operation phases.	^
<b>Ecology (Construction Phase)</b>							
S.13.9	E4-DP3	Creation of proposed Long Valley Nature Park and creation and enhancement of wetland and woodland areas and buffer planting within LVNP.	Compensate for wetland loss arising from the project.	Project Proponent/ Contractor	Long Valley	Construction phase.	N/A

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				(LVNP Detailed Habitat Creation & Management Plan).			
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.  Measures to minimize flightline impacts to birds,	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, H1-1) and works areas.	Construction phase.	N/A
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
<b>DP4- KTN NDA Road D1 to D5 (New Road)</b>							
<b>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</b>							
S.12.A9	LV1-DP4	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to		Detailed Design Consultant/	<u>Throughout NDAs,</u>	Prior to Construction, Construction & for all	N/A



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		try and restore these to their former state to suit future land use, should be adhered to.  With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Contractor		planting, this should be installed as soon as the areas become available, to achieve early establishment	
S.12.A9 MM1	LV2-DP4	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized 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 minimize 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	Government / Detailed Design Consultant/ Contractor/	<u>Throughout NDAs, particularly for reservoirs</u>	Prior to Construction	N/A
S.12.A9 MM2	LV3-DP4	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible	Detailed Design Consultant/	Throughout NDAs	Prior to Construction	N/A

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		<p>Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	into the surrounding landscape				
S.12.A9	LV4-	Tree Protection & Preservation – Existing trees to be retained within the	Protect and Preserve Trees	Government /	Onsite	Prior to Construction	^

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MM4	DP4	<p>Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>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.</p>		Detailed Design  Consultant/  Contractor		and Construction  Phase	
S.12.A9 MM5	LV5- DP4	<p>Tree Transplantation – 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.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC</p>	Transplant Trees where suitable for transplantation	Government /  Detailed Design  Consultant/  Contractor	Onsite possible.  Consider  locations where  Otherwise offsite  locations	Prior to Construction,  Construction Phase &  Maintenance in  Operation Phase	N/A

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		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.					
S.12.A9 MM6	LV6- DP4	Slope Landscaping – Site formation should be reduced as far as possible.  Seeding 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 avoid substantial slope cutting and fill slopes.  To prevent erosion and subsequent loss of landscape resources and character.  To ensure man-made slopes are as visually amenable as possible.	Government  Detailed Design  Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV7- DP4	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments.  Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.  Compensatory planting is proposed at the potential open areas such as	Compensate for trees and shrubs lost due to the Project.	Government  Detailed Design  Consultant/ Contractor	Onsite where possible.  Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A



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		open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.  Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomyrtus tomentosa</i> , <i>Raphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested..					
S.12.A9 MM8	LV8- DP4	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.  The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).  Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i> , <i>Bischofia javanica</i> , <i>Castanopsis fissa</i> , <i>Celtis sinensis</i> , <i>Cinnamomum burmannii</i> , <i>Cinnamomum camphora</i> ,	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		<p>Xanthoxylum avicennae, Hibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Raphiolepis indica, and Rhododendron simsii.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.A9 MM9	LV9- DP4	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV10- DP4	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads	Government / Detailed Design	Along roads, around suitable	Prior to Construction, Construction Phase &	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Consultant/ Contractor	built structures , or around VSRS to contain their view out to the NDA structures.	Maintenance in Operation Phase	
S.12.A9 MM12	LV11- DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.  For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government  Detailed Design  Consultant/ Contractor	On viaducts or along roads.	Prior to Construction, Construction Phase &  Maintenance in Operation Phase	N/A
S.12.A9 MM13 & EIA Annex 13	LV12- DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also)  Also see LV16, LV17, and LV18 as wetland planting should be provided	Compensate for Marsh/ Wetland lost due to the  Project.	Project Proponent/ Detailed Design  Consultant/	Onsite where possible.  Otherwise consider offsite	Prior to Construction, Construction Phase &  Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		along the embankments and beds of modified/ re-provisioned watercourses.		Contractor/ Maintenance Authority	locations		
S.12.A9 MM15	LV13- DP4	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.  All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase  Maintenance in Operation Phase	N/A
<b><i>Landscape and Visual (Construction)</i></b>							
S.12.A9 MM16	LV14- DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.  Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor			N/A
S.12.A9 MM17	LV15- DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	Construction and Operation Phases	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.					
<b>Ecology (Prior to Detailed Design Prior to Construction Phase)</b>							
S. 13.9	E1-DP4	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry.  Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase.	N/A
<b>Ecology (Detailed Design, Construction and Operational Phases)</b>							
S13.9	E2-DP4	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Throughout.	N/A
<b>Ecology (Construction Phase)</b>							
S.13.9	E3-DP4	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora	Contractor.	Interface between areas/habitats of ecological importance (KTN	Construction phase.	N/A

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			and fauna.		areas B1-3, E1-8, G1-3 and H1-1) and works areas		
S13.9	E4-DP4	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.8	E5-DP4	Maintenance of compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Maintenance Authority.	KTN areas E1-8 and G1-3.	Operation phase	N/A
<b>Cultural Heritage (Pre-construction Phase)</b>							
S11.6.1	CH1-DP4	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent / Contractor/ Qualified Archaeologist	In KTN NDA, for Site 1	After land resumption but before Construction commencement of the zones	N/A
S11.6.1	CH2-DP4	<u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u> Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified	In the not-yet-surveyed- areas with medium archaeological	After land resumption but before construction	N/A

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		areas with proposed development as presented in <b>Figure 11.9</b> should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.		Archaeologist	potential located within the work extent of DP4		
S11.6.1	CH3-DP4	<u>Undertaking Induction Training</u> Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spot E	Before the commencement of the excavation works and before site staff are deployed on site	N/A

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		of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.2	CH4-DP4	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u> Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Entrance Gate of HKT03, KT16, KT17 and KT18	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH5-DP4	<u>Undertaking baseline condition survey and baseline vibration impact assessment</u> In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 15mm/s could be adopted for historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report.					
S11.6.2	CH6-DP4	<u>Relocation of Built Heritages</u> Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
<b>Cultural Heritage (Construction Phase)</b>							
S11.6.2	CH7-DP4	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
<b>DP5- New sewage pumping stations (SPSs) in KTN NDA</b>							
<b>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</b>							
S.12.B9	S.12.B9	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. With regard to topsoil, where identified, it should be stripped, treated		Detailed Design Consultant/ Contractor/	Throughout NDAs,	Prior to Construction, Construction & for all planting,	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.				this should be installed as soon as the areas become available, to achieve early establishment	
S.12.B9 MM1	LV2- DP5	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized 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 minimize 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	Government / Detailed Design Consultant/ Contractor/	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.B9 MM2	LV3- DP5	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form,	Improve visual amenity of the new buildings, NDAs in	Detailed Design Consultant/	Throughout NDAs	Throughout NDAs	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated Construction time frame should also be considered.</p>	general and integrate as best possible into the surrounding landscape				
S.12.B9 MM4	LV4- DP5	<p>Tree Protection &amp; Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular</p>	Protect and Preserve  Trees	Government  Detailed Design	Onsite	Prior to Construction and	#

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>(Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>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.</p>		Consultant/ Contractor		Construction Phase	
S.12.B9 MM5	LV5- DP5	<p>Tree Transplantation – 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.</p> <p>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.</p>	Transplant Trees where suitable for transplantation	Government  Detailed Design Consultant/ Contractor	Onsite where possible.  Otherwise consider offsite location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.					
S.12.B9 MM6	LV6- DP5	Slope Landscaping – Site formation should be reduced as far as possible.  Seeding 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 avoid substantial slope cutting and fill slopes.  To prevent erosion and subsequent loss of landscape resources and character.  To ensure man-made slopes are as visually amenable as possible.	Government/  Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM7	LV7- DP5	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.  Compensatory planting is proposed at the potential open areas such as open	Compensate for trees and shrubs lost due to the Project.	Government/  Detailed Design Consultant/ Contractor	Onsite where possible.  Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.  Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomyrtus tomentosa</i> , <i>Raphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested.					
S.12.B9 MM8	LV8-DP5	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.  The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).  Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i> , <i>Bischofia javanica</i> , <i>Castanopsis fissa</i> , <i>Celtis sinensis</i> , <i>Cinnamomum burmannii</i> , <i>Cinnamomum camphora</i> , <i>Xanthoxylum</i>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p><i>avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus omentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.B9 MM9	LV9- DP5	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.B9 MM10	LV10-DP5	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	<i>On appropriate buildings</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM11	LV11-DP5	Screen Planting – Tall screen/buffer trees and shrubs should be implanted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM14.3	LV12-DP5	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	<u>Channelized watercourse, particularly the Ma Wat River Channel Diversion</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.  For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
<b>Landscape and Visual (Construction)</b>							
S.12.B9 MM16	LV13- DP5	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.  Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	<i>Throughout NDAs</i>	Construction Phase	N/A
S.12.B9 MM17	LV14- DP5	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<i>Throughout NDAs</i>	Construction and Operation Phases	^
<b>Ecology (Construction Phase)</b>							
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence	Minimize dust,	Contractor.	<i>Interface</i>	Construction phase.	N/A

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		between active works areas and all areas/habitats of ecological importance.	disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.		<i>between areas/habitats of ecological importance and works areas (all sides of KTN area F1-2).</i>		
<b>DP7-Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works (SWHSTW)</b>							
<b>Landscape and Visual (Construction Phase and Operational Phase)</b>							
S.12.9 MM4	LV1- DP7	<p>Tree Protection &amp; Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>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</p>	Protect and Preserve Trees	Government /  Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		tree protection measures for those trees to be retained.					
S.12.9 MM9	LV2-DP7	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV3-DP7	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated.  These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	<i>On appropriate buildings</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
<b>DP10- Fanling Bypass Eastern Section (New Road)</b>							
<b>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</b>							
S.12.D9	LV1-DP10	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.  With regard to topsoil, where identified, it should be stripped, treated		Detailed Design Consultant/ Contractor	<i>Throughout NDAs.</i>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become	^



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.				available, to achieve early establishment	
S.12.D9 MM1	LV2- DP10	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized 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 minimize 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	Government/ Detailed Design Consultant/ Contractor	<u>Throughout NDAs, particularly for reservoirs</u>	Prior to Construction	N/A
S.12.D9 MM4	LV3- DP10	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction and Construction Phase	^

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		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.					
S.12.D9 MM5	LV4- DP10	<p>Tree Transplantation – 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.</p> <p>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.</p> <p>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</p>	Transplant Trees where suitable for transplantation	Government/ Detailed Design Consultant/ Contractor	<u>Onsite where possible.</u>  <u>Otherwise consider offsite locations</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		referred to.					
S.12.D9 MM6	LV5- DP10	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding 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.</p> <p>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.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government/ Detailed Design  Consultant/ Contractor	<u>Onsite</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM7	LV6- DP10	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma</i></p>	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design  Consultant/ Contractor	<u>Onsite where possible.</u> <u>Otherwise consider offsite locations</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		<i>dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii</i> are suggested.					
S.12.D9 MM8	LV7- DP10	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 &amp; E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>,</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<u><i>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i></u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<i>Rhaphiolepis indica, and Rhododendron simsii.</i> <i>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</i>					
S.12.D9 MM9	LV8- DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM11	LV9- DP10	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government/ Detailed Design Consultant/ Contractor	<u>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9M	LV10-	Road Greening –For viaducts, soft landscaping should be provided to	To soften the hard, straight	Government/	<u>On viaducts or</u>	Prior to Construction,	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
M12	DP10	soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.  For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	edges and provide greening along roads.	Detailed Design Consultant/ Contractor	<u>along roads.</u>	Construction Phase & Maintenance in Operation Phase	
S.12.D9 MM14.3	LV11- DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government/ Detailed Design Consultant/ Contractor	<u>Channelized watercourse, particularly the Ma Wat River Channel Diversion</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		that the channel meets all its requirements for water flow, etc.  For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
<b>Landscape and Visual (Construction)</b>							
S.12.D9 MM16	LV12- DP10	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.  Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	<u>Throughout NDAs</u>	Construction Phase	^
S.12.D9 MM17	LV13- DP10	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	Construction and Operation phases	^
<b>Ecology (Detailed Design, Construction and Operational Phases)</b>							
S13.8	E1- DP10	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/	<u>Throughout NDAs</u>	Detailed design, construction and	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
				Contractor Maintenance Authority.		Operation phases.	
<b>Ecology (Construction Phase)</b>							
S13.9	E3-DP10	Lower reaches of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space Zone D1-3 and Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	Contractor.	<u>FLN area D1-3.</u>	Construction phase.	^
S.13.9	E4-DP10	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor.	<u>Interface between areas/habitats of ecological importance and works areas (all of the north side of the Bypass works areas west of interchange with Sha Tau Kok Road).</u>	Construction phase.	^
<b>Cultural Heritage (Construction Phase)</b>							
S11.6.2	CH4-DP10	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures	To minimize the potential impacts during Construction phase on any	Contractor.	<u>Identified potential vibration impacted built</u>	Construction phase, with details specified in baseline condition	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	identified potential vibration impacted built heritage features		<i>heritage features</i>	survey and baseline vibration impact assessment,	
<b><i>DPI2-Reprovision of temporary wholesale market in FLN NDA</i></b>							
<b><i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i></b>							
S.12.D9	LV1-DP12	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.  With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.D9 MM1	LV2-DP12	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized 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 minimize landform changes and land resumption, while also considering visual amenity. Earthworks and	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.					
S.12.D9 MM2	LV3- DP12	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.  All Noise barriers, particularly noise barriers but also any barriers	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A



EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a design as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>					
S.12.D9 MM4	LV4- DP12	<p>Tree Protection &amp; Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>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</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.D9 MM5	LV5- DP12	<p>Tree Transplantation – 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.</p> <p>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.</p> <p>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.</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM6	LV6- DP12	<p>Slope Landscaping – Site formation should be reduced as far as possible.</p> <p>Seeding of modified slopes should be done as soon as grading works are</p>	To avoid substantial slope cutting and fill slopes.	Government / Detailed Design	Onsite	Prior to Construction, Construction Phase &	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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.</p> <p>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.</p>	<p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Consultant/ Contractor		Maintenance in Operation Phase	
S.12.D9 MM7	LV7- DP12	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>,</p>	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<i>Rhodomyrtus tomentosa</i> , <i>Rhaphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested.					
S.12.D9 MM11	LV8- DP12	Screen Planting – Tall screen/buffer trees and shrubs should be planted.  This measure may additionally form part of the compensatory planting	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
<b>Landscape and Visual (Construction)</b>							
S.12.D9 MM16	LV9- DP12	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.  Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.D9 MM17	LV10- DP12	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.  Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

**Implementation status:**

- ^ Mitigation measure was fully implemented
- \* Observation/reminder was made during site audit but improved/rectified by the contractor
- # Observation/reminder was made during site audit but not yet improved/rectified by the contractor
- X Non-compliance of mitigation measure
- Non-compliance but rectified by the contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period



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**APPENDIX R**  
**WASTE GENERATION IN THE**  
**REPORTING MONTH**

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Name of Department: Civil Engineering and Development Department

**Monthly Summary Waste Flow Table for 2023**

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported Fill (e)	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> )
January	3.628	0.000	2.500	0.000	1.128	6.425	2.904	0.000	0.004	0.000	0.571
February	3.466	0.000	1.869	0.000	1.597	6.967	0.004	0.364	0.003	0.560	0.445
March	2.338	0.000	1.814	0.000	0.524	2.944	0.003	0.449	0.003	0.000	0.572
April	1.260	0.000	1.239	0.000	0.021	0.789	0.004	0.000	0.010	0.720	0.383
May	0.000	0.000	0.000	0.000	0.000	0.103	0.003	0.255	0.003	11.550	0.398
June	0.285	0.000	0.000	0.000	0.285	0.000	0.004	0.390	0.009	10.540	0.191
Sub-total	10.977	0.000	7.422	0.000	3.555	17.228	2.922	1.458	0.032	23.370	2.560
July	0.262	0.000	0.000	0.000	0.262	2.991	0.006	0.308	0.005	0.666	0.366
August	0.957	0.000	0.000	0.000	0.957	21.832	0.003	0.414	0.007	0.000	0.187
September	1.669	0.000	1.073	0.000	0.596	1.142	0.008	0.443	0.014	0.000	0.307
October	3.661	0.000	3.661	0.000	0.000	0.911	0.004	0.239	0.008	0.000	0.291
November	4.967	0.000	4.817	0.000	0.150	3.285	0.003	0.209	0.011	0.400	1.165
December	7.868	0.000	2.943	2.892	2.033	3.630	0.003	0.423	0.006	0.000	0.432
Total	30.362	0.000	19.917	2.892	7.553	51.019	2.950	3.494	0.084	24.436	5.308

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000

- Notes: (1) The performance target are given in PS Clause 1.115(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 material  
(4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down 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>.  
(5) Conversion factors for reporting purpose:  
in-situ: rock = 2.5 tonnes/m<sup>3</sup>; soil = 2.0 tonnes/m<sup>3</sup>  
excavated: rock = 2.0 tonnes/m<sup>3</sup>; soil = 1.8 tonnes/m<sup>3</sup>  
broken concrete and bitumen = 2.4 tonnes/m<sup>3</sup>  
C&D Waste = 0.9 tonnes/m<sup>3</sup>  
Slurry = 1.0 tonnes/m<sup>3</sup>  
(6) Numbers are rounded off to the nearest three decimal places  
\* Forecast  
(7) Total Quantity Generated = a+b+c+d



俊和 - 群利聯營體

CW - KL JV

Name of Department: CEDD

## Appendix F

Contract No.: ND/2019/02

Year **2023**

**Waste Flow Table**

Month	Total Quantity Generated (a) = (d)+(e)	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill* (e)	Imported Fill (f)	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse#
		(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	3,700.28	0.00	0.00	3,700.28	0.00	0.00	0.00	0.00	0.00	0.00	126.34
Feb	7,033.84	0.00	0.00	7,033.84	0.00	0.00	0.00	0.12	0.00	0.00	102.69
Mar	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	106.73
Apr	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.63
May	0.00	0.00	0.00	0.00	0.00	2,789.72	0.00	0.00	0.00	0.00	135.98
June	0.00	0.00	0.00	0.00	0.00	2,607.42	0.0017	0.00	0.0068	0.054	89.35
<b>Sub-total</b>	<b>10,734.11</b>	<b>0.00</b>	<b>5,000.00</b>	<b>10,734.11</b>	<b>0.00</b>	<b>5,397.14</b>	<b>0.0017</b>	<b>0.12</b>	<b>0.0068</b>	<b>0.054</b>	<b>595.72</b>
July	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.32
Aug	0.00	0.00	1,230.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	151.88
Sept	0.00	0.00	700.00	0.00	0.00	0.0	0.000	0.00	0.00	0.00	165.12
Oct	0.00	0.00	900.00	0.00	0.00	0.0	0.000	0.00	0.00	0.00	138.59
Nov	0.00	0.00	1,100.00	0.00	0.00	0.0	0.000	0.00	0.00	0.00	109.14
Dec	0.00	0.00	0.00	0.00	0.00	0.0	0.000	0.00	0.00	0.00	101.70
<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>	<b>5,030.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>856.75</b>
<b>Total</b>	<b>10,734.11</b>	<b>0.00</b>	<b>10,030.00</b>	<b>10,734.11</b>	<b>0.00</b>	<b>5,397.14</b>	<b>0.00</b>	<b>0.20</b>	<b>0.01</b>	<b>0.05</b>	<b>1,452.47</b>

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

Forecast of Total Quantities of C&D Materials to be Generated from the ND/2019/02											
Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemicals Waste	Others, e.g. general refuse
									(see Note 2)		
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
<b>Total:</b>	234,210	8,400	2,500	0	231,710	600	100	1.0	0.5	0.5	375



Sang Hing – Kuly Joint Venture

Contract No.: ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1:

Development of Long Valley Nature Park

Name of Department: CEDD

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

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0.24	0.00	0.00	0.17	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
May	1.57	0.00	0.00	0.34	1.23	0.00	0.00	0.00	0.00	0.00	0.00
Jun	0.11	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total	1.97	0.00	0.00	0.50	1.46	0.00	0.00	0.00	0.00	0.00	0.00
Jul	0.07	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.06	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Sep	1.63	0.00	0.00	0.32	1.31	0.00	0.00	0.00	0.00	0.00	0.00
Oct	0.90	0.00	0.00	0.01	0.89	0.00	0.00	0.00	0.00	0.00	0.00
Nov	1.64	0.00	0.00	0.18	1.46	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.27	0.00	0.00	0.16	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.53	0.00	0.00	1.17	5.36	0.00	0.00	0.00	0.00	0.00	0.00

\*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

**Forecast of Total Quantities of C&D Materials to be Generated from the Contract\***

Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
9.00	2.00	1.00	1.00	6.00	10.00	3.00	3.00	1.00	1.00	3.00

\*Remark: Figure to be revised if necessary

Notes:

- 1 The performance targets are given in ETWB Technical Circular PS Clause 6(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 material
- 4 The Contractor shall also submit the latest forecast of the total amount of C&D materials 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 50,000 m3. (ETWB Technical Circular PS Clause 5(4)(b) refers).  
[Delete Note (4) and the table above on the forecast, where inapplicable].

Monthly Summary Waste Flow Table for 2023 (Year)

Month	Total Quantity Generated	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-Inert C&D Wastes Generated Monthly					
		Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill (e)	Metals (f)	Paper/ cardboard packaging (g)	Plastics (h)	Glass (i)	Chemical Waste (j)	Others, e.g. general refuse (k)
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	1,821.54	0.00	0.00	0.00	1648.04	0.00	62.72	0.00	0.00	0.00	0.00	110.78
Feb	5,111.83	0.00	0.00	1,432.80	3,268.73	289.95	0.0006	0.0668	0.0007	0.00	0.00	120.28
Mar	16,696.38	0.00	0.00	11,792.39	4,675.20	0.00	0.00	0.04	0.00	0.00	0.00	228.75
Apr	10,098.42	0.00	0.00	7,469.40	2,562.44	0.00	0.00	0.00	0.00	0.00	0.00	66.58
May	16,517.90	0.00	0.00	8,880.68	7,135.46	421.66	0.00	0.00	0.00	0.00	0.00	80.10
June	3,040.85	0.00	0.00	748.07	1,119.73	1,082.57	0.0009	0.0781	0.0014	0.0055	0.00	90.39
Sub-total	53,286.91	0.00	0.00	30,323.34	20,409.60	1,794.18	62.72	0.18	0.002	0.006	0.00	696.88
July	677.11	0.00	0.00	0.00	537.28	0.00	0.00	0.00	0.00	0.00	0.00	139.83
Aug	557.34	0.00	0.00	0.00	442.58	0.00	0.001	0.0512	0.0029	0.0082	0.00	114.70
Sept	4,687.99	0.00	0.00	4,377.34	184.22	0.00	0.00	0.00	0.00	0.00	0.00	126.43
Oct	15,950.67	0.00	0.00	13,690.00	1,702.36	291.13	0.0144	0.0543	0.0015	0.0025	0.00	267.11
Nov	28,517.87	0.00	0.00	6,634.54	21,728.89	0.00	0.00	0.00	0.00	0.00	0.00	154.44
Dec	2,904.14	0.00	0.00	194.46	2,543.22	0.00	0.00	0.00	0.00	0.00	0.00	166.46
Sub-total	53,295.11	0.00	0.00	24,896.33	27,138.55	291.13	0.02	0.11	0.00	0.01	0.00	968.97
Total	106,582.03	0.00	0.00	55,219.67	47,548.15	2,085.31	62.74	0.29	0.01	0.02	0.00	1,665.85

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.
- (4) Total quantity generated = a+b+c+d+e+f+g+h+i+j

Forecast of Total Quantities of C&D Materials to be Generated from the DCK JV											
Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemicals Waste	Others, e.g. general refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(see Note 3) (in tonnes)	(in tonnes)	(in tonnes)
	160,282.30	0	10,000	20,000.00	60,000.00	32,200.00	80	0.8	0	1.5	19,500.00

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

Name of Person completing the record: Connie Yuen (EO)

Project : Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

Contract No.: ND/2019/05

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated (a) = (b)+(c)+(d)+(e)	Hard Rock and Large Broken Concrete (b)	*Reused in the Contract ©	Reused in other Projects (d)	Disposed as Public Fill (e)	Imported Fill (f)	Metals (g)	Paper/ cardboard packaging/ (h)	Plastics (i) (see Note 3)	Yard Waste (j)	Chemical Waste (k)	Others, e.g. general refuse (l)
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan-23	1.270	0.000	0.546	0.000	0.724	0.000	4.126	0.275	0.005	0.000	0.000	46.650
Feb-23	2.094	0.000	0.624	0.000	1.470	0.000	0.000	0.608	0.000	2.660	0.000	79.010
Mar-23	2.298	0.000	0.348	0.000	1.950	0.000	0.090	1.302	0.098	1.860	0.000	91.690
Apr-23	2.236	0.000	0.276	0.000	1.960	0.000	0.021	0.699	0.030	1.470	0.000	55.990
May-23	2.752	0.000	0.750	0.000	2.002	0.000	0.006	0.448	0.006	1.610	0.000	71.310
Jun-23	1.964	0.000	0.174	0.000	1.790	0.000	0.034	1.157	0.046	7.890	0.000	87.340
Sub-total	12.614	0.000	2.718	0.000	9.896	0.000	4.277	4.489	0.185	15.490	0.000	431.990
Jul-23	1.025	0.000	0.234	0.000	0.791	0.000	0.016	0.815	0.010	0.000	0.000	94.220
Aug-23	1.031	0.000	0.276	0.000	0.755	0.000	0.015	1.121	0.020	0.000	0.000	101.070
Sep-23	0.533	0.000	0.036	0.000	0.497	0.000	0.000	0.818	0.002	5.270	0.000	227.200
Oct-23	0.995	0.000	0.228	0.000	0.767	0.000	0.035	1.327	0.033	1.490	0.000	125.310
Nov-23	2.558	0.000	0.690	0.000	1.868	0.000	0.038	1.339	0.036	0.000	0.000	123.590
Dec-23	2.055	0.000		0.000	2.055	0.000	0.023	1.428	0.032	2.650	0.000	112.440
Total in 2023	20.811	0.000	4.182	0.000	16.629	0.000	4.404	11.337	0.318	24.900	0.000	1215.820
Total of the Project since 2020	114.153	0.000	14.901	2.857	96.395	5.110	142.108	20.769	4.138	807.713	24.882	4304.730

