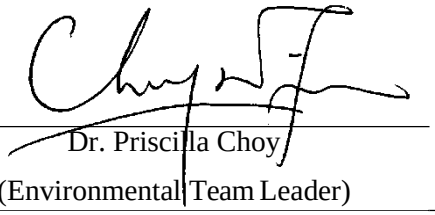
Civil Engineering and Development Department

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 July 2023

(Version 1.3)

Certified By



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(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. 45 (July 2023)

21 August 2023

BY EMAIL

Dear Sir,

We refer to email of 18 August 2023 attaching the Monthly Environmental Monitoring and Audit Report No. 45 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

1 INTRODUCTION 11
Purpose of the report 11
Structure of the report 11

2 PROJECT INFORMATION 13
Background 13
Project Organization 15
Summary of Construction Works Undertaken During Reporting Month 17
Construction Programme 18
Status of Environmental Licences, Notifications and Permits 18

3 AIR QUALITY MONITORING 21
Monitoring Requirements 21
Monitoring Location 21
Monitoring Equipment 22
Monitoring Parameters, Frequency and Duration 22
Monitoring Methodology and QA/QC Procedure 23
Results and Observations 25
Event and Action Plan 26

4. NOISE MONITORING 27
Monitoring Requirements 27
Monitoring Location 27
Monitoring Equipment 27
Monitoring Parameters, Frequency and Duration 28
Monitoring Methodology and QA/QC Procedures 29
Maintenance and Calibration 29
Results and Observations 29
Event and Action Plan 31

5. WATER QUALITY MONITORING 32
Monitoring Requirements 32
Monitoring Parameters, Frequency 32
Results and Observations 32
Monitoring Requirements 33
Monitoring Locations 33
Monitoring Equipment 34
Monitoring Parameters and Frequency 36
QA/QC Requirements 37
Results and Observations 38
Event and Action Plan 38

6. LAND CONTAMINATION (AMBIENT ARSENIC MONITORING) 39
Monitoring Requirements 39
Monitoring Location 39
Monitoring Equipment 40

Monitoring Parameters, Frequency and Duration 40
Monitoring Methodology and QA/QC Procedure 40
Maintenance/Calibration 41
Laboratory Measurement / Analysis 41
Results and Observations 42
Event and Action Plan 42

7. LANDFILL GAS MONITORING 43
Monitoring Requirement 43
Monitoring Parameters and Frequency 43
Monitoring Locations 43
Monitoring Equipment 43
Results and Observations 43
Event and Action Plan 44

8. BUILT HERITAGE MONITORING 45
Monitoring Requirement 45
Monitoring Location 45
Monitoring Parameters and Frequency 45
Monitoring Equipment 46
Results and Observations 46
Event and Action Plan 46

9 ECOLOGICAL MONITORING 47
Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley 47
Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream, and Long Valley 49
Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution 52
Results and Observation 56
References 56

10 ENVIRONMENTAL SITE INSPECTION 57
Site Audits 57
Implementation Status of Environmental Mitigation Measures 60
Implementation Status of Water Quality Mitigation Measures 62
Solid and Liquid Waste Management Status 64
Ecological Mitigation Measures – Creation of Long Valley Nature Park (LVNP) 65

11 ENVIRONMENTAL NON-CONFORMANCE 68
Summary of Exceedances 68
Summary of Environmental Non-Compliance 68
Summary of Environmental Complaint 68
Summary of Environmental Summon and Successful Prosecution 68

12 FUTURE KEY ISSUES 69
Key Issues in the Coming Three Months 69
Monitoring Schedule for the Next Month 77
Construction Programme for the Next Month 77

13 CONCLUSIONS AND RECOMMENDATIONS 78
Conclusions 78
Recommendations 79

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 Two 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 Photographic Records and Implementation Status of Measures
Table 10.4 Specific Water Quality Mitigation Measures for Major Construction Works in the Reporting Month
Table 10.5 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 Two 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 45th 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 July 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
Contract No. ND/2019/01 – 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
Contract No. ND/2019/02 – 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
Contract No. ND/2019/03 – 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
Contract No. ND/2019/04 – Fanling North New Development Area,	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23 February 2021

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
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
Contract No. ND/2019/05 – 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
Contract No. ND/2019/06 – 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
Contract No. ND/2019/07 – 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 Total Suspended Particulates (TSP) Monitoring	FLN-DMS1	N/A	N/A	4, 10, 14, 20 and 26 Jul 23	4, 10, 14, 20 and 26 Jul 23	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	4, 10, 14, 20 and 26 Jul 23		
	FLN-DMS5			3, 7, 13, 19, 25 and 31 Jul 23	3, 7, 13, 19, 25 and 31 Jul 23	N/A		
	KTN-DMS4(B)	3, 7, 13, 19, 25 and 31 Jul 23		3, 7, 13, 19, 25 and 31 Jul 23	N/A			
24-hr TSP Monitoring	FLN-DMS1	N/A	N/A	3, 7, 13, 19, 25 and 31 Jul 23	3, 7, 13, 19, 25 and 31 Jul 23	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	3, 7, 13, 19, 25 and 31 Jul 23		
	FLN-DMS5A			3, 7, 13, 19, 25 and 31 Jul 23	3, 7, 13, 19, 25 and 31 Jul 23	N/A		
	KTN-DMS4(B)	3, 7, 13, 19, 25 and 31 Jul 23		3, 7, 13, 19, 25 and 31 Jul 23	N/A			
Noise Monitoring	CP-FLN-NMS1	N/A			4, 10, 20 and 26 Jul 23			N/A
	CP-FLN-NMS2	N/A				4, 10, 20 and 26 Jul 23	N/A	
	CP-KTN-NMS2	3, 13, 19, 25 and 31 Jul 23	N/A	N/A				
	CP-KTN-NMS3							
	CP-KTN-NMS5							
	CP-KTN-NMS6	N/A	3, 13, 19, 25 and 31 Jul 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*	3, 4, 13, 14, 19, 20, 24 and 25 Jul 23	4, 13, 20 and 25 Jul 23	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	18 Jul 23	N/A*	18 Jul 23	18 Jul 23	N/A*	N/A*	N/A*

	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	6 and 21 Jul 23	6 and 21 Jul 23	6 Jul 23	6 Jul 23	6 Jul 23	N/A*	N/A*
Egretry Monitoring		N/A	N/A	26 Jul 23	N/A	N/A	N/A	N/A
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		6, 12, 18, 24 and 28 Jul 23	N/A	6, 12, 18, 24 and 28 Jul 23	N/A	N/A	N/A	N/A
Water Quality Monitoring [9]		N/A	3, 5, 7, 10, 12, 14, 19, 21, 24, 26, 28 and 31 Jul 23	N/A	3, 5, 7, 10, 12, 14, 19, 21, 24, 26, 28 and 31 Jul 23	N/A	N/A	N/A
Landfill Gas Monitoring		13 Jul 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		4, 12, 18 and 25 Jul 23	5, 12, 19 and 28 Jul 23	6, 14, 18 and 28 Jul 23	6, 13, 19 and 27 Jul 23	3, 10, 20, 24 and 31 Jul 23	6, 13, 19 and 27 Jul 23	7, 14, 21 and 28 Jul 23

Remarks:

N/A – No relevant monitoring is required according to the updated EM&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 exceeds500m, 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

[9] According to HKO, Typhoon Signal No. 8 remain in force on 17 July 23 until 4 pm. Due to safety reasons, the water quality monitoring scheduled on 17 July 23 was cancelled.

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	$L_{eq(30min)}$	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_2	0	0	0	0	0	0
	CH_4						
	CO_2						
Cultural heritage	Built Heritage Monitoring	0	0	0	0	0	0
Ecological Monitoring	Avifauna	0	0	0	0	0	0
	Aquatic fauna	0	0	0	0	0	0
	Non-aquatic fauna	6	6	12	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 exceedance was recorded.

Water Quality

7. All additional water quality monitoring was conducted as scheduled in the reporting month, except 17 July 2023 was cancelled due to the adverse weather. 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 vibration 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. Six (6) action level exceedance and six (6) limit level exceedance for non-aquatic fauna were recorded at T1, T3 and 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, as well as adverse weather condition during the monitoring session saw the non-aquatic fauna result lowered. The ecological monitoring result in the Reporting Month is shown in **Appendix L**.

Egretry Monitoring

12. All Egretry monitoring was conducted as scheduled in the reporting month. The monitoring results can refer to the Monthly Egretry Monitoring Report for July 2023.

Complaint Log

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

Notification of Summons and Successful Prosecutions

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

Reporting Changes

15. 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

16. 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

Contract No.	Site Activities (August to October 2023)
ND/2019/01	(a) Site Clearance, tree felling, removal of existing structures, slope work and drainage works in Portion 1a (b) Excavation, backfilling, construction of hoarding/fencing and road works in Portion 1b (c) Site formation and socket H piling in Portion 1c (d) Temporary storage of material in Portion 1e (e) Tree felling, site formation work, construction of subway and road works in Portion 2 (f) Excavation, backfilling and drainage works in Portion 3 (g) Watermain, excavation, backfilling, road works, sheet piling and pipe jacking in Portion 5 (h) Drainage works, backfilling, road works, watermains work in Portion 6a (i) Operation of HAC treatment facility in Portion 6b (j) Site formation, sheet piling, excavation and drainage works in Portion 7 (k) Construction of retaining wall, RC construction of fresh water reservoir, excavation at WSD's maintenance access, backfilling works and drainage works in Portion 8a (l) Trenchless work, excavation and watermain works in Portion 8b (m) Sheet piling, excavation, drainage works and watermain works in Portion 9b (n) Stockpile of soil in Portion 9c (o) Site clearance, tree felling and remove of existing structure in Portion 13
ND/2019/02	(a) Pipe Jacking (b) Backfilling (c) Concreting (d) Bedding & Pipe Laying (e) ELS (f) Sheet Pile Installation (g) Cut and Fill of Slope
ND/2019/03	(a) Portion 1 & Portion 1A - Road & Drainage works and watermains 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
ND/2019/04	(a) Tree Felling (b) Pile Cap (c) Back Filling (d) Excavation (e) Grouting (f) Sheet Piling (g) Road works (h) Formwork Erection (i) Rebar Fixing (j) Pre-drill (k) Bore pile (l) ELS

Contract No.	Site Activities (August to October 2023)
ND/2019/05	(a) North Team Works - ELS works and Pile cap construction at B2-01 - Backfilling and drainage work at C4-02 & C4-01. - Backfilling at C3-04b. - Slope works at On Lok Garden FS 28 & 29. - Construction of B1-abutment wall and backfill. - Slope drainage works of Jockey Club Rd – F63. - Road works of northbound of Jockey Club Rd. - Laying ducting for traffic signal, traffic light & street light & construction of permanent footpath for subsequent pedestrian diversion at J/O of JCR and Tong Hang Tsuen - Construction of new box culvert & retaining wall at Tong Hang Tsuen - Drainage works – DN 900 at On Kui Street near B1. - Pier construction at D2-01 & B2-03 - Pier head construction at D2-01 - Cross head construction at C2-01 (b) Viaduct Works - Segment fabrication for bridge C2, D1, D2& E1 - Segments erection by LG at bridges C3, C2 - Segments erection by crane at bridge D1 and E1 - SOP construction at E2-01, E2-03, D2-01 - Construction of pile cap and installation of bridge rotation components at pier D2-01 - Design and fabrication of falsework for Bridge B1 - Erection of tower crane at E2-01 (c) South Team Works - TWSRW – Road construction work and UUs laying (Section P800 CH 235 to 450). - TWSRW – Hydroseeding of FS04. - TWSRW - CLP 11 kv cable diversion work (1ST) - TWSRE – Form D300 new road, BBI footing, relocation of existing BBI and road diversion - TWSRE – Drainage Diversion, Road Drain, UUs laying (HKT, CLP, TCSS, Irrigation) - HKY FB (East) – Construction of extension roof, install subframe, cladding, E&M - HKY FB (West) – Construction of LT2 (Foundation) - E3-04a, E3-05M, E4-01 and E4-02 – cap construction. - NB109 – Bay 9~12 base slab construction. Bay 5 to 12 wall construction. - NB69 – Bay 6~8 ELS excavation and base slab construction. - NB110 – Bay 3~5 Base slab and wall construction. (d) Form Traveler - E3-03 – Relocate to E3-01 - E2-02 – construction 7th to 10th pair - D2-02 – construction 1st to 2nd pair - D2-03 – erection of form traveller no. 4 - E2-01 - Design and fabrication of 5th set of form traveler.
ND/2019/06	The construction phase has been completed and handed over to AFCD since 4 April 2022.

Contract No.	Site Activities (August to October 2023)
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 1, 3, 4 and 5 (g) Mini piling works at Portion 4 (h) Construction of noise barrier at Portion 4 and 5 (i) Waterworks at Portion 1 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 45th EM&A Report which summarises the key findings of the EM&A programme in July 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 - s**ummarises 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 egretry sites in the FLN NDA and enhancement works to an existing egretry 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 **2.1.b**.

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 3,600m3/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

Party	Role	Contact Person	Phone No.	Fax No.
Civil Engineering and Development Department, HKSAR (CEDD)	Project Proponent	Mr. Raymond Cheng	3619 3919	3547 1658
Supervisor / Supervisor's Representative (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
Contract No. ND/2019/01 Contractor (Build King – Richwell Engineering Joint Venture)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Edward Tam	9287 8270	
Contract No. ND/2019/02 Contractor (Chun Wo – Kwan Lee Joint Venture.)	Site Agent	Mr. Andy Chan	3485 9780	--
	Environmental Officer	Mr. Wesley So	9144 1643	
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Ken Cheung	9803 5297	
Contract No. ND/2019/04 Contractor (Daewoo – Chun Wo – Kwan Lee Joint Venture)	Site Agent	Mr. Eric Wu	9786 8630	--
	Environmental Manager	Mr. Jimmy Cheng	9609 5916	
	Environmental Officer	Mr. Sam Lam	6178 3179	
Contract No. ND/2019/05 Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Darvin Lo	9467 5891	--
	Environmental Manager	Mr. Pan Fong	9436 9435	
	Environmental Officer	Ms. Louise Poon	5272 5709	
Contract No. ND/2019/06 Contractor (New Concepts Engineering Development Ltd.)	Project Manager	Mr. Joe Cheng	9861 0060	--
	Environmental Officer	Mr. Alex Choy	6360 3236	
Contract No. ND/2019/07 Contractor (China Road and Bridge Corporation)	Site Agent	Mr. Daniel Wong	5335 9572	--
	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

Contract No.	Site Activities (July 2023)
ND/2019/01	(a) Site clearance, tree felling, removal of existing structures and drainage works at Portion 1a (b) Excavation, backfilling and drainage works at Portion 1b (c) Site formation and socket-H piling at Portion 1c (d) Temporary storage of material at Portion 1e (e) Site clearance, site formation and construction of subway, drainage works and road works at Portion 2 (f) Sheet piling, drainage works and construction of haul road at Portion 3 (g) Watermains works at Portion 5 (h) Drainage works and backfilling at Portion 6a (i) Operation of HAC soil treatment facility at Portion 6b (j) No construction works at Portion 7 (k) Construction of retaining wall, RC construction of fresh water service reservoir, construction of WSD's maintenance access, drainage works and backfilling works at Portion 8a (l) Set up for pipe jacking at jacking pit at LWSC's car park, trenchless work, and watermain construction at Portion 8b (m) Sheet piling, excavation, drainage works and watermain construction at Portion 9b (n) Stockpile of soil at Portion 9c (o) Site clearance and removal of existing structures at Portion 13
ND/2019/02	(a) Pipe Jacking (b) Backfilling (c) Concreting (d) Bedding and pipe laying (e) ELS (f) Sheet Pile Installation (g) Cut and Fill of Slope
ND/2019/03	(a) Portion 1 & Portion 1A - Road & Drainage works and watermains works at Yin Kong Road - Installation of Street Lighting - 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)

Contract No.	Site Activities (July 2023)
ND/2019/04	(a) Tree Felling (b) Pile Cap (c) Back Filling (d) Excavation (e) Grouting (f) Sheet Piling (g) Road works (h) Formwork Erection (i) Rebar Fixing (j) Pre-drill (k) Bore pile (l) ELS
ND/2019/05	(a) The segment erection using launching gantry is critical to completion of section 4. (b) The pier D2-01 with bridge rotation system is critical to completion of section 5. (c) The erection of 3rd form traveler at D2-02 is in progress. (d) 5th set of form traveler is under fabrication off-site to be used at E2-01.
ND/2019/06	The construction phase was completed and handed over to AFCD since 4 April 2022.
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) Drainage works, Sewerage works at Portion 1, 3 and 4 (d) Construction of box culvert at Portion 2 (e) Filling works at Portion 2 and 4 (f) Construction of site haul road at Portion 4 (g) Waterworks at Portion 1

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

Contract No.	Permit / Licence No.	Valid Period		Status
		From	To	
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-RN0252-23	16/03/2023	15/08/2023	Valid
	GW-RN0304-23	26/03/2023	31/08/2023	Valid
	GW-RN0392-23	20/04/2023	19/08/2023	Valid
	GW-RN0394-23	26/04/2023	25/07/2023	Expired in reporting month
	GW-RN0419-23	24/04/2023	31/08/2023	Valid
	GW-RN0414-23	13/05/2023	12/09/2023	Valid
	GW-RN0426-23	19/05/2023	18/11/2023	Valid
	GW-RN0439-23	17/05/2023	31/08/2023	Valid
	GW-RN0459-23	15/05/2023	14/07/2023	Expired in reporting month
	GW-RN0727-23	26/07/2023	25/11/2023	Valid
ND/2019/02	GW-RN0234-23	15/03/2023	14/07/2023	Expired in reporting month
	GW-RN0518-23	21/05/2023	31/08/2023	Valid
	GW-RN0534-23	08/06/2023	07/11/2023	Valid
	GW-RN0626-23	15/07/2023	31/08/2023	Valid
ND/2019/03	GW-RN0054-23	01/03/2023	31/08/2023	Valid
ND/2019/04	GW-RN0353-23	13/04/2023	12/07/2023	Expired in reporting month
	GW-RN0480-23	13/05/2023	25/07/2023	Expired in reporting month
	GW-RN0481-23	15/05/2023	31/07/2023	Expired in reporting month
	GW-RN0498-23	24/05/2023	30/07/2023	Expired in reporting month
	GW-RN0595-23	23/06/2023	22/09/2023	Valid
	GW-RN0709-23	13/07/2023	12/10/2023	Valid
	GW-RN0714-23	07/07/2023	11/09/2023	Valid
ND/2019/05	GW-RN0288-23	30/03/2023	31/08/2023	Valid
	GW-RN0435-23	08/05/2023	07/08/2023	Valid
	GW-RN0531-23	01/06/2023	31/07/2023	Expired in reporting month
	GW-RN0600-23	22/06/2023	21/09/2023	Valid
	GW-RN0631-23	19/06/2023	18/09/2023	Valid
	GW-RN0657-23	26/06/2023	30/07/2023	Expired in reporting month
	GW-RN0664-23	24/06/2023	30/08/2023	Valid
	GW-RN0739-23	08/07/2023	31/08/2023	Valid
	GW-RN0765-23	18/07/2023	17/10/2023	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
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

Contract No.	Permit / Licence No.	Valid Period		Status
		From	To	
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
Billing Account for Disposal of Construction Waste				
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
Registration of Chemical Waste Producer				
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
Effluent Discharge License under Water Pollution Control Ordinance				
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
	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[2]	Scattered Village Houses North of Proposed Potential Ecopark
	ND/2019/04		
	ND/2019/05	FLN-DMS3[3]	House near Tong Hang
	ND/2019/03	FLN-DMS5[4]	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)[5]	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	10
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 ±3°C; the relative humidity (RH) was < 50% and not variable by more than ±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^3/min. and 1.4 m^3/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 weighting 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 ±3°C; the RH should be < 50% and did not vary by more than ±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 (µg/m^3)		Action Level, µg/m^3	Limit Level, µg/m^3
	Average	Range		
FLN-DMS1	57.0	25.3 – 100.6	303	500
FLN-DMS3	50.5	29.6 – 74.7	301	500
FLN-DMS5	29.1	14.6 – 46.1	279	500
KTN-DMS4(B)	24.1	12.3 – 36.4	297	500

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

Monitoring Station	Concentration (μg/m³)		Action Level, μg/m³	Limit Level, μg/m³
	Average	Range		
FLN-DMS1	48.1	25.8 – 62.9	150	260
FLN-DMS3	24.7	14.0 – 30.5	165	260
FLN-DMS5A	49.1	29.1 – 69.4	153	260
KTN-DMS4(B)	33.4	24.8 – 40.8	192	260

3.23 All 1-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[2]	Belair Monte
ND/2019/04		
ND/2019/05	CP-FLN-NMS2[3]	Scattered Village Houses in Tong Hang
ND/2019/01	CP-KTN-NMS2[4]	Residential Buildings at Ma Tso Lung
	CP-KTN-NMS3[5]	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	5
Acoustical Calibrator	Brüel & Kjær	4231	1
	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[2]	Duration	Frequency	Measurement
ND/2019/06	CP-FLN-NMS1[3]	$L_{10(30\ min.)}$ dB(A) $L_{90(30\ min.)}$ dB(A) $L_{eq(30\ min.)}$dB(A) (as six consecutive $L_{eq,\ 5min}$ readings)	0700-1900 hours on normal weekdays	Once per week	Façade
ND/2019/04					
ND/2019/05	CP-FLN-NMS2[4]				
ND/2019/01	CP-KTN NMS2[5]				Free-field[1]
	CP-KTN NMS3[6]				
ND/2019/01	CP-KTN NMS5				
ND/2019/02	CP-KTN-NMS6				Façade

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 min.) dB(A) (as six consecutive $L_{eq,\ 5min}$ 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[1]	62.7 – 68.1	69.9	75
ND/2019/04				
ND/2019/05				
	CP-FLN-NMS2[2]	58.4 – 67.9	59.6	
ND/2019/01	CP-KTN-NMS2[3]	52.8 – 59.0	58.6	
	CP-KTN-NMS3[4]	46.5 – 62.2	51.6	
ND/2019/01	CP-KTN-NMS5	55.4 – 64.9	57.2	
ND/2019/02	CP-KTN-NMS6	54.3 – 57.1	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/Level exceedance 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[1]	Belair Monte (Existing)	Excavator, dump truck, mobile crane, piling, road traffic
ND/2019/04			
ND/2019/05			
	CP-FLN-NMS2[2]	Scattered Village House in Tong Hang (Existing)	Excavator, piling, dump truck, road traffic
ND/2019/01	CP-KTN-NMS2[3]	Residential Buildings at Ma Tso Lung (Existing)	Dump truck, excavator, road traffic
ND/2019/01	CP-KTN-NMS3[4]	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
• Temperature(°C) • pH(pH unit) • turbidity (NTU) • water depth (m) • salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) • Ammonia Nitrogen (NH_3-N) (mg NH_3-N/L) • Unionized Ammonia (UIA) (mg/L) • Nitrate-nitrogen (NO_3-N) (mg NO_3^--N/L) • Ortho-phosphate (PO_4) (mg PO_4^{3-}-P/L)	• 3 water depths: 1m below water surface, mid-depth and 1m above river bed. • If the water depth was less than 3m, mid-depth sampling only. • If water depth was less than 6m, mid-depth may be omitted.	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	• Temperature (°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solids (SS) (mg/L) • Arsenic (As) (µg/L)	• 3 water depths: 1m below water surface, mid-depth and 1m above river bed. • If the water depth was less than 3m, mid-depth sampling only. • If water depth was less than 6m, mid-depth might be omitted.	3 days per week
River Indus and near Siu Hang San Tsuen Stream	NTR-CS1 NTR-IS1 SHST-IS2 MWR-IS3	• Temperature (°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solids (SS) (mg/L)		

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, except 17 July 2023 was cancelled due to the adverse weather. 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 1O-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 1O-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[1]	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^3/min. and 1.4 m^3/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 ±3°C; the relative humidity (RH) was < 50% and did not vary by more than ±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 ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±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^3)	Action Level (ng/m^3)	Limit Level, (ng/m^3)
06/07/2023	KTN-DMS4(A)	4.83	9.36	11.7
12/07/2023		4.88		
18/07/2023		1.70		
24/07/2023		5.75		
28/07/2023		6.00		

6.15 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 116.3m^3 of arsenic soil transported to soil treatment plant and 0m^3 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	OPTIMA7 Biogas (Serial No. 331555)	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 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 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#	7.5	3.0
Declared monuments/ Historical structures	3.0	

Remarks:
* peak particle velocity
# 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: 3, 4, 13, 14, 19, 20, 24 and 25 July 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, 54 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 21 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendices L1i and L1j** 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	71.75	12	9	6
Mean abundance of *Ardeola bacchus* using Ng Tung River, Sheung Yue River and Shek Sheung River	18.25	9	6	5
Mean Abundance of Bird recorded in LVNP	560.75	487	341	244
Mean Abundance of *Ardeola bacchus* recorded in LVNP	22	23	16	12
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:
Ardea alba, *Ardea cinerea*, *Egretta eulophotes*, *Egretta garzetta*, *Ardea intermedia* and *Phalacrocorax carbo*

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. There0020weshould 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 during wet season. Three replicates for invertebrates sampling and direct counting of fish fauna were performed respectively.

Date of aquatic fauna monitoring: 18th July 2023

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.

9.28 In the survey of aquatic fauna, a total of 22 aquatic invertebrate species were recorded in Ma Tso Lung Stream and Siu Hang San Tsuen Stream. There were 3 fish species recorded in the reporting month. One introduced species of conservation importance was recorded, which is an introduced species namely *Oreochromis mossambicus*.

9.29 For the monitoring on 18th July 2023, two monitoring stations, MS_01 & MS_05, were found dried-up. No aquatic invertebrate nor fish species was recorded in those stations.

9.30 Aquatic faunal monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendices L2 to L3.**

9.31 **Table 9.2** and **Table 9.3** summarises the aquatic monitoring results during the reporting month.

Table 9.2 Summary Table of Aquatic Macroinvertebrates Monitoring Results to Corresponding Action and Limit Levels.

Number of Native Species Recorded in Stations: MS_01 - MS_15	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
MS_01	0	0	NA	NA
MS_02 & MS_03	4	2	NA	1
MS_04, MS_06 & MS_07	4	1	NA	NA
MS_05	0	0	NA	NA
MS_08, MS_09 & MS_10	7	2	NA	1
MS_11	0	0	NA	NA
MS_12	0	0	NA	NA
MS_13 & MS_14	2	1	NA	NA
MS_15	1	1	NA	NA

Table 9.3 Summary Table of Fish Monitoring Results to Corresponding Action and Limit Levels.

Number of Native Species Recorded in Stations: MS_01 - MS_15	Result in Reporting Month	Baseline Level in Corresponding Month	Action Level	Limit Level
MS_01	0	0	NA	NA
MS_02 & MS_03	0	1	NA	NA
MS_04, MS_06 & MS_07	0	1	NA	NA
MS_05	0	0	NA	NA
MS_08, MS_09 & MS_10	0	0	NA	NA
MS_11	0	0	NA	NA
MS_12	0	0	NA	NA
MS_13 & MS_14	0	1	NA	NA
MS_15	0	0	NA	NA

9.32 No Action or Limit Level exceedance was recorded during the reporting month during monitoring of aquatic fauna.

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

Monitoring Requirements and Protocol

9.33 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.

9.34 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

9.35 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 form the field signs observed.

9.36 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)

9.37 Amphibian surveys should be conducted whenever possible on evenings 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.

9.38 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)

9.39 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

9.40 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: 6, 21 June 2023

Monitoring Location

9.41 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.

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

Monitoring Parameters

9.43 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

9.44 During the survey, a total of 5 mammal species were recorded from transects. Two species of conservation importance were recorded, namely *Cynopterus sphinx* and *Pipistrellus abramus.*

9.45 Domestic dogs, *Canis lupus familiaris*, were commonly found at transect T1, T4 and T6, where associated with human settlements, whilst domestic cats, *Felis catus*, were found at T3 and T6.

9.46 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).

9.47 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).

9.48 *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).

9.49 Bat species, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm during the monitoring at T1. *Pipistrellus abramus* was recorded in flight at nighttime at all transect except T1.

Herpetofauna (Amphibians and Reptiles)

9.50 Among the transects, a total of 8 herpetofauna species were observed. No species recorded

was of conservation importance. 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)

9.51 During the insect survey, a total of 49 butterfly species were recorded from transects. 2 species of butterfly recorded was of particular conservation interest, namely *Hypolimnas misippus* and *Papilio xuthus*. Transect T1 had recorded the highest butterfly diversity among all transects.

9.52 18 species of odonata were recorded in the reporting month. One (1) species recorded was of particular conservation interest, namely *Potamarcha congener*. Transect T1 had recorded the highest odonatan diversity among all transect.

9.53 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 L4 to L7**.

9.54 **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	1	1	NA	NA
T4	1	0	NA	NA
T5	1	1	NA	NA
T6	1	1	NA	NA

9.55 **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	1	9	6	5
T3	2	7	5	4
T4	5	5	4	3
T5	6	2	NA	1
T6	0	7	5	4

9.56 **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	32	28	20	14
T3	15	11	8	6
T4	21	13	9	7
T5	31	8	6	4
T6	4	15	11	8

9.57 **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	13	18	13	9
T3	1	13	9	7
T4	6	5	4	3
T5	5	3	2	1
T6	4	10	7	5

9.58 Six (6) Action Level exceedance and six (6) Limit Level exceedance was recorded in non-aquatic fauna monitoring during the reporting month.

9.59 For the monitoring conducted on 6 July 2023 at Transect T5, a section of the transect route was found located within a private property and hence not accessible. Another section of transect T5 was found blocked by a new accumulation of fallen trees. The inaccessible part are shown in **Photo 1** and **Photo 2** below. The adjusted accessible transect route is shown in **Figure 11**.

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

Photo 2. Inaccessible part of transect T5 blocked by fallen trees.

Results and Observation

Action and Limit Level Exceedance

9.60 Six (6) action level exceedance and six (6) limit level exceedance for non-aquatic fauna were recorded at T1, T3 and T6. The exceedance were considered non-project related, as large proportion of vegetative habitat along T3 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 lower results of non-aquatic fauna monitoring were likely due to adverse weather condition during parts of daytime monitoring of T6 and, night time monitoring at T1 and T6. Future results of these transects will be continuously reviewed.

Details of the Influencing Factors

Major Activities

9.61 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.

9.62 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..

9.63 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.

9.64 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

9.65 According to the observation during survey, temperature and the rain flow records in the reporting month (Reference: http://www.weather.gov.hk/wxinfo/pastwx/metob202307.htm), weather conditions might pose influence towards the monitoring results.

9.66 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 *Supervisor's* Representative and the Contractor	4, 12, 18 and 25 Jul 23	5, 12, 19 and 28 Jul 23	6, 14, 18 and 28 Jul 23	6, 13, 19 and 27 Jul 23	3, 10, 20, 24 and 31 Jul 23	6, 13, 19 and 27 Jul 23	7, 14, 21 and 28 Jul 23
Joint Site Audit with representative of the *Supervisor's* Representative, the Contractor and IEC	12 Jul 23	28 Jul 23	18 Jul 23	19 Jul 23	20 Jul 23	N/A	21 Jul 23

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**.

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 will continue for another week or two. In the reporting month (July 2023), all works have been completed and waiting for the confirmation of the authority. The status will be updated in the next reporting period.

10.5 The weekly site inspection and EM&A Reporting for ND/2019/06 will be maintained until the termination proposal for ND/2019/06 has been endorsed by the IEC, the Engineer and the Project Proponent followed by approval from EPD 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
Contract No.: ND/2019/01			
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Contract No.: ND/2019/02			
Water Quality	19/07/2023	The exposed slopes next to Sheung Yue River should be covered by tarpaulin sheets and maintained regularly and properly to prevent muddy water discharge during rainstorm.	Item remarked as 230728-R02. Follow-up action is needed to be review.
	28/07/2023		Follow-up action is needed to be reported in the following month.
Air Quality	28/07/2023	Faded NRMM label should be replaced.	Follow-up action is needed to be reported in the following month.
Landscape and Visual	19/07/2023	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 230728-R01. Follow-up action is needed to be review.
	28/07/2023		Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/03			
Air Quality	30/06/2023	Dusty stockpiles should be covered with tarpaulin sheets.	Item remarked as 230706-R01. Follow-up action is needed to be review.
	06/07/2023		Item remarked as 230714-R01. Follow-up action is needed to be review.
	14/07/2023		Item remarked as 230718-R01. Follow-up action is needed to be review.
	18/07/2023		Item remarked as 230728-R01. Follow-up action is needed to be review.
	28/07/2023		Follow-up action is needed to be reported in the following month.
Water Quality	30/06/2023	Provide adequate wheel-washing facilities for each vehicle exits.	Item remarked as 230706-O01. Follow-up action is needed to be review.
	06/07/2023		Item remarked as 230714-O01. Follow-up action is needed to be review.
	14/07/2023		Item remarked as 230718-O01. Follow-up action is needed to be review.
	18/07/2023		Item remarked as 230728-O01. Follow-up action is needed to be review.

Parameters	Date	Observations and Recommendations	Follow-up
	28/07/2023		Follow-up action is needed to be reported in the following month.
	30/06/2023	Provide sand bags to prevent muddy water discharge.	Item remarked as 230706-R02. Follow-up action is needed to be review.
	06/07/2023		Item remarked as 230714-R02. Follow-up action is needed to be review.
	14/07/2023		Item remarked as 230718-R02. Follow-up action is needed to be review.
	18/07/2023		Item remarked as 230728-R02. Follow-up action is needed to be review.
	28/07/2023		Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/04			
Noise	29/06/2023	The noise barrier at Bridge F should be fully enclosed.	Improvement/Rectification was observed during follow-up audit session on 6 Jul 2023.
Ecology	29/06/2023	Provide maintenance for 2m high solid barrier at the lower reaches of Siu Hang San Tsuen Stream.	Item remarked as 230706-R01. Follow-up action is needed to be review.
	06/07/2023		Item remarked as 230713-R01. Follow-up action is needed to be review.
	13/07/2023		Item remarked as 230719-R01. Follow-up action is needed to be review.
	19/07/2023		Improvement/Rectification was observed during follow-up audit session on 27 Jul 2023.
Contract No.: ND/2019/05			
Water Quality	26/06/2023	Enhance the water mitigation measure for E201.	Improvement/Rectification was observed during follow-up audit session on 3 Jul 2023.
	03/07/2023	Sandbag barrier should be enhanced to prevent surface runoff at D2-01.	Improvement/Rectification was observed during follow-up audit session on 10 Jul 2023.
Air Quality	26/06/2023	Provide impervious sheeting for dusty stockpile. (Man Young)	Improvement/Rectification was observed during follow-up audit session on 3 Jul 2023.
Waste / Chemical Management	31/07/2023	Provide Drip tray for chemical/fuel containers.	Follow-up action is needed to be reported in the following month.

Parameters	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/06			
--	--	--	--
Contract No.: ND/2019/07			
--	--	--	--

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 10.3.**

Table 10.3 Photographic Records and Implementation Status of Measures

EP No.	Condition	Photographic Record	Implementation Status
EP-466/2013/A	2.9	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.	Λ[1]
EP-467/2013/A	2.9	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.	Λ[1]
EP-468/2013/A	2.11	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.	Λ[1]
EP-469/2013	2.7	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.	Λ[1]

EP-473/2013/A	2.13	 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.	^[1]
EP-475/2013/A	2.7	 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.	^[1]
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		

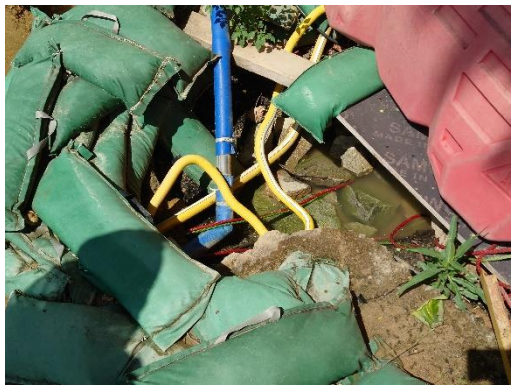
Remark:
[1]: Barrier fences might be subjected to change according to the phasing plan designed at detailed design stage

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 10.4 Specific Water Quality Mitigation Measures for Major Construction Works in the Reporting Month

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

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

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:

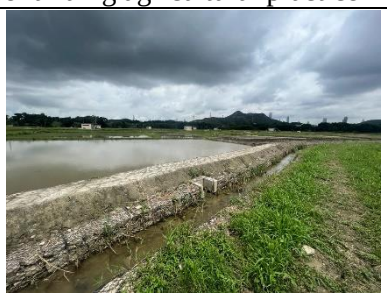
- Biodiversity Zone of about 21 hectares largely designated for biodiversity conservation through cultivation of specified crops and habitat management.
- Agricultural Zone of about 11 hectares designated for commercially focuses crop production and eco-friendly agricultural practice for farming.
- Visitor 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 10.5 Photographic Records of Site Activities in LVNP

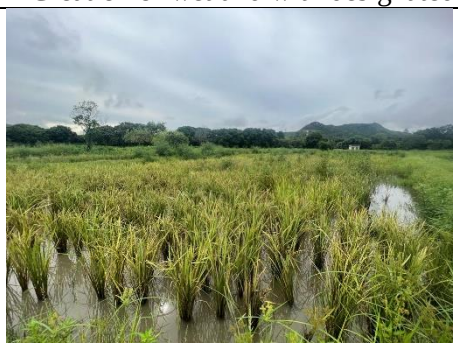
Continuing agricultural practice in existing farmland to maintain habitats in Long Valley



Open water Habitat

Open water Habitat

Creation of wetland with designated habitat for biodiversity conservation



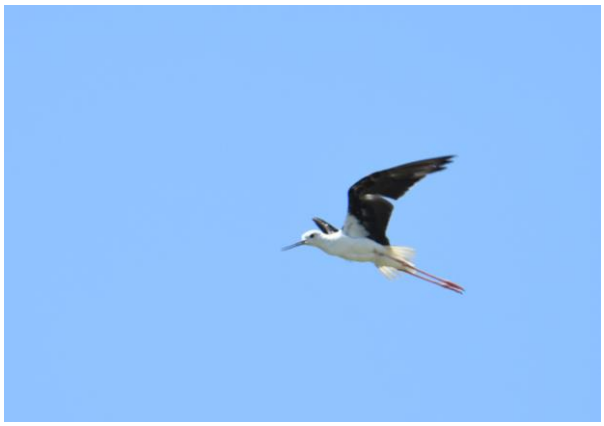
Planting of paddy rice to provide foraging ground for Yellow-breasted Bunting

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

Provision of noise barrier for noisy works in Long Valley

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. Six (6) action level exceedance and six (6) limit level exceedance for non-aquatic fauna were recorded at T1, T3 and T6. The exceedance were considered non-project related, as large proportion of vegetative habitat along T3 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, as well as adverse weather condition during the monitoring session saw the non-aquatic fauna result lowered.

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 (August to October 2023)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance / tree felling	Portions 1a, 2, 13	- Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste)	**Air** - Watering on exposed earth and haul road. - Cover the stockpiles or dusty materials. - Deploy water bowsers to water the haul road. - Deploy mist-cannon on site - Provide shelter with top and 3-sides for cement production activities. - Cover the Arsenic-containing soil. - Store the bulk cement in enclosed silo tank for soil treatment. - Close the mechanical cover of the vehicles used for transporting dusty materials. - Establish vehicle wheel washing facilities at vehicle exit points. - Speed control of site vehicles. **Noise** - Regular inspect of construction plants in good condition.
	(b) GI works	NIL		
	(c) Excavation / Backfilling	Portions 1b, 3, 5, 7, 8b, 8b, 9b		
	(d) Construction of retaining wall	Portions 8a		
	(e) Construction of hoarding / fencing	Portion 1b		
	(f) Site Formation	Portions 1c, 2		
	(g) Removal of existing structure	Portions 1a, 13		
	(h) Construction of subway	Portions 2		
	(i) Operation of HAC treatment facility	Portions 6b		
	(j) Drainage works / watermains works	Portions 1a, 3, 5, 6a, 7, 8a, 8b, 9b		

	(k) Road Construction	Portion 1b, 2, 5, 6a		- Provide temporary noise screens if necessary. - Use of Quiet plants (QPME) and working methods if possible. - Sequencing operation of construction plants where practicable. - Shut down the machines and plant if not in use. - Only well-maintained plant to be operated on-site - Mobile plant to be sited as far away from NSRs as possible practicable. - Conduct noise monitoring regularly. - Erect silent-up noise barrier at portion 6b. **Water** - Set up wastewater treatment system (AquaSed) on site - Erect soil bund / temporary drain to divert /collect surface runoff. - Maintain the drainage and wastewater treatment facilities. **Waste / Chemical Management** - Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions - Provide recycling bins on site, encourage reuse and recycle as much as possible. - Provide drip trays for chemical containers. - Chemical spill kit available on site. - Chemical waste cabinet available on site.
	(l) Trenchless	Portion 5, 8b		
	(m) Construction of reservoir	Portions 8a		
	(n) Sheet piling / ELS	Portion 1c, 5, 7, 9b		

				- Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste collector. - Delivery of yard waste to tree shredding facility for upcycling.
ND/2019/02	(a) Pipe Jacking	Portions 3	Air, Noise, Waste	- Dusty works should be spray water. Idle stockpile or slop should be covered by Tarpaulin sheet properly. - Wheel washing should be carried out at every exit. - Plants should be well maintained to prevent dark smoke and oil leakage. Idle plant should be turned off. - Drip tray should be provided for all chemical and stationary plants. - No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is obtained. - Erect noise screen along site boundary. - Waste should be sorted and dispose according to the Waste Management Plan - No direct discharge of wastewater into storm drains is allowed. Wastewater must be de-silted before discharged in accordance with the water discharge license. - Dull green barrier and ecological measures should be implemented according to the Ecological protection plan.
	(b) Backfilling	Portion 3, 4 & 5	Air, Noise, Waste	
	(c) Concreting	Portions 5, 7, 8 & 10	Air, Noise, Water, Waste, Ecology	
	(d) Bedding & Pipe Laying	Portion 3 & 5	Air, Noise, Water, Waste, Ecology	
	(e) ELS	1.32, Portions 3, 4, 10	Air, Noise, Water, Waste, Ecology	
	(f) Sheet Pile Installation	1.32, Portion 3, 4, CH982-1046	Air, Noise, Water, Waste	
	(g) Cut and Fill of Slope	Portion 3, 4	Air, Noise, Water, Waste	
ND/2019/03	(a) Excavation & ELS	Portion 1, 1A, 2, 3, 4, 4A, 4B, 5, 5A	- Waste - Air pollution - Noise pollution	- Dusty works should be sprayed with water or stockpile should be covered by Tarpaulin properly.

	(b) Site Clearance	Sections 7, 8 and 9	- Waste - Air pollution - Noise pollution	- Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off. - Drip tray should be provided for all chemical and stationary plants. - No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted. - Waste should be sorted and disposed according to Waste Management Plan. - No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.
	(c) Tree Felling	Sections 6, 7, 8 and 9	- Waste - Air pollution - Noise pollution	
ND/2019/04	(a) Sheet piling	Portion H, F, K and Bridge A204, A301, A303	- Air, Noise, Waste	- Dusty works should be sprayed with water or stockpile should be covered by tarpaulin properly. - Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off. - Drip tray should be provided for all chemical and stationary plants. - No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted. - Waste should be sorted and disposed according to Waste Management Plan. - No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.
	(b) Pile cap	Bridge A1, A2 and A3	- Air, Noise, Water, Waste	
	(c) Grouting	Bridge F, A2, A3 and Portion A, B, K, H	- Air, Noise, Water, Waste	
	(d) Bore pile	Bridge G and A301	- Air, Noise, Water, Waste	
	(e) Excavation & ELS	Portion J, F, H, K, X, S, Bridge A1, A2 and A3	- Air, Noise, Waste	
	(f) Road works	Portion J, H, Q, R, U and VY	- Air, Noise, Waste	
	(g) Pre-drilling	NIL	- Air, Noise, Water, Waste	

	(h) Tree felling	Portion A	- Air, Noise, Waste	
	(i) UU diversion	Portion J and K	- Air, Noise, Waste	
ND/2019/05	(a) ELS & Pile Cap Construction	B2-01, B2-03, D2-01	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual - Cultural Heritage	- Regular watering on exposed worksites and haul road. - Stockpiling area should be provided with covers and water spraying system. - Only well maintained plant to be operated on site. - plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs. - mobile plant to be sited as far away from NSRs as possible practicable. - All open stockpiles of construction materials of more than 50m3 to be cove red with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system. - 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. - Segregate and store different types of waste in different containers, skip or
	(b) Pier/Pier head Construction	D2-01 & B2-03; C2-04b, D2-01; E3-04a, E3-05M, E4-01 and E4-02		
	(c) Cross head construction	NIL		
	(d) Slope works	NIL		
	(e) Fabrication for segment	C2, D1, D2 & E1		
	(f) Fabrication for Form Traveler	3rd and 4th set of form traveler; 4th and 5th set of form traveler		
	(g) Construction of Abutment wall	B1		
	(h) Segment Erection by Launching Girder & Crane	bridges C4,C3; bridge D1 and E1		
	(i) SOP construction (precast & in-situ cast in type)	E3-02, D2-03, E2-01, E2-03		
	(j) T-span construction by Form Traveler	Pier E2-02, E3-03, D2-02, E3-01; D2-03, E2-03		

	(k) Installation of bridge rotation components	Pier D2-01		stockpiles to enhance reuse or recycling of materials and their proper disposal. - Sort out demolition debris and ex cavated materials from demolition works to recover reusable/recyclable portions. - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling. - 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. - 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 ca nnot 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. - Conducting Construction Vibration Monitoring - Tree Protection & Preservation Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be
	(l) Road construction	TWSRW, TWSRE		
	(m) Base slab construction	NB110 – bay 3~5; NB69 – bay 6~8		
	(n) Tree Works	All works areas		

				preserved according to ETWB Technical Circular (Works) No. 29/2004. - 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. - Erect 2m high dull green site boundary fence.
ND/2019/06	N/A	N/A	N/A	N/A
ND/2019/07	(a) Road works	Portion 1, 4, 5	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual	- Regular watering on exposed worksites and haul road. - Stockpiling area should be provided with covers and water spraying system. - Only well-maintained plant to be operated on-site. - plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs. - mobile plant to be sited as far away from NSRs as possible practicable. - All open stockpiles of construction materials of more than 50m3 to be covered with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.
	(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 1, 3, 4, 5		
	(g) Sewerage works	Portion 1, 3, 4, 5		
	(h) Construction of Noise Barrier	Portion 5		
	(i) Mini piling works	Portion 4		
	(j) Waterworks	Portion 1, 4		

				- 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. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal. - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions. - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling. - 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. - 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.

				- Tree Protection & Preservation – Exiting 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. - 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. - Erect 2m high dull green site boundary fence. - Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.

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**.

13 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

13.1 This monthly EM&A Report presents the EM&A work undertaken in July 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 Six (6) non-project related action level exceedance and six (6) 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 4, 12, 18 and 25 Jul 23 by ET in the reporting month.

Contract No. ND/2019/02

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

Contract No. ND/2019/03

13.6 Environmental site inspections were conducted on 6, 14, 18 and 28 Jul 23 by ET in the reporting month.

Contract No. ND/2019/04

13.7 Environmental site inspections were conducted on 6, 13, 19 and 27 Jul 23 by ET in the reporting month.

Contract No. ND/2019/05

13.8 Environmental site inspections were conducted on 3, 10, 20, 24 and 31 Jul 23 by ET in the reporting month.

Contract No. ND/2019/06

13.9 Environmental site inspections were conducted on 6, 13, 19 and 27 Jul 23 by ET in the reporting month.

Contract No. ND/2019/07

13.10 Environmental site inspections were conducted on 7, 14, 21 and 28 Jul 23 by ET in the reporting month.

13.11 No environmental complaints 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.

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 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 minimise runoff.

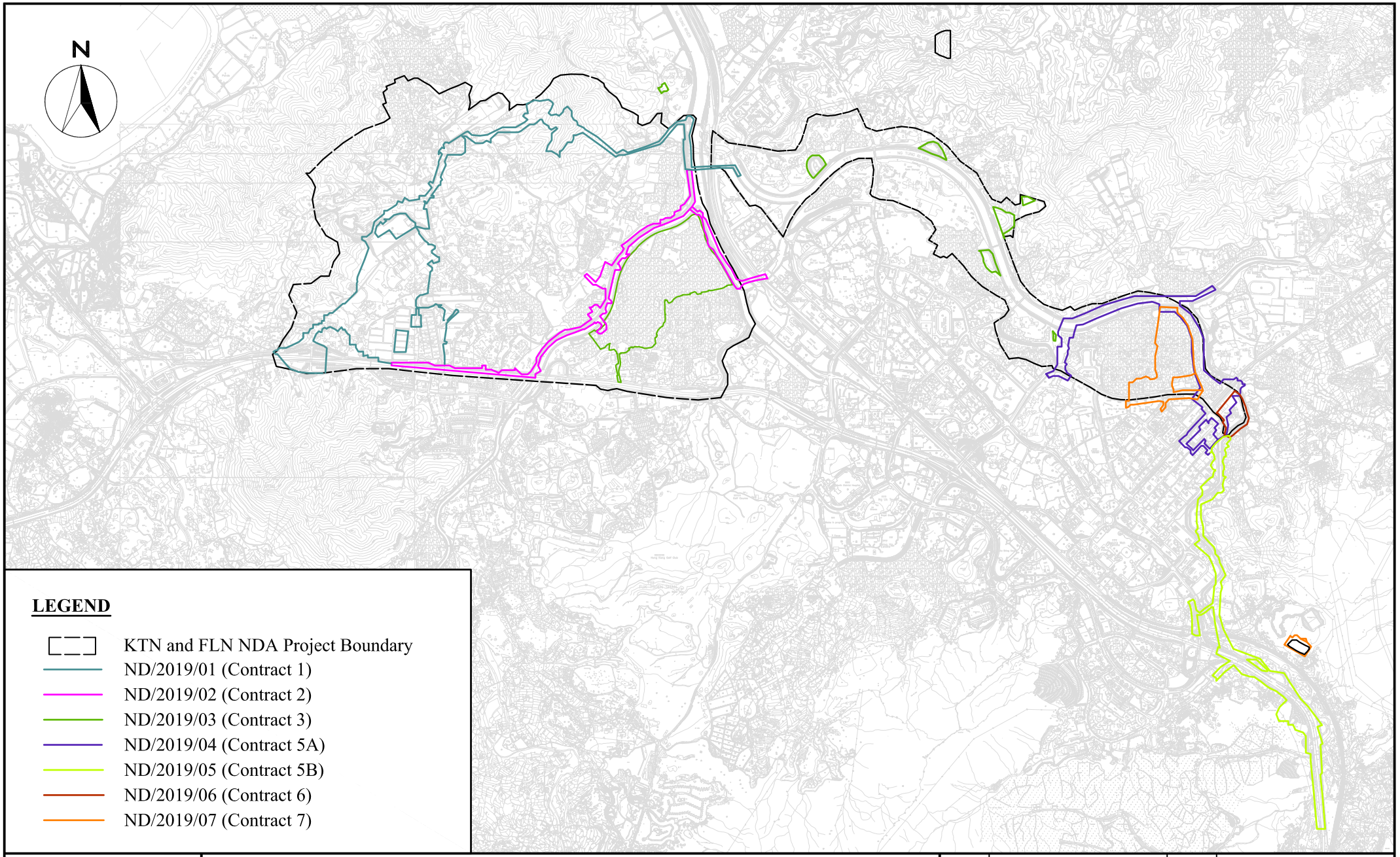
Ecology

- 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.

DRAWING(S)



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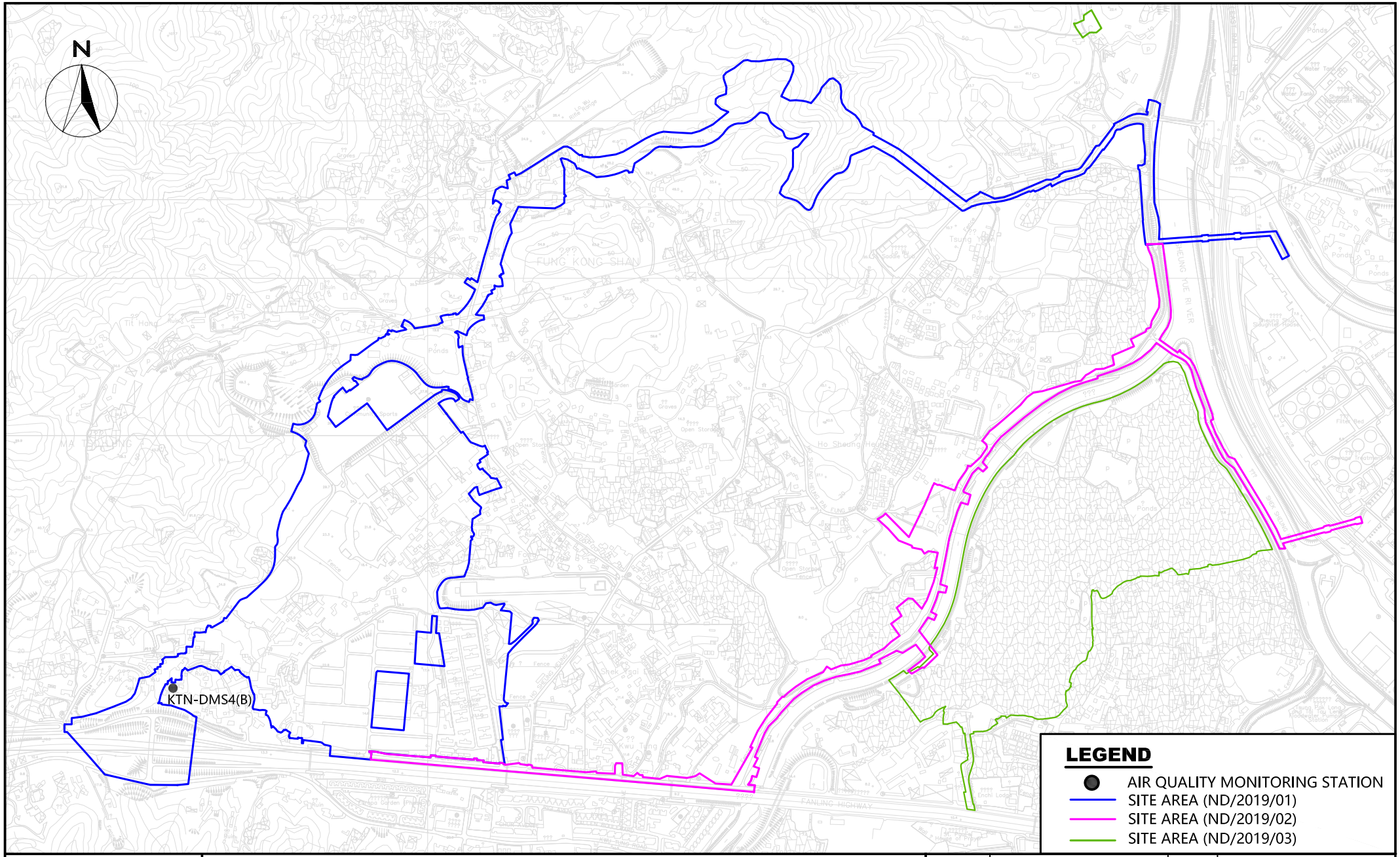
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Project Boundary for the Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas

SCALE	A4 @ 1:80000	DATE	July 2020
CHECK	KL	DRAWN	ML
Project No.	WMA20002	Drawing No. 1	REV -

FIGURE(S)



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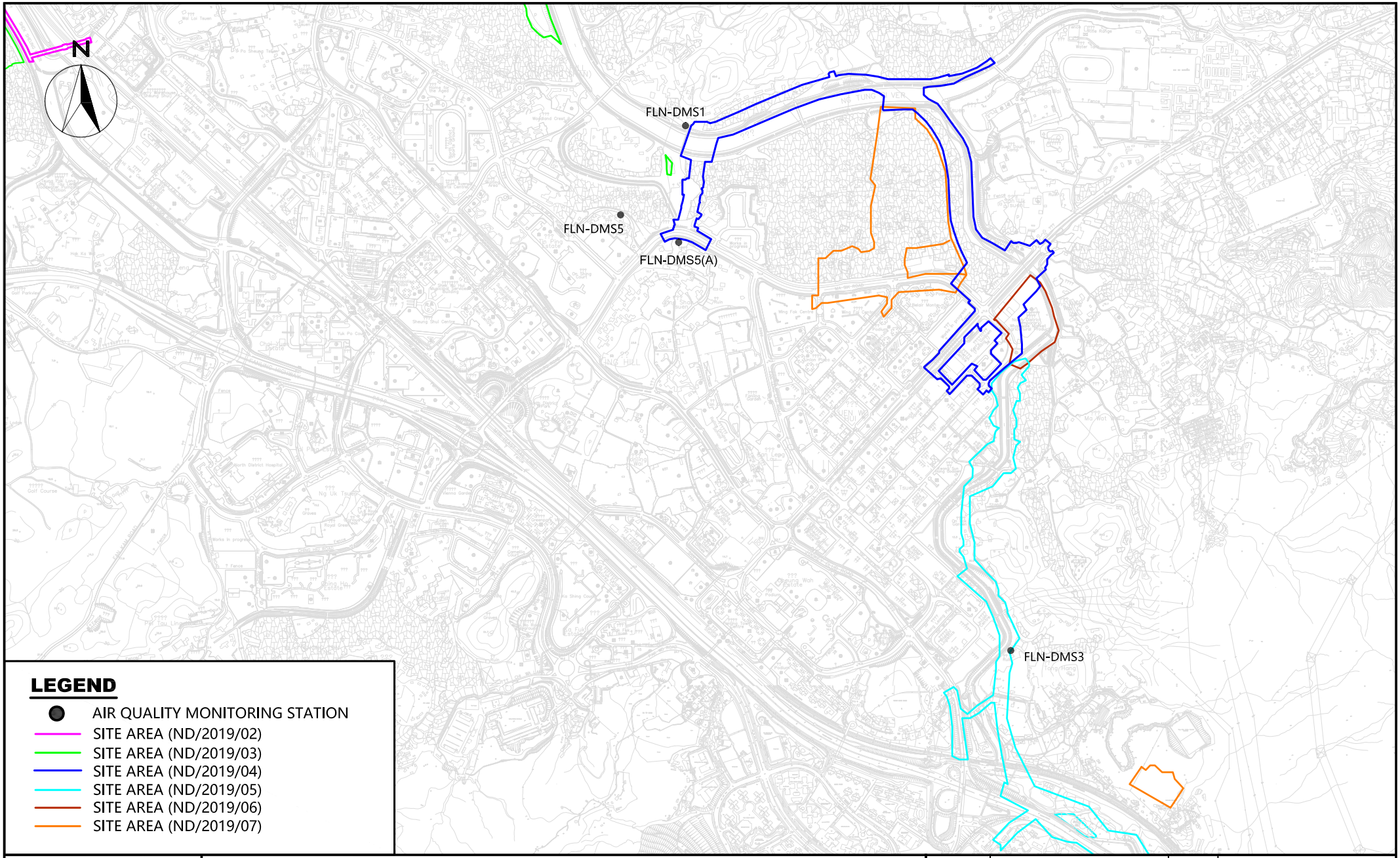
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (KTN)

SCALE	A4 @ 1:30000	DATE	AUG 2022
CHECK	MM	DRAWN	ML
PROJECT No.	WMA20002	FIGURE NO. 1	REV —



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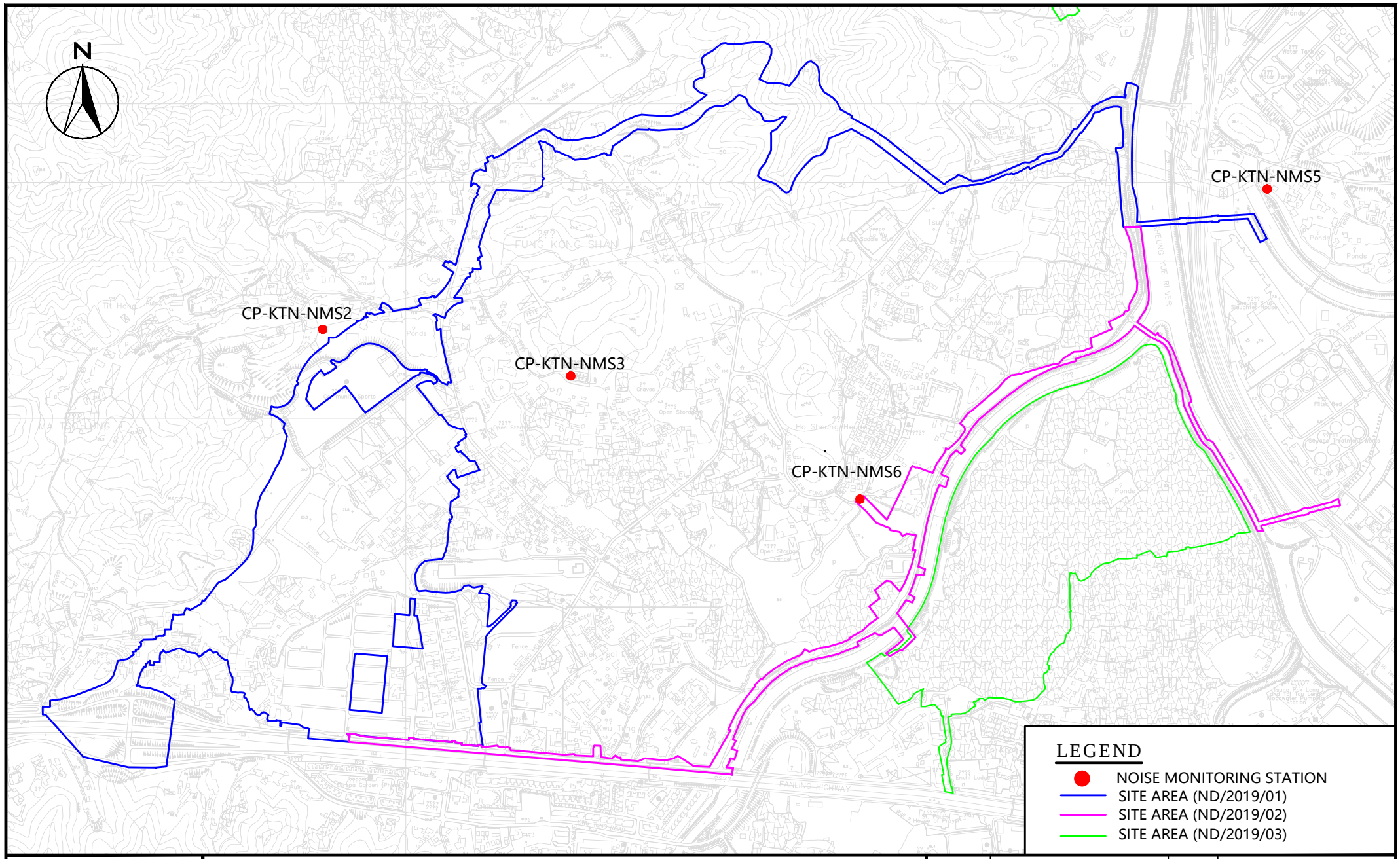
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (FLN)

SCALE	A4 @ 1:40000	DATE	DEC 2021
CHECK	IT	DRAWN	ML
PROJECT No.	WMA20002	FIGURE NO.	2
		REV	—



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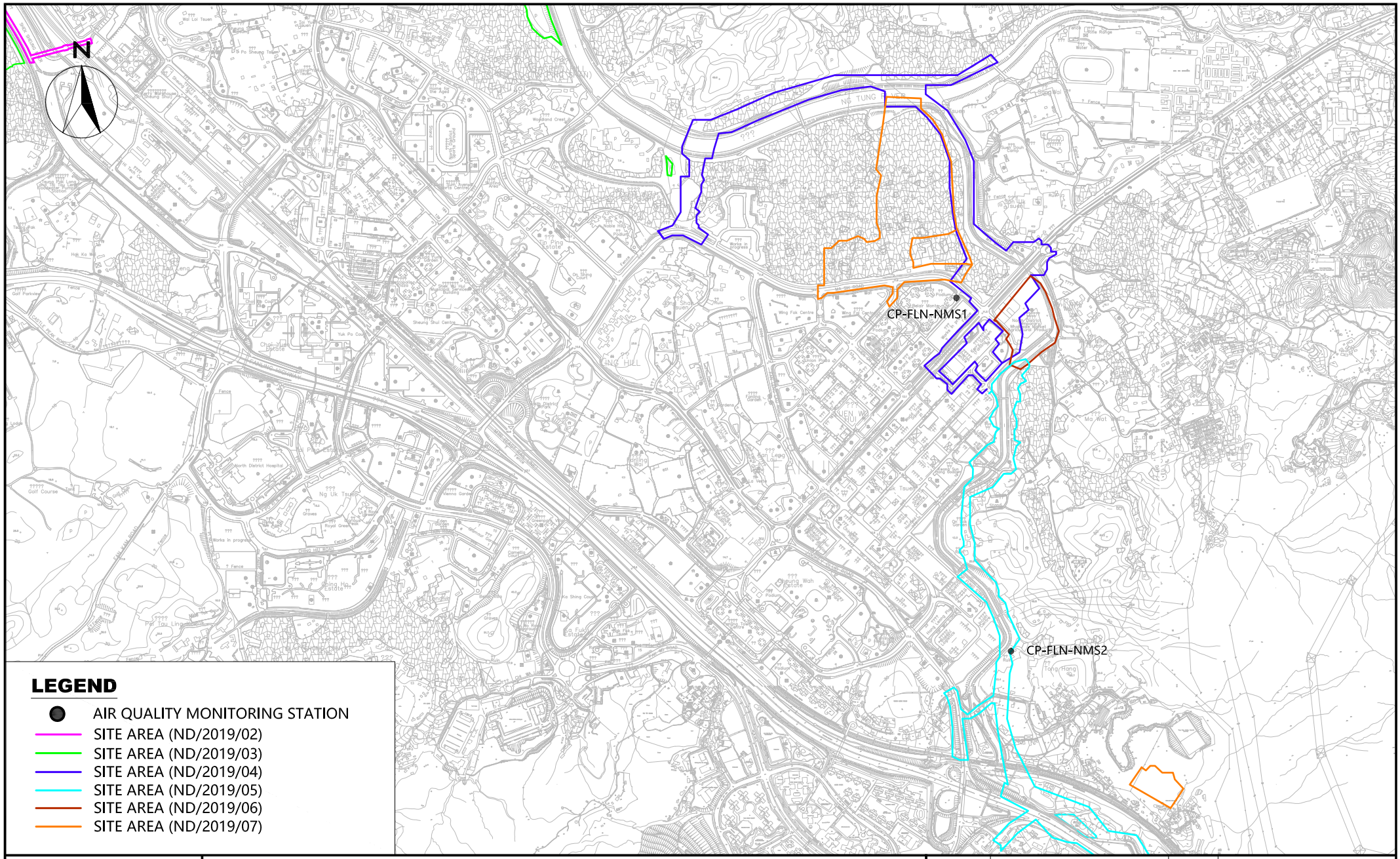
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Station (KTN)

SCALE	A4 @ 1:30000	DATE	OCT 2020
CHECK	KL	DRAWN	NL
PROJECT No.	WMA20002	FIGURE NO.	3
		REV	—



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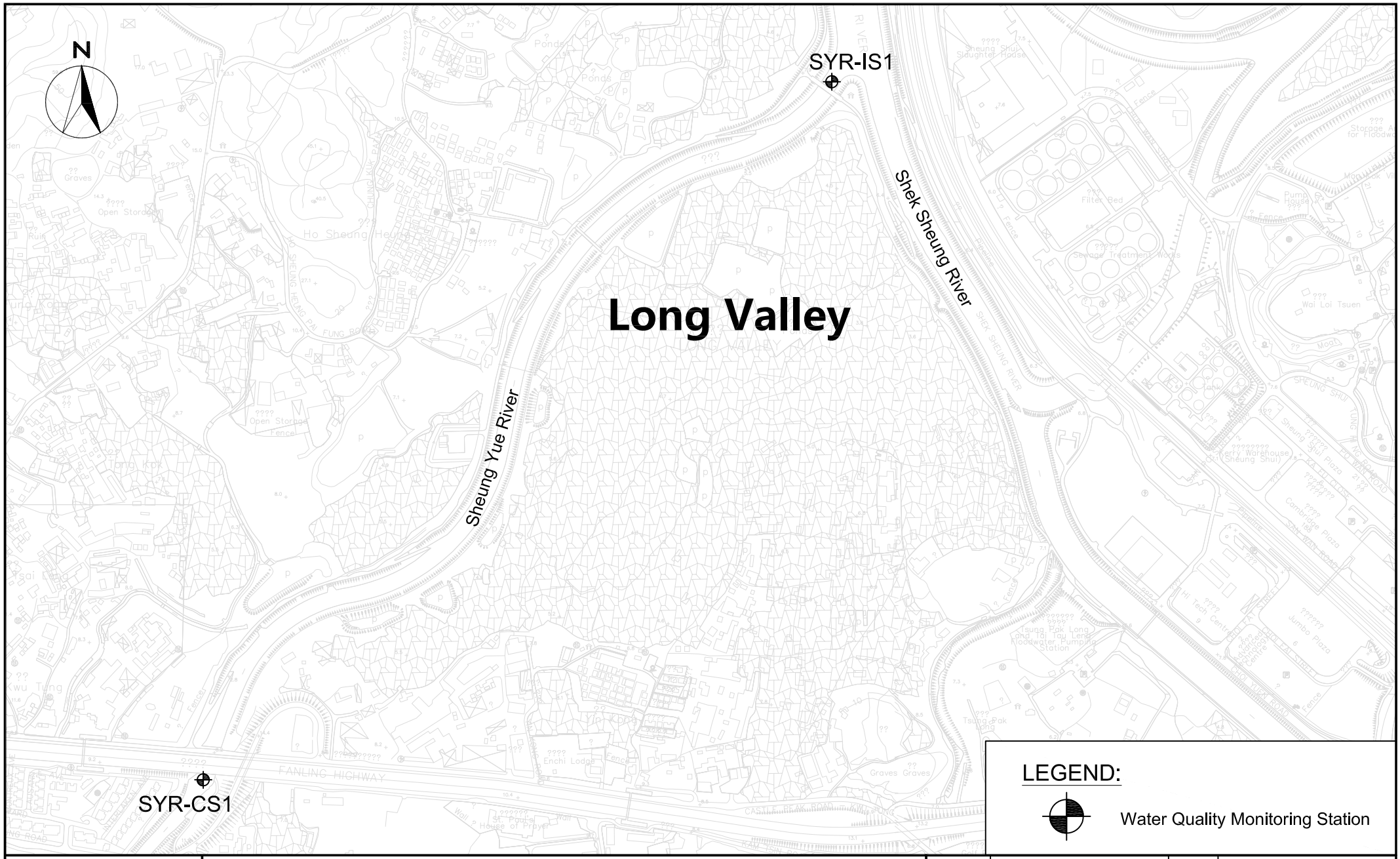
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Stations (FLN)

SCALE	A4 @ 1:40000	DATE	AUG 2020
CHECK	KL	DRAWN	NL
PROJECT No.	WMA20002	FIGURE NO.	4
		REV	—



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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 —

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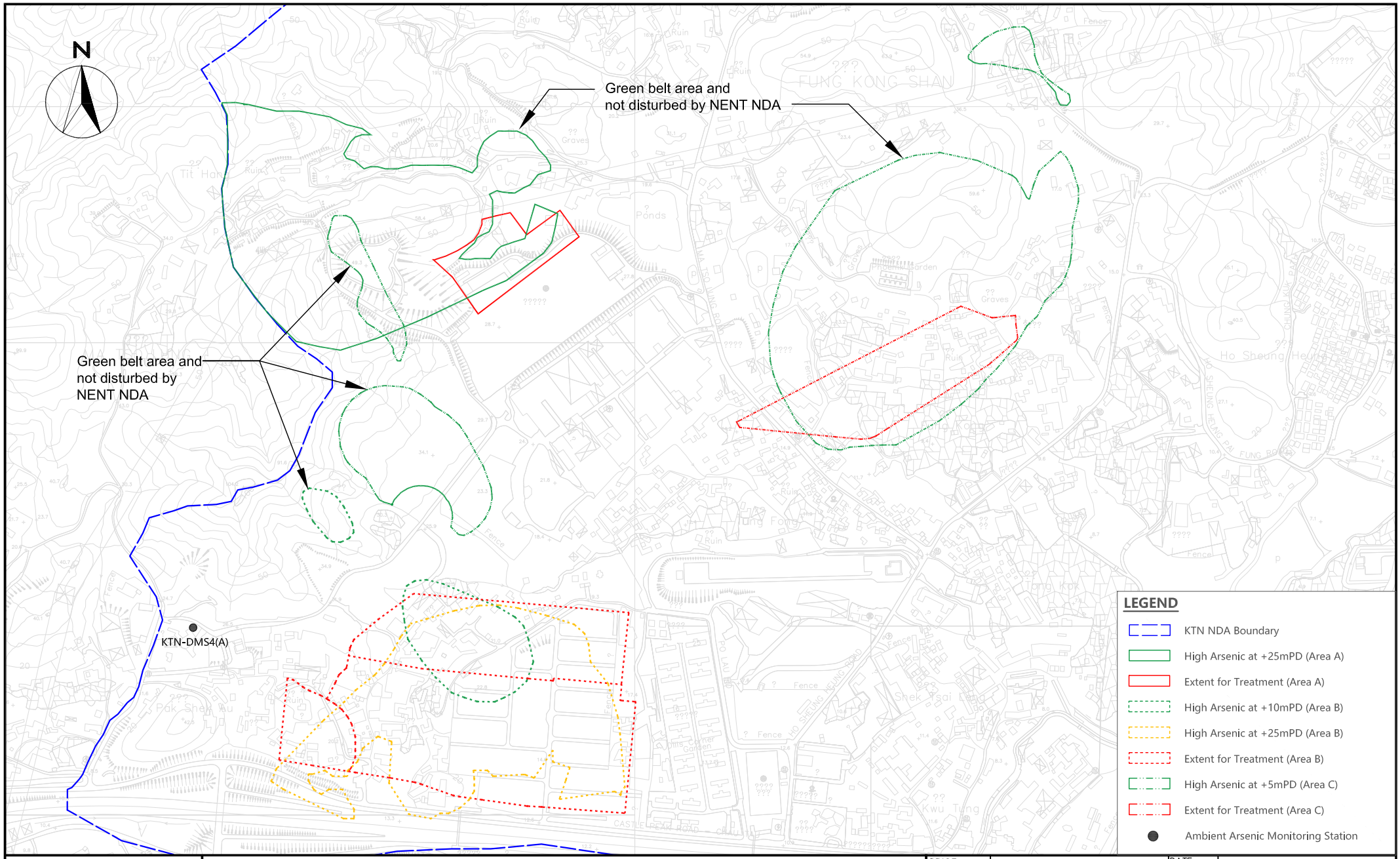
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Additional Water Quality Monitoring Stations at River Indus and near Siu Hang San Tsuen Stream

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



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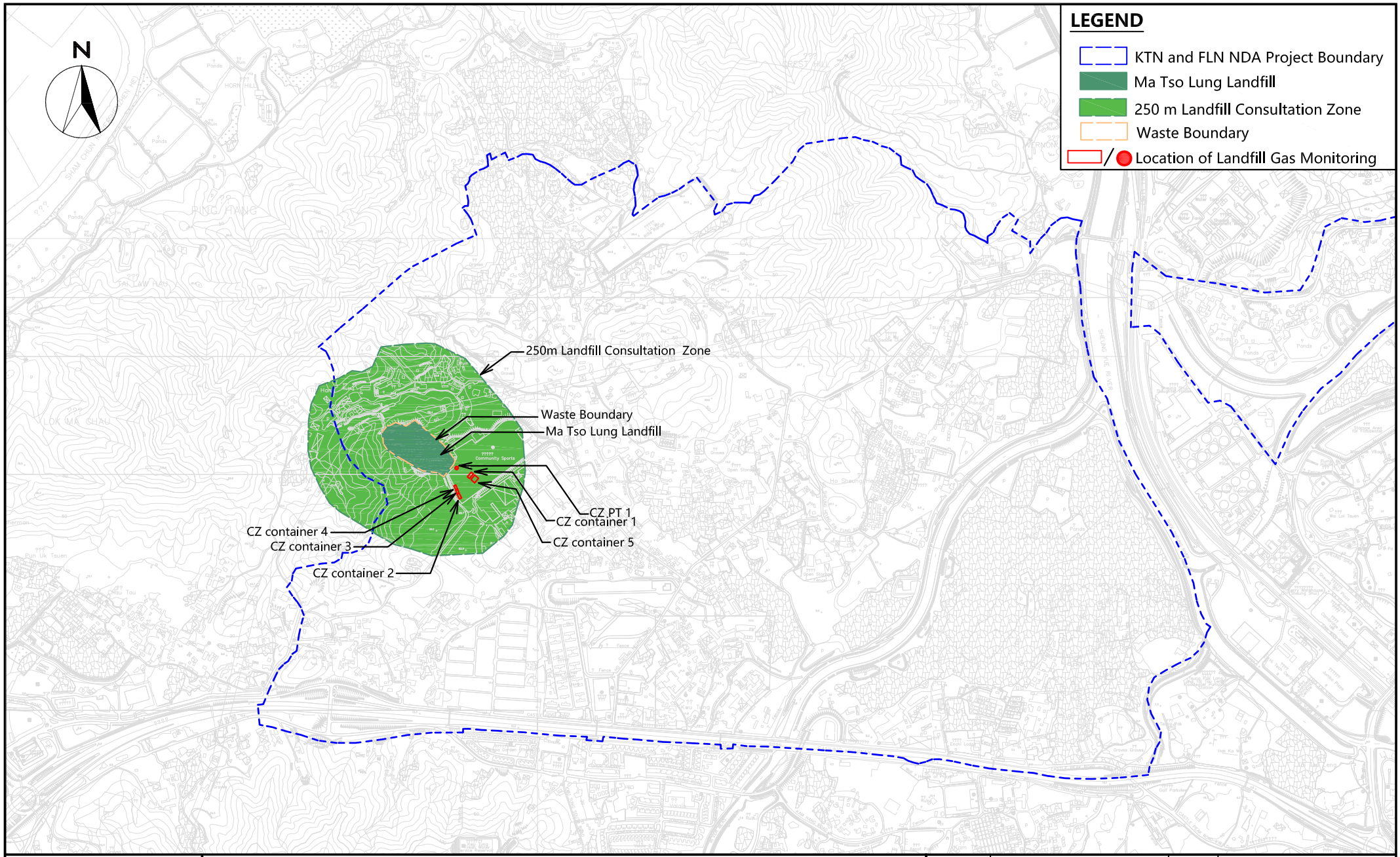
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Ambient Arsenic Monitoring Station

SCALE	1:20000 (A4)	DATE	Jun 2020
CHECK	IT	DRAWN	ML
PROJECT No.	WMA20002	FIGURE NO.	7
		REV	-



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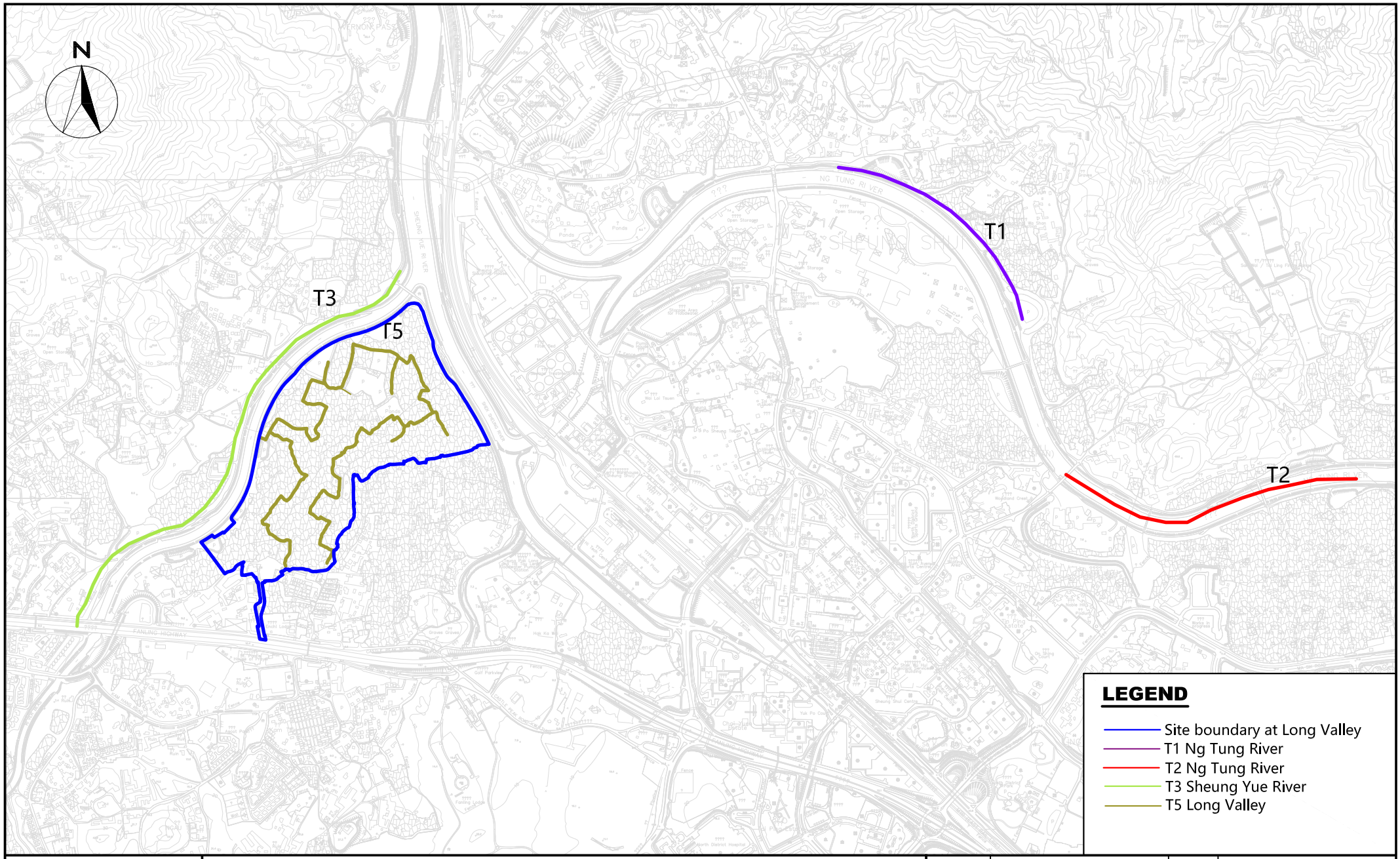
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Landfill Gas Monitoring

SCALE	A4 @ 1:40000	DATE	JAN 2021
CHECK	KL	DRAWN	NL
PROJECT No.	WMA20002	FIGURE NO. 8	REV —



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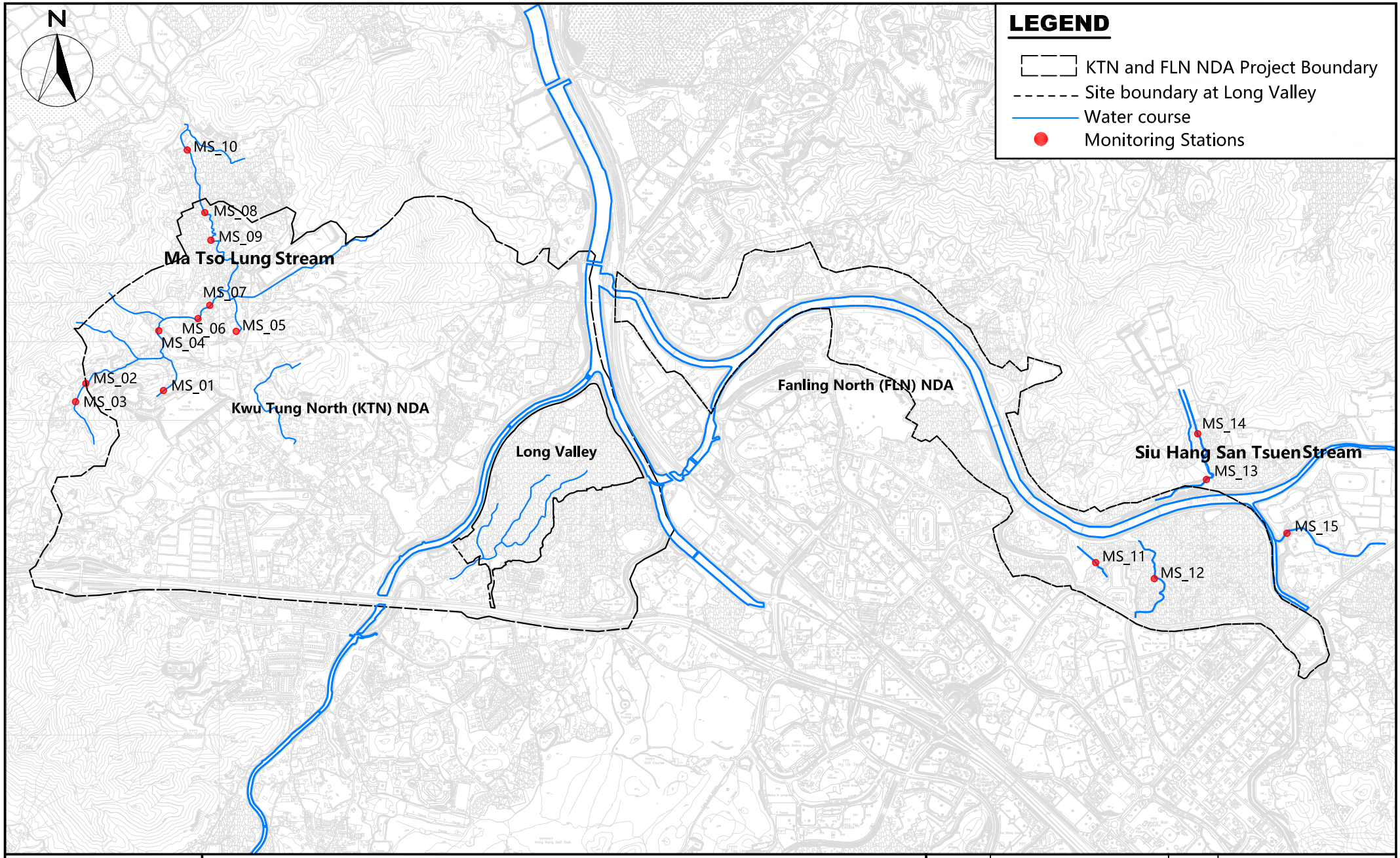
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Monitoring of Measures to Minimise Disturbance to Water Birds on Ng Tung, Sheung Yue and Long Valley (Transect Routes for T1 - T3 & T5)

SCALE	A4 @ 1:40000	DATE	MAY 2020
CHECK	IT	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO. 9	REV —



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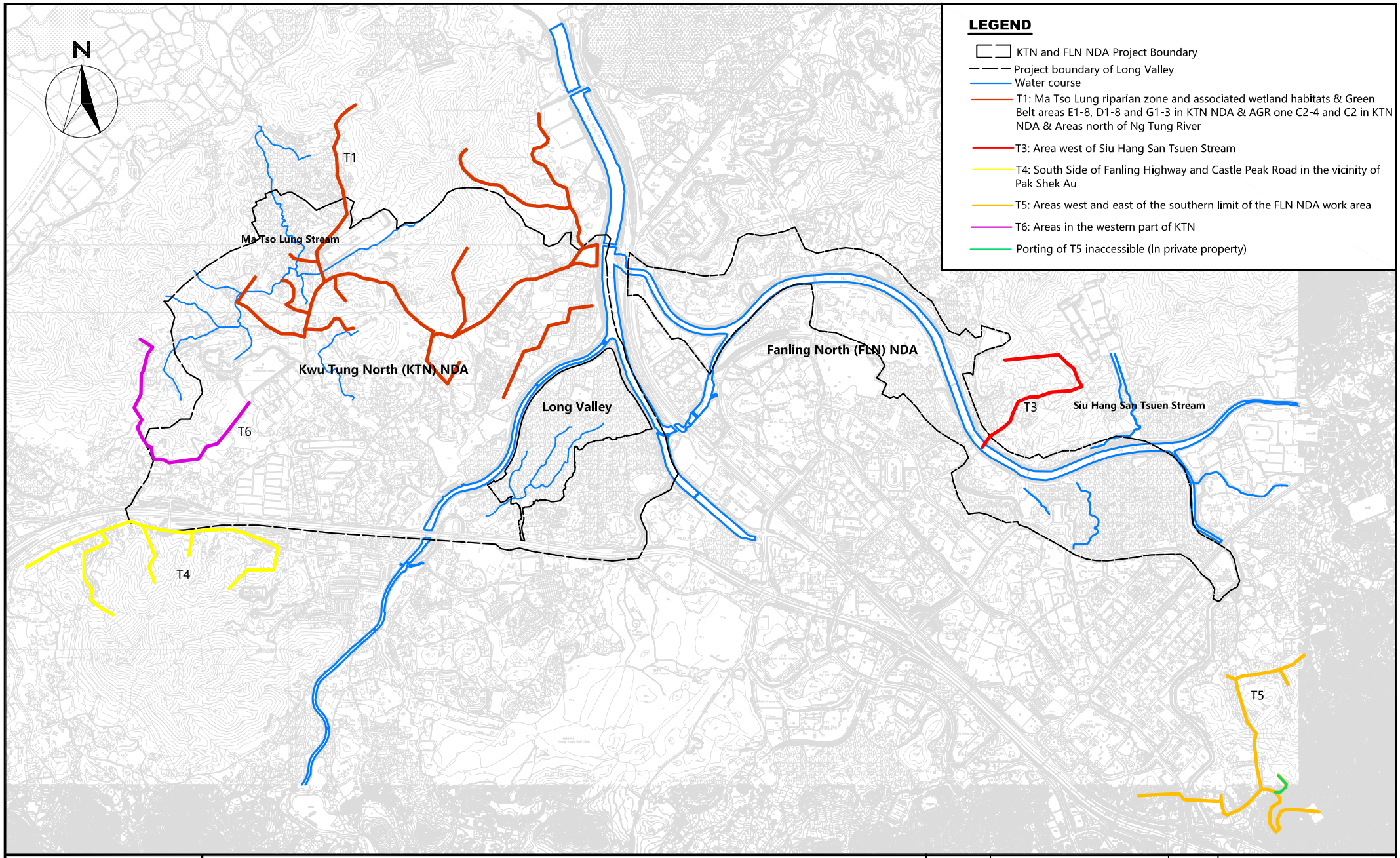
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Monitoring Stations at Ma Tso Lung Stream and Siu Hang San Tsuen Stream

SCALE	A4 @ 1:60000	DATE	MAY 2020
CHECK	IT	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO.	10
		REV	–



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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

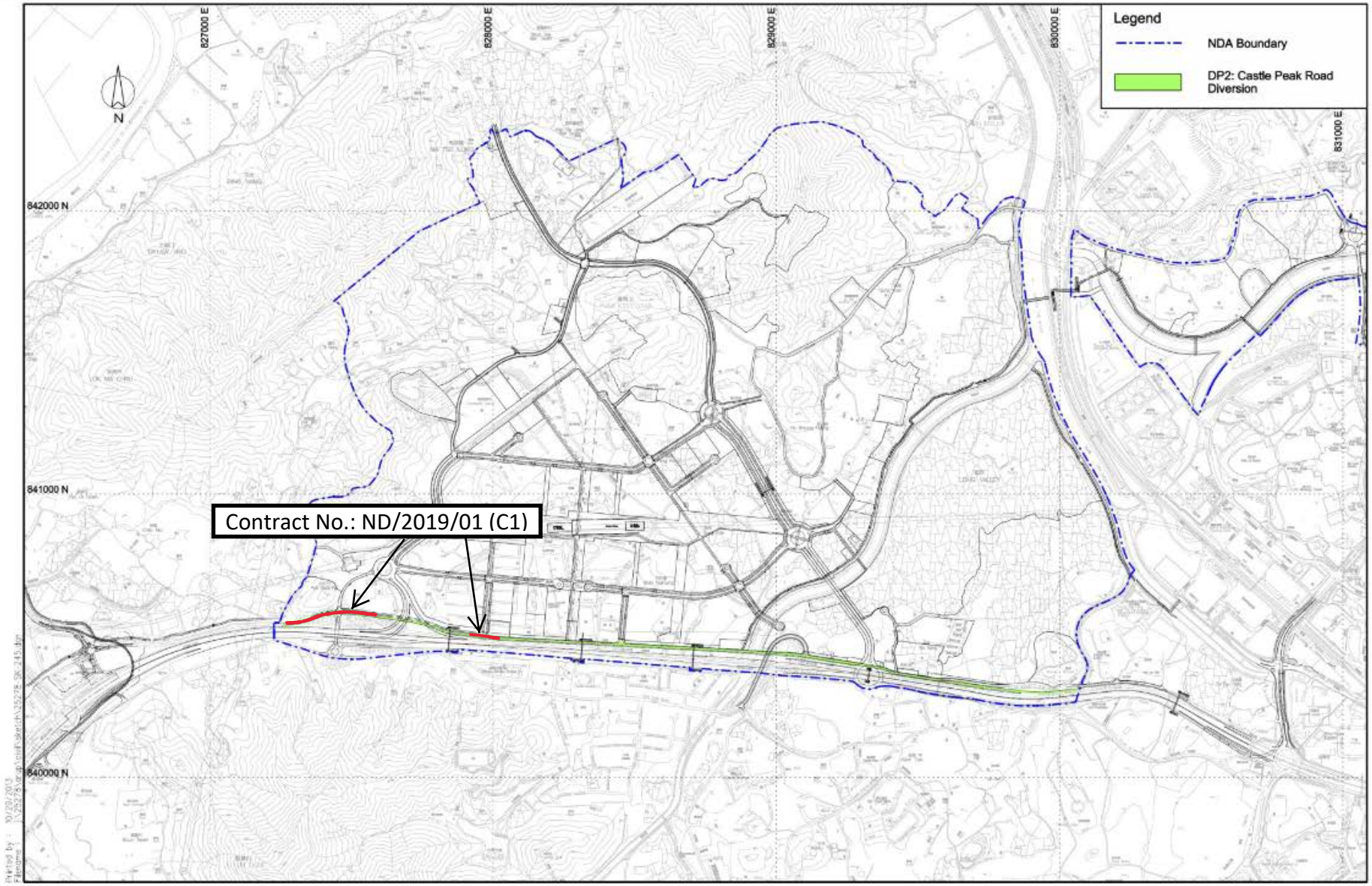
Location of Transect Route of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)

SCALE	A4 @ 1:70000	DATE	JUL 2021
CHECK	KL	DRAWN	ML
PROJECT No.	WMA20002	FIGURE NO.	11
		REV	–

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

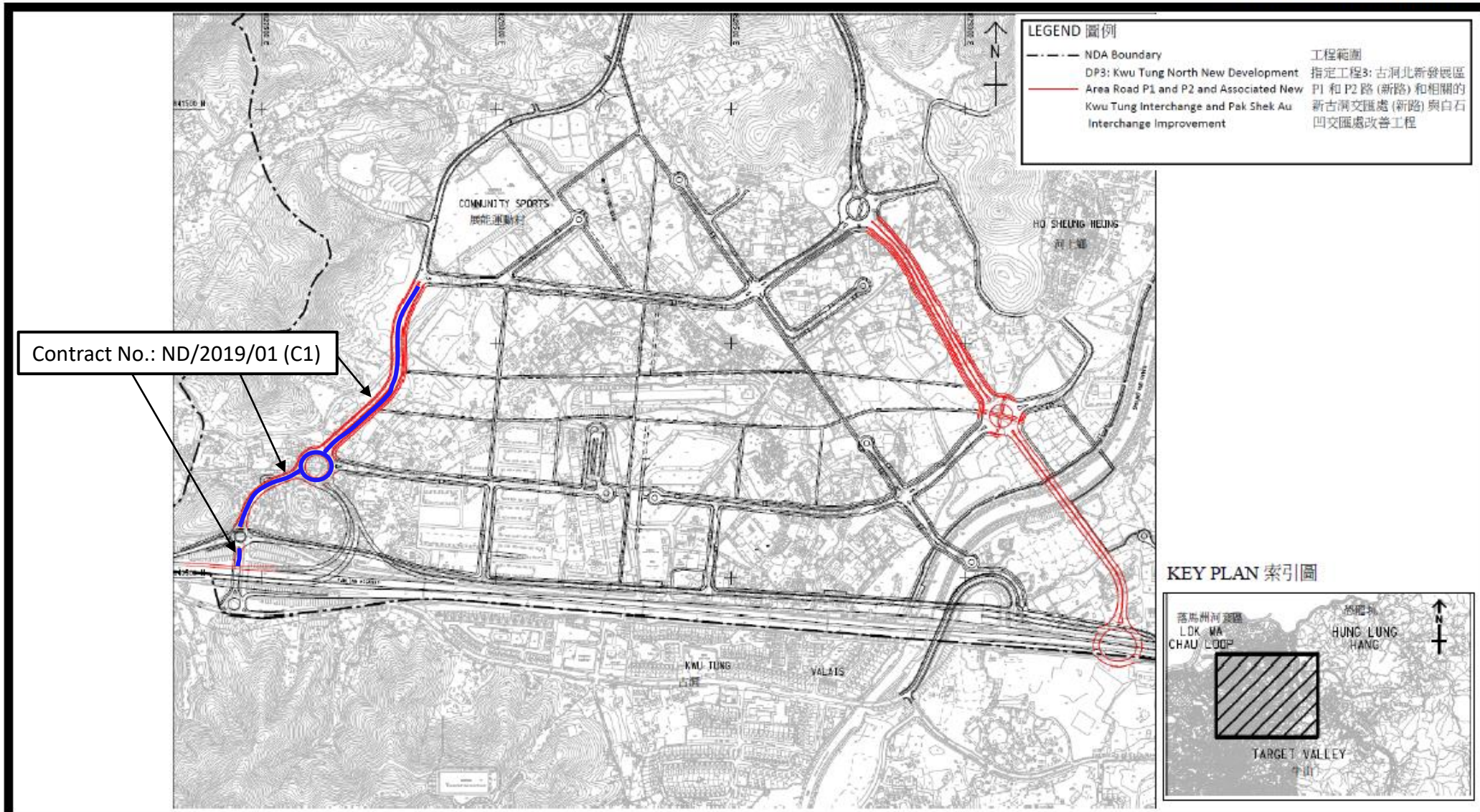
(Extracted from Drawing No. SK/245 of North East New Territories New Development Area Planning and Engineering Study)

Environmental Permit No: EP-466/2013/A

Figure 13

Site Layout Plan of Contract ND/2019/01

under EP-467-2013-A



Project Title: 工程名稱:	**Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement** 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

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

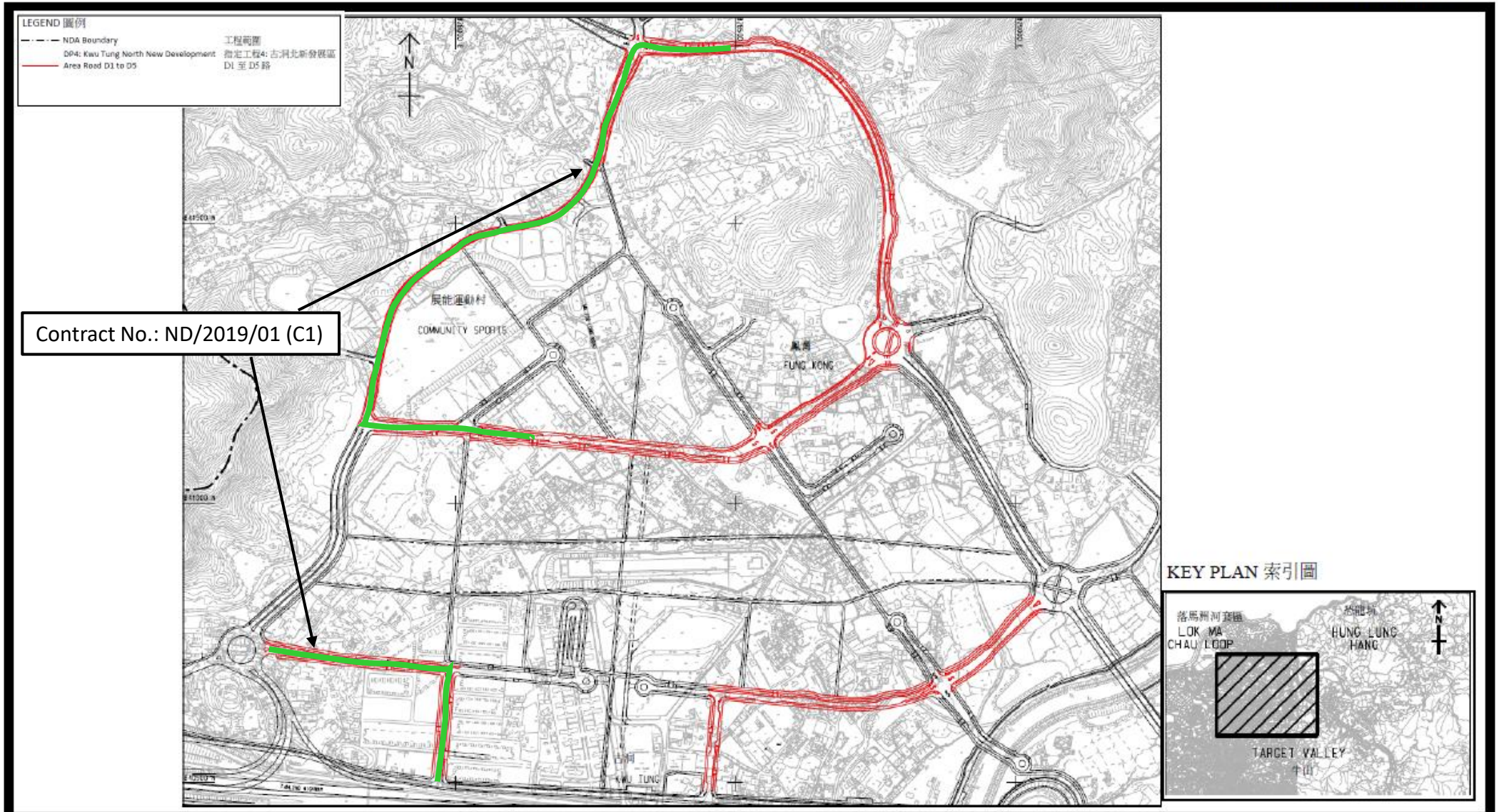
圖1：交匯處改善工程位置 (示意圖)
(本圖是根據申請更改環境許可證(編號: VEP-523/2016)圖1.2編制)

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

Figure 14

Site Layout Plan of Contract ND/2019/01

under EP-468-2013-A



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

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)

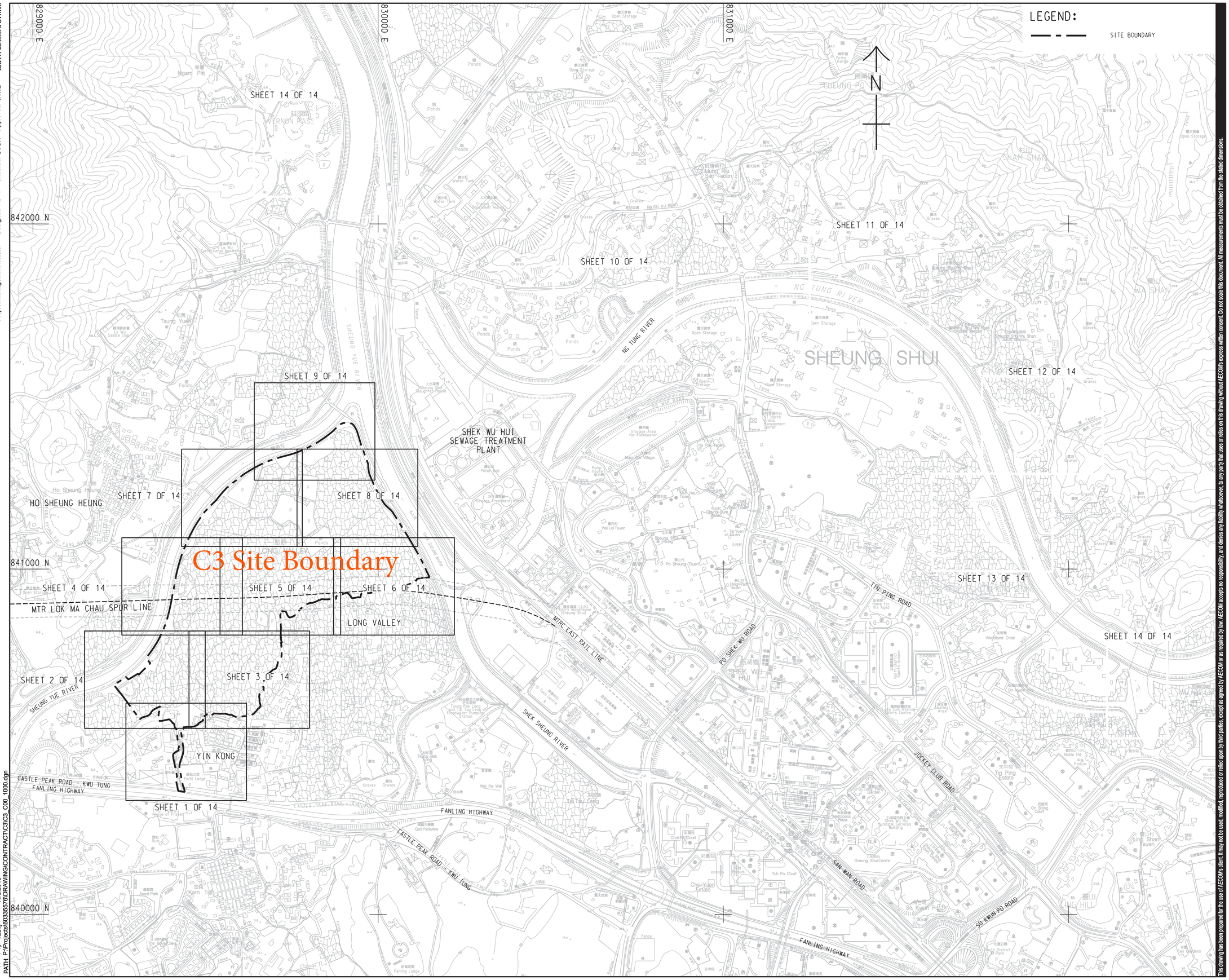
Environmental Permit No:
EP-468/2013/A
環境許可證編號：
EP-468/2013/A

Figure 15

Site Layout Plan of Contract ND/2019/03

under EP-468-2013-A

Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm



Sang Hing - Kuly Venture

Title of Designated Project
Kwu Tung North New Development Area Road D1 to D5

CLIENT
業主

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

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. 複核
-	JUN-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/2019/03

SHEET TITLE
圖紙名稱
KEY PLAN OF GENERAL LAYOUT

SHEET NUMBER
圖紙編號
60335576/C3/C00/1000

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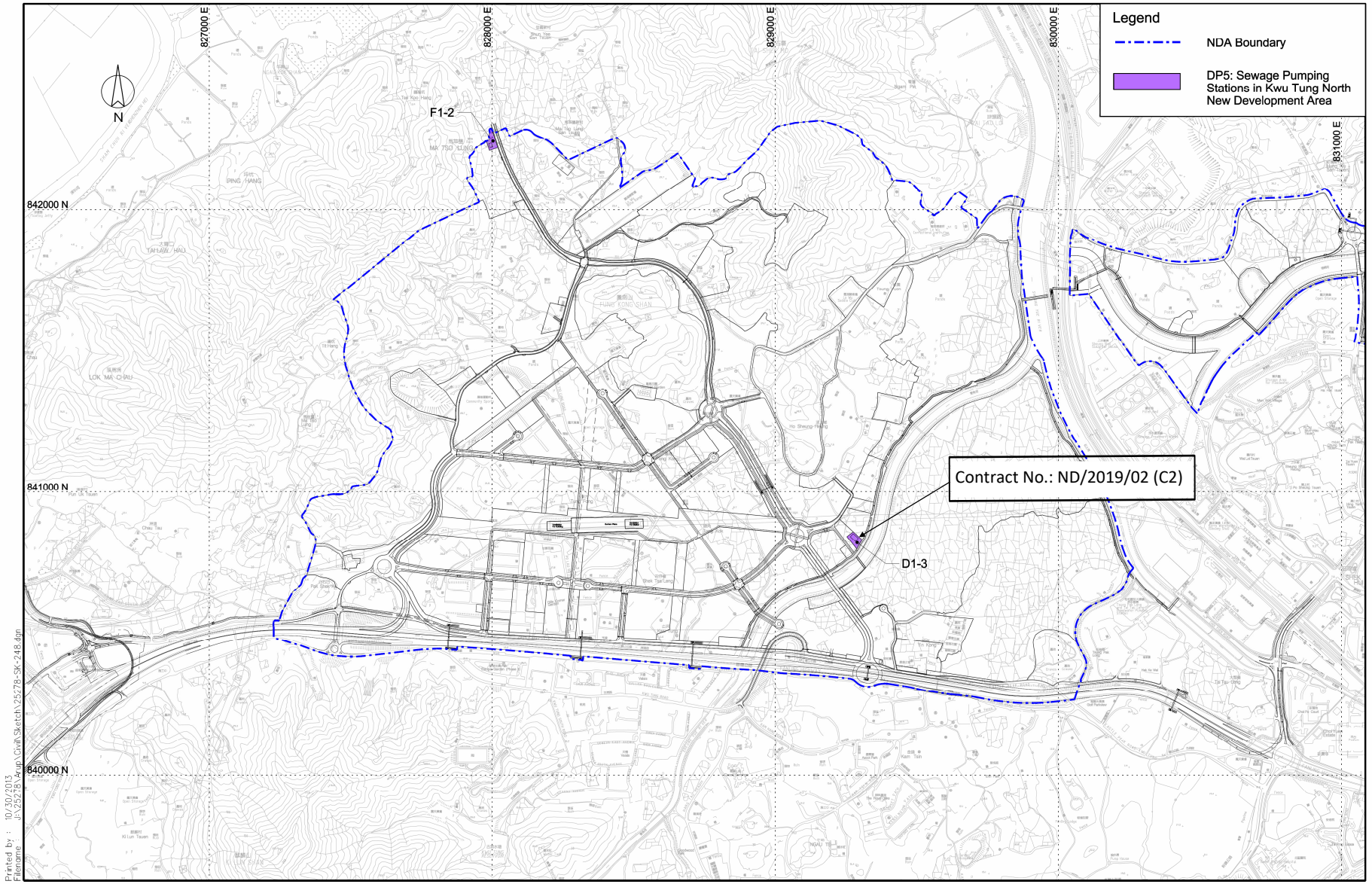
Plot File by: Yauky
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_1000.dgn
11/6/2019

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

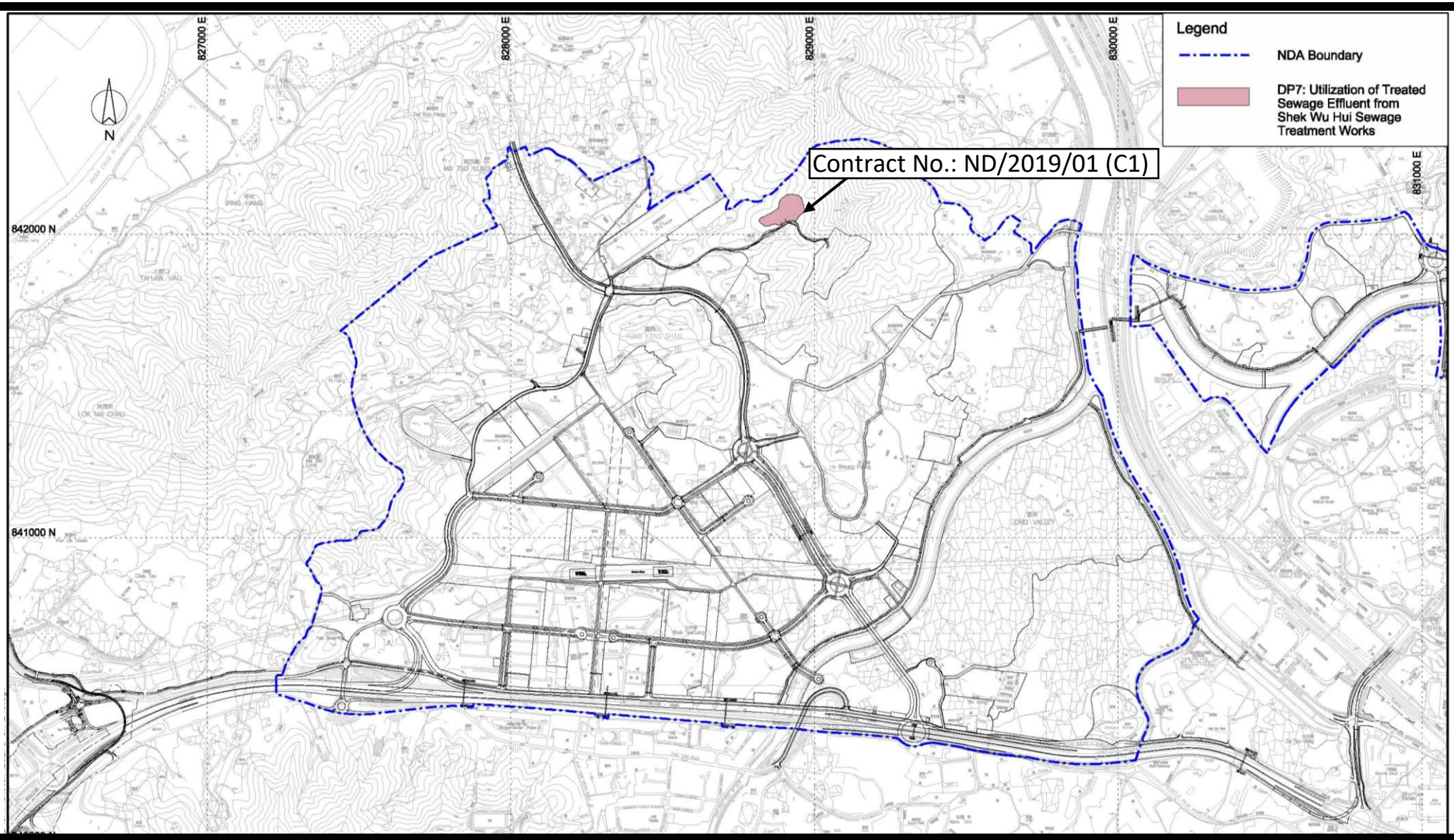
(Extracted from Drawing No. SK/248 of North East New Territories New Development Area Planning and Engineering Study)

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

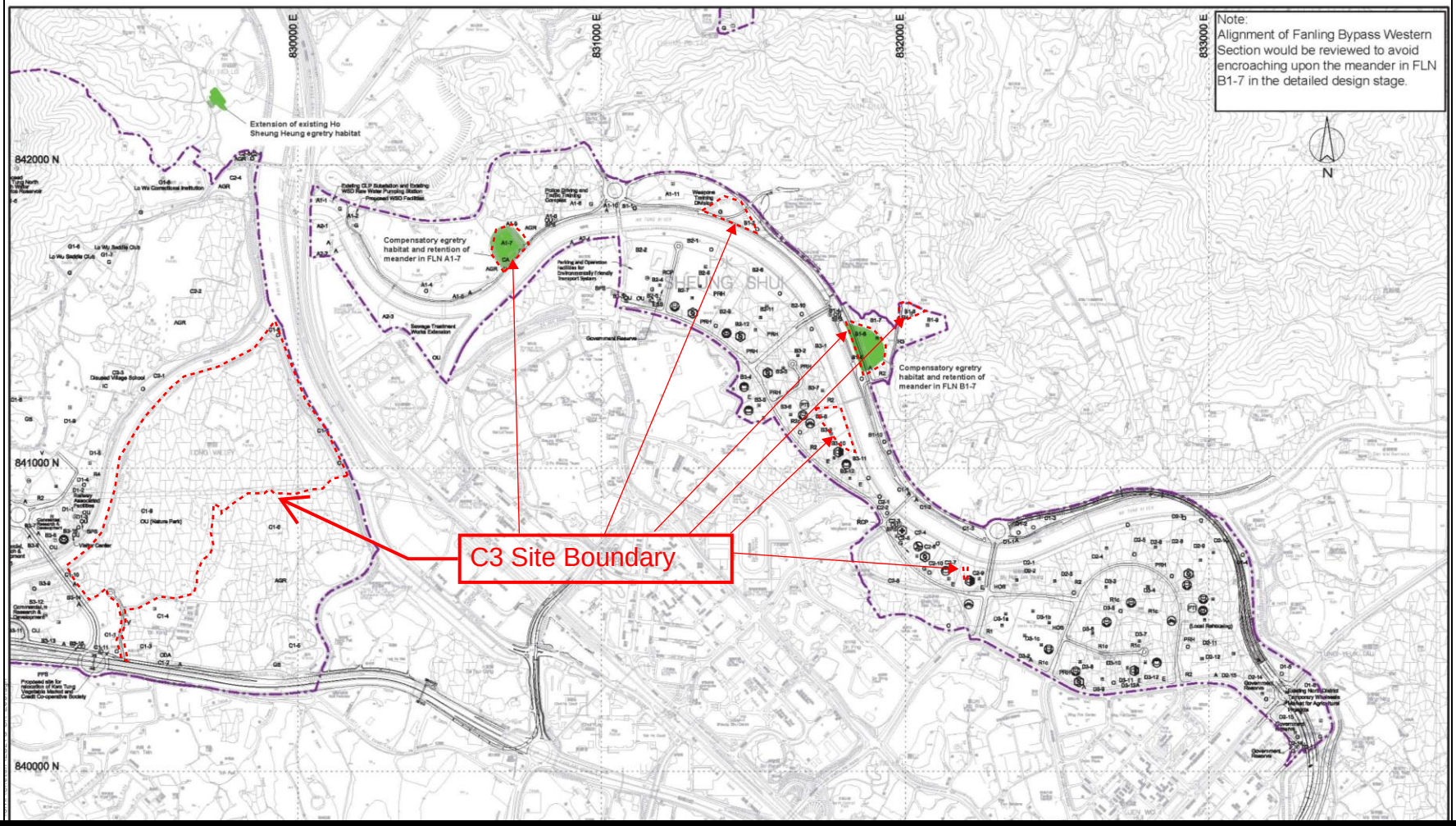
(Extracted from Drawing No. SK/249 of North East New Territories New Development Area Planning and Engineering Study)

Environmental Permit No: EP-470/2013/A

Figure 18

Site Layout Plan of Contract ND/2019/03

under EP-473-2013-A



Project Title: 工程名稱:	**Fanling Bypass Eastern Section** 粉嶺繞道東段
Figure 2: 圖 2:	**Location of Alternative Egretry Sites and Retained Meanders** 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)

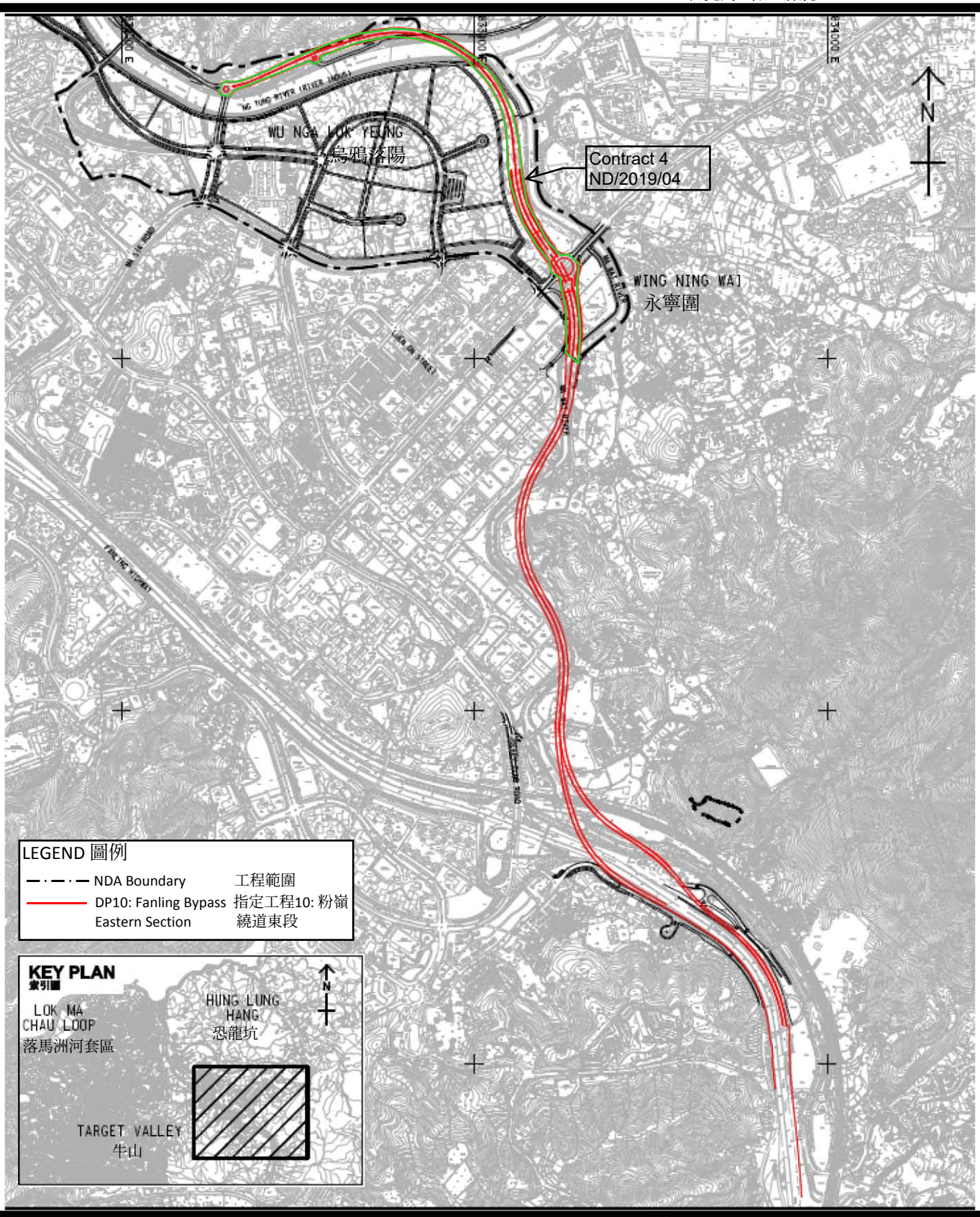
(摘錄自新界東北新發展區規劃及工程研究 圖: SK/254)

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

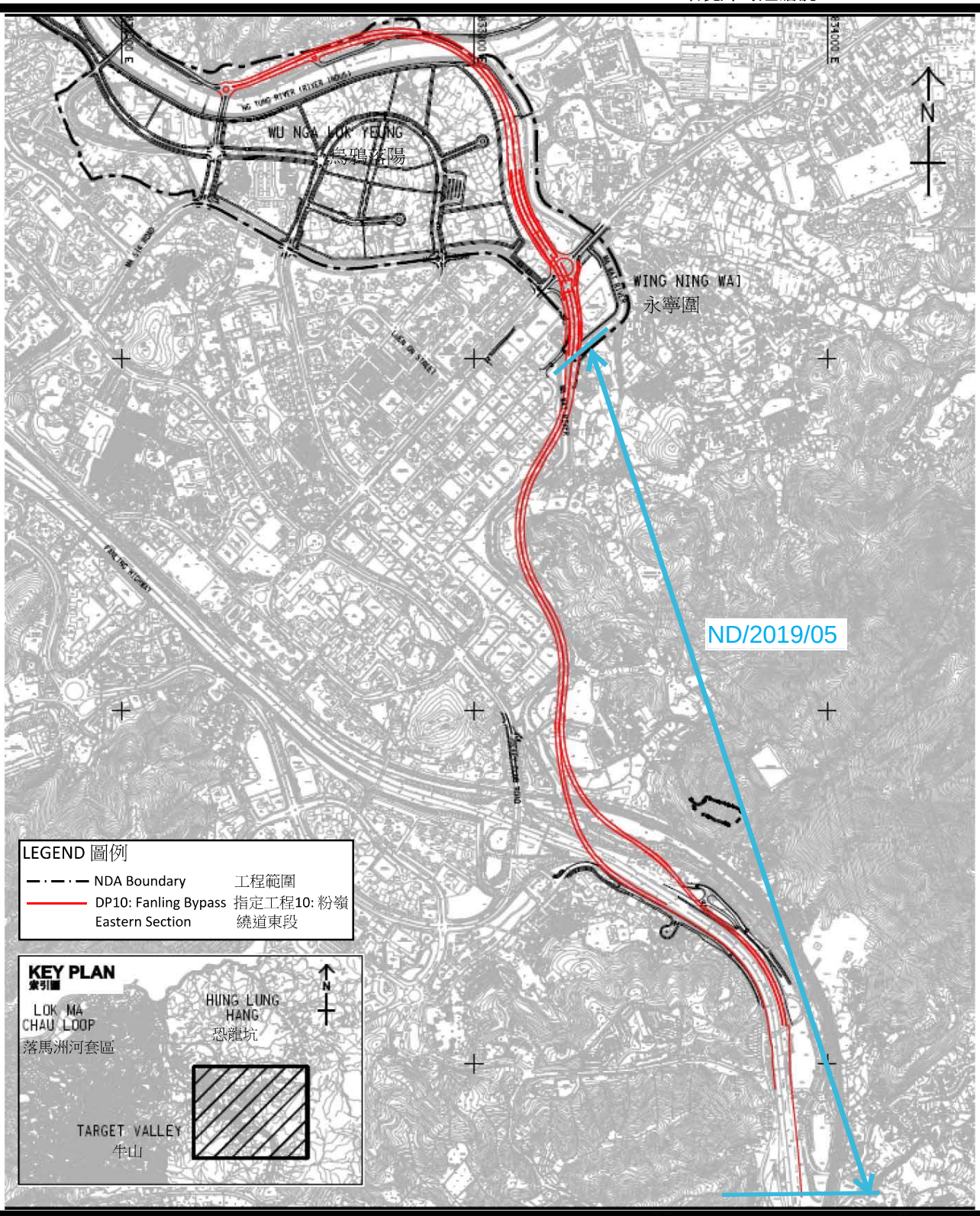
Environmental Permit No: EP-473/2013/A

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)

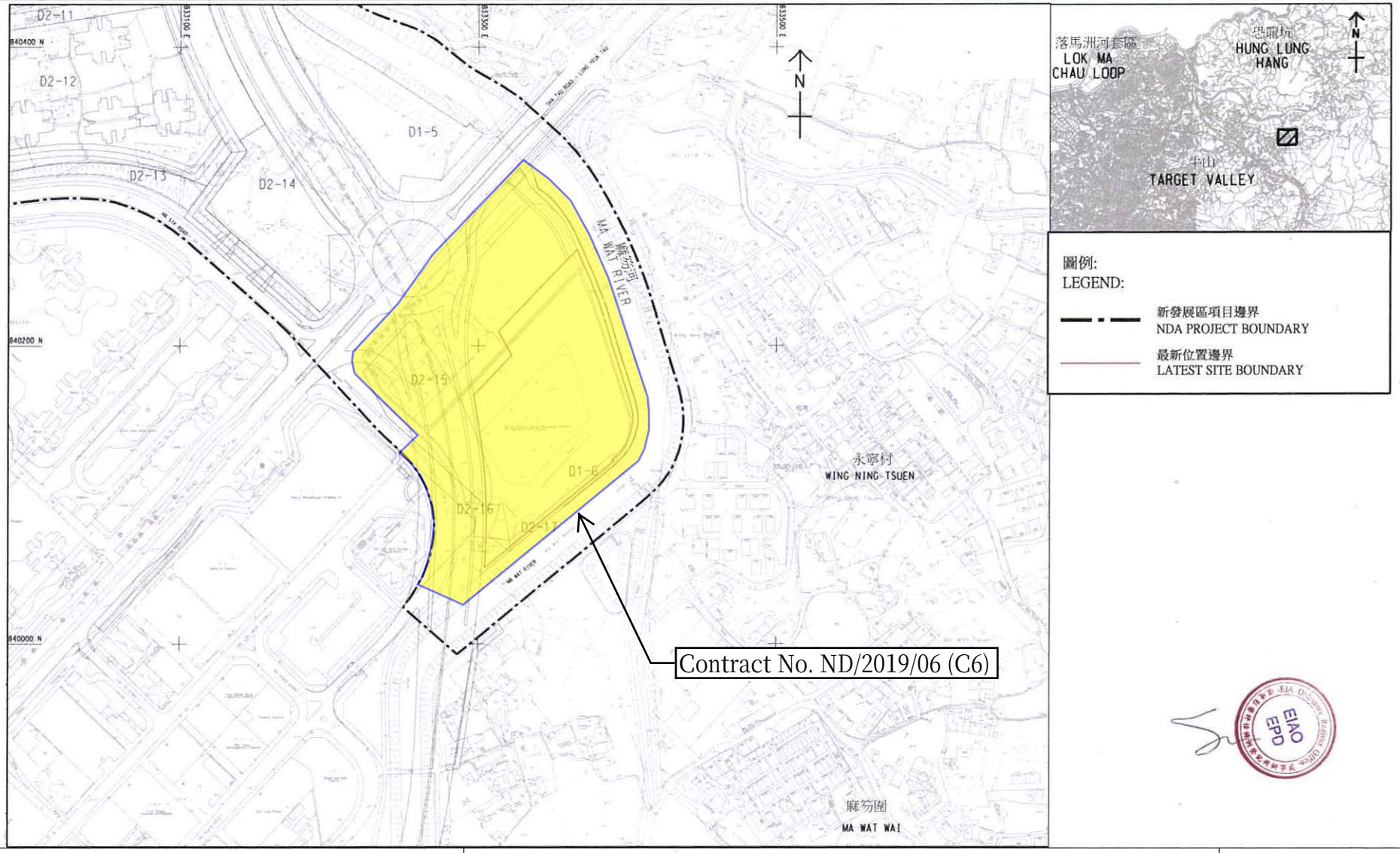
This figure was prepared based on Figure 1.1 of VEP application (No.:VEP-526/2016)
本圖是根據申請更改環境許可證(編號: VEP-526/2016)圖1.1編制

Environmental Permit No: EP-473/2013/A
環境許可證編號: EP-473/2013/A

Figure 21

Site Layout Plan of Contract ND/2019/06

under EP-475-2013-A



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

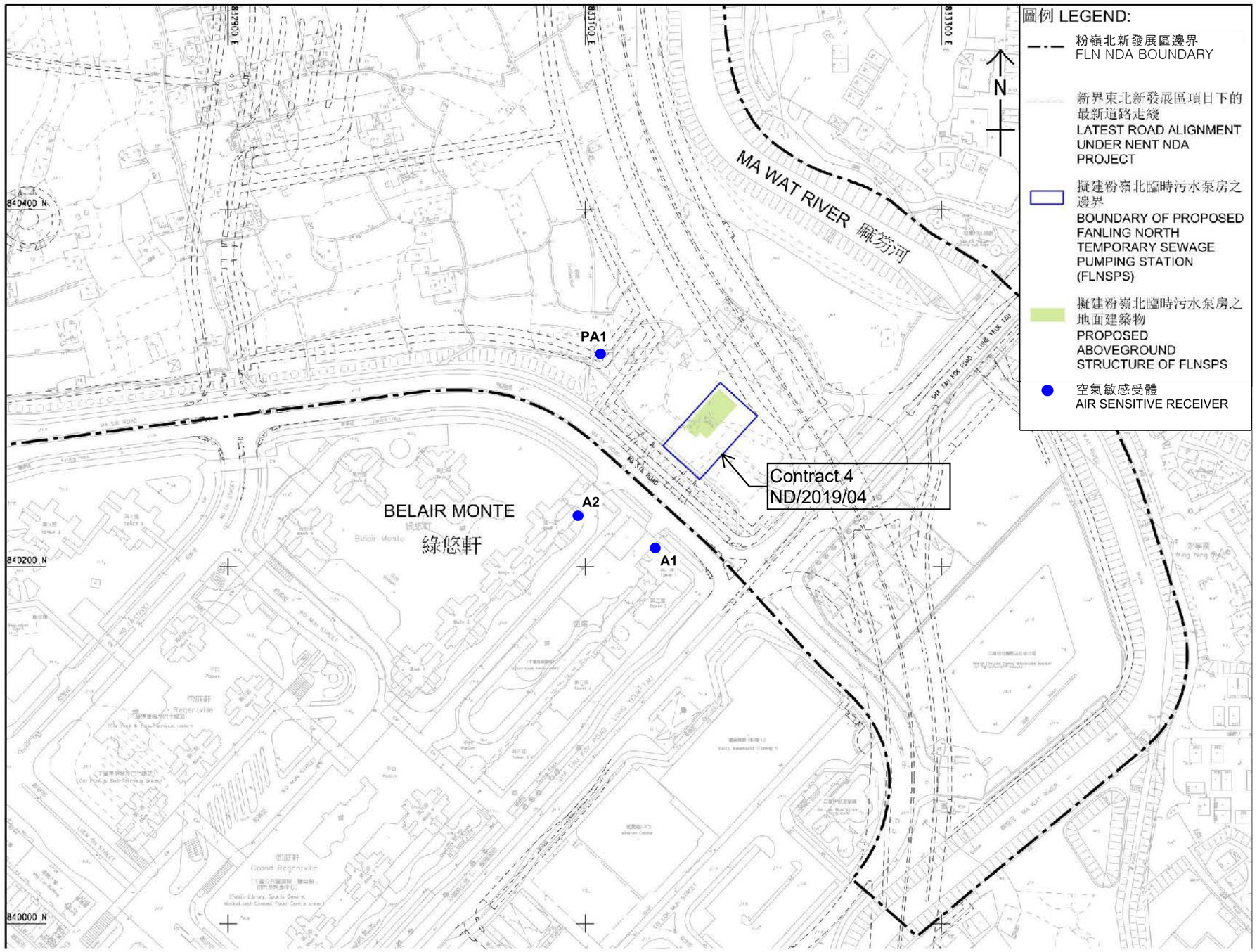
Environmental Permit No.: EP-475/2013/A
環境許可證編號 ：EP-475/2013/A

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)

APPENDIX A
CONSTRUCTION PROGRAMME

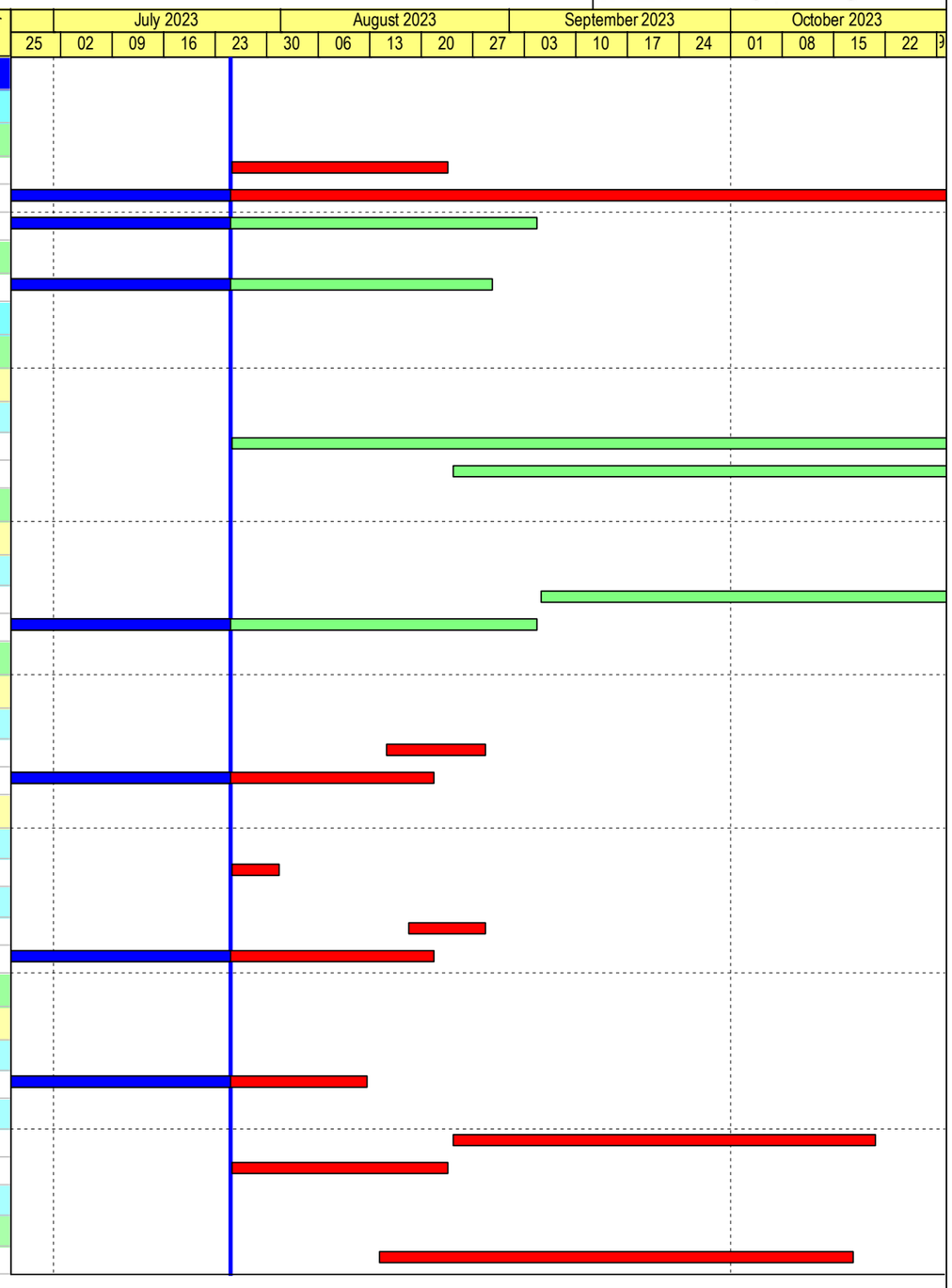
Construction Programme of ND/2019/01

AECOM

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

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Revised Programme (2023-06-25) Rev.0 for Edward						
6.0 - Prelimiaries and General Requirements						
6.2 - General Submissions						
GS-1310	Application of Water Supply to WSD	30	25-Jul-23	23-Aug-23	-133	CD(7d)
GS-1290	Preparation and Submission of Fully Corodinated BIM	947	21-Aug-20 A	25-Feb-26*	-20	CD(7d)
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	04-Sep-23	408	CD(7d)
6.3 - Subletting Packages						
SP-1210	Landscaping Works	36	05-Jun-23 A	29-Aug-23	557	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 (Anticipated Commencement Date 19-May-2023)	150	25-Jul-23	21-Dec-23	747	CD(7d)
S1P10a-2018	Road Works - Irrigation System Installation	60	24-Aug-23	04-Nov-23	441	WD(6d)
Section 3						
Portion 1a in Area E (Soil Treatment & Interface with HKHS's Contractors)						
Soil Treatment						
S3P1a-2020	Backfilling to the formation levels	48	05-Sep-23	02-Nov-23	644	WD(6d)
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed, interim soil to be excavated / treated : 1260m3 / 400m3)	36	01-Mar-23 A	04-Sep-23	422	WD(6d)
Section 6A						
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)						
Soil Treatment						
S6AP1e-2030	Erect Chain Link Fence	12	15-Aug-23	28-Aug-23	-116	WD(6d)
S6AP1e-2020	Site formation Works	24	25-May-23 A	21-Aug-23	-116	WD(6d)
Portion 15 in Area G1 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S6AP15-1020	Site clearance	6	25-Jul-23	31-Jul-23	-98	WD(6d)
Soil Treatment						
S6AP15-2030	Erect Chain Link Fence	9	18-Aug-23	28-Aug-23	-45	WD(6d)
S6AP15-2020	Site formation Works	24	01-Jun-23 A	21-Aug-23	-39	WD(6d)
Section 8						
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)						
Preparation work						
S8P2-1018	Remaining Site clearance	17	05-Jun-23 A	12-Aug-23	-767	WD(6d)
Soil Treatment						
S8P2-2020	Backfilling to the formation levels	48	24-Aug-23	20-Oct-23	-512	WD(6d)
S8P2-2010	Remove soil (original assumed 6898m3) (0/1 EGI completed, interim soil to be excavated / treated : 0m3/0m3) Clean Soil	26	25-Jul-23*	23-Aug-23	-796	WD(6d)
Civil Work						
Construction of Pak Shek Au Junction						
S8P2-4100	Cut slope KS34 - Cut Slope	54	14-Aug-23	17-Oct-23	-767	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 (2023-07)

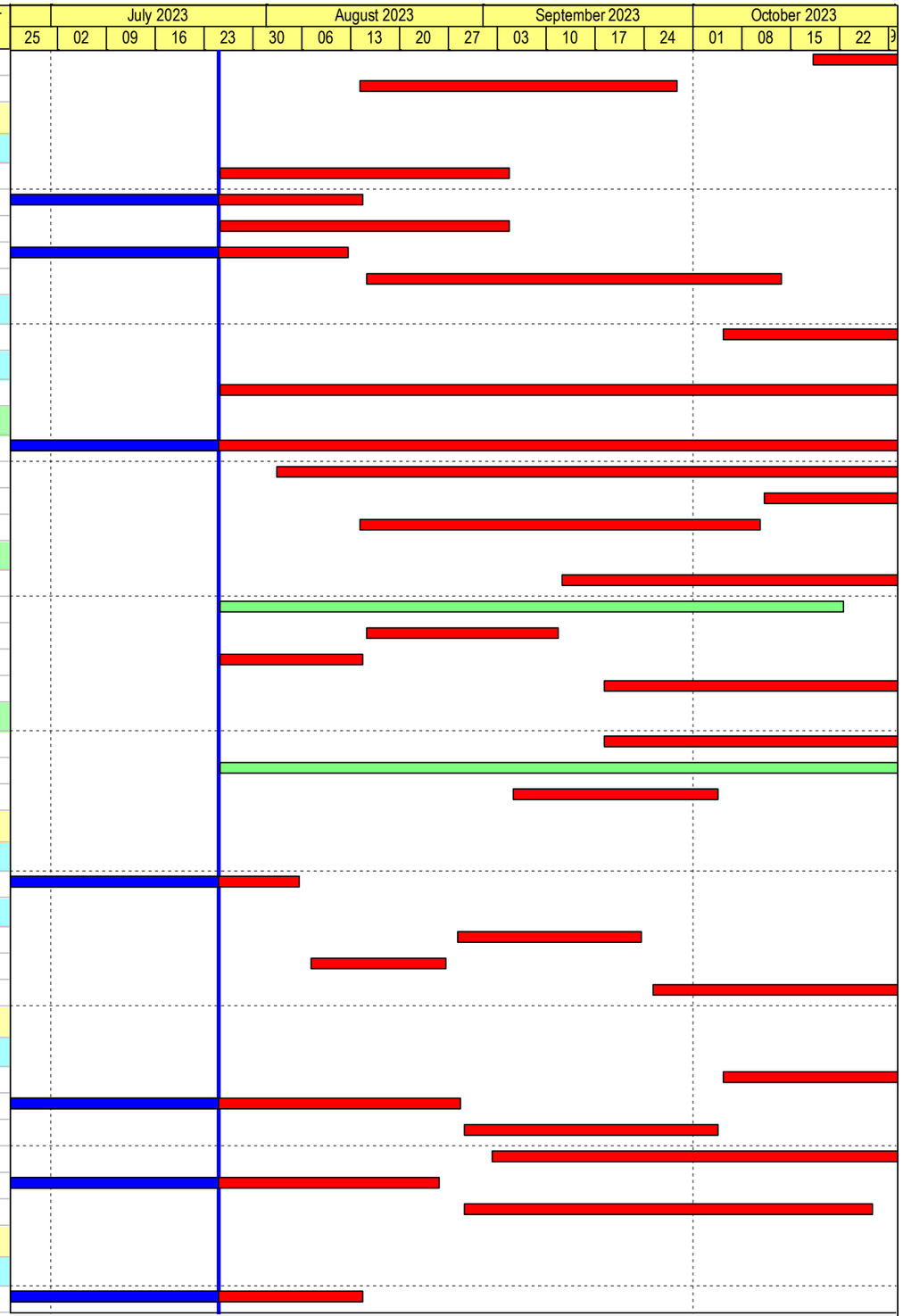
Data Date: 25-Jul-23

Run Date: 31-Jul-2023

Project ID: ND201901-RP-40
Lauyout: ND201901-3MRP with logo For Edward

REVISED PROGRAMME (2023-07)			
Date	Revision	Checked	Approved
31-Jul-23	Rev.0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S8P2-4100.10	Cut slope KS34 - Row AE & AD Soil Nail (27 + 20 Soil Nails) + Slope Drain + Soil Nail head	24	18-Oct-23	15-Nov-23	-715	WD(6d)
S8P2-4120.50	Road & Drain Construction (CH260 to CH220) - Construct Drainage SMH KTRC1 to Channel RC1 (0 of 1 MHComplete)	40	14-Aug-23	28-Sep-23	-711	WD(6d)
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)						
Preparation work						
S8P1a-1040	Arsenic Treatment Plan	36	25-Jul-23	04-Sep-23	-384	WD(6d)
S8P1a-1015	Ground investigation (4 / 7 GI completed)	18	05-Nov-22 A	14-Aug-23	-357	WD(6d)
S8P1a-1030	Prepare Arsenic Assessment Report	36	25-Jul-23	04-Sep-23	-384	WD(6d)
S8P1a-1010	Site clearance & Tree Felling	17	05-Oct-22 A	12-Aug-23	-454	WD(6d)
S8P1a-1025	Verification of Ground Condition & Design Review by Project Manager	60	15-Aug-23	13-Oct-23	-437	CD(7d)
Soil Treatment						
S8P1a-2010	Remove soil (original assumed 10988m3) (0 / 6 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	05-Oct-23	02-Nov-23	-408	WD(6d)
Civil Work						
S8P1a-4000	DCS Works by Others (Anticipated Start Date 1-Jul-2023)	150	25-Jul-23*	21-Dec-23	-276	CD(7d)
South of Roundabout C3						
S8P1a-2300	Construction of Drainage SMH KT 1103 to 1108 (0 / 6 M/H complete)	153	03-May-23 A	25-Jan-24	-195	WD(6d)
S8P1a-2310	Laying Fresh Watermains CHA 365 to CHA 200	172	02-Aug-23*	28-Feb-24	-195	WD(6d)
S8P1a-2040	Slopeworks for new feature KS34 - Cut Slope	24	11-Oct-23	08-Nov-23	-195	WD(6d)
S8P1a-2030	Slopeworks for new feature KS34 - Rock Fill Backfill Slope	48	14-Aug-23	10-Oct-23	-195	WD(6d)
Roundabout C3						
S8P1a-5020	Construction of retaining wall KW17 (0 / 7 bays complete)	124	12-Sep-23	09-Feb-24	-455	WD(6d)
S8P1a-5500	DCS Works by Others (Start Date to be Confirmed)	90	25-Jul-23*	22-Oct-23	243	CD(7d)
S8P1a-5010	Excavation for retaining wall KW17	24	15-Aug-23	11-Sep-23	-455	WD(6d)
S8P1a-5000	Site clearance	18	25-Jul-23	14-Aug-23	-455	WD(6d)
S8P1a-5210	Underground Roundabout Drainage SMHKT 1013 to SKT 1101 (0 / 1 Completed)	48	18-Sep-23	15-Nov-23	-47	WD(6d)
Within MTRC Protection Zone						
S8P1a-4190	Construction of Sewerage FMH KT 3.01D to 3.01E (0 / 2 M/H complete)	48	18-Sep-23	15-Nov-23	-35	WD(6d)
S8P1a-4300	DCS Works by Others (Start Date to be Confirmed)	150	25-Jul-23	21-Dec-23	183	CD(7d)
S8P1a-4010	Site Clearance & Tree Fellling	24	05-Sep-23	04-Oct-23	-408	WD(6d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)						
Soil Treatment						
S8P3-2020	Backfilling to the Water Main formation levels	11	13-May-23 A	05-Aug-23	-143	WD(6d)
Civil Work						
S8P3-3010.20	Backfill for Underground Secondary Drainage work	24	28-Aug-23	23-Sep-23	-143	WD(6d)
S8P3-3010.10	Underground Fresh watermain CHA (North bound Carriageway) CHA	18	07-Aug-23	26-Aug-23	-143	WD(6d)
S8P3-3010.30	Underground Secondary Drainage work (M2.70a to M2.71 and Primary drainage pipe laying) (0 / 3 Completed)	36	25-Sep-23	08-Nov-23	-143	WD(6d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
Civil Work						
S8P5-4060	Pipe Jacking across DJ watermain - 2 Nos 1200 dia Conc Pipe	64	05-Oct-23	19-Dec-23	-214	WD(6d)
S8P5-4048	Pipe Jacking across DJ watermain - Jacking Pit ELS & Excavation	30	10-Jun-23 A	28-Aug-23	-214	WD(6d)
S8P5-4050	Pipe Jacking across DJ watermain - Mobilization and Set Up Pipe Jacking Equipment (CNE 060, EC-1086)	30	29-Aug-23	04-Oct-23	-214	WD(6d)
S8P5-4012.04	Road Works and Traffic Diversion (To South bound Carriageway CH 400 - CH 530)	72	02-Sep-23	28-Nov-23	-118	WD(6d)
S8P5-4004.20	Underground Fresh & Flushing watermains (South bound Carriageway) CHD 325 to 420 & CHQ 315 to 430	28	30-Jul-22 A	25-Aug-23	-184	WD(6d)
S8P5-4004.10	Underground Fresh watermain (North bound Carriageway) CHA 700 to 775	48	29-Aug-23	26-Oct-23	-118	WD(6d)
Portion 6a & 6b in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P6a-1010	Site Clearance & Tree Felling	18	15-Feb-20 A	14-Aug-23	-32	WD(6d)



Build King – Richwell Engineering Joint Venture

- Planned Work
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- Milestone Critical
- Summary LOE
- Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2023-07)

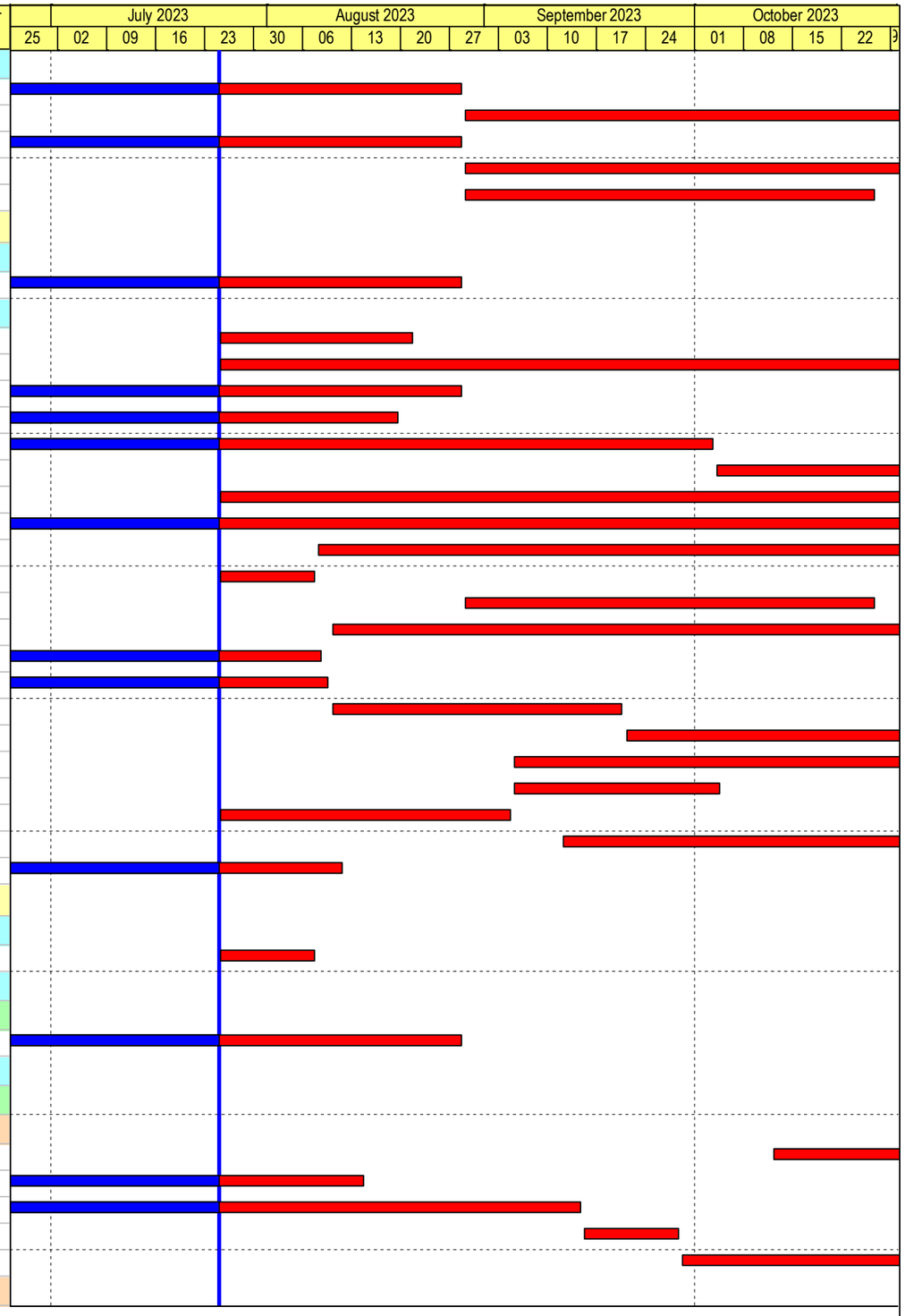
Data Date: 25-Jul-23

Run Date: 31-Jul-2023

Project ID: ND201901-RP-40
Lauyout: ND201901-3MRP with logo For Edward

REVISED PROGRAMME (2023-07)			
Date	Revision	Checked	Approved
31-Jul-23	Rev.0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Civil Work						
S8P6a-6000	Road D4 (SMHKT1001A and pipe laying to KT1001) - Underground Drainage work	30	16-May-23 A	28-Aug-23	-374	WD(6d)
S8P6a-6010	Road D4 - Laying DCS Pipes (CH 100 to CH 190)	60	29-Aug-23	09-Nov-23	-374	WD(6d)
S8P6a-7010	Road D4 - Laying DCS Pipes (CH 290 to CH 400)	30	20-Jun-23 A	28-Aug-23	-104	WD(6d)
S8P6a-6012	Road D4 -Construct DCS Chamber @ CH 164.7	60	29-Aug-23	09-Nov-23	-374	WD(6d)
S8P6a-7020	Road D4 Underground Fresh Watermain CH 290 to CH 400	48	29-Aug-23	26-Oct-23	-104	WD(6d)
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P9b-1010	Site clearance & Tree Felling	30	25-Jun-22 A	28-Aug-23	-358	WD(6d)
Civil Work						
S8P9b-3104	Ma Tso Lung Road D4-2 - Break existing Road paving and Construct Pipe Culvert PC1 - Stage 2	24	25-Jul-23	21-Aug-23	-319	WD(6d)
S8P9b-3108	Ma Tso Lung Road D4-2 - Construction of Underground Drainage Manhole M 3.90 to KT 7110 and KT 7108 to M.395	90	25-Jul-23	09-Nov-23	-319	WD(6d)
S8P9b-3106	Ma Tso Lung Road D4-2 - Construction of Underground Sewerage Manhole FMH 7.14 to 8.03 (1/3 MH Complete)	30	11-May-23 A	28-Aug-23	-319	WD(6d)
S8P9b-3057.08	Road D4 (CH 400 - CH 565) - Underground Fresh Watermains	23	12-Jan-23 A	19-Aug-23	-235	WD(6d)
S8P9b-3057.10	Road D4 (CH 400 to CH 625) - Laying DCS Pipes	59	31-May-23 A	03-Oct-23	-235	WD(6d)
S8P9b-3057.12	Road D4 (CH 565 - CH 625) - Underground Fresh Watermains	48	04-Oct-23	29-Nov-23	-235	WD(6d)
S8P9b-3010	Road D4 (CH 780 to CH 994) - Construction of Underground Drainage Manhole SMH KT5009 to SMH KT5016	135	25-Jul-23	04-Jan-24	-358	WD(6d)
S8P9b-3008	Road D4 (CH 780 to CH 994) - Construction of Underground Sewerage Manhole FMH 7.10 to 7.13 (0/4 MH Complete)	86	15-Mar-23 A	04-Nov-23	-358	WD(6d)
S8P9b-3262	Road D4 Across DJ Watermain - Construct Jacking Pit & Recieving Pit	100	08-Aug-23	05-Dec-23	-459	WD(6d)
S8P9b-3260	Road D4 Across DJ Watermain - Implement TTA and Road Diversion (CH 670 to CH 780)	12	25-Jul-23*	07-Aug-23	-459	WD(6d)
S8P9b-3160	Road D4-1 - Laying DCS Pipes (CH 969 to CH 993)	48	29-Aug-23	26-Oct-23	-307	WD(6d)
S8P9b-3058.20	Road D5 - DCS Works by Others (Anticipated Commencement Date 13 Jul-2023)	90	10-Aug-23	07-Nov-23	-86	CD(7d)
S8P9b-3058.080	Road D5 - Laying Drainage Pipe between SMHK KT7103 and KT7104	13	13-May-23 A	08-Aug-23	-70	WD(6d)
S8P9b-3058.10	Road D5 - Laying Watermains Stage 1 (before H/O to DCS Contractor)	14	22-May-23 A	09-Aug-23	-71	WD(6d)
S8P9b-3058.100	Road D5 - Laying Watermains Stage 2	36	10-Aug-23	20-Sep-23	-69	WD(6d)
S8P9b-3058.110	Road D5 - Underground Utilities by others	36	21-Sep-23	04-Nov-23	-69	WD(6d)
S8P9b-3030.06	Road W1 (CH100 to CH310) - Backfilling to Formation Level	48	05-Sep-23	02-Nov-23	-192	WD(6d)
S8P9b-3030.04	Road W1 (CH100 to CH310) - Pressure test for Fresh & Flushing watermains	24	05-Sep-23	04-Oct-23	-168	WD(6d)
S8P9b-3030.02	Road W1 (CH250 to CH310) - Laying Watermains	36	25-Jul-23	04-Sep-23	-192	WD(6d)
S8P9b-3001.04	Slopeworks for new feature KS19 - Berm, Maintenance Access Construction	88	12-Sep-23	28-Dec-23	-293	WD(6d)
S8P9b-3001.02	Slopeworks for new feature KS19 - Slope Drainaige Construction	16	02-Dec-22 A	11-Aug-23	-293	WD(6d)
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P8a-1035	Remaining Ground investigation (0 / 1 GI completed) to Fresh Water Service Reservoir	12	25-Jul-23	07-Aug-23	-267	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	30	11-Jun-20 A	28-Aug-23	-285	WD(6d)
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying & road						
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)						
Civil Works						
S8K8-1040	Backfilling (6559m3)	108	12-Oct-23	22-Feb-24	-72	WD(6d)
S8K8-1038	Install Watermains inside Chambers	18	22-Feb-23 A	14-Aug-23	-24	WD(6d)
S8K8-1100	Tank No. 1 - Fill up Tank No. 1 for Water Tightness Test	45	18-Apr-23 A	14-Sep-23	-72	WD(6d)
S8K8-1110	Tank No. 1 - Water Tightness Test	14	15-Sep-23	28-Sep-23	-86	CD(7d)
S8K8-1120	Tank No. 2 - Fill up Tank No. 2 for Water Tightness Test	30	29-Sep-23	06-Nov-23	-74	WD(6d)
E&M Works						



Build King – Richwell Engineering Joint Venture

- Planned Work
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ND/2019/01 - 3 Month Rolling Programme (2023-07)

Data Date: 25-Jul-23

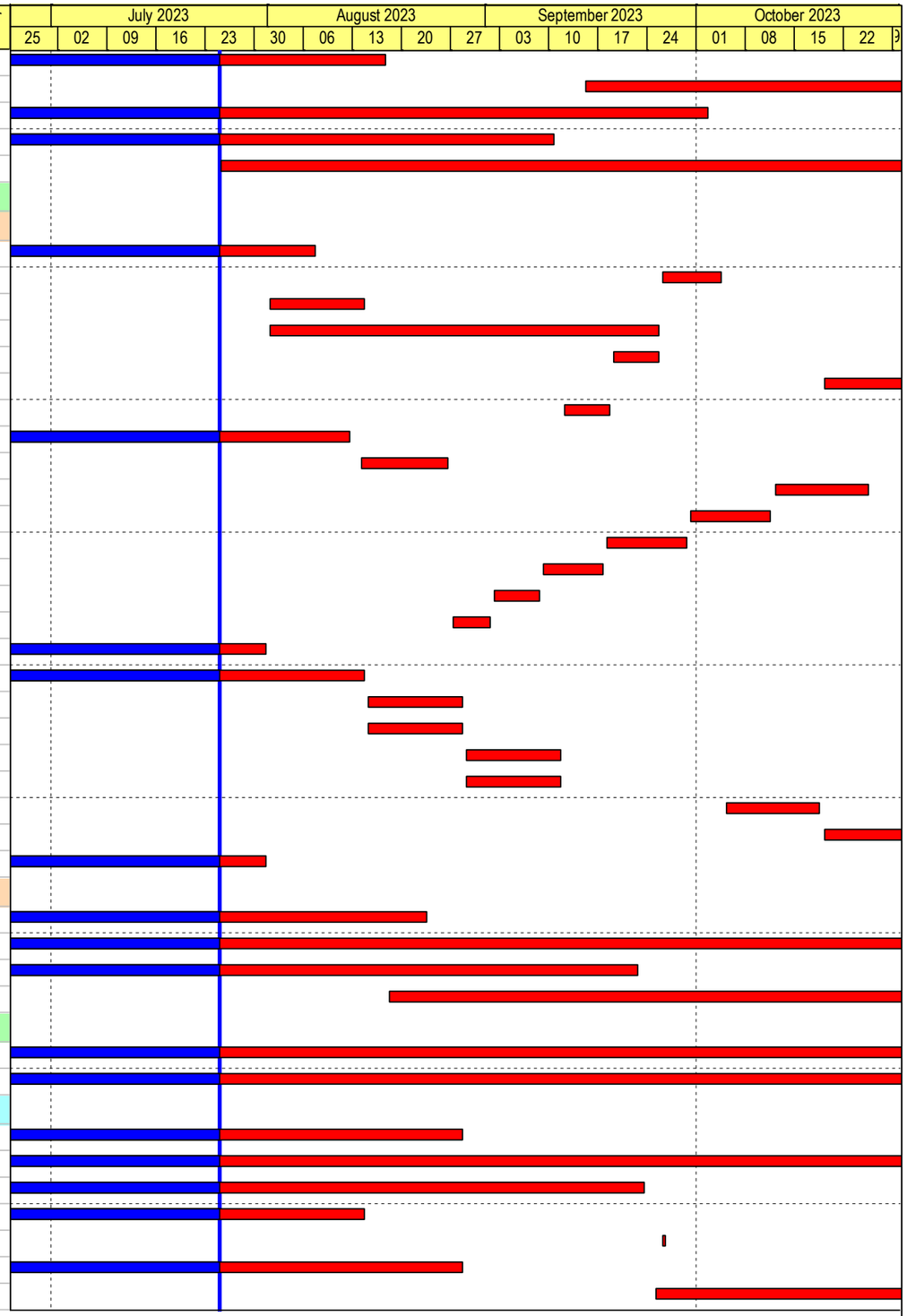
Run Date: 31-Jul-2023

Project ID: ND201901-RP-40
Layout: ND201901-3MRP with logo For Edward

REVISED PROGRAMME (2023-07)

Date	Revision	Checked	Approved
31-Jul-23	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	24	01-Feb-21 A	17-Aug-23	-31	CD(7d)
S8K8-2050	Installation of E&M equipment for KTN FLWSR	200	15-Sep-23	22-May-24	-72	WD(6d)
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	70	15-Aug-22 A	02-Oct-23	-31	CD(7d)
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	48	01-Feb-21 A	10-Sep-23	-31	CD(7d)
S8K8-2040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for KTN FLWSR	120	25-Jul-23	14-Dec-23	-66	WD(6d)
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)						
Civil Works						
S8K8-1000.60	Columns (117 of 120 nos complete)	12	28-Jun-22 A	07-Aug-23	-52	WD(6d)
S8K8-1000.62	Columns (4 nos)	6	26-Sep-23	04-Oct-23	-52	WD(6d)
S8K8-1002.50	Construct Overflow Trough	12	01-Aug-23	14-Aug-23	-52	WD(6d)
S8K8-1032	Construction of Intlet Chamber	48	01-Aug-23	25-Sep-23	-34	WD(6d)
S8K8-1000.46	Cover Slab - No. 15 Stage 3	6	19-Sep-23	25-Sep-23	-52	WD(6d)
S8K8-3038	Install Watermains inside Chambers	100	19-Oct-23	20-Feb-24	-52	WD(6d)
S8K8-1002.80	Remove Tower Crane	6	12-Sep-23	18-Sep-23	-52	WD(6d)
S8K8-3048	Road W5 - Cut and Construct Temp Road & Platform for Road W5	17	20-May-23 A	12-Aug-23	-287	WD(6d)
S8K8-3050	Road W5 - Road W5 Remaining Cut Slope	12	14-Aug-23	26-Aug-23	-287	WD(6d)
S8K8-3052.08	Road W5 - Row E & D (120 Nos)	14	12-Oct-23	25-Oct-23	-353	CD(7d)
S8K8-3052.06	Road W5 - Row G & F (89 Nos)	12	30-Sep-23	11-Oct-23	-353	CD(7d)
S8K8-3052.04	Road W5 - Row I & H (78 Nos)	12	18-Sep-23	29-Sep-23	-353	CD(7d)
S8K8-3052.02	Road W5 - Row K & J (52 Nos)	9	09-Sep-23	17-Sep-23	-353	CD(7d)
S8K8-3052.00	Road W5 - Row M & L (42 Nos)	7	02-Sep-23	08-Sep-23	-353	CD(7d)
S8K8-3052	Road W5 - Row O & N (26 Nos)	6	27-Aug-23	01-Sep-23	-353	CD(7d)
S8K8-1002.48	Roof - bay 3	6	02-May-23 A	31-Jul-23	-52	WD(6d)
S8K8-1002.44	Roof - bay 4	18	16-Jan-23 A	14-Aug-23	-52	WD(6d)
S8K8-1002.52	Roof - bay 5	12	15-Aug-23	28-Aug-23	-52	WD(6d)
S8K8-1002.54	Roof - bay 6	12	15-Aug-23	28-Aug-23	-52	WD(6d)
S8K8-1002.58	Roof - bay 7	12	29-Aug-23	11-Sep-23	-52	WD(6d)
S8K8-1002.60	Roof - bay 8	12	29-Aug-23	11-Sep-23	-52	WD(6d)
S8K8-1002.62	Roof - bay 9	12	05-Oct-23	18-Oct-23	-52	WD(6d)
S8K8-3040.10	Tank No. 1 - Fill up Tank No. 1 for Water Tightness Test & Water Sterility Test	42	19-Oct-23	07-Dec-23	-43	WD(6d)
S8K8-1028	Temp Works for Inlet Chamber Construction	6	10-May-23 A	31-Jul-23	-34	WD(6d)
E&M Works						
S8K8-4010	Design and Approval for E&M works for KTN FWSR	30	20-Dec-21 A	23-Aug-23	-110	CD(7d)
S8K8-4030	Procurement of E&M equipment for KTN FWSR	54	15-Aug-22 A	15-Nov-23	-140	CD(7d)
S8K8-4020	Submission and Approval of E&M plants & materials for KTN FWSR	60	15-Mar-22 A	22-Sep-23	-140	CD(7d)
S8K8-4040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for KTN FWSR	140	18-Aug-23	03-Feb-24	-114	WD(6d)
Remaining pipe laying work and roadworks within Road W1						
S8K8-4100	Road W1 - Construction of Drainage Manhole SMH KT 8105 to 8103 (0 / 8 M/H complete)	90	15-May-23 A	09-Nov-23	-239	WD(6d)
S8K8-4200	Road W2 - Construction of Drainage Manhole SMH KT 8104A to 8002 (0 / 6 M/H complete)	90	03-May-23 A	09-Nov-23	-42	WD(6d)
Remaining Civil Work in Portion 8a Area A						
S8P8a-6000.10	Backfill to level of utilities laying (SMH KT 7006B to 7001)	30	01-Jun-23 A	28-Aug-23	-159	WD(6d)
S8P8a-2562	Construction of retaining wall KW06 bay 1 - bay 7 (bays 0/7 completed)	90	21-Jun-23 A	09-Nov-23	-295	WD(6d)
S8P8a-2602	Construction of retaining wall KW05 bay 7 - bay 16 (Base Slab 10/10 bays completed, Stem Wall 3/10 bays completed)	53	12-Nov-22 A	23-Sep-23	-342	WD(6d)
S8P8a-2662	Construction of retaining wall KW11 bay 1 - bay 11 (Base Slab 11/11 bays completed, Stem Wall 9/11 bays completed)	18	16-Jun-22 A	14-Aug-23	-159	WD(6d)
S8P8a-5032	Divert Traffic to Road A5	1	26-Sep-23	26-Sep-23	-98	WD(6d)
S8P8a-2560	Excavation for retaining wall KW06 bay 1 - bay 7 (bays 3/7 Completed)	30	06-Jun-23 A	28-Aug-23	-235	WD(6d)
S8P8a-2604	Retaining wall KW05 - Drainage Construction	90	25-Sep-23	13-Jan-24	-144	WD(6d)



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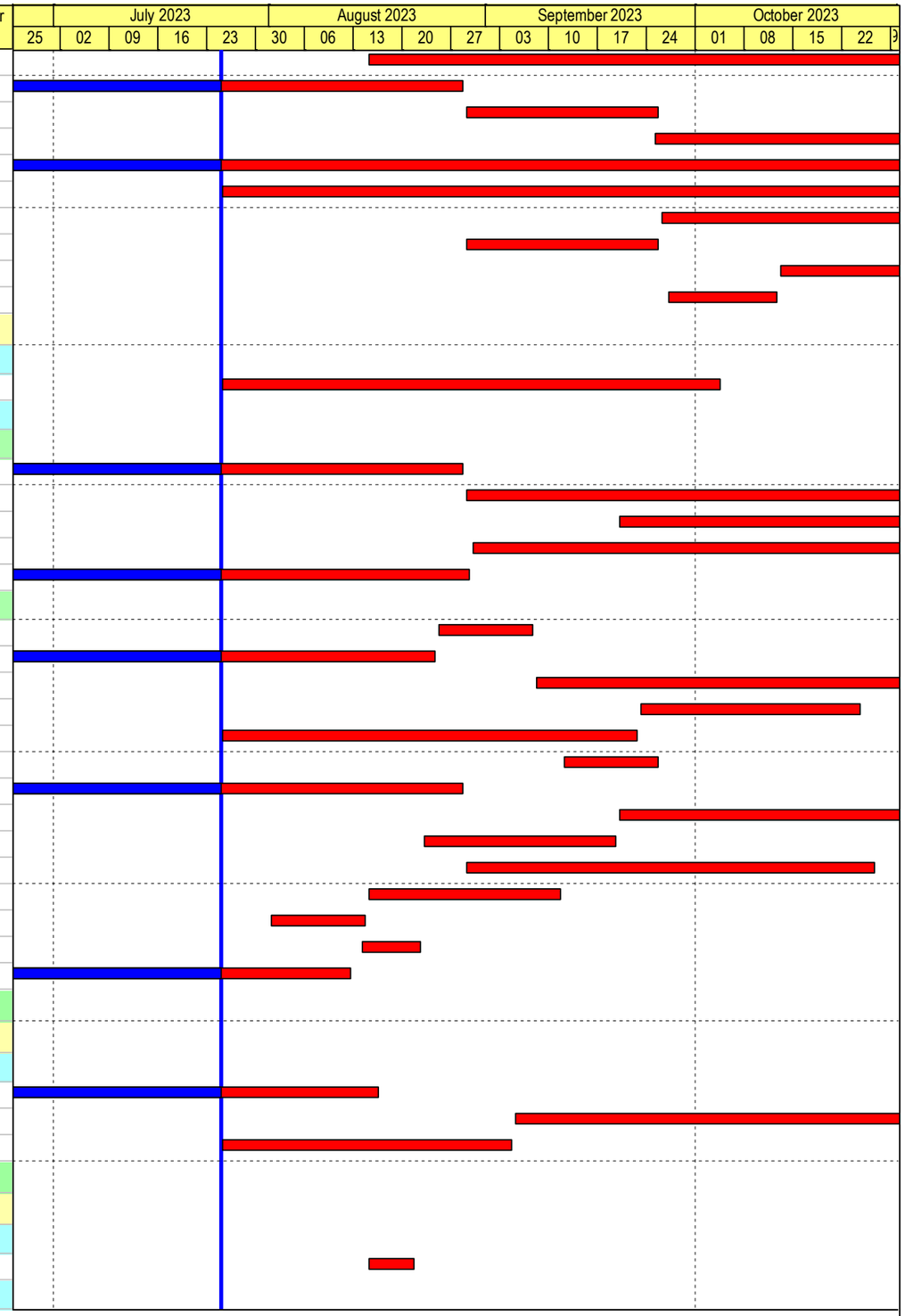
S8P8a-2664	Retaining wall KW11 - Drainage Construction	72	15-Aug-23	09-Nov-23	-91	WD(6d)
S8P8a-5020	Road A5 - New Formed Rock Fill Slope KS52	30	25-Apr-23 A	28-Aug-23	-223	WD(6d)
S8P8a-5030	Road A5 - Road Works	24	29-Aug-23	25-Sep-23	-223	WD(6d)
S8P8a-6020	Road W1 - Backfilling to Formation Level For Drainage Construction SMH KT 7016 to 7015 to 7014 Connection	48	25-Sep-23	22-Nov-23	-342	WD(6d)
S8P8a-6001	Road W1 - Construction of Drainage Manhole SMH KT 7006B to 7001 (0 / 8 M/H complete)	90	25-Apr-23 A	09-Nov-23	-219	WD(6d)
S8P8a-6006	Road W1 - Construction of Drainage Manhole SMH KT 7011A to 7009 to 7008A Connection (0 / 5 M/H complete)	104	25-Jul-23	25-Nov-23	-285	WD(6d)
S8P8a-6028	Road W1 - Construction of Drainage Manhole SMH KT 7019A Connection to 7017 to 7016 Connection (0 / 5 M/H complete)	72	26-Sep-23	21-Dec-23	-223	WD(6d)
S8P8a-5022	Slopeworks for KS52 - Construct Slope Drainage	24	29-Aug-23	25-Sep-23	-223	WD(6d)
S8P8a-4010	Slopeworks for new feature KS25 - Construct Remaining Slope Drainage	24	13-Oct-23	10-Nov-23	-98	WD(6d)
S8P8a-4000	Slopeworks for new feature KS25 - Remaing Cut Slope	12	27-Sep-23	12-Oct-23	-98	WD(6d)
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)						
Soil Treatment						
S8P8b-2020	Backfilling to the formation levels	60	25-Jul-23	04-Oct-23	-403	WD(6d)
Construction of Watermains						
Construction of watermains by trenchless method						
S8P8b-4012.22	GPR & Micrometemor Survey, Reporting & Approval	30	27-Dec-22 A	28-Aug-23	-480	WD(6d)
S8P8b-4012.24	Ground Treatment	134	29-Aug-23	07-Feb-24	-480	WD(6d)
S8P8b-4120	Up Hill Pipe Jacking - 2100 dia Pipe Sleeve For Flushing Water	132	20-Sep-23	01-Mar-24	-177	WD(6d)
S8P8b-4110	Up Hill Pipe Jacking - 2500 dia Pipe Sleeve For Fresh Water	132	30-Aug-23	06-Feb-24	-177	WD(6d)
S8P8b-4100	Up Hill Pipe Jacking Pit - Mobilization and Set Up Pipe Jacking Equipment	31	15-Apr-23 A	29-Aug-23	-177	WD(6d)
Construction of watermains by open trench method						
S8P8b-5002.02	DSD Maintenance Road - Implement TTA for Stage 2 - CHY 1047 to 1143	12	25-Aug-23	07-Sep-23	-324	WD(6d)
S8P8b-5002	DSD Maintenance Road - Stage 1 Laying flushing water main - CHY 1143 to 1233	27	04-Mar-23 A	24-Aug-23	-324	WD(6d)
S8P8b-5004	DSD Maintenance Road - Stage 2 Laying flushing water main - CHY 1047 to 1143	110	08-Sep-23	20-Jan-24	-324	WD(6d)
S8P8b-5006.04	Government Land - Laying Flushing water main - CHY 921 to 931	24	23-Sep-23	24-Oct-23	-251	WD(6d)
S8P8b-5006.06	Government Land - Laying Flushing water main - CHY 987 to 1040	52	25-Jul-23	22-Sep-23	-251	WD(6d)
S8P8b-8200	Ho Sheung Heung Road Fresh water main - Backill and Reinstate Road	12	12-Sep-23	25-Sep-23	-289	WD(6d)
S8P8b-7120	Ho Sheung Heung Road Fresh water main - Combine Chamber Construction (CHO 752 to 775)	30	29-Apr-23 A	28-Aug-23	-433	WD(6d)
S8P8b-7102	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling (CHO 550 to 553)	48	20-Sep-23	17-Nov-23	-488	WD(6d)
S8P8b-7100	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling (CHO 553 to 569)	24	23-Aug-23	19-Sep-23	-488	WD(6d)
S8P8b-7130	Ho Sheung Heung Road Fresh water main - Excavation, Laying Pipes and Backfilling(CHO 720 to 760)	48	29-Aug-23	26-Oct-23	-433	WD(6d)
S8P8b-8190	Ho Sheung Heung Road Fresh water main - Expose existing Watermain & Liase with WSD	24	15-Aug-23	11-Sep-23	-289	WD(6d)
S8P8b-8180	Ho Sheung Heung Road Fresh water main - Implement TTA to Expose existing Watermain for Connection	12	01-Aug-23*	14-Aug-23	-289	WD(6d)
S8P8b-7094	Preparation & Implement TTA (CHO 553 to 569)	8	14-Aug-23	22-Aug-23	-488	WD(6d)
S8P8b-7092	Preparation, Submission, Approval of TTA (CHO 553 to 569)	17	05-May-23 A	12-Aug-23	-488	WD(6d)
Section 9						
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)						
Soil Treatment						
S9P12-3030	Approval of CIA, Tunnel Monitoring Proposal and Analysis	23	18-May-23 A	16-Aug-23	-599	CD(7d)
S9P12-3050	Excavate to Formation Level (after set up for Tunnel Monitoring)	48	05-Sep-23	02-Nov-23	-483	WD(6d)
S9P12-3040	Installation of Tunnel Monitoring Instrumentation	36	25-Jul-23	04-Sep-23	-483	WD(6d)
Section 10B						
Portion 15 in Area J1 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S10BP7-1020	Site clearance	6	15-Aug-23	21-Aug-23	-116	WD(6d)
Soil Treatment						