\*Approx. estimation for each dump truck is 6m<sup>3</sup>/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 114.153 (in '000m<sup>3</sup>) (a) = (b)+(c)+(d)+(e)



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

Name of Person completing the record: KM LUI (EO)

Project : Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Contract No.: ND/2019/07

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 T)
Jan	0	0	0	0	0	0	0	0	0	0	0.018
Feb	0	0	0	0	0	1.400	0	0	0	0	0.013
Mar	0.212	0	0	0	0.212	11.711	0	0	0.001	0	0.028
Apr	0	0	0	0	0	7.340	0	0	0	0	0.009
May	0	0	0	0	0	6.492	0	0	0	0	0.015
Jun	0	0	0	0	0	0.439	0	0	0	0	0.018
Sub-total	0.212	0.000	0.000	0.000	0.212	27.382	0.000	0.000	0.001	0.000	0.101
Jul	0	0	0	0	0	8.396	0	0	0	0	0.030
Aug	0	0	0	0	0	15.000	0	0	0	0	0.030
Sep	0	0	0	0	0	2.087	0	0	0	0	0.017
Oct	0	0	0	0	0	9.268	0	0	0	0	0.040
Nov	0	0	0	0	0	4.844	0	0	0	0	0.017
Dec	0	0	0	0	0	0	0	0	0	0	0.012
Total	0.212	0.000	0.000	0.000	0.212	66.977	0.000	0.000	0.001	0.000	0.247

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
  - (2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.
  - (3) Broken concrete for recycling into aggregates.
  - (4) Total Quantity Generated = a+b+c+d..

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**APPENDIX S**  
**COMPLAINT LOG**

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**Appendix S - Complaint Log**

<b>Log Ref.</b>	<b>Location</b>	<b>Received Date</b>	<b>Details of Complaint</b>	<b>Investigation/ Mitigation Action</b>	<b>Status</b>
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13 <sup>th</sup> July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a. Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site. And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11 <sup>th</sup> November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground. Another EPD inspection was conducted on 26 November 2020 at	The height of temporary water barrier was increased at Portion 4. Sprinklers were installed on bare ground at Portion 4 and on top soil at Portion 7. Manual water spraying were provided regularly. Hydroseeding will be provided on soil surface at Portion 4 for long-term measures.  Proper implementation of dust mitigation measures will be continuously reviewed and monitored to avoid potential dust impact on site.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Portion 7 for the dust complaint. During inspection, no obvious dust emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27 <sup>th</sup> November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7 <sup>th</sup> January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the <i>Supervisor</i> , ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13 <sup>th</sup> January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22 <sup>nd</sup> January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures: 1. Issue a memo to the relevant sub-contractor on restricted working hour. 2. Conduct specific training to sub-contractor frontline supervisor and works. 3. Apply a construction noise permit for the suspected location.	Closed
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28 <sup>th</sup> January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10	Ad-hoc training was provided to workers on switching off idling engines when awaiting on site. Poster for “Switching off idling engines” was posted at site entrance to alert workers on the	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	
COM-2021-02-01	CTC Storage Yard (ND/2019/05)	4 <sup>th</sup> February 2021	A complaint was received from EPD call on 2 <sup>nd</sup> February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1 <sup>st</sup> February 2021.	The suspected cause of the complaint was the delivery of a rotary drilling rig by a tractor lorry arrived at CTC Storage Yard at around 19:00 at 1 <sup>st</sup> February 2021. The delivery time was restricted due to the oversized tractor lorry (width >2.4m and length protruded >1.4m at tractor tail). No loading and unloading was conducted during the time of complaint.  For follow up action, the Contractor will apply Construction Noise Permit for any foreseeable delivery that may not be finished before restricted hours and will notify possible affected village representatives in advance.	Closed
COM-2021-02-02	CTC Storage Yard (ND/2019/05)	16 <sup>th</sup> February 2021	A complaint was received from EPD call on 10 <sup>th</sup> February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7 <sup>th</sup> February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7 <sup>th</sup> February 2021 without notification to the Contractor. Sub-contractor has been reminded that any work within site area shall be conducted after instruction by the Contractor and permit-to-work system on restricted hours works shall be strictly followed.	Closed
COM-2021-02-03	CTC Storage Yard (ND/2019/05)	2 <sup>nd</sup> March 2021	A complaint was received from EPD call on 24 <sup>th</sup> February 2021 regarding a noise complaint from a Tong Hang villagers about some machinery noise	Further enhancement on erection of acoustics mats and mobile acoustics mat panels was conducted at strategic location at E1-01 for mitigation of the noise impact to the nearby	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			and dust from CTC Storage yard. Joint site inspection of the Contractor, the <i>supervisor</i> and EPD was conducted on the same day for the bored piling at CTC Storage Yard and check on the noise and dust mitigation measures. EPD requested to enhance noise and dust mitigation measures for grabbing operation of the Rotary Drill Rig for construction of piles of E1-01.	sensitive receivers. Regular water spraying has been applied to suppress the dust from grabbing procedure and the skip.	
COM-2021-03-01	Ma Tso Lung Shun Yee San Tsuen (ND/2019/01)	1 <sup>st</sup> March 2021	A complaint was referred from EPD regarding fly-tipping of C&D waste near Ma Tso Lung Shun Yee San Tsuen and muddy public road.	Under investigation, the suspected site near Shun Yee San Tsuen was out of project site boundary. Internal trip ticket system was properly implemented for dump trucks transported from project site to other approved alternative disposal ground. Also, dump trucks were properly washed and mechanical cover of dump trucks were closed while leaving the site.  For follow up action, banners and flags were displayed on site to promote the environmental protection awareness. Regular training was provided to remind the dump truck drivers that illegal dumping is strictly prohibited.	Closed
COM-2021-03-02	CTC Storage Yard (ND/2019/05)	15 <sup>th</sup> March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9 <sup>th</sup> March 2021 regarding a dust complaint from a Tong Hang villager. The complainant	For follow up action, the Contractor provided training to remind frontline supervisors and workers to wet the auger before movement when it was dried for preventing any occasional situation that the auger was dried.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			complained that rotary drill rig shall be equipped with enclosure for dust control and rotary drill rig had exhaust disturbance. Also, the complainant requested to improve wheel washing at site entrance.	The Contractor provided training to brief frontline supervisor and the operators to prevent exhaust disturbance. Also, the drill rigs exhaust pipe shall not face to the public area. If it is avoidable, screens shall be arranged to divert the exhaust gas. An additional cut-off drain was constructed and notice signs were erected for notifying drivers to give wheel washing in front of the cut-off drains.	
COM-2021-03-03	Ma Tso Lung Road (ND/2019/01)	9 <sup>th</sup> April 2021	A complaint was referred from EPD on 23 March 2021 regarding muddy public access road along Ma Tso Lung Road.	The muddy access road was found generated from a nearby private factory where the access road is not hard paved. The Contractor arranged water browser to help clean up the section of road on 24 <sup>th</sup> and 25 <sup>th</sup> March 2021 respectively. Also, dump truck were properly washed at project site exit near Ma Tso Lung Road.	Closed
COM-2021-04-01	Long Valley, Kwu Tung (ND/2019/03)	9 <sup>th</sup> April 2021	A complaint was referred from EPD regarding to associated impacts arising from construction works at Long Valley Nature Park, causing nuisance and affecting the habitat and ecological value in Long Valley.	Construction works for development of Long Valley Nature Park are conducted according to the recommended mitigation measures stated in Habitat Creation and Management Plan. Wetland creation and restoration works are in progress which include provision of paddy field, turning abandoned agricultural lands into wet agricultural land and provision of open water habitat with bird island. Irrigation channel is under construction for provision of reliable water supply to farmland.  For construction works, the following significant mitigation measures are implemented: 1. Provide noise barriers to minimize noise nuisance to adjacent field where Greater Painted-	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>snipe was found;</p> <p>2. Arrange concrete pump for concreting works to minimise noise impact;</p> <p>3. Provide water spraying on the exposed earth to dampen the dusty surface;</p> <p>4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found;</p> <p>5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland;</p> <p>6. Provide 2m dull green site boundary fence along Long Valley work areas; and</p> <p>7. Block the main accesses by temporary barrier to avoid human disturbance.</p>	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	23 <sup>rd</sup> April 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from Ma Wat River near junction of Ma Wat River and Ng Tung River.	<p>Under investigation, muddy water was observed from a small stream of Ma Wat River which is outside project site boundary. Contractor's wastewater treatment facilities and mitigation measures on water quality were checked. Latest discharge monitoring results shows the discharge quality in compliance with the limit stated in the discharge licence.</p> <p>The following mitigation measures will keep implemented and inspected:</p> <p>1. Installation of silt curtain, geotextiles and concrete blocks for excavation works at Ng Tung River with regular inspection;</p> <p>2. Exposed slope paved with concrete to prevent muddy runoff;</p> <p>3. Setting up wastewater treatment plants at</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				several locations of the site area; 4. Bund/seal off works area near river and set up with dewatering system; 5. Spare water pumps and sand bags for emergency use during heavy rain; 6. Regular training to the operators of wastewater treatment facilities; and 7. Regular checking and maintenance of the wastewater treatment facilities and desilting tank.	
COM-2021-04-03	Near Shek Wu San Tsuen, Sheung Shui (ND/2019/04)	28 <sup>th</sup> April 2021	A complaint was referred from EPD regarding to construction dust arising from dump trucks from construction sites near Shek Wu San Tsuen.	No obvious dust emission was observed during EPD inspection on 28 <sup>th</sup> and 29 <sup>th</sup> April 2021, However, potential dust impact may arise from sandy materials found on public road and exposed ground surface.  For follow up action, soil debris were removed at public road. Water spraying was provided on the exposed ground surface. Also, all dump trucks are covered properly and wheel wash is provided before leaving site. Implemented of the mitigation measures will keep reviewed and monitored.	Closed
COM-2021-05-01	Near Tong Hang section of Ma Wat River (ND/2019/05)	17 <sup>th</sup> May 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from construction sites near Ma Wat River.	Under investigation, no pollution from works areas near Ma Wat River was observed. For wastewater pollution control, all wastewater treatment facilities have been setup at discharge points. According to the latest discharge monitoring results on April 2021, no non-compliance to limit set in discharge licence was recorded. Regular maintenance and services of the facilities have been conducted. Close monitoring	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				with checklist has been conducted by operators of the facilities. Mitigation measures such as sealing gaps between concrete blocks/water barriers/pipe pile walls have been implemented to prevent leakage. Implementation of the mitigation measures will keep reviewed and closely monitored.	
COM-2021-09-01	Chau Tau Road near the CLP Chau Tau Substation (ND/2019/01)	2 <sup>nd</sup> September 2021	A complaint was referred by EPD and an inspection by EPD was conducted on 3 September 2021 regarding a muddy public access road at Chau Tau Road near the CLP Chau Tau Substation.	<p>Ad-hoc site inspection was conducted on 2 Sep 2021 at Chau Tau Road near the CLP Chau Tau Substation, no muddy wheel track or soil deposit was observed. No concrete lorry was observed using the Chau Tau Road near the CLP Chau Tau Substation.</p> <p>Concreting at Portion 5 was observed during EPD inspection on 3 September 2021, wheel washing bay and manual wheel washing was provided at site exit, all vehicles were properly washed and no muddy track was observed at Chau Tau Road.</p> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> <li>• Rearranged the traffic route and informed the concrete lorry drivers not to use Chau Tau Road;</li> <li>• Keep monitoring the effectiveness of the wheel washing facilities at site exist; and</li> <li>• Clean up the public road immediately if soil deposit was observed.</li> </ul>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-09-02	Not specified (ND/2019/01)	3 <sup>rd</sup> September 2021	A complaint was referred by EPD regarding C&D waste stored on site.	<p>Refer to the photos provided by the complainant, the mentioned C&amp;D waste mainly felled trees mixed with general refuse and temporary stored within the site boundary, Ad-hoc site inspection was conducted by Contractor and RSS on 3<sup>rd</sup> September 2021, all C&amp;D waste were stored within the site boundary, no odour perceived during site inspection.</p> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> <li>• Sort out the non-inert waste from the felled trees;</li> <li>• Remove the general refuse if possible, otherwise, coved by tarpaulin sheet; and</li> <li>• Relocate or transport the yard waste to other places which are not easy visible by public.</li> </ul> <p>Implementation of the mitigation measures will keep reviewed and closely monitored to ensure no adverse impact will be generated from the construction works of the Project.</p>	Closed
COM-2021-11-01	Close to Shek Wu San Tsuen (ND/2019/04)	3 <sup>rd</sup> November 2021	A complaint was referred from EPD on 22 <sup>th</sup> November 2021, about various issues including suspected environmental nuisances from the captioned Project from a member of public on 3 <sup>rd</sup> Nov 2021. He followed-up again on 19 <sup>th</sup> Nov 2021.	<p>Site inspection was conducted by contractor and EPD inspectors on 25<sup>th</sup> November 2021, no obvious dust emission was observed within site boundary. The potential dust impact may arise from sandy materials found at public road which is under DSD maintenance.</p> <p>Air quality monitoring was carried out at location FLN-DMS1 - Scattered Village</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>Houses North of Proposed Potential Ecopark and Location FLN-DMS5 - Noble Hill near Shek Wu San Tsuen in accordance with the EM&amp;A manual. With reference to the air quality monitoring data collected in Nov 2021, all monitoring data were complied with the action and limit level and no exceedance was recorded.</p> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> <li>• 工程團隊亦已於接近民居並正在進行大型工程(例如建造大口徑樁)位置安裝了各種隔音屏障，例如在大型機器的發電機上加上隔音布、在圍板加上隔音屏障</li> <li>• 增加自動灑水系統</li> </ul>	
COM-2021-12-01	On Kui Street along Ma Wat River (ND/2019/05)	13 <sup>rd</sup> December 2021	AECOM referred to public complaints received by 1823 on 13 December 2021 regarding "中鐵建保華聯營公司粉嶺地盤工人沖建築泥水落河 污染河道。"	<p>Refer to the photo attached in the above complaint, it is suspected that there were bentonite slurry leaking from the flexible pipe joint near works area of pier C2-01 and the cause of incident as blow:</p> <ul style="list-style-type: none"> <li>• Tightness of flexible pipe joint</li> <li>• Worker's awareness and knowledge on proper handling of pipe leakage</li> <li>• Readiness of contingency tools and equipment for the pipe leakage</li> </ul> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> <li>• Doubling pipe clamps at each joint to strengthen the connection tightness and</li> </ul>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				seal <ul style="list-style-type: none"> <li>• Briefing workers for proper spillage handling</li> <li>• Well readiness of contingency tools and equipment for handling of leakage</li> <li>• Designating responsible supervisor for regular pipeline condition check and monitoring</li> <li>• Daily inspection for pipeline condition by responsible supervisors before works</li> <li>• Erection of bunding/sandbags along the works area to effectively stop any potential leakage/surface runoff</li> <li>• Review and updated Environmental Management Plans (EMP) covering Site Specific Procedures for Muddy runoff/leakage Control (See CSF submission, ref. no. CSF/HSE/002115) on 21 Dec 2021</li> <li>• Specific trainings of proper handling of leakage adjacent to the river/drainage for JV managerial and supervisory staff</li> </ul>	
COM-2022-01-01	Close to Shek Wu San Tsuen (ND/2019/04)	13 <sup>rd</sup> January 2022	A complaint was referred from EPD on 14 Jan 2022 from a public member alleged the captioned Project of “我們每個工作天都會受到高噪音和震動的影響，在沒有足夠的保障下，使近距離的民居十分擔心，屋裂有惡化跡象，兒童/長者難有	Contractor have carried out daily noise monitoring and vibration monitoring. No exceedance was recorded. The monitoring results are displayed on the notice board for easy reference. For noise control measures, QPME label are affixed to generators and acoustic noise barriers are mounted on powered mechanical equipments such as	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			寧靜環境，成人在家中工作、兒童做功課在噪雜的環保下，難以適應，我們很希望受到合理的重視和改善，使實際環境不會太差。”	excavators, crawler cranes and vibration hammers and installed along hoarding to minimize noise nuisance to neighborhood.  Based on the findings of investigation, no exceedance of noise and vibration monitoring was found. Contractor will ensure that the construction works carried out must comply with the condition stated in the Noise Control Ordinance and to implement mitigation measures proposed in the Project Implementation Schedule.	
COM-2022-01-02	Near Sheung Yue River (ND/2019/02)	28 <sup>th</sup> January 2022	A complaint was received from 1823 on 28 Jan 2022 regarding “在雙魚河河邊單車徑附近的工程，一個多月來，當工人沒有工作期間，所有機械都沒有熄匙，當機械運作時，產生很大的噪音及很多廢氣。理解工人有工作時，機械運作是正常，但一個月來工人沒工作時，機械依然運作，產生問題嚴重，要求部門跟進及處理。”	Investigation was conducted by contractor on 4 Feb 2022. All plants are turned off when awaiting more than 3 min. Dark smoke monitoring for the powered mechanical equipment had been carried out. No dark smoke was recorded. Based on the findings of investigation, no exceedance of noise and air monitoring was found.  Follow-up Actions had been conducted on 4 Feb 2022. Mitigation measures are implemented. Dull green barriers are installed around active works areas to prevent dust emitted to the public. QPME is used to minimize noise nuisance to the neighbourhood.  Specific environmental training about Noise and Smoke Control for Plants was provided to frontline staff on 4 Feb 2022. The frontline staff was reminded to switch off idling equipment for	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				preventing recurrence of idling construction equipment awaiting on site, and carry out routine maintenance of plant and equipment for mitigating unwanted noise and air pollutant emissions.	
COM-2022-02-01	Ng Tung River (ND/2019/04)	17 <sup>th</sup> February 2022	<p>EPD received 2 complaints from members of public about suspected disposal of foam waste and illegal discharge from the captioned Project to Ng Tung River on 13 &amp; 16 Feb 2022 respectively.</p> <p>Details of complaint case received on 13 Feb 2022: 「本人途經唔上水悟洞河近馬屎埔新村附近地盤發現河道有大量懷疑發泡膠影響何到魚類生物, 要求環境保護署或相關部門進行跟進」</p> <p>Details of complaint case received on 16 Feb 2022: 「2022年2月10日下午三時, 發現梧桐河面出現乳白色, 懷疑與附近工程泥漿水有關, 懷疑經雨水渠排出。」</p>	<p>Investigation was conducted by contractor. It is found that no foam has been used on site. No construction works was carried out during 9 Feb to 14 Feb 2022 at A3 piling platform as two suspected close contact cases for A3-02 piling platform team was found. The bored piling works and A3 piling platform welding works was suspended from 9 Feb 2022 and resumed on 14 Feb 2022 after the whole team received negative results.</p> <p>Mitigation measures are implemented, there is a silt curtain enclosing the opened workfronts and the openings of the A3 piling platform. Hence, the platform and other workfronts along the river have no discharge to the river.</p> <p>In addition, it is reported that suspected contaminated water was discharging to Ma Wat River from surrounding industrial buildings near C5 contract site.</p> <p>Based on the findings of investigation, no foam</p>	Closed