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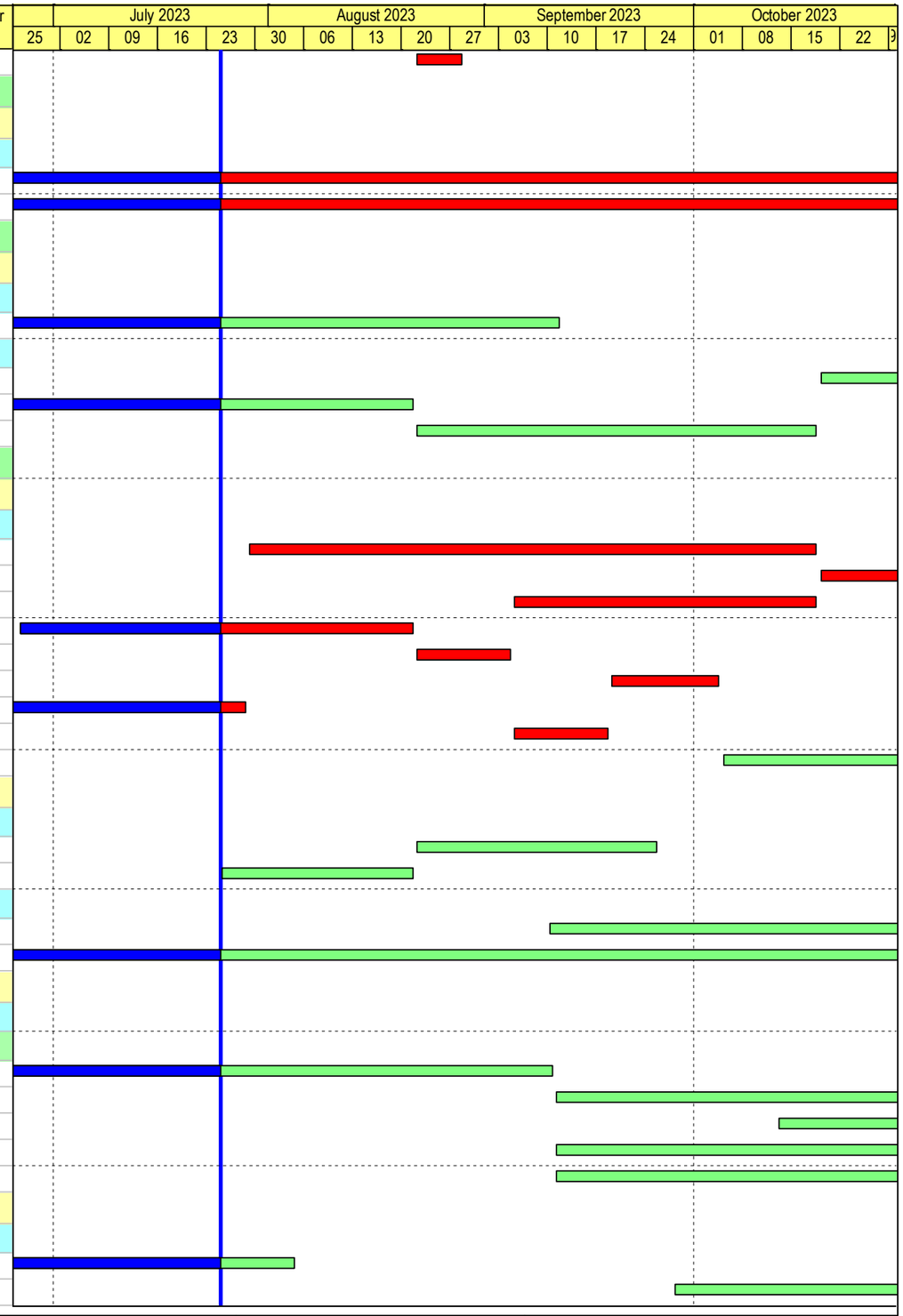
S10BP7-2020	Site formation Works	6	22-Aug-23	28-Aug-23	-116	WD(6d)
Section 11						
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)						
Operation and Dismantling of the Soil Treatment Plant						
S11P6b-3010	Provide treatment to high arsenic-containing soil	482	03-Dec-20 A	08-Mar-25*	-24	WD(6d)
S11P6b-3000	Provide treatment to Imported high arsenic-containing soil (Estimated Qty 90,000m3)	429	01-Mar-23 A	31-Dec-24	-24	WD(6d)
Section 12A						
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)						
Soil Treatment						
S12P10b-2020	Backfilling to the formation levels	42	25-Mar-23 A	11-Sep-23	686	WD(6d)
Civil Work						
S12P10b-3014	Laying Underground Fresh & Flushing Watermains	48	19-Oct-23	14-Dec-23	83	WD(6d)
S12P10b-3010	Underground Primary Drainage & Sewerage (1 / 1 SM/H, 0 / 1 FMH) Before DCS Works	24	13-Oct-21 A	21-Aug-23	83	WD(6d)
S12P10b-3012	Underground Secondary Drainage work (0 / 2 SM/H)	48	22-Aug-23	18-Oct-23	83	WD(6d)
Section 13						
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)						
Civil Works						
S13P2- 6050	East Quadrant - Tree Felling, Slope KS39, Draiange & Road Works	68	29-Jul-23	18-Oct-23	-24	WD(6d)
S13P2- 4060	East Quadrant - Reconstruct existing slope KS40 and 2SE-B/C171	94	19-Oct-23	09-Feb-24	-24	WD(6d)
S13P2- 6060	New Feature KS39 - Slope Drainage	36	05-Sep-23	18-Oct-23	-24	WD(6d)
S13P2- 4030.00	Retaining Wall KW37 - Backfill to Formation level	24	26-Jun-23 A	21-Aug-23	-24	WD(6d)
S13P2- 4030.10	Retaining Wall KW37 - Drainage Works	12	22-Aug-23	04-Sep-23	-24	WD(6d)
S13P2- 4048	West Quadrant - Remaining Installation of smart road lightings system	12	19-Sep-23	04-Oct-23	-22	WD(6d)
S13P2- 4020.06	West Quadrant - Construction of Footpath & Installation of smart road lighting system	4	01-Apr-23 A	28-Jul-23	-24	WD(6d)
S13P2- 4034.06	West Quadrant - Construction of Footpath (After Remaining Draiange & Backfilling KW37)	12	05-Sep-23	18-Sep-23	-24	WD(6d)
S13P2- 4050.00	West Quadrant - Road Widening Works along Kwu Tung Road	60	05-Oct-23	14-Dec-23	22	WD(6d)
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)						
Soil Treatment						
S13P1a-2020	Backfilling to the formation levels	30	22-Aug-23	25-Sep-23	199	WD(6d)
S13P1a-2010	Remove soil (original assumed 14182m3) (0 / 4 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	25-Jul-23*	21-Aug-23	134	WD(6d)
Civil Work						
S13P1a-4000	Road D1 - DCS Works by Others (Anticipated Commencement Date 10-Sep-2023)	120	10-Sep-23*	07-Jan-24	511	CD(7d)
S13P1a-3012	Underground Primary Drainage work SMH KT1015 - KT1013 pipe connection (0 / 4 MH Completed)	119	20-Apr-23 A	13-Dec-23	134	WD(6d)
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)						
Civil Work						
Underground Utilities						
S13P7-4000	DCS Works by Others	48	10-Feb-23 A	10-Sep-23	422	CD(7d)
S13P7-4010	Underground drainage After DCS Works (0 / 6 M/H completed)	72	11-Sep-23	06-Dec-23	420	WD(6d)
S13P7-3014	Underground road lighting ducts	150	13-Oct-23	17-Apr-24	342	WD(6d)
S13P7-3012	Underground sewage (0 / 4 M/H completed)	150	11-Sep-23	13-Mar-24	342	WD(6d)
S13P7-3013	Underground watermains	156	11-Sep-23	20-Mar-24	342	WD(6d)
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)						
Civil Work						
S13P1b-3012	Construction of Sewerage (1 / 1 MH complete)	10	30-Dec-22 A	04-Aug-23	204	WD(6d)
S13P1b-4000	DCS Works by Others (Anticipated Commencement Date 29-Aug-2023)	120	28-Sep-23	25-Jan-24	200	CD(7d)



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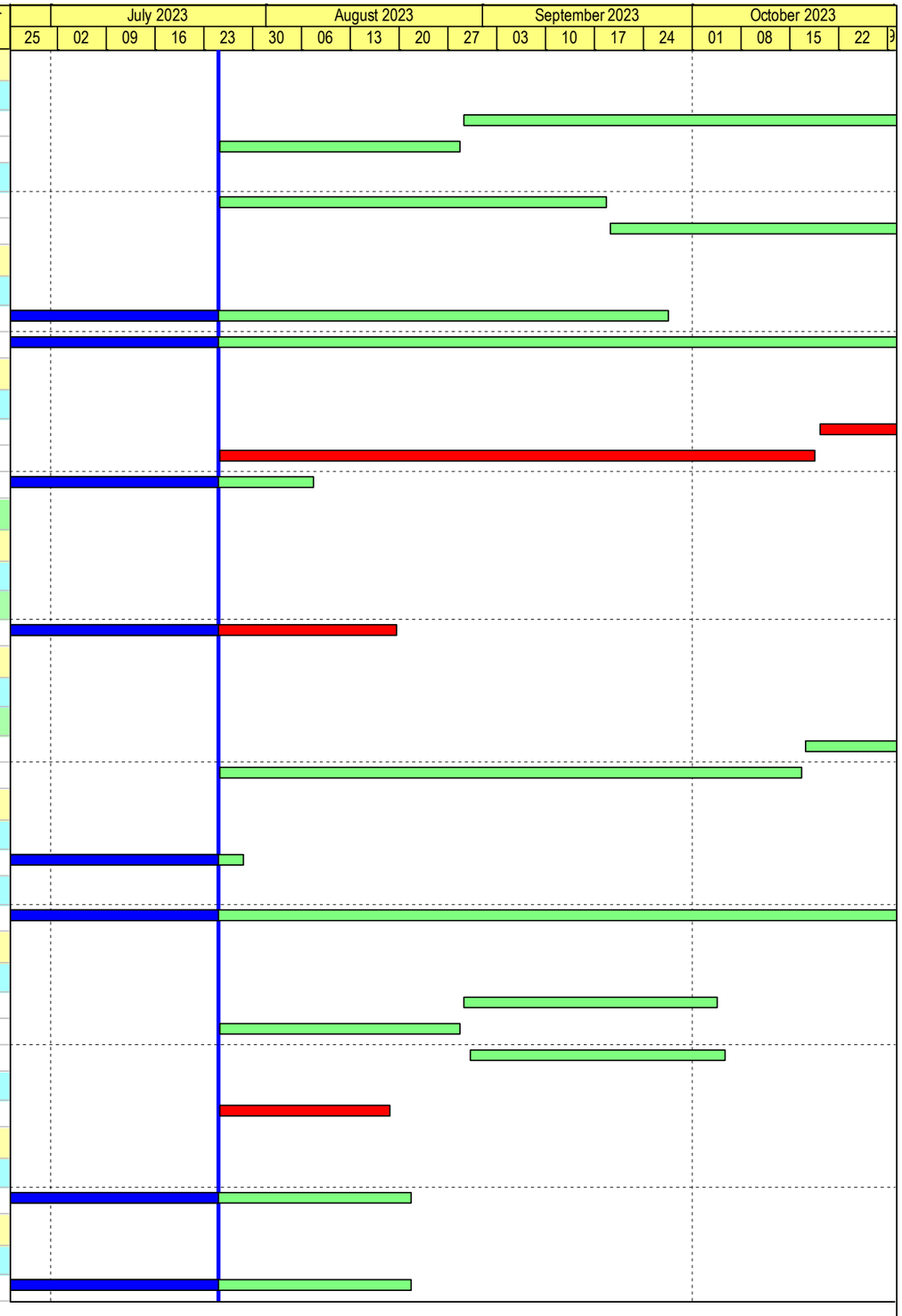
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Soil Treatment						
S13P6a-2020	Backfilling to the formation levels	60	29-Aug-23	09-Nov-23	936	WD(6d)
S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	30	25-Jul-23*	28-Aug-23	428	WD(6d)
Civil Work						
S13P6a-3012	Pipe Jacking across DJ watermain (CNE 060, EC-1086) - Jacking Pit ELS & Excavation	48	25-Jul-23*	18-Sep-23	1	WD(6d)
S13P6a-3012.00	Pipe Jacking across DJ watermain (CNE 060, EC-1086) - Receiving Pit ELS & Excavation	48	19-Sep-23	16-Nov-23	1	WD(6d)
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)						
Civil Work						
S13P1c-4000	DCS Works by Others (Anticipated Commencement Date 29-May-2023)	65	29-May-23 A	27-Sep-23	142	CD(7d)
S13P1c-3010.06	Laying of Fresh Watermain CH I & Flushing Watermain CH DA	54	10-May-23 A	02-Dec-23	113	WD(6d)
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Civil Work						
S13P9a-3084	Additional Noise barrier NB04 - Footing Construction (0 / 5 bays complete)	72	19-Oct-23	15-Jan-24	-12	WD(6d)
S13P9a-3082	Additional Noise barrier NB04 - Piling Works (0 / 30 Mini H piles complete)	72	25-Jul-23*	18-Oct-23	-12	WD(6d)
S13P9a-3012	Construct Underground Sewerage (0 / 2 MH Complete)	12	15-May-23 A	07-Aug-23	48	WD(6d)
Section 14						
Portion 10a in Area H1 (Soil Treatment, UU Diversion & Construction Access to MWSC)						
KD5 - Provision of construction access in Area H1 and between Area H1 and Multi-Welfare Services Com						
Civil Work						
S14P7T-3020	Construct temporary noise barrier along Castle Peak Road in Area H1 & Remaining Area T3	23	15-Jun-23 A	19-Aug-23	-101	WD(6d)
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	17-Oct-23	09-Apr-24	470	WD(6d)
S14P7P-2010	Remove soil (original assumed 17368m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	70	25-Jul-23*	16-Oct-23	470	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	28-Jul-23	161	WD(6d)
Operation and Dismantling of the Soil Treatment Plant						
S14P7S3-3010	Stock Pile of Treated Soil	365	20-Nov-20 A	19-Oct-24	161	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	29-Aug-23	04-Oct-23	667	WD(6d)
S14P7T-1020	Site clearance (Area T1)	30	25-Jul-23	28-Aug-23	667	WD(6d)
S14P7T-1024	Tree felling works (Area T1)	30	30-Aug-23	05-Oct-23	667	WD(6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J						
S14P7T-3010	Construct temporary noise barrier along Castle Peak Road in Area T1 (50m) & Remaining Area T2 (To be deleted)	22	25-Jul-23	18-Aug-23	-100	WD(6d)
Portion 1b in Area S2 (Soil Treatment)						
Soil Treatment						
S14P1b-2020	Site Formation Works & Erecting Hoarding	24	03-Apr-23 A	21-Aug-23	704	WD(6d)
Portion 1c & 9a in Area S2 (Soil Treatment)						
Soil Treatment						
S14P1c-2020	Backfilling to the formation levels	24	27-Jan-23 A	21-Aug-23	704	WD(6d)



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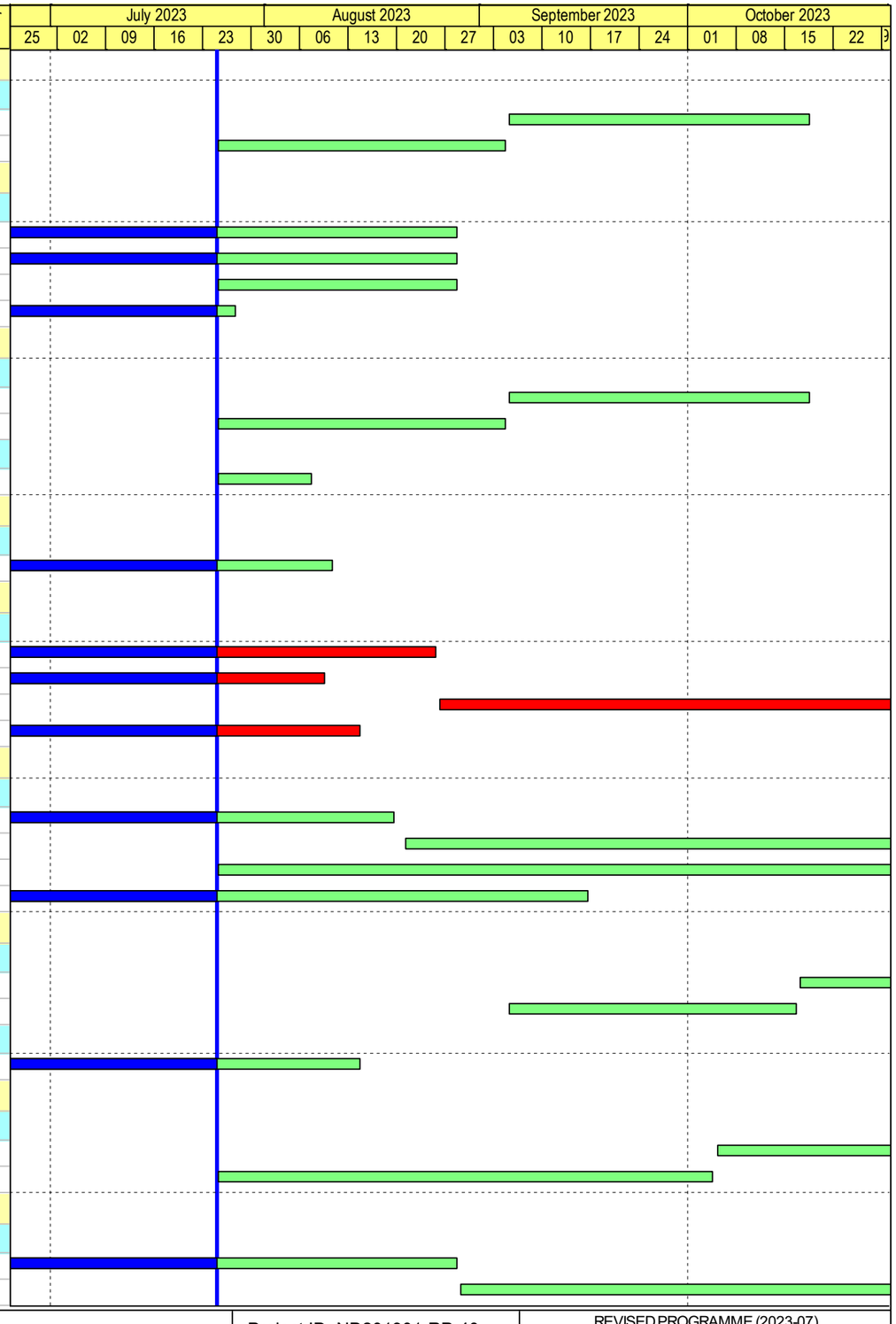
Portion 6a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6a-1050	Arsenic Treatment Plan	36	05-Sep-23	18-Oct-23	362	WD(6d)
S14P6a-1040	Prepare Arsenic Assessment Report	36	25-Jul-23	04-Sep-23	362	WD(6d)
Portion 6b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6b-1050	Arsenic Treatment Plan	30	02-May-22 A	28-Aug-23	404	WD(6d)
S14P6b-1040	Prepare Arsenic Assessment Report	30	02-May-22 A	28-Aug-23	404	WD(6d)
S14P6b-1017	Tree felling	30	25-Jul-23	28-Aug-23	404	WD(6d)
S14P6b-1060	Trial Pit to Determine Soil Stability (4 Nos)	3	06-Jun-23 A	27-Jul-23	1023	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	05-Sep-23	18-Oct-23	422	WD(6d)
S14P1f-1040	Prepare Arsenic Assessment Report	36	25-Jul-23	04-Sep-23	422	WD(6d)
Interim Community Liaison Centre (CLC)						
S14P1f-2040	Dismanlting of interim CLC	12	25-Jul-23	07-Aug-23	422	WD(6d)
Portion 9c in Area S1 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P9c-1014	Tree felling	15	19-Jul-21 A	10-Aug-23	329	WD(6d)
Portion 13 in Area S4 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P13-1012	Approval & Acceptance of Tree felling Application	28	23-May-23 A	25-Aug-23	-18	WD(6d)
S14P13-1030	Environmental ground investigation and laboratory test (2 / 7 EGI completed)	14	10-Feb-23 A	09-Aug-23	-4	WD(6d)
S14P13-1020	Remaining Site clearance & Tree felling	70	26-Aug-23	18-Nov-23	-18	WD(6d)
S14P13-1014	Site clearance	18	15-May-23 A	14-Aug-23	-8	WD(6d)
Cycle Track from Area H to Area N						
Underground Utilities underneath Cycle Track						
S14CT-1010	Construct Underground Primary Drainage in Portion 7 (0 / 1 MH completed)	23	12-Jun-23 A	19-Aug-23	5	WD(6d)
S14CT-1010.04	Construct Underground Sewerage in Portion 7 (0 / 2 MH completed)	90	21-Aug-23	06-Dec-23	5	WD(6d)
S14CT-1028	Laying Underground Watermain in Portion 5 - Stage 1	90	25-Jul-23*	09-Nov-23	130	WD(6d)
S14CT-1044	Laying Underground Watermain in Portion 9a	47	12-May-23 A	16-Sep-23	428	WD(6d)
Portion 1b (Soil Treatment & Civil Works)						
Soil Treatment						
S14P1b-1204	Backfilling to the formation levels	100	17-Oct-23	17-Feb-24	461	WD(6d)
S14P1b-1202	Remove soil (original assumed 4992m3) (0 / 4 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	34	05-Sep-23	16-Oct-23	388	WD(6d)
Civil Works						
S14P1b-1314	Laying Underground Watermain	18	16-Jun-23 A	14-Aug-23	613	WD(6d)
Portion 3 (Soil Treatment & Civil Works)						
Civil Works						
S14P3-1304	Pressure test for Fresh & Flushing watermains	30	05-Oct-23	09-Nov-23	638	WD(6d)
S14P3-1302	Underground Fresh & Flushing watermains (around 100m)	60	25-Jul-23	04-Oct-23	571	WD(6d)
Portion 5 (Soil Treatment & Civil Works)						
Civil Works						
S14P5-1300	Underground Drainage (1 / 2 MH completed)	30	16-Dec-22 A	28-Aug-23	460	WD(6d)
S14P5-1302	Underground Fresh & Flushing watermains (around 100m)	60	29-Aug-23	09-Nov-23	460	WD(6d)



Build King – Richwell Engineering Joint Venture

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ND/2019/01 - 3 Month Rolling Programme (2023-07)

Data Date: 25-Jul-23

Run Date: 31-Jul-2023

Project ID: ND201901-RP-40
Layout: ND201901-3MRP with logo For Edward

REVISED PROGRAMME (2023-07)

Date	Revision	Checked	Approved
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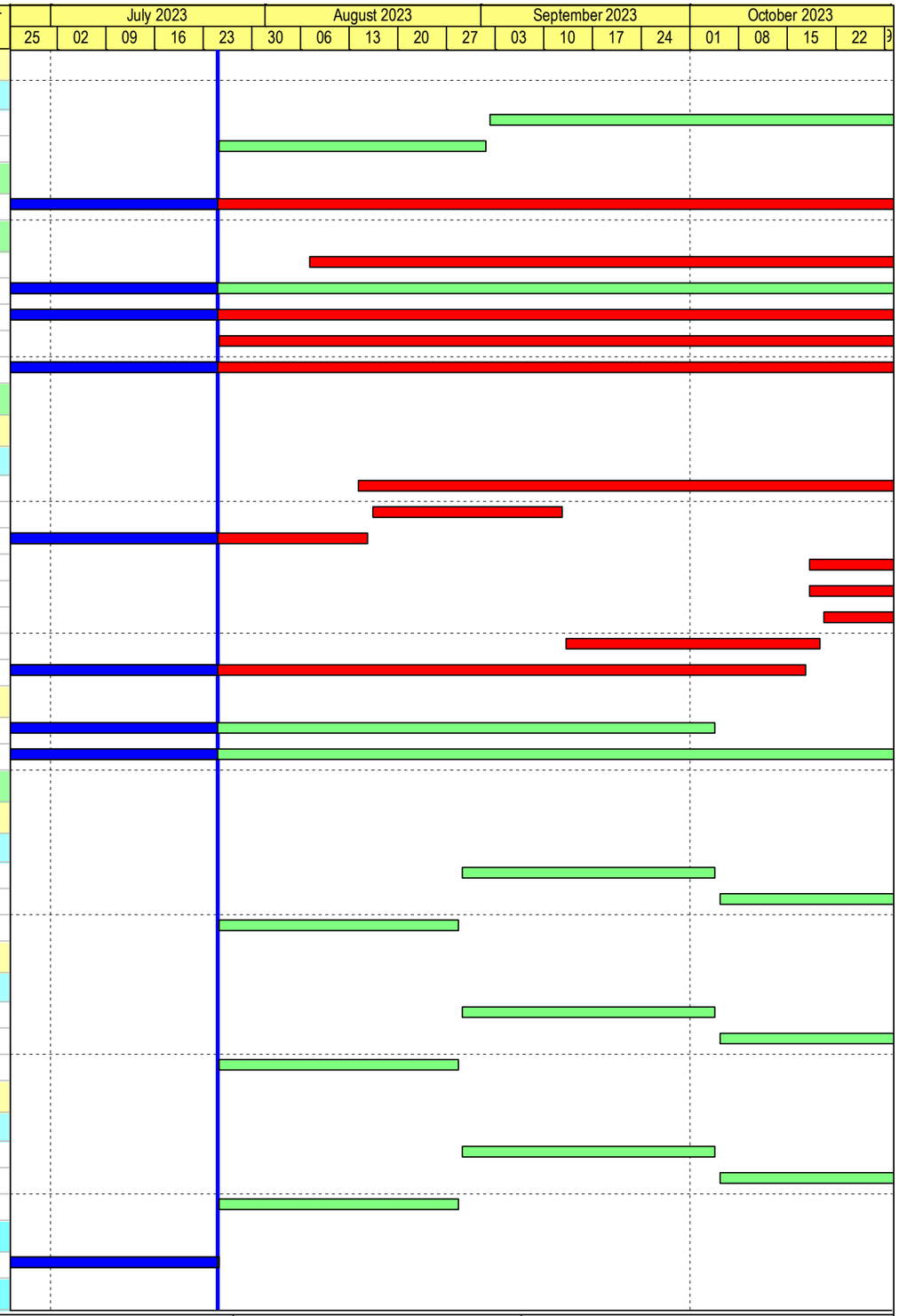
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Portion 1e (Soil Treatment)						
Soil Treatment						
S14P1e-2080	Backfilling to the formation levels	90	02-Sep-23	19-Dec-23	604	WD(6d)
S14P1e-2070	Remove soil (original assumed 860m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	34	25-Jul-23	01-Sep-23	424	WD(6d)
Section 15						
S15-1000	Presevation and protection of tree	900	06-Dec-19 A	09-Jan-26	-3	CD(7d)
Section 18 (Subject to excision)						
S18-1030	Watermain laying work in Portion 3	72	07-Aug-23	01-Nov-23	-108	WD(6d)
S18-1040	Watermain laying work in Portion 5	140	20-Sep-21 A	13-May-24	32	WD(6d)
S18-1050	Watermain laying work in Portion 6a & 6b	150	18-Jul-22 A	31-Aug-24	-224	WD(6d)
S18-1075	Watermain laying work in Portion 8a	350	25-Jul-23	25-Sep-24	-132	WD(6d)
S18-1070	Watermain laying work in Portion 9b	236	12-Jan-23 A	14-Apr-25	-339	WD(6d)
Section 20 (Subject to excision)						
Construction of Pedestrian Subway cum Cycle Track Stage 2 (South of Castle Peak Road)						
Civil and Structural Works						
S20S2-7320.40	Bay No. 1 to 3 - Site Formation	66	14-Aug-23	01-Nov-23	-737	WD(6d)
S20S2-7462	Bay No. 10 - RC Structure (Walls)	24	16-Aug-23	12-Sep-23	-309	WD(6d)
S20S2-7482	Bay No. 11 - RC Structure (Walls)	19	03-Apr-23 A	15-Aug-23	-309	WD(6d)
S20S2-7810	Bay No. 14 - Excavation, Blinding & Waterproofing	15	18-Oct-23	04-Nov-23	-716	WD(6d)
S20S2-7320.10	Bay No. 4 to 8 - Prebored For Sheet Piling	48	18-Oct-23	13-Dec-23	-767	WD(6d)
S20S2-7504	Bay No. 9a - Excavation, Blinding & Waterproofing	10	20-Oct-23	01-Nov-23	-309	WD(6d)
S20S2-7502	Bay No. 9b - RC Structure (Walls)	30	13-Sep-23	19-Oct-23	-309	WD(6d)
S20S2-7320	ELS, Excavation & UU suspension works for subway	70	28-Apr-22 A	17-Oct-23	-767	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	04-Oct-23	408	CD(7d)
S20ELF-1020	Submission and Approval of Lighting, E&M plants & materials	54	17-Feb-23 A	27-Nov-23	408	CD(7d)
Section 21 (Subject to excision)						
Portion 1b in Area M (Soil Treatment)						
Preparation work						
S21P1b-1012	Approval & Acceptance of Tree felling Application	30	29-Aug-23	04-Oct-23	227	WD(6d)
S21P1b-1020	Site Clearance & Tree Felling	60	05-Oct-23	14-Dec-23	227	WD(6d)
S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	25-Jul-23	28-Aug-23	227	WD(6d)
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)						
Preparation work						
S21P1d-1012	Approval & Acceptance of Tree felling Application	30	29-Aug-23	04-Oct-23	227	WD(6d)
S21P1d-1020	Site Clearance & Tree Felling	60	05-Oct-23	14-Dec-23	227	WD(6d)
S21P1d-1010	Tree survey and prepare tree felling and transplant report	30	25-Jul-23	28-Aug-23	227	WD(6d)
Portion 11a in Area M (Soil Treatment)						
Preparation work						
S21P11a-1012	Approval & Acceptance of Tree felling Application	30	29-Aug-23	04-Oct-23	222	WD(6d)
S21P11a-1020	Site Clearance & Tree Felling	60	05-Oct-23	14-Dec-23	222	WD(6d)
S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	25-Jul-23	28-Aug-23	222	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-Jul-23	280	CD(7d)
9.0 - Major EWN / CNE						



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ND/2019/01 - 3 Month Rolling Programme (2023-07)

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REVISED PROGRAMME (2023-07)			
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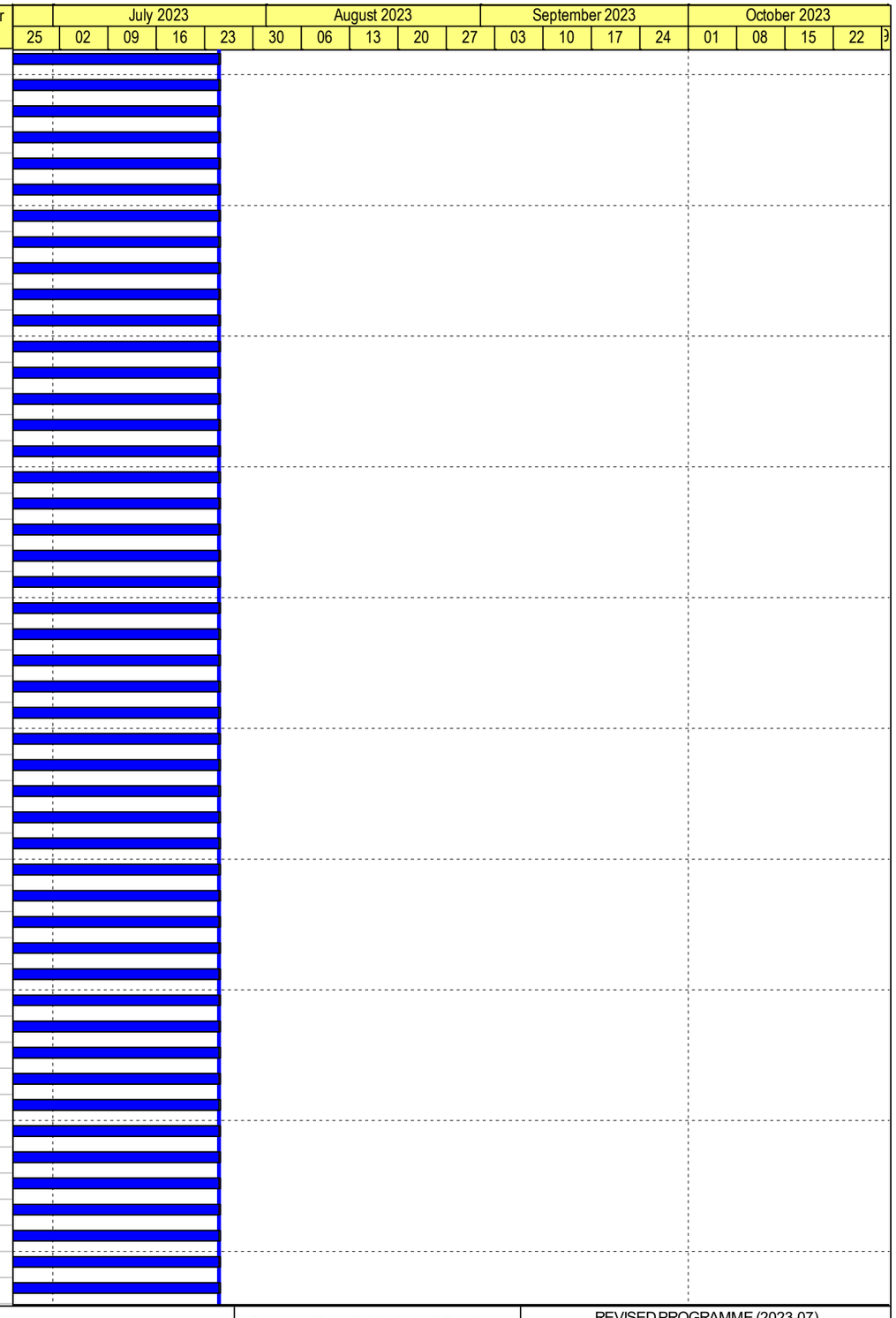
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
EC-1120	Additional Reqm'ts for Demolition of Temp Structures Existing Sawmill Area S2 Portion 1C (CNE 091) (CE 259)	0	25-Oct-22 A	25-Jul-23	565	CD(7d)
EC-1129	Additional Requirements for all the Lifting Operations within the Working Areas (EWN 086)	0	13-Feb-23 A	25-Jul-23	1026	WD(6d)
EC-1089	Additional Sewerage Pipes clash with the Proposed Watermains along Road D4 and D5 (EWN 065)	0	27-Apr-22 A	25-Jul-23	-290	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-Jul-23	-605	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-Jul-23	-567	CD(7d)
EC-1068	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0	02-Dec-21 A	25-Jul-23	-239	CD(7d)
EC-1130	Conflict between the Existing Underground Utilities with the Proposed Pak Shek Au Pedestrain Subway (CNE 097)	0	03-Jan-23 A	25-Jul-23	-570	WD(6d)
EC-1079	Delay in Supply of Precast Concrete Pipe due to the Severe Outbreak of Omicron (EWN 056)	0	16-Feb-22 A	25-Jul-23	1262	CD(7d)
EC-1045	Delay in the Access to and Use of Portion 1b of the Site (CNE 033) (CE 107)	0	06-Jul-21 A	25-Jul-23	280	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-Jul-23	-950	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-Jul-23	-336	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-Jul-23	-439	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-Jul-23	-336	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)	0	19-Jul-22 A	25-Jul-23	-336	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-Jul-23	-567	CD(7d)
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-Jul-23	-199	CD(7d)
EC-1088	Design Changes to the Permanent Street Lighting Works (CNE 074)	0	04-Mar-22 A	25-Jul-23	1262	CD(7d)
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-Jul-23	-567	CD(7d)
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-Jul-23	-290	CD(7d)
EC-1137	Discrepancies between BQ and Contract Dwgs Cycle Track Subway Mass Concrete Fill for protection of WP Membrane (CNE 1	0	28-Feb-23 A	25-Jul-23	-309	WD(6d)
EC-1049	Entrustment of Works for Installation of District Cooling System (DCS) pipelines along Road D4-1 (EWN 033)	0	18-Aug-21 A	25-Jul-23	-460	CD(7d)
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-Jul-23	-127	CD(7d)
EC-1122	Further Changes to the Works Information for the Construction of DCS Pipes at Road D4-1 (PMI 155 CE157) (CNE 095)	0	08-Nov-22 A	25-Jul-23	107	CD(7d)
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Jul-23	1262	CD(7d)
EC-1027	Handling of Unlawful Occupied Property Affected by the Works within the SIte (CNE No. 015)	0	31-Aug-20 A	25-Jul-23	1262	CD(7d)
EC-1106	Inclemant Weather in June 2022 (CNE 080) (CE 216)	0	02-Jun-22 A	25-Jul-23	1262	CD(7d)
EC-1112	Inclement Weather in August 2022 (CNE 087) (CE 236)	0	03-Aug-22 A	25-Jul-23	1262	CD(7d)
EC-1108	Inclement Weather in July 2022 (CNE 082) (CE 227)	0	02-Jul-22 A	25-Jul-23	1262	CD(7d)
EC-1104	Inclement Weather in May 2022 (CNE 078) (CE 212)	0	11-May-22 A	25-Jul-23	1262	CD(7d)
EC-1116	Inclement Weather in October 2022 (CNE 093) (CE 273)	0	07-Oct-22 A	25-Jul-23	1262	CD(7d)
EC-1114	Inclement Weather in September 2022 (CNE 089) (CE 244)	0	19-Sep-22 A	25-Jul-23	1262	CD(7d)
EC-1056	Inclement Weather on 8th October 2021 (CNE 036) (CE 163)	0	08-Oct-21 A	25-Jul-23	1262	CD(7d)
EC-1092	Increased Difficulty for the Construction of Pak Shek Au Pedestrian Subway Cum Cycle Track at Portion 2 (EWN 068)	0	25-May-22 A	25-Jul-23	-543	CD(7d)
EC-1086	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0	31-Mar-22 A	25-Jul-23	-567	CD(7d)
EC-1118	Increased Risk for Suspension of Pipe Jacking Flushing Watermains underneath MTRC Zone Portion 8b (EWN 080) (CNE 092)	0	18-Oct-22 A	25-Jul-23	-389	CD(7d)
EC-1117	Insufficient Design Information and Construction Details for the Works of Tentative NB02 (EWN 079) (CNE 090)	0	17-Oct-22 A	25-Jul-23	-131	CD(7d)
EC-1070	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0	04-Jan-22 A	25-Jul-23	-199	CD(7d)
EC-1038	Late Access to and Use of Site of Portion 1e (EWN 024) (CNE 25) (CE 075)	0	06-Apr-21 A	25-Jul-23	-145	CD(7d)
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-Jul-23	1262	CD(7d)
EC-1005	Late Possession of Site of Portion 3 (CNE No. 005) (CE 015)	0	06-Apr-20 A	25-Jul-23	-176	CD(7d)
EC-1015	Late Possession of Site of Portions 1d & 11a (CNE No. 009) (CE 026)	0	06-Jul-20 A	25-Jul-23	274	CD(7d)
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-Jul-23	-439	CD(7d)
EC-1003	Late Possession of Site of Portions 9c (CNE No. 003) (CE 013)	0	06-Apr-20 A	25-Jul-23	-77	CD(7d)
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-Jul-23	-109	WD(6d)
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-Jul-23	-95	CD(7d)
EC-1080	Possible Suspension of Concrete Supply due to the Severe Outbreak of COVID-19 (EWN 059)	0	02-Mar-22 A	25-Jul-23	1262	CD(7d)
EC-1094	Potential Changes of the Scope of Noise Barriers (AECOM EWN PM-003)	0	23-May-22 A	25-Jul-23	-172	CD(7d)
EC-1123	Potential Delay due to Aggregate Supply Chain Shortage before Chinese New Year 2023 (EWN 082)	0	22-Nov-22 A	25-Jul-23	1262	CD(7d)



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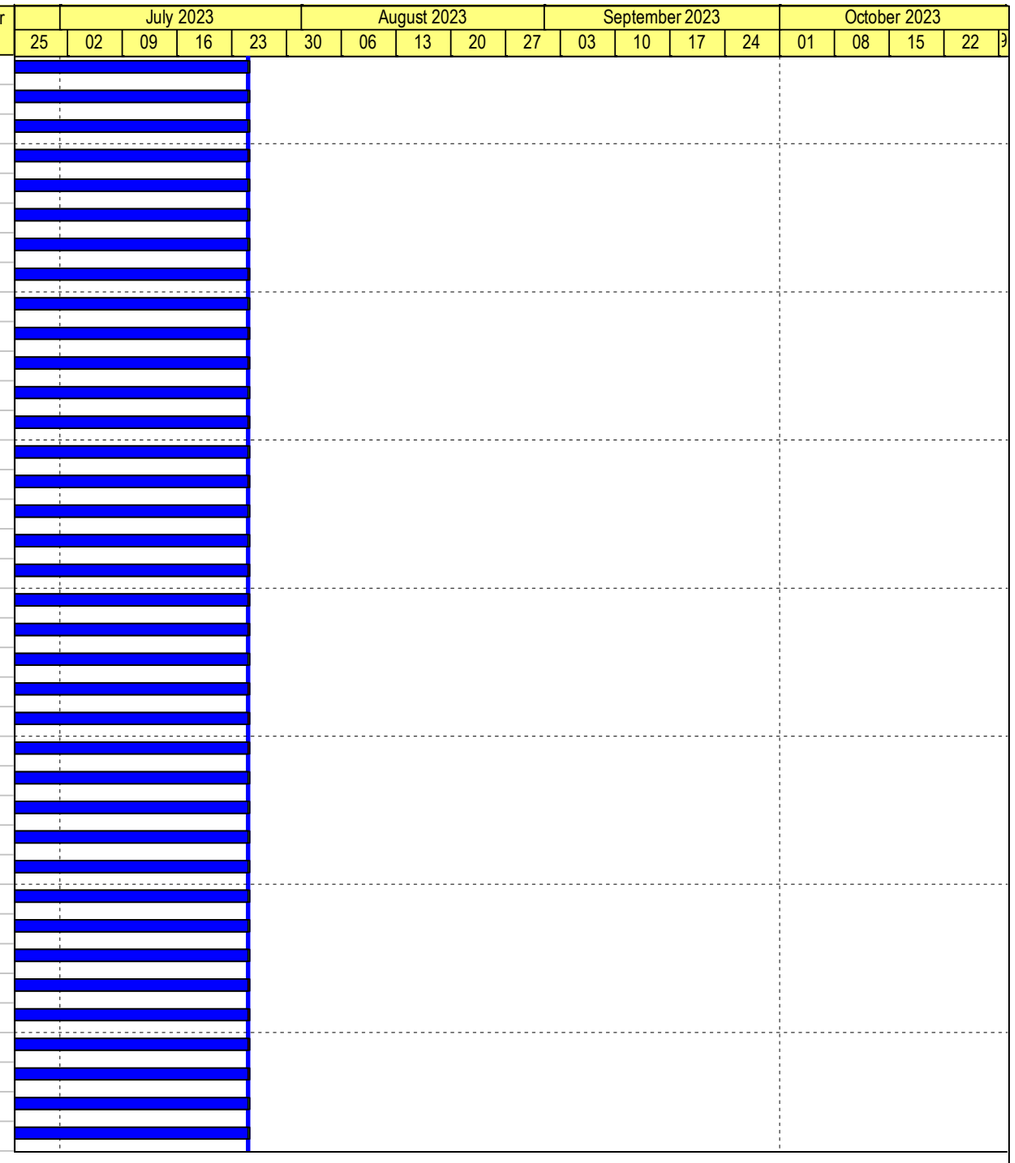
EC-1128	Potential Delay due to Shortage Supply of Manpower after Chinese New Year 2023 (EWN 085)	0	18-Jan-23 A	25-Jul-23	1026	WD(6d)
EC-1124	Potential Delay due to the Increased Difficulties and Uncertainties in Conc Supply in Coming Years (EWN 084) (CNE 100)	0	14-Dec-22 A	25-Jul-23	1262	CD(7d)
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0	06-Oct-21 A	25-Jul-23	32	CD(7d)
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-Jul-23	-64	CD(7d)
EC-1063	Potential Late Access to and Use of the Site (Portions 13) (EWN 50) (CNE 057)	0	13-Dec-21 A	25-Jul-23	1262	CD(7d)
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-Jul-23	56	CD(7d)
EC-1110	Provision of Fill Materials for Contract Nos. ND/2019/05 and ND/2019/07 (CNE 084)	0	17-Aug-22 A	25-Jul-23	1262	CD(7d)
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-Jul-23	-459	WD(6d)
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-Jul-23	1026	WD(6d)
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-Jul-23	-205	CD(7d)
EC-1071	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0	14-Dec-21 A	25-Jul-23	-64	CD(7d)
EC-1138	Revised Drawings for the Construction of Street Furniture in various Positions of the Site (CNE 108)	0	15-Mar-23 A	25-Jul-23	1026	WD(6d)
EC-1132	Revised Drawings for the Noise Barrier NB02 in Portion 6a of the Site (CNE 101)	0	03-Jan-23 A	25-Jul-23	-104	WD(6d)
EC-1119	Revised Noise Barrier Works at Road D3 in Portion 1C of the Site (EWN 081)	0	19-Oct-22 A	25-Jul-23	248	CD(7d)
EC-1109	Revised Sewerage System along Road D4 and D5 at Portion 9b of the Site (CNE 083)	0	02-Aug-22 A	25-Jul-23	-439	CD(7d)
EC-1066	Shortage of Aggregate Supply before Chinese New Year 2022 (CNE 048) (EWN 001.6, 001.8)	0	29-Nov-21 A	25-Jul-23	1262	CD(7d)
EC-1052	Shortage of Cement Supply due to "Energy Consumption Dual Control Policy" (EWN 039) (CNE 049)	0	06-Oct-21 A	25-Jul-23	1262	CD(7d)
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-Jul-23	-455	WD(6d)
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-Jul-23	-351	CD(7d)
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-Jul-23	-498	CD(7d)
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-Jul-23	1262	CD(7d)
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-Jul-23	-88	CD(7d)
EC-1002	Suspension of Works at Part of Portions 5 & 6a (in Area A, N & C1) (CNE No. 002) (EWN No. 004) (CE 018)	0	09-Mar-20 A	25-Jul-23	-460	CD(7d)
EC-1022	Suspension of Works at Part of Portions 9c (CNE no. 010) (CE 030)	0	21-Jul-20 A	25-Jul-23	-77	CD(7d)
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-Jul-23	565	CD(7d)
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-Jul-23	1262	CD(7d)
EC-1105	Tropical Cyclone Warning Signal No.8 from 1st to 2nd July 2022 (CNE 079) (CE 214)	0	01-Jul-22 A	25-Jul-23	1262	CD(7d)
EC-1113	Tropical Cyclone Warning Signal No.8 from 24th to 25th Auguest 2022 (CNE 086) (CE 232)	0	24-Aug-22 A	25-Jul-23	1262	CD(7d)
EC-1121	Tropical Cyclone Warning Signal No.8 from 2nd to 3rd November 2022 (CNE 094) (CE 274)	0	02-Nov-22 A	25-Jul-23	1262	CD(7d)
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040) (CE 165)	0	12-Oct-21 A	25-Jul-23	1262	CD(7d)
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039) (CE 164)	0	09-Oct-21 A	25-Jul-23	1262	CD(7d)
EC-1134	Unavailability for Provision of Access to and Use of Portions 15 of the Site (CNE 104)	0	06-Jan-23 A	25-Jul-23	-98	WD(6d)
EC-1072	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0	29-Dec-21 A	25-Jul-23	-595	CD(7d)
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-Jul-23	-447	WD(6d)
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-Jul-23	-447	WD(6d)
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038) (CNE 049)	0	27-Sep-21 A	25-Jul-23	423	CD(7d)
EC-1075	Works affecred by the Sever Outbreak of Omicron (CNE 073) (EWN 058)	0	25-Feb-22 A	25-Jul-23	1262	CD(7d)



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 (2023-07)

Data Date: 25-Jul-23

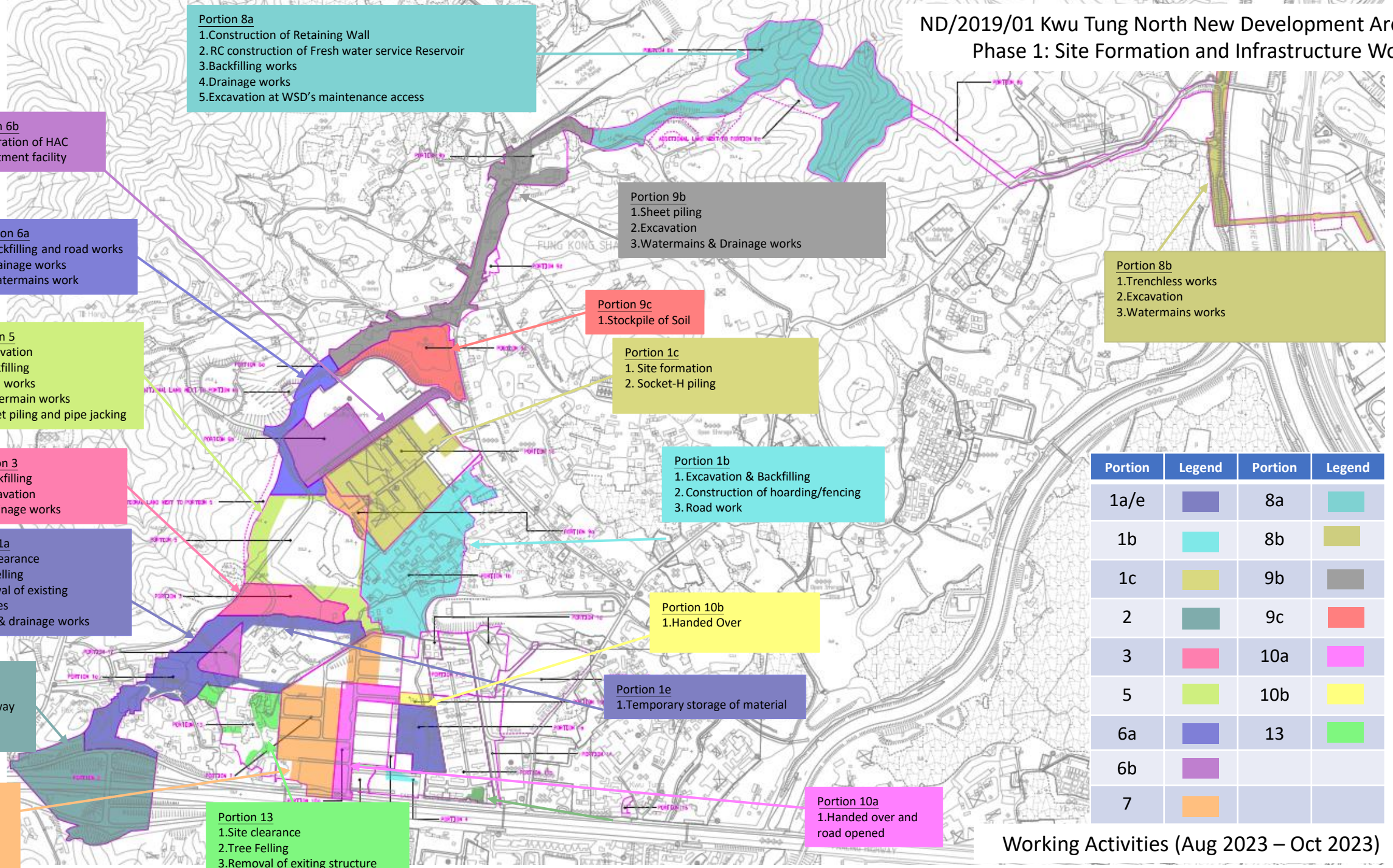
Run Date: 31-Jul-2023

Project ID: ND201901-RP-40
Layout: ND201901-3MRP with logo For Edward

REVISED PROGRAMME (2023-07)

Date	Revision	Checked	Approved
31-Jul-23	Rev. 0	SC	BY

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



Portion	Legend	Portion	Legend
1a/e		8a	
1b		8b	
1c		9b	
2		9c	
3		10a	
5		10b	
6a		13	
6b			
7			

Working Activities (Aug 2023 – Oct 2023)

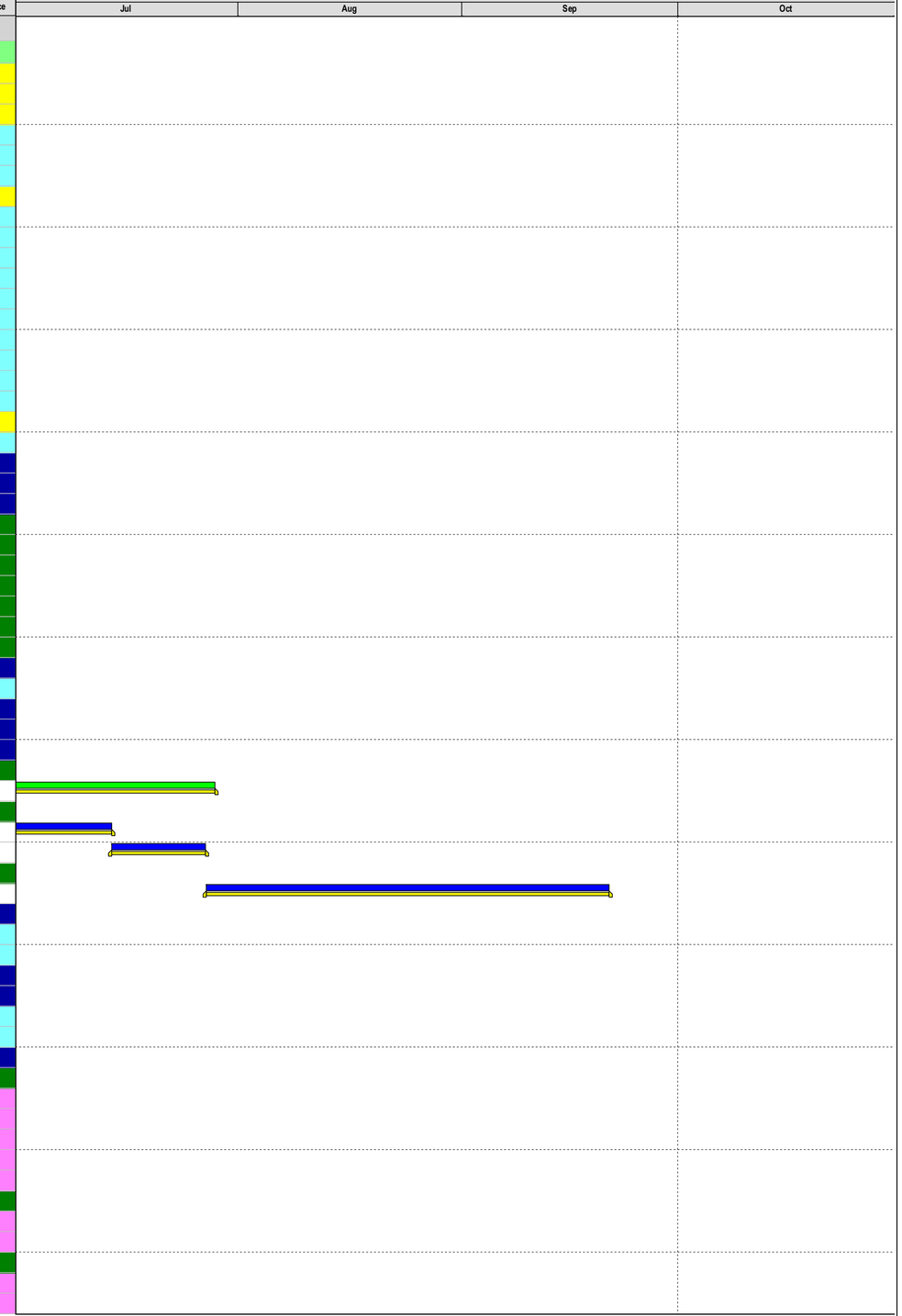
Construction Programme of ND/2019/02

俊和－群利聯營體
CW – KL JV

ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

AECOM

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
1		ND-2019-02 KTNNDA Phase 1:Roads and Drains between Kwu Tung North New Development & Shek Wu Hui	215	215	30-Jun-2023 A	30-Jan-2024	694	
2		Programme Data	215	215	30-Jun-2023 A	30-Jan-2024	694	
3		Date for commencement	0	0			0	
4		Access Dates	0	0			0	
5		Completion Obligation	0	0			0	
6		The Whole of the Works	0	0			0	
7		Sectional Completion	0	0			0	
8		Specified Parts of the works	0	0			0	
9		Compensation Event	0	0			0	
10		CE-017 Unforseen Ground Condition At Footbridge FK2	0	0			0	
11		CE-018 Unforseen Ground Condition At Visitor Center	0	0			0	
12		CE-023 Revised Alignment for Drainage and Sewerage Pipes outside Future CLP ESS Site	0	0			0	
13		CE-026 Stage 1 Advanced Works for Extension of Cycle Track Outside Dills Corner Garden	0	0			0	
14		CE-067 Revised Alignment for drainage at DSD maintenance access (SMH_KT6005A to OF 6013)	0	0			0	
15		CE-068 Revised Alignment for drainage at DSD maintenance access (FMH_KT1.33A to 1.37A)	0	0			0	
16		CE-071 Revised Alignment for Sewerage at Sheung Yue River (FMH_KT1.40A to 1.41A)	0	0			0	
17		CE-074 Revised Alignment for Sewerage at Sheung Yue River (FMH_KT1.38A to 1.40A)	0	0			0	
18		CE-075 Revised Alignment for Sewerage at Sheung Yue River (FMH_KT1.37A to 1.38A)	0	0			0	
19		CE-076 Revised Alignment for Sewerage at Sheung Yue River (FMH_KT1.41A to 1.48A)	0	0			0	
20		Preliminaries	215	215	30-Jun-2023 A	30-Jan-2024	694	
21		Subletting	0	0			0	
22		Consultancy Services	0	0			0	
23		Specialist Subcontractors	0	0			0	
24		ABWF	0	0			0	
25		Package 1 - Gold Success	0	0			0	
26		Package 2 - Gold Success	0	0			0	
27		Package 3 - Sanway	0	0			0	
28		Package 4 - Sanway	0	0			0	
29		Package 5 - De Heng	0	0			0	
30		Package 6	0	0			0	
31		Package 7 - Jibpool	0	0			0	
32		Others	0	0			0	
33		Statutory Submission	84	29	30-Jun-2023 A	21-Sep-2023	144	
34		HyD	0	0			0	
35		DSD	0	0			0	
36		MTRC	78	27	30-Jun-2023 A	21-Sep-2023	133	
37		Method Statement Submission and Approval	27	27	30-Jun-2023	28-Jul-2023	133	
38	MTRC-1060	Preparation of Method Statement for manhole construction work underneath East Rail Line	27	27	30-Jun-2023*	28-Jul-2023	133	
39		Pre-condition Survey & Report	25	0	30-Jun-2023 A	27-Jul-2023 A		
40	MTRC-1110	Preparation of Pre-condition Survey report before construction work underneath East Rail Line	12	0	30-Jun-2023 A	14-Jul-2023 A		
41	MTRC-1120	Approval of Pre-condition report before construction work underneath East Rail Line	12	0	14-Jul-2023 A	27-Jul-2023 A		
42		Notification of commencement of works	53	0	27-Jul-2023 A	21-Sep-2023 A		
43	MTRC-1130	Preparation and Submission of Written Notice to MTRCL for the notification of commencement of works	53	0	27-Jul-2023 A	21-Sep-2023 A		
44		TPRP	0	0			0	
45		BIM Submission	0	0			0	
46		Site Offices & Preliminaries	0	0			0	
47		Temporary office for RE	0	0			0	
48		Temporary office for Contractor	0	0			0	
49		Tree Survey	0	0			0	
50		Contractor's Design	0	0			0	
51		Temporary Works Design	0	0			0	
52		Footbridge FK2	0	0			0	
53		ELS Design	0	0			0	
54		Formwork Design (Abutrment Wall) - CSF475	0	0			0	
55		Formwork Design (Bridge Pier) - CSF576	0	0			0	
56		Falsework Design (End Bridge Deck) - CSF584	0	0			0	
57		Falsework Design (Mid Span Bridge Deck) - CSF894	0	0			0	
58		Sewage Pumping Station	0	0			0	
59		ELS Design	0	0			0	
60		Formwork Design (CSF 675)	0	0			0	
61		Visitor Centre	0	0			0	
62		ELS Design - CSF273	0	0			0	
63		Vertical Blinding Design - CSF439	0	0			0	



Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Baseline Milestone
Critical Milestone
Non-Critical Milestone

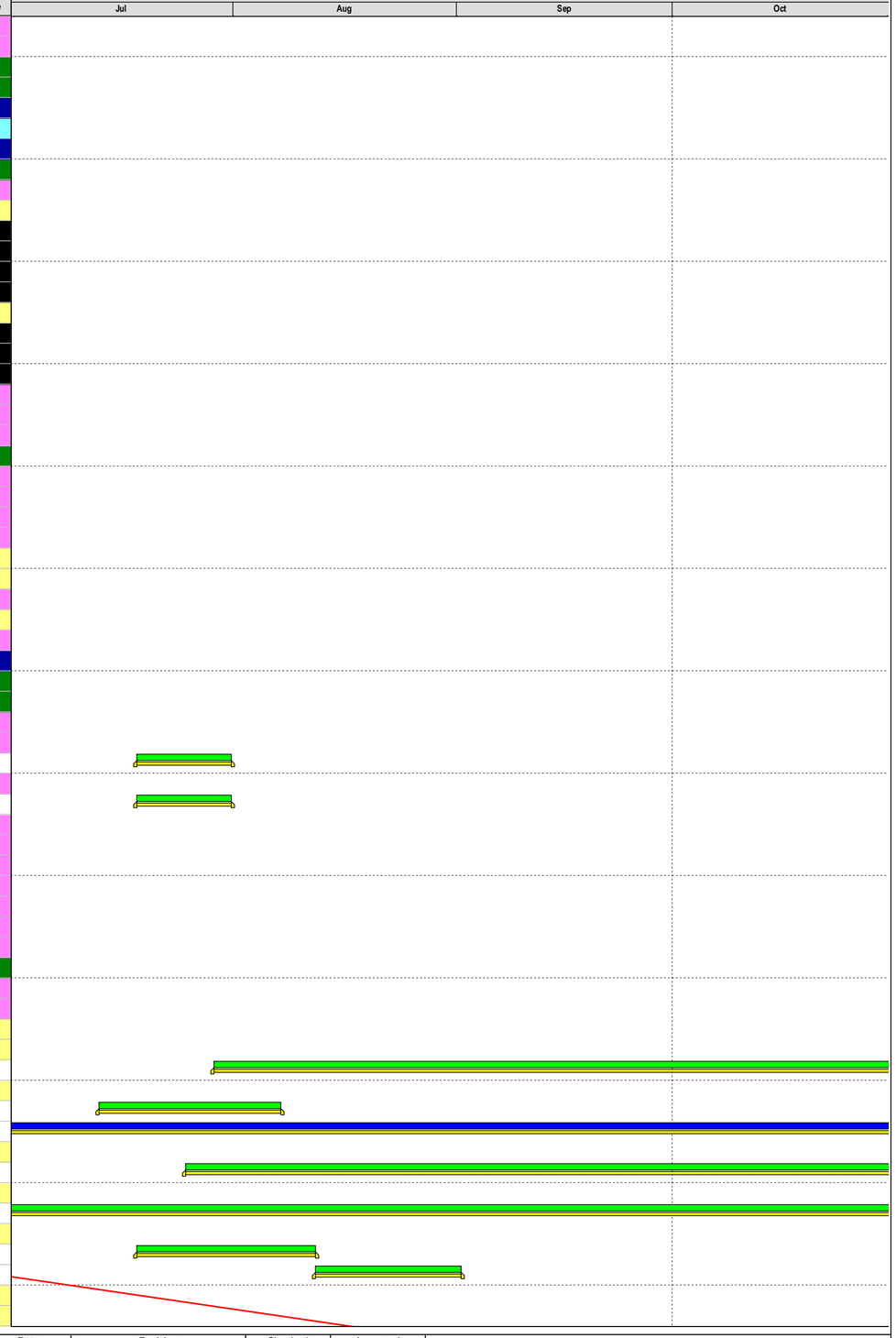
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
64		Single Side Formwork Design for Base slab - CSF454	0	0			0	
65		Formwork Design for Superstructure - CSF598	0	0			0	
66		Pipeworks	0	0			0	
67		3m Dia. Drain (CSF 828 & 834)	0	0			0	
68		CE-026 Extension of Cycle Track outside Dills Corner Garden	0	0			0	
69		E&M Submission	215	215	30-Jun-2023 A	30-Jan-2024	694	
70		Visitor Centre	0	0			0	
71		BS Shop Drawings Submission (Visitor Centre)	0	0			0	
72		CSD/ CBWD	0	0			0	
73		CSD	0	0			0	
74		Basement (CSF 495)	0	0			0	
75		G/F (CSF 758)	0	0			0	
76		1/F (CSF 1027)	0	0			0	
77		R/F (CSF 1046)	0	0			0	
78		CBWD	0	0			0	
79		Basement (CSF-508)	0	0			0	
80		G/F (CSF 537)	0	0			0	
81		R/F (CSF 1097)	0	0			0	
82		MVAC (CSF 451)	0	0			0	
83		Lift (CSF-643)	0	0			0	
84		PV Panel (CSF-909)	0	0			0	
85		BS Materials Submission & Procurement (Visitor Centre)	0	0			0	
86		PD (CSF-607)	0	0			0	
87		FS (CSF-980)	0	0			0	
88		MVAC (CSF-676)	0	0			0	
89		ELE	0	0			0	
90		Genset (CSF-620)	0	0			0	
91		Switchboard (CSF-879)	0	0			0	
92		ELV	0	0			0	
93		PABX System (CSF-1086)	0	0			0	
94		Lift (CSF-539)	0	0			0	
95		Sewerage Pumping Station	215	215	30-Jun-2023 A	30-Jan-2024	694	
96		PMI Issuance	0	0			0	
97		BS Shop Drawings Submission (SPS)	13	13	18-Jul-2023	31-Jul-2023	877	
98		CSD (CSF 1267)	0	0			0	
99		CBWD	12	12	18-Jul-2023	31-Jul-2023	796	
100	CBW-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	12	12	18-Jul-2023	31-Jul-2023	796	
101		Conduit Layout	12	12	18-Jul-2023	31-Jul-2023	796	
102	CL-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	12	12	18-Jul-2023	31-Jul-2023	796	
103		MVAC	0	0			0	
104		FS	0	0			0	
105		PD	0	0			0	
106		SPS Design	0	0			0	
107		ELE (CSF-1182)	0	0			0	
108		ELV	0	0			0	
109		Chemical Dosing System (CSF-1173)	0	0			0	
110		BS Materials Submission & Procurement (SPS)	215	215	30-Jun-2023 A	30-Jan-2024	223	
111		Subletting	0	0			0	
112		SWP	215	215	30-Jun-2023 A	30-Jan-2024	223	
113		Surge Analysis	0	0			0	
114		Submersible Pump (40wks)	186	186	29-Jul-2023	30-Jan-2024	216	
115	SWP-SPS1030	Procurement & Delivery of Submersible Pump (40wks)	186	186	29-Jul-2023	30-Jan-2024	216	
116		Motorized Gate Valve,Check Valve and Actuator (36wks)	170	26	30-Jun-2023 A	22-Jan-2024	399	
117	SWP-SPS1050	Motorized Gate Valve,Check Valve and Actuator - 1st round comment by PM & review	24	24	13-Jul-2023	7-Aug-2023	361	
118	SWP-SPS1070	Procurement & Delivery of Motorized Gate Valve,Check Valve and Actuator (36wks)	170	0	30-Jun-2023 A	22-Jan-2024 A		
119		Lifting Appliance (36wks)	170	170	25-Jul-2023	10-Jan-2024	162	
120	SWP-SPS1190	Procurement & Delivery of Lifting Appliance (36wks)	170	170	25-Jul-2023	10-Jan-2024	162	
121		Mechanical raked bar screen (36wks) (CSF-1318)	170	170	30-Jun-2023	16-Dec-2023	268	
122	SWP-SPS1350	Procurement & Delivery of Mechanical raked bar screen (36wks)	170	170	30-Jun-2023	16-Dec-2023	268	
123		LMCP for Deodourisation System (36wks)	44	44	18-Jul-2023	1-Sep-2023	93	
124	SWP-SPS1370	LMCP for Deodourisation System - 1st round comment by PM & review	24	24	18-Jul-2023	12-Aug-2023	93	
125	SWP-SPS1380	LMCP for Deodourisation System - 2nd submission to PM & approval	20	20	12-Aug-2023	1-Sep-2023	93	
126		DI Pipe and fittings (30 wks)	0	0			0	
127		Penstock and Stop Log (30wks) (CSF-1238)	0	0			0	



Primary Baseline
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Critical Milestone
Non-Critical Milestone

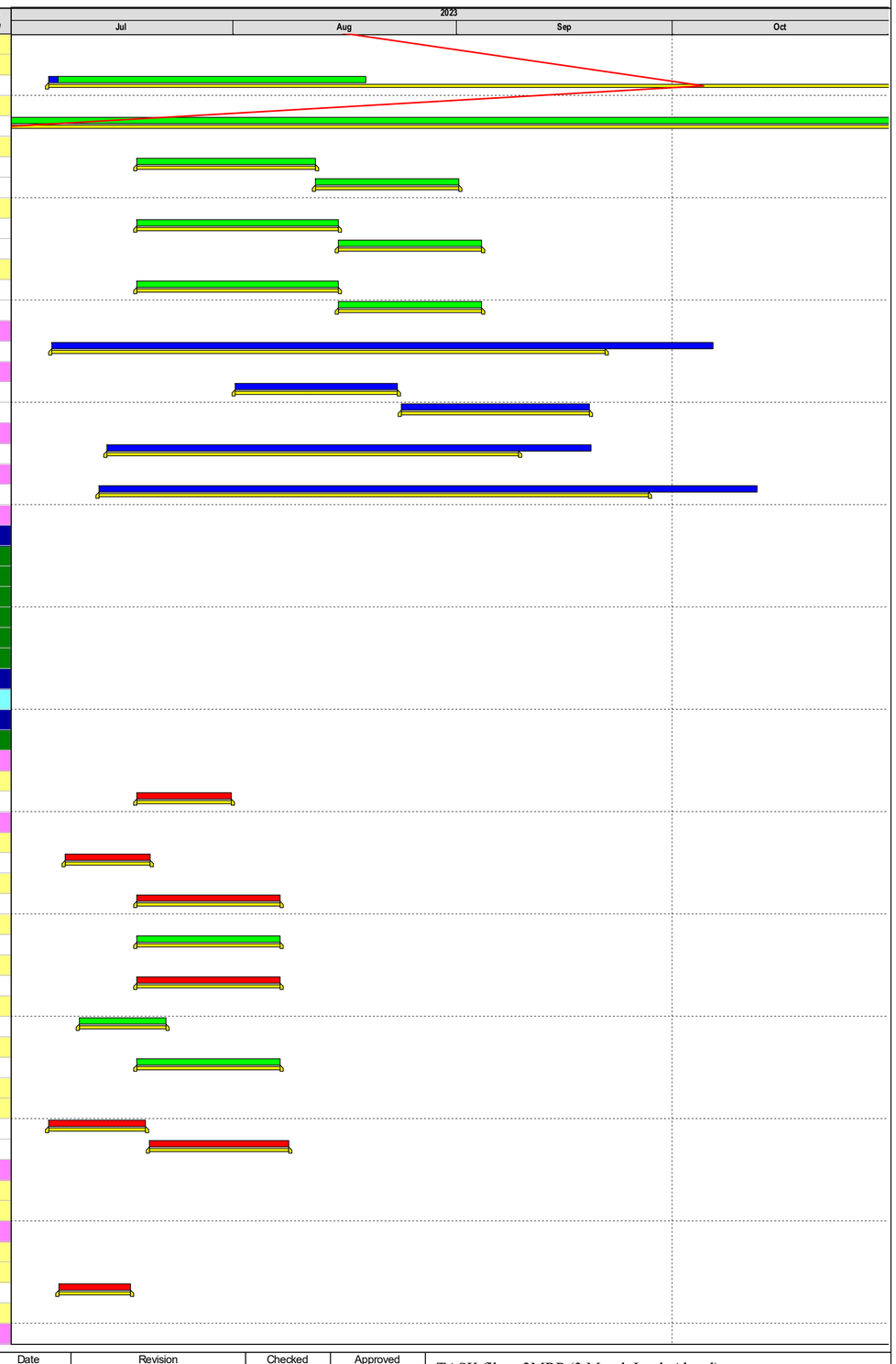
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 2 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
128		**Deodourisation System (30wks) (CSF-1094)**	0	0			0	
129		**Odour Ductwork (30wks)**	142	42	6-Jul-2023 A	19-Aug-2023	257	
130	SWP-SPS1270	Procurement & Delivery of Odour Ductwork (30wks)	142	42	6-Jul-2023 A	19-Aug-2023	257	
131		**Sensors and Instruments (30wks)**	142	142	30-Jun-2023	18-Nov-2023	289	
132	SWP-SPS1310	Procurement & Delivery of Sensors and Instruments (30wks)	142	142	30-Jun-2023	18-Nov-2023	289	
133		**Chemical Dosing System (30wks)**	43	43	18-Jul-2023	1-Sep-2023	165	
134	SWP-SPS1530	Chemical Dosing System - 1st round comment by PM & review	24	24	18-Jul-2023	12-Aug-2023	165	
135	SWP-SPS1540	Chemical Dosing System - 2nd submission to PM & approval	19	19	12-Aug-2023	1-Sep-2023	165	
136		**Davit (24wks)**	45	45	18-Jul-2023	4-Sep-2023	172	
137	SWP-SPS1490	Davit - 1st round comment by PM & review	27	27	18-Jul-2023	15-Aug-2023	172	
138	SWP-SPS1500	Davit - 2nd submission to PM & approval	19	19	15-Aug-2023	4-Sep-2023	172	
139		**A-frame (20wks)**	45	45	18-Jul-2023	4-Sep-2023	177	
140	SWP-SPS1450	A-frame - 1st round comment by PM & review	27	27	18-Jul-2023	15-Aug-2023	177	
141	SWP-SPS1460	A-frame - 2nd submission to PM & approval	19	19	15-Aug-2023	4-Sep-2023	177	
142		**PD (16wks)**	77	0	6-Jul-2023 A	6-Oct-2023 A		
143	PD-SPS1140	Procurement & Delivery of Sand Filter and Activated Carbon Filter (16wks)	77	0	6-Jul-2023 A	6-Oct-2023 A		
144		**FS (24wks)**	47	0	1-Aug-2023 A	19-Sep-2023 A		
145	FS-SPS1070	Material Submission - Local Control Panel	22	0	1-Aug-2023 A	23-Aug-2023 A		
146	FS-SPS1080	Local Control Panel - 1st round comment by PM & review	25	0	24-Aug-2023 A	19-Sep-2023 A		
147		**MVAC (12wks)**	58	0	14-Jul-2023 A	19-Sep-2023 A		
148	MVAC-SPS1070	Procurement & Delivery of AC Unit spilit type (12wks)	58	0	14-Jul-2023 A	19-Sep-2023 A		
149		**ELE (16wks)**	77	0	13-Jul-2023 A	12-Oct-2023 A		
150	ELE-SPS1090	Procurement & Delivery of PV System (16wks)	77	0	13-Jul-2023 A	12-Oct-2023 A		
151		**ELV (16wks)**	0	0			0	
152		**Footbridge FK2 Road lighting**	0	0			0	
153		**Electrical schematic (CSF-445)**	0	0			0	
154		**EL System - Electrical and lighting layout (CSF-494)**	0	0			0	
155		**Materials Submission (CSF-693)**	0	0			0	
156		**Drawing Submission of Road Lighting Layout (CSF-703)**	0	0			0	
157		**Lux Simulation Report (CSF-717)**	0	0			0	
158		**Internal Arrangement of PB-01 (CSF-726)**	0	0			0	
159		**Irrigation System (CSF-634)**	0	0			0	
160		**ABWF Submission and Mock Up**	88	72	30-Jun-2023 A	25-Sep-2023	298	
161		**Visitor Centre**	79	71	30-Jun-2023 A	16-Sep-2023	298	
162		**ABWF Shop Drawing / Method Statement / ITP Submission**	73	38	6-Jul-2023 A	16-Sep-2023	325	
163		**Package 1**	12	12	18-Jul-2023	31-Jul-2023	-18	
164		**Tile Setting Out Drawing / Block Wall Frame Shop Drawings**	12	12	18-Jul-2023	31-Jul-2023	-18	
165	ABWF-P1-1200	2nd submission to PM & approval	12	12	18-Jul-2023	31-Jul-2023	-18	
166		**Package 3**	34	34	6-Jul-2023	8-Aug-2023	40	
167		**Suspended Ceiling**	11	11	8-Jul-2023	20-Jul-2023	-60	
168	ABWF-P3-1080	Suspended Ceiling - 2nd submission to PM & approval	11	11	8-Jul-2023	20-Jul-2023	-60	
169		**Raised Flooring**	19	19	18-Jul-2023	7-Aug-2023	-27	
170	ABWF-P3-1500	Raised Flooring - 2nd submission to PM & approval	19	19	18-Jul-2023	7-Aug-2023	-27	
171		**Plastic Laminate Wall Panels**	19	19	18-Jul-2023	7-Aug-2023	4	
172	ABWF-P3-1530	Plastic Laminate Wall Panel - 2nd submission to PM & approval	19	19	18-Jul-2023	7-Aug-2023	4	
173		**Thermal Insulation Board**	19	19	18-Jul-2023	7-Aug-2023	-44	
174	ABWF-P3-1560	Thermal insulation Board - 2nd submission to PM & approval	19	19	18-Jul-2023	7-Aug-2023	-44	
175		**Glass Wall**	12	12	10-Jul-2023	22-Jul-2023	8	
176	ABWF-P3-1590	Glass Wall - 2nd submission to PM & approval	12	12	10-Jul-2023	22-Jul-2023	8	
177		**Movable Partition**	19	19	18-Jul-2023	7-Aug-2023	40	
178	ABWF-P3-1620	Movable Partition - 2nd submission to PM & approval	19	19	18-Jul-2023	7-Aug-2023	40	
179		**Timber Deck**	0	0			0	
180		**Roof Hatch**	32	32	6-Jul-2023	8-Aug-2023	-1	
181	ABWF-P3-1700	Roof Hatch - 1st round comment by PM & review	13	13	6-Jul-2023	19-Jul-2023	-1	
182	ABWF-P3-1720	Roof Hatch - 2nd submission to PM & approval	19	19	20-Jul-2023	8-Aug-2023	-1	
183		**Package 4**	0	0			0	
184		**Timber Door**	0	0			0	
185		**Fitting & Fixtures**	0	0			0	
186		**Package 5**	10	10	7-Jul-2023	17-Jul-2023	-33	
187		**Window**	0	0			0	
188		**Louvre**	9	9	7-Jul-2023	17-Jul-2023	-29	
189	ABWF-P5-1050	Shop Drawing Submission - Louvre - 2nd submission to PM & approval	9	9	7-Jul-2023	17-Jul-2023	-29	
190		**Aluminium Grilles**	0	0			0	
191		**Package 6**	67	32	11-Jul-2023 A	16-Sep-2023	325	



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Critical Remaining Work
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Non-Critical Milestone

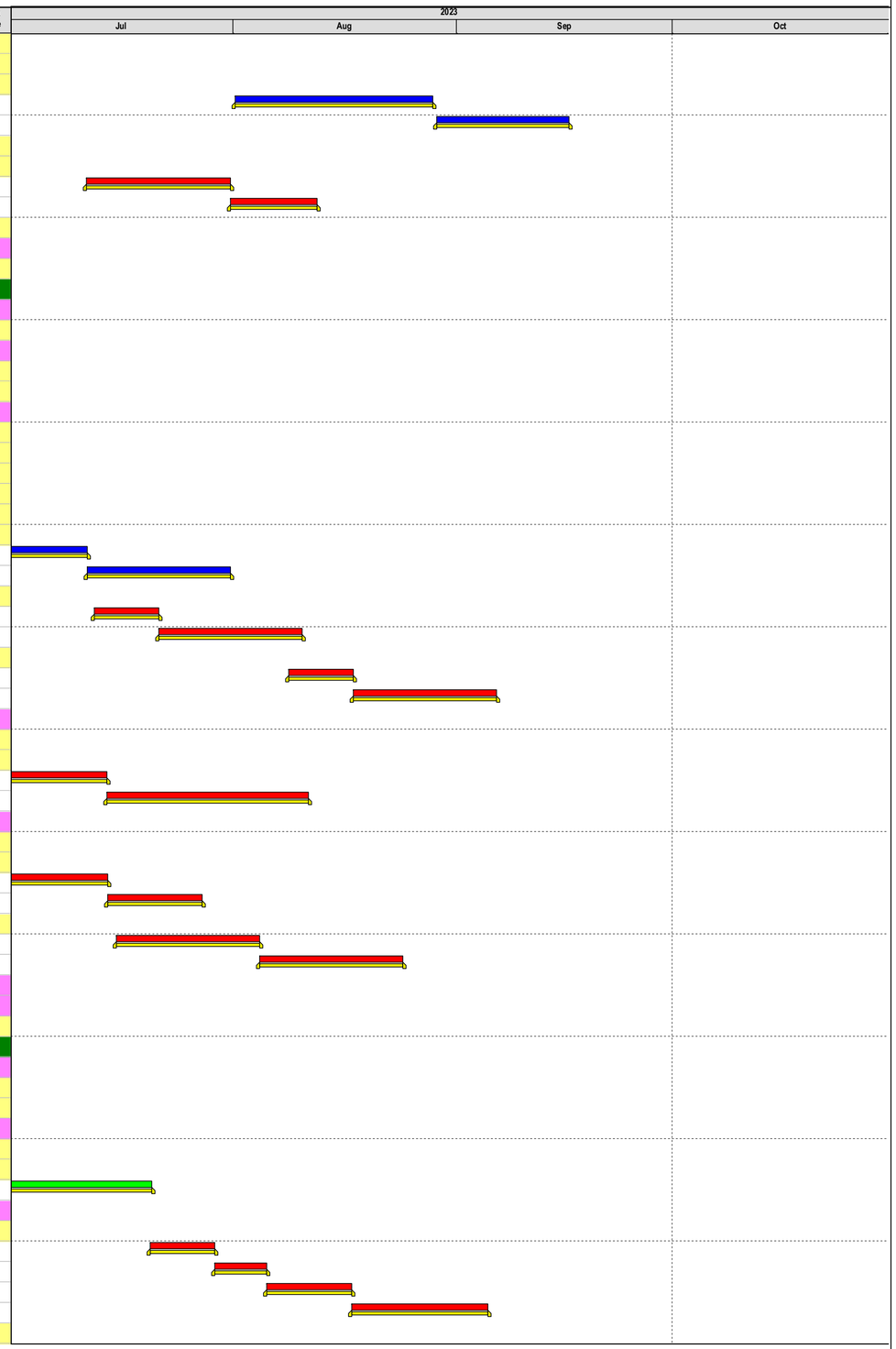
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 3 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

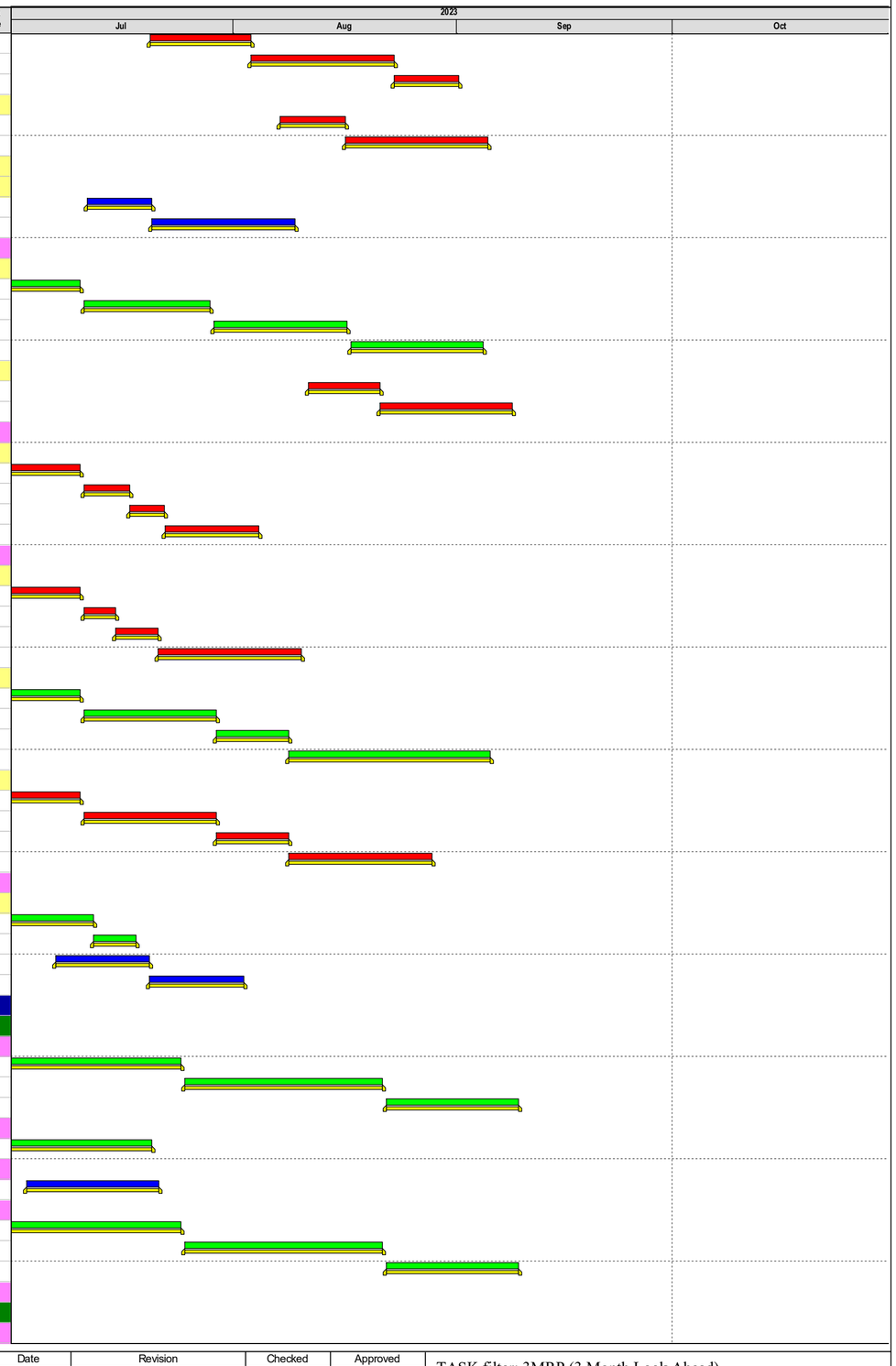
Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
192		**Fence / Handrail / Parapet**	0	0			0	
193		**Skylight**	0	0			0	
194		**Roller Shutters**	45	0	1-Aug-2023 A	16-Sep-2023 A		
195	ABWF-P3-1210	Shop Drawing / Method Statement / ITP Submission - Shutter	27	0	1-Aug-2023 A	28-Aug-2023 A		
196	ABWF-P3-1220	Shop Drawing / Method Statement / ITP Submission - Shutter - 1st round comment by PM & review	19	0	29-Aug-2023 A	16-Sep-2023 A		
197		**Fall Arrest system**	0	0			0	
198		**Steel Doors**	31	31	11-Jul-2023	12-Aug-2023	-48	
199	ABWF-P3-1330	Shop Drawing / Method Statement / ITP Submission - Steel Doors and Ironmongeries - 1st round comment by PM & review	19	19	11-Jul-2023	31-Jul-2023	-48	
200	ABWF-P3-1350	Shop Drawing / Method Statement / ITP Submission - Steel Doors and Ironmongeries - 2nd submission to PM & approval	12	12	31-Jul-2023	12-Aug-2023	-48	
201		**Sundry Metal Works (Covers / Cat Ladder / Steel Staircase)**	0	0			0	
202		**Pacakge 7**	0	0			0	
203		**Toilet Cubicle & Shower Cubicle**	0	0			0	
204		**ABWF Material Submission**	69	69	30-Jun-2023 A	6-Sep-2023	136	
205		**Package 1**	0	0			0	
206		**Concrete Block**	0	0			0	
207		**Package 2**	0	0			0	
208		**Internal Wall Painting (CSF-1294)**	0	0			0	
209		**External Wall Painting**	0	0			0	
210		**Package 3**	68	56	30-Jun-2023 A	6-Sep-2023	136	
211		**External suspended Baffle Ceiling (CSF-1103)**	0	0			0	
212		**Movable Folding Partition (CSF-1104)**	0	0			0	
213		**Internal Acoustic Ceiling (CSF-1105)**	0	0			0	
214		**Raised Floor (CSF-1118)**	0	0			0	
215		**Glass Wall**	0	0			0	
216		**Timber Deck**	28	0	30-Jun-2023 A	31-Jul-2023 A		
217	ABWF-VC3390	Material & Sample Submission -, 2nd round comment by PM & approval	9	0	30-Jun-2023 A	11-Jul-2023 A		
218	ABWF-VC3400	Material Procurement of Timber Deck	19	0	11-Jul-2023 A	31-Jul-2023 A		
219		**Timber Flooring**	28	28	12-Jul-2023	10-Aug-2023	-33	
220	ABWF-VC3630	Material & Sample Submission -, 2nd round comment by PM & approval	9	9	12-Jul-2023	21-Jul-2023	-33	
221	ABWF-VC3640	Material Procurement of Timber Deck	19	19	21-Jul-2023	10-Aug-2023	-33	
222		**Roof Hatch**	28	28	8-Aug-2023	6-Sep-2023	-1	
223	ABWF-VC3690	Material & Sample Submission - Roof Hatch	9	9	8-Aug-2023	17-Aug-2023	-1	
224	ABWF-VC3700	Material & Sample Submission - 1st round comment by PM & review	19	19	17-Aug-2023	6-Sep-2023	-1	
225		**Package 4**	42	42	30-Jun-2023	11-Aug-2023	-27	
226		**Timber Door**	0	0			0	
227		**Fitting and Fixtures**	39	39	30-Jun-2023	11-Aug-2023	-26	
228	ABWF-VC3470	Material & Sample Submission - , 2nd round comment by PM & approval	12	12	30-Jun-2023	14-Jul-2023	-26	
229	ABWF-VC3480	Material Procurement of - Fitting and Fixtures	27	27	14-Jul-2023	11-Aug-2023	-26	
230		**Package 5**	55	55	30-Jun-2023	24-Aug-2023	-28	
231		**Windows**	0	0			0	
232		**Lourves**	25	25	30-Jun-2023	27-Jul-2023	-39	
233	ABWF-VC3510	Material & Sample Submission , 2nd round comment by PM & approval	12	12	30-Jun-2023	14-Jul-2023	-39	
234	ABWF-VC3520	Material Procurement of Lourves	12	12	14-Jul-2023	27-Jul-2023	-39	
235		**Alumninum Grilles**	37	37	15-Jul-2023	24-Aug-2023	-26	
236	ABWF-VC3590	Material & Sample Submission , 2nd round comment by PM & approval	19	19	15-Jul-2023	4-Aug-2023	-26	
237	ABWF-VC3600	Material Procurement of Window / Lourves	19	19	4-Aug-2023	24-Aug-2023	-26	
238		**Package 6**	0	0			0	
239		**Package 7**	0	0			0	
240		**Toilet Cubicle & Shower Cubicle**	0	0			0	
241		**Mock Up**	71	71	30-Jun-2023 A	8-Sep-2023	134	
242		**Package 1**	0	0			0	
243		**Plastering / Tile Adhesive**	0	0			0	
244		**Internal tiling works**	0	0			0	
245		**Package 2**	21	21	30-Jun-2023	20-Jul-2023	7	
246		**Internal Wall Painting**	0	0			0	
247		**External Wall Painting**	19	19	30-Jun-2023	20-Jul-2023	7	
248	ABWF-VC3150	Mock Up 1st round comment by PM & review	19	19	30-Jun-2023	20-Jul-2023	7	
249		**Package 3**	55	47	11-Jul-2023 A	5-Sep-2023	138	
250		**External suspended Baffle Ceiling**	44	44	20-Jul-2023	5-Sep-2023	-60	
251	ABWF-VC1360	Fabrication of Mock Up - External Suspended Baffle Ceiling	9	9	20-Jul-2023	29-Jul-2023	-60	
252	ABWF-VC1370	Mock Up 1st round comment by PM & review	7	7	29-Jul-2023	5-Aug-2023	-60	
253	ABWF-VC1380	Mock Up modification, 2nd round comment by PM & approval	11	11	5-Aug-2023	17-Aug-2023	-60	
254	ABWF-VC1390	Material Procurement of External Suspended Baffle Ceiling	18	18	17-Aug-2023	5-Sep-2023	-60	
255		**Internal Acoustic Ceiling**	41	41	20-Jul-2023	1-Sep-2023	-36	



#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
256	ABWF-VC1400	Fabrication of Mock Up - Acoustic Ceiling	13	13	20-Jul-2023	3-Aug-2023	-36	
257	ABWF-VC1410	Mock Up 1st round comment by PM & review	19	19	3-Aug-2023	23-Aug-2023	-36	
258	ABWF-VC1420	Mock Up modification, 2nd round comment by PM & approval	9	9	23-Aug-2023	1-Sep-2023	-36	
259	**Raised Floor**		28	28	7-Aug-2023	5-Sep-2023	-27	
260	ABWF-VC1080	Fabrication of Mock Up - Raised Floor	9	9	7-Aug-2023	16-Aug-2023	-27	
261	ABWF-VC1090	Mock Up 1st round comment by PM & review	19	19	16-Aug-2023	5-Sep-2023	-27	
262	**Glass Wall**		0	0			0	
263	**Timber Deck**		28	0	11-Jul-2023 A	9-Aug-2023 A		
264	ABWF-VC3090	Mock Up modification, 2nd round comment by PM & approval	9	0	11-Jul-2023 A	20-Jul-2023 A		
265	ABWF-VC3100	Material Procurement of Timber Deck	19	0	20-Jul-2023 A	9-Aug-2023 A		
266	**Package 4**		67	67	30-Jun-2023	8-Sep-2023	21	
267	**Timber Door**		62	62	30-Jun-2023	4-Sep-2023	25	
268	ABWF-VC1520	Fabrication of Mock Up - Timber Doors	9	9	30-Jun-2023	10-Jul-2023	25	
269	ABWF-VC1530	Mock Up 1st round comment by PM & review	18	18	11-Jul-2023	28-Jul-2023	25	
270	ABWF-VC1540	Mock Up modification, 2nd round comment by PM & approval	18	18	29-Jul-2023	16-Aug-2023	25	
271	ABWF-VC1550	Material Procurement of Timber Doors	18	18	17-Aug-2023	4-Sep-2023	25	
272	**Fitting and Fixtures**		28	28	11-Aug-2023	8-Sep-2023	-26	
273	ABWF-VC1640	Fabrication of Mock Up - Fitting and Fixtures	9	9	11-Aug-2023	21-Aug-2023	-26	
274	ABWF-VC1650	Mock Up 1st round comment by PM & review	19	19	21-Aug-2023	8-Sep-2023	-26	
275	**Package 5**		33	33	30-Jun-2023	4-Aug-2023	-42	
276	**Windows / Lourves**		33	33	30-Jun-2023	4-Aug-2023	-42	
277	ABWF-VC1800	Fabrication of Mock Up - Window / Lourves	9	9	30-Jun-2023	10-Jul-2023	-42	
278	ABWF-VC1810	Mock Up 1st round comment by PM & review	6	6	11-Jul-2023	17-Jul-2023	-42	
279	ABWF-VC1820	Mock Up modification, 2nd round comment by PM & approval	5	5	17-Jul-2023	22-Jul-2023	-42	
280	ABWF-VC1830	Material Procurement of Window / Lourves	12	12	22-Jul-2023	4-Aug-2023	-42	
281	**Package 6**		63	63	30-Jun-2023	5-Sep-2023	90	
282	**Skylight**		38	38	30-Jun-2023	10-Aug-2023	-39	
283	ABWF-VC1200	Fabrication of Mock Up - Skylight	9	9	30-Jun-2023	10-Jul-2023	-39	
284	ABWF-VC1210	Mock Up 1st round comment by PM & review	5	5	11-Jul-2023	15-Jul-2023	-39	
285	ABWF-VC1220	Mock Up modification, 2nd round comment by PM & approval	5	5	15-Jul-2023	21-Jul-2023	-39	
286	ABWF-VC1230	Material Procurement of Skylight	19	19	21-Jul-2023	10-Aug-2023	-39	
287	**Fall Arrest System**		63	63	30-Jun-2023	5-Sep-2023	90	
288	ABWF-VC1480	Fabrication of Mock Up - Fall Arrest System	9	9	30-Jun-2023	10-Jul-2023	90	
289	ABWF-VC1490	Mock Up 1st round comment by PM & review	19	19	11-Jul-2023	29-Jul-2023	90	
290	ABWF-VC1500	Mock Up modification, 2nd round comment by PM & approval	9	9	29-Jul-2023	8-Aug-2023	90	
291	ABWF-VC1510	Material Procurement of Fall Arrest System	27	27	8-Aug-2023	5-Sep-2023	90	
292	**Timber Wall / Fences**		55	55	30-Jun-2023	28-Aug-2023	-29	
293	ABWF-VC1040	Fabrication of Mock Up - Timber Wall	9	9	30-Jun-2023	10-Jul-2023	-29	
294	ABWF-VC1050	Mock Up 1st round comment by PM & review	19	19	11-Jul-2023	29-Jul-2023	-29	
295	ABWF-VC1060	Mock Up modification, 2nd round comment by PM & approval	9	9	29-Jul-2023	8-Aug-2023	-29	
296	ABWF-VC1070	Material Procurement of Timber Wall	19	19	8-Aug-2023	28-Aug-2023	-29	
297	**Package 7**		30	16	30-Jun-2023 A	2-Aug-2023	42	
298	**Toilet Cubicle & Shower Cubicle**		30	16	30-Jun-2023 A	2-Aug-2023	42	
299	ABWF-VC2040	Fabrication of Mock Up - Toilet and Shower Cubicles	11	11	30-Jun-2023	12-Jul-2023	42	
300	ABWF-VC2050	Mock Up 1st round comment by PM & review	5	5	12-Jul-2023	18-Jul-2023	42	
301	ABWF-VC2060	Mock Up modification, 2nd round comment by PM & approval	12	0	7-Jul-2023 A	20-Jul-2023 A		
302	ABWF-VC2070	Material Procurement of Toilet and Shower Cubicles	12	0	20-Jul-2023 A	2-Aug-2023 A		
303	**Sewerage Pumping Station**		88	72	30-Jun-2023 A	25-Sep-2023	298	
304	**ABWF Shop Drawings Submission**		72	72	30-Jun-2023 A	9-Sep-2023	324	
305	**Recycled Composite Wood**		68	68	30-Jun-2023	9-Sep-2023	179	
306	ABWF-SPS1040	Shop Drawing Submission - Recycled Composite Wood	22	22	30-Jun-2023*	24-Jul-2023	179	
307	ABWF-SPS1050	Recycled Composite Wood - 1st round comment by PM & review	27	27	25-Jul-2023	21-Aug-2023	179	
308	ABWF-SPS1060	Recycled Composite Wood - 2nd submission to PM & approval	19	19	22-Aug-2023	9-Sep-2023	179	
309	**Fences and Gates**		19	19	30-Jun-2023	20-Jul-2023	338	
310	ABWF-SPS1160	Fences and Gates - 2nd submission to PM & approval	19	19	30-Jun-2023	20-Jul-2023	338	
311	**Window and Lourves**		19	0	3-Jul-2023 A	21-Jul-2023 A		
312	ABWF-SPS1190	Shop Drawing Submission Window and Lourves - 2nd submission to PM & approval	19	0	3-Jul-2023 A	21-Jul-2023 A		
313	**Claddings**		68	68	30-Jun-2023	9-Sep-2023	145	
314	ABWF-SPS1200	Shop Drawing Submission - Claddings	22	22	30-Jun-2023*	24-Jul-2023	145	
315	ABWF-SPS1210	Shop Drawing Submission Claddings - 1st round comment by PM & review	27	27	25-Jul-2023	21-Aug-2023	145	
316	ABWF-SPS1220	Shop Drawing Submission Claddings - 2nd submission to PM & approval	19	19	22-Aug-2023	9-Sep-2023	145	
317	**Shutters**		0	0			0	
318	**ABWF Material Submission & Procurement**		49	49	30-Jun-2023 A	21-Aug-2023	308	
319	**Recycled Composite Wood**		19	0	17-Jul-2023 A	4-Aug-2023 A		



Primary Baseline
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Critical Milestone
Non-Critical Milestone

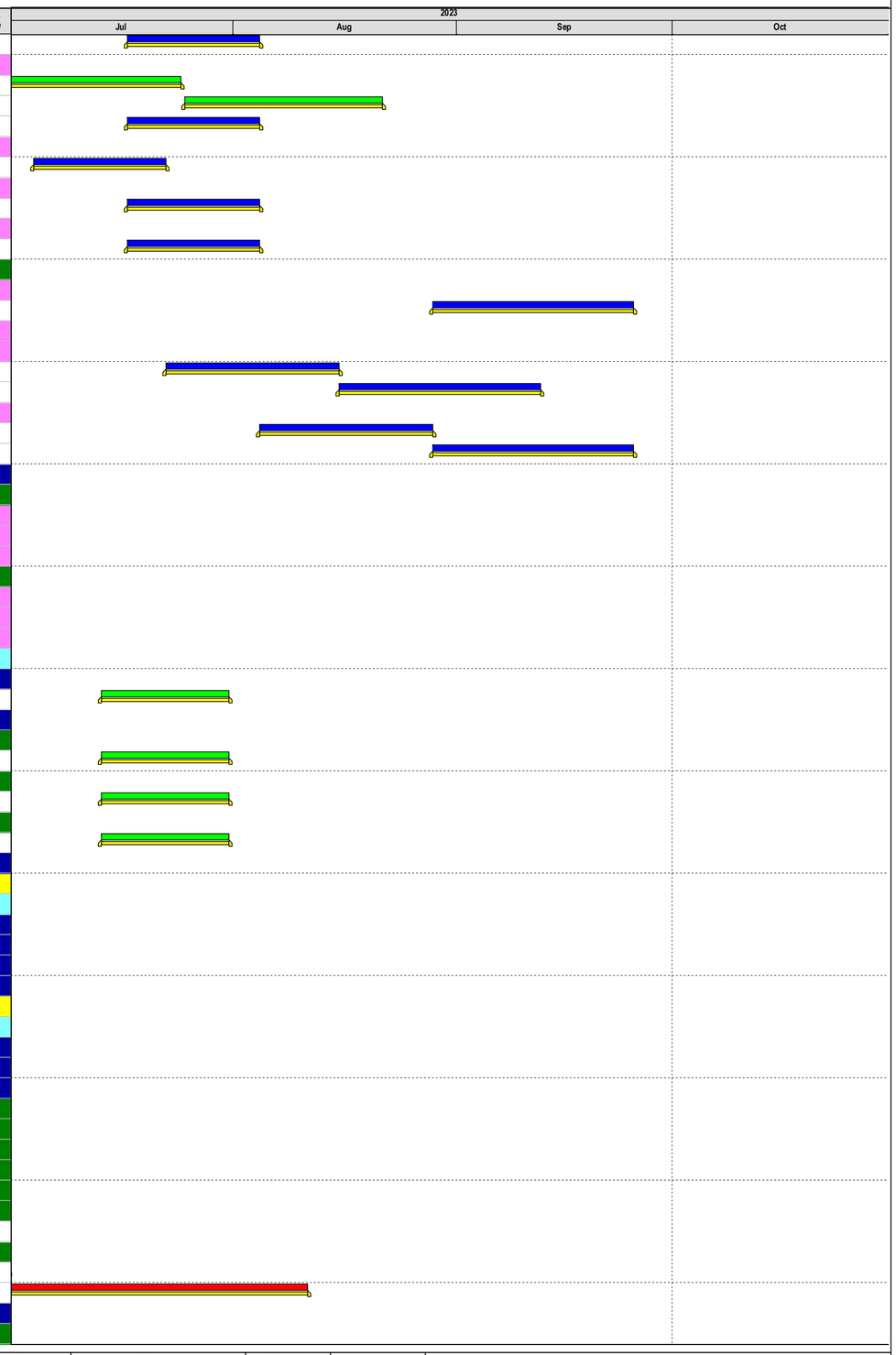
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 5 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
320	ABWF-SPS1130	Material Submission - Recycled Composite Wood - 2nd submission to PM & approval	19	0	17-Jul-2023 A	4-Aug-2023 A		
321	**Fences and Gates**		49	49	30-Jun-2023 A	21-Aug-2023	308	
322	ABWF-SPS1230	Material Submission - Fences and Gates	22	22	30-Jun-2023*	24-Jul-2023	308	
323	ABWF-SPS1240	Material Submission - Fences and Gates - 1st round comment by PM & review	27	27	25-Jul-2023	21-Aug-2023	308	
324	ABWF-SPS1250	Material Submission - Fences and Gates - 2nd submission to PM & approval	19	0	17-Jul-2023 A	4-Aug-2023 A		
325	**Window and Lourves**		19	0	4-Jul-2023 A	22-Jul-2023 A		
326	ABWF-SPS1280	Material Submission - Windows and Lourves - 2nd submission to PM & approval	19	0	4-Jul-2023 A	22-Jul-2023 A		
327	**Claddings**		19	0	17-Jul-2023 A	4-Aug-2023 A		
328	ABWF-SPS1310	Material Submission - Claddings - 2nd submission to PM & approval	19	0	17-Jul-2023 A	4-Aug-2023 A		
329	**Shutters**		19	0	17-Jul-2023 A	4-Aug-2023 A		
330	ABWF-SPS1370	Material Submission - FRR Shutters - 2nd submission to PM & approval	19	0	17-Jul-2023 A	4-Aug-2023 A		
331	**Mock Up**		65	0	22-Jul-2023 A	25-Sep-2023 A		
332	**Recycled Composite Wood**		27	0	28-Aug-2023 A	25-Sep-2023 A		
333	ABWF-SPS1080	Mock Up 1st round comment by PM & review	27	0	28-Aug-2023 A	25-Sep-2023 A		
334	**Fences and Gates**		0	0			0	
335	**Window and Lourves**		49	0	22-Jul-2023 A	12-Sep-2023 A		
336	ABWF-SPS1420	Fabrication of Mock Up - Window and Lourvres	22	0	22-Jul-2023 A	15-Aug-2023 A		
337	ABWF-SPS1430	Mock Up 1st round comment by PM & review	27	0	15-Aug-2023 A	12-Sep-2023 A		
338	**Claddings**		49	0	4-Aug-2023 A	25-Sep-2023 A		
339	ABWF-SPS1460	Fabrication of Mock Up - Claddings	22	0	4-Aug-2023 A	28-Aug-2023 A		
340	ABWF-SPS1470	Mock Up 1st round comment by PM & review	27	0	28-Aug-2023 A	25-Sep-2023 A		
341	**Footbridge FK2**		0	0			0	
342	**ABWF Shop Drawings Submission**		0	0			0	
343	**Footbridge Deck Paving**		0	0			0	
344	**Handrail**		0	0			0	
345	**Ramp Staircase Finishes**		0	0			0	
346	**ABWF Material Submission & Procurement**		0	0			0	
347	**Footbridge Deck Paving**		0	0			0	
348	**Handrail**		0	0			0	
349	**Ramp Staircase Finishes**		0	0			0	
350	**Landscape Works Submission**		17	17	13-Jul-2023	31-Jul-2023	24	
351	**Landscape Method Statement Submission**		16	16	13-Jul-2023	31-Jul-2023	23	
352	LA-SPS1110	Method Statement of Planting and Soil Mixing - 2nd submission to PM & approval	16	16	13-Jul-2023	31-Jul-2023	23	
353	**Landscape Material Submission & Test Report**		16	16	13-Jul-2023	31-Jul-2023	23	
354	**Plant Specimen & Origin**		16	16	13-Jul-2023	31-Jul-2023	23	
355	LA-SPS1020	Plant Nursery and Specimen Photos - 2nd submission to PM & approval	16	16	13-Jul-2023	31-Jul-2023	23	
356	**Soil Mix**		16	16	13-Jul-2023	31-Jul-2023	23	
357	LA-SPS1050	Soil Mix Test Report - 2nd submission to PM & approval	16	16	13-Jul-2023	31-Jul-2023	23	
358	**Soil Conditioners**		16	16	13-Jul-2023	31-Jul-2023	23	
359	LA-SPS1080	Soil Conditioners Test Report & Samples - 2nd submission to PM & approval	16	16	13-Jul-2023	31-Jul-2023	23	
360	**Landscape Design Submission**		0	0			0	
361	**Works in Section 1**		0	0			0	
362	**Portion 1 - Road & Drains**		0	0			0	
363	**Site Possession**		0	0			0	
364	**Pre-construction works**		0	0			0	
365	**CE-026 Extension of Cycle Track outside Dills Corner Garden**		0	0			0	
366	**Utilities and Signage Works**		0	0			0	
367	**Works in Section 2**		110	110	30-Jun-2023 A	17-Oct-2023	434	
368	**Portion 2 - Road & Drains**		95	95	30-Jun-2023 A	3-Oct-2023	16	
369	**Site Possession**		0	0			0	
370	**Pre-construction works**		0	0			0	
371	**ELS**		42	42	30-Jun-2023	11-Aug-2023	-33	
372	**Launching shaft for SMH_KT6003A and FMH_KT1.26A**		0	0			0	
373	**Combined Shaft for SMH_KT2003 and FMH_KT1.23**		0	0			0	
374	**Launching shaft at FMH_KT1.30A**		0	0			0	
375	**Receiving shaft at FMH_KT1.32A**		0	0			0	
376	**Combined shaft for SMH_KT6005A & FMH_KT1.33A**		0	0			0	
377	**Combined shaft for SMH_KT6003B & FMH_KT1.27A**		0	0	30-Jun-2023	30-Jun-2023	-76	
378	P2-8225	Site Possession (Assume 03-Apr-2023)	0	0		30-Jun-2023*	-76	
379	**Combined shaft for SMH_KT6004A & FMH_KT1.29A**		39	39	30-Jun-2023	11-Aug-2023	-32	
380	P2-3000	Set up TTA at Castle Peak Road Carriageway	1	1	30-Jun-2023	30-Jun-2023	-32	
381	P2-3010	ELS of combined pit for SMH_KT6004A & FMH_KT1.29A	38	38	30-Jun-2023	11-Aug-2023	-32	1
382	**Pipe Jacking**		95	95	30-Jun-2023 A	3-Oct-2023	16	
383	**(KT1.26A to KT1.23) (IL: 5.1-5.7mPD) 800mm dia**		0	0			0	



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Data Date: 30-Jun-2023
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Page : 6 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

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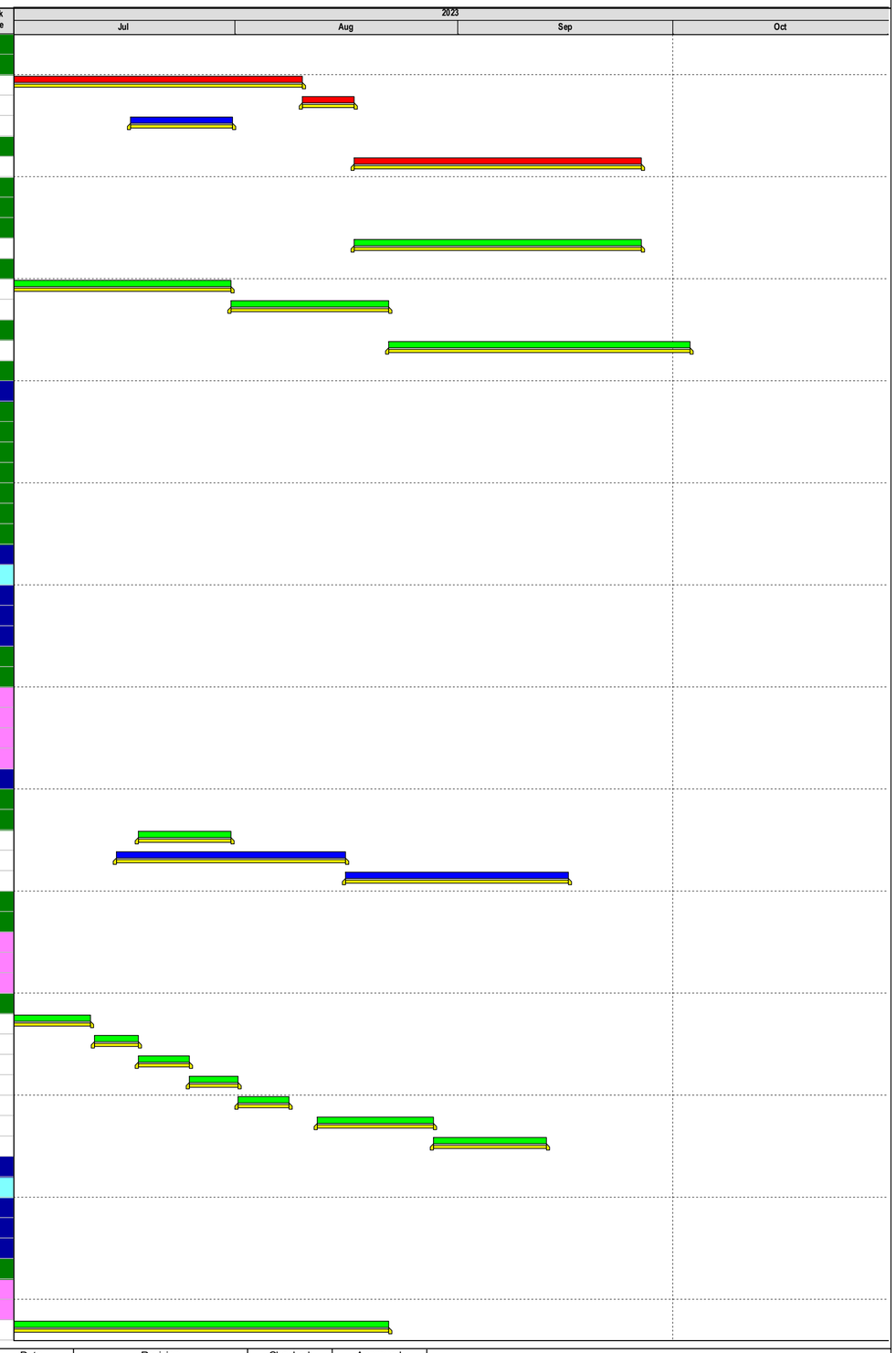
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
384		(KT6003A to KT2003) (IL: 6.0-6.4mPD) 2100mm dia	0	0			0	
385		(KT1.30A to KT1.32A) (IL:3.8-3.,6mPD) 800mm dia	45	45	30-Jun-2023 A	17-Aug-2023	-38	
386	P2-3170	Set up and assembly of TBM (0.8m dia.)	38	38	30-Jun-2023	10-Aug-2023	-38	
387	P2-3180	Pipe Jacking from FMH_KT1.30A to FMH_KT1.32A (20m, 3m/day)	7	7	10-Aug-2023	17-Aug-2023	-38	1
388	P2-3185	Removal of TBM (0.8m dia.) from FMH_KT1.32A	14	0	17-Jul-2023 A	31-Jul-2023 A		
389		(KT1.29A to KT1.27A) (IL: 4.1-4.6mPD) 800mm dia	38	38	17-Aug-2023	26-Sep-2023	-38	
390	P2-8205	Set up and Assembly of TBM (0.8m dia.)	38	38	17-Aug-2023	26-Sep-2023	-38	2
391		(KT1.26A to KT1.27A) (IL:5.1-4.6mPD) 800mm dia	0	0			0	
392		(KT1.30A to KT1.29A) (IL:4.1-3.8mPD) 800mm dia	0	0			0	
393		(KT1.33A to KT1.32A) (IL: 3.6mPD) 1500mm dia	38	38	17-Aug-2023	26-Sep-2023	19	
394	P2-4020	Set up and assembly of TBM (1.5m dia.)	38	38	17-Aug-2023	26-Sep-2023	19	2
395		(KT6003A to KT6003B) (IL: 6.0-5.7mPD) 2100mm dia	49	49	30-Jun-2023	22-Aug-2023	11	
396	P2-8265	Pipe Jacking from SMH_KT6003A to SMH_KT6003B (85m, 3m/day)	28	28	30-Jun-2023	31-Jul-2023	11	1
397	P2-8270	Removal of TBM (2.1m dia.) at SMH_KT6003B	21	21	31-Jul-2023	22-Aug-2023	11	0
398		(KT6004A to KT6003B) (IL: 5.3-5.7mPD) 2100mm dia	38	38	22-Aug-2023	3-Oct-2023	11	
399	P2-8275	Set up and Assembly TBM (2.1m dia.) at SMH_KT6004A	38	38	22-Aug-2023	3-Oct-2023	11	2
400		(KT6004A to KT6005A) (IL: 5.9mPD) 2100mm dia	0	0			0	
401		Manhole Construction	0	0			0	
402		FMH_KT1.23	0	0			0	
403		SMH_KT6003A & FMH_KT1.26A	0	0			0	
404		SMH_KT6003B & FMH_KT1.27A	0	0			0	
405		SMH_KT6004A & FMH_KT1.29A	0	0			0	
406		FMH_KT1.32A	0	0			0	
407		FMH_KT1.30A	0	0			0	
408		SMH_KT6005A & FMH_KT1.33A	0	0			0	
409		Utilities Works and Signage	0	0			0	
410		Portion 3 - Road & Drains	78	75	30-Jun-2023 A	16-Sep-2023	416	
411		Site Possession	0	0			0	
412		Pre-construction works	0	0			0	
413		Drainage Outfall_6013 constuction by Open Cut (By CE-067)	0	0			0	
414		Outfall_6013	0	0			0	
415		Manhole SMH_KT6013A & FMH_KT1.36A	0	0			0	
416		ELS	0	0			0	
417		FMH_KT1.36A	0	0			0	
418		SMH_KT6013A	0	0			0	
419		Drainage Installation	0	0			0	
420		Sewer Pipeline Installation (KT1.33A to KT1.41A)	78	75	30-Jun-2023 A	16-Sep-2023	416	
421		KT1.39A - KT1.38A (99m) (Pipe Jacking by CE-074)	0	0			0	
422		KT1.39A - KT1.40A (99m) (Pipe Jacking by CE-074)	60	12	15-Jul-2023 A	16-Sep-2023	416	
423	P3-6080	Demolish & removal of the slurry pipe, power cable inside the jacking pipe,	12	12	18-Jul-2023	31-Jul-2023	416	
424	P3-6107	Backfilling to at grade level KT1.39A	30	0	15-Jul-2023 A	16-Aug-2023 A		2
425	P3-6120	Backfilling to at grade level KT1.40A	30	0	16-Aug-2023 A	16-Sep-2023 A		2
426		KT1.38A - KT1.37A (99m) (Open Cut by CE-075)	0	0			0	
427		KT1.37A - KT1.36A (90m) (Open Cut by CE-068)	0	0			0	
428		Before Tree Removal	0	0			0	
429		Tree Removal	0	0			0	
430		After Tree Removal	0	0			0	
431		KT1.36A - KT1.33A (23m) (Open Cut by CE-068)	70	70	30-Jun-2023	13-Sep-2023	268	
432	P3-6130	Sheet pile installation of Trench for 800 dia. and 2100 dia. pipe installation	10	10	30-Jun-2023	11-Jul-2023	268	2
433	P3-6140	Soft Excavation to to 1st Strut Level	6	6	12-Jul-2023	18-Jul-2023	268	2
434	P3-6150	Install 1st Level Strut	7	7	18-Jul-2023	25-Jul-2023	268	2
435	P3-6160	Soft Excavation to to 2nd Strut Level	6	6	25-Jul-2023	1-Aug-2023	268	2
436	P3-6170	Install 2nd Level Strut	7	7	1-Aug-2023	8-Aug-2023	268	2
437	P3-6220	Backfill to base level of 2100 dia pipe, bedding and pipe laying	15	15	12-Aug-2023	28-Aug-2023	268	2
438	P3-6230	Backfill to formation and reinstatement	15	15	28-Aug-2023	13-Sep-2023	268	2
439		Reinstatement	0	0			0	
440		Portion 4 - Road & Drains	110	110	30-Jun-2023 A	17-Oct-2023	434	
441		Site Possession	0	0			0	
442		Pre-construction works	0	0			0	
443		Rising Main Installation by Open Cut (CHB 50 to 493 & CHB515 to 974)	110	110	30-Jun-2023	17-Oct-2023	434	
444		Gang 1	110	110	30-Jun-2023	17-Oct-2023	221	
445		Rising Main CHB255 to CHB371 (116M) Gang 1-1	0	0			0	
446		Rising Main CHB180 to CHB255 (75M) Gang 1-2	101	101	30-Jun-2023	17-Oct-2023	196	
447	P4-6480	Sheet Pile Installation for open trench	49	49	30-Jun-2023	22-Aug-2023	196	3



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Critical Remaining Work
Baseline Milestone
Critical Milestone
Non-Critical Milestone

Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 7 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
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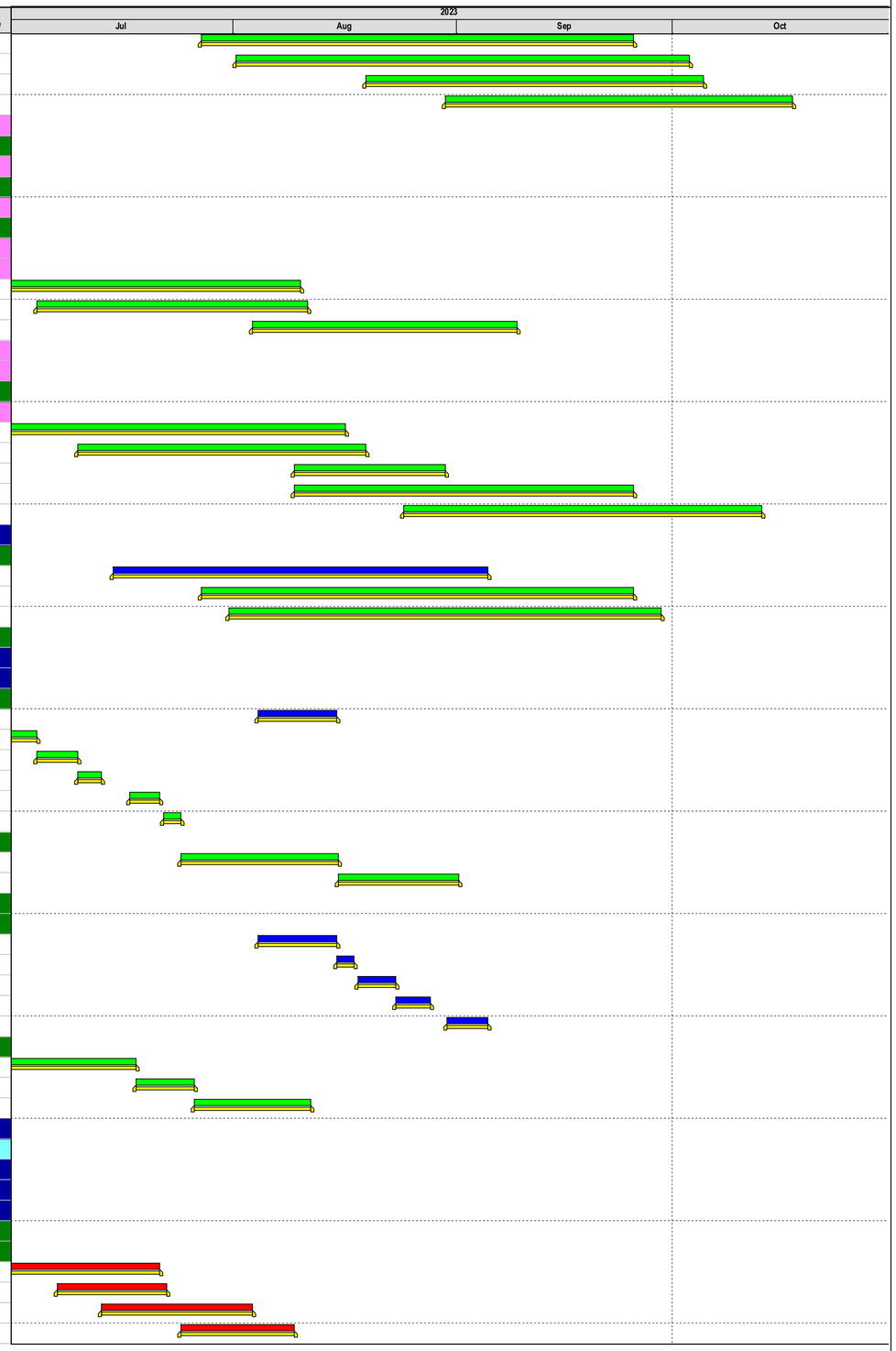
TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
448	P4-6490	Soft Excavation to 1st strut level	57	57	27-Jul-2023	25-Sep-2023	196	3
449	P4-6500	Installation of strut S1	58	58	1-Aug-2023	3-Oct-2023	196	3
450	P4-6510	Soft Excavation to 2nd strut level	42	42	19-Aug-2023	5-Oct-2023	196	4
451	P4-6520	Installation of strut S2	44	44	30-Aug-2023	17-Oct-2023	196	4
452	**Rising Main CHB515 to CHB589 (74M) Gang 1-3**		0	0			0	
453	**Gang 2**		0	0			0	
454	**Rising Main CHB120 to CHB180 (60M) Gang 2-1**		0	0			0	
455	**Gang 3**		0	0			0	
456	**Rising Main CHB589 to CHB699 (88M) Gang 3-1**		0	0			0	
457	**Gang 4**		71	71	30-Jun-2023	9-Sep-2023	160	
458	**Rising Main CHB50 to CHB120 (70M) Gang 4-1**		0	0			0	
459	**Rising Main CHB371 to CHB493 (122M) Gang 4-2**		67	67	30-Jun-2023	9-Sep-2023	142	
460	P4-6420	Soft Excavation to 1st strut level	38	38	30-Jun-2023	10-Aug-2023	142	
461	P4-6430	Installation of strut S1	36	36	4-Jul-2023	11-Aug-2023	142	
462	P4-6440	Soft Excavation to F.L.	35	35	3-Aug-2023	9-Sep-2023	142	
463	**Rising Main CHB699 to CHB749 (50M) Gang 4-3**		0	0			0	
464	**Rising Main CHB749 to CHB867 (118M) Gang 4-4**		0	0			0	
465	**Gang 5**		97	97	30-Jun-2023	13-Oct-2023	397	
466	**Rising Main CHB867 to CHB974 (107M) Gang 5-1**		97	97	30-Jun-2023	13-Oct-2023	397	
467	P4-6370	Installation of strut S2	44	44	30-Jun-2023	16-Aug-2023	397	
468	P4-6380	Soft Excavation to F.L.	39	39	10-Jul-2023	19-Aug-2023	397	
469	P4-6390	Bedding and Pipe Laying (Twins DN700)	20	20	9-Aug-2023	30-Aug-2023	397	
470	P4-6395	RC Works Inspection Chamber and Air Valve Chamber	45	45	9-Aug-2023	25-Sep-2023	406	
471	P4-6400	Backfilling of drain to at grade level	45	45	24-Aug-2023	13-Oct-2023	397	
472	**NS 250 PE Pipe Installation (From KT6.03A to KT6.01)**		77	64	15-Jul-2023 A	29-Sep-2023	257	
473	**Sewer Pipeline FMH_KT6.03A to FMH_KT6.02A (Gang 5-1)**		73	61	15-Jul-2023 A	29-Sep-2023	226	
474	P4-6240	Sheet Pile Installation for open trench	49	0	15-Jul-2023 A	5-Sep-2023 A		
475	P4-6250	Soft Excavation to 1st strut level	57	57	27-Jul-2023	25-Sep-2023	226	
476	P4-6260	Installation of strut S1	58	58	31-Jul-2023	29-Sep-2023	226	
477	**Sewer Pipeline FMH_KT6.02A to FMH_KT6.01 (Gang 5-2)**		0	0			0	
478	**Rising Main Installation by Pipe Jacking CHB493 to CHB514 (21M)**		0	0			0	
479	**Drainage Outfall constuction by Open Cut**		67	63	30-Jun-2023 A	5-Sep-2023	481	
480	**Outfall_5105**		43	22	30-Jun-2023 A	15-Aug-2023	343	
481	P4-OF1650	Removal of Grasscrete and concrete materials	10	0	4-Aug-2023 A	15-Aug-2023 A		
482	P4-OF1660	Excavation to formation level	3	3	30-Jun-2023	4-Jul-2023	343	
483	P4-OF1670	Laying of silt curtain and delivery of concrete block	5	5	4-Jul-2023	10-Jul-2023	343	
484	P4-OF1680	Pour Concrete Blinding	4	4	10-Jul-2023	13-Jul-2023	343	
485	P4-OF1690	Erect formwork for Vertical blinding for base slab shear key	5	5	17-Jul-2023	21-Jul-2023	343	
486	P4-OF1700	Pour Concrete shear key blinding	2	2	22-Jul-2023	24-Jul-2023	343	
487	**Manhole SMH_KT5105**		37	37	24-Jul-2023	1-Sep-2023	343	
488	P4-5060	Trench excavation between KT5105 and Outfall_5105 (30m)	21	21	24-Jul-2023	15-Aug-2023	343	2
489	P4-5070	Pipe Laying (2100 Concrete Pipe)	16	16	15-Aug-2023	1-Sep-2023	343	
490	**Manhole SMH_KT5105A**		0	0			0	
491	**Outfall_5104**		30	0	4-Aug-2023 A	5-Sep-2023 A		
492	P4-OF1860	Removal of Grasscrete and concrete materials	10	0	4-Aug-2023 A	15-Aug-2023 A		
493	P4-OF1870	Excavation to formation level	3	0	15-Aug-2023 A	17-Aug-2023 A		
494	P4-OF1880	Laying of silt curtain and delivery of concrete block	5	0	18-Aug-2023 A	23-Aug-2023 A		
495	P4-OF1890	Pour Concrete Blinding	4	0	23-Aug-2023 A	28-Aug-2023 A		
496	P4-OF1900	Erect formwork for Vertical blinding for base slab shear key	5	0	30-Aug-2023 A	5-Sep-2023 A		
497	**Manhole SMH_KT5104**		40	40	30-Jun-2023	11-Aug-2023	454	
498	P4-5120	Trench excavation between KT5104 and Outfall_5104 (30m)	16	16	30-Jun-2023	18-Jul-2023	454	2
499	P4-5130	Pipe Laying (900 Concrete Pipe)	8	8	18-Jul-2023	26-Jul-2023	454	
500	P4-5140	Manhole SMH_KT5104 Construction & Backfill	16	16	26-Jul-2023	11-Aug-2023	454	2
501	**Reinstatement**		0	0			0	
502	**Portion 5 - Sewage Rising Main**		85	85	30-Jun-2023	22-Sep-2023	75	
503	**Site Possession**		0	0			0	
504	**Preparation Works**		0	0			0	
505	**Sewage Rising Main Installation by Open Cut (CHB1056 to CHB 1557)**		85	85	30-Jun-2023	22-Sep-2023	-4	
506	**CHB1200 - CHB1300 (100m)**		0	0			0	
507	**CHB1056 - CHB1102 (46m)**		80	80	30-Jun-2023	22-Sep-2023	-5	
508	P5-2320	Installation of strut S1	20	20	30-Jun-2023	21-Jul-2023	-5	2
509	P5-2330	Soft Excavation to 2nd strut level	15	15	7-Jul-2023	22-Jul-2023	-5	2
510	P5-2340	Installation of strut S2	20	20	13-Jul-2023	3-Aug-2023	-5	2
511	P5-2350	Soft Excavation to F.L.	15	15	24-Jul-2023	9-Aug-2023	-5	2



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Critical Remaining Work
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Critical Milestone
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Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 8 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

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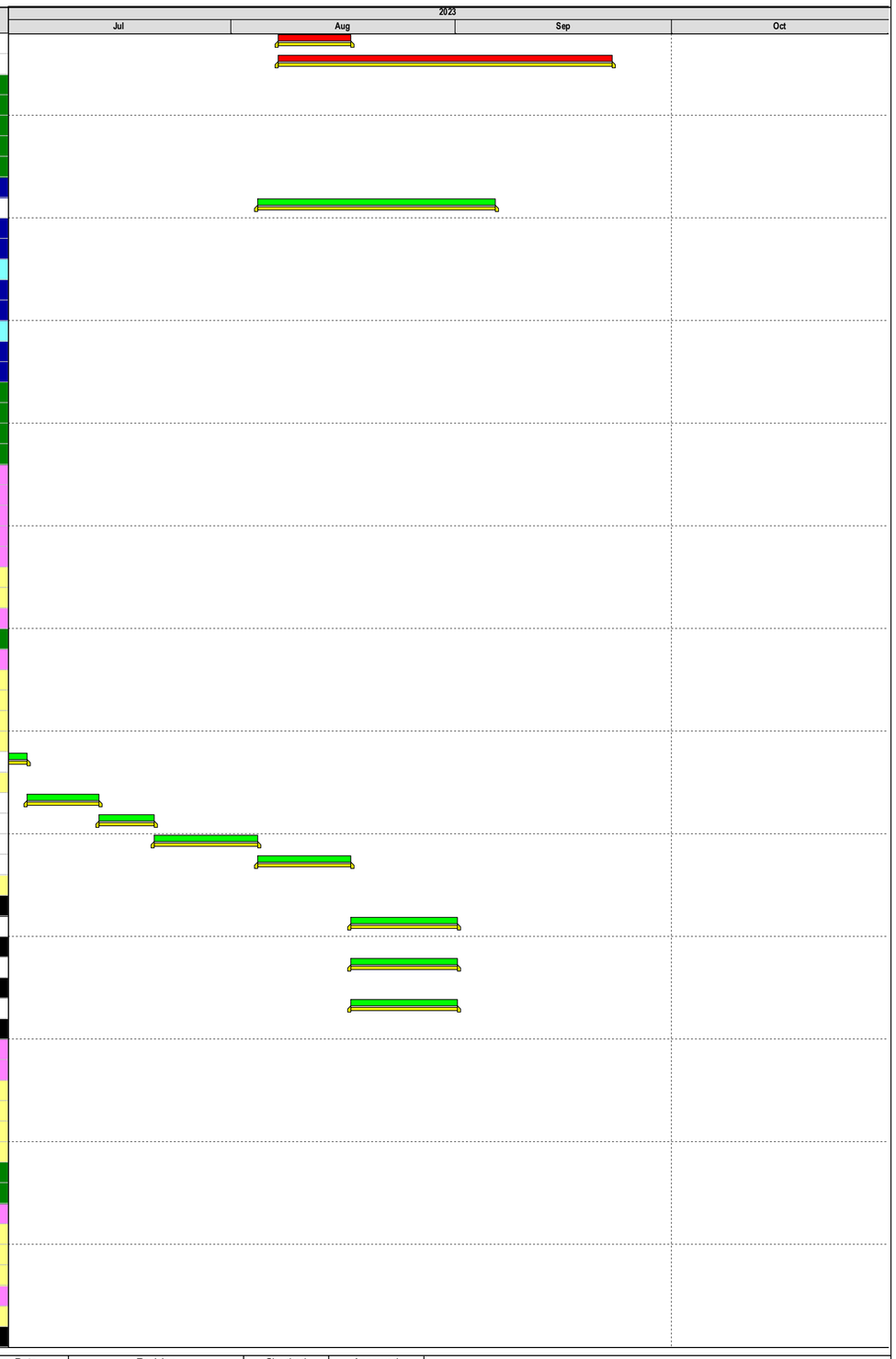
TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
512	P5-2360	Bedding and Pipe Laying (Twins DN700)	10	10	7-Aug-2023	17-Aug-2023	-5	2
513	P5-2365	RC Works Inspection Chamber and Air Valve Chamber	45	45	7-Aug-2023	22-Sep-2023	-5	
514	CHB1102 - CHB1151 (49m)		0	0			0	
515	CHB1151 - CHB1200 (49m)		0	0			0	
516	CHB1300 - CHB 1359 (59m)		0	0			0	
517	CHB1359 - CHB 1478 (119m)		0	0			0	
518	CHB1478 - CHB 1557 (79m)		0	0			0	
519	Sewage Rising Main Installation across Sheung Yue River by Pipejacking		31	31	4-Aug-2023	6-Sep-2023	83	
520	P5-3060	Pipe Jacking from CHB 982 to CHB 1046 (64m, 2.7m/day)	31	31	4-Aug-2023	6-Sep-2023	83	
521	Sewage Rising Main Installation across Shek Sheung River by Pipejacking		0	0			0	
522	Reinstatement		0	0			0	
523	Portion 6 - Sewage Discharge Manhole Type SSM1		0	0			0	
524	Site Possession		0	0			0	
525	Sewerage Works		0	0			0	
526	Portion 7 - Kwu Tung North Sewage Pumping station		66	62	30-Jun-2023 A	5-Sep-2023	340	
527	Site Poession		0	0			0	
528	Sewage Pumping Station		66	62	30-Jun-2023 A	5-Sep-2023	340	
529	Submission		0	0			0	
530	Site Preparation		0	0			0	
531	Foundation		0	0			0	
532	Excavation		0	0			0	
533	1st Stage		0	0			0	
534	2nd Stage Portion 3-6 1st level (+4.5mPD)		0	0			0	
535	3rd Stage Portion 3-6 2nd level (+2.2mPD)		0	0			0	
536	4th Stage Portion 3-6 3rd level (-0.5mPD)		0	0			0	
537	5th Stage Portion 3-4		0	0			0	
538	Grout Curtain		0	0			0	
539	Excavation		0	0			0	
540	6th Stage Portion 3-4 5th & 5a level (-4.3mPD & -5.9mPD)		0	0			0	
541	Station Structure		62	62	30-Jun-2023	1-Sep-2023	4	
542	Basement to G/F Wall & G/F Slab		62	62	30-Jun-2023	1-Sep-2023	4	
543	+1.55mPD (1st Pour)		0	0			0	
544	-2.05mPD (1st Pour)		0	0			0	
545	-6.21mPD		0	0			0	
546	-2.05mPD (2nd Pour)		1	1	30-Jun-2023	3-Jul-2023	3	
547	P7-BF1190	Base Slab, Wall of wet well and wall Kickers for screen chamber Concreting (-2.05mPD to -0.5mPD)	1	1	30-Jun-2023	3-Jul-2023	3	1
548	+1.55mPD (2nd Pour)		43	43	3-Jul-2023	17-Aug-2023	3	
549	P7-BF2000	Dismantling base slab formwork and soil backfill to -0.5mPD with testing	10	10	3-Jul-2023	13-Jul-2023	3	2
550	P7-BF2010	Dismantle of strut S3 at -0.5mPD	7	7	13-Jul-2023	21-Jul-2023	3	2
551	P7-BF2060	Remove Intermediate Sheet Pile separating Portion 1,2 & 3	14	14	21-Jul-2023	4-Aug-2023	3	2
552	P7-BF2070	Construct Remaining Portion of +1.55mPD B/F Slab (137m3)	12	12	4-Aug-2023	17-Aug-2023	3	2
553	+7.50mPD (G/F Slab)		14	14	17-Aug-2023	1-Sep-2023	4	
554	Bay 1		14	14	17-Aug-2023	1-Sep-2023	3	
555	P7-BF1401	Backfill & Dismantle of strut S2 at +2.2mPD	14	14	17-Aug-2023	1-Sep-2023	3	2
556	Bay 2		14	14	17-Aug-2023	1-Sep-2023	3	
557	P7-BF1423	Backfill & Dismantle of strut S2 at +2.2mPD	14	14	17-Aug-2023	1-Sep-2023	3	2
558	Bay 3		14	14	17-Aug-2023	1-Sep-2023	3	
559	P7-BF1433	Dismantle of strut S2 at +2.2mPD	14	14	17-Aug-2023	1-Sep-2023	3	2
560	Bay 4		0	0			0	
561	Tx Room Double Slab at +12.55mPD		0	0			0	
562	Roof Slab		0	0			0	
563	Bay 1		0	0			0	
564	Bay 2		0	0			0	
565	Bay 3		0	0			0	
566	Bay 4		0	0			0	
567	Retaining Wall & U trough		0	0			0	
568	ABWF/ E&M Works		0	0			0	
569	Basement Floor		0	0			0	
570	Valve Chamber		0	0			0	
571	Wet Well		0	0			0	
572	Screen Chamber & Retention Tank		0	0			0	
573	Ground Floor		0	0			0	
574	Tx Room / Switch Room		0	0			0	
575	ABWF		0	0			0	



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Page : 9 of 20

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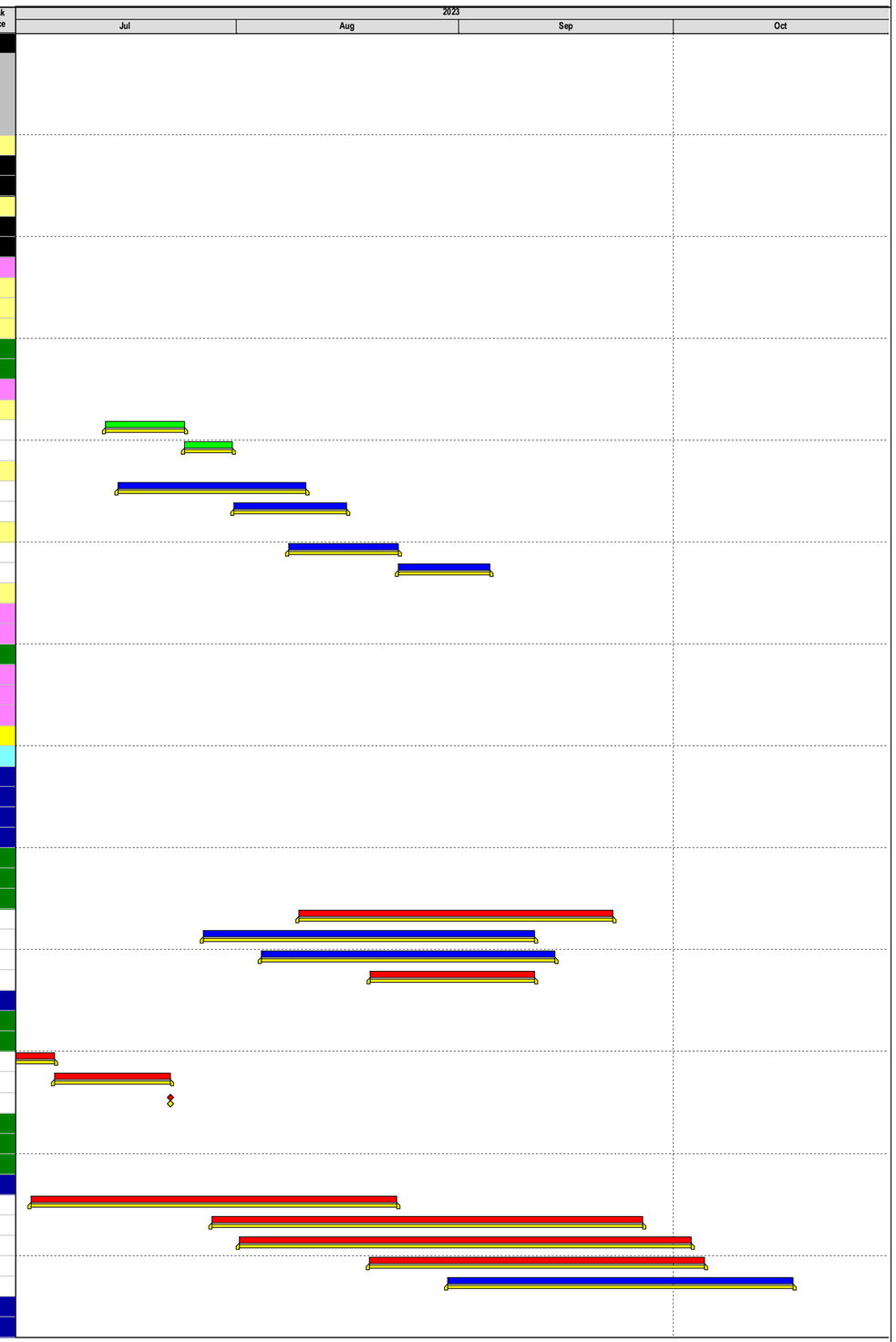
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
576		BS Works	0	0			0	
577		Electrical Works	0	0			0	
578		MVAC Works	0	0			0	
579		FS Works	0	0			0	
580		CLP works & Statutory Inspection	0	0			0	
581		DO Room	0	0			0	
582		ABWF	0	0			0	
583		BS Works	0	0			0	
584		Pump Hall	0	0			0	
585		ABWF	0	0			0	
586		BS Works	0	0			0	
587		Roof Floor	0	0			0	
588		ABWF	0	0			0	
589		BS Works	0	0			0	
590		Landscape Works	0	0			0	
591		External Finishes	0	0			0	
592		External Works	53	17	13-Jul-2023 A	5-Sep-2023	340	
593		Drainage and Site Formation	53	17	13-Jul-2023 A	5-Sep-2023	340	
594		Sewerage pipe KT1.47A to KT1.48A	16	16	13-Jul-2023	31-Jul-2023	368	
595	P7-1333	Open Trench formation for sewerage pipe KT1.47A to KT1.48A (12m long, -1.96mPD)	10	10	13-Jul-2023	24-Jul-2023	368	2
596	P7-1336	Sewerage Pipe laying KT1.47A to KT1.48A (12m) (DN1050)	6	6	24-Jul-2023	31-Jul-2023	368	3
597		Rising main CHB0.0 to CHB50	30	0	15-Jul-2023 A	16-Aug-2023 A		
598	P7-1350	Open Trench formation for rising main CHB0.0 to CHB50 (50m long 4m Depth, 1.6-2mPD)	25	0	15-Jul-2023 A	10-Aug-2023 A		2
599	P7-1360	Rising main laying (50m) (Twins DN700)	15	0	31-Jul-2023 A	16-Aug-2023 A		3
600		DN1050 Overflow Pipe	27	0	8-Aug-2023 A	5-Sep-2023 A		
601	P7-1375	Open Trench formation for DN1050 Overflow Pipe(24m long +5.3mPD)	15	0	8-Aug-2023 A	23-Aug-2023 A		2
602	P7-1377	Overflow Pipe laying (24m) (DN1050)	12	0	23-Aug-2023 A	5-Sep-2023 A		3
603		DN1050 Pipe Under SPS EVA	0	0			0	
604		EVA Construction	0	0			0	
605		Landscape Works	0	0			0	
606		Statutory Inspection	0	0			0	
607		WSD Inspection (Irrigation Water Supply)	0	0			0	
608		FSD Inspection	0	0			0	
609		CEDD / DSD Inspection	0	0			0	
610		Works in Section 3	110	97	30-Jun-2023 A	17-Oct-2023	-197	
611		Portion 8 - Roads & Drains	110	97	30-Jun-2023 A	17-Oct-2023	-197	
612		Site Possession	0	0			0	
613		Pre-construction works	0	0			0	
614		Cycle Track and Footpath Diversion (For KT1.41A to KT1.47A Construction)	0	0			0	
615		Sewer Pipeline Installation	58	44	27-Jul-2023 A	22-Sep-2023	-185	
616		KT1.40A - KT1.43.7 (50m)	0	0			0	
617		KT1.43.7 - KT1.41A (60m)	0	0			0	
618		KT1.41A - KT1.47A (100m) (Open Cut by CE-076)	55	42	27-Jul-2023 A	22-Sep-2023	-167	
619	P8-6030	Soft Excavation to 2nd strut level	42	42	9-Aug-2023	22-Sep-2023	-189	
620	P8-6040	Installation of strut S2	44	0	27-Jul-2023 A	11-Sep-2023 A		
621	P8-6050	Soft Excavation to F.L.	39	0	4-Aug-2023 A	14-Sep-2023 A		
622	P8-6100	Construction of Manhole KT1.47A	21	21	19-Aug-2023	11-Sep-2023	-156	2
623		Drainage Outfall constuction by Open Cut	23	23	30-Jun-2023	22-Jul-2023	-141	
624		Outfall 5100A	0	0			0	
625		Outfall 5101	21	21	30-Jun-2023	22-Jul-2023	-126	
626	P8-OF4096	Remove remining side sheet pile & rock fill	5	5	30-Jun-2023	6-Jul-2023	-126	
627	P8-OF4106	Backfilling to at grade level	16	16	6-Jul-2023	22-Jul-2023	-126	1
628	P8-OF4116	Report Completion of Drainage works	0	0		22-Jul-2023	-126	
629		Sewer Installation at SMH_KT5101A to OF5101(50m) (Open Cut)	0	0			0	
630		Outfall 5103	0	0			0	
631		Sewer Installation at SMH_KT5103 to OF 5103 (50m) (Open Cut)	0	0			0	
632		NS 250 PE Pipe Installation (From KT1.47A to KT6.03A)	100	88	3-Jul-2023 A	17-Oct-2023	-195	
633	P8-6900	Sheet Pile Installation for open trench	49	49	3-Jul-2023*	23-Aug-2023	-265	
634	P8-7000	Soft Excavation to 1st strut level	57	57	28-Jul-2023	26-Sep-2023	-265	
635	P8-7010	Installation of strut S1	58	58	1-Aug-2023	3-Oct-2023	-195	
636	P8-7020	Soft Excavation to 2nd strut level	42	42	19-Aug-2023	5-Oct-2023	-195	
637	P8-7030	Installation of strut S2	44	0	30-Aug-2023 A	17-Oct-2023 A		
638		Underground Utilities	0	0			0	
639		Reinstatement	0	0			0	



Primary Baseline
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Remaining Work
Critical Remaining Work
Baseline Milestone
Critical Milestone
Non-Critical Milestone

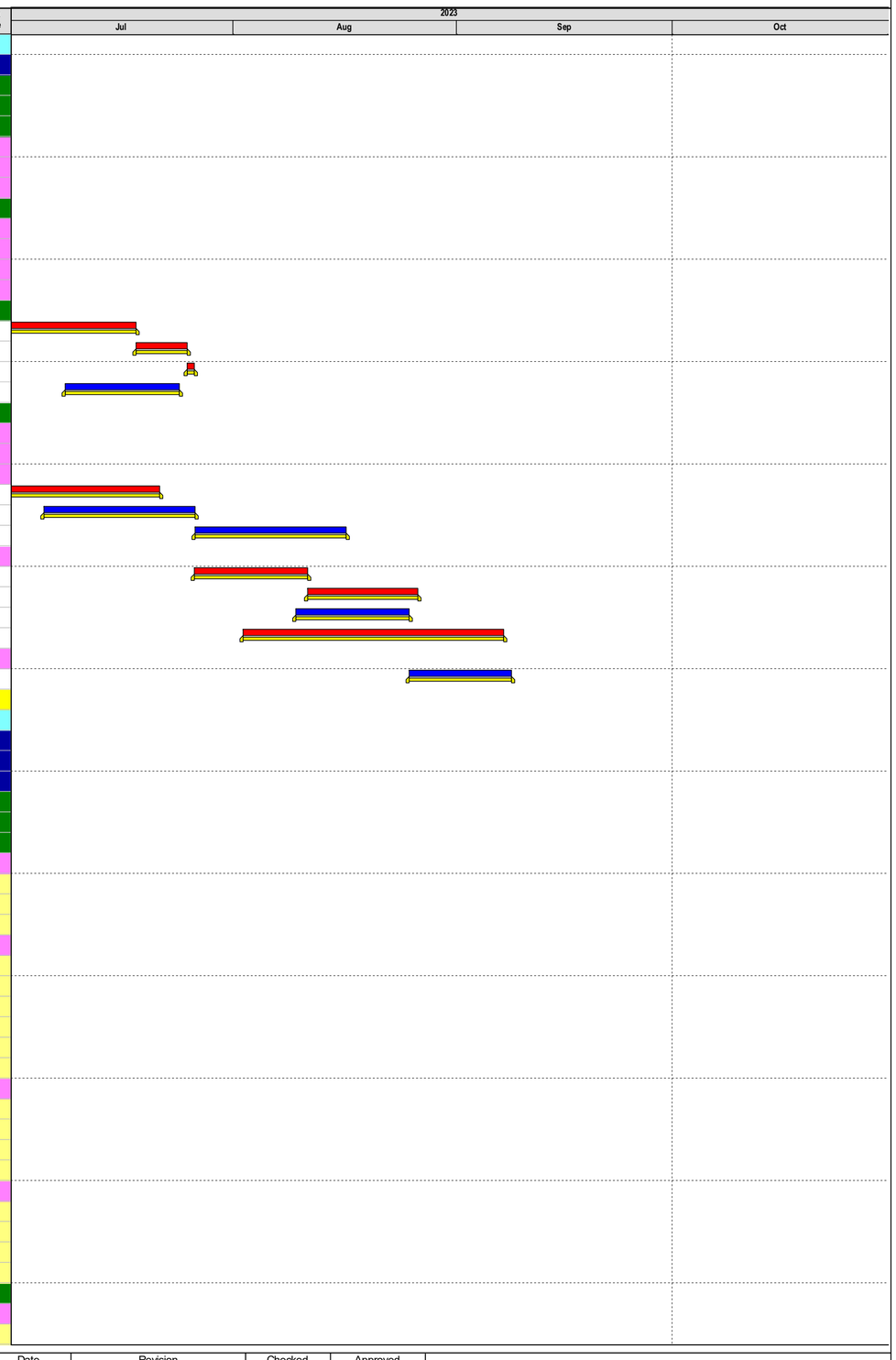
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 10 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
640		Portion 9 - Footbridge	71	70	30-Jun-2023 A	8-Sep-2023	-188	
641		Footbridge Construction	71	70	30-Jun-2023 A	8-Sep-2023	-188	
642		Site Posession	0	0			0	
643		Site Preparation	0	0			0	
644		South River Embankment	0	0			0	
645		Piling works Existing Feature: 2SE-B/FR104 (South River Embankment)	0	0			0	
646		Abutment FK2-04M	0	0			0	
647		Superstructure	0	0			0	
648		North River Embankment	0	0			0	
649		Piling works in Existing Feature: 2SE-B/FR107 (North River Embankment)	0	0			0	
650		Abutment FK2-01M	0	0			0	
651		Piling Works for Footway Ramp	0	0			0	
652		Superstructure	0	0			0	
653		Middle Bridge Deck	24	24	30-Jun-2023 A	26-Jul-2023	-129	
654	P9-1746	Internal Formwork Erection for Middle Deck (2nd Pour)	16	16	30-Jun-2023	18-Jul-2023	-170	2
655	P9-1747	Rebar Fixing for Middle Deck (2nd Pour)	7	7	18-Jul-2023	25-Jul-2023	-170	3
656	P9-1748	Concreting for Middle Deck (2nd Pour)	1	1	25-Jul-2023	26-Jul-2023	-170	
657	P9-1760	Backfilling the cofferdam & Remove sheet pile	14	0	8-Jul-2023 A	24-Jul-2023 A		2
658		Remaining Footbridge Works	71	70	30-Jun-2023 A	8-Sep-2023	-188	
659		Northern Footway Ramp / Staircase	0	0			0	
660		Southern Footway Ramp / Staircase	0	0			0	
661		ABWF Works	44	20	30-Jun-2023 A	16-Aug-2023	-125	
662	P9-1613	Laying of footbridge deck pavings	20	20	30-Jun-2023	21-Jul-2023	-125	2
663	P9-1621	Metal Parapet and Handrail Installation	20	0	5-Jul-2023 A	26-Jul-2023 A		2
664	P9-1631	Laying of staircase finishes	20	0	26-Jul-2023 A	16-Aug-2023 A		2
665		BS Works	41	41	26-Jul-2023 A	7-Sep-2023	-170	
666	P9-1595	Bridge Pillar Box Installation	15	15	26-Jul-2023	11-Aug-2023	-170	3
667	P9-1601	Bridge Cable Laying for Lamp Post	15	15	11-Aug-2023	26-Aug-2023	-159	3
668	P9-1602	Bridge Lamp Post Installation	15	0	9-Aug-2023 A	25-Aug-2023 A		3
669	P9-1603	South Bridge Drainage works	35	35	2-Aug-2023	7-Sep-2023	-170	2
670		Landscape Works	14	0	25-Aug-2023 A	8-Sep-2023 A		
671	P9-1615	Formation of Slope profile by rock fill	14	0	25-Aug-2023 A	8-Sep-2023 A		2
672		Works in Section 4	96	119	30-Jun-2023 A	26-Oct-2023	28	
673		Portion 10 - Visitor Centre	96	119	30-Jun-2023 A	26-Oct-2023	28	
674		Site Possession	0	0			0	
675		Pre-construction works	0	0			0	
676		Visitor Centre	96	119	30-Jun-2023 A	26-Oct-2023	28	
677		Foundation	0	0			0	
678		Excavation	0	0			0	
679		Substructure	0	0			0	
680		Low Level Pile Cap and Basement Slab	0	0			0	
681		Bay 1	0	0			0	
682		Bay 2 (Excl. Sump Pump)	0	0			0	
683		Bay 3 (Incl. Sump Pump)	0	0			0	
684		Basement Walls & Columns	0	0			0	
685		Basement Retaining Wall Bay 1	0	0			0	
686		Basement Retaining Wall Bay 2	0	0			0	
687		Column C4, C5, C8, C9, C12, C13 & C17	0	0			0	
688		Basement Retaining Wall Bay 3	0	0			0	
689		Basement Internal Wall & Staircase	0	0			0	
690		Basement to G/F Lift Shaft Wall	0	0			0	
691		Basement Water Tank	0	0			0	
692		Sprinkler Tank	0	0			0	
693		FS Water Tank	0	0			0	
694		Rain Water Tank	0	0			0	
695		Irrigation water Tank	0	0			0	
696		High Level Pile Cap & Column	0	0			0	
697		C20 to C22	0	0			0	
698		C19	0	0			0	
699		C3, C6	0	0			0	
700		C10, C14 & C18	0	0			0	
701		Superstructure	35	35	30-Jun-2023	3-Aug-2023	-76	
702		Ground Floor to Roof Floor	35	35	30-Jun-2023	3-Aug-2023	-76	
703		B/F to G/F Wall and G/F Slab	0	0			0	



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Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 11 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
704		Bay 1	0	0			0	
705		Bay 2	0	0			0	
706		Tx Room Cable Trench and slab	0	0			0	
707		G/F Slab	0	0			0	
708		Bay 4 (On Grade Slab) (Toilet)	0	0			0	
709		Bay 5 (On Grade Slab) (Tx Room)	0	0			0	
710		G/F to 1/F Wall and 1/F Slab	0	0			0	
711		Bay 1	0	0			0	
712		Bay 2	0	0			0	
713		Bay 3	0	0			0	
714		1/F to +12.850mPD wall and +12.850mPD slab	10	10	30-Jun-2023	10-Jul-2023	-76	
715		Bay 1	0	0			0	
716		Bay 2	8	8	30-Jun-2023	10-Jul-2023	-68	
717	P10-3410	Erection of formwork for double slab	3	3	30-Jun-2023	4-Jul-2023	-68	1
718	P10-3420	Double slab Rebar fixing	3	3	4-Jul-2023	7-Jul-2023	-68	1
719	P10-3430	Double Slab Shutters	1	1	7-Jul-2023	8-Jul-2023	-68	1
720	P10-3440	Double Slab Concreting	1	1	8-Jul-2023	10-Jul-2023	-68	1
721		1/F to R/F Wall and R/F Slab	32	32	30-Jun-2023	3-Aug-2023	-68	
722		Bay 1	24	24	30-Jun-2023	26-Jul-2023	-69	
723	P10-3810	Erection of falsework and working platform from Double Slab to R/F wall	3	3	30-Jun-2023	4-Jul-2023	-69	1
724	P10-3820	Erection of One Side Formwork from Double Slab to R/F wall	3	3	4-Jul-2023	7-Jul-2023	-69	1
725	P10-3830	Rebar Fixing from Double Slab to R/F wall	3	3	7-Jul-2023	11-Jul-2023	-69	1
726	P10-3840	Erection of remaining side formwork from Double Slab to R/F wall	3	3	11-Jul-2023	13-Jul-2023	-69	1
727	P10-3845	Double Slab to R/F wall Concreting	1	1	13-Jul-2023	14-Jul-2023	-69	1
728	P10-3850	Erection of falsework and working platform for R/F Slab	4	4	14-Jul-2023	19-Jul-2023	-69	1
729	P10-3860	Erection of Formwork for R/F Slab	2	2	19-Jul-2023	21-Jul-2023	-69	1
730	P10-3870	Rebar Fixing for R/F Slab	2	2	21-Jul-2023	22-Jul-2023	-69	1
731	P10-3880	R/F Slab Shutters	2	2	22-Jul-2023	25-Jul-2023	-69	1
732	P10-3890	R/F Slab Concreting	1	1	25-Jul-2023	26-Jul-2023	-69	1
733		Bay 2	24	24	10-Jul-2023	3-Aug-2023	-68	
734	P10-3900	Erection of falsework and working platform from Double Slab to R/F wall	3	3	10-Jul-2023	12-Jul-2023	-68	1
735	P10-3910	Erection of One Side Formwork from Double Slab to R/F wall	3	3	12-Jul-2023	15-Jul-2023	-68	1
736	P10-3920	Rebar Fixing from Double Slab to R/F wall	3	3	15-Jul-2023	19-Jul-2023	-68	1
737	P10-3930	Erection of remaining side formwork from Double Slab to R/F wall	3	3	19-Jul-2023	21-Jul-2023	-68	1
738	P10-3935	Double Slab to R/F wall Concreting	1	1	22-Jul-2023	22-Jul-2023	-68	1
739	P10-3940	Erection of falsework and working platform for R/F Slab	3	3	22-Jul-2023	26-Jul-2023	-68	1
740	P10-3950	Erection of Formwork for R/F Slab	3	3	26-Jul-2023	29-Jul-2023	-68	1
741	P10-3960	Rebar Fixing for R/F Slab	2	2	29-Jul-2023	1-Aug-2023	-68	1
742	P10-3970	R/F Slab Shutters	2	2	1-Aug-2023	2-Aug-2023	-68	1
743	P10-3980	R/F Slab Concreting	1	1	2-Aug-2023	3-Aug-2023	-68	1
744		ABWF / E&M Works	96	119	30-Jun-2023 A	26-Oct-2023	28	
745		Basement Floor	52	52	12-Jul-2023	1-Sep-2023	10	
746		Rainwater Harvesting Tank / Irrigation Pump Room	47	47	17-Jul-2023	1-Sep-2023	6	
747		ABWF	45	45	17-Jul-2023	1-Sep-2023	6	
748	P10-BFRH-1060	Wall Finishes (Wall waterproofing, plastering, Skim Coat and 1st Coat Painting)	21	21	17-Jul-2023	7-Aug-2023	6	
749	P10-BFRH-1070	Water tanks waterproofing and tiling	12	12	8-Aug-2023	19-Aug-2023	6	
750	P10-BFRH-1080	Concrete Plinth Casting and finishes	12	12	19-Aug-2023	1-Sep-2023	6	
751		BS Works	0	0			0	
752		MVAC	0	0			0	
753		PD	0	0			0	
754		EL	0	0			0	
755		Sprinkler & FS Pump Room	42	42	12-Jul-2023	23-Aug-2023	20	
756		ABWF	40	40	12-Jul-2023	23-Aug-2023	18	
757	P10-BFFS-1150	Wall Finishes (Wall waterproofing, plastering, Skim Coat and 1st Coat Painting)	14	14	12-Jul-2023	26-Jul-2023	18	
758	P10-BFFS-1160	Water tanks waterproofing and tiling	12	12	26-Jul-2023	8-Aug-2023	18	
759	P10-BFFS-1170	Concrete Plinth Casting and finishes	12	12	8-Aug-2023	21-Aug-2023	18	
760	P10-BFFS-1180	Floor Screeding	2	2	21-Aug-2023	23-Aug-2023	18	
761		BS Works	0	0			0	
762		MVAC	0	0			0	
763		PD	0	0			0	
764		EL	0	0			0	
765		FS	0	0			0	
766		Ground Floor	96	114	30-Jun-2023 A	21-Oct-2023	33	
767		Generator Room	69	69	30-Jun-2023	6-Sep-2023	-22	

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Critical Remaining Work
Baseline Milestone
Critical Milestone
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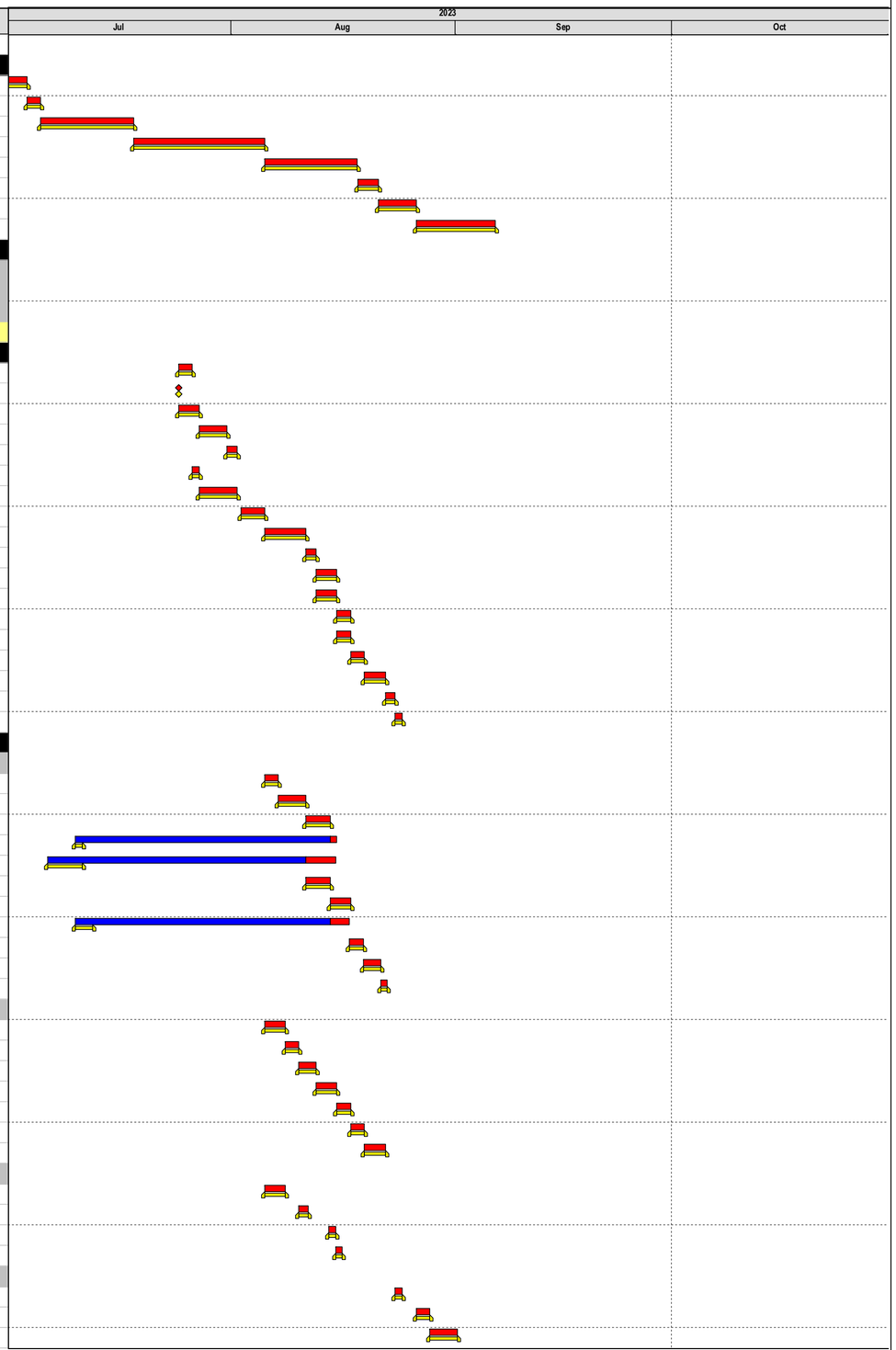
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 12 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
768	P10-GFGS1000	Access Date of G/F Generator Room Fitting Out	0	0	30-Jun-2023		-21	
769	**ABWF**		64	64	30-Jun-2023	6-Sep-2023	-21	
770	P10-GFGS1010	Setting Out	2	2	30-Jun-2023	3-Jul-2023	-21	
771	P10-GFGS1020	Erect Scaffolding for wall and ceiling finishes	2	2	3-Jul-2023	5-Jul-2023	-21	
772	P10-GFGS1030	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	5-Jul-2023	18-Jul-2023	-21	
773	P10-GFGS1040	Wall Finishes (Wall plastering, Tiling, Skim Coat and 1st Coat Painting)	18	18	18-Jul-2023	5-Aug-2023	-21	
774	P10-GFGS1050	Concrete Plinth Casting and finishes	12	12	5-Aug-2023	18-Aug-2023	-21	
775	P10-GFGS1060	Floor Screeding	2	2	18-Aug-2023	21-Aug-2023	-21	
776	P10-GFGS1070	Access Panel Installation to Generator Room	6	6	21-Aug-2023	26-Aug-2023	-21	
777	P10-GFGS1080	Floor epoxy Painting & door installation	10	10	26-Aug-2023	6-Sep-2023	-21	
778	**BS Works**		0	0			0	
779	MVAC		0	0			0	
780	EL		0	0			0	
781	FS		0	0			0	
782	**Tx Room / Switch Room**		54	37	6-Jul-2023 A	1-Sep-2023	-58	
783	**ABWF**		30	30	24-Jul-2023	24-Aug-2023	-58	
784	P10-Tx1100	Setting Out	2	2	24-Jul-2023	26-Jul-2023	-58	
785	P10-Tx1105	Access Date of Tx Room Double Slab Builders works	0	0	24-Jul-2023		-58	
786	P10-Tx1107	Formwork dismantling and touch up works	3	3	24-Jul-2023	27-Jul-2023	-58	
787	P10-Tx1108	Waterproofing works of Tx Room Double Slab	3	3	27-Jul-2023	31-Jul-2023	-58	
788	P10-Tx1109	Flooding Test and Infra Red test after waterproofing	2	2	31-Jul-2023	1-Aug-2023	-58	
789	P10-Tx1110	Erect Scaffolding for wall and ceiling finishes of Tx Rm	1	1	26-Jul-2023	27-Jul-2023	-58	
790	P10-Tx1120	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	5	5	27-Jul-2023	1-Aug-2023	-58	
791	P10-Tx1130	Wall Finishes (Wall plastering, Lourve Frame, Wall Tiling, Skim Coat and 1st Coat Painting)	4	4	2-Aug-2023	5-Aug-2023	-58	
792	P10-Tx1140	Cable Trench Plastering	5	5	5-Aug-2023	11-Aug-2023	-58	
793	P10-Tx1150	Cable Trench Angle Frame Installation	2	2	11-Aug-2023	12-Aug-2023	-58	
794	P10-Tx1160	Floor Screeding	2	2	12-Aug-2023	15-Aug-2023	-58	
795	P10-Tx1170	Metal Door Frame Installation	2	2	12-Aug-2023	15-Aug-2023	-58	
796	P10-Tx1180	Ceiling And Wall Painting (Final Coat)	2	2	15-Aug-2023	17-Aug-2023	-58	
797	P10-Tx1190	Chequer Plate Installation	2	2	15-Aug-2023	17-Aug-2023	-58	
798	P10-Tx1200	Painting to Chequer Plate	2	2	17-Aug-2023	19-Aug-2023	-58	
799	P10-Tx1210	Floor Dust Proof Coating	2	2	19-Aug-2023	22-Aug-2023	-58	
800	P10-Tx1220	Durasteel Installation to Air Duct	2	2	22-Aug-2023	23-Aug-2023	-58	
801	P10-Tx1230	Metal Door Leaf Installation	1	1	23-Aug-2023	24-Aug-2023	-58	
802	**BS Works**		54	25	6-Jul-2023 A	1-Sep-2023	-58	
803	Electrical Works		45	16	6-Jul-2023 A	22-Aug-2023	-57	
804	P10-Tx1270	Delivery of Cable Tray	1	1	5-Aug-2023	7-Aug-2023	-57	2
805	P10-Tx1530	Installation of Cable Tray over ceiling	4	4	7-Aug-2023	11-Aug-2023	-57	2
806	P10-Tx1560	Installation of Light Fitting at Switch Room	3	3	11-Aug-2023	14-Aug-2023	-51	2
807	P10-Tx1590	SAT of Switchboard	1	1	10-Jul-2023 A	15-Aug-2023	-51	2
808	P10-Tx1600	Installation of MCB Board	4	4	6-Jul-2023 A	15-Aug-2023	-57	2
809	P10-Tx1610	Installation of Earthing System at Tx Room and Switch Room	3	3	11-Aug-2023	14-Aug-2023	-57	2
810	P10-Tx1620	System T&C (Electrical Works)	3	3	14-Aug-2023	17-Aug-2023	-57	2
811	P10-Tx1630	Installation of Lighting conductors	3	3	10-Jul-2023 A	17-Aug-2023	-57	2
812	P10-Tx1640	Installation of Lightning Pits	2	2	17-Aug-2023	19-Aug-2023	-57	2
813	P10-Tx1650	Installation of Earthing Pits	2	2	19-Aug-2023	21-Aug-2023	-57	2
814	P10-Tx1660	Earthing and Lightning T&C	1	1	21-Aug-2023	22-Aug-2023	-57	2
815	MVAC Works		15	15	5-Aug-2023	22-Aug-2023	-56	
816	P10-Tx1680	Intallation (MVAC) of Conduit at Tx Room	2	2	5-Aug-2023	8-Aug-2023	-56	2
817	P10-Tx1690	Cable Wiring & Cable Containment (MVAC) of Conduit at Tx Room	2	2	8-Aug-2023	10-Aug-2023	-56	2
818	P10-Tx1700	Installation of Fan and Air Duct at Tx Room	3	3	10-Aug-2023	12-Aug-2023	-56	2
819	P10-Tx1710	Installation of Fan Controller at Tx Room	2	2	12-Aug-2023	15-Aug-2023	-56	2
820	P10-Tx1720	Installation of Fan and Air Duct at Switchroom	2	2	15-Aug-2023	17-Aug-2023	-56	2
821	P10-Tx1730	Installation of LMCP at Switchroom	2	2	17-Aug-2023	19-Aug-2023	-56	2
822	P10-Tx1740	System T&C (MVAC Works)	2	2	19-Aug-2023	22-Aug-2023	-56	2
823	FS Works		10	10	5-Aug-2023	16-Aug-2023	-52	
824	P10-Tx1770	Intallation (FS) of Conduit at Tx Room	2	2	5-Aug-2023	8-Aug-2023	-52	2
825	P10-Tx1790	Installation of Heat Detector at Tx Room	2	2	10-Aug-2023	11-Aug-2023	-52	2
826	P10-Tx1820	Installation of Heat Detector at Switchroom	1	1	14-Aug-2023	15-Aug-2023	-52	2
827	P10-Tx1830	Installation of AFA panel and audio / visual alarm equipment	1	1	15-Aug-2023	16-Aug-2023	-52	2
828	CLP works & Statutory Inspection		34	8	27-Jul-2023 A	1-Sep-2023	-58	
829	P10-Tx1850	Submit WR1	1	1	23-Aug-2023	24-Aug-2023	-58	2
830	P10-Tx2000	1st CLP Inspection of Tx Room	1	1	26-Aug-2023	28-Aug-2023	-58	2
831	P10-Tx2010	1st Defect Rectification	4	4	28-Aug-2023	1-Sep-2023	-58	2



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Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 13 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