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				has been used by on site and no suspected contaminated water was discharged from the project. Thus, the complaint cases are not caused by our project.	
COM-2022-03-01	Near Ho Sheung Heung (ND/2019/02)	2 <sup>nd</sup> March 2022	A complaint was received from EPD on 8 Mar 2022 from a public member regarding "投訴河上鄉鄉公所附近地盤的機器及吊雞車的難嗅氣味滋擾"	<p>Joint inspection for the issue was conducted by AECOM, Environmental team, Contractor on 9 March 2022 and no source of odour was found during the inspection. There was no major works. The area is for temporary soil storage. Only one excavator is at Portion 11. The excavator is well maintained and no bad smell is emitted. Moreover, all plants are checked before used. As per the contract requirement, project must use Euro V diesel in our plants, which is a cleaner fuel than industrial diesel and shall generate less odour. Project regularly conducts diesel sampling and testing to ensure that the used fuel is Euro V diesel. A diesel sampling for the excavator at Portion11 was also conducted on 9 March 2022.</p> <p>Based on the findings of investigation, all plants are well maintained and checked before use. Cleaner fuel is used for plants onsite. No odour was found. CW-KL JV mitigates air pollution from sources to reduce environmental nuisance to the neighbourhood.</p>	Closed
COM-2022-03-02	Near Ho Sheung Heung (ND/2019/02)	23 <sup>rd</sup> March 2022	A complaint was received from EPD on 22 Mar 2022 from a public member regarding "河鄉近洪聖爺廟"	Joint inspection for the issue was conducted by AECOM, Environmental team, Independent Environmental Checker and Contractor on 25 March 2022. There was no major works. The area	Closed