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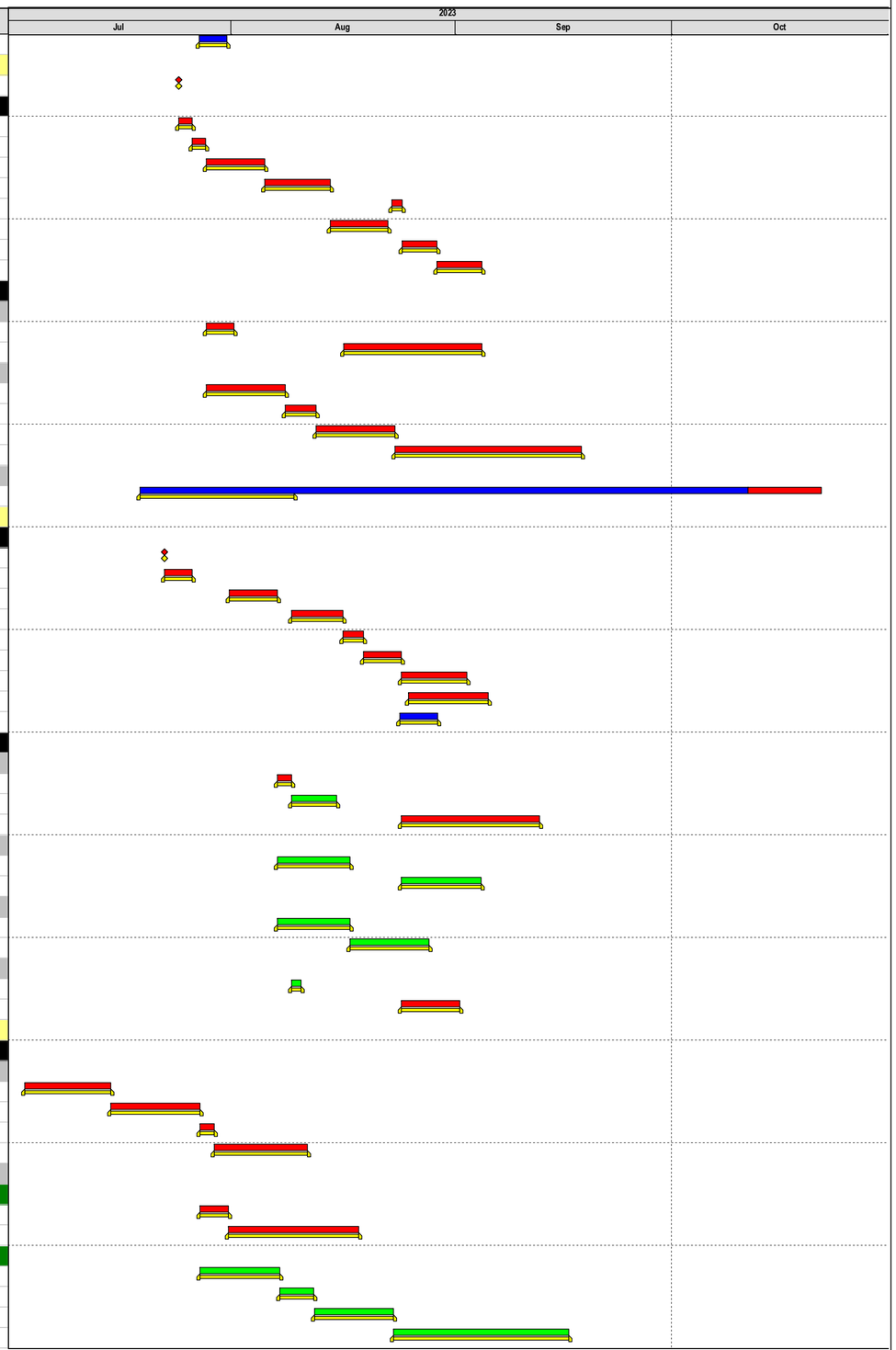
832	P10-Tx2030	2nd Defect Rectification	3	0	27-Jul-2023 A	31-Jul-2023 A		2
833	**FS Control Room**		58	84	19-Jul-2023 A	21-Oct-2023	-52	
834	P10-GFFS1020	Access Date of G/F FS control Room Fitting Out	0	0	24-Jul-2023		-52	
835	**ABWF**		40	40	24-Jul-2023	4-Sep-2023	-39	
836	P10-GFFS1050	Setting Out	2	2	24-Jul-2023	26-Jul-2023	-52	
837	P10-GFFS1060	Erect Scaffolding for wall and ceiling finishes	2	2	26-Jul-2023	28-Jul-2023	-52	
838	P10-GFFS1070	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	8	8	28-Jul-2023	5-Aug-2023	-39	
839	P10-GFFS1080	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	8	8	5-Aug-2023	14-Aug-2023	-39	
840	P10-GFFS1090	Floor Screeding	2	2	23-Aug-2023	24-Aug-2023	-39	
841	P10-GFFS1100	Concrete Plinth Casting and finishes	8	8	14-Aug-2023	22-Aug-2023	-39	
842	P10-GFFS1110	Access Panel Installation to FS control Room	4	4	24-Aug-2023	29-Aug-2023	-39	
843	P10-GFFS1120	Floor epoxy Painting & door installation	6	6	29-Aug-2023	4-Sep-2023	-39	
844	**BS Works**		58	80	19-Jul-2023 A	21-Oct-2023	-52	
845	**MVAC**		36	36	28-Jul-2023	4-Sep-2023	-39	
846	P10-GFFS1150	Setting out for all equipment / MOS inspection	3	3	28-Jul-2023	1-Aug-2023	-52	
847	P10-GFFS1160	Air Duct installation	18	18	16-Aug-2023	4-Sep-2023	-39	
848	**EL**		49	49	28-Jul-2023	18-Sep-2023	-52	
849	P10-GFFS1170	Setting out for all equipment / MOS inspection	10	10	28-Jul-2023	8-Aug-2023	-52	
850	P10-GFFS1180	Installation of cable containment	5	5	8-Aug-2023	12-Aug-2023	-52	
851	P10-GFFS1190	Cable wiring	10	10	12-Aug-2023	23-Aug-2023	-52	
852	P10-GFFS1200	Installation of Lighting fitting and small power provision	24	24	23-Aug-2023	18-Sep-2023	-52	
853	**FS**		21	11	19-Jul-2023 A	21-Oct-2023	-52	
854	P10-GFFS1140	FS Sprinkler head, Alarm smoke detector, heat detector installation	21	11	19-Jul-2023 A	21-Oct-2023	-52	
855	**Ground Floor Male / Female / U-Toilet**		49	49	22-Jul-2023 A	12-Sep-2023	54	
856	**ABWF**		42	42	22-Jul-2023 A	5-Sep-2023	0	
857	P10-GT1000	Access Date of G/F Toilet Fitting Out	0	0	22-Jul-2023		-13	
858	P10-GT1010	Site Survey and setting out	3	3	22-Jul-2023	26-Jul-2023	-13	
859	P10-GT1020	Block Wall Erection	6	6	31-Jul-2023	7-Aug-2023	-18	
860	P10-GT1040	Waterproofing & testing	7	7	9-Aug-2023	16-Aug-2023	-18	
861	P10-GT1050	Protected screed	3	3	16-Aug-2023	19-Aug-2023	-18	
862	P10-GT1060	Ceiling Grid Installation	5	5	19-Aug-2023	24-Aug-2023	-18	
863	P10-GT1070	Wall finishes and furring wall installation	9	9	24-Aug-2023	2-Sep-2023	-18	
864	P10-GT1080	Floor finishes with protection	10	10	25-Aug-2023	5-Sep-2023	-18	
865	P10-GT1085	Ceiling Board Installation	5	0	24-Aug-2023 A	29-Aug-2023 A		
866	**BS Works**		35	35	7-Aug-2023	12-Sep-2023	54	
867	**MVAC**		35	35	7-Aug-2023	12-Sep-2023	-1	
868	P10-GT1030	Setting out for all equipment / Conduit / Switches	2	2	7-Aug-2023	9-Aug-2023	-18	
869	P10-GT1150	MEP Conduit embedment	6	6	9-Aug-2023	15-Aug-2023	8	
870	P10-GT1160	Air Duct installation	18	18	24-Aug-2023	12-Sep-2023	-1	
871	**FS**		27	27	7-Aug-2023	4-Sep-2023	9	
872	P10-GT1180	FS Piping, cable containment Installation	10	10	7-Aug-2023	17-Aug-2023	16	
873	P10-GT1190	FS Sprinkler pipe overhead with ceiling installation	10	10	24-Aug-2023	4-Sep-2023	9	
874	**PD**		20	20	7-Aug-2023	28-Aug-2023	69	
875	P10-GT1210	setting out for pipeworks / San fit, & Installation of pipework at ceiling level	10	10	7-Aug-2023	17-Aug-2023	69	
876	P10-GT1220	Installation of pipework connection to underground drainage	10	10	17-Aug-2023	28-Aug-2023	69	
877	**EL**		23	23	9-Aug-2023	1-Sep-2023	-1	
878	P10-GT1250	Setting out for all equipment / MOS inspection	2	2	9-Aug-2023	10-Aug-2023	12	
879	P10-GT1260	Installation of cable containment	8	8	24-Aug-2023	1-Sep-2023	-1	
880	**BOH**		84	84	30-Jun-2023 A	22-Sep-2023	43	
881	**Material Recovery**		79	79	3-Jul-2023	19-Sep-2023	7	
882	**ABWF**		38	38	3-Jul-2023	11-Aug-2023	-8	
883	P10-GF-MR1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	3-Jul-2023	15-Jul-2023	-15	
884	P10-GF-MR1030	Wall Finishes (Wall plastering, tiling)	12	12	15-Jul-2023	27-Jul-2023	-15	
885	P10-GF-MR1040	Floor Screeding	2	2	27-Jul-2023	29-Jul-2023	-8	
886	P10-GF-MR1050	Floor quarry Tiles & door installation	12	12	29-Jul-2023	11-Aug-2023	-8	
887	**BS Works**		54	54	27-Jul-2023	19-Sep-2023	7	
888	**MVAC**		21	21	27-Jul-2023	18-Aug-2023	-15	
889	P10-GF-MR1080	Setting out for all equipment / MOS inspection	3	3	27-Jul-2023	31-Jul-2023	-15	
890	P10-GF-MR1090	Air Duct installation	18	18	31-Jul-2023	18-Aug-2023	-15	
891	**EL**		49	49	27-Jul-2023	16-Sep-2023	8	
892	P10-GF-MR1100	Setting out for all equipment / MOS inspection	10	10	27-Jul-2023	7-Aug-2023	6	
893	P10-GF-MR1110	Installation of cable containment	5	5	7-Aug-2023	12-Aug-2023	8	
894	P10-GF-MR1120	Cable wiring	10	10	12-Aug-2023	23-Aug-2023	8	
895	P10-GF-MR1130	Installation of Lighting fitting and small power provision	24	24	23-Aug-2023	16-Sep-2023	8	



Primary Baseline
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Remaining Work
Critical Remaining Work
Baseline Milestone
Critical Milestone
Non-Critical Milestone

Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 14 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
896		FS	30	30	18-Aug-2023	19-Sep-2023	-15	
897	P10-GF-MR1060	FS Piping, cable containment Installation	30	30	18-Aug-2023	19-Sep-2023	-15	
898		PD	0	0			0	
899		Security Control Room	64	64	3-Jul-2023	5-Sep-2023	-45	
900		ABWF	44	44	3-Jul-2023	17-Aug-2023	-26	
901	P10-GFSC1050	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	9	9	3-Jul-2023	12-Jul-2023	-43	
902	P10-GFSC1060	Wall plastering	9	9	12-Jul-2023	21-Jul-2023	-43	
903	P10-GFSC1070	Floor Screeding	2	2	27-Jul-2023	29-Jul-2023	-26	
904	P10-GFSC1090	Wall Skim Coat and 1st Coat Painting	6	6	29-Jul-2023	5-Aug-2023	-26	
905	P10-GFSC1100	Floor epoxy Painting & door installation	6	6	11-Aug-2023	17-Aug-2023	-26	
906		BS Works	46	46	21-Jul-2023	5-Sep-2023	-45	
907		MVAC	26	26	21-Jul-2023	17-Aug-2023	-26	
908	P10-GFSC1130	Setting out for all equipment / MOS inspection	3	3	21-Jul-2023	25-Jul-2023	-43	
909	P10-GFSC1140	Air Duct installation	18	18	29-Jul-2023	17-Aug-2023	-26	
910		EL	43	43	21-Jul-2023	5-Sep-2023	-43	
911	P10-GFSC1150	Setting out for all equipment / MOS inspection	10	10	21-Jul-2023	1-Aug-2023	-43	
912	P10-GFSC1160	Installation of cable containment	5	5	1-Aug-2023	5-Aug-2023	-43	
913	P10-GFSC1170	Cable wiring	10	10	7-Aug-2023	16-Aug-2023	-43	
914	P10-GFSC1180	Installation of Lighting fitting and small power provision	18	18	17-Aug-2023	5-Sep-2023	-43	
915		FS	0	0			0	
916		Security System	0	0			0	
917		Main Distribution Frame Room	79	79	30-Jun-2023	22-Sep-2023	4	
918		ABWF	46	46	30-Jun-2023	18-Aug-2023	-14	
919	P10-GF-MDF1000	Setting Out	2	2	30-Jun-2023	3-Jul-2023	-17	
920	P10-GF-MDF1010	Erect Scaffolding for wall and ceiling finishes	2	2	3-Jul-2023	5-Jul-2023	-17	
921	P10-GF-MDF1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	5-Jul-2023	18-Jul-2023	-17	
922	P10-GF-MDF1030	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12	18-Jul-2023	31-Jul-2023	-17	
923	P10-GF-MDF1040	Floor Screeding	2	2	31-Jul-2023	1-Aug-2023	-14	
924	P10-GF-MDF1050	Floor epoxy Painting	10	10	8-Aug-2023	18-Aug-2023	-14	
925		BS Works	51	51	31-Jul-2023	22-Sep-2023	4	
926		MVAC	21	21	31-Jul-2023	22-Aug-2023	-17	
927	P10-GF-MDF1080	Setting out for all equipment / MOS inspection	3	3	31-Jul-2023	2-Aug-2023	-17	
928	P10-GF-MDF1090	Air Duct installation	18	18	2-Aug-2023	22-Aug-2023	-17	
929		EL	49	49	31-Jul-2023	20-Sep-2023	6	
930	P10-GF-MDF1100	Setting out for all equipment / MOS inspection	10	10	31-Jul-2023	10-Aug-2023	4	
931	P10-GF-MDF1110	Installation of cable containment	5	5	10-Aug-2023	15-Aug-2023	6	
932	P10-GF-MDF1120	Cable wiring	10	10	15-Aug-2023	25-Aug-2023	6	
933	P10-GF-MDF1130	Installation of Lighting fitting and small power provision	24	24	25-Aug-2023	20-Sep-2023	6	
934		FS	30	30	22-Aug-2023	22-Sep-2023	-17	
935	P10-GF-MDF1060	FS Piping, cable containment Installation	30	30	22-Aug-2023	22-Sep-2023	-17	
936		Water Meter Cabinet	65	65	30-Jun-2023	7-Sep-2023	71	
937		ABWF	40	40	30-Jun-2023	11-Aug-2023	71	
938	P10-GF-WMC1000	Setting Out	2	2	30-Jun-2023	3-Jul-2023	71	
939	P10-GF-WMC1010	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	3-Jul-2023	15-Jul-2023	71	
940	P10-GF-WMC1020	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12	15-Jul-2023	28-Jul-2023	71	
941	P10-GF-WMC1030	Floor Screeding	2	2	28-Jul-2023	31-Jul-2023	71	
942	P10-GF-WMC1040	Double Leaf Door Installation to water meter cabinet	6	6	31-Jul-2023	5-Aug-2023	71	
943	P10-GF-WMC1050	Floor epoxy Painting & door installation	6	6	5-Aug-2023	11-Aug-2023	71	
944		BS Works	25	25	12-Aug-2023	7-Sep-2023	71	
945		PD	25	25	12-Aug-2023	7-Sep-2023	71	
946	P10-GF-WMC1060	Water piping works Installation	15	15	12-Aug-2023	28-Aug-2023	71	
947	P10-GF-WMC1070	Water Meter Installation	10	10	28-Aug-2023	7-Sep-2023	71	
948		Equipment Room	51	51	24-Jul-2023	13-Sep-2023	-30	
949		ABWF	36	36	24-Jul-2023	31-Aug-2023	-32	
950	P10-GFER1000	Setting Out	2	2	24-Jul-2023	26-Jul-2023	-39	
951	P10-GFER1010	Erect Scaffolding for wall and ceiling finishes	2	2	26-Jul-2023	28-Jul-2023	-39	
952	P10-GFER1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	28-Jul-2023	10-Aug-2023	-39	
953	P10-GFER1030	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12	10-Aug-2023	22-Aug-2023	-39	
954	P10-GFER1040	Floor Screeding	2	2	23-Aug-2023	24-Aug-2023	-32	
955	P10-GFER1050	Access Panel Installation	6	6	24-Aug-2023	31-Aug-2023	-32	
956		BS Works	22	22	23-Aug-2023	13-Sep-2023	-30	
957		MVAC	21	21	23-Aug-2023	13-Sep-2023	-39	
958	P10-GFER1090	Setting out for all equipment / MOS inspection	3	3	23-Aug-2023	25-Aug-2023	-39	
959	P10-GFER1100	Air Duct installation	18	18	25-Aug-2023	13-Sep-2023	-39	

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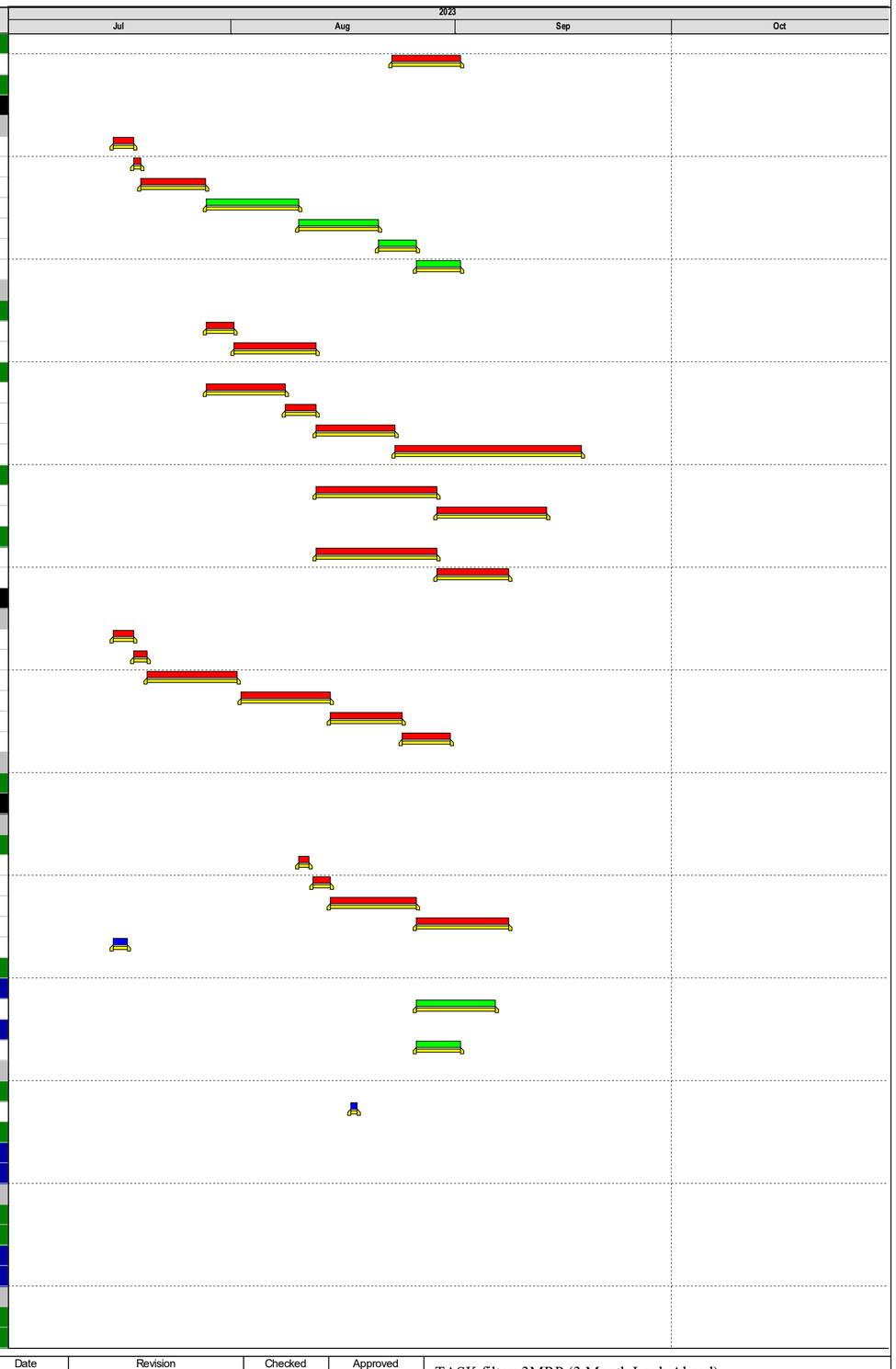
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 15 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
960		EL	10	10	23-Aug-2023	1-Sep-2023	-18	
961	P10-GFER1110	Setting out for all equipment / MOS inspection	10	10	23-Aug-2023	1-Sep-2023	-18	
962		FS	0	0			0	
963		Cleaners Store	61	61	15-Jul-2023	18-Sep-2023	-4	
964		ABWF	46	46	15-Jul-2023	1-Sep-2023	11	
965	P10-GFCS1000	Setting Out	2	2	15-Jul-2023	18-Jul-2023	-19	
966	P10-GFCS1010	Erect Scaffolding for wall and ceiling finishes	1	1	18-Jul-2023	19-Jul-2023	-19	
967	P10-GFCS1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	9	9	19-Jul-2023	28-Jul-2023	-19	
968	P10-GFCS1030	Floor Waterproofing, testing and Protective Screeding	12	12	28-Jul-2023	10-Aug-2023	11	
969	P10-GFCS1040	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	10	10	10-Aug-2023	21-Aug-2023	11	
970	P10-GFCS1060	Ceiling Grid Installation	6	6	21-Aug-2023	26-Aug-2023	11	
971	P10-GFCS1070	Floor epoxy Painting	6	6	26-Aug-2023	1-Sep-2023	11	
972		BS Works	49	49	28-Jul-2023	18-Sep-2023	-4	
973		MVAC	15	15	28-Jul-2023	12-Aug-2023	-19	
974	P10-GFCS1100	Setting out for all equipment / MOS inspection	3	3	28-Jul-2023	1-Aug-2023	-19	
975	P10-GFCS1110	Air Duct installation	12	12	1-Aug-2023	12-Aug-2023	-19	
976		EL	49	49	28-Jul-2023	18-Sep-2023	-4	
977	P10-GFCS1120	Setting out for all equipment / MOS inspection	10	10	28-Jul-2023	8-Aug-2023	-4	
978	P10-GFCS1130	Installation of cable containment	5	5	8-Aug-2023	12-Aug-2023	-4	
979	P10-GFCS1140	Cable wiring	10	10	12-Aug-2023	23-Aug-2023	-4	
980	P10-GFCS1150	Installation of Lighting fitting and small power provision	24	24	23-Aug-2023	18-Sep-2023	-4	
981		FS	30	30	12-Aug-2023	13-Sep-2023	0	
982	P10-GFCS1080	FS Piping, cable containment Installation	15	15	12-Aug-2023	29-Aug-2023	-19	
983	P10-GFCS1090	FS Sprinkler head, Alarm smoke detector, heat detector installation	15	15	29-Aug-2023	13-Sep-2023	0	
984		PD	25	25	12-Aug-2023	8-Sep-2023	-19	
985	P10-GFCS1160	Water piping works Installation	15	15	12-Aug-2023	29-Aug-2023	-19	
986	P10-GFCS1170	Floor Drain Installation	10	10	29-Aug-2023	8-Sep-2023	-19	
987		Maintenance Corridor	46	46	15-Jul-2023	31-Aug-2023	-35	
988		ABWF	44	44	15-Jul-2023	31-Aug-2023	-33	
989	P10-GF-MC1020	Setting Out	2	2	15-Jul-2023	18-Jul-2023	-33	
990	P10-GF-MC1030	Erect Scaffolding for wall and ceiling finishes	2	2	18-Jul-2023	20-Jul-2023	-33	
991	P10-GF-MC1040	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	20-Jul-2023	1-Aug-2023	-33	
992	P10-GF-MC1050	Floor Waterproofing, testing and Protective Screeding	12	12	2-Aug-2023	14-Aug-2023	-33	
993	P10-GF-MC1060	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	10	10	14-Aug-2023	24-Aug-2023	-33	
994	P10-GF-MC1070	Access Panel Installation	6	6	24-Aug-2023	31-Aug-2023	-33	
995		BS Works	0	0			0	
996		PD	0	0			0	
997		Staircase	55	29	15-Jul-2023 A	8-Sep-2023	-21	
998		ST-02	52	28	15-Jul-2023 A	8-Sep-2023	13	
999		ABWF	52	28	15-Jul-2023 A	8-Sep-2023	-69	
1000	P10-GF-ST2-1020	Setting Out	2	2	10-Aug-2023	11-Aug-2023	-69	
1001	P10-GF-ST2-1030	Erect Scaffolding for wall and ceiling finishes	2	2	12-Aug-2023	14-Aug-2023	-69	
1002	P10-GF-ST2-1040	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	14-Aug-2023	26-Aug-2023	-69	
1003	P10-GF-ST2-1050	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12	26-Aug-2023	8-Sep-2023	-69	
1004	P10-GF-ST2-1055	Dismantle Scaffolding	1	0	15-Jul-2023 A	17-Jul-2023 A		
1005		BS Works	10	10	26-Aug-2023	6-Sep-2023	15	
1006		PD	10	10	26-Aug-2023	6-Sep-2023	15	
1007	P10-GF-ST2-1000	Water piping works Installation	10	10	26-Aug-2023	6-Sep-2023	15	
1008		FS	6	6	26-Aug-2023	1-Sep-2023	15	
1009	P10-GF-ST2-1100	FS Piping, cable containment Installation	6	6	26-Aug-2023	1-Sep-2023	15	
1010		ST-03	1	0	17-Aug-2023 A	18-Aug-2023 A		
1011		ABWF	1	0	17-Aug-2023 A	18-Aug-2023 A		
1012	P10-GF-ST3-1035	Dismantle Scaffolding	1	0	17-Aug-2023 A	18-Aug-2023 A		
1013		BS Works	0	0			0	
1014		PD	0	0			0	
1015		FS	0	0			0	
1016		ST-04	0	0			0	
1017		ABWF	0	0			0	
1018		BS Works	0	0			0	
1019		PD	0	0			0	
1020		FS	0	0			0	
1021		ST-05	0	0			0	
1022		ABWF	0	0			0	
1023		BS Works	0	0			0	



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Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 16 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

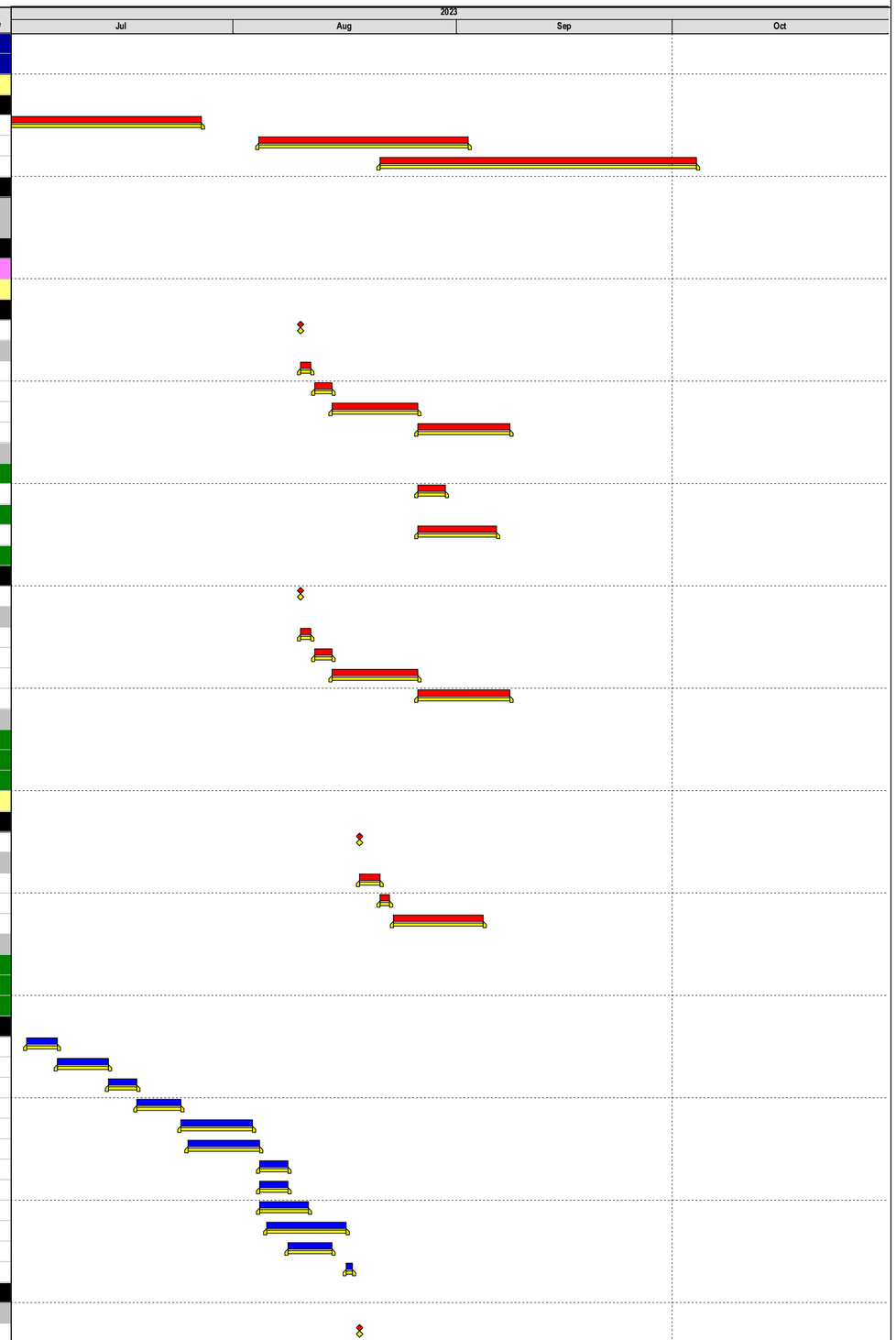
TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

ND/2019/02 - Kwu Tung North New Development Area Phase 1:
Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

AECOM

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

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
1024		PD	0	0			0	
1025		FS	0	0			0	
1026		External wall and External Area	96	96	30-Jun-2023	4-Oct-2023	-47	
1027		ABWF	88	88	30-Jun-2023	4-Oct-2023	-42	
1028	P10-GF-EXT1000	Erection of external scaffolding	25	25	30-Jun-2023	27-Jul-2023	-17	3
1029	P10-GF-EXT1010	Waterproofing & Window / Louvre Glazing Works	28	28	4-Aug-2023	2-Sep-2023	-42	6
1030	P10-GF-EXT1030	Wooden Fence Installation	40	40	21-Aug-2023	4-Oct-2023	-42	6
1031		BS Works	0	0			0	
1032		EL	0	0			0	
1033		FS	0	0			0	
1034		Landscape Works	0	0			0	
1035		1st Floor	74	78	3-Jul-2023 A	26-Oct-2023	-20	
1036		Zone 1	29	29	10-Aug-2023	8-Sep-2023	-41	
1037		Multi Purpose Room 1 & 2	29	29	10-Aug-2023	8-Sep-2023	-41	
1038	P10-1FMP-1000	Access Date of 1/FMulti Purpose Room (1&2) Fitting Out	0	0	10-Aug-2023		-47	
1039		ABWF	28	28	10-Aug-2023	8-Sep-2023	-47	
1040	P10-1F-MP1010	Setting Out	2	2	10-Aug-2023	11-Aug-2023	-47	
1041	P10-1F-MP1020	Erect Scaffolding for wall and ceiling finishes	2	2	12-Aug-2023	14-Aug-2023	-47	
1042	P10-1F-MP1030	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	14-Aug-2023	26-Aug-2023	-47	
1043	P10-1F-MP1040	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12	26-Aug-2023	8-Sep-2023	-47	
1044		BS Works	11	11	26-Aug-2023	6-Sep-2023	-39	
1045		MVAC	3	3	26-Aug-2023	30-Aug-2023	-36	
1046	P10-1F-MP1110	Setting out for all equipment / MOS inspection	3	3	26-Aug-2023	30-Aug-2023	-36	
1047		EL	10	10	26-Aug-2023	6-Sep-2023	-36	
1048	P10-1F-MP1130	Setting out for all equipment / MOS inspection	10	10	26-Aug-2023	6-Sep-2023	-36	
1049		FS	0	0			0	
1050		Storage Room	29	29	10-Aug-2023	8-Sep-2023	-63	
1051	P10-1F-SR0900	Access Date of 1/FStorage Room Fitting Out	0	0	10-Aug-2023		-60	
1052		ABWF	28	28	10-Aug-2023	8-Sep-2023	-60	
1053	P10-1F-SR1000	Setting Out	2	2	10-Aug-2023	11-Aug-2023	-60	
1054	P10-1F-SR1010	Erect Scaffolding for wall and ceiling finishes	2	2	12-Aug-2023	14-Aug-2023	-60	
1055	P10-1F-SR1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	14-Aug-2023	26-Aug-2023	-60	
1056	P10-1F-SR1030	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12	26-Aug-2023	8-Sep-2023	-60	
1057		BS Works	0	0			0	
1058		MVAC	0	0			0	
1059		EL	0	0			0	
1060		FS	0	0			0	
1061		Zone 2	71	69	3-Jul-2023 A	26-Oct-2023	-30	
1062		Workshop	17	17	18-Aug-2023	4-Sep-2023	-74	
1063	P10-1F-WS1000	Access Date of 1/F Workshop & Printer Room Fitting Out	0	0	18-Aug-2023		-68	
1064		ABWF	16	16	18-Aug-2023	4-Sep-2023	-68	
1065	P10-1F-WS1010	Setting Out	2	2	18-Aug-2023	21-Aug-2023	-68	
1066	P10-1F-WS1020	Erect Scaffolding for wall and ceiling finishes	2	2	21-Aug-2023	22-Aug-2023	-68	
1067	P10-1F-WS1030	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	23-Aug-2023	4-Sep-2023	-68	
1068		BS Works	0	0			0	
1069		MVAC	0	0			0	
1070		EL	0	0			0	
1071		FS	0	0			0	
1072		Pantry	44	0	3-Jul-2023 A	17-Aug-2023 A		
1073	P10-PTRY-1030	MEP Conduit embedment	5	0	3-Jul-2023 A	7-Jul-2023 A		
1074	P10-PTRY-1040	Waterproofing & testing	7	0	7-Jul-2023 A	14-Jul-2023 A		
1075	P10-PTRY-1050	Protected screed	3	0	14-Jul-2023 A	18-Jul-2023 A		
1076	P10-PTRY-1060	Ceiling finishes	6	0	18-Jul-2023 A	24-Jul-2023 A		
1077	P10-PTRY-1070	Floor finishes	10	0	24-Jul-2023 A	3-Aug-2023 A		
1078	P10-PTRY-1080	Wall finishes	10	0	25-Jul-2023 A	4-Aug-2023 A		
1079	P10-PTRY-1090	Cabinet installation	3	0	4-Aug-2023 A	8-Aug-2023 A		
1080	P10-PTRY-1100	Door installation	3	0	4-Aug-2023 A	8-Aug-2023 A		
1081	P10-PTRY-1110	Vanity Counter Installation	6	0	4-Aug-2023 A	11-Aug-2023 A		
1082	P10-PTRY-1120	Sanitary fitting installation	10	0	5-Aug-2023 A	16-Aug-2023 A		
1083	P10-PTRY-1130	Signage, false ceiling panels, Lighting and air grille installation	6	0	8-Aug-2023 A	14-Aug-2023 A		
1084	P10-PTRY-1140	Inspection, T&C, cleaning	1	0	16-Aug-2023 A	17-Aug-2023 A		
1085		Female Toilets / Disabled Toilet / Male Toilet / Baby Care Room	38	69	31-Jul-2023 A	26-Oct-2023	-31	
1086		ABWF	34	63	31-Jul-2023 A	26-Oct-2023	-26	
1087	P10-1T1000	Access Date of Toilet Fitting Out	0	0	18-Aug-2023		-28	



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Critical Remaining Work
Baseline Milestone
Critical Milestone
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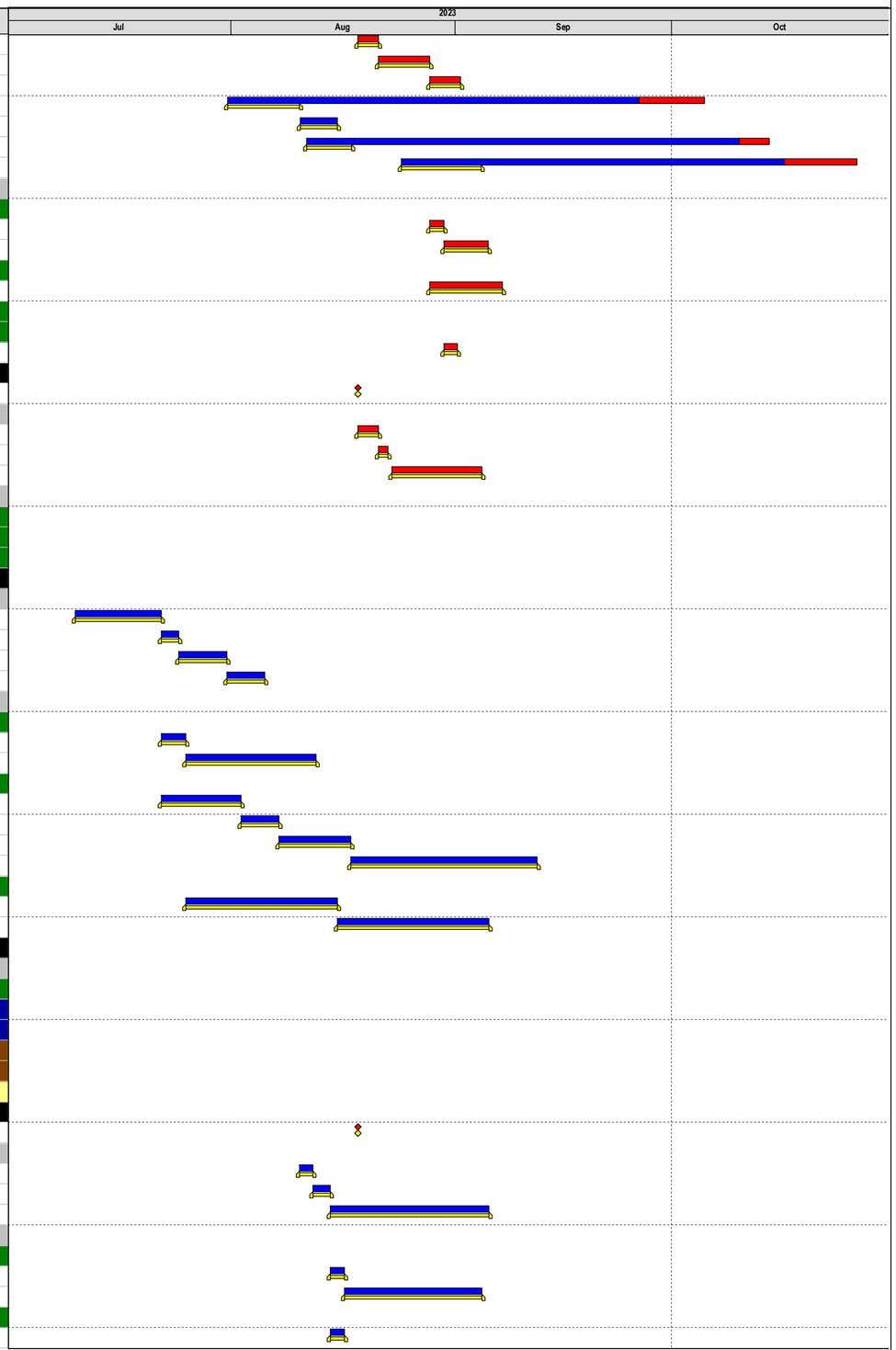
Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 17 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
1088	P10-1T1010	Site Survey and setting out	2	2	18-Aug-2023	21-Aug-2023	-28	
1089	P10-1T1020	Block Wall Erection	7	7	21-Aug-2023	28-Aug-2023	-28	
1090	P10-1T1030	MEP Conduit embedment	5	5	28-Aug-2023	1-Sep-2023	-28	
1091	P10-1T1070	Floor finishes	10	7	31-Jul-2023 A	5-Oct-2023	-36	
1092	P10-1T1075	Ceiling Grid Installation	5	0	10-Aug-2023 A	15-Aug-2023 A		
1093	P10-1T1110	Cubical installation	6	5	11-Aug-2023 A	14-Oct-2023	-36	
1094	P10-1T1120	Sanitaryfitting installation	10	9	24-Aug-2023 A	26-Oct-2023	-26	
1095	BS Works		10	10	28-Aug-2023	7-Sep-2023	-7	
1096	MVAC		8	8	28-Aug-2023	5-Sep-2023	-12	
1097	P10-1T1150	Setting out for all equipment / Conduit / Switches	2	2	28-Aug-2023	30-Aug-2023	-12	
1098	P10-1T1180	MEP Conduit embedment	6	6	30-Aug-2023	5-Sep-2023	-12	
1099	FS		10	10	28-Aug-2023	7-Sep-2023	-6	
1100	P10-1T1160	FS Piping, cable containment Installation	10	10	28-Aug-2023	7-Sep-2023	-6	
1101	PD		0	0			0	
1102	EL		2	2	30-Aug-2023	1-Sep-2023	-12	
1103	P10-1T1200	Setting out for all equipment / MOS inspection	2	2	30-Aug-2023	1-Sep-2023	-12	
1104	Senior Forestry Officer Office		17	17	18-Aug-2023	4-Sep-2023	-74	
1105	P10-1F-SFO1180	Access Date of 1/F SFO Office Fitting Out	0	0	18-Aug-2023		-68	
1106	ABWF		16	16	18-Aug-2023	4-Sep-2023	-68	
1107	P10-1F-SFO1000	Setting Out	2	2	18-Aug-2023	21-Aug-2023	-68	
1108	P10-1F-SFO1010	Erect Scaffolding for wall and ceiling finishes	2	2	21-Aug-2023	22-Aug-2023	-68	
1109	P10-1F-SFO1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12	23-Aug-2023	4-Sep-2023	-68	
1110	BS Works		0	0			0	
1111	MVAC		0	0			0	
1112	EL		0	0			0	
1113	FS		0	0			0	
1114	Server Room		61	0	10-Jul-2023 A	12-Sep-2023 A		
1115	ABWF		26	0	10-Jul-2023 A	5-Aug-2023 A		
1116	P10-1F-SER1030	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	0	10-Jul-2023 A	22-Jul-2023 A		
1117	P10-1F-SER1040	Floor Screeding	2	0	22-Jul-2023 A	24-Jul-2023 A		
1118	P10-1F-SER1060	Ceiling Grid Installation	6	0	24-Jul-2023 A	31-Jul-2023 A		
1119	P10-1F-SER1070	Plastic Laminate Installation	6	0	31-Jul-2023 A	5-Aug-2023 A		
1120	BS Works		49	0	22-Jul-2023 A	12-Sep-2023 A		
1121	MVAC		21	0	22-Jul-2023 A	12-Aug-2023 A		
1122	P10-1F-SER1100	Setting out for all equipment / MOS inspection	3	0	22-Jul-2023 A	25-Jul-2023 A		
1123	P10-1F-SER1110	Air Duct installation	18	0	25-Jul-2023 A	12-Aug-2023 A		
1124	EL		49	0	22-Jul-2023 A	12-Sep-2023 A		
1125	P10-1F-SER1120	Setting out for all equipment / MOS inspection	10	0	22-Jul-2023 A	2-Aug-2023 A		
1126	P10-1F-SER1130	Installation of cable containment	5	0	2-Aug-2023 A	7-Aug-2023 A		
1127	P10-1F-SER1140	Cable wiring	10	0	7-Aug-2023 A	17-Aug-2023 A		
1128	P10-1F-SER1150	Installation of Lighting fitting and small power provision	24	0	17-Aug-2023 A	12-Sep-2023 A		
1129	FS		40	0	25-Jul-2023 A	5-Sep-2023 A		
1130	P10-1F-SER1080	FS Piping, cable containment Installation	20	0	25-Jul-2023 A	15-Aug-2023 A		
1131	P10-1F-SER1090	FS Sprinkler head, Alarm smoke detector, heat detector installation	20	0	15-Aug-2023 A	5-Sep-2023 A		
1132	BOH		0	0			0	
1133	Staircase		0	0			0	
1134	ST-06		0	0			0	
1135	ABWF		0	0			0	
1136	BS Works		0	0			0	
1137	PD		0	0			0	
1138	FS		0	0			0	
1139	Zone 3		34	26	10-Aug-2023 A	14-Sep-2023	19	
1140	Office & Office Room 1 & 2		25	12	10-Aug-2023 A	5-Sep-2023	33	
1141	P10-1FOF-1000	Access Date of 1/F Office Room 1 & 2 Fitting Out	0	0	18-Aug-2023		-5	
1142	ABWF		25	0	10-Aug-2023 A	5-Sep-2023 A		
1143	P10-1FOF-1010	Setting Out	2	0	10-Aug-2023 A	12-Aug-2023 A		
1144	P10-1FOF-1020	Erect Scaffolding for wall and ceiling finishes	2	0	12-Aug-2023 A	14-Aug-2023 A		
1145	P10-1FOF-1030	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	21	0	14-Aug-2023 A	5-Sep-2023 A		
1146	BS Works		20	12	14-Aug-2023 A	4-Sep-2023	25	
1147	MVAC		20	0	14-Aug-2023 A	4-Sep-2023 A		
1148	P10-1FOF-1100	Setting out for all equipment / MOS inspection	2	0	14-Aug-2023 A	16-Aug-2023 A		
1149	P10-1FOF-1110	Air Duct installation	18	0	16-Aug-2023 A	4-Sep-2023 A		
1150	EL		16	12	14-Aug-2023 A	31-Aug-2023	-5	
1151	P10-1FOF-1120	Setting out for all equipment / MOS inspection	2	0	14-Aug-2023 A	16-Aug-2023 A		



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Remaining Work
Critical Remaining Work
Baseline Milestone
Critical Milestone
Non-Critical Milestone

Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 18 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
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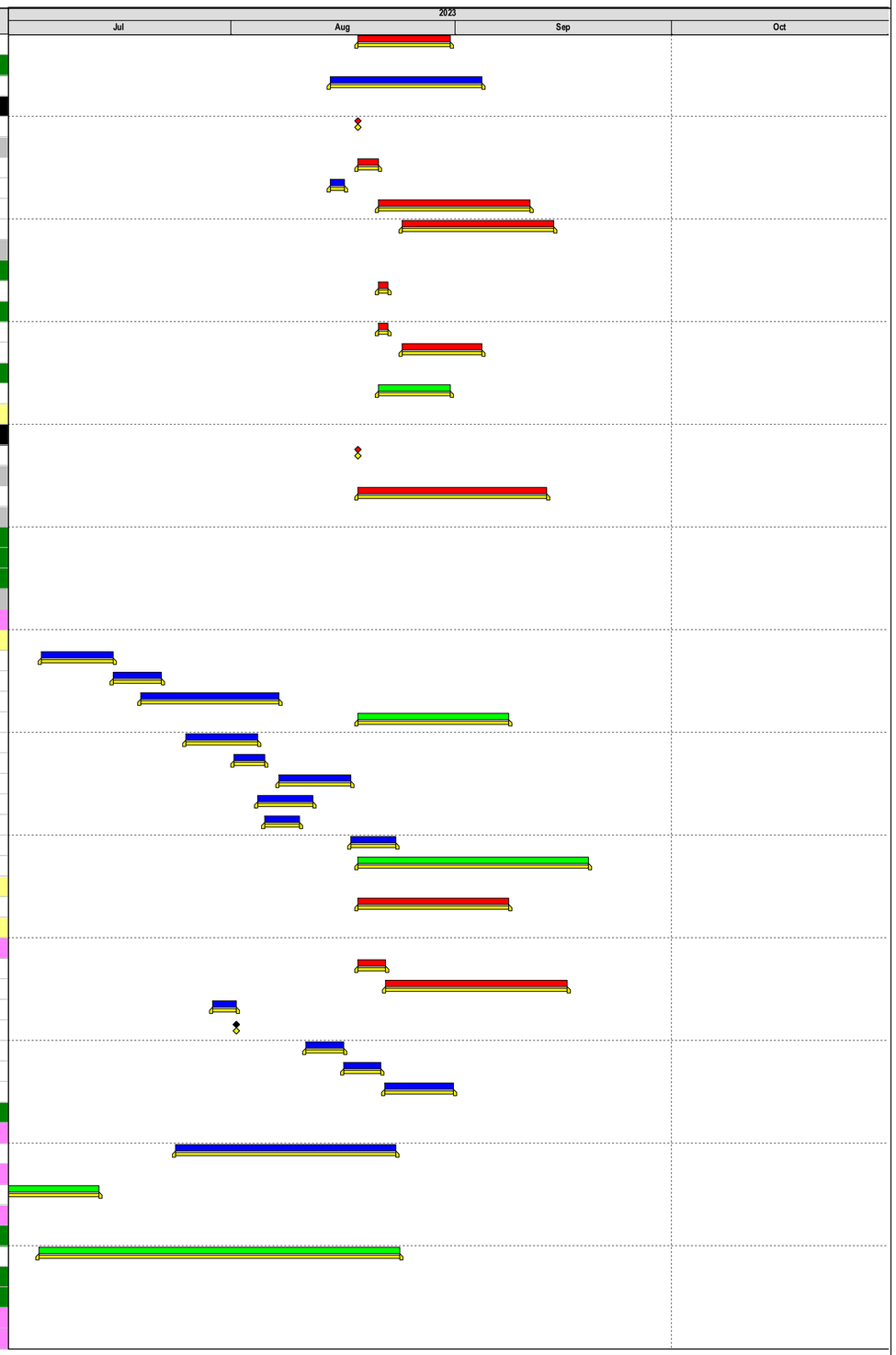
TASK filter: 3MRP (3 Month Look Ahead).
Kwu Tung North - Monthly Update Program

#	Activity ID	Activity Name	Planned Duration	Remaining Duration	Start	Finish	Total Float	Time Risk Allowance
1152	P10-1FOF-1130	Installation of cable containment	12	12	18-Aug-2023	31-Aug-2023	-5	
1153	FS		20	0	14-Aug-2023 A	4-Sep-2023 A		
1154	P10-1FOF-1080	FS Piping, cable containment Installation	20	0	14-Aug-2023 A	4-Sep-2023 A		
1155	Main Office		30	26	14-Aug-2023 A	14-Sep-2023	-10	
1156	P10-1FOF1010	Access Date of 1/F Main Office Fitting Out	0	0	18-Aug-2023		-46	
1157	ABWF		30	26	14-Aug-2023 A	14-Sep-2023	-46	
1158	P10-1FOF1160	Setting Out	2	2	18-Aug-2023	21-Aug-2023	-46	
1159	P10-1FOF1170	Erect Scaffolding for wall and ceiling finishes	2	0	14-Aug-2023 A	16-Aug-2023 A		
1160	P10-1FOF1180	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	20	20	21-Aug-2023	11-Sep-2023	-46	
1161	P10-1FOF1190	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	20	20	24-Aug-2023	14-Sep-2023	-46	
1162	BS Works		14	14	21-Aug-2023	4-Sep-2023	0	
1163	MVAC		2	2	21-Aug-2023	22-Aug-2023	-4	
1164	P10-1F-OF1280	Setting out for all equipment / MOS inspection	2	2	21-Aug-2023	22-Aug-2023	-4	
1165	EL		14	14	21-Aug-2023	4-Sep-2023	-4	
1166	P10-1F-OF1300	Setting out for all equipment / MOS inspection	2	2	21-Aug-2023	22-Aug-2023	-4	
1167	P10-1F-OF1310	Installation of cable containment	10	10	24-Aug-2023	4-Sep-2023	-4	
1168	FS		10	10	21-Aug-2023	31-Aug-2023	4	
1169	P10-1F-OF1260	FS Piping, cable containment Installation	10	10	21-Aug-2023	31-Aug-2023	4	
1170	Zone 4		26	26	18-Aug-2023	13-Sep-2023	-58	
1171	External Area		26	26	18-Aug-2023	13-Sep-2023	-58	
1172	P10-1F-EXT1000	Access Date of 1/F External Area Fitting Out	0	0	18-Aug-2023		-55	
1173	ABWF		25	25	18-Aug-2023	13-Sep-2023	-55	
1174	P10-1F-EXT1010	Erection of external scaffolding	25	25	18-Aug-2023	13-Sep-2023	-55	3
1175	BS Works		0	0			0	
1176	MVAC		0	0			0	
1177	EL		0	0			0	
1178	FS		0	0			0	
1179	Landscape Works		0	0			0	
1180	Roof Floor		76	32	5-Jul-2023 A	19-Sep-2023	7	
1181	ABWF		72	30	5-Jul-2023 A	19-Sep-2023	7	
1182	P10-RF1050	Water Testing & Infra red testing	10	0	5-Jul-2023 A	15-Jul-2023 A		
1183	P10-RF1060	Laying Insulation board with protection floor screed	6	0	15-Jul-2023 A	22-Jul-2023 A		
1184	P10-RF1070	Laying Floor finishes	18	0	19-Jul-2023 A	7-Aug-2023 A		
1185	P10-RF1080	Roof Dog House BS Installation	20	20	18-Aug-2023	8-Sep-2023	7	
1186	P10-RF1081	Roof Skylight Steelwork / Frame Installation (Top of Main Office: 4nos)	10	0	25-Jul-2023 A	4-Aug-2023 A		
1187	P10-RF1082	Roof Skylight Steelwork / Frame Installation (Top of Office Room 1 & 2: 2nos)	5	0	1-Aug-2023 A	5-Aug-2023 A		
1188	P10-RF1083	Roof Skylight Steelwork / Frame Installation (Ext. Area: 4nos)	10	0	7-Aug-2023 A	17-Aug-2023 A		
1189	P10-RF1084	Roof Skylight Glazing Installation (Top of Main Office: 4nos)	7	0	4-Aug-2023 A	12-Aug-2023 A		
1190	P10-RF1085	Roof Skylight Glazing Installation (Top of Office Room 1 & 2: 2nos)	4	0	5-Aug-2023 A	10-Aug-2023 A		
1191	P10-RF1086	Roof Skylight Glazing Installation (Ext. Area: 4nos)	6	0	17-Aug-2023 A	23-Aug-2023 A		
1192	P10-RF1095	PV Panel Installation	30	30	18-Aug-2023	19-Sep-2023	7	
1193	BS Works		20	20	18-Aug-2023	8-Sep-2023	-33	
1194	P10-RF1150	BS 1st Fixing (Elec, Water, Irrigation piping, AC Ducting and piping)	20	20	18-Aug-2023	8-Sep-2023	-33	
1195	Landscape Works		0	0			0	
1196	Lift Installation		47	28	29-Jul-2023 A	16-Sep-2023	-18	
1197	P10-LT0900	Builder's works before handover to Cladding contractor installation	3	3	18-Aug-2023	22-Aug-2023	-18	3
1198	P10-LT1000	Lift External wall Cladding Installation	25	25	22-Aug-2023	16-Sep-2023	-18	2
1199	P10-LT1005	Erection of Scaffolding and Lift Shaft checking	3	0	29-Jul-2023 A	1-Aug-2023 A		2
1200	P10-LT1007	Commence Lift Installation	0	0		1-Aug-2023 A		2
1201	P10-LT1030	Grouting of Lift Door Frame	5	0	11-Aug-2023 A	16-Aug-2023 A		2
1202	P10-LT1040	Car Sling, Hoisting ropes, and counter weight frame	5	0	16-Aug-2023 A	21-Aug-2023 A		2
1203	P10-LT1050	Lift Cart Assembly	10	0	22-Aug-2023 A	31-Aug-2023 A		2
1204	External Works		55	14	30-Jun-2023 A	23-Aug-2023	36	
1205	Retaining wall		30	0	24-Jul-2023 A	23-Aug-2023 A		
1206	P10-4150	Backfill to +7.5mPD	30	0	24-Jul-2023 A	23-Aug-2023 A		3
1207	Underground Utilities Connection		12	12	30-Jun-2023	13-Jul-2023	35	
1208	P10-2311.1	Underground sewerage Installation and Temp. Sewerage Tank connection	12	12	30-Jun-2023	13-Jul-2023	35	3
1209	EVA Construction		0	0			0	
1210	Signage Works		48	48	5-Jul-2023	24-Aug-2023	31	
1211	P10-SG-1000	Placing Statutory Signages and ready for FS Inspection	48	48	5-Jul-2023*	24-Aug-2023	31	2
1212	Building Services T&C		0	0			0	
1213	Statutory Inspection		0	0			0	
1214	EMSD Inspection (Lift)		0	0			0	
1215	DSD Inspection		0	0			0	



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Data Date: 30-Jun-2023
Project Start: 3-Feb-2020
Project End: 25-Dec-2025
Page : 19 of 20

Programme Forecast (Jul-Aug-Sep-Oct 2023)

Date	Revision	Checked	Approved
31-Jul-2023	00	RP	EW

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Kwu Tung North - Monthly Update Program

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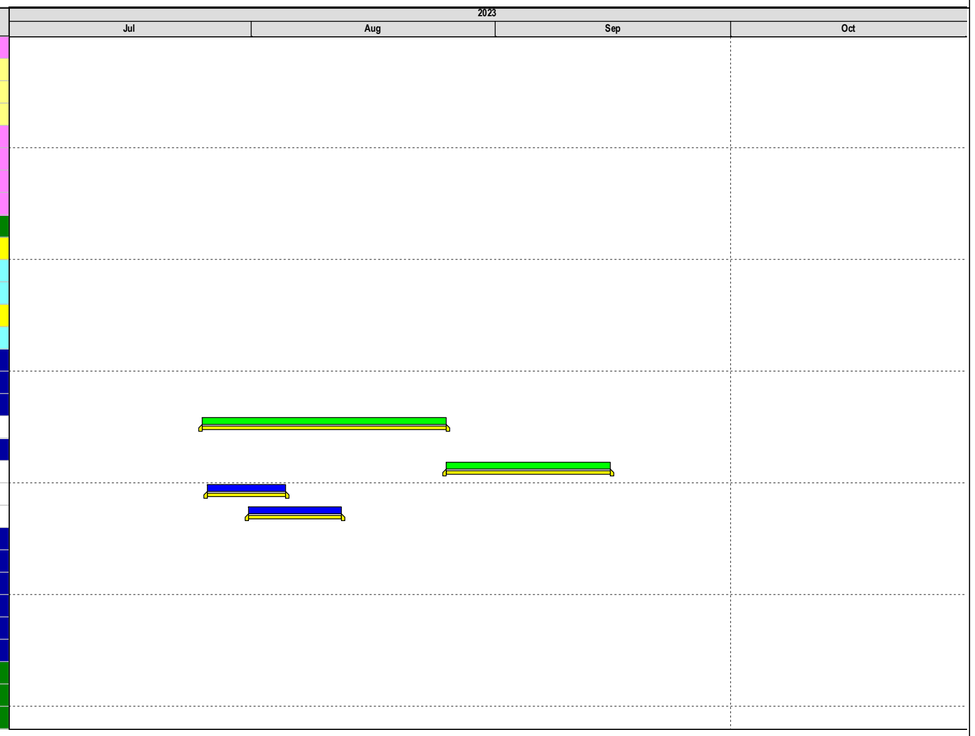
1216		WSD Inspection	0	0			0	
1217		Fresh Water / Salt Water / Cleansing Water / Irrigation Water Supply	0	0			0	
1218		FS Water Supply	0	0			0	
1219		FS Street Hydrant	0	0			0	
1220		FSD Inspection	0	0			0	
1221		BEAM PLUS Final Assessment	0	0			0	
1222		CEDD, ASD & EMSD Inspection	0	0			0	
1223		BEE Ordinance Submission	0	0			0	
1224		Switching Sewerage System	0	0			0	
1225		Works in Section 4A	0	0			0	
1226		Landscape Method Statement Submission	0	0			0	
1227		Establishment Works	0	0			0	
1228		Works in Section 5	52	52	25-Jul-2023 A	15-Sep-2023	42	
1229		Portion 11 - Village Resite Area	52	52	25-Jul-2023 A	15-Sep-2023	42	
1230		Preliminary Works	0	0			0	
1231		Ground Investigation Works	0	0			0	
1232		Site Formation	30	30	25-Jul-2023	25-Aug-2023	32	
1233	P11-1030	Excavation and Cart Away High Arsenic Content Soil (Subjected to actual GI Result) (3000m3 @100m3/d)	30	30	25-Jul-2023	25-Aug-2023	32	4
1234		Drainage Works (Level: (IL +5mPD to +6.25mPD)	50	20	26-Jul-2023 A	15-Sep-2023	37	
1235	P11-1040	Sheet Pile installation (total length 140m with assume using type 4 sheet pile with 350pcs)	20	20	25-Aug-2023	15-Sep-2023	32	2
1236	P11-1090	Construction of Drainage Manhole M6.01	10	0	26-Jul-2023 A	5-Aug-2023 A		2
1237	P11-1100	Construction of Drainage Manhole M6.02	12	0	31-Jul-2023 A	12-Aug-2023 A		2
1238		Outfall 6.04	0	0			0	
1239		Outfall 5104	0	0			0	
1240		Fresh Water Pipeworks (Level: (IL +6mPD to +7.0mPD)	0	0			0	
1241		Salt Water Pipeworks	0	0			0	
1242		Utilities Works	0	0			0	
1243		Road A6 Works (Total 100m @ 10m/Bay)	0	0			0	
1244		1st Cycle (4 Bays)	0	0			0	
1245		2nd Cycle (4 Bays)	0	0			0	
1246		3rd Cycle (3 Bays)	0	0			0	



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Critical Remaining Work
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Page : 20 of 20

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Kwu Tung North - Monthly Update Program

Project Management Initials: Designer: ELHY Checked: CYCH Approved: IHWL

ISO A1 594mm x 841mm

LEGEND:

SITE BOUNDARY

N

828000 E

829000 E

830000 E

842000 N

841000 N

840000 N

MA TSO LUNG
馬草壟

FUNG KONG SHAN
鳳崗山

HO SHEUNG HEUNG

LONG VALLEY

KWU TUNG

PAK SHEK AU

SHEK TSAI LENG

SHEK WU HUI SEWAGE TREATMENT WORKS

SHEUNG YUE RIVER

NG TUNG RIVER

SHEK SHEUNG RIVER

MTRC EAST RAIL LINE

CASTLE PEAK ROAD - CHAU TAU

CASTLE PEAK ROAD - KWU TUNG

FANLING HIGHWAY

SHEET 1 OF 10

SHEET 2 OF 10

SHEET 3 OF 10

SHEET 6 OF 10

SHEET 7 OF 10

SHEET 8 OF 10

SHEET 9 OF 10

SHEET 10 OF 10

Portion 1

Portion 2

Portion 3

Portion 4

Portion 5

Portion 6

Portion 7

Portion 8

Portion 9

Portion 10

Portion 11

WA2

Portion 1 (LP, ELS and Pipe Jacking)

Sewage Pump Room (Portion 7), Visitor Centre (Portion 10, ELS and Pile cap) & Footbridge (Portion 9N, H-pile)

Footbridge (Portion 9N, Pile cap)

Plot File by: ZENGLY2 2019/10/25
PATH p:\projects\60335576\drawing\contract\c21000\C2_C00_1000.dgn

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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

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

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

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

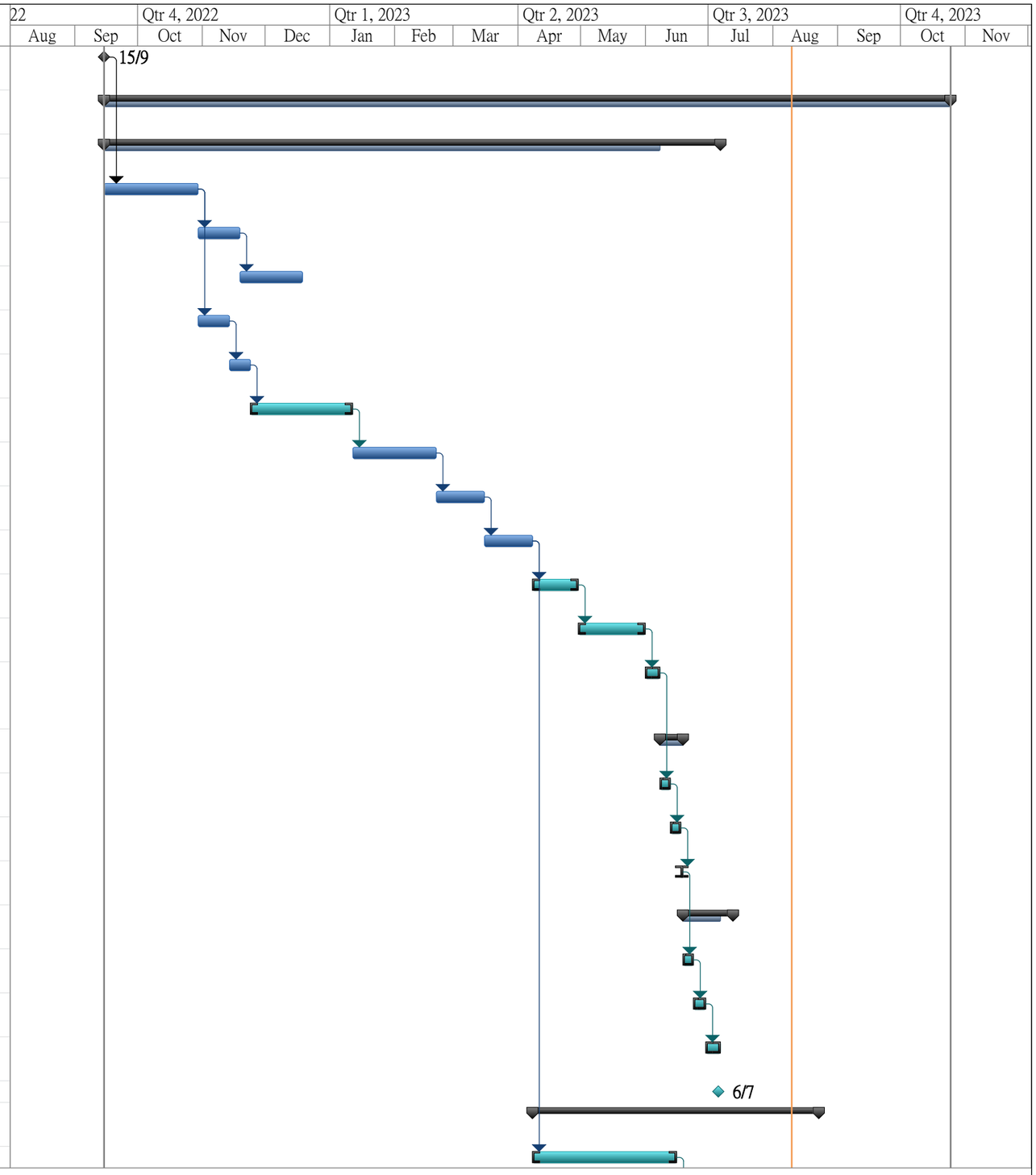
KEY PLAN

SHEET NUMBER
圖紙編號

60335576/C2/C00/1000A

Construction Programme of ND/2019/03

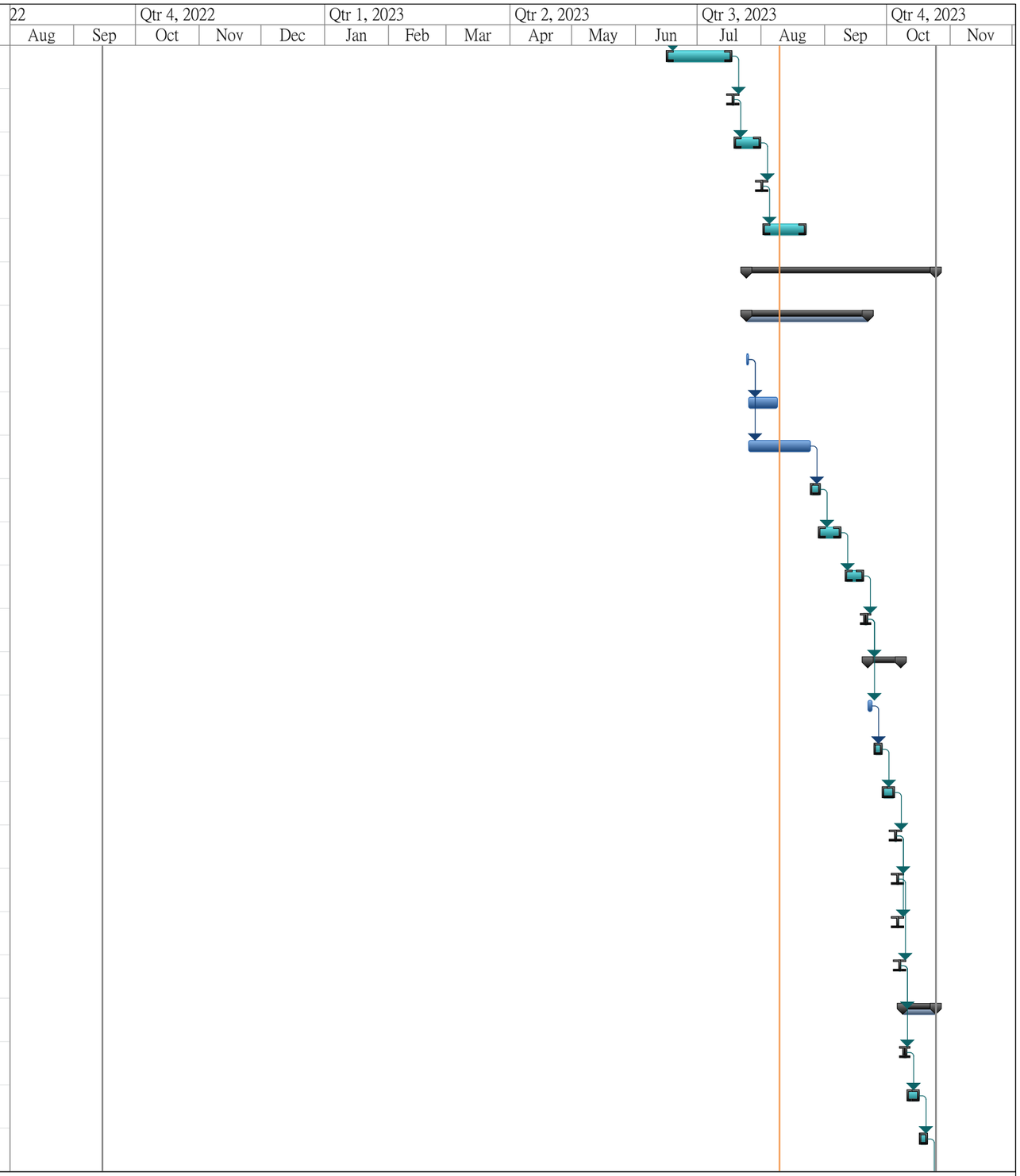
ID	Task Mode	Task Name	Duration	Start	Finish
1		Confirmation of Permanent Location of Tudigongs	0 days	Thu 15/9/22	Thu 15/9/22
2		**Ying Kong Roadworks**	**405 days**	**Thu 15/9/22**	**Tue 24/10/23**
3		**Construction of Pavilion at Yin Kong Road (Section 1)**	**295 days**	**Thu 15/9/22**	**Thu 6/7/23**
4		Liaison with Yin Kong Representative for the Details of Pavilion	45 days	Thu 15/9/22	Sat 29/10/22
5		Design of Pavilion	20 days	Sun 30/10/22	Fri 18/11/22
6		Material Ordering	30 days	Sat 19/11/22	Sun 18/12/22
7		Site Clearance and Site Formation	15 days	Sun 30/10/22	Sun 13/11/22
8		Construction of Base Slab	10 days	Mon 14/11/22	Wed 23/11/22
9		Construction of Columns	49 days	Thu 24/11/22	Wed 11/1/23
10		Construction of Inclinded Roof	40 days	Thu 12/1/23	Mon 20/2/23
11		Installation of Glazed Roof Tile and Architectural Finishes	23 days	Tue 21/2/23	Wed 15/3/23
12		Surrounding Features and Connection to Yin Kong Road	23 days	Thu 16/3/23	Fri 7/4/23
13		Advanced to Expose the Existing UU	22 days	Sat 8/4/23	Sat 29/4/23
14		Connection of Proposed 250 Pipe to Existing Watermain	32 days	Sun 30/4/23	Wed 31/5/23
15		Laying of K1 Kerb (Affected by WSD connection works at T Junuction at Castle Road and Yin Kong Road	7 days	Thu 1/6/23	Wed 7/6/23
16		**Stage 1 Protection of Shallow Cover Cable Duct (Near 恩慈之家 Side)**	**11 days**	**Thu 8/6/23**	**Sun 18/6/23**
17		Formation SRT	5 days	Thu 8/6/23	Mon 12/6/23
18		Subbase SRT	5 days	Tue 13/6/23	Sat 17/6/23
19		Laying of Bitumen	1 day	Sun 18/6/23	Sun 18/6/23
20		**Stage 2 Protection of Shallow Cover Cable Duct (Near Site Office Side)**	**24 days**	**Mon 19/6/23**	**Wed 12/7/23**
21		Formation SRT	5 days	Mon 19/6/23	Fri 23/6/23
22		Subbase SRT	6 days	Sat 24/6/23	Thu 29/6/23
23		Laying of Bitumen	7 days	Fri 30/6/23	Thu 6/7/23
24		**Completion of Section 1**	0 days	Thu 6/7/23	Thu 6/7/23
25		**Yin Kong Road Outstanding Works / Reinstatement Works**	**137 days**	**Sat 8/4/23**	**Tue 22/8/23**
26		BaiSun and Relocation of Tudigongs	69 days	Sat 8/4/23	Thu 15/6/23



Yin Kong Rd Programme
8-8-2023

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

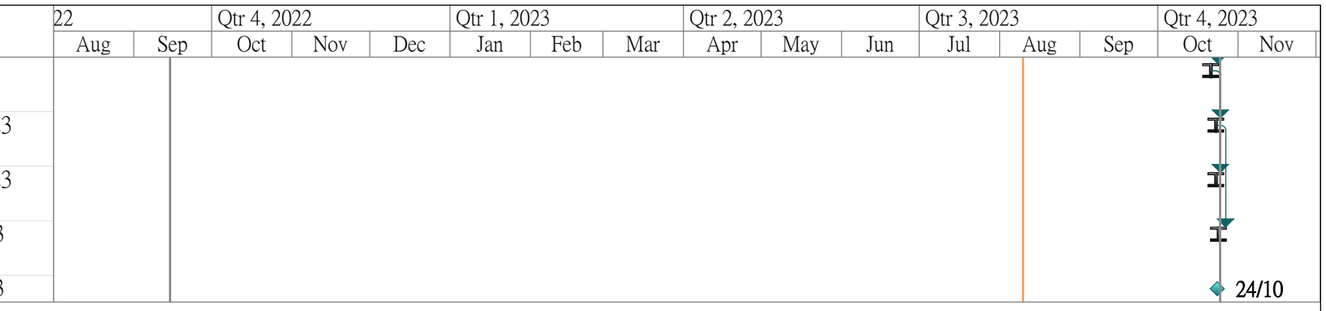
ID	Task Mode	Task Name	Duration	Start	Finish
27		Lighting Works Installation	32 days	Fri 16/6/23	Mon 17/7/23
28		CLP Meter Installation	1 day	Tue 18/7/23	Tue 18/7/23
29		Watermains Construction Works	13 days	Wed 19/7/23	Mon 31/7/23
30		Watermains Connection by WSD	1 day	Tue 1/8/23	Tue 1/8/23
31		Remaining Pavement	21 days	Wed 2/8/23	Tue 22/8/23
32		**Yin Kong Roadworks**	**92 days**	**Tue 25/7/23**	**Tue 24/10/23**
33		**TTA Submission for Works Commencement**	**59 days**	**Tue 25/7/23**	**Thu 21/9/23**
34		TTA Submission	1 day	Tue 25/7/23	Tue 25/7/23
35		Application for LCSD XP	14 days	Wed 26/7/23	Tue 8/8/23
36		TTA Approval by Traffic Deptment	30 days	Wed 26/7/23	Thu 24/8/23
37		Case Coordination for XP	5 days	Fri 25/8/23	Tue 29/8/23
38		Permit Application for XP to HyD	11 days	Tue 29/8/23	Fri 8/9/23
39		Application for RMO	9 days	Mon 11/9/23	Tue 19/9/23
40		Notice of Works Commencement	2 days	Wed 20/9/23	Thu 21/9/23
41		**Road Works at LHS**	**16 days**	**Fri 22/9/23**	**Sat 7/10/23**
42		Hack off Existing Concrete Pavement to Formation Level	2 days	Fri 22/9/23	Sat 23/9/23
43		Carry out SRT (Formation Layer)	4 days	Mon 25/9/23	Thu 28/9/23
44		Place Granular Subbase and SRT	6 days	Fri 29/9/23	Wed 4/10/23
45		Place Road Base	1 day	Thu 5/10/23	Thu 5/10/23
46		Place Base Course (AM)	1 day	Fri 6/10/23	Fri 6/10/23
47		Place Wearing Course (PM)	1 day	Fri 6/10/23	Fri 6/10/23
48		Road Marking	1 day	Sat 7/10/23	Sat 7/10/23
49		**Road Works at RHS**	**16 days**	**Mon 9/10/23**	**Tue 24/10/23**
50		Hack off Existing Concrete Pavement to Formation	2 days	Mon 9/10/23	Tue 10/10/23
51		Carry out SRT (Formation Layer)	6 days	Wed 11/10/23	Mon 16/10/23
52		Place Granular Subbase and SRT	4 days	Tue 17/10/23	Fri 20/10/23



Yin Kong Rd Programme
8-8-2023

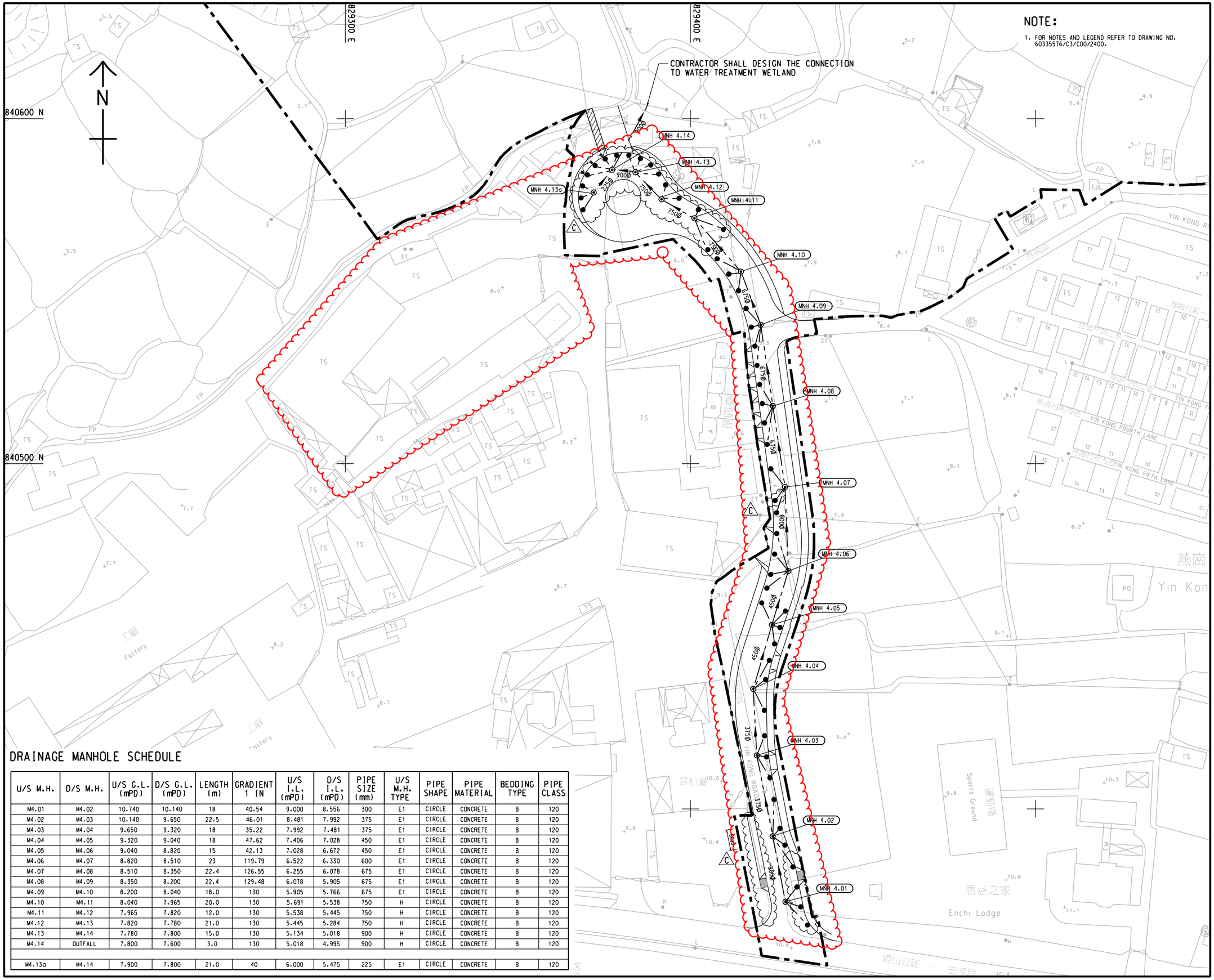
Task
Split
Milestone
Summary
Project Summary
External Tasks
External Milestone
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
Deadline
Progress

ID	Task Mode	Task Name	Duration	Start	Finish
53		Place Road Base	1 day	Sat 21/10/23	Sat 21/10/23
54		Place Base Course (AM)	1 day	Mon 23/10/23	Mon 23/10/23
55		Place Wearing Course (PM)	1 day	Mon 23/10/23	Mon 23/10/23
56		Road Marking	1 day	Tue 24/10/23	Tue 24/10/23
57		**Completion of Ying Kong Roadworks**	0 days	Tue 24/10/23	Tue 24/10/23



Yin Kong Rd Programme
8-8-2023

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



NOTE:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C3/C00/2400.

DRAINAGE MANHOLE SCHEDULE

U/S M.H.	D/S M.H.	U/S G.L. (mPD)	D/S G.L. (mPD)	LENGTH (m)	GRADIENT 1 IN	U/S I.L. (mPD)	D/S I.L. (mPD)	PIPE SIZE (mm)	U/S M.H. TYPE	PIPE SHAPE	PIPE MATERIAL	BEDDING TYPE	PIPE CLASS
M4.01	M4.02	10.740	10.140	18	40.54	9.000	8.556	300	E1	CIRCLE	CONCRETE	B	120
M4.02	M4.03	10.140	9.650	22.5	46.01	8.481	7.992	375	E1	CIRCLE	CONCRETE	B	120
M4.03	M4.04	9.650	9.320	18	35.22	7.992	7.481	375	E1	CIRCLE	CONCRETE	B	120
M4.04	M4.05	9.320	9.040	18	47.62	7.406	7.028	450	E1	CIRCLE	CONCRETE	B	120
M4.05	M4.06	9.040	8.820	15	42.13	7.028	6.672	450	E1	CIRCLE	CONCRETE	B	120
M4.06	M4.07	8.820	8.510	23	119.79	6.522	6.330	600	E1	CIRCLE	CONCRETE	B	120
M4.07	M4.08	8.510	8.350	22.4	126.55	6.255	6.078	675	E1	CIRCLE	CONCRETE	B	120
M4.08	M4.09	8.350	8.200	22.4	129.48	6.078	5.905	675	E1	CIRCLE	CONCRETE	B	120
M4.09	M4.10	8.200	8.040	18.0	130	5.905	5.766	675	E1	CIRCLE	CONCRETE	B	120
M4.10	M4.11	8.040	7.965	20.0	130	5.691	5.538	750	H	CIRCLE	CONCRETE	B	120
M4.11	M4.12	7.965	7.820	12.0	130	5.538	5.445	750	H	CIRCLE	CONCRETE	B	120
M4.12	M4.13	7.820	7.780	21.0	130	5.445	5.284	750	H	CIRCLE	CONCRETE	B	120
M4.13	M4.14	7.780	7.800	15.0	130	5.134	5.018	900	H	CIRCLE	CONCRETE	B	120
M4.14	OUTFALL	7.800	7.600	3.0	130	5.018	4.995	900	H	CIRCLE	CONCRETE	B	120
M4.13a	M4.14	7.900	7.800	21.0	40	6.000	5.475	225	E1	CIRCLE	CONCRETE	B	120

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
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

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM

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

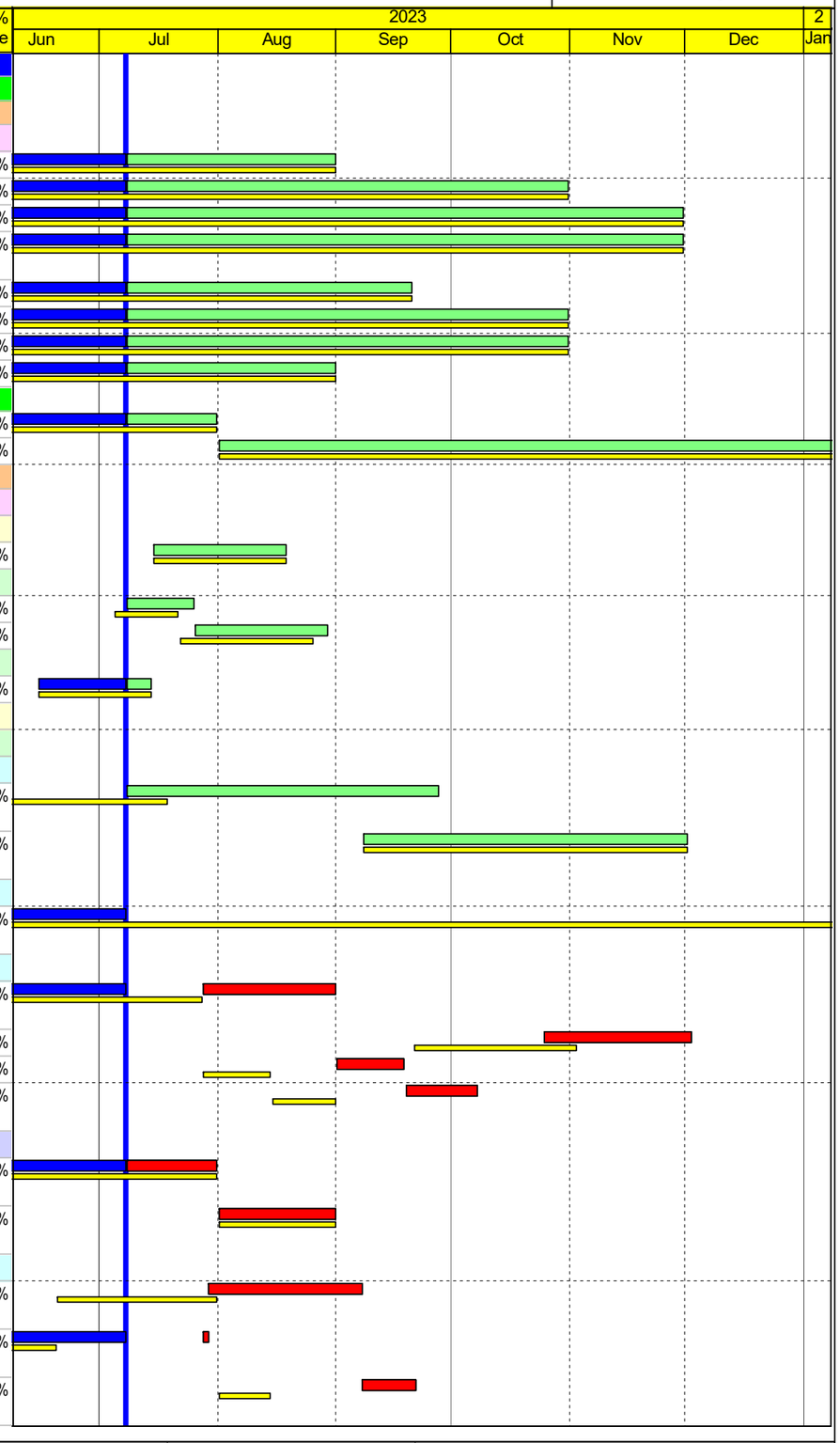
PROJECT NO.	CONTRACT NO.
60335576	ND/2019/03
SCALE: 1:500 (A1)	DATE: 4-JUN-20
DRAWN: KLC	PREPARED: DF
APPROVED: PY	
SKETCH NO.: ND/2019/03/R10/130/0052	REV.: C

26/8/2021 Y:\TO\TO_ND_2019_03\C3_Site Sketch\C3_SK0052C.dgn

Y:\TO\TO_ND_2019_03\C3_Site Sketch\C3_SK0052C.dgn 26/8/2021 9:12:34

Construction Programme of ND/2019/04

Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
2023-06 Monthly Update (based on RP06(1) Submitted on 23 Jun 2023)									
Preliminary Works									
Submission									
Preparation for relevant works									
SUB-1090	Prepare, submit & accept work submission for design for RC and MiC works	80	47	08-Mar-21 A	31-Aug-23	08-Mar-21	31-Aug-23	32	41.25%
SUB-1120	Prepare, submit & accept work submission for erect NB steel post and panel	146	96	08-May-23 A	31-Oct-23	08-May-23	31-Oct-23	45	34.25%
SUB-1410	Electrical and Mechanical Works for Lift Installation	80	122	08-Jun-22 A	30-Nov-23	08-Jun-22	30-Nov-23	141	0%
SUB-1420	Road lighting system - Design, lux, civil requirement, CLP pillar box(including gantry anf directional sign)	80	122	17-Sep-22 A	30-Nov-23	17-Sep-22	30-Nov-23	131	0%
SUB-1450	Bio-treatment Plant for Public Toilet	90	64	08-Aug-22 A	20-Sep-23	08-Aug-22	20-Sep-23	60	28.89%
SUB-1470	Traffic Control and Surveillance System (TCSS)	90	96	08-Aug-22 A	31-Oct-23	08-Aug-22	31-Oct-23	194	0%
SUB-1480	Traffic Detector System	90	96	08-Aug-22 A	31-Oct-23	08-Aug-22	31-Oct-23	194	0%
SUB-1510	Crash cushion system.	90	47	08-Aug-22 A	31-Aug-23	08-Aug-22	31-Aug-23	209	47.78%
Construction Works									
CW-1000	Tree felling at different portions (S8)	960	20	03-Dec-20 A	31-Jul-23	03-Dec-20	31-Jul-23	64	97.92%
CW-1010	Protection of tree at different portions (S8)	429	429	01-Aug-23	08-Jan-25	01-Aug-23	08-Jan-25	64	0%
Civil Works around Interchange									
Stage 1									
Construction Underpass (Portion H/C7)									
INTS1-1300-2	Backfilling to Structure Works for Bay C1 to C4	30	30	15-Jul-23	18-Aug-23	15-Jul-23	18-Aug-23	30	0%
Underpass - Bay C1									
INTS1-1s1	Structure Works for Bay C1 - Wall	15	15	08-Jul-23	25-Jul-23	05-Jul-23	21-Jul-23	50	0%
INTS1-1s2	Structure Works for Bay C1 - Roof	30	30	26-Jul-23	29-Aug-23	22-Jul-23	25-Aug-23	50	0%
Underpass - Bay C2									
INTS1-2s1	Structure Works for Bay C2 - Roof	24	6	15-Jun-23 A	14-Jul-23	15-Jun-23	14-Jul-23	30	75%
UU Works (Portion H, J, K, L, M)									
North of Sha Tau Kok Road									
Rising main Works									
INTS1-1120	Rising Mains on Ma Sik Rd (Part 2- Ma Sik Rd Via Sha Tau Kok Rd to downstream at On Kui St)	70	70	08-Jul-23	27-Sep-23	11-Feb-23	18-Jul-23	154	0%
INTS1-1120	Rising Mains on Ma Sik Rd (From STK Rd to Ma Sik Rd down stream near C7)	70	70	08-Sep-23	01-Dec-23	08-Sep-23	01-Dec-23	163	0%
Sewerage Works									
INTS1-1140	Remaining sewerage at Ma Sik rd (Part 1) Ma Sik Road (from rising main of STK Rd to C7)	90	67	08-Dec-22 A	15-Apr-24	08-Dec-22	15-Apr-24	17	25.56%
Stormwater Works									
INTS1-1130	1350 stormwater pipe near junction of STK Rd/Ma Sik rd (from existing to SMH 2002c to downstream at Ma Sik Rd, C7)	83	30	18-Apr-23 A	31-Aug-23	18-Apr-23	27-Jul-23	-157	63.86%
INTS1-113	900 stormwater pipe near On Kui St (underneath CLP132 Ping Che joint ba	34	34	25-Oct-23	02-Dec-23	21-Sep-23	02-Nov-23	-106	0%
INTS1-113	Testing of remaining 1350 stormwater pipe at Ma Sik rd	15	15	01-Sep-23	18-Sep-23	28-Jul-23	14-Aug-23	-157	0%
INTS1-1130	Connection of remaining 1350 stormwater pipe at Ma Sik rd to downstream pipeworks (constructed by other contract C7)	15	15	19-Sep-23	07-Oct-23	15-Aug-23	31-Aug-23	-157	0%
Temporary Diversion (for ELSW of Underpass C9-C13)									
INTS1-113	Temp diversion of 1350 stormwater pipe at Ma Sik rd to downstream pipeworks (Design & approval)	92	20	11-Apr-23 A	31-Jul-23	11-Apr-23	31-Jul-23	-127	78.26%
INTS1-113	Temp diversion of 1350 stormwater pipe at Ma Sik rd to downstream pipeworks (Construction)	27	27	01-Aug-23	31-Aug-23	01-Aug-23	31-Aug-23	-127	0%
Water Main Works									
INTS1-1220	Watermain at STK Rd (Part 1) near Part C of Footbridge F6- 600MS, 600DI, 300DI	34	34	29-Jul-23	07-Sep-23	20-Jun-23	31-Jul-23	-121	0%
INTS1-1220-	Decking for Watermain at STK Rd (Part 1) near Part C of Footbridge F6- 600MS, 600DI, 300DI	19	2	29-May-23 A	29-Jul-23	29-May-23	19-Jun-23	-121	90%
INTS1-1220	Watemain at STK Rd (Part 2) near Part D of Footbridge F6 and temp connection point - 600MS, 600DI, 300DI	12	12	07-Sep-23	21-Sep-23	01-Aug-23	14-Aug-23	-108	0%



Remaining Work
Milestone
Baseline Milestone
Project Baseline
Critical Remaining Work
Crit Milestone
Actual Work
Actual Milestone

Project ID: RP06a(1)-MU06-2023

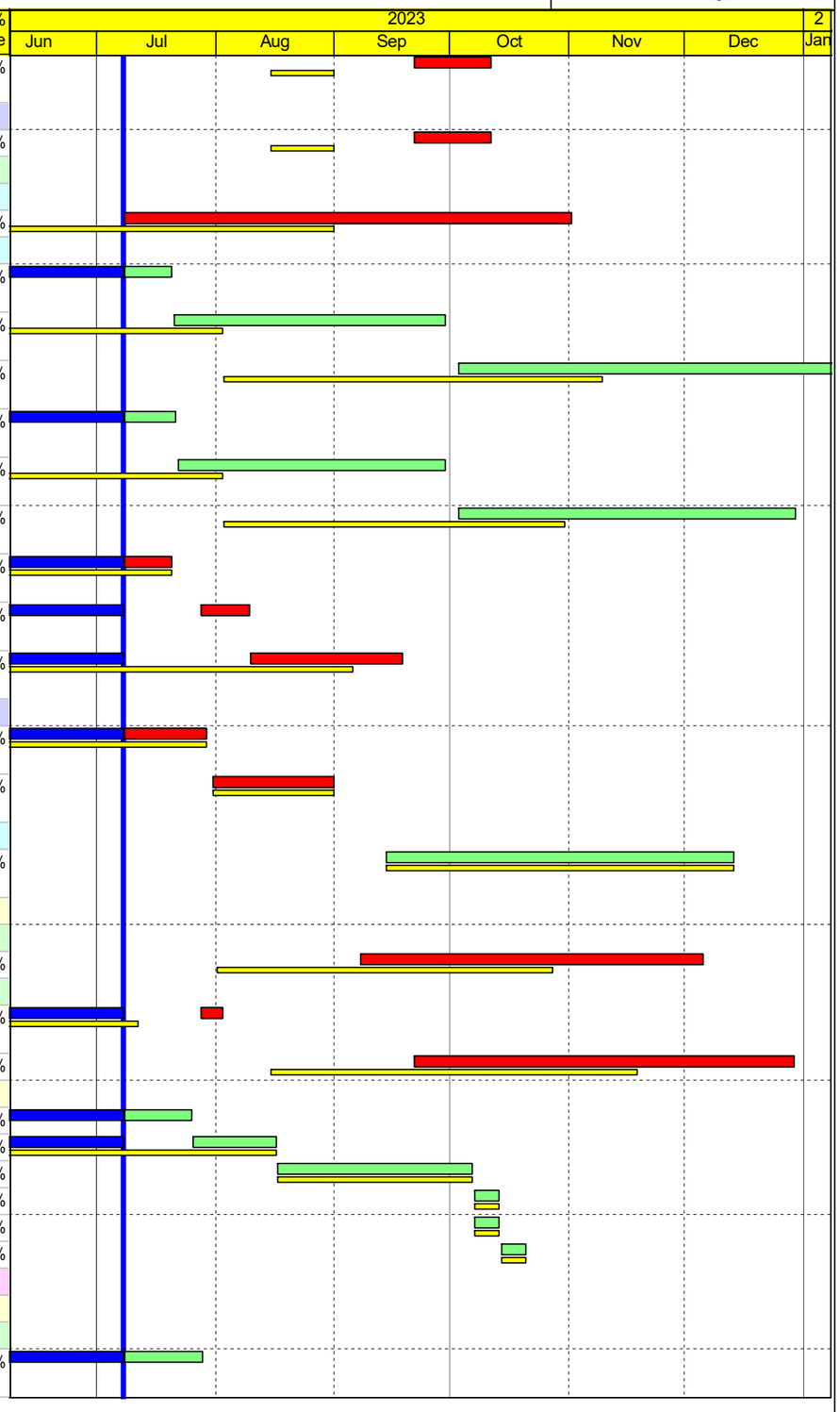
Three Months Rolling Programme (08 July 2023 to 31 October 2023)

Data Date: 08-Jul-23
Printed: 15-Jul-23 14:28
Layout: 3 MRP Layout
TASK filter: 3 Months Lookahead.

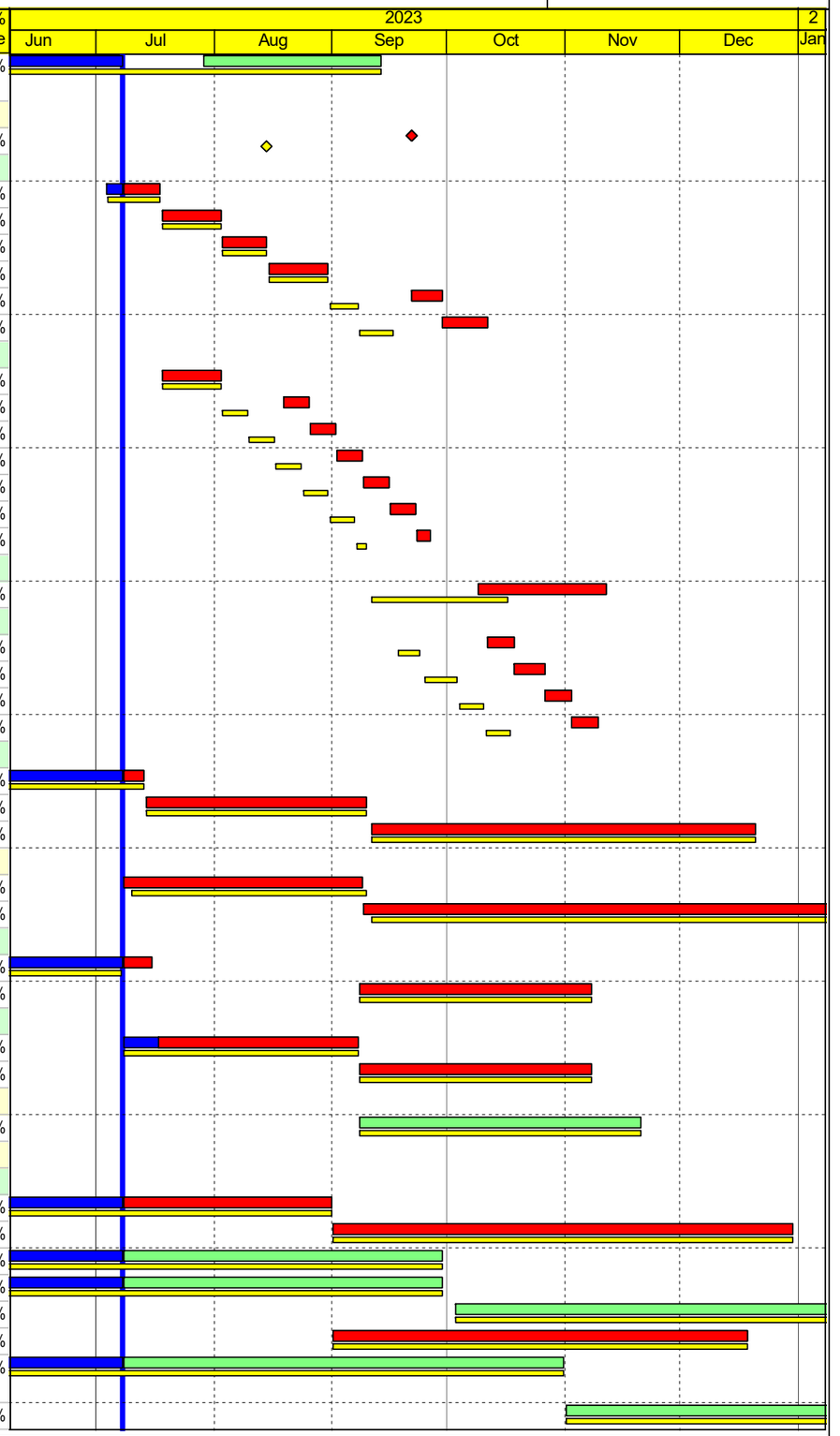
Baseline Programme RP06(1)

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

Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
INTS1-1220	Watermain (from STK Rd to connection point at On Kui ST) (Part 3) - 600DI and final connection	15	15	21-Sep-23	11-Oct-23	15-Aug-23	31-Aug-23	-28	0%
Temporary connection (for ELSW of Underpass C9-C13)									
INTS1-12	Temporary connection - 600MS and 300DI (including all testing)	15	15	21-Sep-23	11-Oct-23	15-Aug-23	31-Aug-23	-28	0%
South of Sha Tau Kok Road									
Rising Main Works									
INTS1-1400	Rising main installation (underneath CLP 132 Ping Che joint bay)	97	97	08-Jul-23	01-Nov-23	08-May-23	31-Aug-23	-79	0%
Sewerage Works									
INTS1-1300	Sewerage works including ELSW (near Portion M), from FMH_FL5.06 to FMH_FL5.08	80	11	08-Dec-22 A	20-Jul-23	08-Dec-22	19-May-23	22	86.25%
INTS1-1300	Sewerage works including ELSW (On Kiu St), from FMH_FL5.08 to FMH_FL5.09 (Part 1)	61	61	21-Jul-23	29-Sep-23	20-May-23	02-Aug-23	22	0%
INTS1-1300	Sewerage works including ELSW (On Kiu St), from FMH_FL5.08 to FMH_FL5.09 (Part 2)	82	82	03-Oct-23	10-Jan-24	03-Aug-23	09-Nov-23	22	0%
INTS1-1300	Sewerage works including ELSW (On Chuen St), from FMH_FL5.09 to FMH1004470 (Part 1)	60	12	08-Dec-22 A	21-Jul-23	08-Dec-22	20-May-23	31	80%
INTS1-1300	Sewerage works including ELSW (On Chuen St), from FMH_FL5.09 to FMH1004470 (Part 2)	60	60	22-Jul-23	29-Sep-23	22-May-23	02-Aug-23	31	0%
INTS1-1300	Sewerage works including ELSW (On Chuen St), from FMH_FL5.09 to FMH1004470 (Part 3)	73	73	03-Oct-23	29-Dec-23	03-Aug-23	30-Oct-23	31	0%
INTS1-1300	Sewerage works including ELSW (Portion K), from FMH_FL5.05 to FMH_FL5.06	93	11	08-Dec-22 A	20-Jul-23	08-Dec-22	20-Jul-23	-59	88.17%
INTS1-1300	Sewerage works including ELSW (STK Road), from FMH_FL5.00 to FMH_FL5.02 (Part 1)	50	11	14-Jan-23 A	09-Aug-23	14-Jan-23	27-May-23	-66	78%
INTS1-1300	Sewerage works including ELSW (STK Road), from FMH_FL5.00 to FMH_FL5.02 (Part 2)	84	34	29-May-23 A	18-Sep-23	29-May-23	05-Sep-23	-66	59.52%
Temporary diversion (for ELWS of Underpass C9-C13)									
INTS1-1300	Temporary sewerage diversion from FMH5.03 to new sewerage manhole and then existing manhole (design & approval)	92	19	11-Apr-23 A	29-Jul-23	11-Apr-23	29-Jul-23	-51	79.35%
INTS1-1300	Temporary sewerage diversion from FMH5.03 to new sewerage manhole and then existing manhole (Construction)	28	28	31-Jul-23	31-Aug-23	31-Jul-23	31-Aug-23	-51	0%
Stormwater Works and Retaining Wall									
INTS1-1320	Retaining Wall FW32 and 33 (141m, 20 bays, 15d/bay,2 teams) and stormwater drain-Part 1	75	75	14-Sep-23	13-Dec-23	14-Sep-23	13-Dec-23	13	0%
F6 after TTA2 Implemented (Part C and Part D)									
Footbridge F6 (Part C)									
INTS1-9120	ELS for F6 (Part C)	73	73	07-Sep-23	05-Dec-23	01-Aug-23	27-Oct-23	-121	0%
Footbridge F6 (Part D)									
INTS1-9010a	Piling Works for Lift tower and Footbridge F6 (Part D) (total 18nos. socket H piles, 3 piles/wk)	36	5	29-May-23 A	02-Aug-23	29-May-23	11-Jul-23	-152	86.11%
INTS1-9020	ELS for F6 Part D	80	80	21-Sep-23	29-Dec-23	15-Aug-23	18-Nov-23	-108	0%
CLC									
CLC-1020	Material ordering (Steel)	16	15	11-Apr-23 A	25-Jul-23	11-Apr-23	24-May-23	261	6.25%
CLC-1040	Builder works/Renovation works before installation of prefabricated panel	36	19	11-Apr-23 A	16-Aug-23	11-Apr-23	16-Aug-23	261	47.22%
CLC-1050	Installation of prefabricated panel, including E&M	42	42	17-Aug-23	06-Oct-23	17-Aug-23	06-Oct-23	261	0%
CLC-1060	Connection of electricity supply	6	6	07-Oct-23	13-Oct-23	07-Oct-23	13-Oct-23	261	0%
CLC-1070	Connection of water supply	6	6	07-Oct-23	13-Oct-23	07-Oct-23	13-Oct-23	261	0%
CLC-1080	Site clearance works and handover	6	6	14-Oct-23	20-Oct-23	14-Oct-23	20-Oct-23	261	0%
Stage 2									
TTA no.2									
Full closure of On Kui Street for Subsequent Works									
INTS2-3040a	Necessary diversion works near the new entrance of wholesale market (for full closure of On Kui St) -Part 1	90	18	08-Dec-22 A	28-Jul-23	08-Dec-22	29-May-23	13	80%



Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
INTS2-3040b	Necessary diversion works near the new entrance of wholesale market (for full closure of On Kui St)-Part 2	90	40	30-May-23 A	13-Sep-23	30-May-23	13-Sep-23	13	55.56%
Construction of Underpass (Portion H, J, K)									
INTS2-1140a	Diversion of existing footpath and cycle track	0	0		21-Sep-23		14-Aug-23	-76	0%
Pipe Pile Installation (Underpass Bay 9 - Bay 11)									
INTS2-4020	Pipe piling (A3a)	12	8	04-Jul-23 A	17-Jul-23	04-Jul-23	17-Jul-23	-135	33.33%
INTS2-4030	Pipe piling (C4)	14	14	18-Jul-23	02-Aug-23	18-Jul-23	02-Aug-23	-135	0%
INTS2-4040	Pipe piling (A4)	10	10	03-Aug-23	14-Aug-23	03-Aug-23	14-Aug-23	-57	0%
INTS2-4050	Pipe piling (B3)	14	14	15-Aug-23	30-Aug-23	15-Aug-23	30-Aug-23	-57	0%
INTS2-4060	Pipe piling (B4b)	7	7	21-Sep-23	29-Sep-23	31-Aug-23	07-Sep-23	-76	0%
INTS2-4070	Pipe piling (A6)	8	8	29-Sep-23	11-Oct-23	08-Sep-23	16-Sep-23	-76	0%
ELSW for Underpass Bay 9- Bay 11									
INTS2-4100	King post installation	14	14	18-Jul-23	02-Aug-23	18-Jul-23	02-Aug-23	-135	0%
INTS2-4110	Excavation to below 1st layer of strut	6	6	19-Aug-23	25-Aug-23	03-Aug-23	09-Aug-23	-149	0%
INTS2-4120	Install 1st layer of strut	6	6	26-Aug-23	01-Sep-23	10-Aug-23	16-Aug-23	-149	0%
INTS2-4130	Excavation to below 2nd layer of strut	6	6	02-Sep-23	08-Sep-23	17-Aug-23	23-Aug-23	-149	0%
INTS2-4140	Install 2nd layer of strut	6	6	09-Sep-23	15-Sep-23	24-Aug-23	30-Aug-23	-149	0%
INTS2-4150	Excavate to founding level	6	6	16-Sep-23	22-Sep-23	31-Aug-23	06-Sep-23	-149	0%
INTS2-4160	Formation and blinding	3	3	23-Sep-23	26-Sep-23	07-Sep-23	09-Sep-23	-149	0%
Underpass C9-C11 Structure (assume hanging UUs and concurrent with UUs diversion)									
INTS2-3100	Combined Bay C10&C11 - Base Slab	29	29	09-Oct-23	11-Nov-23	11-Sep-23	16-Oct-23	-157	0%
ELSW for Underpass Bay 12- Bay 13									
INTS2-4170	Excavation to below 1st layer of strut	6	6	11-Oct-23	18-Oct-23	18-Sep-23	23-Sep-23	-76	0%
INTS2-4180	Install 1st layer of strut	6	6	18-Oct-23	26-Oct-23	25-Sep-23	03-Oct-23	-76	0%
INTS2-4190	Excavation to below 2nd layer of strut	6	6	26-Oct-23	02-Nov-23	04-Oct-23	10-Oct-23	-76	0%
INTS2-4200	Install 2nd layer of strut	6	6	02-Nov-23	09-Nov-23	11-Oct-23	17-Oct-23	-76	0%
Underpass C14-C15									
INTS2-1010	ELS for Bay C14 to C15 (13m/bay, 60days/bay, 2no. workfronts)-Part 1	60	5	11-Apr-23 A	13-Jul-23	11-Apr-23	13-Jul-23	-30	91.67%
INTS2-1010	ELS for Bay C14 to C15 (13m/bay, 60days/bay, 2no. workfronts)-Part 2	50	50	14-Jul-23	09-Sep-23	14-Jul-23	09-Sep-23	-30	0%
INTS2-1090	Structure Works for Bay C15	84	84	11-Sep-23	20-Dec-23	11-Sep-23	20-Dec-23	-30	0%
Noise Barrier FLN-SE22 and FLN-SE21 (Portion J)									
INTS2-2000a	Submission and approval of Design for noise enclosure	54	54	08-Jul-23	08-Sep-23	10-Jul-23	09-Sep-23	-13	0%
INTS2-2000b	Fabrication of noise enclosure material	100	100	09-Sep-23	10-Jan-24	11-Sep-23	11-Jan-24	-13	0%
Noise Barrier FLN-SE22 (Near Sha Tau Kok)									
INTS2-1030	Noise Barrier Footing-Northbound	50	7	08-May-23 A	15-Jul-23	08-May-23	07-Jul-23	-53	86%
INTS2-1030	Noise Barrier Footing-Central Median	49	49	08-Sep-23	07-Nov-23	08-Sep-23	07-Nov-23	-53	0%
Noise Barrier FLN-SE21 (Near Fanling)									
INTS2-1030a	Noise Barrier Footing-Northbound	53	46	08-Jul-23 A	07-Sep-23	08-Jul-23	07-Sep-23	-53	13.21%
INTS2-1030	Noise Barrier Footing-Central Median	49	49	08-Sep-23	07-Nov-23	08-Sep-23	07-Nov-23	-53	0%
UU works (Portion J)									
INTS2-1040	UU Works (drainage) - Northbound of Sha Tau Kok Road (after TTA2)-Part	60	60	08-Sep-23	20-Nov-23	08-Sep-23	20-Nov-23	37	0%
Lift Tower and Footbridge F6 (Portion J)									
Design and Fabrication (S960 Footbridge F6 and Lift)									
INTS2-1450	Design and Approval of steel element and canopy for Footbridge F6	339	47	11-Apr-23 A	31-Aug-23	11-Apr-23	31-Aug-23	-130	86.14%
INTS2-1450	Fabrication and delivery of steel element an canopy for Footbridge F6	99	99	01-Sep-23	30-Dec-23	01-Sep-23	30-Dec-23	-80	0%
INTS2-1450	Combined Builder Works for lift shaft	111	72	08-May-23 A	29-Sep-23	08-May-23	29-Sep-23	26	35.14%
INTS2-1450	Installation drawing for lift	111	72	08-May-23 A	29-Sep-23	08-May-23	29-Sep-23	26	35.14%
INTS2-1450	Fabrication for lift	165	165	03-Oct-23	24-Apr-24	03-Oct-23	24-Apr-24	26	0%
INTS2-1450	Design and Approval of bearing for Footbridge F6	90	90	01-Sep-23	18-Dec-23	01-Sep-23	18-Dec-23	-130	0%
INTS2-1450-2	Lighting design(Civil requirement,Pillar box arrangement,Electrical Design,lighting&earthing,Lux simulation)KD3-F6&SE	146	96	08-May-23 A	31-Oct-23	08-May-23	31-Oct-23	1	34.25%
INTS2-1450	Procurement of lighting items and E&M items	144	144	01-Nov-23	27-Apr-24	01-Nov-23	27-Apr-24	1	0%



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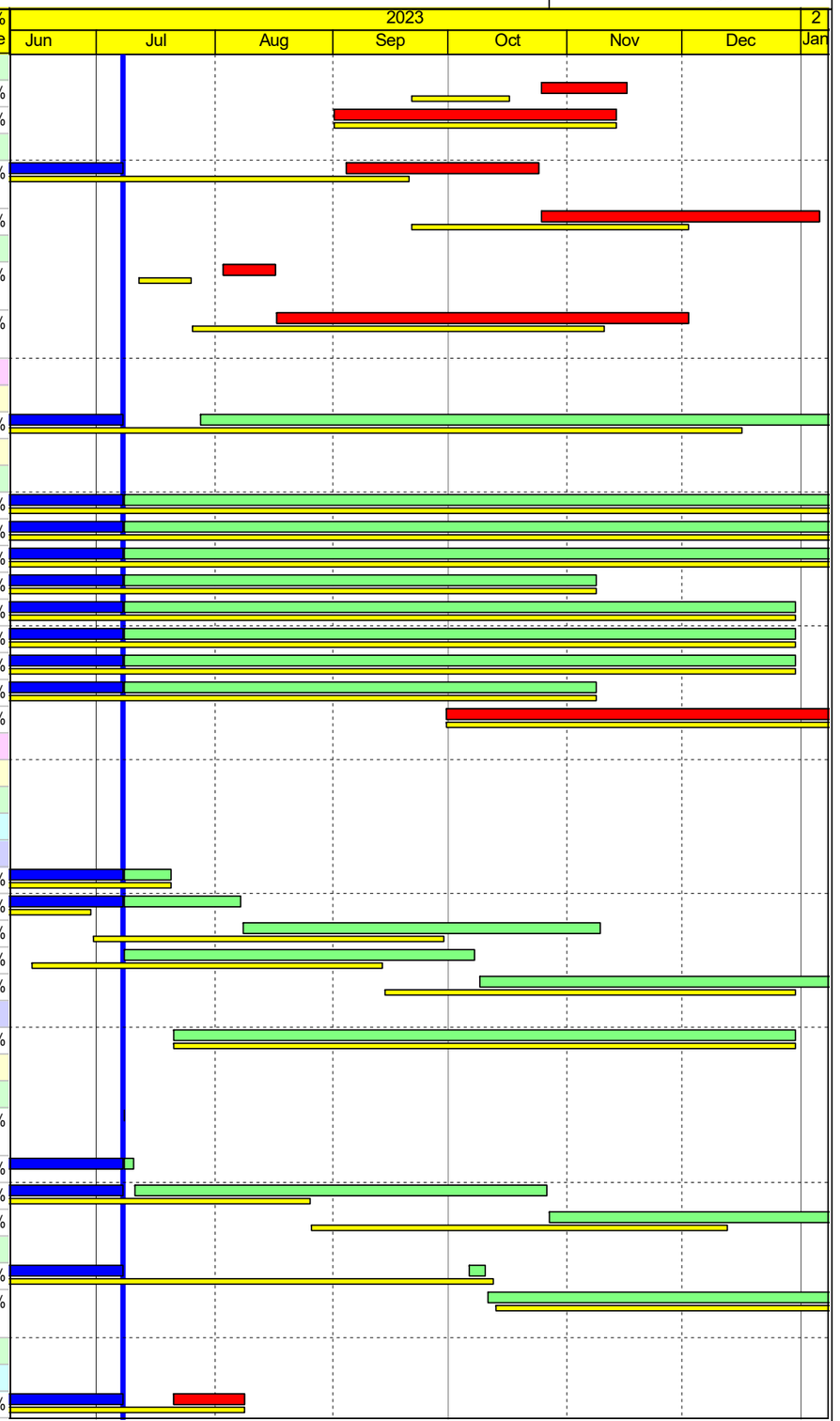
Part A (Cable D)									
INTS2-1310	F6 piling (Part A)(remaining 10 nos Hpiles, 3 piles/wk)	20	20	25-Oct-23	16-Nov-23	21-Sep-23	16-Oct-23	-86	0%
INTS2-3000c	F6 pier works C01, C02 (2 Piers), 1WF	60	60	01-Sep-23	13-Nov-23	01-Sep-23	13-Nov-23	-1	0%
Part B (Some part After Cable D)									
INTS2-1060	Piling for Footbridge F6 (Part B2) and lift (constrainted by CLP 11kV cables), remaining no.=24 nos.at 3 piles/wk)	64	41	05-Sep-22 A	24-Oct-23	05-Sep-22	20-Sep-23	-167	35.94%
INTS2-1060a	ELS for pile cap and pier at P07, P08, C03 (3 locations)	60	60	25-Oct-23	05-Jan-24	21-Sep-23	02-Dec-23	-167	0%
Part D									
INTS2-1080	Construction of Footbridge F6 Pier P06 after TTA no.2 (6nos piles at 3piles/wk)(Part D)	12	12	03-Aug-23	16-Aug-23	12-Jul-23	25-Jul-23	-152	0%
INTS2-1080a	Construction of Footbridge F6 Pier P06 after TTA no.2 (ELS, 1 cap, 1 pier)(Part D)	90	90	17-Aug-23	02-Dec-23	26-Jul-23	10-Nov-23	-24	0%
Stage 3									
TTA no.3									
INTS3-0010	Design, submit, processing & approval for TTA no.3	180	180	15-May-23 A	04-Mar-24	15-May-23	16-Dec-23	71	0%
Stormwater Pumping Station (after TTA Stage 3) (Portion H)									
Statutory Submission and Design									
INTS3-103	FS design (Stormwater pumping station)	268	218	08-May-23 A	28-Mar-24	08-May-23	28-Mar-24	60	18.66%
INTS3-103-1	Submersible pump design (Stormwater pumping station)	268	218	08-May-23 A	28-Mar-24	08-May-23	28-Mar-24	60	18.66%
INTS3-103-2	Scada design (Stormwater pumping station)	268	218	08-May-23 A	28-Mar-24	08-May-23	28-Mar-24	60	18.66%
INTS3-103-4	Lighting and E&M for Stormwater Pumping Station	153	103	08-May-23 A	08-Nov-23	08-May-23	08-Nov-23	89	32.68%
INTS3-104	Flood alarm system design (Underpass)	196	146	08-May-23 A	30-Dec-23	08-May-23	30-Dec-23	32	25.51%
INTS3-104-1	Flood alarm system civil requirement (Underpass)	196	146	08-May-23 A	30-Dec-23	08-May-23	30-Dec-23	32	25.51%
INTS3-104-2	FS radio communication system (Underpass)	196	146	08-May-23 A	30-Dec-23	08-May-23	30-Dec-23	32	25.51%
INTS3-104-4	Lighting system and E&M (underpass)	153	103	08-May-23 A	08-Nov-23	08-May-23	08-Nov-23	6	32.68%
INTS3-2000	Submission and approval of WWO 542	365	365	30-Sep-23	28-Sep-24	30-Sep-23	28-Sep-24	-88	0%
Construction of Depressed road (Portion H & F)									
Depressed Road A									
CSD									
Depressed Road A (CSD)									
Depressed Rd									
UTRA-1001	Structure (1-4)	61	11	08-May-23 A	20-Jul-23	08-May-23	20-Jul-23	12	81.97%
UTRA-1003	Excavation and ELS Installation (4-9)	26	26	30-May-23 A	07-Aug-23	30-May-23	29-Jun-23	79	0%
UTRA-1004	Structure (5-9)	78	78	08-Aug-23	09-Nov-23	30-Jun-23	29-Sep-23	79	0%
UTRA-1006	Excavation and ELS Installation (9-12)	77	77	08-Jul-23	07-Oct-23	14-Jun-23	13-Sep-23	18	0%
UTRA-1007	Structure (10-12) including all wall construction and backfill, removal of strut	88	88	09-Oct-23	23-Jan-24	14-Sep-23	30-Dec-23	18	0%
Retaining Wall									
UTRA-2001	Retaining wall FW29	135	135	21-Jul-23	30-Dec-23	21-Jul-23	30-Dec-23	12	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-Jul-23	08-Jul-23	08-May-23	08-May-23	26	0%
UTR-1000a	Sheet pile installation for U-trough B (B1-B3)	60	2	13-Jun-22 A	10-Jul-23	13-Jun-22	09-May-23	24	96.67%
UTR-1010	ELS for U-trough B (B1 - B3, 3 bays)	90	90	10-May-23 A	26-Oct-23	10-May-23	25-Aug-23	24	0%
UTR-1040	Construction of U-trough B (3 bays, 15m/bay, 30d/bay,1workfronts)	90	90	27-Oct-23	15-Feb-24	26-Aug-23	12-Dec-23	24	0%
B4-B10									
UTR-1050a	ELS for U-trough B (B4 - B10, 7 bays, 2 workfronts)_Part 1 (Sheet pile)	110	4	13-Jun-22 A	10-Oct-23	13-Jun-22	12-Oct-23	83	96.36%
UTR-1100	ELS for U-trough B (B4 - B10, 7 bays, 2 workfronts)-Part 2 (Sheet pile and ELSW)	100	100	11-Oct-23	08-Feb-24	13-Oct-23	14-Feb-24	83	0%
Remaining Works at Depressed road and Slip Road at both side of Depressed Road B									
Slip Road from Interchange to Fanling Highway									
UTR-3100	Retaining Wall FW9 (13 bays, 15d/bay,2 teams)-Part 1	50	16	06-Mar-23 A	08-Aug-23	06-Mar-23	08-Aug-23	-59	68%



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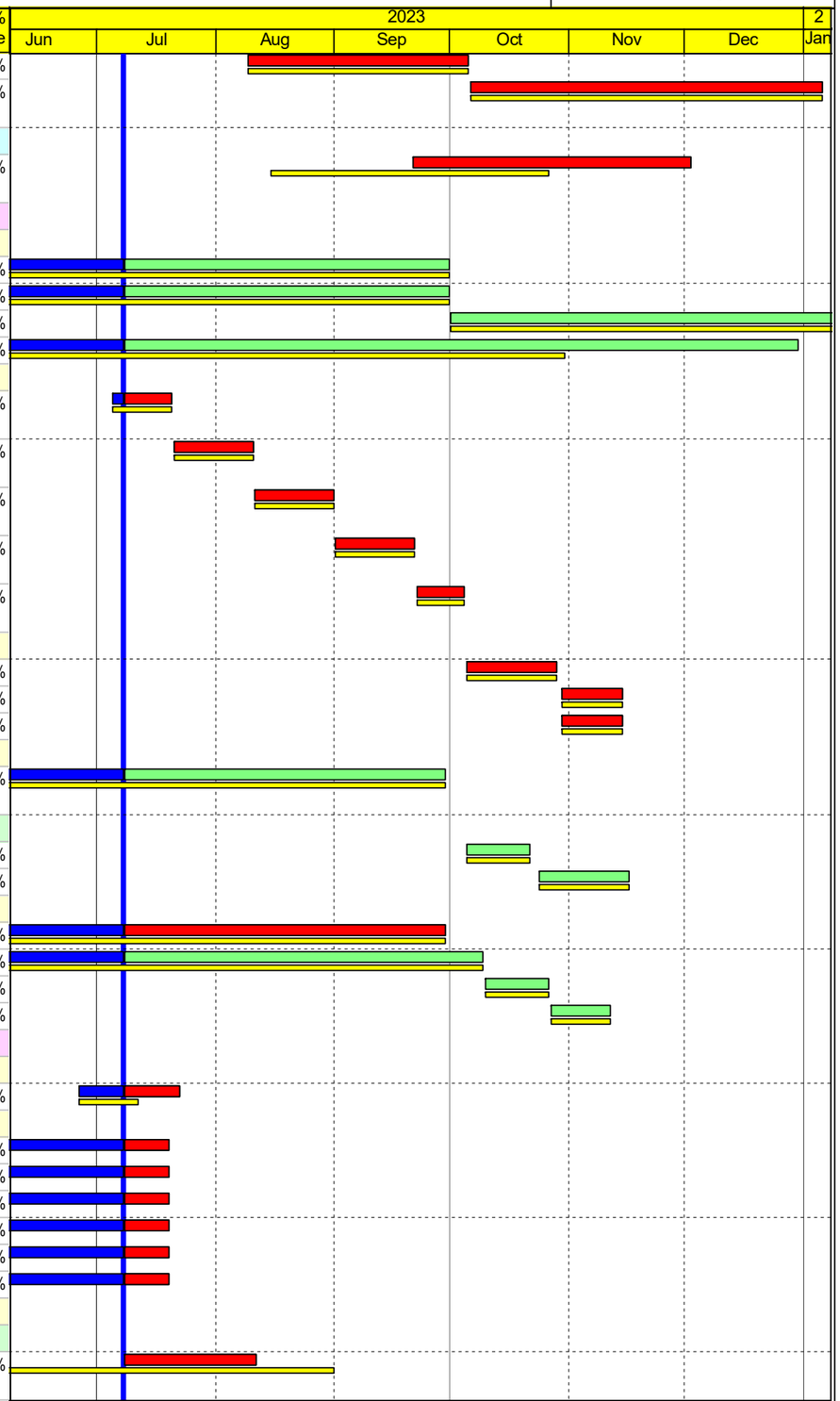
UTR-3100a	Retaining Wall FW9 (13 bays, 15d/bay,2 teams)-Part 2	48	48	09-Aug-23	05-Oct-23	09-Aug-23	05-Oct-23	-59	0%
UTR-3110	UU works along FW9 (including backfilling, drainage, watermain along slip road)-Part 1	75	75	06-Oct-23	05-Jan-24	06-Oct-23	05-Jan-24	-59	0%
Slip Road from Fanling Highway to Interchange									
UTR-3010	FW-10(~75m, ~10bay, 15d/bay, 2 team) (after 11kV, town gas and other UUs)	60	60	21-Sep-23	02-Dec-23	15-Aug-23	26-Oct-23	-123	0%
Sewage Pumping Station in Portion N (After TTA2 Northbound)									
Statutory Submission and Design									
SPS-101	Submission and approval of WWO 542 (FS and Portable / Flushing)	146	85	08-May-23 A	30-Sep-23	08-May-23	30-Sep-23	35	41.78%
SPS-102	Submission and approval of FS design and Flame detector	365	85	01-Dec-22 A	30-Sep-23	01-Dec-22	30-Sep-23	35	76.71%
SPS-103	Submission and approval of DDA to DSD	152	152	01-Oct-23	29-Feb-24	01-Oct-23	29-Feb-24	35	0%
SPS-105	Submission and approval of WWO 542 (FS and Portable / Flushing)	365	176	08-Aug-22 A	30-Dec-23	08-Aug-22	30-Oct-23	7	51.78%
Excavation and ELS									
SPS-1010b	Excavate (existing GL to +7.35mPD) to and Install L1 ELS @ +7.850 mPD between PP2 and PP3 only; Qty:463 m3 @ 300 m3/d)	14	11	05-Jul-23 A	20-Jul-23	05-Jul-23	20-Jul-23	0	21.43%
SPS-1010c	Excavate (+7.35mPD to +3.5mPD) between PP2 and PP3 and Install L2 ELS at +4.0 mPD (Approx. Vol = 778 m3 @ 300 m3/day	18	18	21-Jul-23	10-Aug-23	21-Jul-23	10-Aug-23	0	0%
SPS-1010d	Excavate (+3.5mPD to -1.65mPD) between PP2 and PP3 and Install L3 ELS at -1.15 mPD (Qty:1168m3 @ 250m3/d)	18	18	11-Aug-23	31-Aug-23	11-Aug-23	31-Aug-23	0	0%
SPS-1010e	Excavate (-1.65mPD to -3.985 mPD) between PP2 and PP3 to FEL (Qty: 485m3 @ 175m3/d)	18	18	01-Sep-23	21-Sep-23	01-Sep-23	21-Sep-23	0	0%
SPS-1010g	Install L1 Strut between PP1 and PP3,Excavate (+7.35mPD to +5.325mPD) between PP 1 and PP3 (Qty: 200m3 @ 300m3/d)	9	9	22-Sep-23	04-Oct-23	22-Sep-23	04-Oct-23	0	0%
Structural Works									
SPS-1030a	Construct Base Slab plus kicker (Wet Well) and remove L3 strut	20	20	05-Oct-23	28-Oct-23	05-Oct-23	28-Oct-23	0	0%
SPS-1030b	Construct Wall (wet well) up to +3.5	14	14	30-Oct-23	14-Nov-23	30-Oct-23	14-Nov-23	0	0%
SPS-1030c	Construct base slab (inlet chamber)	14	14	30-Oct-23	14-Nov-23	30-Oct-23	14-Nov-23	0	0%
Transformer Room, Switch Room									
SPS-1020	Transformer room civil requirement and Tx room and LV switch room electrical layout design (by CLP)	122	72	08-May-23 A	29-Sep-23	08-May-23	29-Sep-23	15	40.98%
Tx and Switch Rooms - Structures									
SPS-1020-01	Construct Base Slab for Tx Room and Switch Room	15	15	05-Oct-23	21-Oct-23	05-Oct-23	21-Oct-23	13	0%
SPS-1020-02	Construct Wall and Columns for Tx Room and Switch Room	21	21	24-Oct-23	16-Nov-23	24-Oct-23	16-Nov-23	13	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)	317	72	08-Aug-22 A	29-Sep-23	08-Aug-22	29-Sep-23	-76	77.29%
SPS-1035	E&M, BS and ABWF Procurement	227	78	07-Nov-22 A	09-Oct-23	07-Nov-22	09-Oct-23	114	65.64%
SPS-1036	E&M works Factory acceptance test	14	14	10-Oct-23	26-Oct-23	10-Oct-23	26-Oct-23	114	0%
SPS-1037	E&M works delivery	14	14	27-Oct-23	11-Nov-23	27-Oct-23	11-Nov-23	114	0%
Reprovision of On Luk Mun Street Playground (S3)									
Sublet and Design for Skateboard Park									
OLMSP-100a	Mock up and other submission	13	13	26-Jun-23 A	22-Jul-23	26-Jun-23	11-Jul-23	-58	0%
Sublet and Design for Ancillary and Services Block									
OLMSP-100b	Submission & Approval of design for Ancillary Block	90	10	01-Sep-22 A	19-Jul-23	01-Sep-22	20-May-23	-85	88.89%
OLMSP-100b	Preliminary Design and Layout, Elevations	50	12	08-Nov-22 A	19-Jul-23	08-Nov-22	20-May-23	-108	76%
OLMSP-100b	Submission & Approval - Design Foundation/Footing/Structure	37	12	21-Nov-22 A	19-Jul-23	21-Nov-22	20-May-23	-108	67.57%
OLMSP-100b	Submission & Approval - UU/Drainage/E&M	63	12	14-Nov-22 A	19-Jul-23	14-Nov-22	20-May-23	-108	80.95%
OLMSP-100b	Submission & Approval - Shop Drawing	60	12	21-Nov-22 A	19-Jul-23	21-Nov-22	20-May-23	-92	80%
OLMSP-100b	Submission & Approval - Materials	94	12	21-Nov-22 A	19-Jul-23	21-Nov-22	19-May-23	-57	87.23%
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	30	08-Jul-23	11-Aug-23	08-Dec-22	31-Aug-23	-11	0%



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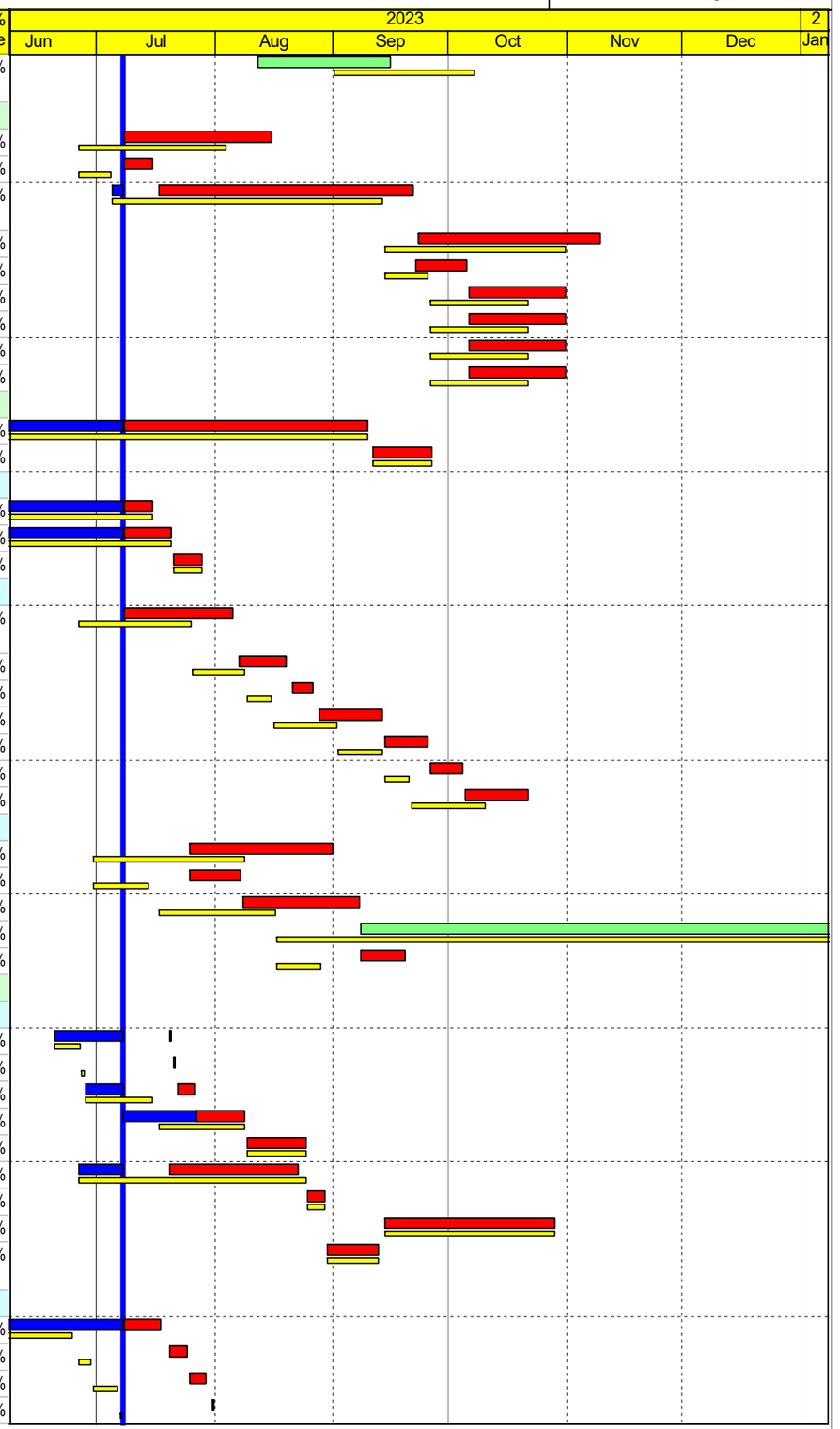
OLMSP-500b	Dismantle existing water main supply to wholesale market (for subsequent construction of Depressed Rd B - Bay 4-10)	30	30	12-Aug-23	15-Sep-23	01-Sep-23	07-Oct-23	98	0%
Public Area									
OLMSP-600	Construction of fence wall (Part 1)	33	33	08-Jul-23	15-Aug-23	26-Jun-23	03-Aug-23	-6	0%
OLMSP-600a	Construction of fence wall (Part 2)	7	7	08-Jul-23	15-Jul-23	26-Jun-23	04-Jul-23	-84	0%
OLMSP-610	External cable drawpits and cable ducting for E&M services includign CLP and direct link	61	58	05-Jul-23 A	21-Sep-23	05-Jul-23	13-Sep-23	-84	4.92%
OLMSP-610a	Cabling (by CLP)	38	38	23-Sep-23	09-Nov-23	14-Sep-23	31-Oct-23	-85	0%
OLMSP-620	Backfilling works	10	10	22-Sep-23	05-Oct-23	14-Sep-23	25-Sep-23	-38	0%
OLMSP-630	U channel and catchpit	21	21	06-Oct-23	31-Oct-23	26-Sep-23	21-Oct-23	-38	0%
OLMSP-640	Staircase	21	21	06-Oct-23	31-Oct-23	26-Sep-23	21-Oct-23	-38	0%
OLMSP-650	Granite tiling	21	21	06-Oct-23	31-Oct-23	26-Sep-23	21-Oct-23	-38	0%
OLMSP-670	Builder works (Gate, railing, footpath, arbour, signage etc)	21	21	06-Oct-23	31-Oct-23	26-Sep-23	21-Oct-23	-38	0%
New Skateboard Park									
OLMSP-126	Submission and Approval of General Building Plan (GBP)	105	55	08-May-23 A	09-Sep-23	08-May-23	09-Sep-23	-50	47.62%
OLMSP-126	Submission of Form 501	14	14	11-Sep-23	26-Sep-23	11-Sep-23	26-Sep-23	-50	0%
Site Formation and UUs									
OLMSP-10	Stormwater drainage works within the park	90	7	08-Dec-22 A	15-Jul-23	08-Dec-22	15-Jul-23	-52	92.22%
OLMSP-10	Retaining Wall FW 31 (13 bays, 15d/bay, 3 teams)	69	11	09-Aug-22 A	20-Jul-23	09-Aug-22	20-Jul-23	-51	84.06%
OLMSP-10	Backfilling behind retaining wall	7	7	21-Jul-23	28-Jul-23	21-Jul-23	28-Jul-23	-51	0%
Construction of Skateboard Park (by California)									
OLMSP-101(	Rough grading and drainage (floor drain and its connection pipe to main stormwater drainage system)	25	25	08-Jul-23	05-Aug-23	26-Jun-23	25-Jul-23	-70	0%
OLMSP-10	Install vertical wall	12	12	07-Aug-23	19-Aug-23	26-Jul-23	08-Aug-23	-70	0%
OLMSP-10	Install steps	6	6	21-Aug-23	26-Aug-23	09-Aug-23	15-Aug-23	-70	0%
OLMSP-10	Install transition and banks	15	15	28-Aug-23	13-Sep-23	16-Aug-23	01-Sep-23	-70	0%
OLMSP-10	Install flat works	10	10	14-Sep-23	25-Sep-23	02-Sep-23	13-Sep-23	-70	0%
OLMSP-10	All other remaining works (inspection and rectify defect)	6	6	26-Sep-23	04-Oct-23	14-Sep-23	20-Sep-23	-70	0%
OLMSP-10	BS works (lighting installation by Kum Shing)	15	15	05-Oct-23	21-Oct-23	21-Sep-23	10-Oct-23	-70	0%
Landscape Area									
OLMSP-102	Construction of fence wall	33	33	25-Jul-23	31-Aug-23	30-Jun-23	08-Aug-23	-44	0%
OLMSP-10	Construction of concrete access	12	12	25-Jul-23	07-Aug-23	30-Jun-23	14-Jul-23	-44	0%
OLMSP-10	Landscaping Softworks with acceptance by clients (S3)	27	27	08-Aug-23	07-Sep-23	17-Jul-23	16-Aug-23	-44	0%
OLMSP-10	Establishment works	365	365	08-Sep-23	06-Sep-24	17-Aug-23	15-Aug-24	6	0%
OLMSP-10	BS works (lighting installation by Kum Shing and irrigation system)	10	10	08-Sep-23	19-Sep-23	17-Aug-23	28-Aug-23	-44	0%
Ancillary Block & Service Block and other facility									
Ancillary Block									
OLMSP-12	Construction of Ancillary Block (Foundation)-rebar fixing	5	1	20-Jun-23 A	20-Jul-23	20-Jun-23	26-Jun-23	-77	80%
OLMSP-12	Construction of Ancillary Block (Foundation)-concreting	1	1	21-Jul-23	21-Jul-23	27-Jun-23	27-Jun-23	-77	0%
OLMSP-12	Bearing wall construction and pump room main structure	15	4	28-Jun-23 A	26-Jul-23	28-Jun-23	15-Jul-23	-77	73.33%
OLMSP-12	Building drainage	20	11	08-Jul-23 A	08-Aug-23	17-Jul-23	08-Aug-23	-77	45%
OLMSP-12	Backfilling works	14	14	09-Aug-23	24-Aug-23	09-Aug-23	24-Aug-23	-77	0%
OLMSP-12	Construction of Ancillary Block (Fabrication) including structural and ABWF	51	29	26-Jun-23 A	22-Aug-23	26-Jun-23	24-Aug-23	-75	43.14%
OLMSP-12	Construction of Ancillary Block (Installation)	4	4	25-Aug-23	29-Aug-23	25-Aug-23	29-Aug-23	-77	0%
OLMSP-12	BS work (Lighitng, flushing/cleansing pump, plumbing, hose reel)	36	36	14-Sep-23	28-Oct-23	14-Sep-23	28-Oct-23	-75	0%
OLMSP-124(	ABWF(connect to footing, late cast of internal tiles and E&M services, parapet and trench at roof and waterproof work)	12	12	30-Aug-23	12-Sep-23	30-Aug-23	12-Sep-23	-74	0%
Service Block									
OLMSP-12	Excavation for building foundation	40	8	08-May-23 A	17-Jul-23	08-May-23	24-Jun-23	-83	80%
OLMSP-123	Construction of Service Block (Foundation)-formworks erection	4	4	20-Jul-23	24-Jul-23	26-Jun-23	29-Jun-23	-85	0%
OLMSP-12	Construction of Service Block (Foundation)-rebar fixing	5	5	25-Jul-23	29-Jul-23	30-Jun-23	06-Jul-23	-85	0%
OLMSP-12	Construction of Service Block (Foundation)-concreting	1	1	31-Jul-23	31-Jul-23	07-Jul-23	07-Jul-23	-85	0%



Remaining Work | Crit Milestone | Milestone | Actual Work | Baseline Milestone | Actual Milestone | Project Baseline | Critical Remaining Work

Project ID: RP06a(1)-MU06-2023

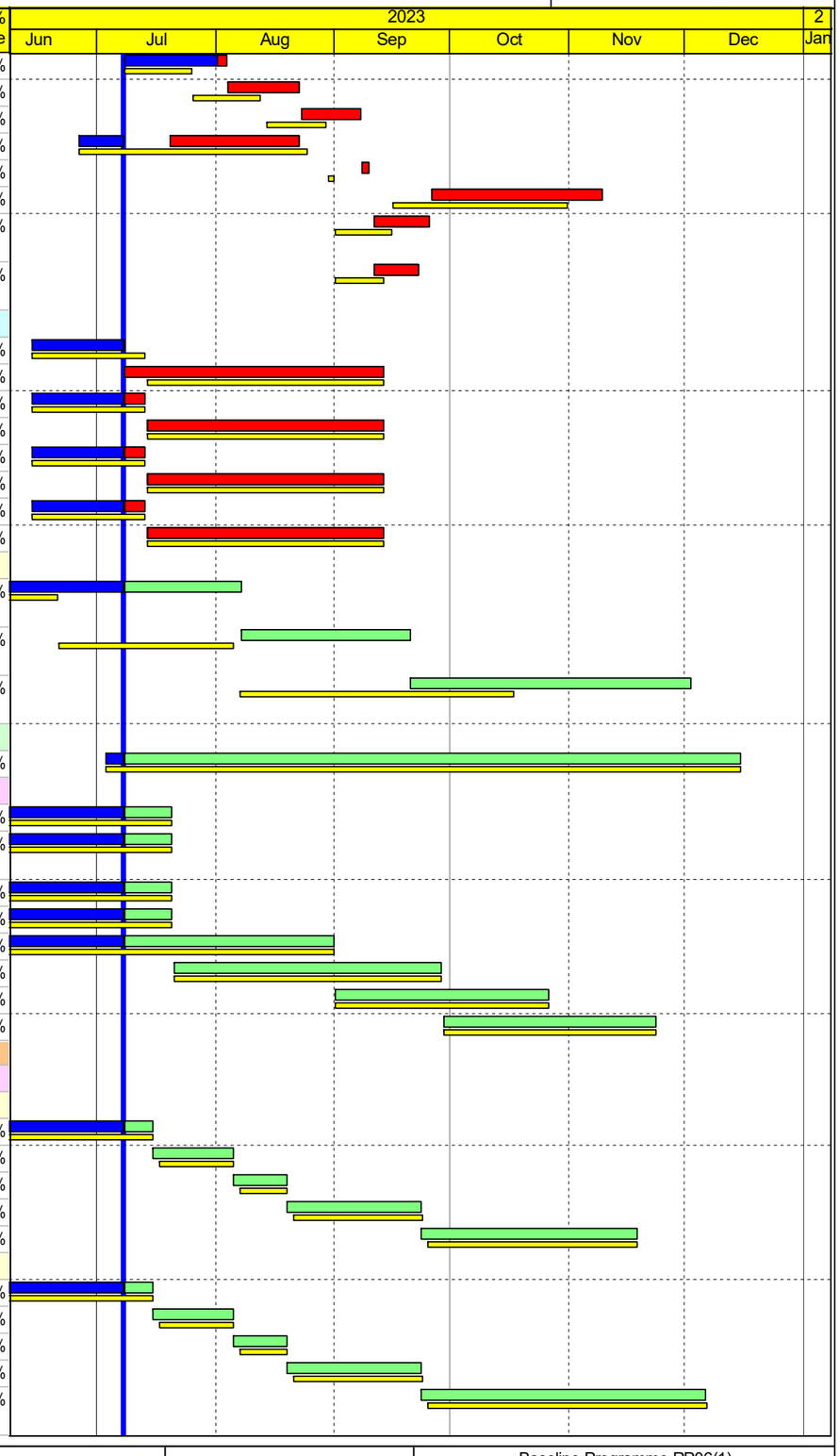
Three Months Rolling Programme (08 July 2023 to 31 October 2023)

Data Date: 08-Jul-23
Printed: 15-Jul-23 14:28
Layout: 3 MRP Layout
TASK filter: 3 Months Lookahead.

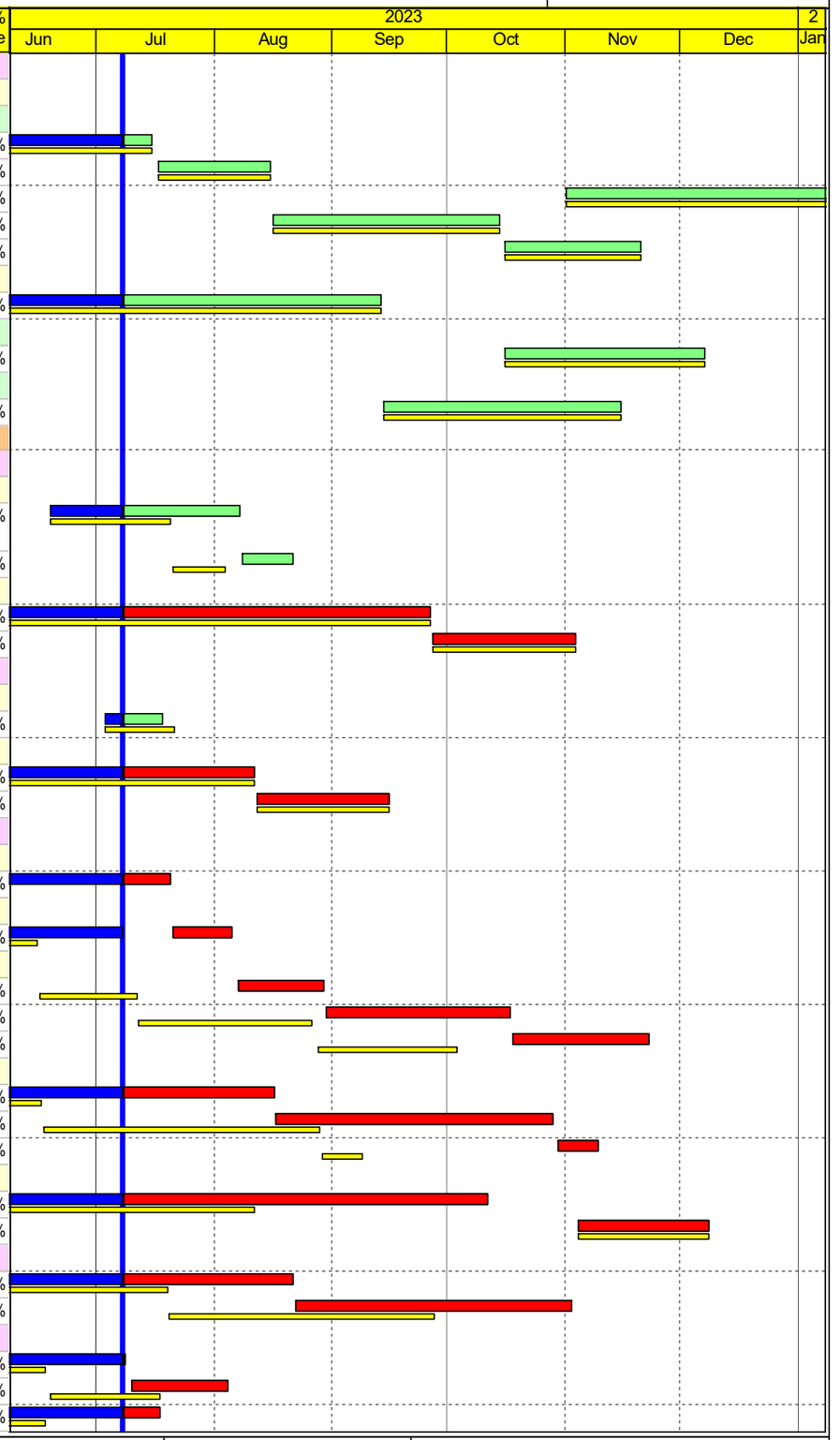
Baseline Programme RP06(1)

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

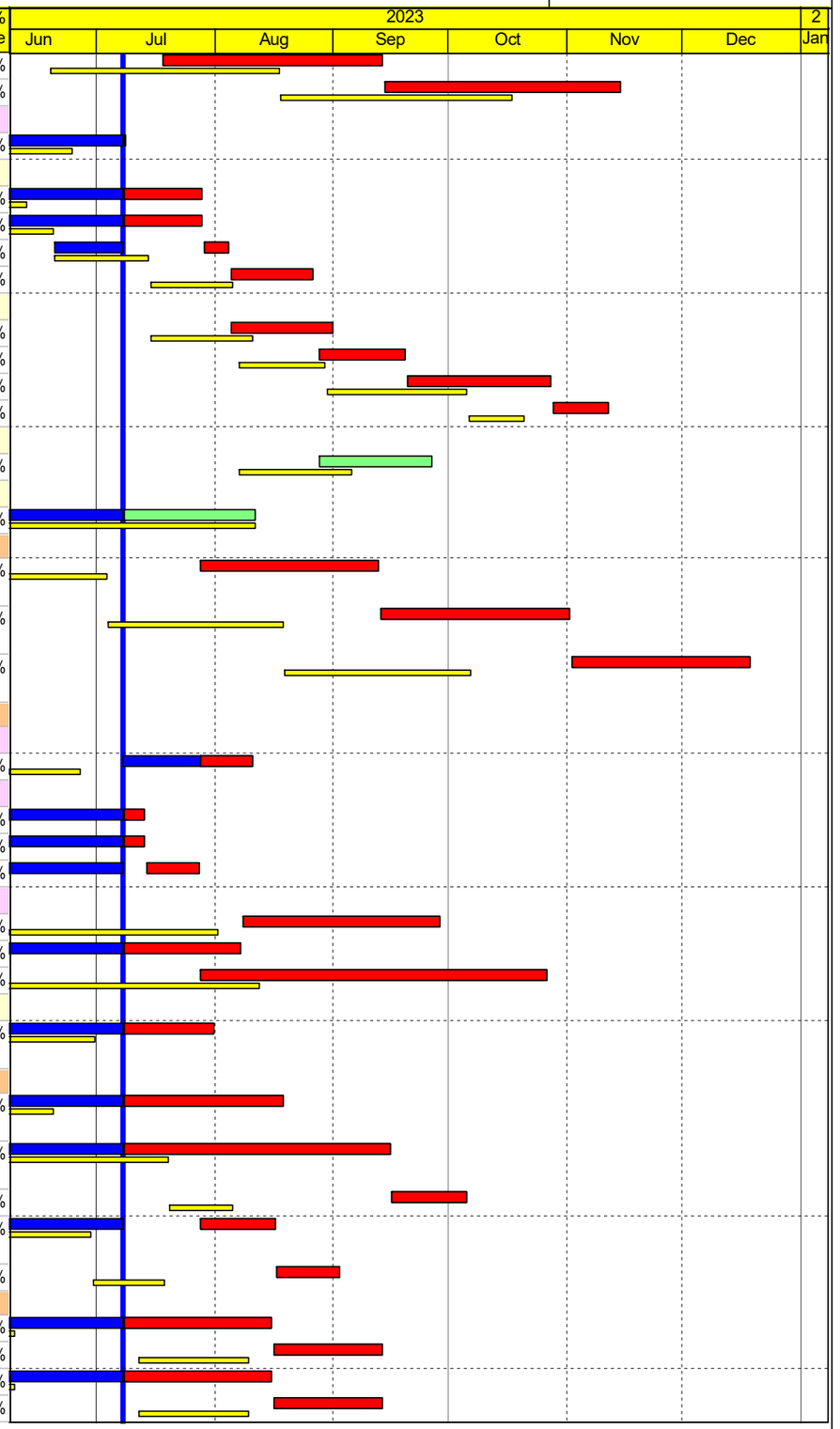
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
OLMSP-12	Bearing wall construction	15	3	08-Jul-23 A	03-Aug-23	08-Jul-23	25-Jul-23	-85	80%
OLMSP-12	Building drainage	16	16	04-Aug-23	22-Aug-23	26-Jul-23	12-Aug-23	-85	0%
OLMSP-12	Backfilling works	14	14	23-Aug-23	07-Sep-23	14-Aug-23	29-Aug-23	-85	0%
OLMSP-12	Construction of Service Block (Fabrication) including structural and ABWF	51	29	26-Jun-23 A	22-Aug-23	26-Jun-23	24-Aug-23	-71	43.14%
OLMSP-12	Construction of Service Block (Installation)	2	2	08-Sep-23	09-Sep-23	30-Aug-23	31-Aug-23	-85	0%
OLMSP-12	BS work (Lighting, FS pump, plumbing, AC for switch room and call point)	36	36	26-Sep-23	09-Nov-23	16-Sep-23	31-Oct-23	-85	0%
OLMSP-123(	ABWF(connect to footing, late cast of internal tiles and E&M services, parapet and trench at roof and waterproof work)	13	13	11-Sep-23	25-Sep-23	01-Sep-23	15-Sep-23	-85	0%
OLMSP-123(	Works required by CLP at Meter room (meter board and lock for the door of meter room)	11	11	11-Sep-23	22-Sep-23	01-Sep-23	13-Sep-23	-85	0%
Material Submissions (MEP)									
OLMSP-25	Aproval of MVAC item	30	0	14-Jun-23 A	08-Jul-23	14-Jun-23	13-Jul-23	-90	100%
OLMSP-25	Procurement of MVAC item	62	68	14-Jul-23 A	13-Sep-23	14-Jul-23	13-Sep-23	-90	0%
OLMSP-25	Aproval of FS (including FS pump)item	30	6	14-Jun-23 A	13-Jul-23	14-Jun-23	13-Jul-23	-90	80%
OLMSP-25	Procurement of FS (including FS pump) item	62	62	14-Jul-23 A	13-Sep-23	14-Jul-23	13-Sep-23	-90	0%
OLMSP-25	Aproval of Pumping and Drainage item	30	6	14-Jun-23 A	13-Jul-23	14-Jun-23	13-Jul-23	-90	80%
OLMSP-25	Procurement of Pumping and Drainageitem	62	62	14-Jul-23 A	13-Sep-23	14-Jul-23	13-Sep-23	-90	0%
OLMSP-25	Aproval of Electrical item	30	6	14-Jun-23 A	13-Jul-23	14-Jun-23	13-Jul-23	-90	80%
OLMSP-25	Procurement of Electrical item	62	62	14-Jul-23 A	13-Sep-23	14-Jul-23	13-Sep-23	-90	0%
Works in Portion P									
OLMSP-1050	Retaining Wall FW10 (around 75m, 10 bays,15d/bay, 2 team) and other facilities-Part 1	37	26	08-May-23 A	07-Aug-23	08-May-23	20-Jun-23	57	30%
OLMSP-1050a	Retaining Wall FW10 (around 75m, 10 bays,15d/bay, 2 team) and other facilities-Part 2	38	38	07-Aug-23	20-Sep-23	21-Jun-23	05-Aug-23	57	0%
OLMSP-1100	Backfilling work to Retaining Wall FW10 & remaining area (between abutment (by Contract C5) and Depressed road B)	60	60	20-Sep-23	02-Dec-23	07-Aug-23	17-Oct-23	57	0%
Temporary Skateboard Park Scheme									
OLMSP-2570	Operation of mini Skateboard Park	140	135	03-Jul-23 A	15-Dec-23	03-Jul-23	15-Dec-23	184	3.57%
Reprovision of Public Toilet and Refuse Collection Point (S6)									
PTRCP-100-1	Submission and approval of structural design for RCP and Toilet	602	11	11-Apr-23 A	20-Jul-23	11-Apr-23	20-Jul-23	8	98.17%
PTRCP-100-11	Submission and approval of E&M design for RCP and Toilet (Civil requirement, MVAC, Plumbling, Electrical)	602	11	11-Apr-23 A	20-Jul-23	11-Apr-23	20-Jul-23	8	98.17%
PTRCP-100-21	Submission and approval of UU and drainage design for RCP and Toilet	602	11	11-Apr-23 A	20-Jul-23	11-Apr-23	20-Jul-23	8	98.17%
PTRCP-100-31	Submission and approval of ABWF for RCP and Toilet	602	11	11-Apr-23 A	20-Jul-23	11-Apr-23	20-Jul-23	8	98.17%
PTRCP-100-41	Submission and approval of material submission for RCP and Toilet	97	47	08-May-23 A	31-Aug-23	08-May-23	31-Aug-23	32	51.55%
PTRCP-100-61	Submission and Consent for RCP and Toilet (ASD and FEHD)	60	60	21-Jul-23	28-Sep-23	21-Jul-23	28-Sep-23	8	0%
PTRCP-100-71	Procurement of builder works and E&M items	45	45	01-Sep-23	26-Oct-23	01-Sep-23	26-Oct-23	32	0%
PTRCP-1000	Prefabrication of Mic Unit	45	45	29-Sep-23	23-Nov-23	29-Sep-23	23-Nov-23	8	0%
Works in Portion A and Portion B (KD5)									
Portion A									
Noise Barrier NB91									
OTH-A-500	TTA and RA	57	7	08-May-23 A	15-Jul-23	08-May-23	15-Jul-23	47	88.6%
OTH-A-500.1	UU detection and trial pits	18	18	15-Jul-23	05-Aug-23	17-Jul-23	05-Aug-23	47	0%
OTH-A-500.2	Break planter, cast concrete footpath	12	12	05-Aug-23	19-Aug-23	07-Aug-23	19-Aug-23	47	0%
OTH-A-500.3	Noise barrier 91- ELSW for pile cap	30	30	19-Aug-23	23-Sep-23	21-Aug-23	23-Sep-23	47	0%
OTH-A-5000	Noise barrier 91- Footing (Stage 1)	45	45	23-Sep-23	18-Nov-23	25-Sep-23	18-Nov-23	47	0%
Noise Barrier NB53									
OTH-A-400	TTA and RA	57	7	08-May-23 A	15-Jul-23	08-May-23	15-Jul-23	247	88.6%
OTH-A-400.1	UU detection and trial pits	18	18	15-Jul-23	05-Aug-23	17-Jul-23	05-Aug-23	247	0%
OTH-A-400.2	Break planter, cast concrete footpath	12	12	05-Aug-23	19-Aug-23	07-Aug-23	19-Aug-23	247	0%
OTH-A-400.3	Noise barrier 53- ELSW for piling platform and pile cap	30	30	19-Aug-23	23-Sep-23	21-Aug-23	23-Sep-23	247	0%
OTH-A-4000	Noise barrier 53- Piling - Assume CSD approved- mini pile : 80 nos, 1.5 day / pile (Stage 1)	60	60	23-Sep-23	06-Dec-23	25-Sep-23	06-Dec-23	247	0%



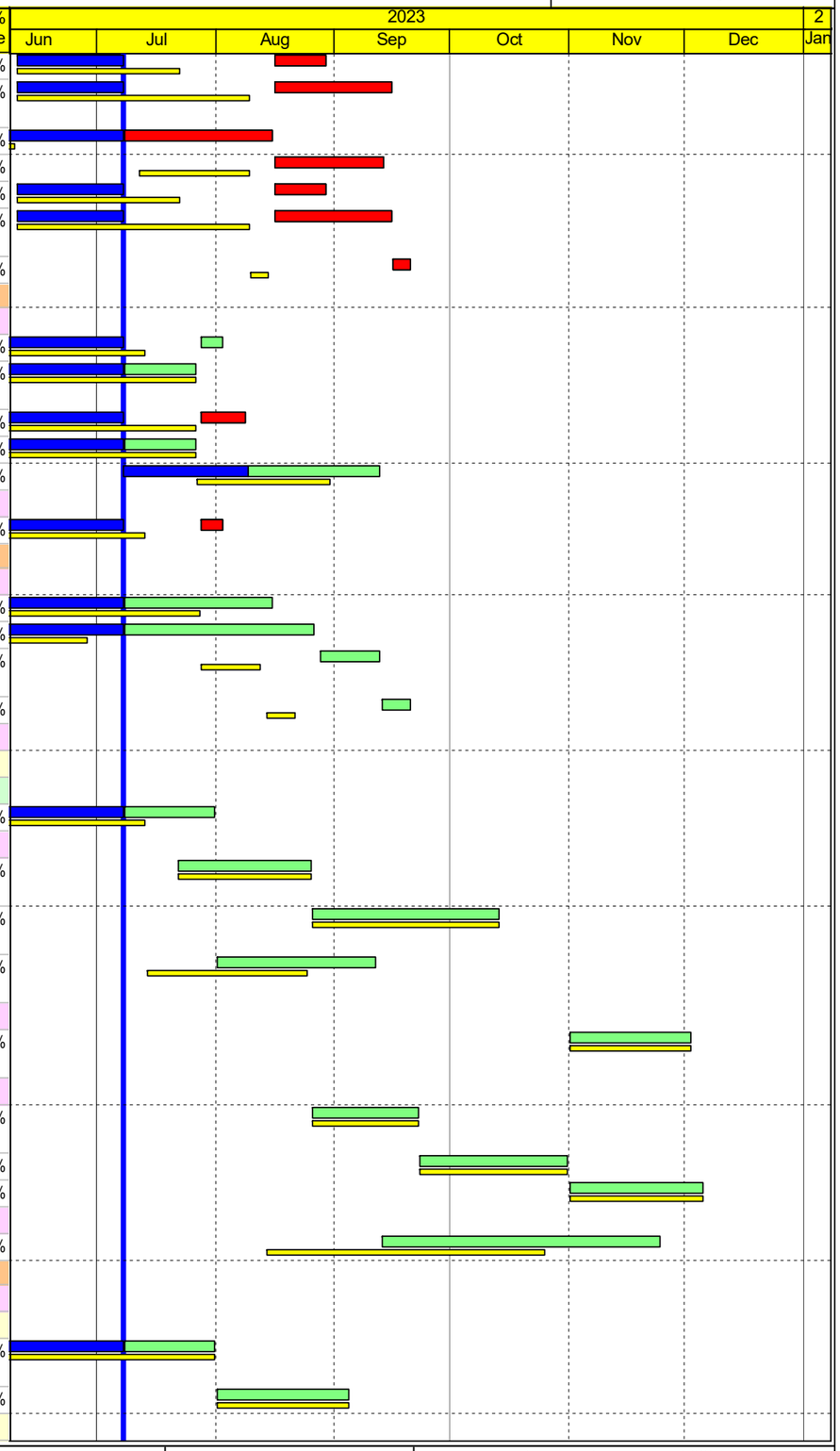
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
Portion B									
South Part of L3 Road									
Southbound									
OTH-B-4030	Footing of NB52	45	7	16-Dec-22 A	15-Jul-23	16-Dec-22	15-Jul-23	14	84.44%
OTH-B-403(	Wall of NB52	26	26	17-Jul-23	15-Aug-23	17-Jul-23	15-Aug-23	14	0%
OTH-B-403(	Fabrication of Steel works and panel for noise barrier NB51 & NB52	90	90	01-Nov-23	20-Feb-24	01-Nov-23	20-Feb-24	237	0%
OTH-B-4040	Backfilling for drainage works	50	50	16-Aug-23	14-Oct-23	16-Aug-23	14-Oct-23	14	0%
OTH-B-4050	Temporary access	30	30	16-Oct-23	20-Nov-23	16-Oct-23	20-Nov-23	14	0%
North Part of L3 Road									
OTH-B-600	Assembling and Storage area for FT	108	58	08-May-23 A	13-Sep-23	08-May-23	13-Sep-23	16	46.3%
Southbound									
OTH-B-6000	ELS for drainage works	45	45	16-Oct-23	07-Dec-23	16-Oct-23	07-Dec-23	106	0%
Northbound									
OTH-B-7000	Excavation for U-trough	51	51	14-Sep-23	15-Nov-23	14-Sep-23	15-Nov-23	139	0%
Works within Portions Q, R, S,T, U, V, X and Y (S4)									
Portion R									
Area 6									
OTH-1046-1	Stage 2 - Demolish and modify central divider, relocate public lightning, traffic signal	26	26	19-Jun-23 A	07-Aug-23	19-Jun-23	20-Jul-23	50	0%
OTH-1046-1a	Carriageway pavement and road markings	12	12	08-Aug-23	21-Aug-23	21-Jul-23	03-Aug-23	50	0%
Portion R Additional Work (Ducting Works)									
OTH-1046-7b	XP application and permit (3 months), TTA, RA	90	69	03-May-23 A	26-Sep-23	03-May-23	26-Sep-23	-71	23.33%
OTH-1046-7d	Additional ducting	30	30	27-Sep-23	03-Nov-23	27-Sep-23	03-Nov-23	-71	0%
Portion Q									
Area 1									
OTH-1031e	Permanent backfilling and reinstate cycle track	17	9	03-Jul-23 A	18-Jul-23	03-Jul-23	21-Jul-23	80	50%
Portion Q Additional Work									
OTH-1032-1a	XP, TTA and RA	0	30	03-May-23 A	11-Aug-23	03-May-23	11-Aug-23	-62	0%
OTH-1032-1c	Additional ducting	30	30	12-Aug-23	15-Sep-23	12-Aug-23	15-Sep-23	-62	0%
Portion U									
Area 1									
OTH-1070-1c	Construct new carriageway	34	11	06-Apr-23 A	20-Jul-23	06-Apr-23	19-May-23	-42	67.65%
Area 2 (Traffic Island)									
OTH-1070-2f	Set back the existing traffic island	14	14	31-May-23 A	05-Aug-23	31-May-23	15-Jun-23	-42	0%
Area 4									
OTH-1070-2g	Demolition of existing central divider	20	20	07-Aug-23	29-Aug-23	16-Jun-23	11-Jul-23	-42	0%
OTH-1070-2h	Drainage	40	40	30-Aug-23	17-Oct-23	12-Jul-23	26-Aug-23	-42	0%
OTH-1070-2i	Construction of new central divider	30	30	18-Oct-23	22-Nov-23	28-Aug-23	03-Oct-23	-42	0%
Area 3									
OTH-1070-2	Drainage works and temporary walkway	30	34	06-Apr-23 A	16-Aug-23	06-Apr-23	16-Jun-23	-61	0%
OTH-1070-3a	Construct top slab	60	60	17-Aug-23	28-Oct-23	17-Jun-23	28-Aug-23	-61	0%
OTH-1070-3c	Set back road kerb	10	10	30-Oct-23	09-Nov-23	29-Aug-23	08-Sep-23	-61	0%
Portion U Additional Works									
OTH-1070-4a	XP, TTA and RA	0	80	03-May-23 A	11-Oct-23	03-May-23	11-Aug-23	-52	0%
OTH-1070-4c	Additional ducting	30	30	04-Nov-23	08-Dec-23	04-Nov-23	08-Dec-23	-71	0%
Portion S									
OTH-1050a	Subway extension (Stage 1)	60	38	15-May-23 A	21-Aug-23	15-May-23	19-Jul-23	-10	36.67%
OTH-1050b	Subway extension (Stage 2)	60	60	22-Aug-23	02-Nov-23	20-Jul-23	27-Sep-23	-10	0%
Portion X									
OTH-2030	Site formation, wing wall, retaining wall, draft wall (Part 1)	50	1	01-May-23 A	08-Jul-23	01-May-23	17-Jun-23	-13	98%
OTH-2030a	Site formation, wing wall, retaining wall, draft wall (Part 2)	23	23	10-Jul-23	04-Aug-23	19-Jun-23	17-Jul-23	-13	0%
OTH-2030b	Modify subway	50	8	15-May-23 A	17-Jul-23	15-May-23	17-Jun-23	-47	84%



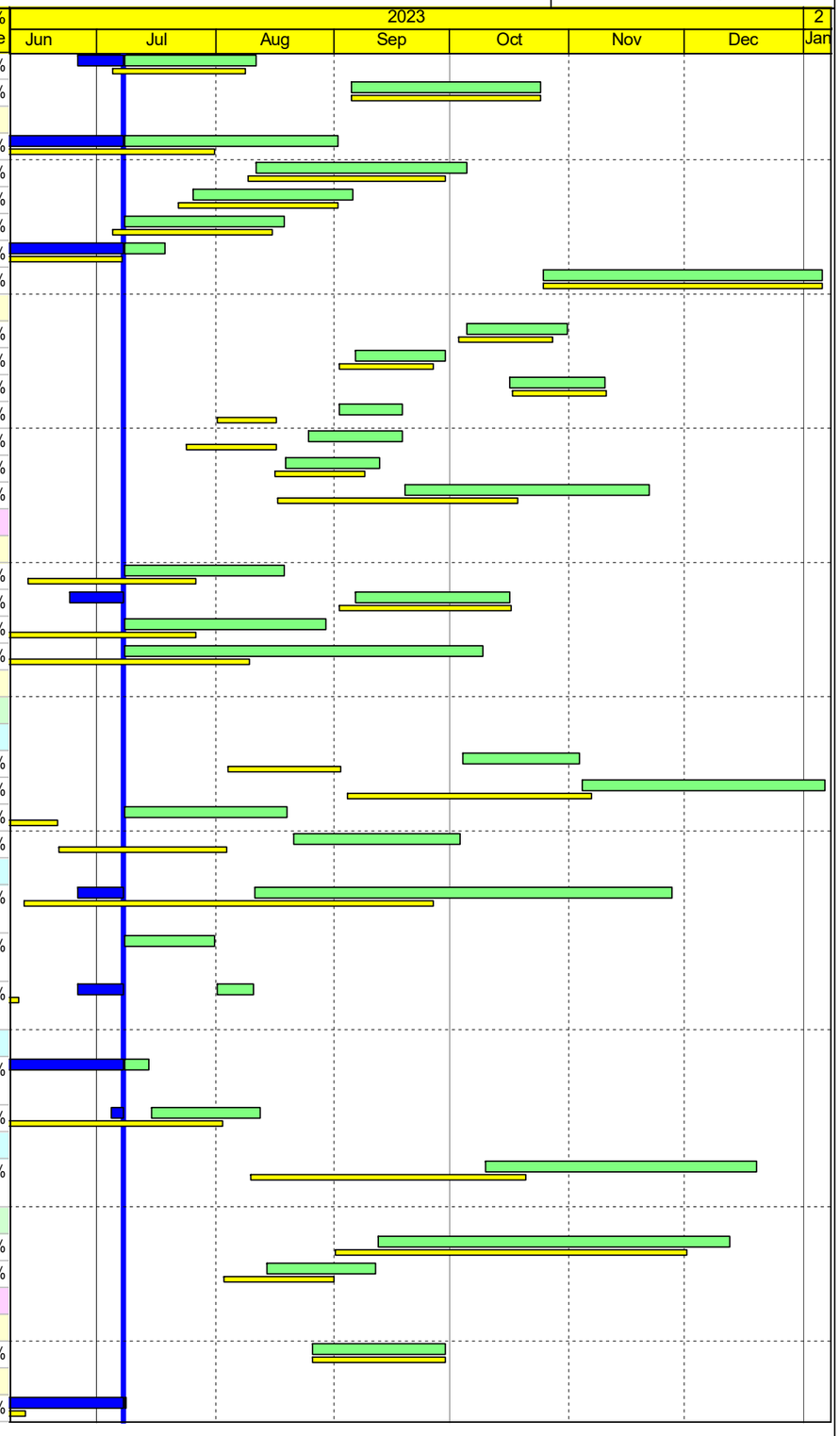
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
OTH-2030c	Relocate public lighting, relocate directional sign	50	50	18-Jul-23	13-Sep-23	19-Jun-23	17-Aug-23	-47	0%
OTH-2040	Construct new pavement at carriageway	50	50	14-Sep-23	14-Nov-23	18-Aug-23	17-Oct-23	-47	0%
Portion V,Y									
OTH-1075	TTA application for Portion VY	209	1	27-Apr-22 A	08-Jul-23	27-Apr-22	24-Jun-23	21	99.52%
Area 1 (New Footpath Area)									
OTH-1080-1a1	UU lowering (by others)	30	18	15-May-23 A	28-Jul-23	15-May-23	12-Jun-23	-18	40%
OTH-1080-1b	Relocate Fire Hydrant	30	18	15-May-23 A	28-Jul-23	15-May-23	19-Jun-23	-18	40%
OTH-1080-1c	Drainage	20	6	20-Jun-23 A	04-Aug-23	20-Jun-23	14-Jul-23	-18	70%
OTH-1080-1d	Carriageway	19	19	05-Aug-23	26-Aug-23	15-Jul-23	05-Aug-23	-18	0%
Area 2 (Pedestrian Crossing)									
OTH-1080-2a	Tree works	23	23	05-Aug-23	31-Aug-23	15-Jul-23	10-Aug-23	-2	0%
OTH-1080-2c	Demolish existing central divider	20	20	28-Aug-23	19-Sep-23	07-Aug-23	29-Aug-23	-18	0%
OTH-1080-2d	Construct new central divider and traffic island	30	30	20-Sep-23	27-Oct-23	30-Aug-23	05-Oct-23	-18	0%
OTH-1080-2f	Carriageway	13	13	28-Oct-23	11-Nov-23	06-Oct-23	20-Oct-23	-18	0%
Area 3 (New Pedestrian Crossing Island)									
OTH-1080-2g	Form Pedestrian Crossing and Island	26	26	28-Aug-23	26-Sep-23	07-Aug-23	05-Sep-23	6	0%
Portion VY Additional Work									
OTH-1080-4a	XP, TTA and RA	0	30	08-May-23 A	11-Aug-23	08-May-23	11-Aug-23	28	0%
Junction improvement works at Portion J (S4)									
OTH-2020	Relocation of Traffic System- Siu Wan Road Junctional works (tree felling and site clearance)	40	40	28-Jul-23	12-Sep-23	15-May-23	03-Jul-23	-49	0%
OTH-2020a	Relocation of Traffic System- Siu Wan Road Junctional works (road realignment)	40	40	13-Sep-23	01-Nov-23	04-Jul-23	18-Aug-23	-49	0%
OTH-2020b	Relocation of Traffic System- Siu Wan Road Junctional works (paving works etc)	40	40	02-Nov-23	18-Dec-23	19-Aug-23	06-Oct-23	-49	0%
CLP 132kV and 11kV Cable Works at Bridge and interchange area									
Cable B (Green) Fanling to Louhu Circuit 132KV- by CLP (Bridge A2,A3 and interchange)									
CLP-2060	Abandon of Cable B (At portion C,G,H,J,K,L) (Interchange area)	15	12	08-Jul-23 A	10-Aug-23	08-Jun-23	26-Jun-23	-33	20%
Cable C (Red) Ting Kok Road- Heung Yuen Wai Circuit 132KV- by CLP (Bridge A3 and interchange area)									
CLP-3000	Diversion of CLP 150m cable C1 (At portion H,J)	69	5	09-May-22 A	13-Jul-23	09-May-22	12-May-23	-167	92.75%
CLP-3010	Diversion of CLP 63m cable C2 (At portion K,K1,K2)	60	5	08-Jul-22 A	13-Jul-23	08-Jul-22	12-May-23	-167	91.67%
CLP-3020	Abandon of C1(At portion H,J,K,K1,K2)	21	12	18-Jan-23 A	27-Jul-23	18-Jan-23	13-May-23	-167	42.86%
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	08-Aug-23	28-Sep-23	08-Jun-23	01-Aug-23	-43	0%
CLP-4005	Diversion of CLP 163m cable D1 (At portion H)(outside Underpass)	50	26	08-Dec-22 A	07-Aug-23	08-Dec-22	07-Jun-23	-43	48%
CLP-4020	Diversion of CLP 180m cable D3 -after TTA 2	75	75	28-Jul-23	26-Oct-23	15-May-23	12-Aug-23	-64	0%
Temporary Diversion Scheme (CLP 132 Ping Che Line)									
CLP-4120	Ducting works, cabling works and change-over for CLP temporary diversion (by CLP)	144	20	30-Dec-22 A	31-Jul-23	30-Dec-22	30-Jun-23	-24	86.11%
CLP 11kV Cables works at Interchange area (tentative scheme)									
CLP-5010	Laying new 11kV cables(255m) F6 & underpass area (Portion J/H)(after C5 to C8)	60	36	08-Dec-22 A	18-Aug-23	08-Dec-22	19-Jun-23	-149	40%
CLP-5030	Laying new 11kV cables(520m) F6 & underpass & U-Through B area (portion K)	60	60	08-May-23 A	15-Sep-23	08-May-23	19-Jul-23	-74	0%
CLP-5040	Abandon 11kV cables in Underpass and Uthrough B area (portion K)	15	15	16-Sep-23	05-Oct-23	20-Jul-23	05-Aug-23	-74	0%
CLP-5050	Laying new 11kV cables(400m) at STK Road and MS Road (portion J)(after TTA 2)	38	17	15-May-23 A	16-Aug-23	15-May-23	29-Jun-23	-167	55.26%
CLP-5060	Abandon 11kV cables at STK Rad and MS Road (portion J)	15	15	17-Aug-23	02-Sep-23	30-Jun-23	18-Jul-23	-167	0%
Towngas (By others)									
TG-1000	IPA gas main laying (Above Underpass C8 and along STK Rd)	45	33	11-Apr-23 A	15-Aug-23	11-Apr-23	09-Jun-23	-121	26.67%
TG-1000a	IPA gas main laying (after pipe pile underpass C9-C10)	25	25	16-Aug-23	13-Sep-23	12-Jul-23	09-Aug-23	-121	0%
TG-1010	MP gas main laying-stage 1 (Above Underpass C8 and along STK Rd)	45	33	11-Apr-23 A	15-Aug-23	11-Apr-23	09-Jun-23	-123	26.67%
TG-1010a	MP gas main laying-stage 1 (after pipe pile underpass C9-C10)	25	25	16-Aug-23	13-Sep-23	12-Jul-23	09-Aug-23	-121	0%



Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
TG-1020	MP gas main laying-stage 2 (portion J/K, near Toilet/ RCP)	35	12	10-Jun-23 A	29-Aug-23	10-Jun-23	22-Jul-23	-108	65.71%
TG-1030	MP gas main laying-stage 3 (Portion P, near Playground, Data centre, On Chuen St)	50	27	10-Jun-23 A	15-Sep-23	10-Jun-23	09-Aug-23	-123	46%
TG-1040	LBG gas main laying-stage 1(Above Underpass C8 and along STK Rd)	47	33	11-Apr-23 A	15-Aug-23	11-Apr-23	09-Jun-23	-123	29.79%
TG-1040a	LBG gas main laying-stage 1 (after pipe pile underpass C9-C10)	25	25	16-Aug-23	13-Sep-23	12-Jul-23	09-Aug-23	-121	0%
TG-1050	LBG gas main laying-stage 2 (portion J/K, near Toilet/ RCP)	35	12	10-Jun-23 A	29-Aug-23	10-Jun-23	22-Jul-23	-108	65.71%
TG-1060	LBG gas main laying-stage 3(Portion P, near Playground, Data centre, On Chuen St)	50	27	10-Jun-23 A	15-Sep-23	10-Jun-23	09-Aug-23	-123	46%
TG-1070	Abandon existing gas main	4	4	16-Sep-23	20-Sep-23	10-Aug-23	14-Aug-23	-123	0%
Telecom (By others)									
HGC/HKBN/HKBNESHK/PCCW									
TL-1010	HGC/HKBN/HKBNES/PCCW diversion -stage 2 (after TTA)	49	5	15-May-23 A	02-Aug-23	15-May-23	13-Jul-23	106	89.8%
TL-1020	HGC/HKBN/HKBNES/PCCW diversion -stage 3 (after RW9, near existing market and new playground)	66	16	08-May-23 A	26-Jul-23	08-May-23	26-Jul-23	112	75.76%
TL-1030	HGC/HKBN/HKBNES/PCCW diversion -stage 4 (near Portion M)	60	10	15-May-23 A	08-Aug-23	15-May-23	26-Jul-23	-11	83.33%
TL-1050	PCCW diversion-stage 6 (near the On Luk Min St playground)	66	16	08-May-23 A	26-Jul-23	08-May-23	26-Jul-23	112	75.76%
TL-1060	Abandon of existing cables of UUs	30	30	08-Jul-23 A	12-Sep-23	27-Jul-23	30-Aug-23	101	0%
Towngas/telecom									
TL-3010	HGC/HKBN/HKBNES diversion -stage 2 (after TTA)	49	5	15-May-23 A	02-Aug-23	15-May-23	13-Jul-23	-135	89.8%
Bridge F(MS)									
Stage 7 Bridge Deck Construction & Formation work ard abutment in N.side									
BWFW-7020	Bridge deck construction between pier F-03 and abt F-04M	53	33	24-May-23 A	15-Aug-23	24-May-23	27-Jul-23	120	37.74%
BWFW-7020a	Submission and approval of post tension method statement and material	90	43	08-Dec-22 A	26-Aug-23	08-Dec-22	28-Jun-23	110	52.22%
BWFW-7030	Post tensioning slab tendons (include 7 days for required concrete strength) F-03 to F-04M	14	14	28-Aug-23	12-Sep-23	28-Jul-23	12-Aug-23	110	0%
BWFW-7040	Remove false work	7	7	13-Sep-23	20-Sep-23	14-Aug-23	21-Aug-23	187	0%
Stage 8 Cofferdam modification and Formation in Both sides									
South side									
New scheme in wet season									
BWFW-808(	Construction of steel platform for bored pile at F-02	55	20	08-May-23 A	31-Jul-23	08-May-23	13-Jul-23	151	63.64%
Stage 9 Piling works for pier F-02 and abutment F-01M in S.side									
BWFW-9020	Bored pile construction at abutment pier F-02 (2 nos, 15d/ bored, 1 set machine)	30	30	22-Jul-23	25-Aug-23	22-Jul-23	25-Aug-23	1	0%
BWFW-9020a	Interface coring, sonic test, and grouting for bored pile construction at abutment pier F-02	40	40	26-Aug-23	13-Oct-23	26-Aug-23	13-Oct-23	73	0%
BWFW-9030a	Interface coring, sonic test, and grouting for bored pile construction at abutment F-01M	36	36	01-Aug-23	11-Sep-23	14-Jul-23	24-Aug-23	151	0%
Stage 10 ELS installation & Excavation and Pile Cap & piers in S.side									
BWFW-10000	Install sheet pile using vibration hammer to form ELS system for the pile cap F-02 (*carry out on dry season)	28	28	01-Nov-23*	02-Dec-23	01-Nov-23	02-Dec-23	9	0%
Stage 11 Abutment construction in S.side									
BWFW-11000	Install sheet pile using vibration hammer to form ELS system for the pile cap F-01 (After F-02 bored pile)	24	24	26-Aug-23	22-Sep-23	26-Aug-23	22-Sep-23	111	0%
BWFW-11010	ELS and install wailing and strut F-01	30	30	23-Sep-23	31-Oct-23	23-Sep-23	31-Oct-23	111	0%
BWFW-11020	F-01 Pile cap construction (1nos, 30d/ cap, 1 workfront)	30	30	01-Nov-23	05-Dec-23	01-Nov-23	05-Dec-23	111	0%
Stage 12 Falsework erection in Middle of Ng Tung River (dry season)									
BWFW-12000	Erect steel platform between pier F-02 and F-03 (after F-03 and F-04 Deck)	60	60	13-Sep-23	24-Nov-23	14-Aug-23	25-Oct-23	110	0%
Bridge Works (A1,A2,A3,G,F4)									
Bridge A1									
ELS of Bridge A1 Foundation									
BWBE-1030a	Existing rebar bending yard for bridge works adjacent pile cap A1-01M (occupied the area up to 31/7/23)	30	20	08-May-23 A	31-Jul-23	08-May-23	31-Jul-23	155	33.33%
BWBE-1050	ELS for Pier A1-01M	30	30	01-Aug-23	04-Sep-23	01-Aug-23	04-Sep-23	155	0%
Pile cap of Bridge A1 Foundation									



Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
BWBC-1010	Pile cap for Abt A1-02 (1 no. pile cap, 30d/cap, 1no. workfront)	30	29	26-Jun-23 A	11-Aug-23	05-Jul-23	08-Aug-23	176	2%
BWBC-1050	Pile cap for Abt A1-01M (1 no. pile cap, 45d/cap, 1no. workfront)	40	40	05-Sep-23	24-Oct-23	05-Sep-23	24-Oct-23	155	0%
Construction of Bridge A1 Substructure									
BWBS-1050	Pier A1-06a/b (2nos. column, 30d/column, 1 no. workfront)	60	48	20-Jan-23 A	01-Sep-23	20-Jan-23	31-Jul-23	80	20%
BWBS-1070	Pier A1-02a/b (2nos. column, 36d/column, 1 no. workfront)	45	45	11-Aug-23	05-Oct-23	09-Aug-23	29-Sep-23	199	0%
BWBS-1090	Pier A1-03a/b (2nos. column, 36d/column, 1 no. workfront, 2 nos. pier moul	36	36	26-Jul-23	05-Sep-23	22-Jul-23	01-Sep-23	172	0%
BWBS-1130	Pier A1-04a/b (2nos. column, 36d/column, 1 no. workfront, 2 nos. pier moul	36	36	08-Jul-23	18-Aug-23	05-Jul-23	15-Aug-23	137	0%
BWBS-1150	Pier A1-05a/b (2nos. column, 36d/column, 1 no. workfront, 2 nos. pier moul	50	9	08-May-23 A	18-Jul-23	08-May-23	07-Jul-23	112	82%
BWBS-1220	Abt A1-01M (1no. abutment, ~60 d/abutment,1no. workfront)	60	60	25-Oct-23	05-Jan-24	25-Oct-23	05-Jan-24	155	0%
Construction of Bridge A1 Deck									
BWBD-1061	Falsework Erection for A1 cast in-situ decking (A1-02 to A1-03)	21	21	05-Oct-23	31-Oct-23	03-Oct-23	27-Oct-23	199	0%
BWBD-1062	Falsework Erection for A1 cast in-situ decking (A1-03 to A1-04)	21	21	06-Sep-23	29-Sep-23	02-Sep-23	26-Sep-23	172	0%
BWBD-1063	Falsework Erection for A1 cast in-situ decking (A1-06 to A2-01 and remaini	21	21	16-Oct-23	10-Nov-23	17-Oct-23	10-Nov-23	305	0%
BWBD-1063-1	Bearing installation at A1-06	14	14	02-Sep-23	18-Sep-23	01-Aug-23	16-Aug-23	80	0%
BWBD-1064	Falsework Erection for A1 cast in-situ decking (A1-05 to A1-06)	21	21	25-Aug-23	18-Sep-23	24-Jul-23	16-Aug-23	80	0%
BWBD-1065	Falsework Erection for A1 cast in-situ decking (A1-04 to A1-05)	21	21	19-Aug-23	12-Sep-23	16-Aug-23	08-Sep-23	137	0%
BWBD-1080d	Cast in-site Bridge Deck (From A1-06 to A1-05) 60days/span	52	52	19-Sep-23	21-Nov-23	17-Aug-23	18-Oct-23	80	0%
Bridge A2									
Construction of Bridge A2 Substructure									
BWBS-1020	Pier A2-02a/b (2nos. column, 36d/column, 1no. workfronts, 2 nos. pier mou	36	36	08-Jul-23	18-Aug-23	13-Jun-23	26-Jul-23	54	0%
BWBS-1060	Pier A2-01a/b (2nos. column, 36d/column, 1no. workfronts, 2 nos. pier mou	36	32	24-Jun-23 A	16-Oct-23	02-Sep-23	16-Oct-23	305	10%
BWBS-1085	Pier A2-03l (1 no. column, 50d/column, 1no. workfront)	45	45	08-Jul-23	29-Aug-23	02-Jun-23	26-Jul-23	84	0%
BWBS-1140a	Pier A2-05M (1no. crosshead, 26d RMD + 52d Crosshead,1no. workfront)	78	78	08-Jul-23	09-Oct-23	08-May-23	09-Aug-23	129	0%
Construction of Bridge A2 Deck									
Construction of Pier Table									
A2-02									
BWBD-1021	Falsework Erection for A2 cast in-situ pier table - A2-02	26	26	04-Oct-23	03-Nov-23	04-Aug-23	02-Sep-23	17	0%
BWBD-102	Bridge A2 cast in-situ pier table at A2-02	52	52	04-Nov-23	06-Jan-24	04-Sep-23	06-Nov-23	17	0%
BWBD-102	Design of FWK &Falsework Erection for A2 cast in situ pier table - A2-02	37	37	08-Jul-23	19-Aug-23	08-May-23	20-Jun-23	7	0%
BWBD-102	Fabrication of FWK &Falsework Erection for A2 cast in situ pier table - A2-(	36	36	21-Aug-23	03-Oct-23	21-Jun-23	03-Aug-23	17	0%
A2-03									
BWBD-1023	Falsework Erection for A2 cast in-situ portal - A2-03l and A2-03r (include RMD platform)	90	90	26-Jun-23 A	27-Nov-23	12-Jun-23	26-Sep-23	63	0%
BWBD-1023	Design of FWK &Falsework Erection for A2 cast in-situ portal - A2-03l and A2-03r	20	20	08-Jul-23	31-Jul-23	08-May-23	31-May-23	17	0%
BWBD-1023	Fabrication of FWK &Falsework Erection for A2 cast in-situ portal - A2-03l and A2-03r	9	9	26-Jun-23 A	10-Aug-23	01-Jun-23	10-Jun-23	63	0%
A2-04									
BWBD-1027	Falsework Erection for A2 cast in-situ pier table - A2-04 (include RMD platform)	26	6	03-May-23 A	14-Jul-23	03-May-23	31-May-23	36	76.92%
BWBD-102	Bridge A2 cast in-situ pier table at A2-04	52	25	05-Jul-23 A	12-Aug-23	01-Jun-23	02-Aug-23	36	51.92%
A2-05									
BWBD-1024	Falsework Erection for A2 cast in-situ pier table - A2-05 (include RMD platform)	60	60	10-Oct-23	19-Dec-23	10-Aug-23	20-Oct-23	129	0%
Form Traveller and Segment Erection Works									
BWBD-1041	Bridge A2 by Form Traveler - Stage 1 (at Pier A2-04), Team A	76	76	12-Sep-23	12-Dec-23	01-Sep-23	01-Dec-23	36	0%
BWBD-2090	Setup traveler	25	25	14-Aug-23	11-Sep-23	03-Aug-23	31-Aug-23	36	0%
Bridge A3									
Construction of Bridge A3 Foundation (Team 2) (~30m depth)									
BWBF-1340b	Pier A3-01r (2nos. pile, 20d/pile, 1no. workfront)*	30	30	26-Aug-23	29-Sep-23	26-Aug-23	29-Sep-23	1	0%
ELS of Bridge A3 Foundation									
BWBE-3000	ELS for Pier A3-01l for piling platform	30	1	24-Apr-23 A	08-Jul-23	24-Apr-23	12-Jun-23	42	96.67%



Remaining Work
Milestone
Baseline Milestone
Project Baseline
Critical Remaining Work
Crit Milestone
Actual Work
Actual Milestone

Project ID: RP06a(1)-MU06-2023

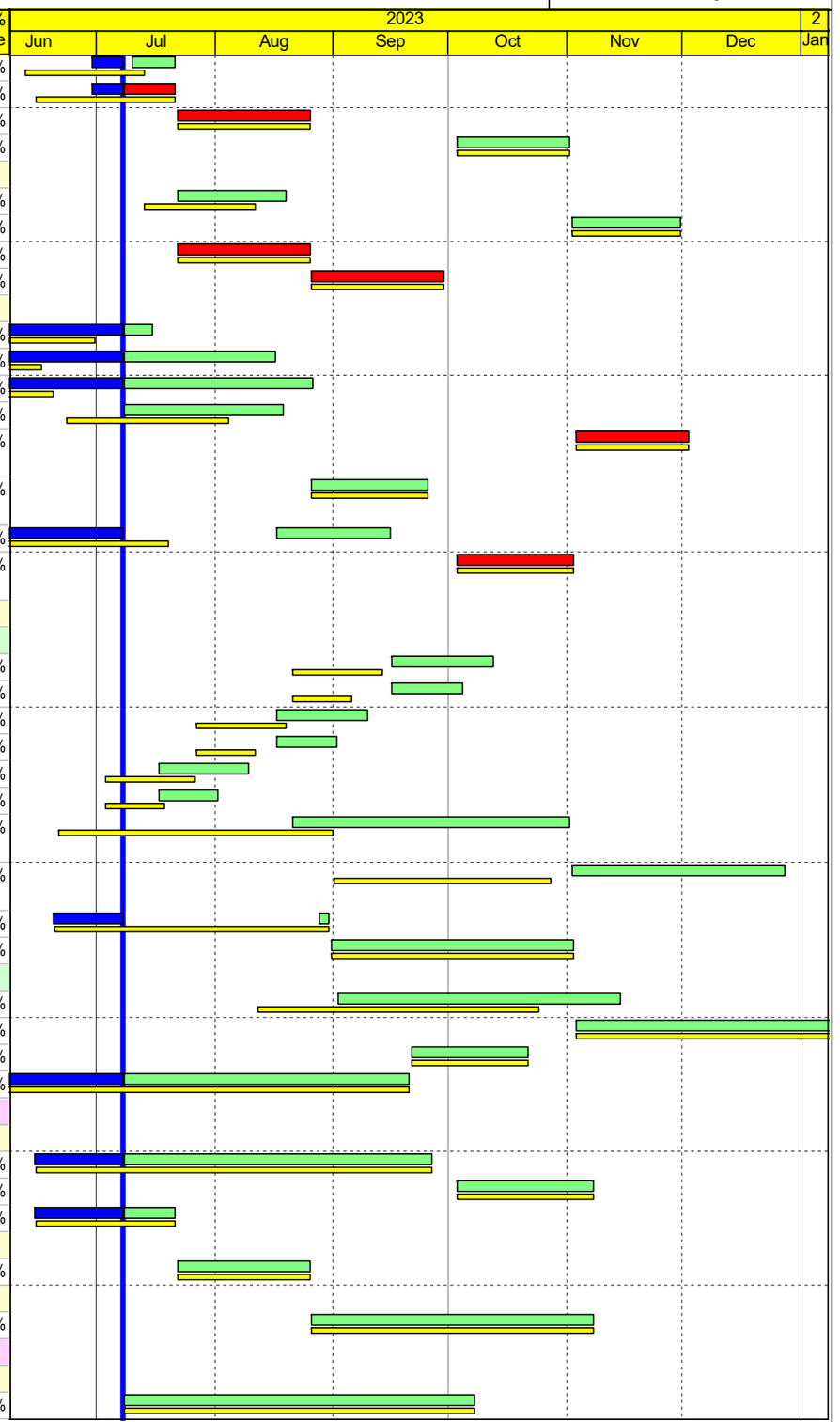
Three Months Rolling Programme (08 July 2023 to 31 October 2023)

Data Date: 08-Jul-23
Printed: 15-Jul-23 14:28
Layout: 3 MRP Layout
TASK filter: 3 Months Lookahead.

Baseline Programme RP06(1)

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

Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
BWBE-3000-1	ELS for Pier A3-01l	25	11	30-Jun-23 A	21-Jul-23	12-Jun-23	13-Jul-23	61	56%
BWBE-3020	ELS for Pier A3-03r	30	12	30-Jun-23 A	21-Jul-23	15-Jun-23	21-Jul-23	0	60%
BWBE-3030	ELS for Pier A3-03l	30	30	22-Jul-23	25-Aug-23	22-Jul-23	25-Aug-23	0	0%
BWBF-1340a	ELS for Pier A3-01r	25	25	03-Oct-23	01-Nov-23	03-Oct-23	01-Nov-23	2	0%
Pile cap of Bridge A3 Foundation									
BWBC-3000	Pile cap for A3-01l (2nos. pile cap, 25d/cap, 1nos. workfronts)	25	25	22-Jul-23	19-Aug-23	13-Jul-23	11-Aug-23	61	0%
BWBC-3000a	Pile cap for A3-01r (1nos. pile cap, 25d/cap, 1 workfronts)	25	25	02-Nov-23	30-Nov-23	02-Nov-23	30-Nov-23	2	0%
BWBC-3020	Pile cap for A3-03r (1no. pile cap, 30d/cap, 1no. workfront)	30	30	22-Jul-23	25-Aug-23	22-Jul-23	25-Aug-23	0	0%
BWBC-3030	Pile cap for A3-03l (1no. pile cap, 30d/cap, 1no. workfront)	30	30	26-Aug-23	29-Sep-23	26-Aug-23	29-Sep-23	0	0%
Construction of Bridge A3 Substructure									
BWBS-1010a	Extract sheet pile and backfilling at Abt 03-06M	19	7	08-Jun-23 A	15-Jul-23	08-Jun-23	30-Jun-23	227	63.16%
BWBS-1030	Pier A3-05a/b (2nos. column, 30d/column, 1no. workfront)	60	34	22-Jul-22 A	16-Aug-23	22-Jul-22	16-Jun-23	221	43.33%
BWBS-1170	Pier A3-02 in nullah (1no. column, 60d/column,1no. workfront)	60	43	19-Apr-23 A	26-Aug-23	19-Apr-23	19-Jun-23	1	28.33%
BWBS-1194-1	Fabrication of FWK and Falseworks for Pier A3-01 and A3-03	36	36	08-Jul-23	18-Aug-23	23-Jun-23	04-Aug-23	10	0%
BWBS-1195	Pier A3-01l (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)- Stage 1	26	26	03-Nov-23	02-Dec-23	03-Nov-23	02-Dec-23	0	0%
BWBS-1210	Pier A3-03r (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)-stage 1	26	26	26-Aug-23	25-Sep-23	26-Aug-23	25-Sep-23	4	0%
BWBS-1215	Pier A3-04a/b (2nos. column, 30d/column,1no. workfront)	60	26	29-Sep-22 A	15-Sep-23	29-Sep-22	19-Jul-23	255	56.67%
BWBS-1260	Pier A3-03l (1 no. column, 26d/column, portal, 2nos. workfront, 1 steel mould)-stage 2	26	26	03-Oct-23	02-Nov-23	03-Oct-23	02-Nov-23	0	0%
Construction of Bridge A3 Deck									
Construction of Pier table									
BWBD-1081	Falsework Erection for A3 cast in-situ decking (A3-04 to A3-03)	21	21	16-Sep-23	12-Oct-23	21-Aug-23	13-Sep-23	255	0%
BWBD-1081	Bearing installation at A3-04	14	14	16-Sep-23	04-Oct-23	21-Aug-23	05-Sep-23	255	0%
BWBD-1082	Falsework Erection for A3 cast in-situ decking (A3-05 to A3-04)	21	21	17-Aug-23	09-Sep-23	27-Jul-23	19-Aug-23	221	0%
BWBD-1082	Bearing installation at A3-05	14	14	17-Aug-23	01-Sep-23	27-Jul-23	11-Aug-23	221	0%
BWBD-1083	Falsework Erection for A3 cast in-situ decking (A3-06 to A3-05)	21	21	17-Jul-23	09-Aug-23	03-Jul-23	26-Jul-23	227	0%
BWBD-1083	Bearing installation at A3-06	14	14	17-Jul-23	01-Aug-23	03-Jul-23	18-Jul-23	248	0%
BWBD-1084	Design of FWK and Falsework Erection for A3 cast in-situ pier table & column (A3-01 & A3-03)	60	60	21-Aug-23	01-Nov-23	21-Jun-23	31-Aug-23	7	0%
BWBD-1084-1	Fabrication of FWK and Falsework Erection for A3 cast in-situ pier table (A3-01 & A3-03)	46	46	02-Nov-23	27-Dec-23	01-Sep-23	27-Oct-23	7	0%
BWBD-1087	Falsework Erection for A3 cast in-situ pier table (A3-02) include RMD platfc	60	3	20-Jun-23 A	30-Aug-23	20-Jun-23	30-Aug-23	1	95%
BWBD-1087a	Bridge A3 cast in-situ pier table (A3-02)	52	52	31-Aug-23	02-Nov-23	31-Aug-23	02-Nov-23	1	0%
Form Traveller and Segment Erection Works									
BWBD-1091b	Cast in Bridge Deck (From A3-05 to A3-06) 60days/span	60	60	02-Sep-23	14-Nov-23	12-Aug-23	24-Oct-23	221	0%
BWBD-2110	Bridge A3 by Form Traveler Stage 5 (at Pier A3-02), Team B	114	114	03-Nov-23	21-Mar-24	03-Nov-23	21-Mar-24	1	0%
BWBD-2150	Setup traveler	25	25	21-Sep-23	21-Oct-23	21-Sep-23	21-Oct-23	10	0%
BWBD-2150a	Procurement of 2nd Set Form Traveller (4 nos)	25	64	08-May-23 A	20-Sep-23	08-May-23	20-Sep-23	10	0%
Bridge G									
Construction of Bridge G Foundation (Team 3) CSD									
BWBF-1180	ELS for bored pile works at G-02 to G-06	87	69	15-Jun-23 A	26-Sep-23	15-Jun-23	26-Sep-23	4	20.69%
BWBF-1240	Pier G-02 (2 nos. pile, 15d/pile, 1 no. workfront)	30	30	03-Oct-23	07-Nov-23	03-Oct-23	07-Nov-23	1	0%
BWBF-1270	Pier G-01a/b (2 nos. pile, 15d/pile, 1no. workfront)	30	12	15-Jun-23 A	21-Jul-23	15-Jun-23	21-Jul-23	1	60%
ELS of Bridge G Foundation									
BWBE-4050	ELS for Pier G-01	30	30	22-Jul-23	25-Aug-23	22-Jul-23	25-Aug-23	126	0%
Pile cap of Bridge G Foundation									
BWBC-4000	Pile cap for G-01 (2nos. pile cap, 30d/cap, 1no. workfront)	60	60	26-Aug-23	07-Nov-23	26-Aug-23	07-Nov-23	126	0%
Footbridge F4									
Design and Fabrication (Steel Footbridge F4 and Lighting)									
BWBF-136-1	Approval of Design (AIP, DDA and Acabas)	77	77	08-Jul-23	07-Oct-23	08-Jul-23	07-Oct-23	12	0%



Remaining Work
Milestone
Baseline Milestone
Project Baseline
Critical Remaining Work
Crit Milestone
Actual Work
Actual Milestone

Project ID: RP06a(1)-MU06-2023

Three Months Rolling Programme (08 July 2023 to 31 October 2023)

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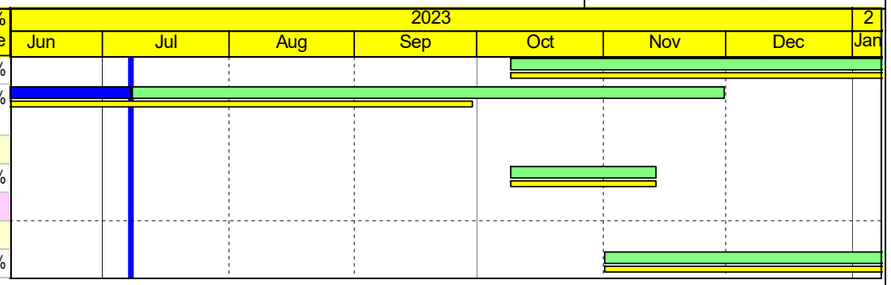
TASK filter: 3 Months Lookahead.

Baseline Programme RP06(1)

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

Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	Start	Finish	BL Start RP06(1)	BL Finish RP06(1)	Total Float	Activity % Complete
BWBF-136-2	Fabritation of steel element for Footbridge F4	165	165	09-Oct-23	30-Apr-24	09-Oct-23	30-Apr-24	151	0%
BWBF-136-3	Lighting design (Civil requirement, Pillar box arrangement, Electrical Design, lighting and earthing, Lux simulation)	24	122	08-May-23 A	30-Nov-23	08-May-23	29-Sep-23	157	0%
Construction of Footbridge F4 Foundation									
BWBF-1360a	ELS for Footbridge F4-01	30	30	09-Oct-23	13-Nov-23	09-Oct-23	13-Nov-23	12	0%
Construction of Bridge Furniture									
Other Bridge Deck Works									
BWF-108	Procurement of Installation of traffic detection system and TCSS items (KD	180	180	01-Nov-23	12-Jun-24	01-Nov-23	12-Jun-24	194	0%



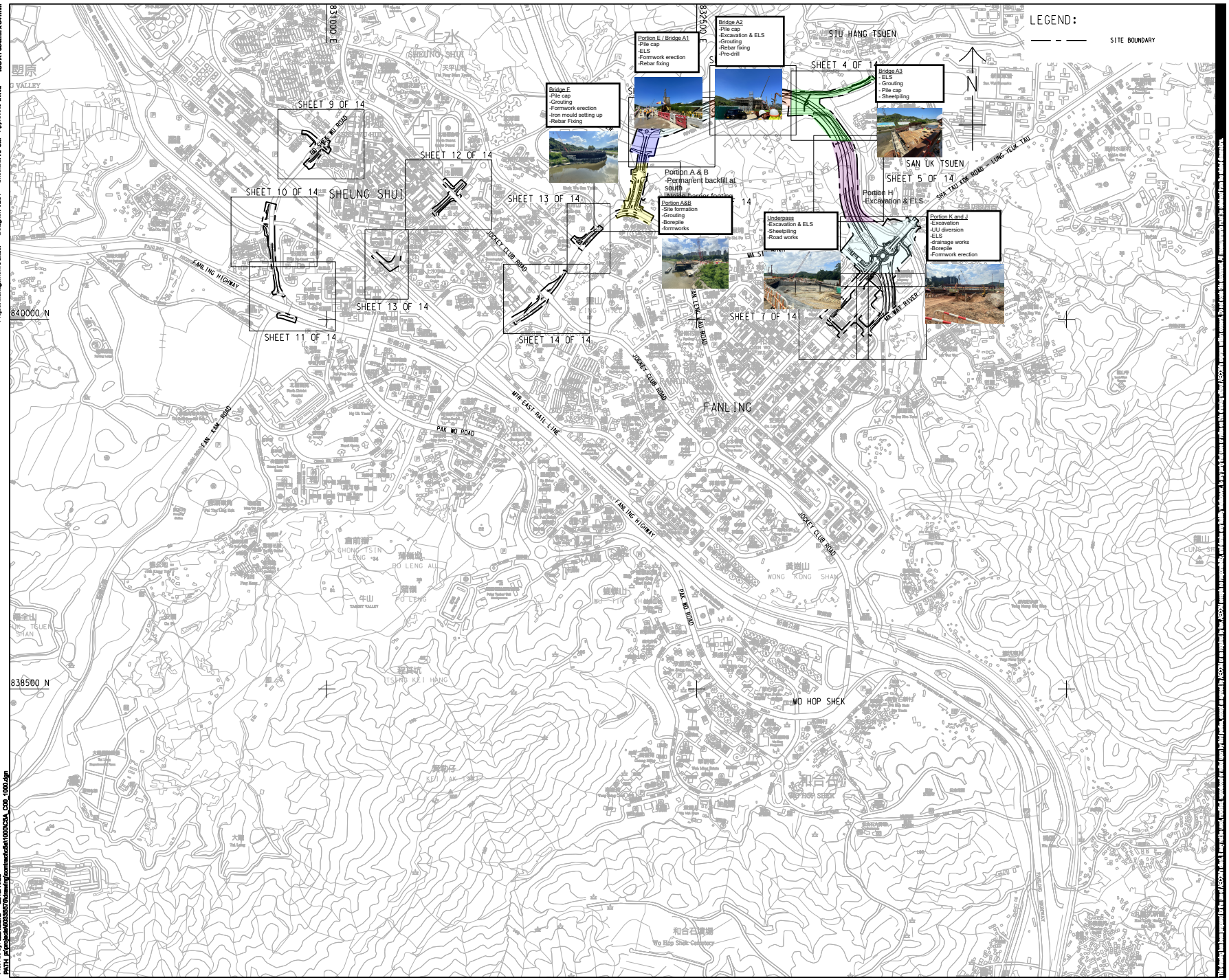
Remaining Work
Milestone
Baseline Milestone
Project Baseline
Critical Remaining Work
Crit Milestone
Actual Work
Actual Milestone

Project ID: RP06a(1)-MU06-2023

Three Months Rolling Programme (08 July 2023 to 31 October 2023)

Data Date: 08-Jul-23
Printed: 15-Jul-23 14:28
Layout: 3 MRP Layout
TASK filter: 3 Months Lookahead.

Baseline Programme RP06(1)			
Date	Revision	Ch...	Approved
08-Jul-23	Data Date		



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
CEDD Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	NOV-19	TENDER DRAWING	RPCM

STATUS

SCALE A1 1 : 7000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60335576

CONTRACT NO. ND/2019/04

SHEET TITLE

KEY PLAN AND LOCATION PLAN

SHEET NUMBER

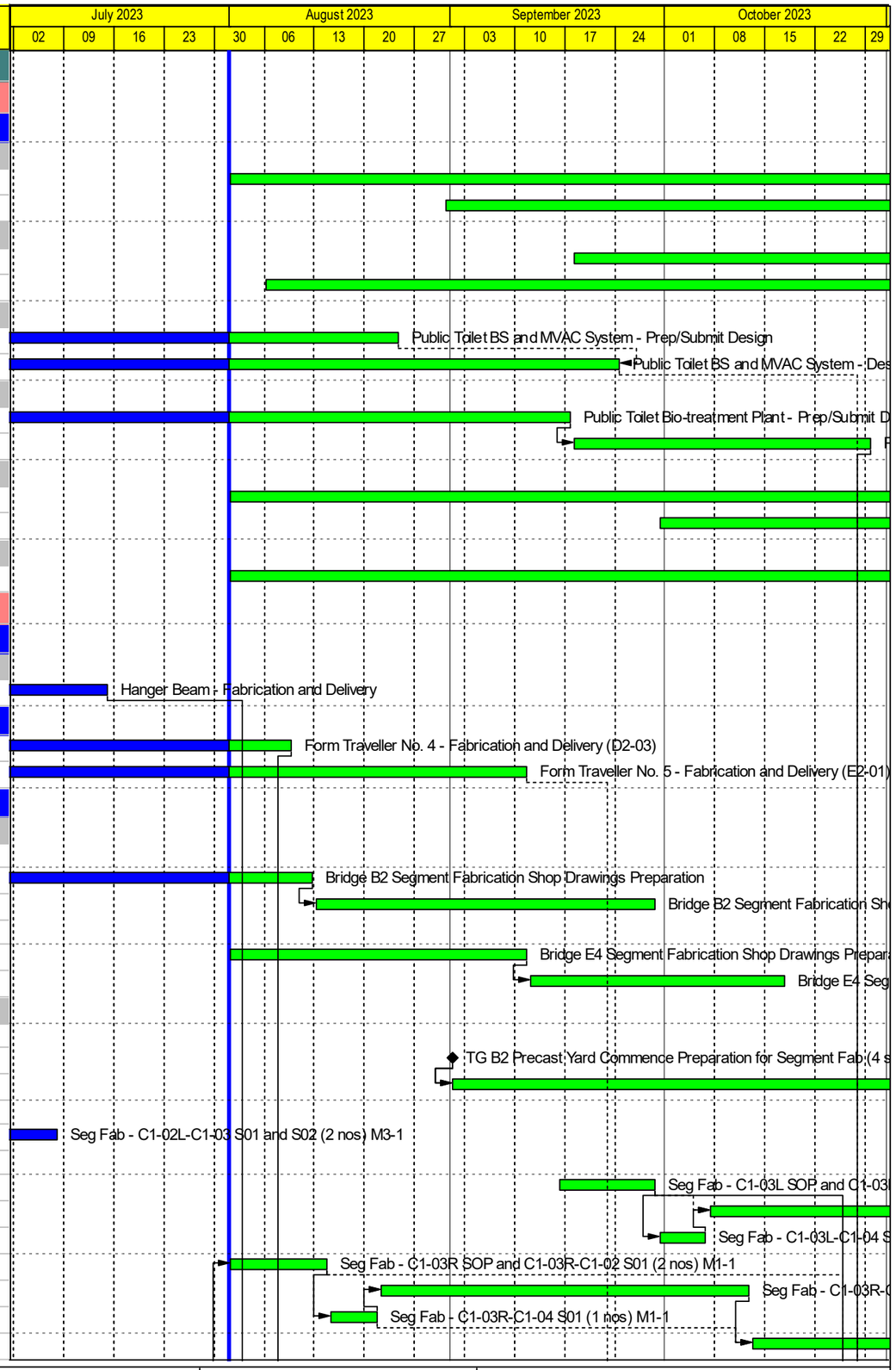
60335576/C5A/C00/1000

Project Management Initials: Designer: JLCT Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/11/23
PATH p:\projects\60335576\drawing\contract\c5a\1000\C5A_C00_1000.dgn

Construction Programme of ND/2019/05

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
Detail Programme Revision 16					
2.0 - Preliminary Works					
2.3 - Contractor's Design (PS 1,109)					
2.3.2 - (b) Irrigation system					
CDb-110	Irrigation System - Prep/Submit Design	130	01-Aug-23	08-Dec-23	527
CDb-130	Irrigation System - Design Approval	130	31-Aug-23	07-Jan-24	527
2.3.4 - (d) Lighting System					
CDd-135	Road Lighting System - Manufacturing and Delivery	90	18-Sep-23	16-Dec-23	1094
CDd-200	Bridge Deck Void Lighting System - Prep/Submit Design	180	06-Aug-23	01-Feb-24	369
2.3.6 - (f) BBI Public Toilet BS System					
CDf-110	Public Toilet BS and MVAC System - Prep/Submit Design	24	01-Mar-22 A	24-Aug-23	657
CDf-130	Public Toilet BS and MVAC System - Design Approval	55	01-May-22 A	24-Sep-23	656
2.3.7 - (g) BBI Public Toilet Bio-treatment Plant					
CDg-110	Public Toilet Bio-treatment Plant - Prep/Submit Design	48	01-Mar-22 A	17-Sep-23	585
CDg-130	Public Toilet Bio-treatment Plant - Design Approval	42	18-Sep-23	29-Oct-23	585
2.3.9 - (i) Traffic Detector System					
CDi-110	Traffic Detector System - Prep/Submit Design	150	01-Aug-23	28-Dec-23	312
CDi-130	Traffic Detector System - Design Approval	120	30-Sep-23	27-Jan-24	312
2.3.11 - (k) Deck Girdder Access Facilities					
CDk-100	Access Facilities - Procurement	150	01-Aug-23	28-Dec-23	278
4.0 - Bridge Construction					
4.1 - Precast Segment Erection					
4.1.2 - Hanger Beam					
E2-7520	Hanger Beam - Fabrication and Delivery	0	10-Jun-23 A	15-Jul-23 A	
4.2 - Form Traveller					
E2-7407	Form Traveller No. 4 - Fabrication and Delivery (D2-03)	8	03-Oct-22 A	09-Aug-23	10
E2-7409	Form Traveller No. 5 - Fabrication and Delivery (E2-01)	36	01-Mar-23 A	11-Sep-23	48
4.3 - Segment Fabrication					
4.3.1 - Shop Drawings					
- Bridge B2					
AD-500	Bridge B2 Segment Fabrication Shop Drawings Preparation	12	01-Jul-23 A	12-Aug-23	219
AD-502	Bridge B2 Segment Fabrication Shop Drawings PM Review	48	13-Aug-23	29-Sep-23	219
- Bridge E4					
AD-590	Bridge E4 Segment Fabrication Shop Drawings Preparation	42	01-Aug-23	11-Sep-23	428
AD-592	Bridge E4 Segment Fabrication Shop Drawings PM Review	36	12-Sep-23	17-Oct-23	428
4.3.2 - Off-Site Fabrication					
- Preparation Works					
OSF-190	TG B2 Precast Yard Commence Preparation for Segment Fab (4 sets)	0	01-Sep-23*		14
OSF-195	TG B2 Precast Yard Set-up and Establishment	136	01-Sep-23	16-Feb-24	14
- C1-02 T-span					
OSF-0265	Seg Fab - C1-02L-C1-03 S01 and S02 (2 nos) M3-1	0	27-Jun-23 A	08-Jul-23 A	
- C1-03 T-span					
OSF-0340	Seg Fab - C1-03L SOP and C1-03L-C1-02 S01 (2 nos) M1-2	12	16-Sep-23	29-Sep-23	39
OSF-0343	Seg Fab - C1-03L-C1-02 S02 to S10 (9 nos) M1-2	45	07-Oct-23	28-Nov-23	39
OSF-0345	Seg Fab - C1-03L-C1-04 S01 (1 nos) M1-2	6	30-Sep-23	06-Oct-23	39
OSF-0350	Seg Fab - C1-03R SOP and C1-03R-C1-02 S01 (2 nos) M1-1	12	01-Aug-23	14-Aug-23	79
OSF-0370	Seg Fab - C1-03R-C1-02 S02 to S10 (9 nos) M1-1	45	22-Aug-23	12-Oct-23	79
OSF-0373	Seg Fab - C1-03R-C1-04 S01 (1 nos) M1-1	6	15-Aug-23	21-Aug-23	79
OSF-0375	Seg Fab - C1-03R-C1-04 S02 to S10 (9 nos) M1-1	45	13-Oct-23	04-Dec-23	79



CRCC - Paul Y. Joint Venture

Actual Work
Remaining Work
Critical Remaining Work
Milestone

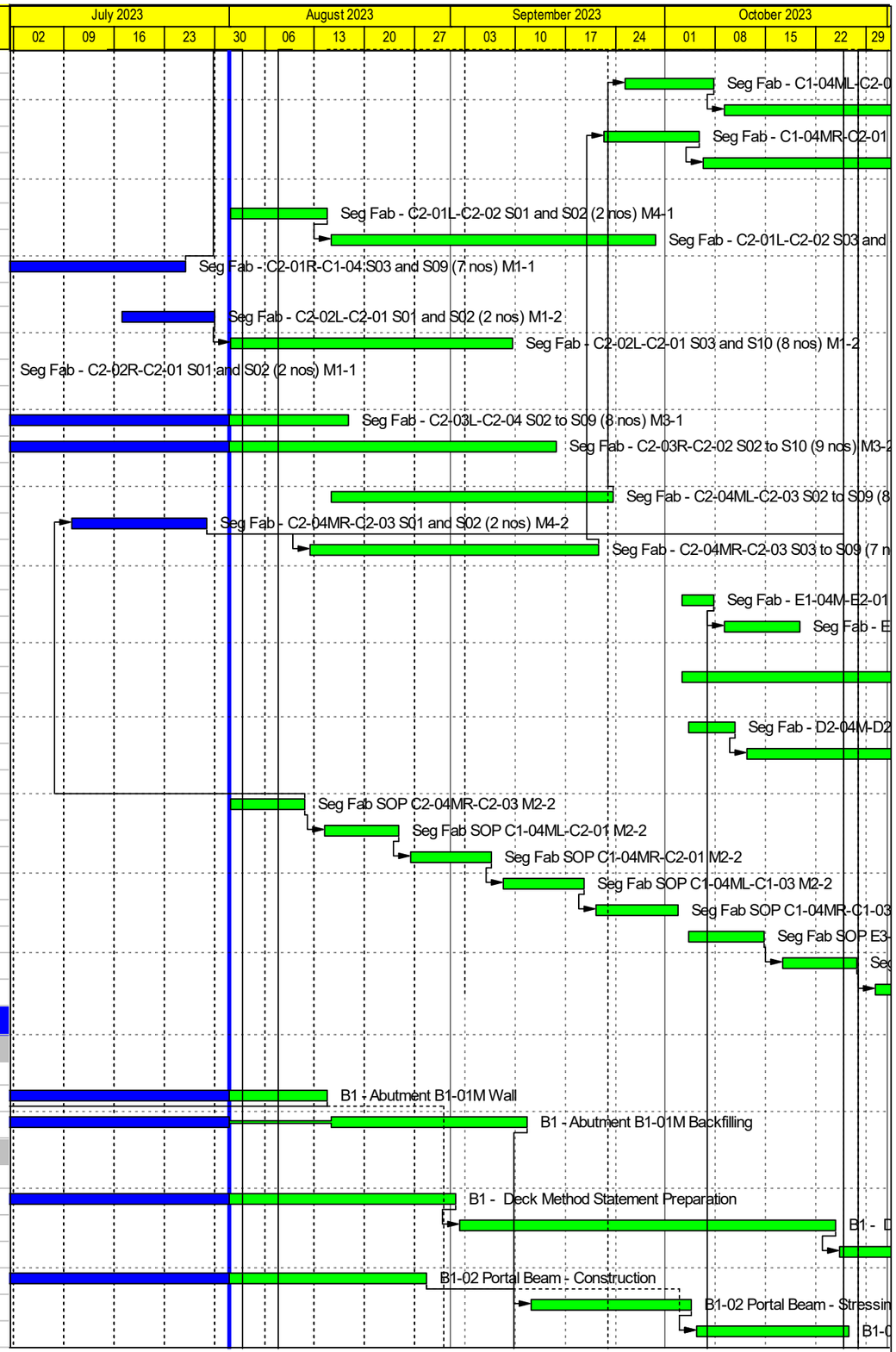
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme (AUG 2023)

Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 1 of 10

3MRP			
Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
- C1/C2 End-span					
OSF-0380	Seg Fab - C1-04ML-C2-01 S01 and S02 (2 nos) M2-1	12	25-Sep-23	07-Oct-23	59
OSF-0383	Seg Fab - C1-04Ml-C2-01 S03 to S10 (8 nos) M2-1	35	09-Oct-23	17-Nov-23	59
OSF-0390	Seg Fab - C1-04MR-C2-01 S01 and S02 (2 nos) M4-2	12	22-Sep-23	05-Oct-23	61
OSF-0410	Seg Fab - C1-04MR-C2-01 S03 to S10 (8 nos) M4-2	35	06-Oct-23	15-Nov-23	61
- C2-01 T-span					
OSF-0425	Seg Fab - C2-01L-C2-02 S01 and S02 (2 nos) M4-1	12	01-Aug-23	14-Aug-23	97
OSF-0427	Seg Fab - C2-01L-C2-02 S03 and S09 (7 nos) M4-1	40	15-Aug-23	29-Sep-23	97
OSF-0433	Seg Fab - C2-01R-C1-04 S03 and S09 (7 nos) M1-1	0	18-Jun-23 A	26-Jul-23 A	
- C2-02 T-span					
OSF-0460	Seg Fab - C2-02L-C2-01 S01 and S02 (2 nos) M1-2	0	17-Jul-23 A	30-Jul-23 A	
OSF-0463	Seg Fab - C2-02L-C2-01 S03 and S10 (8 nos) M1-2	35	01-Aug-23	09-Sep-23	104
OSF-0470	Seg Fab - C2-02R-C2-01 S01 and S02 (2 nos) M1-1	0	01-Jun-23 A	01-Jul-23 A	
- C2-03 T-span					
OSF-0547	Seg Fab - C2-03L-C2-04 S02 to S09 (8 nos) M3-1	15	19-May-23 A	17-Aug-23	78
OSF-0570	Seg Fab - C2-03R-C2-02 S02 to S10 (9 nos) M3-2	40	29-May-23 A	15-Sep-23	8
- C2/C3 End-span					
OSF-0503	Seg Fab - C2-04ML-C2-03 S02 to S09 (8 nos) M2-1	35	15-Aug-23	23-Sep-23	59
OSF-0510	Seg Fab - C2-04MR-C2-03 S01 and S02 (2 nos) M4-2	0	10-Jul-23 A	29-Jul-23 A	
OSF-0530	Seg Fab - C2-04MR-C2-03 S03 to S09 (7 nos) M4-2	35	12-Aug-23	21-Sep-23	61
- E2/E1 End-span					
OSF-1045	Seg Fab - E1-04M-E2-01 S02 M4-1	5	03-Oct-23	07-Oct-23	251
OSF-1050	Seg Fab - E1-04M-E2-01 S03 to S04 (2 nos) M4-1	10	09-Oct-23	19-Oct-23	251
- D2/D1 End-span					
OSF-1270	Seg Fab - D1-04M-D2-01 S03 to S10 (8 nos) M4-1	40	03-Oct-23	17-Nov-23	255
- D2-04M End-span					
OSF-1280	Seg Fab - D2-04M-D2-03 S01 (1 nos) M3-1	6	04-Oct-23	10-Oct-23	345
OSF-1290	Seg Fab - D2-04M-D2-03 S02 to S06 (5 nos) M3-1	25	12-Oct-23	09-Nov-23	353
- Segment on Pier (SOP)					
OSF-1370	Seg Fab SOP C2-04MR-C2-03 M2-2	10	01-Aug-23	11-Aug-23	44
OSF-1380	Seg Fab SOP C1-04ML-C2-01 M2-2	10	14-Aug-23	24-Aug-23	251
OSF-1390	Seg Fab SOP C1-04MR-C2-01 M2-2	10	26-Aug-23	06-Sep-23	251
OSF-1400	Seg Fab SOP C1-04ML-C1-03 M2-2	10	08-Sep-23	19-Sep-23	251
OSF-1410	Seg Fab SOP C1-04MR-C1-03 M2-2	10	21-Sep-23	02-Oct-23	251
OSF-1460	Seg Fab SOP E3-05M-E3-04 M2-2	10	04-Oct-23	14-Oct-23	283
OSF-1470	Seg Fab SOP E3-05M-E4-01 M2-2	10	17-Oct-23	27-Oct-23	292
OSF-1480	Seg Fab SOP E4-03M-E4-02 M2-2	10	30-Oct-23	09-Nov-23	399
4.4 - Bridge B1					
4.4.1 - Substructure Portion I and 1A					
- Pier					
B1-0014	B1 - Abutment B1-01M Wall	12	01-Mar-23 A	14-Aug-23	143
B1-0014a	B1 - Abutment B1-01M Backfilling	24	05-May-23 A	11-Sep-23	195
4.4.4 - Bridge Deck					
- Portal Beam					
B1-0055	B1 - Deck Method Statement Preparation	28	01-Feb-23 A	01-Sep-23	243
B1-0056	B1 - Deck Method Statement ICE	42	02-Sep-23	24-Oct-23	243
B1-0057	B1 - Deck Method Statement PM Review	42	25-Oct-23	12-Dec-23	243
B1-0061	B1-02 Portal Beam - Construction	24	02-May-23 A	28-Aug-23	283
B1-0062	B1-02 Portal Beam - Stressing	18	12-Sep-23	04-Oct-23	283
B1-0063	B1-02 Portal Beam - Remove Temp Work	18	05-Oct-23	26-Oct-23	283



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Actual Work
Remaining Work
Critical Remaining Work
Milestone

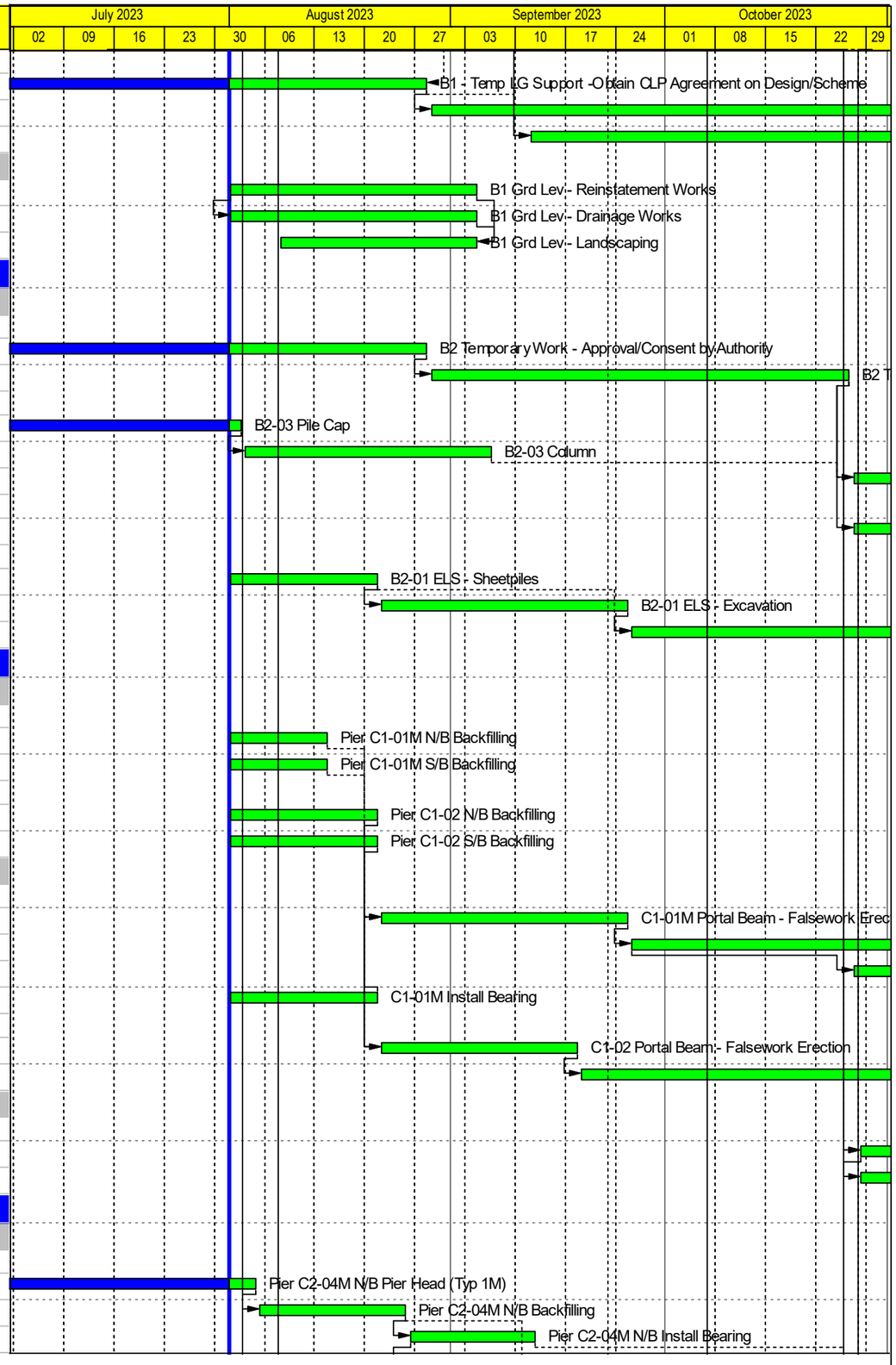
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme (AUG 2023)

Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 2 of 10

3MRP			
Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
	- Precast Beam				
B1-0101	B1 - Temp LG Support -Obtain CLP Agreement on Design/Scheme	24	01-Jul-23 A	28-Aug-23	131
B1-0102	B1 - Temp LG Support - Offsite Fabrication/Delivery	120	29-Aug-23	22-Jan-24	211
B1-0103	B1 - Temp LG Support - Construct Foundation	124	12-Sep-23	09-Feb-24	195
	4.4.6 - Bridge B1 Ground Level Works				
B1-7000	B1 Grd Lev - Reinstatement Works	30	01-Aug-23	04-Sep-23	550
B1-7050	B1 Grd Lev - Drainage Works	30	01-Aug-23	04-Sep-23	550
B1-7200	B1 Grd Lev - Landscaping	24	08-Aug-23	04-Sep-23	550
	4.5 - Bridge B2				
	4.5.1 - Substructure				
	- Preparation Works				
B2-0015	B2 Temporary Work - Approval/Consent by Authority	24	25-Oct-22 A	28-Aug-23	88
B2-0020	B2 Temporary Work - Procurement/Fabrication	48	29-Aug-23	26-Oct-23	88
	- Pier B2-03				
B2-0210	B2-03 Pile Cap	2	03-Jun-23 A	02-Aug-23	122
B2-0220	B2-03 Column	30	03-Aug-23	06-Sep-23	122
B2-0232	B2-03 Cross Head Falseworks	30	27-Oct-23	30-Nov-23	88
	- Pier B2-02				
B2-0272	B2-02 Cross Head Falseworks	30	27-Oct-23	30-Nov-23	125
	- Pier B2-01				
B2-0280	B2-01 ELS - Sheetpiles	18	01-Aug-23	21-Aug-23	130
B2-0285	B2-01 ELS - Excavation	30	22-Aug-23	25-Sep-23	130
B2-0290	B2-01 Pile Cap	30	26-Sep-23	02-Nov-23	130
	4.6 - Bridge C1				
	4.6.2 - Pier				
	- C1-01M				
C1-1175	Pier C1-01M N/B Backfilling	12	01-Aug-23	14-Aug-23	117
C1-1335	Pier C1-01M S/B Backfilling	12	01-Aug-23	14-Aug-23	117
	- C1-02				
C1-1155	Pier C1-02 N/B Backfilling	18	01-Aug-23	21-Aug-23	107
C1-1315	Pier C1-02 S/B Backfilling	18	01-Aug-23	21-Aug-23	107
	4.6.3 - Portal Beam				
	- C1-01M				
C1-3011	C1-01M Portal Beam - Falsework Erection	30	22-Aug-23	25-Sep-23	111
C1-3012	C1-01M Portal Beam - C1 Beam	60	26-Sep-23	07-Dec-23	111
C1-3015	C1-01M Portal Beam - B2 Beam	60	27-Oct-23	08-Jan-24	111
C1-3020	C1-01M Install Bearing	18	01-Aug-23	21-Aug-23	111
	- C1-02				
C1-3111	C1-02 Portal Beam - Falsework Erection	24	22-Aug-23	18-Sep-23	107
C1-3114	C1-02 Portal Beam - Construction	72	19-Sep-23	14-Dec-23	107
	4.6.4 - Bridge Deck				
	- T-span C1-03				
C1-2305	C1-03 N/B Segment on Pier by crane	36	28-Oct-23	08-Dec-23	77
C1-2310	C1-03 S/B Segment on Pier by crane	36	28-Oct-23	08-Dec-23	77
	4.7 - Bridge C2				
	4.7.2 - Pier				
	- C2-04				
C2-1492	Pier C2-04M N/B Pier Head (Typ 1M)	4	19-Jun-23 A	04-Aug-23	8
C2-1495	Pier C2-04M N/B Backfilling	18	05-Aug-23	25-Aug-23	8
C2-1498	Pier C2-04M N/B Install Bearing	15	26-Aug-23	12-Sep-23	8



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Actual Work
Remaining Work
Critical Remaining Work
Milestone

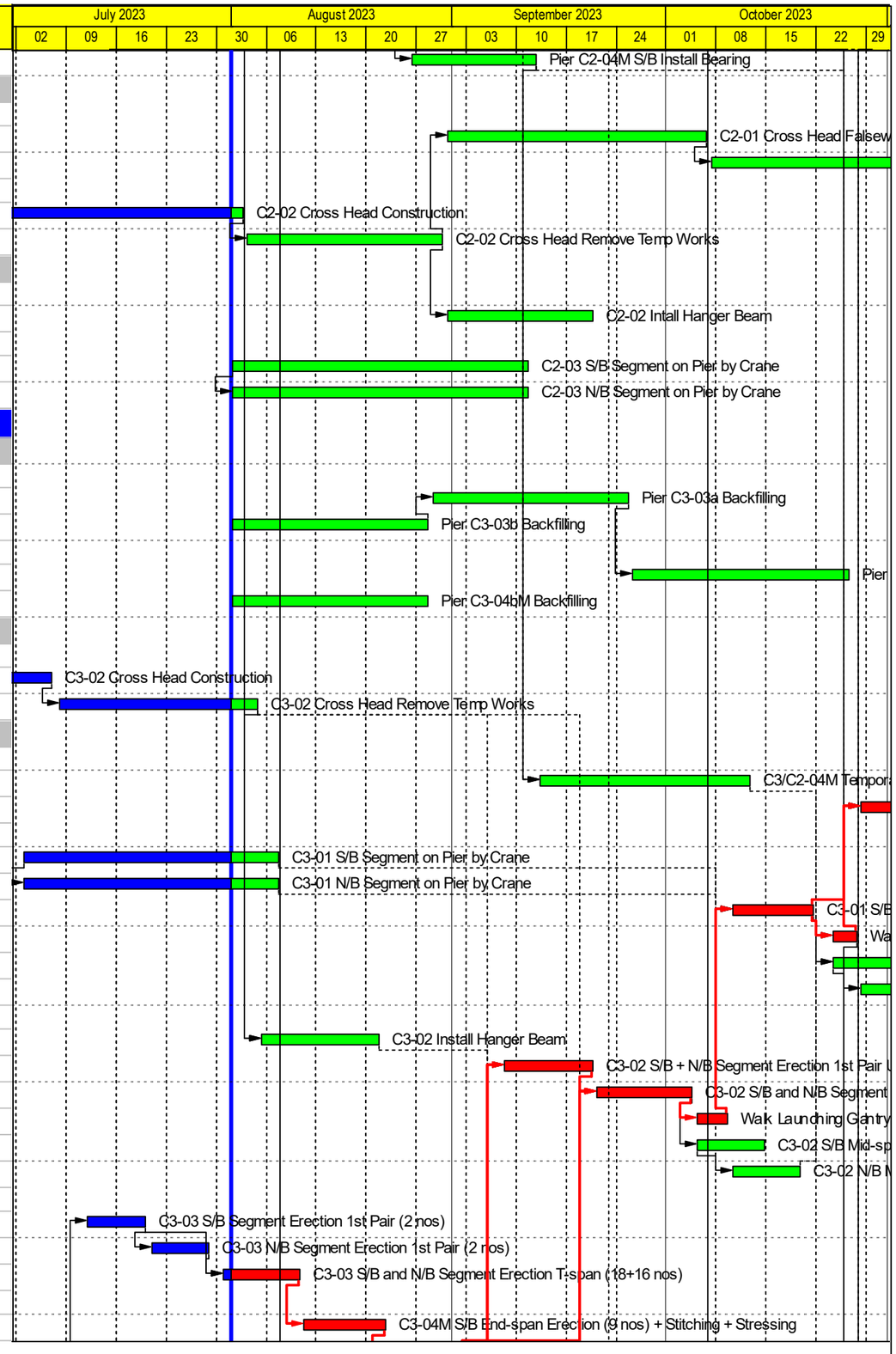
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme (AUG 2023)

Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 3 of 10

3MRP			
Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
C2-1518	Pier C2-04M S/B Install Bearing	15	26-Aug-23	12-Sep-23	8
4.7.3 - Cross Head					
- C2-01					
C2-1752	C2-01 Cross Head Falseworks	30	31-Aug-23	06-Oct-23	6
C2-1755	C2-01 Cross Head Construction	60	07-Oct-23	16-Dec-23	6
- C2-02					
C2-1805	C2-02 Cross Head Construction	2	27-Mar-23 A	02-Aug-23	6
C2-1808	C2-02 Cross Head Remove Temp Works	24	03-Aug-23	30-Aug-23	6
4.7.4 - Bridge Deck					
- T-span C2-02					
C2-2219	C2-02 Intall Hanger Beam	18	31-Aug-23	20-Sep-23	106
- T-span C2-03					
C2-2300	C2-03 S/B Segment on Pier by Crane	36	01-Aug-23	11-Sep-23	78
C2-2310	C2-03 N/B Segment on Pier by Crane	36	01-Aug-23	11-Sep-23	78
4.8 - Bridge C3					
4.8.3 - Pier					
- C3-03					
C3-1425	Pier C3-03a Backfilling	24	29-Aug-23	25-Sep-23	430
C3-1475	Pier C3-03b Backfilling	24	01-Aug-23	28-Aug-23	430
- C3-04M					
C3-1525	Pier C3-04aM Backfilling	24	26-Sep-23	26-Oct-23	430
C3-1575	Pier C3-04bM Backfilling	24	01-Aug-23	28-Aug-23	478
4.8.4 - Portal Beam and Cross Head					
- C3-02					
C3-1815	C3-02 Cross Head Construction	0	18-Apr-23 A	07-Jul-23 A	
C3-1818	C3-02 Cross Head Remove Temp Works	4	08-Jul-23 A	04-Aug-23	15
4.8.5 - Bridge Deck					
- End-span C3/C2-04M					
C3-2005	C3/C2-04M Temporary Support for LG / End-span falsework	24	13-Sep-23	12-Oct-23	8
C3-2010	C3/C2-04M S/B + N/B SOP (4 nos)	17	28-Oct-23	16-Nov-23	0
- T-span C3-01					
C3-2110	C3-01 S/B Segment on Pier by Crane	6	03-Jul-23 A	07-Aug-23	52
C3-2115	C3-01 N/B Segment on Pier by Crane	6	03-Jul-23 A	07-Aug-23	52
C3-2130	C3-01 S/B and N/B Segment Erection T-span (19+19 nos)	11	10-Oct-23	21-Oct-23	0
C3-2135	Walk Launching Gantry to C2-04M	4	24-Oct-23	27-Oct-23	0
C3-2140	C3-01 S/B Mid-span Stitch and Stressing	9	24-Oct-23	02-Nov-23	12
C3-2142	C3-01 N/B Mid-span Stitch and Stressing	9	28-Oct-23	07-Nov-23	18
- T-span C3-02					
C3-2214	C3-02 Install Hanger Beam	14	05-Aug-23	21-Aug-23	15
C3-2215	C3-02 S/B + N/B Segment Erection 1st Pair Using Hanger Beam	11	08-Sep-23	20-Sep-23	0
C3-2220	C3-02 S/B and N/B Segment Erection T-span (16+18 nos)	10	21-Sep-23	04-Oct-23	0
C3-2222	Walk Launching Gantry to C3-01	4	05-Oct-23	09-Oct-23	0
C3-2225	C3-02 S/B Mid-span Stitch and Stressing	9	05-Oct-23	14-Oct-23	14
C3-2227	C3-02 N/B Mid-span Stitch and Stressing	9	10-Oct-23	19-Oct-23	14
- T-span C3-03					
C3-2310	C3-03 S/B Segment Erection 1st Pair (2 nos)	0	12-Jul-23 A	20-Jul-23 A	
C3-2315	C3-03 N/B Segment Erection 1st Pair (2 nos)	0	21-Jul-23 A	29-Jul-23 A	
C3-2320	C3-03 S/B and N/B Segment Erection T-span (18+16 nos)	9	31-Jul-23 A	10-Aug-23	0
- End-span C3-04					
C3-2420	C3-04M S/B End-span Erection (9 nos) + Stitching + Stressing	10	11-Aug-23	22-Aug-23	0



CRCC - Paul Y. Joint Venture

Actual Work
Remaining Work
Critical Remaining Work
Milestone

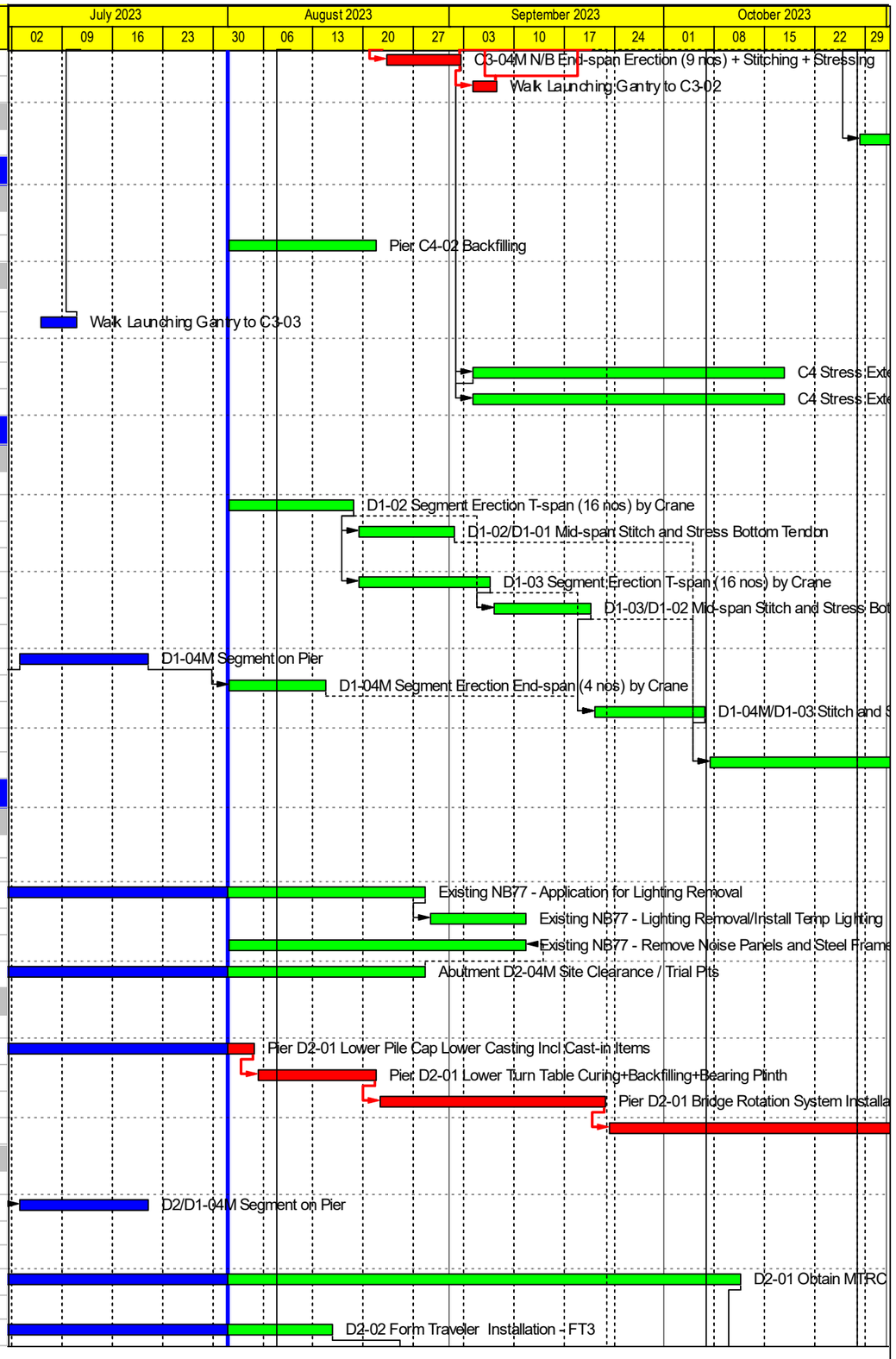
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme (AUG 2023)

Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 4 of 10

3MRP			
Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
C3-2460	C3-04M N/B End-span Erection (9 nos) + Stitching + Stressing	10	23-Aug-23	02-Sep-23	0
C3-2465	Walk Launching Gantry to C3-02	4	04-Sep-23	07-Sep-23	0
4.8.7 - Bridge C3 Ground Level Works					
C3-7340	C3 Grd Lev - Temp Ramp/Haul Road Construction	30	28-Oct-23	01-Dec-23	326
4.9 - Bridge C4					
4.9.3 - Pier					
- C4-02					
C4-1375	Pier C4-02 Backfilling	18	01-Aug-23	21-Aug-23	532
4.9.5 - Bridge Deck					
- End-span C4/C3-04M					
C4-2065	Walk Launching Gantry to C3-03	0	06-Jul-23 A	11-Jul-23 A	
- Stitch and Stress					
C4-2650	C4 Stress External Tendon E S/B	36	04-Sep-23	17-Oct-23	433
C4-2750	C4 Stress External Tendon E N/B	36	04-Sep-23	17-Oct-23	433
4.10 - Bridge D1					
4.10.4 - Bridge Deck					
- T-span D1-02					
D1-2270	D1-02 Segment Erection T-span (16 nos) by Crane	16	01-Aug-23	18-Aug-23	362
D1-2275	D1-02/D1-01 Mid-span Stitch and Stress Bottom Tendon	12	19-Aug-23	01-Sep-23	366
- T-span D1-03					
D1-2370	D1-03 Segment Erection T-span (16 nos) by Crane	16	19-Aug-23	06-Sep-23	362
D1-2375	D1-03/D1-02 Mid-span Stitch and Stress Bottom Tendon	12	07-Sep-23	20-Sep-23	362
- End-span D1-04M					
D1-2460	D1-04M Segment on Pier	0	03-Jul-23 A	21-Jul-23 A	
D1-2470	D1-04M Segment Erection End-span (4 nos) by Crane	12	01-Aug-23	14-Aug-23	394
D1-2475	D1-04M/D1-03 Stitch and Stress Bottom Tendon	12	21-Sep-23	06-Oct-23	362
- Stitch and Stress					
D1-2750	D1 Stress External Tendon E	24	07-Oct-23	04-Nov-23	362
4.11 - Bridge D2					
4.11.1 - Foundation					
- Portion XI					
- Pier D2-04M					
D2-1016	Existing NB77 - Application for Lighting Removal	24	01-Feb-23 A	28-Aug-23	126
D2-1018	Existing NB77 - Lighting Removal/Install Temp Lighting	12	29-Aug-23	11-Sep-23	126
D2-1020	Existing NB77 - Remove Noise Panels and Steel Frames	36	01-Aug-23	11-Sep-23	126
D2-1255	Abutment D2-04M Site Clearance / Trial Pits	24	01-Feb-23 A	28-Aug-23	138
4.11.2 - Pier					
- D2-01					
D2-1515	Pier D2-01 Lower Pile Cap Lower Casting Incl Cast-in Items	4	26-Jun-23 A	04-Aug-23	0
D2-1516	Pier D2-01 Lower Turn Table Curing+Backfilling+Bearing Plinth	14	05-Aug-23	21-Aug-23	0
D2-1517	Pier D2-01 Bridge Rotation System Installation	28	22-Aug-23	22-Sep-23	0
D2-1520	Pier D2-01 Upper Pile Cap Casting Incl Cast-in Items	42	23-Sep-23	14-Nov-23	0
4.11.3 - Bridge Deck					
- End-span D2/D1-04M					
D2-2050	D2/D1-04M Segment on Pier	0	03-Jul-23 A	21-Jul-23 A	
- D2-01					
- Prep Work					
D2-2159	D2-01 Obtain MTRC Consent for Deck Construction	60	15-May-23 A	11-Oct-23	94
- D2-02					
D2-7565	D2-02 Form Traveler Installation - FT3	13	19-May-23 A	15-Aug-23	33



CRCC - Paul Y. Joint Venture

Actual Work
Remaining Work
Critical Remaining Work
Milestone

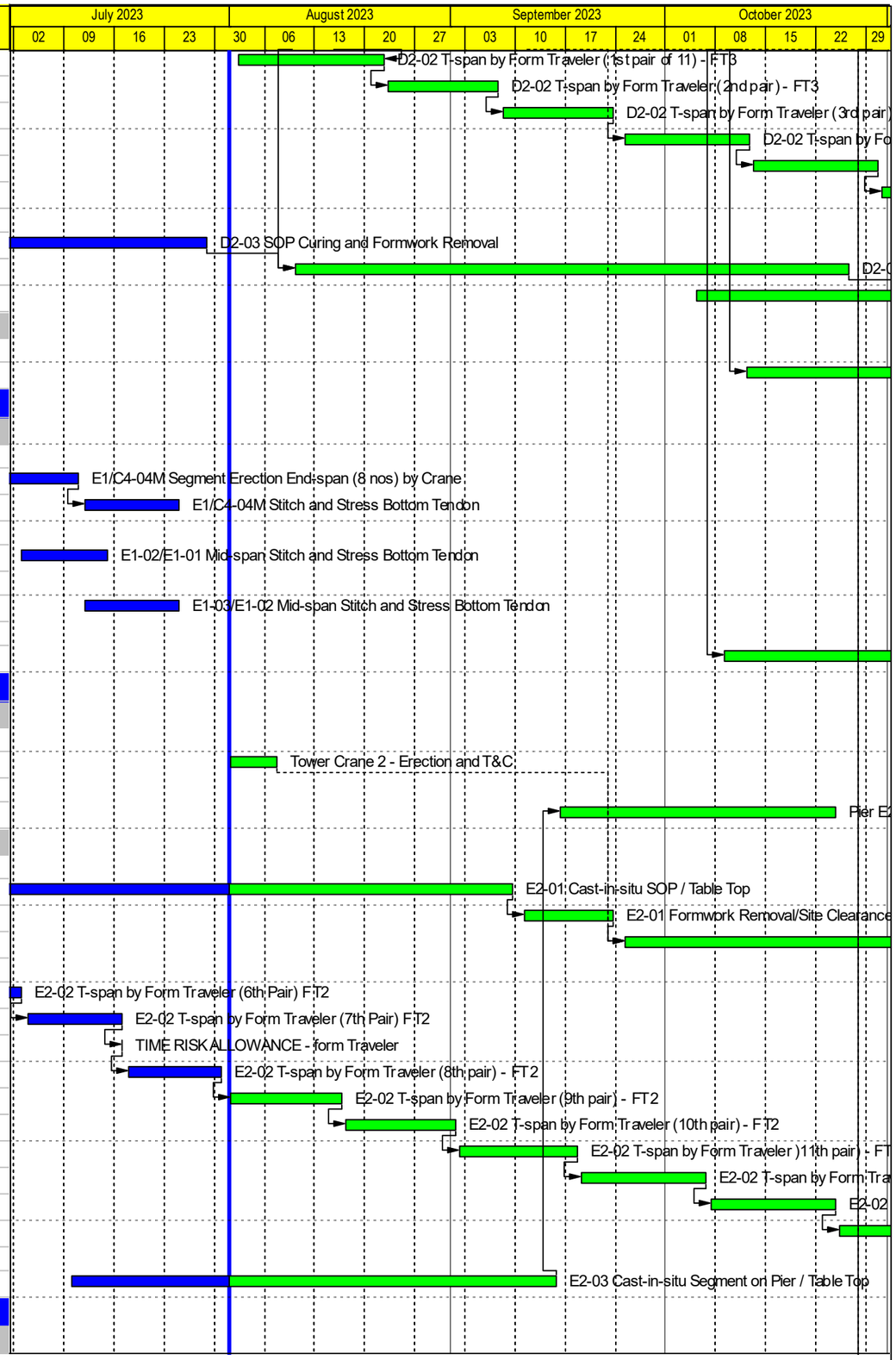
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme (AUG 2023)

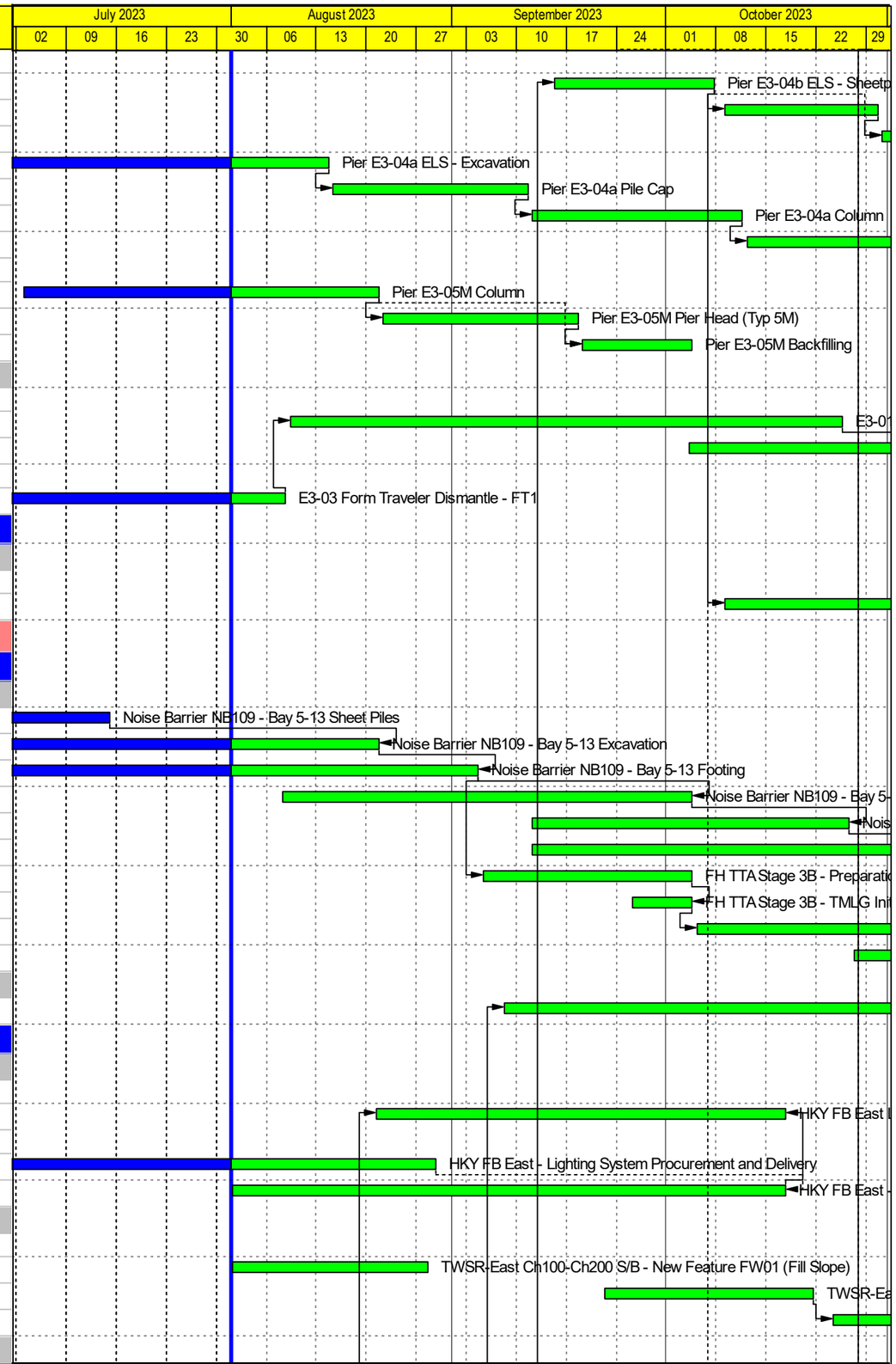
Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 5 of 10

3MRP			
Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
D2-7568	D2-02 T-span by Form Traveler (1st pair of 11) - FT3	18	02-Aug-23	22-Aug-23	33
D2-7575a	D2-02 T-span by Form Traveler (2nd pair) - FT3	14	23-Aug-23	07-Sep-23	33
D2-7575b	D2-02 T-span by Form Traveler (3rd pair) - FT3	14	08-Sep-23	23-Sep-23	33
D2-7575c	D2-02 T-span by Form Traveler (4th pair) - FT3	14	25-Sep-23	12-Oct-23	33
D2-7575d	D2-02 T-span by Form Traveler (5th pair) - FT3	14	13-Oct-23	30-Oct-23	33
D2-7575e	D2-02 T-span by Form Traveler (6th pair) - FT3	14	31-Oct-23	15-Nov-23	33
- D2-03					
D2-2361a	D2-03 SOP Curing and Formwork Removal	0	23-Jun-23 A	29-Jul-23 A	
D2-2362	D2-03 Form Traveler Installation - FT4	64	10-Aug-23	26-Oct-23	10
D2-2362a	D2-03 T-span by Form Traveler (1st pair of 11) - FT4	24	05-Oct-23	02-Nov-23	10
4.11.4 - Road Works and Furniture					
- Parapet					
D2-3050	D2 Obtain MTRC Consent for Parepet Construction	90	12-Oct-23	29-Jan-24	474
4.12 - Bridge E1					
4.12.4 - Bridge Deck					
- End-span D1/C4-04M					
E1-2060	E1/C4-04M Segment Erection End-span (8 nos) by Crane	0	12-Jun-23 A	11-Jul-23 A	
E1-7260	E1/C4-04M Stitch and Stress Bottom Tendon	0	12-Jul-23 A	25-Jul-23 A	
- T-span E1-01					
E1-2275	E1-02/E1-01 Mid-span Stitch and Stress Bottom Tendon	0	03-Jul-23 A	15-Jul-23 A	
- T-span E1-02					
E1-2375	E1-03/E1-02 Mid-span Stitch and Stress Bottom Tendon	0	12-Jul-23 A	25-Jul-23 A	
- T-span E1-04M					
E1-2380	E1-04M Segment on Pier	36	09-Oct-23	20-Nov-23	285
4.13 - Bridge E2					
4.13.2 - Pier					
- E2-01					
E2-1538	Tower Crane 2 - Erection and T&C	6	01-Aug-23	07-Aug-23	78
- E2-03					
E2-6035	Pier E2-03 Backfilling	30	16-Sep-23	24-Oct-23	150
4.13.3 - Bridge Deck					
- T-span E2-01					
E2-2162	E2-01 Cast-in-situ SOP / Table Top	35	26-Jun-23 A	09-Sep-23	37
E2-2170	E2-01 Formwork Removal/Site Clearance	12	11-Sep-23	23-Sep-23	37
E2-7450	E2-01 Form Traveler Installation - FT5	64	25-Sep-23	11-Dec-23	37
- T-span E2-02					
E2-7432a	E2-02 T-span by Form Traveler (6th Pair) FT2	0	16-Jun-23 A	03-Jul-23 A	
E2-7432b	E2-02 T-span by Form Traveler (7th Pair) FT2	0	04-Jul-23 A	17-Jul-23 A	
E2-7435	TIME RISK ALLOWANCE - form Traveler	0	17-Jul-23 A	17-Jul-23 A	
E2-7440	E2-02 T-span by Form Traveler (8th pair) - FT2	0	18-Jul-23 A	31-Jul-23 A	
E2-7440a	E2-02 T-span by Form Traveler (9th pair) - FT2	14	01-Aug-23	16-Aug-23	114
E2-7440b	E2-02 T-span by Form Traveler (10th pair) - FT2	14	17-Aug-23	01-Sep-23	114
E2-7440c	E2-02 T-span by Form Traveler)11th pair) - FT2	14	02-Sep-23	18-Sep-23	114
E2-7440d	E2-02 T-span by Form Traveler (12th pair) - FT2	14	19-Sep-23	06-Oct-23	114
E2-7440e	E2-02 T-span by Form Traveler (13th pair) - FT2	14	07-Oct-23	24-Oct-23	114
E2-7440f	E2-02 T-span by Form Traveler (14th pair) - FT2	18	25-Oct-23	14-Nov-23	114
- T-span E2-03					
E2-2460	E2-03 Cast-in-situ Segment on Pier / Table Top	40	10-Jul-23 A	15-Sep-23	150
4.14 - Bridge E3					
4.14.2 - Pier					



Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
- E3-04					
E3-5570	Pier E3-04b ELS - Sheetpiling	18	15-Sep-23	07-Oct-23	24
E3-5572	Pier E3-04b ELS - Excavation	18	09-Oct-23	30-Oct-23	24
E3-5575	Pier E3-04b Pile Cap	18	31-Oct-23	20-Nov-23	24
E3-7465	Pier E3-04a ELS - Excavation	12	12-Jun-23 A	14-Aug-23	107
E3-7470	Pier E3-04a Pile Cap	24	15-Aug-23	11-Sep-23	107
E3-7480	Pier E3-04a Column	24	12-Sep-23	11-Oct-23	107
E3-7490	Pier E3-04a Backfilling	18	12-Oct-23	02-Nov-23	107
- E3-05M					
E3-5610	Pier E3-05M Column	18	03-Jul-23 A	21-Aug-23	400
E3-5612	Pier E3-05M Pier Head (Typ 5M)	24	22-Aug-23	18-Sep-23	400
E3-5615	Pier E3-05M Backfilling	12	19-Sep-23	04-Oct-23	400
4.14.4 - Bridge Deck					
- T-span E3-01M-1					
E3-2152	E3-01M Form Traveller Installation (FT1)	64	09-Aug-23	25-Oct-23	31
E3-2153	E3-01M E-span False Balance Cantilever by FT1 (2nd pair)	24	04-Oct-23	01-Nov-23	31
- T-span E3-03					
E3-2358	E3-03 Form Traveler Dismantle - FT1	7	23-Jun-23 A	08-Aug-23	31
4.15 - Bridge E4					
4.15.2 - Pier					
- E4-01					
E4-1310	Pier E4-01 ELS - Sheetpiling	24	09-Oct-23	06-Nov-23	117
5.0 - Fanling Highway Associated Works					
5.2 - Fanling Highway Noise Barrier					
5.2.3 - Noise Barrier NB109					
FHY-1512	Noise Barrier NB109 - Bay 5-13 Sheet Piles	0	09-Jan-23 A	15-Jul-23 A	
FHY-1513	Noise Barrier NB109 - Bay 5-13 Excavation	18	06-Feb-23 A	21-Aug-23	68
FHY-1515	Noise Barrier NB109 - Bay 5-13 Footing	30	24-Apr-23 A	04-Sep-23	68
FHY-1517	Noise Barrier NB109 - Bay 5-13 Stem Wall	48	08-Aug-23	04-Oct-23	72
FHY-1519	Noise Barrier NB109 - Bay 5-13 Backfilling and Reinstatement	36	12-Sep-23	26-Oct-23	72
FHY-1520	Noise Barrier NB109 - Bay 5-13 Road Works	48	12-Sep-23	09-Nov-23	72
FHY-1521a	FH TTA Stage 3B - Preparation / 1st Submission	24	05-Sep-23	04-Oct-23	68
FHY-1521b	FH TTA Stage 3B - TMLG Initial Comment	6	26-Sep-23	04-Oct-23	68
FHY-1521c	FH TTA Stage 3B - 2nd Submission	24	05-Oct-23	02-Nov-23	68
FHY-1521d	FH TTA Stage 3B - TMLG Final Comment	6	27-Oct-23	02-Nov-23	68
5.2.5 - Fanling Bypass N/B Slip Road					
TSW-4200	Noise Barrier NB29 U-shaped (bays 7 to 15) - Site Clearance	48	08-Sep-23	06-Nov-23	183
5.3 - Tai Wo Service Road East (TWSR-East)					
5.3.1 - TWSR-East HKY FB Extension					
- Lift and Stairs Structure					
FBE-1235	HKY FB East LT1 Lift Shaft - Steel Works	48	21-Aug-23	17-Oct-23	514
- HKY FB Extension Deck					
FBE-1352	HKY FB East - Lighting System Procurement and Delivery	25	01-Aug-22 A	29-Aug-23	530
FBE-1355	HKY FB East - ABWF and BS Works	65	01-Aug-23	17-Oct-23	514
5.3.2 - TWSR East (1) Adjacent to Cycle Track					
- Ch100 to Ch200					
TSE-2405	TWSR-East Ch100-Ch200 S/B - New Feature FW01 (Fill Slope)	24	01-Aug-23	28-Aug-23	567
TSE-2421	TWSR-East Ch100-Ch200 S/B - Road Lighting including Cabling	24	22-Sep-23	21-Oct-23	567
TSE-2425	TWSR-East Ch100-Ch200 S/B - TIME RISK ALLOWANCE	12	24-Oct-23	06-Nov-23	567
5.3.3 - TWSR-East Bus-Bus Interchange					