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			<p>有個很大的基建地盤，經常發出很大噪音，包括車輛駛入後停泊時的聲浪，地盤面積有半個摩士公園大，車輛可以泊到其他地方，減少對居民的滋擾，之前亦曾作出相同投訴，有環保署職員跟進，故現堅持要求再次跟進及回覆 "</p>	<p>is for temporary soil storage. A dump truck was at portion 11, but left the site in short time. All dump trucks used in the project would not stay on site overnight and left the site before 6p.m. One excavator and one loader were at Portion 11. No idling crane lorry was at Portion 11. The equipment would be switched off when not in use. Moreover, all our plants are well maintained and checked before used.</p> <p>Noise monitoring around Portion 11 had been conducted on 26, 28 and 29 March 2022 (AM and PM periods) by Contractor with AECOM. The noise levels are lower than the standard of noise requirement for domestic premises (75dB(A)). It was predicted that no noise exceedance would be found at NSRs.</p> <p>Environmental Training related to use of equipment onsite had been provided to site staff to increase their awareness of environmental protection. Posters of mitigating adverse environmental impacts had been fixed at Portion 11 to increase workers' environmental awareness. QR codes for air quality, noise, and water quality monitoring data conducted by Environmental team of the project had been also fixed at Portion 11 for the public's information.</p> <p>Based on the findings of investigation, all plants</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				are well maintained and checked before use. CW-KL JV mitigates noise pollution from sources to reduce environmental nuisance to the neighborhoods. No noise exceedance is predicted to be found at NSRs. Environmental promotion is given to site staff to increase their awareness of environmental protection.	
COM-2022-06-15	Near Ng Tung River, adjacent to Shek Wu San Tsuen North (ND/2019/04)	5 <sup>th</sup> July 2022	A complaint was received from EPD on 15 June 2022 from a public member regarding “本人住在梧桐河多年，每天都會到河邊兩岸進行晨運或會經河邊出外購物。由年頭開始，兩岸邊有些小型機械在進行工程，開始時還好，但近期發現機械所發出的黑煙比以前多，有時發現有些污水，泥水和油污流道出行人道來。本人有一次發現有些泥水和油污落到溝渠和地面，便好心跟現場人員講叫他們小心。但是他們沒有理會，因為梧桐河是一個非常美麗的地方，假日也有很多人來遊玩。避免意外發生，希望貴處能代為處理。”	<p>Investigation was conducted by contractor and reply as follow: “工程團隊經常及日後亦會加緊巡視地盤範圍，同時敦促工程人員注重機械及挖掘機的廢氣排放，以及工程污水或泥水流出，減少對周邊環境的影響。”</p> <p>Air monitoring was conducted on 2, 8, 14, 20, 24 and 30 June 2022, including AM and PM period. No exceedance of air monitoring was found. One exceedance of Water Quality Monitoring was found on 13 June 2022, but based on the investigation report, there was no direct evidence showing that the exceedance recorded at the 3 nearby monitoring stations were due to Contract.</p> <p>For dark smoke emission, the contractor would collect and test the Ultra Low Sulphur Diesel(ULSD) content monthly. For monitoring of any muddy water discharging from construction activities, the contractor would collect and test the suspended solids from Ng Tung River monthly, also collect and test pH, suspended solids and</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				COD of wastewater sampling at wastewater treatment plant monthly.	
COM-2022-06-28	Near Ng Tung River, adjacent to Shek Wu San Tsuen North (ND/2019/04)	5 <sup>th</sup> July 2022	A complaint was received from EPD on 28 June 2022 from a public member regarding “連續兩日聞到燒塑膠燒鐵味，然後見到地盤這部機放黑煙，每幾秒噴一次村民不想再持續吸入這些毒氣。”	Investigation was conducted by contractor and reply as follow: “本工程沒有包含燃燒塑製品或鐵製品工序，而附近居民有焚燒垃圾習慣，有可能因而產生誤會；工程所使用的機械及挖掘機已符合環保署要求，有團隊接收投訴後即時於6月29日安排維修人員檢查相關挖掘機並無異常，同時就投訴人的關注已於7月4日將所述挖掘機調離該範圍。工程團隊會繼續盡力安排工程機械及挖掘機在合理工作距離內遠離居民住處，以減少對居民的影響。”	Closed
COM-2022-06-30	Near Ng Tung River, adjacent to Shek Wu San Tsuen North (ND/2019/04)	5 <sup>th</sup> July 2022	A complaint was received from EPD on 30 June 2022 from a public member regarding “講嚟講去都係得個講字，日日都大塵，又話整自動灑水系統等咗咁耐都有，機器又放黑煙又臭。”	Investigation was conducted by contractor and reply as follow: “自動灑水系統已安裝完成，另外工程人員亦會手動向工地範圍噴灑水份，以減低塵埃對附近居民的影響；而由於相關投訴時段（6月30日）至今均為雨天，工程人員亦有持續觀察塵土飛揚及泥水等開題，由於雨水可有效隔絕塵埃，待天氣好轉後相關恆常減少塵埃的措施亦會恢復，例如地面乾燥就會進行相對應減少塵埃的措施，包括人手及自動灑水等。”	Closed
COM-2022-07-21	Man Young Storage area (ND/2019/05)	21 <sup>st</sup> July 2022	EPD received a public complaint on 14 July 2022 from nearby villagers regarding noise and odour nuisance from generators. Complaint detail is as follow:	Investigation was conducted by contractor and clarify a few points as follow: 1. Instead of four generators being used simultaneously from the complaint, there shall be actually two generators being used	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			"現投訴地盤長期24 小時 長期用柴油發電機，做成民居滋擾，因為噪音及震動.附近居民無法睡眠，柴油氣味亦令人非常討厭，請問法例是否不能晚上七點後不能用柴油發電機.另外那地盤晚上七點後亦有人工作.故亦不一需要長時間開發發電機，而那地盤共有四個發電機同時開動.。該地盤為保華公司與中國建築聯營。正確地址為粉嶺塘坑村370 號。萬勇地盤。燈柱號碼AJ2326 對面"	<p>alternatively (one is solely for standby purpose) for power supply of site works and containers.</p> <p>2. Instead of 24 hours operation of the concerned generator from the complaint, there shall be actually no restricted hour (19:00-07:00) works for generator operation according to our permit-to-work system (see appendix I).</p> <p>3. A valid construction noise permit (ref. no.: GW-RN0551-22) is obtained on 11/7/2022 covering concerned works area and PMEs before 23:00 (see appendix II). All conditions imposed on permit will be strictly followed once restricted hour works are conducted.</p> <p>The cause of the complaint is concluded to be noise and odour nuisance for the daily operation of one generator in non-restricted hours (07:00 to 19:00).</p> <p>For noise mitigation measures, contractor had arranged all generators of Quality Powered Mechanical Equipment (QPME) type and installed sound reduction fabric along the side of site boundary facing to the villagers. On top of these measures, JV had installed acoustic blanket (27 dB sound reduction) enclosing the two generators for non-restricted hour operation</p> <p>For odour mitigation measures, on top of currently</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				using all generators with approved NRMM type, JV also installed odour adsorption bags which is made of activated carbon during oil fueling practice to further reduce nuisance.	
COM-2022-07-27	Near Portion 1b/1c (Ma Tso Lung) (ND/2019/01)	27 <sup>th</sup> July 2022	A complaint referred from 1823 regarding dust emission and noise impact, “古洞馬草壟地盤沒有任何圍板引致沙塵及噪音影響附近村民事宜”	<p>The contractor claimed that due to the confirmation of site formation level of the hoarding, water main diversion and necessary access, the erection of site hoarding is on hold. Weekly environmental walk was conducted at the mentioned area on 19 and 26 July 2022, no obvious dust emissions and noise impacts were identified.</p> <p>EPD carried out complaint investigation at Portion 1b / 1c on 26 July 2022 at 11:00, no adverse comment was given.</p> <p>Air quality monitoring and noise monitoring were carried out at nearby location once to twice a week and no exceedance was recorded. An ad-hoc noise monitoring was carried out on 28 July 2022 at Portion 1b, no exceedance was recorded also.</p> <p>The contractor would start the hoarding erection in early of August 2022, erect tarpaulin sheet on temporary fencing in front of villager's house etc as mitigation. The environmental conditions of the site will be continuously reviewed and monitored to ensure no adverse impacts generated from the construction works of the Project.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2022-07-21	Lower Ng Tung River (from upstream Ma Wat River) (ND/2019/05)	29 <sup>th</sup> July 2022	<p>EPD received a complaint on 29 July 2022 concerning that the brownish silty water was continuously flowing to Lower Ng Tung River from upstream of Mat Wat River. The complaint was forwarded to ET by EPD through email on 5 Aug 2022.</p> <p>Based on peripheral inspection, the muddy water was spotted.</p>	<p>At the time of EPD's inspection, a tiny gap was found at the bund around the sheet piles at B2-03. The gap was then sealed off so as to prevent muddy runoff from the sheet piling work.</p> <p>Concerning the photo taken at C2-02 by EPD, there shall be collection facilities to divert runoff to our wastewater treatment plant prior to discharge. Wastewater collection facilities including sufficient water pumps and flexible pipes are prepared during works.</p> <p>Meanwhile, below are some JV's regular preventive measures for water pollution control:</p> <ol style="list-style-type: none"> <li>1. 18 nos. of wastewater treatment facilities are operating for different working areas including B2-03 and C2-02;</li> <li>2. Discharge qualities are regularly monitored and tested by HOKLAS accredited laboratory. The results show all discharge quality are complying with discharge standards as per discharge license, test results for concerned areas which were submitted to EPD.</li> </ol>	Closed
COM-2022-08-08	Ma Wat River near Lamp Post EB1339 (ND/2019/05)	8 <sup>th</sup> August 2022	<p>EPD received a complaint EPD ref: N07/RN/00016607-22 on 8 August 2022 and forwarded to ET through E-mail on 12/08/2022 and transferred to JV on the same day.</p> <p>The complaint content: "近電燈柱</p>	<p><b>Noise</b></p> <p>Refer to the Contractor's internal Permit-to-Work (PTW) System for restricted hours works, there was no works carried out at Pier C4-01 on any Sundays or public holidays which is nearest to the lamp pole EB1339 since 13 July 2022. The</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			EB1339 沿麻笏河一帶，有一大型建天橋工程，本來已經帶給鄉郊空氣和噪音污染，近來星期日和假期也開工，其機器均嘈雜和發出廢氣，貴署不應該容許工程在假日運作，嚴重影響跑步、踏單車和郊遊人士。請貴署注視。"	<p>Sundays works at Pier C4-02 and C4-03 which are further away from the aforesaid lamp pole were performed in accordance with the CNP ref. GW-RN0551-22 (with validity from 11 July 2022 to 10 October 2022 granted by EPD on 30 June 2022). Therefore, the possible cause of the incident might be Sundays' works at Pier C4-02 and C4-03 on 31/07/2022 and Pier C4-02 on 07/08/2022 but the works at these areas were carried out in complying with the condition to the valid CNP.</p> <p><b>Air</b></p> <p>For the aforesaid Sundays' works for Pier C4-02, a generator has been used and emitted exhaust gas that might be the cause of the incident. There is a high volume sampler for regular air monitoring at around 30m distance from the generator. Up to now, there was no any exceedance reported from ET since commencement of the project. Based on the above findings, it might conclude that there was no any non-compliance issue.</p> <p>Nevertheless, the Contractor will conduct internal surprise check to the restricted hours works, if any, and give exhaust checking and fuel testing to ensure compliance of ULSD standard.</p>	
COM-2022-08-16a	Ma Wat River near Lamp Post EB1339 (ND/2019/05)	16 <sup>th</sup> August 2022	EPD received a complaint (EPD ref: N07/RN/00017008-22) regarding water pollution in Fanling On Lok Tsuen near lamp post EB1339 on 16	To facilitate ET's investigation, this report is providing the following information: Since the works areas vicinity to lamp post EB1339 are Piers C4-01 and C4-02, the following	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			<p>August 2022. EPD forwarded the case to ET through email on 17 August 2022.</p> <p>The complaint content: " 本人留意到近麻笏村的麻笏河有大量水泥流入河，影響釣魚人士，查看下，是由上游（近安樂村業和街利亨中心近電燈柱EB1339）一帶的多個大型工程的水泥流入河。另外，建築物 and 工地範圍和附近很多積水，很污糟，有大量工人的飯盒和垃圾，引起蚊患和衛生。"</p>	<p>investigation are focusing on these two works area locations.</p> <ol style="list-style-type: none"> <li>1. Site activities at Piers C4-01 and C4-02; From thorough investigation, there are only minor defect rectification works for pier concrete surface at Pier no. C4-01 which is nearest to the lamp pole EB1339. Besides, there are only formwork/falsework dismantling works in the concerned area at Pier C4-02 which is further away from the aforesaid lamp pole. The whole area has been hard paved without any muddy surface. It is reasonably concluded that there are no construction activities in the concerned location which would generate large amount of muddy water.</li> <li>2. Preventive measures for pollution control; 18 nos. of wastewater treatment facilities have been setup and operating for different working areas including works area of Pier Nos. C4-01 &amp; C4-02 in the concerned period.</li> <li>3. Latest discharge monitoring results; The water quality of the discharge from the Site have been monitored according to the granted discharge licence ref. WT00036996-2020. Discharge qualities are regularly monitored and tested by HOKLAS accredited laboratory. The results show all discharge samples are complying with discharge standards outlined in discharge license, test results of discharge sample in concerned areas which were</li> </ol>	



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>submitted to EPD.</p> <p>4. Any possible source of muddy discharge to induce the captioned incident; Based on the above information and investigation findings, it is concluded that the source of muddy discharge was not related to the construction activities under Contract No. ND/2019/05.</p> <p>5. Housekeeping; Receptacle with lid were provided on site. Cleaning have been performing in daily basis. Daily morning brief have been conducting to remind frontline staff about housekeeping.</p> <p>Although it is concluded that the complaint was not related to the Contract, the Contractor will keep daily monitoring on site condition and visual check discharge qualities against with standard solution of suspended solids (30 mg/L stipulated in licence condition) in order to get rid of any muddy discharge to the river. In addition, the Contractor will regularly conduct morning briefing and tool-box training to the frontline for keeping refresh their awareness on muddy water control.</p>	
COM-2022-08-16b	Ma Sik Road and Sha Tau Kok Road near Lung Yeuk Tau (ND/2019/04)	16 <sup>th</sup> August 2022	A complaint was received from EPD on 16 August 2022, "One Innovale construction site located in Ma Sik Road and Sha Tau Kok Road (Lung Yeuk Tau) that has been creating not only serious dust but also muddy	<p>Investigation was conducted by contractor and reply as follow:</p> <p>"Despite the fact that the One Innovale construction site, where the complainant concerned about, is not part of ND/2019/04 project, we would ensure all vehicles has used the</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			materials along the main road. During sunny days, dust flies up with busy traffic flow. This morning I even saw muds dropped down from the trucks made the road a muddy mess pollution."	wheel washing facilities before leaving the site. Also, we have assigned two workers to conduct cleaning works to area adjacent with our vehicle egress. Moreover, we inspect every dump trucks on application of mechanical dump truck cover and keep photo records for compliance control. In addition, water bowser is arranged for road washing along Sha Tau Kok Road adjacent with our vehicle egress regularly."	
COM-2022-09-01	青山公路近燈柱EA2139 (ND/2019/01 , ND/2019/05)	1 <sup>st</sup> September 2022	Complaint received by EPD on 1 Sep 2022 and forwarded to ET on 2 Sep 2022, “投訴土木工程署, 環保署監管不善, 大量黃泥水從地盤流入附近河流, 影響生態. 地點: 青山公路近燈柱EA2139”.	Investigation was conducted by contractor and reply as follow: “A soil storage area was handed over from ND/2019/01 to ND/2019/05 on 18 August 2022. As this is a new area just possessed about 2 weeks before the date of this complaint, site preparation and setup such as wheel washing bay, temporary drainage system, wastewater treatment facility etc. were still undergoing. Some temporary measures were provided in place for preventing runoff into the adjacent public drainage system. During the site preparation and setup works, it was found that there is a pipework by others outside C5's site which intermittently discharges muddy water into the surface drainage and suspected the complaint is caused by this. Contractor of C1 also provided certain information as follow: “Portion 1e (next to the said area) which is a temporary storage area with no major construction works will be carried out at such portion. The grey water pipe which is	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>belongs to other contractor nearby and muddy water discharge into the surface drainage was occasionally observed. We suspected the complaint is caused by this. Few water pipes were identified at the north sides near the interface of other contractor.”</p> <p>From 5 Sep 2022, the weekly environmental inspection of C5 with Environmental Team (ET) will cover this area for regular identification of any deficiency in environmental management.</p>	
COM-2022-09-29	Construction site nearby Dills Corner Garden Blk 5 (ND/2019/02)	29 <sup>th</sup> September 2022	Complaint received by EPD on 29 Sep 2022 and forwarded to ET on 30 Sep 2022. Complaint detail is as follow: “石仔嶺花園第五座投訴工程噪音滋擾。我們不知承辦商工程，請幫忙跟進。謝謝！”	<p>Joint inspection for the issue was conducted by AECOM, EPD and Contractor on 29 September 2022. Installation of sheet pile by Vibration Hammer was in progress during the inspection. Considering the founding during inspection and in order to quantify the noise nuisance made by related works, noise monitoring around Portion 2 had been conducted on 30 September, 3 and 5 October 2022(AM and PM periods) by Contractor with AECOM. Result shown that all noise levels are lower than the standard (75dB(A)). But the traffic condition has been considered as an influencing factor. Based on the findings, no noise exceedance is predicted to be found at NSRs.</p> <p>Several mitigation measures have been taken to alleviate the impact made. Noise screen has been erected along the fencing at Portion 2. Moreover, noise generation works including installation of sheet pile will be suspended at Portion 2 during 11:00-14:00 of working day. Environmental</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				promotion is given to site staff to increase their awareness of environmental protection.	
COM-2022-10-06	Fanling On Lok Tsuen near lamp post EB1339” (ND/2019/05)	7 <sup>th</sup> October 2022	Complaint received by EPD on 6 Oct 2022 and forwarded to ET on 7 Oct 2022. “近電燈柱 EB1339 近麻笏河，有一大型建天橋工程，星期日和假期幾十名工人正在開工，工作間大型鐵板聲炒耳，工人大聲叫囂，還開擴音器播歌.....使附近寧靜的安樂村、麻笏村、塘坑村和郊遊人士不安寧。”	Based on the Contractor’s internal Permit-to-Work (PTW) System for restricted hours works, there was no works carried out at Pier C4-01 on recent Sundays or public holidays where is located near lamp pole EB1339 since September 2022. The holiday works at Pier C4-02 which are further away from the aforesaid lamp pole were carried out on 04/10/2022 in accordance with the CNP ref. GW-RN0551-22 granted by EPD. The works involved housekeeping and scaffold erection without any Powered Mechanic Equipment (PMEs). Therefore, the possible cause of the incident might be the work at Pier C4-02 on 04/10/2022. But the scaffold erection involved prescribed construction work in non-Designated Area was carried out with fully compliance with the valid CNP. Therefore, it might conclude that there was no any non-compliance issue. Nevertheless, the Contractor have conducted specific training to relevant site supervisors to remind workers to refrain from using loud speakers/playing loud music for works during restricted hours and to ensure keep the restricted hours works as quiet as possible, if any, and will install sound absorbing materials for the concerned works.	Closed
COM-2022-10-09	Portion 5 (ND/2019/02)	17 <sup>th</sup> October 2022	Complaint received by EPD on 13 Oct 2022 and forwarded to ET on 17	As mentioned by EPD, the construction site is near Shek Sheung River. The complaint location	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Oct 2022. The complainant alleged the captioned Project of "有關上水石上河有地盤直接排放污水落河事宜 2022 年 10 月 9 日 地盤直接排放污水落河"	may be Portion 5 of project site. Joint inspection for the issue was conducted by EPD, AECOM and Contractor on 14 October 2022. According to the record of construction site, no work was arranged on 9 Oct 2022. Subject to the comments made by EPD staff during the site inspection, several mitigation measures have been taken to enhance the water pollution control performance. Contractor had arranged a wastewater treatment tank to replace the existing tank on site to improve the treatment performance and one more sedimentation tank is introduced to increase the detention time. Moreover, all hoses related to the wastewater transportation have been removed from the slope near Shek Sheung River. Also, water discharge has been suspended for the facilities enhancement. Contractor enhanced the routine checking and maintenance of wastewater treatment facilities including cleaning and replacing of tanks. Posters of mitigating adverse environmental impacts had been fixed at Portion 5 to increase workers' environmental awareness. Training has been provided for site staff. Based on the findings of investigation, CW-KL JV enhanced water pollution control to reduce nuisance to the environment. Environmental promotion is given to site staff to increase their awareness of environmental protection.	
COM-2022-10-18	安樂村新界蔬	28 <sup>th</sup> October 2022	EPD received a complaint (EPD ref: N07/RN/00022664-22) regarding	Since the works areas adjacent to North District Temporary Wholesale Market (北區臨時農	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
	菜批發市場旁 (ND/2019/05)		water pollution in “construction works of the Kwu Tung North new development area of NENT Project” on 18 October 2022 and forwarded to ET through E-mail on 28 October 2022 and ET transferred to JV on the same day. The complaint alleged: "投訴安樂村新界蔬菜批發市場旁有人私自破壞污水渠並把污水接駁至麻笏非法排放污水，投訴人表示親眼見到涉事人員鑿爛污水渠，具體位置會後續來電補充附近的燈柱號碼，又表示部門跟進時如需要具體位置亦可直接聯絡查詢人。"	產品批發市場) are Portion I and Portion II, the following investigation are focusing on these two works area locations. 1. Site activities at Portion I and Portion II; In response to the complaint, “sewerage pipe being damaged and connected to Ma Wat River” is not observed on-site. There were substructure construction works which did not generate wastewater in Portion I and II. 2. Preventive measures for pollution control; 2 nos. of wastewater treatment facilities have been setup and operating for works area in portion I & Portion II in the concerned period. 3. Latest discharge monitoring results; The water quality of the discharge from the Site have been monitored according to the granted discharge licence ref. WT00036996-2020. Discharge qualities are regularly monitored and tested by HOKLAS accredited laboratory. The results show all discharge samples are complying with discharge standards outlined in discharge license, test results of discharge sample in concerned areas which were submitted to EPD. 4. Any possible source of muddy discharge to induce the captioned incident; No wastewater generating activities were conducted at Portion I and II on 18 October 2022. Wastewater (if any) from all construction activities is properly collected, treated and	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				monitored. Based on the above findings, it is concluded that the complaint was not related to the Contract. Contractor will continue daily monitoring on our site condition and visual check discharge qualities against with standard solution of suspended solids (30 mg/L stipulated in licence condition) in order to get rid of any water pollution to the river. In addition, Contractor will regularly conduct morning briefing and tool-box training to the frontline for keeping refresh their awareness on water pollution control.	
COM-2022-10-31	near Po Lau Road, Kwu Tung (ND/2019/01)	31 <sup>st</sup> October 2022	EPD received a complaint with ref: N07/RN/00024008-22 on 31 October 2022 and referred the complaint to ET. Description: A complaint referred from EPD regarding dust impact near Po Lau Road, Kwu Tung. The complaint alleged: “古洞開發區波樓路新大樓附近有路面平整工程，早上九時多有儲泥及卸泥活動，吹起沙塵，影響駕駛安全”	The suspected complaint location was Portion 1b. According to the records of Hong Kong Observatory on 31 October 2022, typhoon signal number 1 was hoisted and the local winds were generally strong. 1. Weekly environmental walk and EPD ad-hoc inspection was carried out on 01 November 2022 morning, it was reminded that the frequency of watering shall be increased under strong wind condition. 2. Two water browsers were deployed for regularly watering of main haul road. 3. Mist cannon was provided on site for dust suppression. 4. Manual water spraying was provided to maintain site condition in a damp condition. 5. Once the level of stockpile reached the formation level, hydroseeding was applied.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				6. Dust monitoring was carried out at KTN-DMS4(B) on 21 Oct 2022 and 27 Oct 2022, no exceedance was recorded. 7. Cover the slope surface with impervious sheeting. 8. Addition water browser with capacity 20,000L was deployed on site on 01 November 2022. 9. Hydroseeding to exposed soil once the formation level reached. 10. Keep closely monitoring on the concerned area.	
COM-2022-11-10	Construction site near Shek Wu San Tsuen North (ND/2019/04)	10 <sup>th</sup> November 2022	EPD received a complaint with ref: N07/ RN/00025077-22 on 10 November 2022 and referred the complaint to ET and IEC on 2 December 2022. The complaint alleged: "White smoke was emitted from an operating crane (blue/white color) in the construction site of Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section nearby Shek Wu San Tsuen North."	There was a crane in blue/white color working in the area nearby Shek Wu San Tsuen. According to Contractor's record, the crane has stopped works since 10 Nov 2022 afternoon for the preparation of removal from site. No white or dark smoke emission has been observed on 10 Nov 2022 morning. The crane was removed on 12 Nov 2022. Photo record shown that the blue/white crane was totally removed on 14 Nov 2022.  Based on the findings of investigation, no emission of white smoke was observed on the date of complaint. The Contractor would keep monitoring the plant whether there are dark smoke emission and the operation would stop at once if dark smoke emission has been observed, by comparing with the Ringelmann Chart.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2022-12-07	Construction site near Lamp post VD6513 (ND/2019/05)	7 <sup>th</sup> December 2022	<p>EPD received a complaint with ref.: N07/RN/00028143-22 on 7 Dec 2022 and referred the complaint to ET and IEC on 14 Dec 2022. The complaint alleged: “本人住北區，習慣晨運，目睹近來北區太多基建工程，已經很多污染，環保署有沒有積極監察？”</p> <p>本人於星期日(27.12.2022)，行經粉嶺龍山近塘坑村附近，近電燈柱VD6513，興建中的橋跨行人路，高空掉下釘子在行人路上，掉下發泡膠並隨風吹散各地和麻芴河流中，請環保署查看是否有物質？做成污染。附上圖。另外，水馬大部分欠蓋存積水。</p> <p>高空掉建築物很危險”</p>	<p>The investigation results are as follows:</p> <ol style="list-style-type: none"> <li>1. The works area vicinity to lamp post VD6513 is Piers C4-03. There are viaduct construction works above the concerned lamp post.</li> <li>2. Expanding foam and tiny metal nails found over there were both non-hazardous and non-harmful substance. It is suspected that they were some remaining left behind from previous foundation construction works or by the public due to there is a public area currently. Although the material might be not from the current works, to maintain good neighborhood relationship, the Contractor have promptly followed up as follow: <ol style="list-style-type: none"> <li>A. Cleaned up the expanding foam and metal nails,</li> <li>B. Tightened and securely fixed the safety net,</li> <li>C. Sealed up those water-filled barriers without lids and their damaged parts.</li> </ol> </li> </ol> <p>JV conducted joint site inspection with EPD inspectors at the concerned area on 13 Dec 2022. EPD satisfied with the above follow-up actions taken for the complaint.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2023-01-12	Sheung Yue River (ND/2019/01) (ND/2019/02)	12 <sup>th</sup> January 2023	As reported by DSD, DSD had a joint site inspection, and observed large amount of muddy runoff was outflowing from the construction sites at Kwu Tung North into Sheung Yue River, which divided into 3 main sources of muddy runoff.	Due to the complaint location, there will be two contractors conducted the investigation as below. <u>From Contract Number (ND/2019/01):</u> Investigation was conducted by contractor and reply as follow: Investigation Findings: 1. The suspected complaint location was between Portion 7 and the outlet of Sheung Yue River. 2. According to the site records, activities include trimming and compaction of formation level and installation of lamp post were conducted. 3. EPD staff carried out investigation on 16 January 2023 and two water samples were collected. 4. An immediate checking by supplier was arranged to check the efficiency of the wastewater treatment plant. 5. During the checking, it was observed that the chemical dosing system was found clogged due to undissolved chemical, and it has been repaired. 6. The chemical was found lumping due to recent high relative humidity. 7. According to the records of Hong Kong Observatory on 10-15 January 2023, the relative humidity was reached to at least 94%. 8. An inspection was carried out with ET, it was observed that a covered u-channel was found damage and mud was accumulated at the bottom of the channel. Wastewater discharged from wastewater treatment plant may mixed with the	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>accumulated mud and cause the wastewater become turbid / muddy.</p> <p>9. Visual comparison was conducted with ET on 17 January 2023, the colour of the glass bottle collected from wastewater treatment plant looks clear when compare with the standard solution.</p> <p>10. During the ad-hoc inspection on 27 January 2023, inadequate treated wastewater discharge from nearby private construction site was observed.</p> <p>Mitigation Measures and Follow-Up Actions:</p> <ol style="list-style-type: none"> <li>1. Properly store the chemical with covered tarpaulin to prevent lumping;</li> <li>2. A refresher training for WWTP operation and maintenance by supplier was provided to foreman and designated workers;</li> <li>3. Repair the damaged u-channel;</li> <li>4. Arrange to clear the accumulated sludge in the channel; and</li> <li>5. Keep closely monitoring such as daily visual inspection on the WWTP and clear the accumulated sludge in the channel.</li> </ol> <p><u>From Contract Number (ND/2019/02):</u> Investigation was conducted by contractor and reply as follow: As mentioned by EPD and DSD, the finding was happened at the upstream of Sheung Yue River and the project site falls along the downstream of</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>complaint location.</p> <p>1. Joint inspection for the issue was conducted by EPD and DSD on 11 January 2023.</p> <p>2. According to the record of construction site, no work was arranged on 12 January 2023 at Portion 1 along Castle Peak Road. Formwork, steel work and welding were carried out along Sheung Yue River. Site inspection and discharge sampling by contractor itself was conducted 12 January 2023 along all of the functioning wastewater treatment facilities along Sheung Yue River and no muddy discharge was found. The condition of outfall along rivers were also checked.</p> <p>3. According to investigation by contractor 12 Jan 2023, no muddy discharge from our project was observed. Preventative measures have been provided to further reduce the risk of illegal discharge. Silt Curtain has been installed along outfall and workforce with potential risk of polluted runoff has been installed sheet pile and canvas was provided to intercept runoff due to rainwater.</p> <p>4. Checking and maintenance of wastewater treatment facilities have been carried out by supplier before the joint inspection by EPD and DSD.</p> <p>5. Training on proper wastewater treatment and discharge has been provided for site staff to raise the awareness of site staff at all levels.</p> <p>Conclusion: Based on the findings of investigation, CW-KL</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				JV enhanced water pollution control to reduce nuisance to the environment. Environmental promotion is given to site staff and workers to increase their awareness of environmental protection.	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2023-02-03	a construction site near On Lok Garden at On Fuk Street, North District. (ND/2019/05)	3 <sup>rd</sup> February 2023	EPD received a complaint with ref.: N07/RN/0002434-23 on 29 Jan 2023. Complaint detail: Suspect some closeby construction sites flow the waste water into the river that potentially kill the fish inside the river.	<p>The investigation result as follows:</p> <p>Since the concerned area near On Lok Garden is Portion V, the following investigation is focusing on portion V and its nearby works area (portion VI &amp; VIII) from upper stream of Ma Wat River.</p> <ol style="list-style-type: none"> <li>1. Site activities at concerned areas; There were superstructure construction works (i.e., construction of pier and portal beam and segment) which did not generate wastewater in Portion V and its nearby works area from upper stream of Ma Wat River.</li> <li>2. Preventive measures for pollution control; 19 sets of wastewater treatment facilities have been setup and operating for all works area for Contract No. 5 which covering all of the concerned works areas,</li> <li>3. Latest discharge monitoring results; The water quality of the discharge from the Site have been monitored according to the granted discharge licence ref. WT00036996-2020. Discharge qualities are regularly monitored and tested by HOKLAS accredited laboratory. The results show all discharge samples are complying with discharge standards outlined in discharge license, test results of discharge sample in concerned areas which were submitted to EPD.</li> </ol>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>4. Any possible source of muddy discharge to induce the captioned incident; No wastewater generating activities were conducted at Portion V in concerned period between 06:48 to 06:53 on 19 January 2023. Wastewater (if any) from all our construction activities is properly collected, treated and monitored.</p> <p>During joint inspection with EPD inspectors and the Supervisor as well as the contractor on 31 January 2023, off site wastewater sources from other discharge pipes at upper stream of Ma Wat River are observed which are highly potential contributing to the incident.</p>	



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2023-02-08	Construction site near Dills Corner Garden (ND/2019/01)	8 <sup>th</sup> February 2023	EPD received a complaint with ref.: N07/RN/00003315-23 on 6 Feb 2023. Complaint detail: 投訴波樓路石仔嶺花園裏面的打樁工程噪音	<p>The investigation result as follows:</p> <ol style="list-style-type: none"> <li>1. The suspected complaint location was Dills Corner Garden where few contracts which included ND/2019/01, ND/2019/02, ND/2019/05 and private construction site were carried out construction works nearby.</li> <li>2. There was no foundation work carried out at or near Drills Corner Garden under ND/2019/01.</li> <li>3. The nearest site area Portion 1e was a temporary storage area for construction material where no construction works carried out.</li> <li>4. However, piling work was identified next to the Drills Corner Garden which was not belonged to ND/2019/01.</li> <li>5. According to the EPD records, there were two piling permits granted to other contactors near the Drills Corner Garden which were not under ND/2019/01.</li> <li>6. As there was no foundation work carried out under ND/2019/01, no mitigation measures or follow-up actions were proposed.</li> </ol>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2023-04-03a	The Soil Stockpiling area at Kwu Tung near L/P: GD5847 (ND/2019/05)	3 <sup>rd</sup> April 2023	EPD received a complaint with ref.: N07/RN/00008714-23 on 3 Apr 2023. Complaint detail: 投訴上水古洞波樓路石仔嶺花園隔離地盤的泥車出馬路時，帶泥水往馬路	<p>The investigation result as follows:</p> <ol style="list-style-type: none"> <li>1. There are many construction sites in the concerned area adjacent to lamp post GD5847 using the access road. Thus, concerned dump trucks and their impacts may not be relevant to JV.</li> <li>2. There are stockpiling works for the temporary storage, internal transferring and sorting of inert materials in the concerned area.</li> <li>3. To prevent any potential impacts from the works, sufficient resources of manpower and facilities are allocated for the implementation of mitigation measures including wheel washing and water pollution control.</li> <li>4. Resources allocation is listed as below, <ul style="list-style-type: none"> <li>(a) Four full-time workers and one supervisory staff</li> <li>(b) Wheel washing bay supplemented with water pipes</li> <li>(c) Proper temporary drainage system (cutoff drain, water pumps, sump pits, bunding, etc.,)</li> <li>(d) One set of wastewater treatment facilities</li> <li>(e) Fully hard paved haul road</li> </ul> </li> </ol> <p>Based on the above findings, it is concluded that the complaint was not related to the Contract. JV will continue allocating sufficient resources and daily monitoring of their site conditions for proper pollution control.</p>	Closed
COM-2023-04-03b			EPD received a complaint with ref.: N07/RN/00008728-23 on 3 Apr 2023. Complaint detail: 投訴古洞發展區地盤的泥車頭，出入時沒有清洗乾淨，將泥漿帶出馬路，他今天大約14:00，發現有多部泥頭車都此問題，泥漿由青山公路古洞段，一直帶到往元朗的高速公路，現要求跟進及回覆		

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2023-08-09	Construction site next to Tong Hang near L/P No. VD6513 (ND/2019/05)	9 <sup>th</sup> August 2023	EPD received a complaint with ref.: N07/RN/00018620-23 on 4 Aug 2023. Complaint detail: "本人於今個星期日(30.07.2023), 再次行經粉嶺龍山近塘坑村附近, 近電燈柱 VD6513 附近, 發覺強烈油積味, 相信有機器流油, 同時亦發覺油積連水流至行人路, 使路濕滑, 一部份油流入河流"	<p>The investigation result as follows:</p> <p><b>1. Site activities at Piers C4-03</b> The works area vicinity to lamp post VD6513 is Piers C4-03. Superstructure works for viaduct construction were conducted above the concerned lamp post. It was precast segment erection works (only involve lifting, transporting and tendonning) and no operation of heavy machinery/plants was conducted at ground level during the complaint period. No wastewater/chemicals were generated in the surrounding works.</p> <p><b>2. Preventive measures for wastewater or chemical leakage/overflowing;</b> There were plenty of preventive measures for wastewater or chemical leakage/overflowing from site listing as below:</p> <ul style="list-style-type: none"> <li>- All ground area were totally hard paved</li> <li>- Edges of all site boundaries were entirely enclosed and embanked</li> <li>- All openings of segment structures were fully closed</li> <li>- Chemical waste storage cabinet was provided in the concerned area for storage of chemical waste</li> </ul> <p>Based on the above findings, it is concluded that the complaint was not related to the Contract. JV will continue daily monitoring on our site condition and the nearby drainage and river condition to prevent any water pollution. In addition, JV will regularly conduct morning briefing</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				and tool-box training to the frontline for keeping refresh their awareness on water pollution control.	
COM-2023-08-25	Ma Tso Lung Stream, near L/P No. VD7574 (ND/2019/01)	25 <sup>th</sup> August 2023	<p>EPD received a complaint with ref.: N07/RN/00020185-23 on 22 Aug 2023. Complaint detail: "I am writing to express my deep concerns about the water pollution in Ma Tso Lung Stream, which is a result of the illegal dumping of construction waste.</p> <p>Following heavy rain, the Advance Site Formation and Engineering Infrastructure Works at Kwu Tung North and Fanling North New Development Areas have significantly impacted the upstream of the Ma Tso Lung Stream, specifically at the location marked by government lamppost VD7574. For further clarity on the location, you can refer to: (<a href="https://www.landsd.gov.hk/doc/en/nda/ktnda/D_KTN_1A_BW_SD_compress_1.pdf">https://www.landsd.gov.hk/doc/en/nda/ktnda/D_KTN_1A_BW_SD_compress_1.pdf</a>)</p> <p>Due to the vast amounts of construction waste, the stream's drainage has been severely obstructed. This was particularly evident after last week's Special Announcement on Flooding in the Northern New Territories. The</p>	<p>The investigation result as follows:</p> <ul style="list-style-type: none"> <li>- The suspected complaint location was found at Ma Tso Lung Stream, about 200 meters outside the site boundary of Kwu Tung North New Development Area.</li> <li>- BKREJV carried out investigation accompanied by AECOM RSS on 31 August 2023, no construction activity was observed nearby.</li> <li>- During the investigation, no illegal dumping was identified upstream. The water of the stream looks clear, therefore, pollution downstream (complaint location) generated from the project is unlikely. The C&amp;D material on the stream believed accumulated by nature.</li> <li>- No accumulation of C&amp;D waste along the upstream of Ma Tso Lung Stream was observed during the investigation. The stream is free from blockage.</li> <li>- By comparing the photos from complainant provided and the photos taken on 31 August 2023, there are no major differences observed.</li> <li>- As the mentioned location which is outside the site</li> </ul>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			<p>stream's blockage from the waste has prevented efficient water drainage, posing a serious threat to the lives of the residents living by its banks.</p> <p>It's noteworthy that the KWU TUNG NORTH OUTLINE DEVELOPMENT PLAN No. D/KTN/1 (<a href="https://www.pland.gov.hk/pland_en/info_serv/tp_plan/adopted/ES/D_KTN_1_en.pdf">https://www.pland.gov.hk/pland_en/info_serv/tp_plan/adopted/ES/D_KTN_1_en.pdf</a>) had previously emphasized the importance of the Ma Tso Lung Stream. It serves as a crucial corridor for numerous fauna of conservation importance, including the Three-banded Box Terrapin. The stream, along with its surrounding riparian vegetation, has been designated under the "Green Belt" zoning for protection in the Outline Development Plan (ODP). The recent infrastructural developments have gravely affected this ecosystem and the habitat of the rare Three-banded Box Terrapin.</p> <p>In addition to the aforementioned concerns, the engineering works have significantly reduced surface water flow. As a result, the Ma Tso Lung Stream faces not only pollution but also the alarming threat of becoming a dry streambed. This drastically impacts the ecological balance and endangers the</p>	<p>boundary, no follow up action is proposed.</p> <p>Based on the above findings, it is concluded that the accumulated C&amp;D material on the stream likely accumulated by nature instead of illegal dumping by project. It is concluded that the complaint is not project related.</p> <p>However, BKREJV are responsible to monitor the condition alongside the boundary of construction site regularly.</p>	



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			<p>myriad of biodiversity dependent on this vital water source.</p> <p>...</p> <p>Enclosed are comparative photos from July to August 2022 juxtaposed with the current state in August 2023, capturing the stark degradation of the stream over a year."</p>		
COM-2023-09-04	Construction site near the junction of Sha Tau Kok Road and Ma Sik Road (ND/2019/04)	4 <sup>th</sup> September 2023, 7 <sup>th</sup> September 2023	<p>EPD received a complaint with ref: N07/RN/00021148-23 on 4 Sep 2023.</p> <p>Complaint detail: “沙頭角公路與馬適路交界的地盤排放泥水到附近河道造成污染”</p> <p>Supplementary detail received by EPD with the same ref on 7 Sep 2023.</p> <p>Complaint detail: “在 7/9/2023 下午,該地盤再次排出大量黃泥水”</p>	<p>The investigation result as follows:</p> <p>For the complaint received on 4 September 2023, the cause of the silty water entering Ma Wat River was mainly due to the malfunctioning of wetsep, which was damaged due to electric short during the adverse weather, no.1, no.3, no.8, no.9 and no.10 and 5 hours of amber warning signal, caused by Super typhoon Saola on 1 and 2 September 2023. The wetsep was repaired immediately after Saola left and resumed the function on 4 September 2023 afternoon and no more silty water was observed entering Ma Wat River. The water quality observed on 5 September 2023 was normal and complied with the legal requirement of discharge licence.</p> <p>For 7 September 2023, the major cause of the incident was the accumulated soil at the existing outfall overflow to the river due to the continuous rainy weather, which was not discharge from the construction site.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2023-09-13	Open water channel within the project site of KTN NDA phase 1 (ND/2019/01)	4 <sup>th</sup> September 2023, 21 <sup>st</sup> September 2023	<p>EPD spotted overflow of muddy water from an open water channel within the project site of ND/2019/01 to the nearby nullah at the site boundary which would eventually discharge into Sheung Yue River.</p> <p>During the EPD follow-up site inspection on 13 Sep 2023, similar overflow of muddy water still observed. On 21 Sep 2023, a joint site inspection was held.</p>	<p>The investigation result as follows:</p> <p>According to the record of Hong Kong Observatory, Super Typhoon SAOLA signal 10 was hoisted from 1 September 2023 to 2 September 2023. Amber Rainstorm Warning Signal was recorded from 19:45 of 1 September 2023 to 01:00 of 2 September 2023. Special Announcement on Flooding in the Northern New Territories was hoisted from 22:05 of 1 September 2023 to 04:30 of 2 September 2023 and the total rainfall from 1 to 2 September 2023 is nearly 180mm.</p> <p>It was observed that the capacity of the existing 2 no. of wastewater treatment system (AquaSed) provided for the treatment of the permanent rectangular channel (RC3) was insufficient.</p> <p>The permanent rectangular channel (RC3) which has been serving as temporary buffer zone for temporary storage of collected surface runoff which included wastewater generated from other interfacing contractors.</p> <p>It was observed that muddy water overflowed from the outlet of RC3 to the concerned discharge point.</p> <p>It was noted that various nearby interfacing contractors discharged their construction wastewater to the same concerned discharge point via RC3.</p> <p>Traces of muddy site runoff and yellowish sediments</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>were spotted on the bare surface outside RC3. Traces of yellowish sediment was observed in water channel out of the project site just next to RC2. The capacity of pumping system at RC2 seems insufficient. The storage pond capacity at Northern Portion seems inadequate to collect surface runoff generated from stockpiles area. The U-channel near Ma Tso Lung Road was filled with soil thus reduce the design capacity of water collection.</p> <p>Follow-up actions:</p> <ul style="list-style-type: none"> <li>- One additional water pump (increased from 2 to 3 in total) was deployed at RC3 and one water pump (increased from 1 to 2 in total) was deployed at RC2 respectively.</li> <li>- The open stockpile at northern portion was properly treated by hydroseeding.</li> <li>- Enlarge the depth of sump pit at Northern Portion from 1m to 2m. Storage pond was properly maintained by desilting regularly.</li> <li>- The blocked U-channel and cut-off drain near Ma Tso Lung Road was desilted generation of muddy surface runoff.</li> <li>- Sand bag bund with geotextile was placed properly and the bottom of the hoarding was sealed along the site boundary near Ma Tso Lung Road to prevent muddy water washed out to the</li> </ul>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>lower elevated of the site to public areas</p> <ul style="list-style-type: none"> <li>- Regularly desilting of rectangular channel (RC2 and RC3 to maintain the capacity.</li> <li>- Demarcate the discharge pipes by labelling which belongs to BKREJV.</li> <li>- Temporary drainage management plan at portion 1c was enclosed for reference.</li> </ul>	
COM-2023-11-08A	Construction site near Tong Hang (ND/2019/05)	8 <sup>th</sup> November 2023	<p>EPD received a complaint with ref: N07/RN/00026110-23 on 2 Nov 2023.</p> <p>Complaint detail: “投訴人於 2023/11/01 23:18:56 留言投訴粉嶺塘坑村對出的地盤最近晚上均會搬運大型物料入地盤，但搬運過程發出巨大噪音，要求環保署跟進。因投訴人沒有留聯絡資料，CSC 未能了解更多詳情。”</p>	<p>The investigation result as follows:</p> <p>The location of the complaint likely to be the storage yard which is being used partly by a business operator (CTC-container storage) and segment storage for this contract. According to our Permit-to-Work (PTW) application records, there was no physical works scheduled at the storage yard during the complaint period.</p> <p>Based on the above findings, it is concluded that the complaint was not related to the works.</p> <p>In case of works during restricted hours, the contractor will apply a Construction Noise Permit, works during restricted hours will only be carried out when a valid CNP is in force.</p> <p>In order to minimise the noise impact to the noise sensitive receiver, temporary noise barrier was erected along hoarding facing the noise sensitive receiver. The</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				installation of temporary noise barrier was completed on 13 November 2023.	
COM-2023-11-08B	Construction site near Junction of Ma Sik Road and Sha Tau Kok Road (ND/2019/04)	8 <sup>th</sup> November 2023	EPD received a complaint with ref: N07/RN/00025564-23 on 26 Oct 2023. Complaint detail: “本人再次見到粉嶺馬適路-沙頭角公路地盤晚上 9 點後仍然工作 地盤內有工程車和多名工人鋪木地板, 其間有人多次使用切割機鋸斷木板, 造成巨大噪音, 而自過往多月本人多次投訴後, 該地盤仍然沒有任何改善”	The investigation results are as follows:  Having reviewed on internal record and permit-to-work system, no work activities were scheduled and taken beyond 7 pm from 11 September to 31 October 2023. The supplementary information including statements from relevant representatives, the foreman in charge of the concerned area, representative of the sub-contractor from Hung Wing Steel Engineering Limited conducting construction works of CLC; the site diaries recorded the scheduled works and working period during weekdays within the aforesaid period; The work permits issued within the aforesaid period; and the valid CNP.  The Contractor claimed that they had a comprehensive noise control system for environmental protection in place which has been effective so far. The works in restricted hours are well organized and under control with the work permit system. Adequate mitigation measures are also provided for any work in restricted hours.  In conclusion, according to the above, all scheduled works were completed by 19:00 from 11 September to 31 October 2023 according to their records. All major works were substantially completed before the soft opening of the Community Liaison Centre on 26	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				October 2023, except the remaining construction of the fire service tank and the associated water pipes and fittings installation are in progress during normal working hours, for example, no activities during restricted hours, to be completed before FSI inspection tentatively scheduled on 20 December 2023. No potential noise impact during restricted hours would occur.	

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**APPENDIX T**  
**SUMMARY OF SUCCESSFUL**  
**PROSECUTION**

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**Appendix T - Summary of Successful Prosecution**

<b>Date of Successful Prosecution</b>	<b>Details of the Successful Prosecution</b>	<b>Status</b>	<b>Follow Up</b>
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**APPENDIX U**  
**SUMMARY TABLE FOR REQUIRED**  
**SUBMISSION UNDER**  
**ENVIRONMENTAL PERMIT**

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**Development of Kwu Tung North and Fanling North New Development Areas**  
**Summary for the EP Submissions**

DP No.	EP No.	Designated Project	Phase (1st Phase = 1, Remaining Phase = 2)	Commencement date of construction	C1	C2	C3	C4	C5	C6	C7
<a href="#">DP2</a>	<a href="#">EP-466/2013/A</a>	Castle Peak Road Diversion	1	12-Aug-20	<a href="#">C1-DP2</a>						
<a href="#">DP3</a>	<a href="#">EP-467/2013/A</a>	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement	1	12-Aug-20	<a href="#">C1-DP3</a>						
<a href="#">DP4</a>	<a href="#">EP-468/2013/A</a>	Kwu Tung North New Development Area Road D1 to D5	1	1-Jun-20 (for C1) 3-Jul-20 (for C3)	<a href="#">C1-DP4</a>		<a href="#">C3-DP4</a>				
<a href="#">DP5</a>	<a href="#">EP-469/2013</a>	Sewage Pumping Stations in Kwu Tung North New Development Area	1	28-Oct-20		<a href="#">C2-DP5</a>					
<a href="#">DP7</a>	<a href="#">EP-470/2013/A</a>	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	1	23-Mar-20	<a href="#">C1-DP7</a>						
<a href="#">DP10</a>	<a href="#">EP-473/2013/A</a>	Fanling Bypass Eastern Section	1	6-Oct-20 (for C3) 23-Feb-21 (for C4) 1-Aug-20 (for C5)			<a href="#">C3-DP10</a>	<a href="#">C4-DP10</a>	<a href="#">C5-DP10</a>		
<a href="#">DP12</a>	<a href="#">EP-475/2013/A</a>	Reprovision of temporary Wholesale Market in Fanling North New Development Area	1	29-Oct-19						<a href="#">C6-DP12</a>	
<a href="#">DP14</a>	<a href="#">EP-546/2017</a>	Fanling North Temporary Sewage Pumping Station	1	16-Feb-21				<a href="#">C4-DP14</a>			



DP2	EP-466/2013/A	Castle Peak Road Diversion				
Construction commencement date		12 August 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction.	Notified 2 March 2020	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction .	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction.	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction.	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction.	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	<b>To Conduct -</b> A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer.  <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3.	prior to the commencement of construction.	Submitted 8 October 2022	Comments by EPD on 20 Dec 2022
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	<b>Deposit -</b> A copy of Photographic and cartographic records of directly impacted historical buildings at HKT08 and the entrance gate of HKT03.	prior to the commencement of the respective removal or relocation works.	NA	No relocation is required.
		Others	<b>For Approval -</b> Proposals on relocation of any built heritages.	prior to commencement of the respective relocation work.	NA	No relocation is required.
2.8	Landscape Plan	Others	<b>Deposit</b>	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project.	Resubmitted to EPD 14 July 2023	
2.10	Traffic Noise Mitigation Plan	Before construction	<b>Submit</b>	At least one month before commencement of construction	To be submitted before commencement of Remaining Phase works	
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction.	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period.	Submitted by ET Monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address.	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit.	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available.	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation.	N/A	

Remarks:

tbc: To be confirmed  
DP: Designated Project  
\* tentative submission date will be supplemented once available  
# The Landscape Plan will be submitted by CEDD’s Castle Peak Road project team as confirmed since there is no existing tree is being affected by CEDD KTN NDA Phase 1 Works within the small portion of area along Castle Peak Road (near Pak Shek Au) which is overlapped with DP2 work boundary.

DP3	EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement				
Construction commencement date		12 August 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Sumbissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Traffic Noise Mitigation Plan	Before construction	<b>For Approval</b>	no later than 1 month before the commencement of construction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	<b>Deposit -</b> A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical lanscape features at Locatoins KT38, KT44 and KT52.	prior to the commencement of the respective removal or relocation works	Deposited 10 Feb 2021	No relocation is required
2.8	Landscape Plan	Others	<b>Deposit</b>	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	Deposited 19 December 2022	Resubmitted to EPD 14 July 2023
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation	N/A	

Remarks: tbc: To be confirmed  
DP: Designated Project  
\*tentative submission date will be supplemented once available

DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
Construction commencement date		1 June 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	<b>To Conduct -</b> A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 8 October 2022	Comments by EPD on 20 December 2022
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	<b>Deposit -</b> A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	NA	No relocation is required.
		Others	<b>For Approval -</b> Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	NA	No relocation is required.
2.8	Compensatory Tree Planting Plan	Before construction	<b>For Approval</b>	prior to the commencement of construction	Resubmitted 17 August 2022	EPD approved 31 August 2022
2.9	Habitat Creation and Management Plan	Others	<b>For Approval</b>	prior to the commencement of construction of relevant part of the Project	Submitted 20 October 2020	EPD approved 4 November 2020
2.10	Traffic Noise Mitigation Plan	Before construction	<b>For Approval</b>	no later than 1 month before commencement of construction	Submitted 31 July 2019	EPD approved 9 August 2019
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation	N/A	

Remarks: tbc: To be confirmed  
DP: Designated Project  
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DP5	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area				
Construction commencement date		28 October 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notify 14 October 2020	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction	Deposited 17 September 2020	
2.5	Location Plans	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction	Deposited 11 August 2022	First Deposited 15 October 2020
2.6	Landscape Plan	Before construction	<b>Deposit</b>	at least 6 weeks before the commencement of th corresponding parts of landscape and visual mitigation measures	Deposited 9 August 2022	Resubmitted to EPD on 5 July 2023
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation	N/A	

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DP7	EP-470/2013/A	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works				
Construction commencement date		23 March 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notify 22 January 2020	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation	N/A	

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DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
Construction commencement date		1 August 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notified 8 September 2020	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction	Deposited 17 March 2021	
2.5	Location Plans	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction	Deposited 10 December 2020	
2.6	Relocation Plan for Rose Bitterling	Before construction	<b>Approval</b>	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	<b>Approval</b>	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	<b>Deposit</b>	before the commencement of construction	Deposited 5 May 2022	EPD Satisfied 18 May 2022
2.9	Traffic Noise Mitigation Plan	Before construction	<b>Approval</b>	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	<b>To Conduct -</b> A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2022, 5 May 2022 and 12 July 2022	
2.11	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	<b>Deposit -</b> A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	Submitted 25 May 2022	No relocation is required
		Others	<b>For Approval -</b> Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	NA	No relocation is required
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation	N/A	

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DP12	EP-475/2013/A	Reprovision of Temporary Wholesale Market in Fanling North New Development Area				
Construction commencement date		29 October 2019				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notified 15 October 2019	
2.1	Establish of ET	Before construction	<b>Establish -</b> An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	<b>Deposit</b>	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	<b>Inform in writing</b>	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.5	Layout Plan	Before construction	<b>Deposit</b>	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.6	Landscape Plan	Others	<b>Deposit</b>	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	Deposited 31 March 2022	
3.3	Baseline Monitoring Report	Before construction	<b>Submit</b>	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	<b>Submit</b>	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET monthly	
4.2	Dedicated website	During construction	<b>Set up and Notify in writing --</b> the internet address	in place within one month after the commencement of construction of the Project.	Notified 7 July 2022	First Notified 22 April 2020 [For all EPs]
		During construction and operation	<b>Upload --</b> All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			<b>Maintain</b>	entire construction period and during the first 3-year of operation	N/A	

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DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station				
Construction commencement date			16 February 2021			
Operation commencement date			tbc			
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 1 month prior to the commencement of construction	Notified 8 September 2020	
1.14	Commencement date of operation	Before operation	Notify in writing	no later than 1 month prior to the commencement of operation	N/A	
2.4	IEC Audit Report	After construction	Deposit	within one month upon completion of the construction works	N/A	