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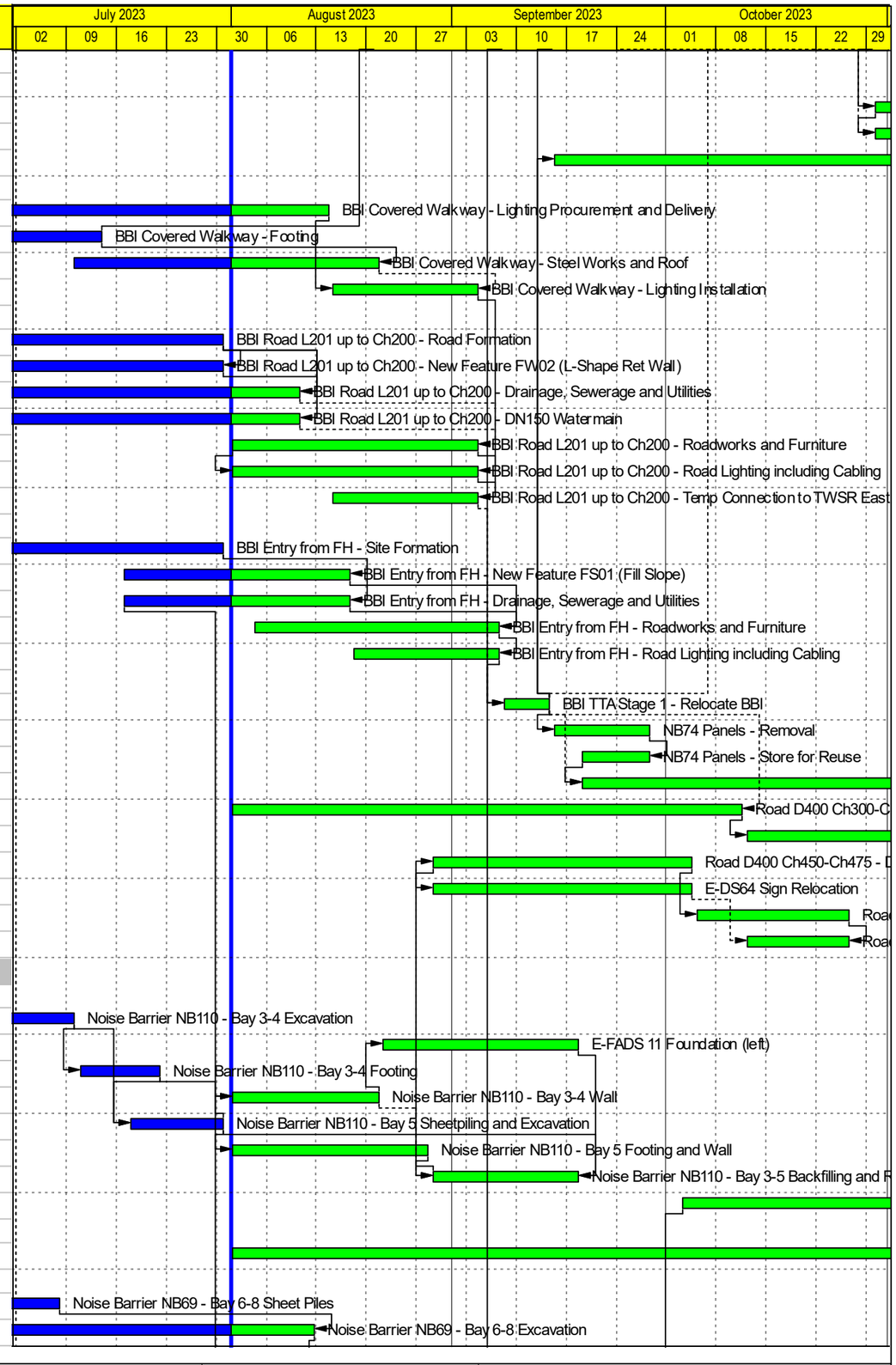
3-Month Rolling Programme (AUG 2023)

Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 7 of 10

3MRP

Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
- Bus-Bus Interchange Shelter					
- Public Toilet					
BBI-1015	BBI Public Toilet - Bio-treatment Plant Procurement/Delivery	120	30-Oct-23	23-Mar-24	472
BBI-1018	BBI Public Toilet - Lighting+Elec+BS+Fit-out Procurement/Delivery	90	30-Oct-23	17-Feb-24	502
BBI-1020	BBI Public Toilet - G/F Slab	48	15-Sep-23	13-Nov-23	495
- Covered Walkway					
BBI-1208	BBI Covered Walkway - Lighting Procurement and Delivery	12	11-Oct-22 A	14-Aug-23	27
BBI-1215	BBI Covered Walkway - Footing	0	14-Nov-22 A	14-Jul-23 A	
BBI-1225	BBI Covered Walkway - Steel Works and Roof	18	10-Jul-23 A	21-Aug-23	39
BBI-1230	BBI Covered Walkway - Lighting Installation	18	15-Aug-23	04-Sep-23	27
- Bus-Bus Interchange Road Works					
BBI-1310	BBI Road L201 up to Ch200 - Road Formation	0	18-Oct-22 A	31-Jul-23 A	
BBI-1315	BBI Road L201 up to Ch200 - New Feature FW02 (L-Shape Ret Wall)	0	02-May-23 A	31-Jul-23 A	
BBI-1320	BBI Road L201 up to Ch200 - Drainage, Sewerage and Utilities	9	02-May-23 A	10-Aug-23	48
BBI-1322	BBI Road L201 up to Ch200 - DN150 Watermain	9	02-May-23 A	10-Aug-23	48
BBI-1330	BBI Road L201 up to Ch200 - Roadworks and Furniture	30	01-Aug-23	04-Sep-23	27
BBI-1331	BBI Road L201 up to Ch200 - Road Lighting including Cabling	30	01-Aug-23	04-Sep-23	27
BBI-1350	BBI Road L201 up to Ch200 - Temp Connection to TWSR East	18	15-Aug-23	04-Sep-23	27
- TWSR East (2) Entry to BBI from Fanling Highway					
BBI-1420	BBI Entry from FH - Site Formation	0	05-Jun-23 A	31-Jul-23 A	
BBI-1425	BBI Entry from FH - New Feature FS01 (Fill Slope)	15	17-Jul-23 A	17-Aug-23	24
BBI-1430	BBI Entry from FH - Drainage, Sewerage and Utilities	15	17-Jul-23 A	17-Aug-23	24
BBI-1440	BBI Entry from FH - Roadworks and Furniture	30	04-Aug-23	07-Sep-23	24
BBI-1441	BBI Entry from FH - Road Lighting including Cabling	18	18-Aug-23	07-Sep-23	24
- TWSR East (2) BBI Exit to Fanling Highway					
BBI-1500	BBI TTA Stage 1 - Relocate BBI	6	08-Sep-23	14-Sep-23	24
BBI-1503	NB74 Panels - Removal	12	15-Sep-23	28-Sep-23	84
BBI-1504	NB74 Panels - Store for Reuse	9	19-Sep-23	28-Sep-23	84
BBI-1505	NB74 Foundation Demolition	42	19-Sep-23	09-Nov-23	84
BBI-1522	Road D400 Ch300-Ch430 - Application for Lighting Removal	60	01-Aug-23	11-Oct-23	96
BBI-1523	Road D400 Ch300-Ch430 - Lighting Removal/Install Temp Lighting	48	12-Oct-23	07-Dec-23	96
BBI-1710	Road D400 Ch450-Ch475 - Drainage, Sewerage and Utilities	30	29-Aug-23	04-Oct-23	210
BBI-1715	E-DS64 Sign Relocation	30	29-Aug-23	04-Oct-23	216
BBI-1720	Road D400 Ch450-Ch475 - Roadworks and Furniture	18	05-Oct-23	26-Oct-23	210
BBI-1730	Road D400 Ch450-Ch475 - Road Lighting including Cabling	12	12-Oct-23	26-Oct-23	210
5.3.5 - TWSR-East Noise Barrier					
- Noise Barrier NB110 (Typ FV3)					
TSE-1302	Noise Barrier NB110 - Bay 3-4 Excavation	0	01-Jul-23 A	10-Jul-23 A	
TSE-1303	E-FADS 11 Foundation (left)	24	22-Aug-23	18-Sep-23	210
TSE-1305	Noise Barrier NB110 - Bay 3-4 Footing	0	11-Jul-23 A	22-Jul-23 A	
TSE-1307	Noise Barrier NB110 - Bay 3-4 Wall	18	01-Aug-23	21-Aug-23	210
TSE-1310	Noise Barrier NB110 - Bay 5 Sheetpiling and Excavation	0	18-Jul-23 A	31-Jul-23 A	
TSE-1311	Noise Barrier NB110 - Bay 5 Footing and Wall	24	01-Aug-23	28-Aug-23	210
TSE-1312	Noise Barrier NB110 - Bay 3-5 Backfilling and Reinstatement	18	29-Aug-23	18-Sep-23	210
TSE-1368	Noise Barrier NB110 - Fabrication and Delivery	150	03-Oct-23	06-Apr-24	392
- Noise Barrier NB68					
TSE-1568	Noise Barrier NB68 - Fabrication and Delivery	150	01-Aug-23	29-Jan-24	492
- Noise Barrier NB69					
TSE-1510	Noise Barrier NB69 - Bay 6-8 Sheet Piles	0	08-May-23 A	08-Jul-23 A	
TSE-1515	Noise Barrier NB69 - Bay 6-8 Excavation	11	22-May-23 A	12-Aug-23	254



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Date : 04-Aug-23 / Page 8 of 10

3MRP			
Date	Revision	Checked	Approved
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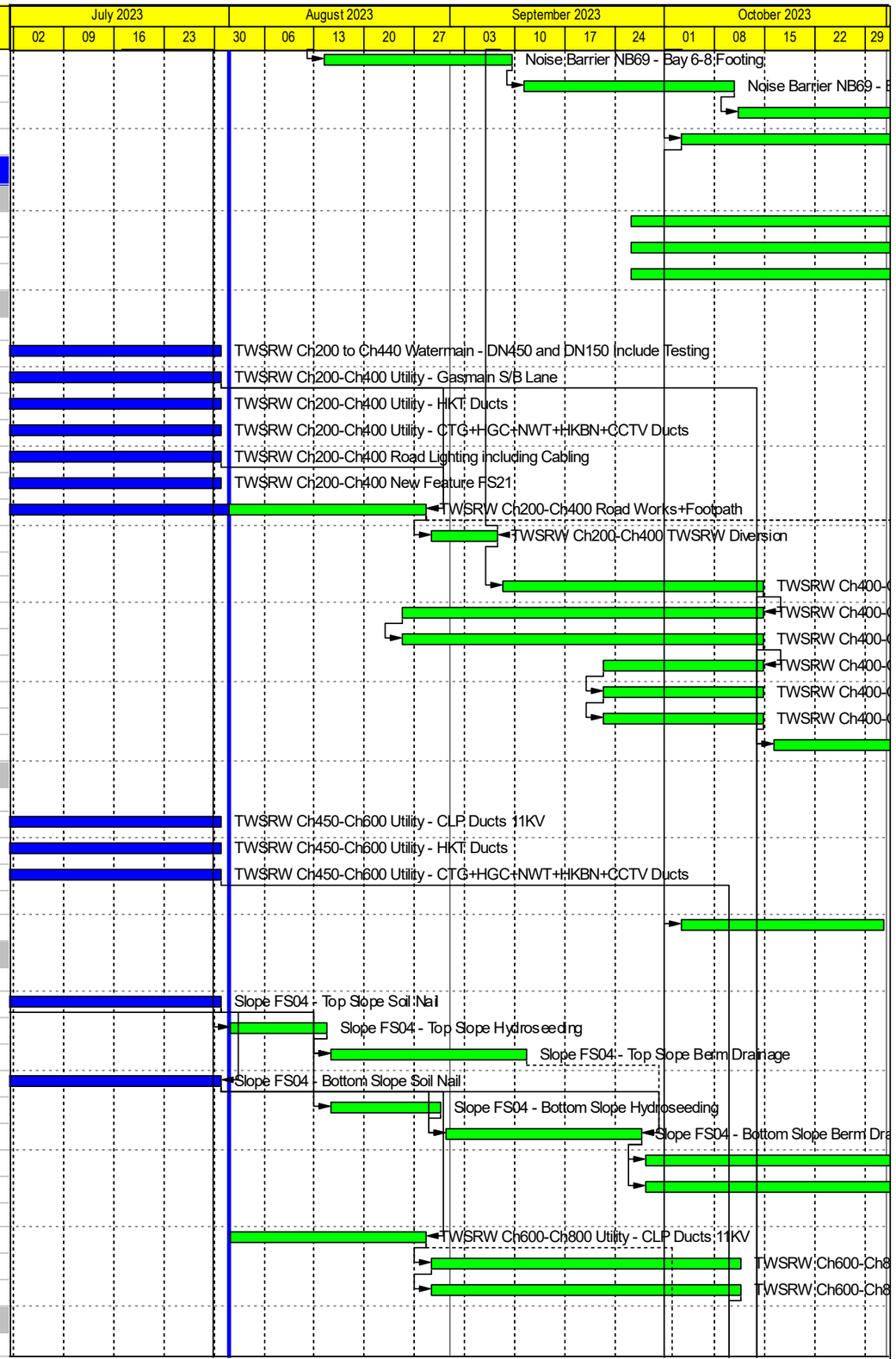
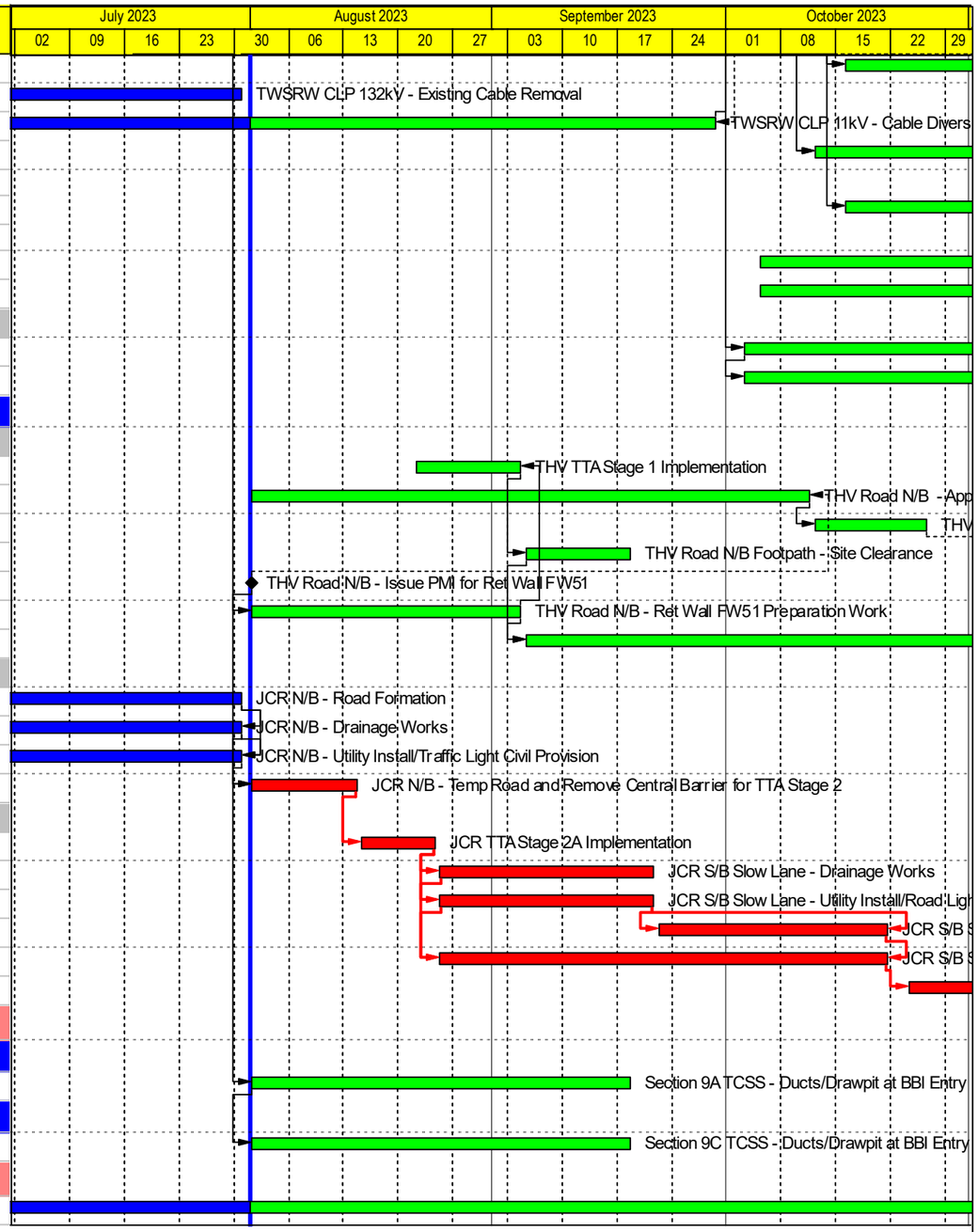
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
TSE-1520	Noise Barrier NB69 - Bay 6-8 Footing	24	14-Aug-23	09-Sep-23	254
TSE-1525	Noise Barrier NB69 - Bay 6-8 Stem Wall	24	11-Sep-23	10-Oct-23	254
TSE-1530	Noise Barrier NB69 - Bay 6-8 Backfilling and Reinstatement	24	11-Oct-23	08-Nov-23	254
TSE-1565	Noise Barrier NB69 - Fabrication and Delivery	150	03-Oct-23	06-Apr-24	392
5.4 - Tai Wo Service Road West (TWSR-West)					
5.4.2 - TWSR-West Ch000 to Ch200					
TSW-4106	TWSRW Ch100-Ch150 Drainage 1650dia - SMH FL9109 to existing MH	78	26-Sep-23	30-Dec-23	144
TSW-4107	TWSRW Ch100-Ch150 Sewerage DN450 - FMH TWS2.04 to TWS2.06	78	26-Sep-23	30-Dec-23	144
TSW-4109	TWSRW Ch100-Ch150 Watermain - DN450 and DN150 Include Testing	36	26-Sep-23	09-Nov-23	78
5.4.3 - TWSR-West Ch200 to Ch450					
- Ch200 to Ch400					
TSW-4437	TWSRW Ch200 to Ch440 Watermain - DN450 and DN150 Include Testing	0	18-Oct-22 A	31-Jul-23 A	
TSW-4438	TWSRW Ch200-Ch400 Utility - Gasmain S/B Lane	0	03-Oct-22 A	31-Jul-23 A	
TSW-4444	TWSRW Ch200-Ch400 Utility - HKT Ducts	0	01-Nov-22 A	31-Jul-23 A	
TSW-4445	TWSRW Ch200-Ch400 Utility - CTG+HGC+NWT+HKBN+CCTV Ducts	0	15-Nov-22 A	31-Jul-23 A	
TSW-4448	TWSRW Ch200-Ch400 Road Lighting including Cabling	0	15-Nov-22 A	31-Jul-23 A	
TSW-4449	TWSRW Ch200-Ch400 New Feature FS21	0	15-Nov-22 A	31-Jul-23 A	
TSW-4450	TWSRW Ch200-Ch400 Road Works+Footpath	24	15-Nov-22 A	28-Aug-23	126
TSW-4464	TWSRW Ch200-Ch400 TWSRW Diversion	9	29-Aug-23	07-Sep-23	135
- Ch400 to Ch450					
TSW-4453	TWSRW Ch400-Ch450 Utility - Gasmain S/B Lane	30	08-Sep-23	14-Oct-23	135
TSW-4455	TWSRW Ch400-Ch450 Drainage 1500dia.	42	25-Aug-23	14-Oct-23	135
TSW-4457	TWSRW Ch400-Ch450 Sewerage DN600	42	25-Aug-23	14-Oct-23	135
TSW-4459	TWSRW Ch400-Ch450 Utility - Gasmain N/B Lane	18	22-Sep-23	14-Oct-23	951
TSW-4461	TWSRW Ch400-Ch450 Utility - HKT Ducts	18	22-Sep-23	14-Oct-23	951
TSW-4462	TWSRW Ch400-Ch450 Utility - CTG+HGC+NWT+HKBN+CCTV Ducts	18	22-Sep-23	14-Oct-23	951
TSW-4463	TWSRW Ch400-Ch450 Road Works+Footpath	24	16-Oct-23	13-Nov-23	951
5.4.4 - TWSR-West Ch450 to Ch600					
- Ch450 to Ch600 Footpath					
TSW-3126	TWSRW Ch450-Ch600 Utility - CLP Ducts 11KV	0	06-Mar-23 A	31-Jul-23 A	
TSW-3127	TWSRW Ch450-Ch600 Utility - HKT Ducts	0	27-Mar-23 A	31-Jul-23 A	
TSW-3128	TWSRW Ch450-Ch600 Utility - CTG+HGC+NWT+HKBN+CCTV Ducts	0	27-Mar-23 A	31-Jul-23 A	
- HKYFB West Piling					
TSW-4800	HKYFB West Temp Ramp Install	24	03-Oct-23	31-Oct-23	110
5.4.5 - TWSR-West Ch600 to Ch800					
- Ch600 to Ch800 Slope Works					
TSW-1138	Slope FS04 - Top Slope Soil Nail	0	01-Nov-22 A	31-Jul-23 A	
TSW-1139	Slope FS04 - Top Slope Hydroseeding	12	01-Aug-23	14-Aug-23	214
TSW-1140	Slope FS04 - Top Slope Berm Drainage	24	15-Aug-23	11-Sep-23	228
TSW-1148	Slope FS04 - Bottom Slope Soil Nail	0	16-Jan-23 A	31-Jul-23 A	
TSW-1149	Slope FS04 - Bottom Slope Hydroseeding	14	15-Aug-23	30-Aug-23	214
TSW-1150	Slope FS04 - Bottom Slope Berm Drainage	24	31-Aug-23	27-Sep-23	214
TSW-1155	Existing Feature 3SW-C/C360 Soil Nail	120	28-Sep-23	24-Feb-24	544
TSW-1160	Existing Feature 3SW-C/C430 Soil Nail	120	28-Sep-23	24-Feb-24	544
- Ch600 to Ch800 Road Works					
TSW-1178	TWSRW Ch600-Ch800 Utility - CLP Ducts 11KV	24	01-Aug-23	28-Aug-23	138
TSW-1180	TWSRW Ch600-Ch800 Utility - HKT Ducts	36	29-Aug-23	11-Oct-23	156
TSW-1181	TWSRW Ch600-Ch800 Utility - CTG+HGC+NWT+HKBN+CCTV Ducts	36	29-Aug-23	11-Oct-23	156
5.4.6 - Existing Utility Diversion					
- TWSRW Divert Existing Utilities					



Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
TSW-8810	TWSRW Gasmain Diversion	90	16-Oct-23	01-Feb-24	153
TSW-8840	TWSRW CLP 132kV - Existing Cable Removal	0	02-May-23 A	31-Jul-23 A	
TSW-8845	TWSRW CLP 11kV - Cable Diversion	52	02-May-23 A	29-Sep-23	110
TSW-8850	TWSRW Telecom - Cable Diversion	90	12-Oct-23	29-Jan-24	156
- Sewerage Diversion					
TSW-8860	TWSRW Existing Sewerage Diversion Stage 1	24	16-Oct-23	13-Nov-23	135
- Watermain Diversion Stage 1					
TSW-5750	TWSRW DN450 WM Diversion Stage 1 - Temp Connection Pipe	30	05-Oct-23	09-Nov-23	78
TSW-8775	TWSRW DN150 WM Diversion Stage 1 - Temp Connection Pipe	30	05-Oct-23	09-Nov-23	78
5.4.7 - TWSR Noise Barrier					
TSW-1268	NB30 - Fabrication and Delivery	180	03-Oct-23	13-May-24	392
TSW-7385	NB30 Panels - Evaluate to Reuse	48	03-Oct-23	28-Nov-23	446
5.5 - Jockey Club Road					
5.5.2 - Tong Hang Village Road (THV Road)					
JCR-2180	THV TTA Stage 1 Implementation	12	22-Aug-23	04-Sep-23	7
JCR-2181	THV Road N/B - Application for Lighting Removal	60	01-Aug-23	11-Oct-23	13
JCR-2182	THV Road N/B - Lighting Removal/Install Temporary Lighting	12	12-Oct-23	26-Oct-23	13
JCR-2185	THV Road N/B Footpath - Site Clearance	12	05-Sep-23	18-Sep-23	7
JCR-2190	THV Road N/B - Issue PMI for Ret Wall FW51	0	01-Aug-23		7
JCR-2193	THV Road N/B - Ret Wall FW51 Preparation Work	30	01-Aug-23	04-Sep-23	7
JCR-2195	THV Road N/B - Ret Wall FW51 Construction	48	05-Sep-23	02-Nov-23	7
5.5.3 - North Bound					
JCR-2420	JCR N/B - Road Formation	0	15-Mar-23 A	31-Jul-23 A	
JCR-2430	JCR N/B - Drainage Works	0	15-Mar-23 A	31-Jul-23 A	
JCR-2440	JCR N/B - Utility Install/Traffic Light Civil Provision	0	15-Jun-23 A	31-Jul-23 A	
JCR-2450	JCR N/B - Temp Road and Remove Central Barrier for TTA Stage 2	12	01-Aug-23	14-Aug-23	0
5.5.5 - South Bound					
JCR-2600	JCR TTA Stage 2A Implementation	9	15-Aug-23	24-Aug-23	0
JCR-2610	JCR S/B Slow Lane - Drainage Works	24	25-Aug-23	21-Sep-23	0
JCR-2620	JCR S/B Slow Lane - Utility Install/Road Lighting	24	25-Aug-23	21-Sep-23	0
JCR-2625	JCR S/B Slow Lane - Traffic Signal Ducts and Drawpits	24	22-Sep-23	21-Oct-23	0
JCR-2630	JCR S/B Slow Lane - Road Paving/Marking	48	25-Aug-23	21-Oct-23	0
JCR-2640	JCR TTA Stage 2B Implementation	9	24-Oct-23	02-Nov-23	0
6.0 - TCSS Works					
6.2 - Key Date 3A and Section 9A					
TCS-331	Section 9A TCSS - Ducts/Drawpit at BBI Entry	42	01-Aug-23	18-Sep-23	492
6.4 - Section 9C					
TCS-451	Section 9C TCSS - Ducts/Drawpit at BBI Entry	42	01-Aug-23	18-Sep-23	996
7.0 - Miscellaneous Works					
MIS-100	Preservation and Protection of Trees	305	28-Oct-20 A	09-Aug-24	7



CRCC - Paul Y. Joint Venture

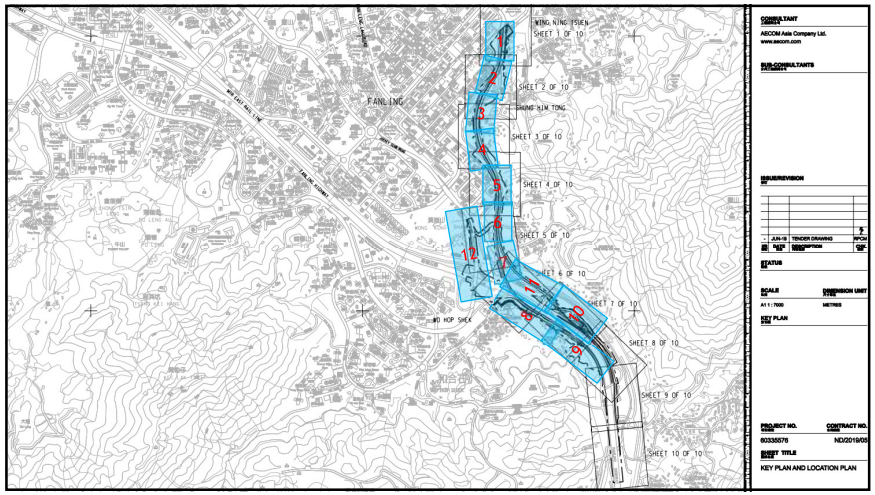
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme (AUG 2023)

Project ID : DPr16
Layout : DP 3MRP
TASK filter: 3MRP.
Date : 04-Aug-23 / Page 10 of 10

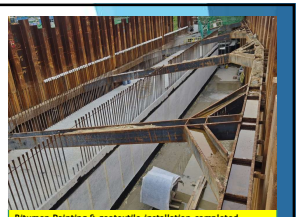
3MRP			
Date	Revision	Checked	Approved
01-Aug-23	MPR No. 41		

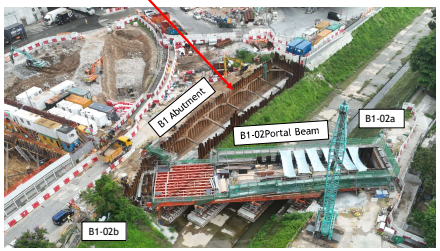


1 North Team

B1-01M (On Kui St)
- Bitumen Painting, Geotextile, Mira Drain and subsoil drain installation completed
- Concrete Block Retaining Wall Installation Completed
- Backfilling in progress (5/10 Layers Completed)
- Wall - ES: 01/03/23 EF: 15/05/23
- Wall - LS: 26/02/24 LF: 08/04/24
- **On track against R15**

Concrete Block Retaining Wall Installation Completed


Bitumen Painting & geotextile installation completed



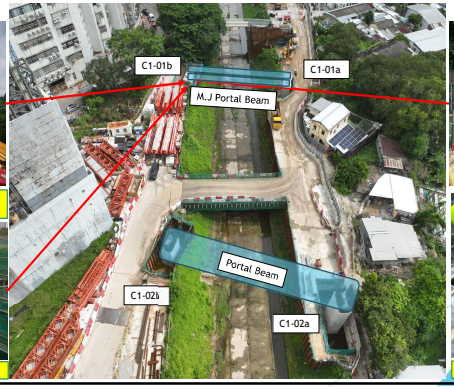
Backfilling in Progress

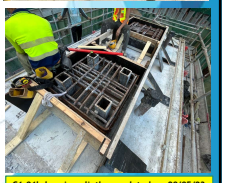
2 Pier & Portal Team

C1-01b pier head
- C1-01a pier head completed on 17/05/23
  Pier head
  - ES: 13/02/23 EF: 19/05/23
  - LS: 23/12/23 LF: 06/01/24
- **Ahead against R15**

C1-01b pier head concreting completed on 17/05/23

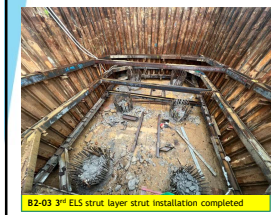
C1-01a bearing completed on 25/05/23

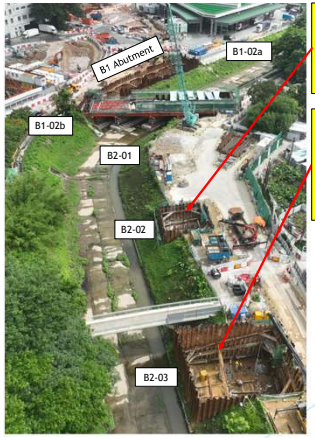



C1-01b bearing plinth completed on 20/05/23

2 North Team

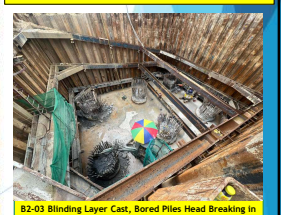
B2-02 Cap Concreted, 1st & 2nd layer of strut removed


B2-03 3rd ELS strut layer strut installation completed



B2-02 (Shum Him Tong)
- B2-02 Rebar Fixing Works Completed
- B2-02 Cap Concreted on 13/05/23
- 1st & 2nd Layer of Strut Removed
- Pile Cap - ES: 22/04/23 EF: 29/05/23
- Pile Cap - LS: 14/02/24 LF: 19/03/24
- **Ahead against R15**

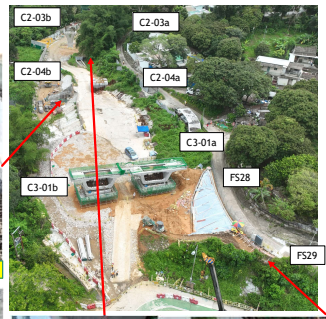
B2-03 (Shum Him Tong)
- 3rd ELS strut layer strut installation completed
- Blinding Layer Casted on 03/06/23
- Bored Piles Head Breaking in Progress
- ELS Excavation - ES: 22/03/23 EF: 29/04/23
- ELS Excavation - LS: 03/01/24 LF: 26/01/24
- **On Track against R15**


B2-03 Blinding Layer Cast, Bored Piles Head Breaking in Progress

3 North Team

C2-04b pile cap rebar fixing completed on 03/06/23

C2-04b pile cap completed and handed over to Pier Team on 08/06/2023



C2-03a and C2-03b backfilling to F.G.L. completed on 30/05/23 and 27/05/23 respectively

Portion 5 (On Lok Garden)
C2-04b
- Pile Cap rebar fixing commenced on 30/05/23 and completed on 03/06/23
- Pile cap concreted on 05/06/23
- ELS + Cap - ES: 14/03/23 EF: 06/06/23
  - LS: 03/05/23 LF: 04/07/23

On track against R15

C2-03a & b
- Backfilling to F.G.L.
- Backfilling- ES: 17/05/23 EF: 07/06/23
  - LS: 04/10/23 LF: 25/10/23

On track against R15

Slope FS28
- Drainage and cut slope construction in progress

Slope FS28 drainage construction in progress

3 Viaduct

CEDD Contract no. ND/2019/05
Fanling North New Development Areas,
Phase 1 : Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

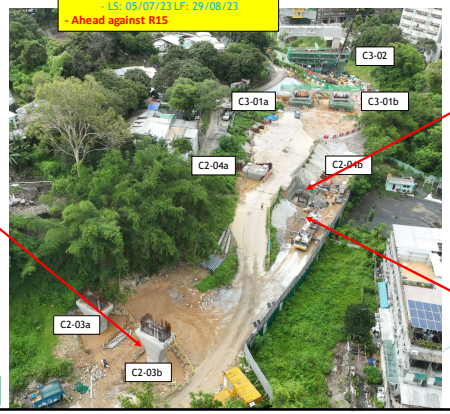
Segments Erection by Crane (Bridge E1 and D1)

- C3-01 precast cell erection complete on 30 May.

3 Pier & Portal Team

Portion 5 (On Lok Garden)
C2-04b Pier & Pier head
Kicker completed on 08/06/23
- Pier + Pier head
  - ES: 07/06/23 EF: 03/08/23
  - LS: 05/07/23 LF: 29/08/23
- **Ahead against R15**

C2-03b hand over to backfilling works on 22/05/23



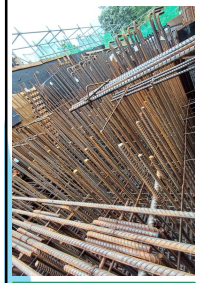
C2-04b pier construction in progress

C2-04b pier kicker completed on 09/06/23

3 Pier & Portal Team

Portion 4
C2-02 cross head Construction
- C2-02 cross head in progress
  - Cross head - ES: 14/02/23 EF: 28/06/23
  - LS: 01/11/23 LF: 23/01/24

1st pour concreting completed by 11/06/23
- **Ahead against R15**



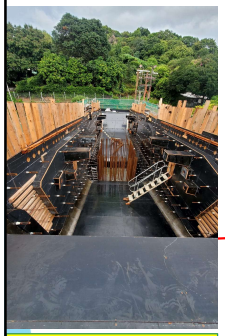
Rebar fixing at C2-02 cross head (2nd pour) in progress

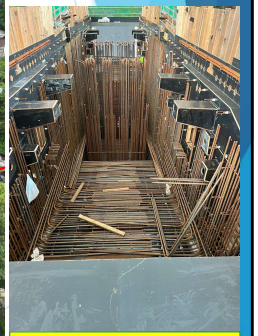
C2-02 cross head (1st pour) completed on 08/06/23

4

- Pier & Portal Team Area Highlighted
  - Cross head - C3-02

Portion 6 (Village side)
C3-02 Cross Head Construction in Progress
Cross head - ES:01/02/23 EF:29/06/23
- LS:01/06/23 LF:23/08/23
Target 1st pour concreting by 17/06/23
- On track against R15



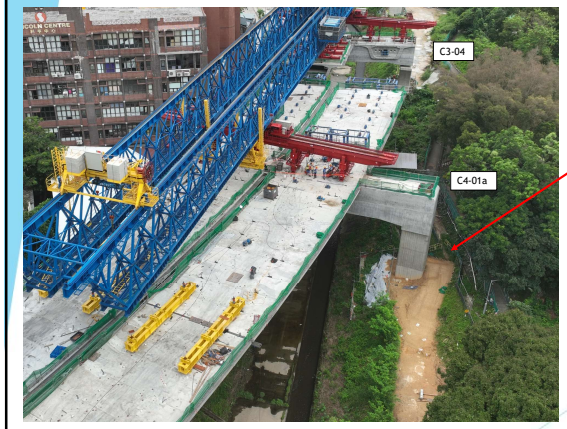


Side Formwork at C3-02 cross head construction completed on 29/05/23

Rebar Fixing at C3-02 cross head construction in progress

5

- North Team



Portion VI (Tai Wong Yeh)
Pier C4-01a
- Backfilling to E.G.L. (+13.6mPD) in progress.
Backfilling - ES: 01/04/23 EF: 26/04/23
- LS: 26/04/25 LF: 19/05/25

C4-01a backfilling to +13.4mPD. SRT carried out on 31/05/23.

5

CEDD Contract no. ND/2019/05
Fanling North New Development Areas,
Phase 1 : Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Han

- Viaduct **Launching Girder (Bridge C4)**
  - LG launched to Pier C3-04 from 19 May~22 May.
  - Total 140 segments erected by LG.

Separation of persons and vehicles

Main support moving forward

C3-04bM end span

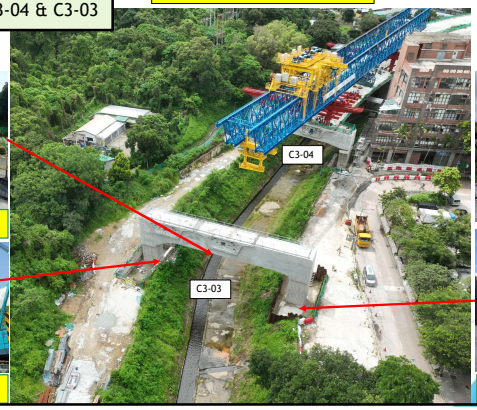
5

- Pier & Portal Team Area Highlighted
  - Portal Beam - C3-04 & C3-03

Portion 6 (Village side)
C3-03 Portal Beam Construction completed
- Portal beam - ES:01/03/23 EF:04/05/23
LS:17/05/22 LF:14/06/23
- Ahead against R15

Dismantling of truss at C3-03 Portal Beam completed on 19/05/23

Dismantling of steel bracket at C3-03 Portal Beam completed on 01/06/23



C3-03 Portal Beam completed hand over to bridge team on 07/06/23

6

CEDD Contract no. ND/2019/05
Fanling North New Development Areas,
Phase 1 : Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

Viaduct

Segments Erection by Crane (Bridge E1 and D1)

6

CEDD Contract no. ND/2019/05
Fanling North New Development Areas,
Phase 1 : Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

Viaduct

Segments Erection by Crane (Bridge E1 and D1)

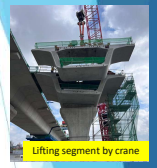
6

CEDD Contract no. ND/2019/05
Fanling North New Development Areas,
Phase 1 : Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

Viaduct

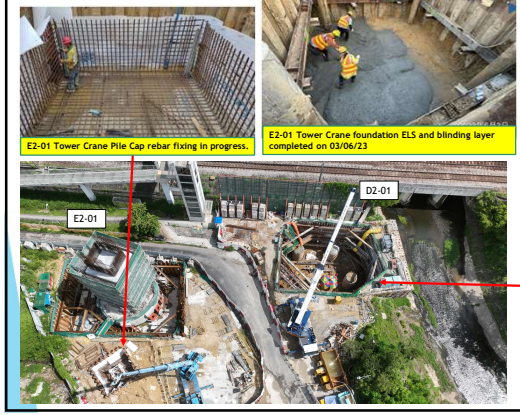
Segments Erection by Crane (Bridge E1 and D1)

- T-span segments at pier D1-01 & E1-01 complete.
- C4-04bM to D1-01 end span segments erection complete.



7

North Team
Area Highlighted -D2-01



E2-01 Tower Crane Pile Cap rebar fixing in progress.

E2-01 Tower Crane foundation ELS and blinding layer completed on 03/06/23

Portion 8 (MTR trackside)
E2-01 Tower Crane Foundation
- Sheet piling commenced on 25/05/23 and completed on 29/05/23
- Excavation, shoring system and blinding layer completed on 03/06/23

D2-01
- 3rd layer strut and waling completed on 22/05/23
- Excavation to F.E.L. completed on 06/06/23
- 4th layer strut and waling in progress, cast blinding layer on 12/06/23
- D2-01 ELS + Grouting + Excavation
  - ES:15/11/22 EF:12/06/23
  - LS:01/04/22 LF:12/06/23
- **On tack against R15**

D2-01 Excavation to F.E.L. completed. 4th layer strut and waling in progress.

7

CEDD Contract no. ND/2019/05
Fanling North New Development Areas,
Phase 1 : Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

Viaduct

Bridge Rotation

E2-01 Tower Crane on 09/06/2023

D2-01 steel shear support fabrication

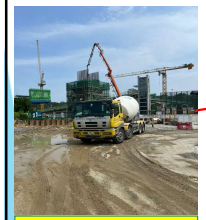
7

Pier & Portal Team
Area Highlighted
- Rotation bridge- E2-01 pier

Rotation Bridge at Pier E2-01

Pier head Construction in Progress
- Pier head - ES: 12/04/23 EF:23/06/23
  LS: 24/05/23 LF:29/06/23

Pier head (2nd pour) concreting completed on 01/06/23
- **Ahead against R15**



E2-01 pier head (2nd pour) concreting completed on 01/06/23

Dismantling of E2-01 steel mould at pier head (2nd pour) completed on 07/06/23

1

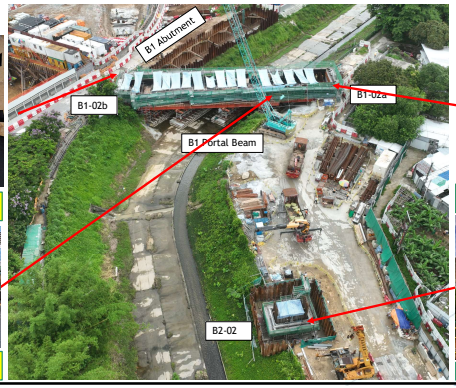
Pier & Portal Team
Area Highlighted - B1-02 Portal Beam

Portion 1 (On Kui St)
B1-02 Portal Beam
- ES:01/03/23 EF:12/08/24
- LS:15/07/24 LF:19/11/24
- **Target portal beam concreting by 30/06/23**
- **On Track against R15**

Portion 1 (On Kui St)
B2-02 Pier
- B2-02 pier completed on 09/06/23
- ES:30/05/23 EF:05/07/24
- LS:20/03/24 LF:27/04/24
- **Ahead against R15**

Side formwork at B1-02a portal beam in progress

Segment kicker formwork at B1-02 portal beam in progress



Soffit formwork at B1-02 portal beam completed on 01/06/23

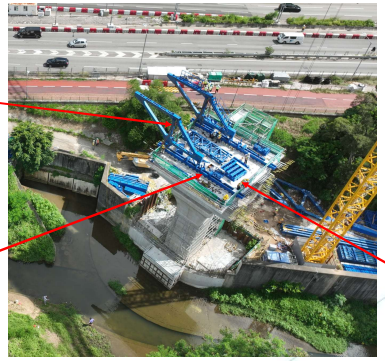
B2-02 pier construction completed on 08/06/23

8

Form Traveler Team
Area Highlighted
- FT3 (D2-02 T -Span)

FT3: D2-02
- **Installation of FT3 in progress**
- Installation of FT3
  - ES: 06/05/23 EF: 22/07/23
  - LS: 19/05/23 LF: 04/08/23
- **On Track against R15**

Railway beam installation completed on 01/06/23



Main frame erection completed on 10/06/23

8

South Team - Highlight
UU work at TWSRW

CLP 11kv cable laying
(Between K.Kee Factory and Entrance of HKY)

1350 dia. drainage pipe laying
(Between FL9103 and FL9102)

Construction work(ELS) of drainage manhole (FL9110)

Ducts laying(Telecoms) (Near FS06)

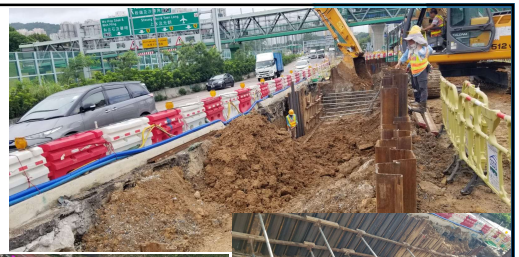
Ducts laying(Telecoms) (Near FS21)

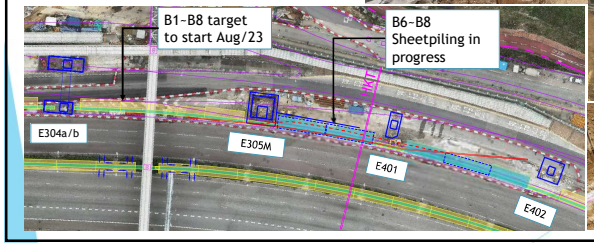
8

中国铁建 Paul Y

South Team

8. Noise Barrier NB 69
TSE-1515 (R15) ES: 17/11/23 EF:21/12/23
LS: 05/01/24 LF:08/02/24
- LV Cable Slewing in progress
- Sheetpiling works will resume 15/06





9

中国铁建 Paul Y

South Team

1. TWSRW (CH200 to 400)
TSW - 4450 (R15) ES: 15/11/22 EF:10/07/23
LS: 05/05/23 LF:07/08/23
- Road work affected by UU laying work.

Pipe laying work of 600 dia. sewer(TWS1.02)
(Connect to existing manhole)
(Temporary diversion)

Construction work of U-channel at FS06

FS04 Slope Drainage work

- Road construction work(CH235 –CH290)
Compaction and SRT

Road construction work(Footpath and Cycle Track) near new Wo Hop Shek Village

- Trench excavation for laying DN1200(drainage)
- (Between FL9104A and FL9104B

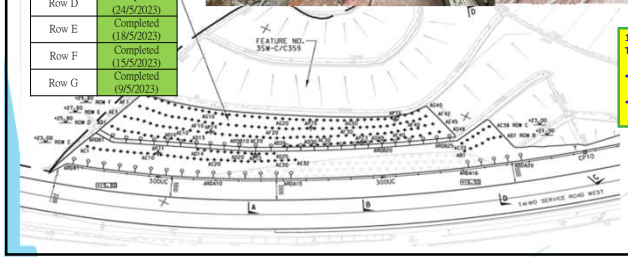
9

中国铁建 Paul Y

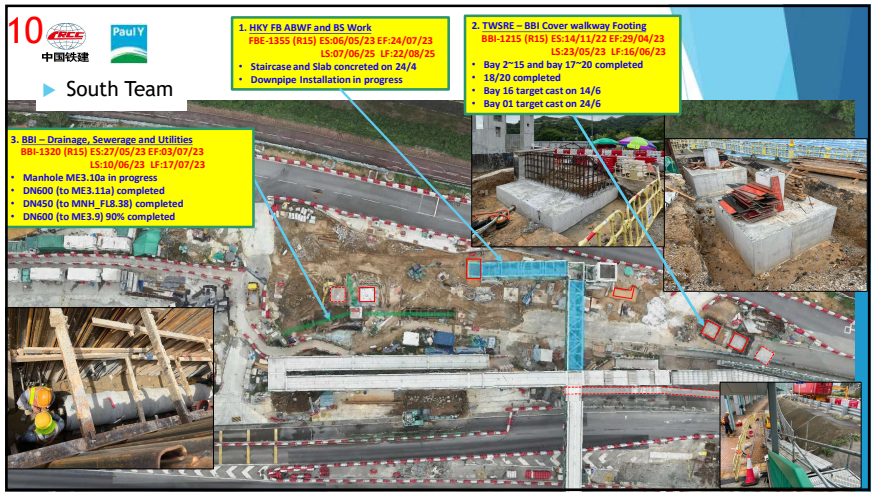
South Team

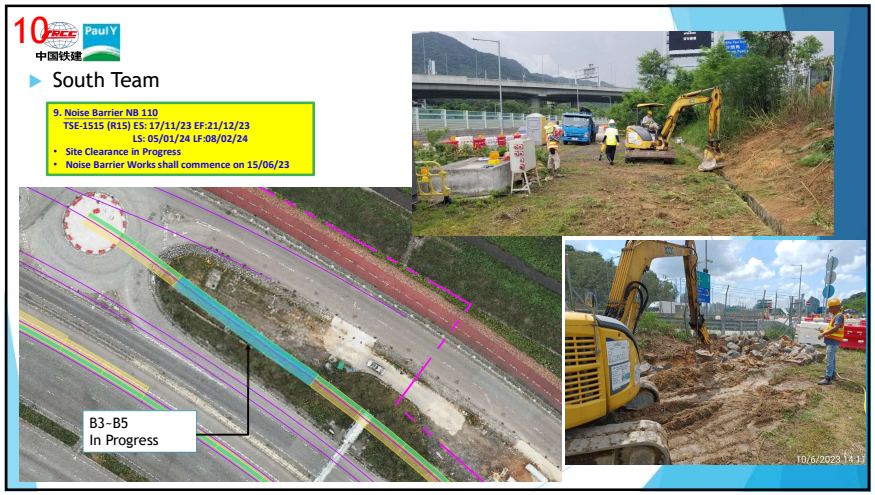
FS04 Concreting of Soil Nail Head

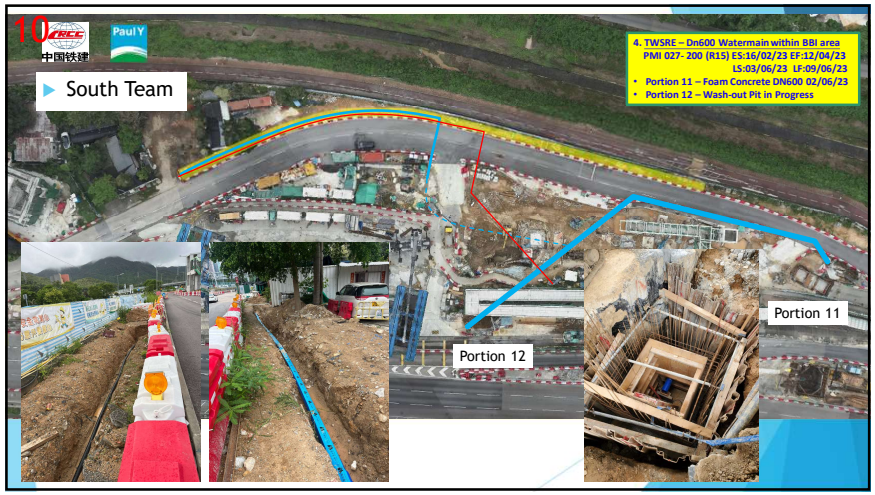
Row	Completed
Row B	Completed (5/6/2023)
Row C	Completed (27/5/2023)
Row D	Completed (24/5/2023)
Row E	Completed (18/5/2023)
Row F	Completed (15/5/2023)
Row G	Completed (9/5/2023)

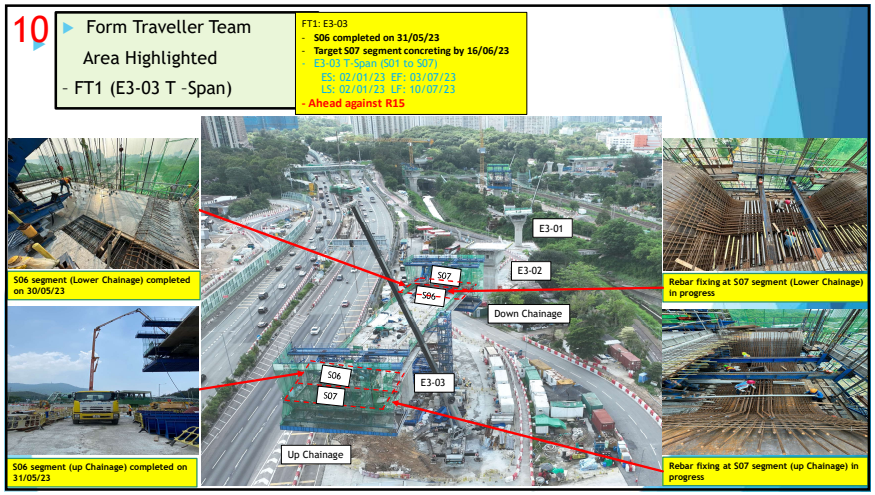


1. FS 04 – Soil Nail
TSW 1138 (R15) ES: 01/11/22 EF:04/05/23
LS: 19/05/23 LF:16/06/23
- Laying work of hessian bags for soil nail head in progress
- Drilling work of raking drain(ROW B)
Target to be completed on 17/6/23


10
South Team
1. HKY FB ABWF and BS Work
FBE-1355 (R1S) ES:06/05/23 EF:24/07/23
LS:07/06/25 LF:22/08/25
• Staircase and Slab concreted on 24/4
• Downpipe Installation in progress
2. TWSRE – BBI Cover walkway Footing
BBI-1215 (R1S) ES:14/11/22 EF:29/04/23
LS:23/05/23 LF:16/06/23
• Bay 2~15 and bay 17~20 completed
• 18/20 completed
• Bay 16 target cast on 14/6
• Bay 01 target cast on 24/6
3. BBI – Drainage, Sewerage and Utilities
BBI-1320 (R1S) ES:27/05/23 EF:03/07/23
LS:10/06/23 LF:17/07/23
• Manhole ME3.10a in progress
• DN600 (to ME3.11a) completed
• DN450 (to MNH_FL8.38) completed
• DN600 (to ME3.9) 90% completed

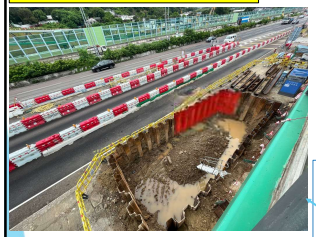

10
South Team
9. Noise Barrier NB 110
TSE-1515 (R1S) ES: 17/11/23 EF:21/12/23
LS: 05/01/24 LF:08/02/24
• Site Clearance in Progress
• Noise Barrier Works shall commence on 15/06/23
B3-B5
In Progress


10
South Team
4. TWSRE – Dn600 Watermain within BBI area
PMI 027- 200 (R1S) ES:16/02/23 EF:12/04/23
LS:03/06/23 LF:09/06/23
• Portion 11 – Foam Concrete DN600 02/06/23
• Portion 12 – Wash-out Pit in Progress
Portion 11
Portion 12

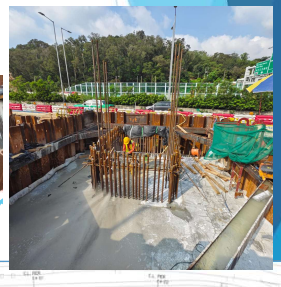

10
Form Traveller Team
Area Highlighted
- FT1 (E3-03 T -Span)
FT1: E3-03
- S06 completed on 31/05/23
- Target S07 segment concreting by 16/06/23
E3-03 T-Span (S01 to S07)
ES: 02/01/23 EF: 03/07/23
LS: 02/01/23 LF: 10/07/23
- Ahead against R15
S06 segment (Lower Chainage) completed on 30/05/23
S06 segment (up Chainage) completed on 31/05/23
E3-01
E3-02
E3-03
S07
S06
Down Chainage
Up Chainage
Rebar fixing at S07 segment (Lower Chainage) in progress
Rebar fixing at S07 segment (up Chainage) in progress

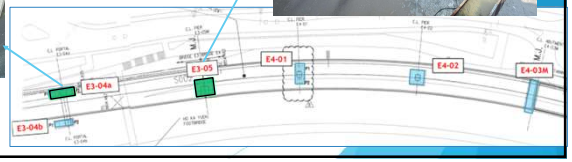
10 South Team

5. E3-04a Pile Cap
E3-7470 (R1S) ES:29/08/23 EF:25/09/23
LS:10/11/23 LF:07/12/23
- Anticipated Completion Date 15/07/23
- 1st Shoring to be completed 15/06/23
- 2nd Shoring to be completed 24/06/23



6. E3-05M Pile Cap
E3-5605 (R1S) ES:05/05/23 EF:25/05/23
LS:17/06/23 LF:10/07/23
- Pilecap casted on 01/06/23

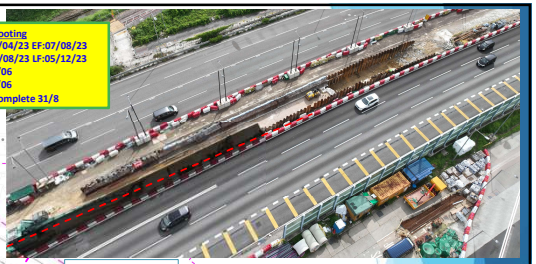




10 South Team

7. Noise Barrier NB 109-Footing
FHY 1S1S (R1S) ES: 20/04/23 EF:07/08/23
LS: 19/08/23 LF:05/12/23
- Pavement Work 14-20/06
- Implement TTA286 21/06
- Bay 9 to 13 Target to Complete 31/8

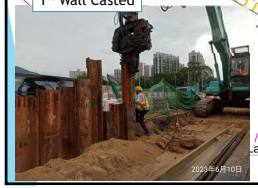
B1-B4 target to start June/24

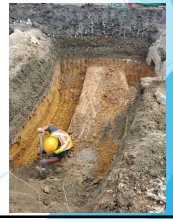


PLT

B5 to B8
1st Wall Casted

B9-B10
Sheetpiling in progress





HKT

Layout Plan

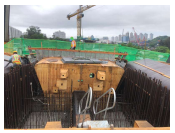
B15-B20
target to start July/24

11

Viaduct

Segment On Pier (SOP)

- D2-03 SOP cast the 2nd pour concrete on 06/06/2023



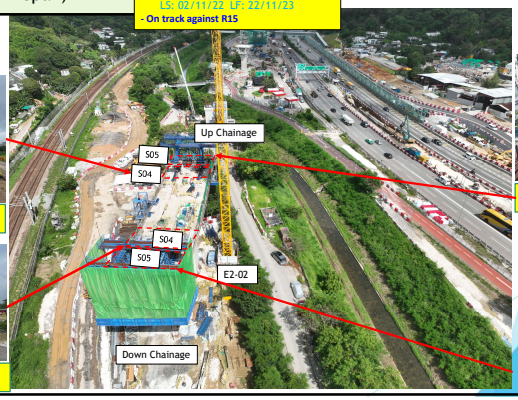
11

Form Traveller Team
Area Highlighted
- FT2 (E2-02 T -Span)

FT2: E2-02
- S04 segment completed on 17/5/23
- S05 segment construction in progress
- **Target concreting at S03 by 13/06/23**
- E3-03 T-Span (S01 to S014)
ES: 02/11/22 EF: 28/10/23
LS: 02/11/22 LF: 22/11/23
- **On track against R1S**

S04 segment (Up Chainage) completed on 17/05/23

S04 segment (Down Chainage) completed on 17/05/23



Rebar fixing at S05 segment (Up Chainage) in progress

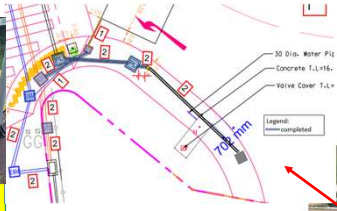
Rebar fixing at S05 segment (Down Chainage) in progress

12 North Team

Jockey Club Road – CSD (Northbound)
Core sample of existing carriageway to verify the existing road condition for CSD of road re-construction to road re-surfacing.

12 North Team

Cable duct laying & draw pit for traffic light , detection loop & street light



Jockey Club Road (THV)
Cable duct laying & draw pit for traffic light , detection loop & street light in progress
- ES: 15/3/24 EF:23/4/24
- LS: 15/3/24 LF:23/4/24
- **On track against R15**

Cable duct laying & draw pit for traffic light , detection loop & street light

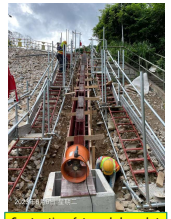
Breaking of existing footpath for cable duct laying for traffic light

12 North Team

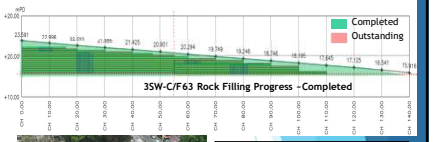
Rockfill slope works completed

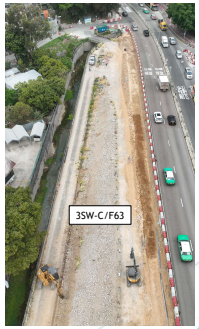
Road formation works in progress

Construction of stepped channel at CH30



Construction of stepped channel at CH0





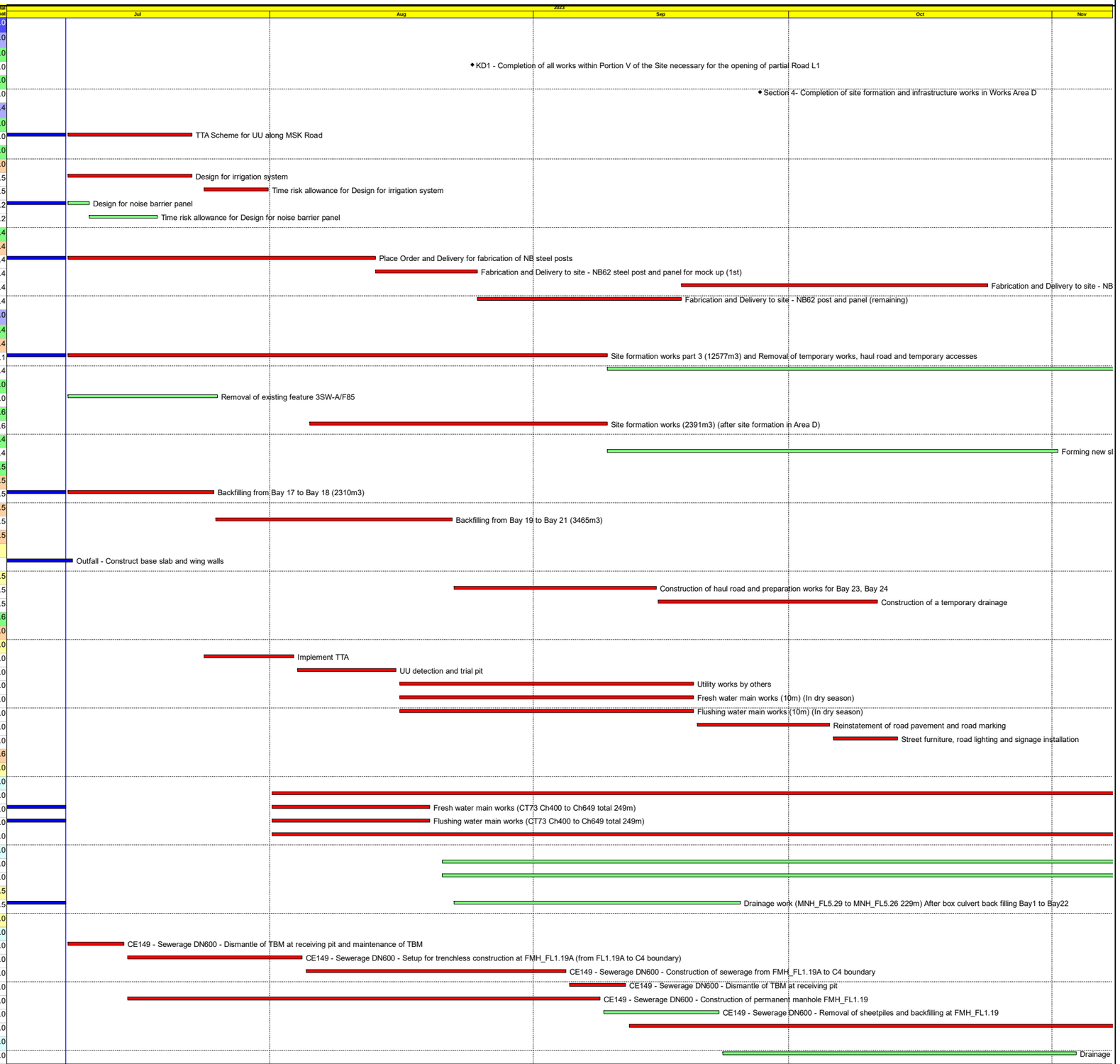
Jockey Club Road
Jockey Club Road 3SW-C/F63
- Rockfill Slope construction completed on 24/5/23

Rockfill Ch 60 - 140
- ES: 16/1/23 EF:26/4/23
- LS: 1/4/23 LF:26/4/23
- **Slippage against R15**
- Road formation works in progress
- Completed rock fill slope stepped channel at CH 30 and lower part at CH 0.

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
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works		1416.0	31-Aug-20 A	06-Nov-24	-48.0
Key Dates and Sectional Completion of the Works		33.5	24-Aug-23	27-Sep-23	0.0
Contractual Key Dates		0.0	24-Aug-23	24-Aug-23	0.0
KDS1000	KD1 - Completion of all works within Portion V of the Site necessary for the opening of partial Road L1	0.0		24-Aug-23*	0.0
Contractual Sectional Completion of the Works		0.0	27-Sep-23	27-Sep-23	0.0
KDS1040	Section 4- Completion of site formation and infrastructure works in Works Area D	0.0		27-Sep-23*	0.0
Preliminaries, Contractor's Design, Method Statement Submission and Approval		364.0	10-Aug-22 A	24-Oct-23	-5.4
General Submission		150.0	01-Jan-23 A	22-Jul-23	-50.0
PGS1260	TTA Scheme for UU along MSK Road	150.0	01-Jan-23 A	22-Jul-23	-50.0
Contractor's Design Submission and Approval		149.0	23-Nov-22 A	31-Jul-23	8.0
Permanent Works Design		149.0	23-Nov-22 A	31-Jul-23	8.0
PWD1030	Design for irrigation system	13.0	08-Jul-23	22-Jul-23	-52.5
PWD1035	Time risk allowance for Design for irrigation system	7.0	24-Jul-23	31-Jul-23	-52.5
PWD1040	Design for noise barrier panel	90.0	23-Nov-22 A	10-Jul-23	19.2
PWD1045	Time risk allowance for Design for noise barrier panel	7.0	10-Jul-23	18-Jul-23	19.2
Tendering and Procurement for Major Subcontractor		364.0	10-Aug-22 A	24-Oct-23	-5.4
Procurement for NB Post and Panel		364.0	10-Aug-22 A	24-Oct-23	-5.4
TDS1170-1	Place Order and Delivery for fabrication of NB steel posts	364.0	10-Aug-22 A	13-Aug-23	-50.4
TDS1180-1	Fabrication and Delivery to site - NB62 steel post and panel for mock up (1st)	12.0	13-Aug-23	25-Aug-23	-50.4
TDS1180-2	Fabrication and Delivery to site - NB63 post and panel (Bay18 - Bay21)	36.0	18-Sep-23	24-Oct-23	-5.4
TDS1180-3	Fabrication and Delivery to site - NB62 post and panel (remaining)	24.0	25-Aug-23	18-Sep-23	-5.4
Section 1- Site Formation and Infrastructure Works in Area A		300.0	04-Jan-23 A	24-Nov-23	242.0
Site Formation (Portion II- Area A 21900m2)		128.6	16-May-23 A	22-Nov-23	244.4
Site Formation Works in South Part of Portion II		128.6	16-May-23 A	22-Nov-23	244.4
S1-SF1417	Site formation works part 3 (12577m3) and Removal of temporary works, haul road and temporary accesses	78.0	16-May-23 A	09-Sep-23	-105.1
S1-SF1420	Construction of open channel (180m)	60.0	09-Sep-23	22-Nov-23	244.4
Site Formation (Portion III- Area A 4900m2)		15.0	08-Jul-23	25-Jul-23	299.0
S1-SF1546	Removal of existing feature 3SW-A/F85	15.0	08-Jul-23	25-Jul-23	299.0
Site Formation (Portion IV- Area A 3800m2)		30.0	05-Aug-23	09-Sep-23	-85.6
S1-SF1870	Site formation works (2391m3) (after site formation in Area D)	30.0	05-Aug-23	09-Sep-23	-85.6
Slope Works		42.0	09-Sep-23	01-Nov-23	262.4
S1-SW1010	Forming new slope feature FS06 and construction of slope drainage	42.0	09-Sep-23	01-Nov-23	262.4
Box Culvert BC3 and Outfall 10		90.5	10-May-23 A	11-Oct-23	234.5
Box Culvert BC3 (CH168 to CH216)		29.0	10-May-23 A	25-Jul-23	-38.5
S1-BC0890	Backfilling from Bay 17 to Bay 18 (2310m3)	29.0	10-May-23 A	25-Jul-23	-38.5
Box Culvert BC3 (CH216 to CH264)		24.0	25-Jul-23	22-Aug-23	-38.5
S1-BC1120-1	Backfilling from Bay 19 to Bay 21 (3465m3)	24.0	25-Jul-23	22-Aug-23	-38.5
Box Culvert BC3 (CH264 to CH282.799) and Outfall 10		90.5	24-Jun-23 A	11-Oct-23	234.5
Revised Outfall		12.0	24-Jun-23 A	08-Jul-23 A	
S1-BC1330	Outfall - Construct base slab and wing walls	12.0	24-Jun-23 A	08-Jul-23 A	
Bay 22 to 24		41.0	22-Aug-23	11-Oct-23	-38.5
S1-BC1125	Construction of haul road and preparation works for Bay 23, Bay 24	21.0	22-Aug-23	15-Sep-23	-38.5
S1-BC1130	Construction of a temporary drainage	20.0	15-Sep-23	11-Oct-23	-38.5
Drainage, Sewerage, Waterworks and Road Works		300.0	04-Jan-23 A	24-Nov-23	122.6
Along Ma Sik Road		69.0	24-Jul-23	13-Oct-23	-41.0
TTA - Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary		69.0	24-Jul-23	13-Oct-23	-41.0
S1-CS1240	Implement TTA	10.0	24-Jul-23	03-Aug-23	-41.0
S1-CS1260	UU detection and trial pit	10.0	04-Aug-23	15-Aug-23	-41.0
S1-CS1270	Utility works by others	30.0	16-Aug-23	19-Sep-23	-41.0
S1-CS1293	Fresh water main works (10m) (In dry season)	30.0	16-Aug-23	19-Sep-23	-41.0
S1-CS1295	Flushing water main works (10m) (In dry season)	30.0	16-Aug-23	19-Sep-23	-41.0
S1-CS1300	Reinstatement of road pavement and road marking	12.0	20-Sep-23	05-Oct-23	-41.0
S1-CS1305	Street furniture, road lighting and signage installation	7.0	06-Oct-23	13-Oct-23	-41.0
Along Proposed Cycletrack and Footpath		300.0	04-Jan-23 A	24-Nov-23	122.6
Works in Portion I		261.0	04-Jan-23 A	24-Nov-23	60.0
Works in Portion I CT73 (Ch400 to Ch649)		249.0	04-Jan-23 A	10-Nov-23	-38.0
S1-CS1472	Irrigation system (CT73 Ch400 to Ch649 total 249m)	85.0	01-Aug-23	10-Nov-23	-41.0
S1-CS1473	Fresh water main works (CT73 Ch400 to Ch649 total 249m)	85.0	04-Jan-23 A	19-Aug-23	-38.0
S1-CS1474	Flushing water main works (CT73 Ch400 to Ch649 total 249m)	85.0	04-Jan-23 A	19-Aug-23	-38.0
S1-CS1475	U-Channel along the Cycletrack(CT73 Ch400 to Ch649 total 249m)	85.0	01-Aug-23	10-Nov-23	-38.0
Works in Portion I CT74		80.0	21-Aug-23	24-Nov-23	60.0
S1-CS1493	Fresh water main works (CT74 Ch100 to Ch281 total 181m)	80.0	21-Aug-23	24-Nov-23	60.0
S1-CS1495	Flushing water main works (CT74 Ch100 to Ch281 total 181m)	80.0	21-Aug-23	24-Nov-23	60.0
Works in Portion II CT71 (Ch100 to Ch369.376)		85.0	09-Jan-23 A	25-Sep-23	172.5
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	25-Sep-23	172.5
Works in Portion III CT76 (Ch100 to Ch298.277)		104.0	08-Jul-23	09-Nov-23	85.0
Sewerage		104.0	08-Jul-23	09-Nov-23	52.0
S1-CS1810-4	CE149 - Sewerage DN600 - Dismantle of TBM at receiving pit and maintenance of TBM	6.0	08-Jul-23	14-Jul-23	-7.0
S1-CS1810-5	CE149 - Sewerage DN600 - Setup for trenchless construction at FMH_FL1.19A (from FL1.19A to C4 boundary)	18.0	15-Jul-23	04-Aug-23	-7.0
S1-CS1810-6	CE149 - Sewerage DN600 - Construction of sewerage from FMH_FL1.19A to C4 boundary	26.0	05-Aug-23	04-Sep-23	-7.0
S1-CS1810-7	CE149 - Sewerage DN600 - Dismantle of TBM at receiving pit	6.0	05-Sep-23	11-Sep-23	-7.0
S1-CS1820-3	CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.19	48.0	15-Jul-23	08-Sep-23	-5.0
S1-CS1820-4	CE149 - Sewerage DN600 - Removal of sheetpiles and backfilling at FMH_FL1.19	12.0	09-Sep-23	22-Sep-23	90.0
S1-CS1820-5	CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.19A	48.0	12-Sep-23	09-Nov-23	-7.0
Remaining Works (next to Portion V - approx 64m)		33.0	23-Sep-23	03-Nov-23	90.0
S1-CS1575-1	Drainage work (SMH_FL2005 to SMH_FL2008 Remaining 64m) (CE027 Original:1nos Manhole)	33.0	23-Sep-23	03-Nov-23	90.0



Actual Work
Remaining Work
Critical Remaining Work
Milestone

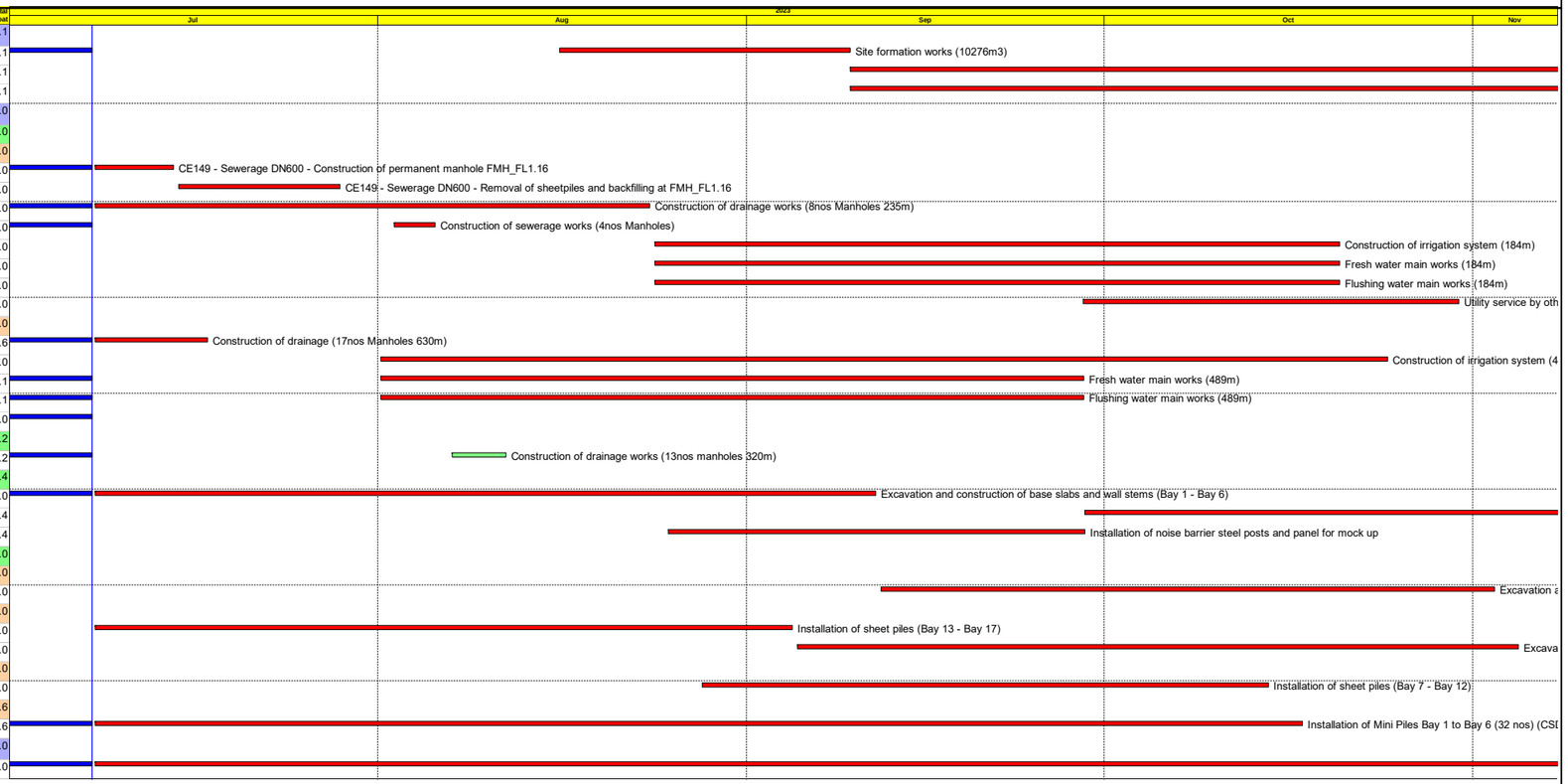
中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

Three Month Rolling Programme (Data Date : 08-Jul-23)

Date	Revision	Checked	Approved
08-Jul-23	RDWPC1	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
Section 4- Site Formation and Infrastructure Works in Area D		388.6	04-Feb-22 A	04-Dec-23	-105.1
S4-SF1120	Site formation works (10276m3)	80.0	04-Feb-22 A	09-Sep-23	-105.1
S4-SF1125	Construction of open channel (257m)	70.0	09-Sep-23	04-Dec-23	-105.1
S4-SF1130	Irrigation system (250m)	50.0	09-Sep-23	10-Nov-23	-85.1
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		427.0	09-Mar-22 A	29-Dec-23	-20.0
Road L1		427.0	09-Mar-22 A	29-Dec-23	-20.0
Road L1 in Portion V (P600 CH100 to CH194)		258.9	11-Oct-22 A	30-Oct-23	-98.0
S1-CS1820-1	CE149 - Sewerage DN600 - Construction of permanent manhole FMH_FL1.16	45.0	08-Jun-23 A	14-Jul-23	-103.0
S1-CS1820-2	CE149 - Sewerage DN600 - Removal of sheetpiles and backfilling at FMH_FL1.16	12.0	15-Jul-23	28-Jul-23	-103.0
S5-RD1345	Construction of drainage works (8nos Manholes 235m)	80.0	30-Nov-22 A	23-Aug-23	-113.0
S5-RD1350	Construction of sewerage works (4nos Manholes)	46.0	11-Oct-22 A	05-Aug-23	-98.0
S5-RD1360	Construction of irrigation system (184m)	48.0	24-Aug-23	20-Oct-23	-113.0
S5-RD1370	Fresh water main works (184m)	48.0	24-Aug-23	20-Oct-23	-108.0
S5-RD1375	Flushing water main works (184m)	48.0	24-Aug-23	20-Oct-23	-108.0
S5-RD1380	Utility service by others	24.0	29-Sep-23	30-Oct-23	-98.0
Road L1 in Portion IV (P600 CH194 to CH393, P700 CH100 to CH175)		427.0	09-Mar-22 A	29-Dec-23	-20.0
S5-RD1180	Construction of drainage (17nos Manholes 630m)	85.0	09-Mar-22 A	17-Jul-23	-32.6
S5-RD1185	Construction of irrigation system (489m)	70.0	01-Aug-23	24-Oct-23	-45.0
S5-RD1200	Fresh water main works (489m)	70.0	23-Feb-23 A	29-Sep-23	-26.1
S5-RD1210	Flushing water main works (489m)	70.0	23-Feb-23 A	29-Sep-23	-26.1
S5-RD1220	Road pavement works	75.0	10-Jun-23 A	29-Dec-23	-20.0
Road L2		80.0	13-Dec-22 A	11-Aug-23	15.2
S5-RD1500	Construction of drainage works (13nos manholes 320m)	80.0	13-Dec-22 A	11-Aug-23	15.2
Noise Barrier NB62		333.3	14-Nov-22 A	12-Dec-23	-43.4
S5-NB1060	Excavation and construction of base slabs and wall stems (Bay 1 - Bay 6)	70.0	14-Nov-22 A	11-Sep-23	-28.0
S5-NB1080	Installation of noise barrier steel posts	60.0	29-Sep-23	12-Dec-23	-43.4
S5-NB1080-1	Installation of noise barrier steel posts and panel for mock up	30.0	25-Aug-23	29-Sep-23	-43.4
Noise Barrier NB63		100.0	10-May-23 A	04-Nov-23	-14.0
Noise Barrier NB63 (Bay 18 to Bay 21)		42.0	12-Sep-23	02-Nov-23	-12.0
S1-NB1275	Excavation and construction of base slab (Bay 18 - Bay 21)	42.0	12-Sep-23	02-Nov-23	-12.0
Noise Barrier NB63 (Bay 13 to Bay 17)		100.0	08-Jul-23	04-Nov-23	-24.0
S1-NB1200	Installation of sheet piles (Bay 13 - Bay 17)	50.0	08-Jul-23	04-Sep-23	-72.0
S1-NB1210	Excavation and installation of lateral support (Bay13 - Bay17)	50.0	05-Sep-23	04-Nov-23	-24.0
Noise Barrier NB63 (Bay 7 to Bay 12)		40.0	28-Aug-23	14-Oct-23	-72.0
S1-NB1205	Installation of sheet piles (Bay 7 - Bay 12)	40.0	28-Aug-23	14-Oct-23	-72.0
Noise Barrier NB63 (Bay 1 to Bay 6)		90.0	10-May-23 A	17-Oct-23	-73.6
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	17-Oct-23	-73.6
Section 6- Completion of Preservation And Protection Of Existing Trees		1146.0	31-Aug-20 A	06-Nov-24	-39.0
S6-CS1000	Preservation and protection of trees	1146.0	31-Aug-20 A	06-Nov-24	-39.0

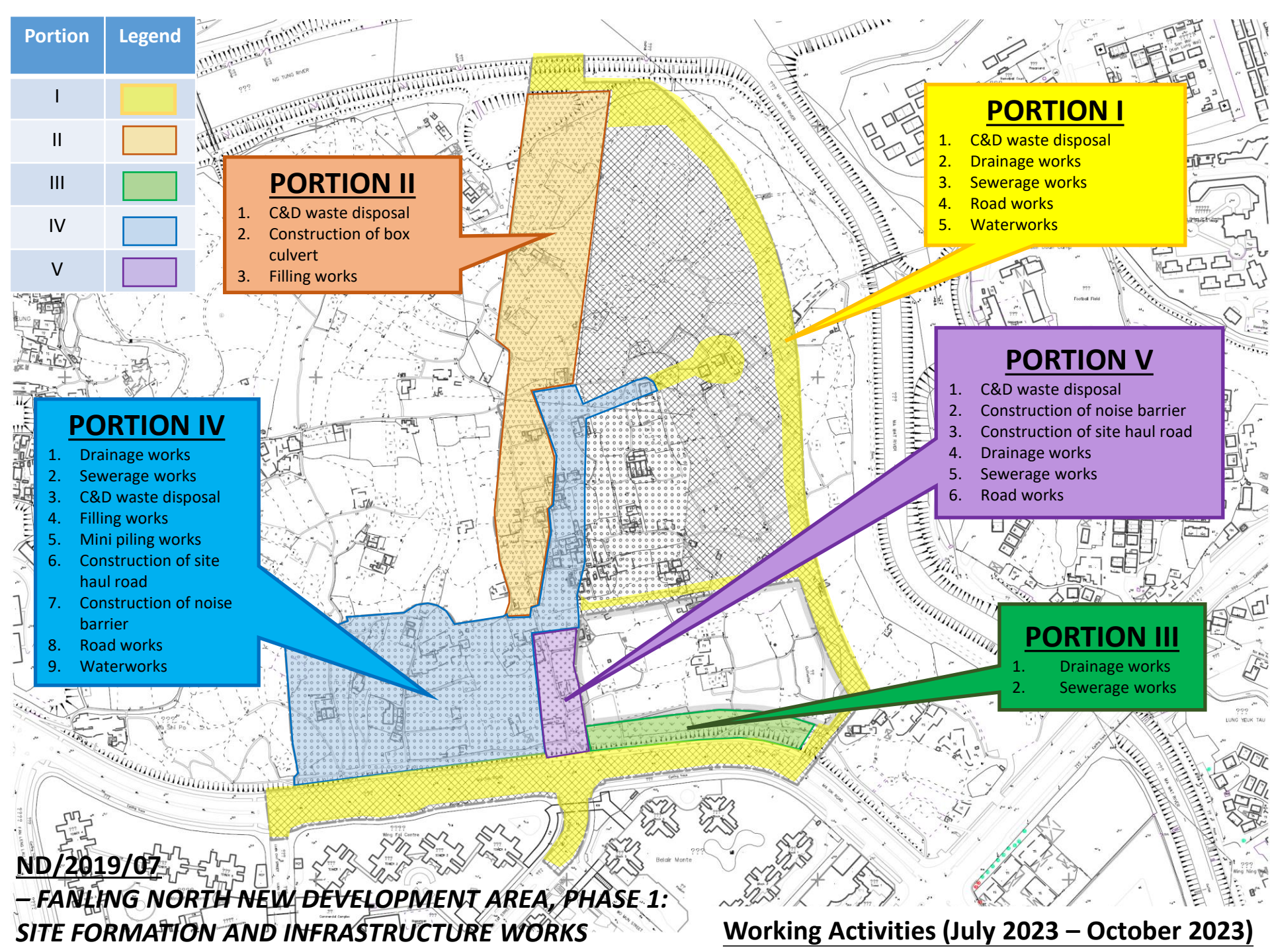


Actual Work
Remaining Work
Critical Remaining Work
Milestone

中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

Three Month Rolling Programme (Data Date : 08-Jul-23)

Date	Revision	Checked	Approved
08-Jul-23	RDWPC1	ST	CLX



ND/2019/07

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

Working Activities (July 2023 – October 2023)

APPENDIX B
ACTION AND LIMIT LEVELS

Appendix B - Action and Limit Levels

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

Monitoring station	Action Level (ug/m^3)	Limit Level (ug/m^3)
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^3)	Limit Level (ug/m^3)
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(1)

Parameters	Action Level	Limit Level
DO in mg/L (depth average)#+	5 percentile of baseline data.	4 mg/L or 1 percentile of baseline data.
SS in mg/L (depth averaged)*&	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)*^	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)*~	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)(1)

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

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	**9.36ng/m^3** - 80% of 11.7ng/m3 – the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented)	**11.7ng/m^3** - 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_2	<19% v/v	Increase underground ventilation to restore O_2 to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O_2 level to >19%
CH_4	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH_4 to <10% LEL
CO_2	>0.5% v/v	Increase ventilation to restore C O_2 to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO_2 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 – July

Monitoring Parameter	Action Level	Limit Level
Mean abundance of bird	341	244
Mean abundance of *Ardeola bacchus*	16	12
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– July

Monitoring Parameter	Action Level	Limit Level
Mean abundance of birds*	9	6
Mean abundance of *Ardeola bacchus*	6	5
*Large waterbirds: *Ardea alba, Ardea cinerea, Ardea intermedia, Egretta eulophotes, Egretta garzetta* and *Phalacrocorax carbo*		

Table B-8.3Action and Limit Levels of Declines in Aquatic Fauna– July

Monitoring Station		Action Level (Species richness of native species)	Limit Level (Species richness of native species)
MS_01	Macroinvertebrates	NA	NA
	Fish	NA	NA
MS_02 & MS_03	Macroinvertebrates	NA	1
	Fish	NA	NA
MS_04, MS_06 & MS_07	Macroinvertebrates	NA	NA
	Fish	NA	NA
MS_05	Macroinvertebrates	NA	NA
	Fish	NA	NA
MS_08, MS_09 & MS_10	Macroinvertebrates	NA	1
	Fish	NA	NA
MS_11	Macroinvertebrates	NA	NA
	Fish	NA	NA
MS_12	Macroinvertebrates	NA	NA
	Fish	NA	NA

MS_13 & MS_14	Macroinvertebrates	NA	NA
	Fish	NA	NA
MS_15	Macroinvertebrates	NA	NA
	Fish	NA	NA

Table B-8.4 Action and Limit Levels of Declines in the Seasonal Non-aquatic Fauna (Herptofauna, Butterfly and Odonates) in Ecologically Sensitive Habitats– July

Monitoring Parameter	Transect	Action Level	Limit Level
Monthly species richness of native species of herpetofauna	T1	6	5
	T3	5	4
	T4	4	3
	T5	NA	1
	T6	5	4
Monthly species richness of butterflies	T1	20	14
	T3	8	6
	T4	9	7
	T5	6	4
	T6	11	8
Month species richness of native species of odonates	T1	13	9
	T3	9	7
	T4	4	3
	T5	2	1
	T6	7	5

Table B-8.5 Action and Limit Levels of Declines in the Non-seasonal Non-aquatic Fauna (Mammals) in Ecologically Sensitive Habitats– July

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

APPENDIX C
COPIES OF CALIBRATION CERTIFCATES

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WELLAB LIMITED
Room 1714, Technology Park
18 On Lai Street, Shatin
New Territories, Hong Kong
Tel: 2898 7388 Fax: 2898 7076
Website : www.wellab.com.hk

TEST REPORT

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

Test Report No.:	38570
Date of Issue:	2023-07-10
Date Received:	2023-07-08
Date Tested:	2023-07-08
Date Completed:	2023-07-10
Next Due Date:	2023-09-09
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)	1.128

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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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:	8-Jul-23	8-Jul-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	36	43
2	48	57
3	70	79
4	82	89
5	97	107
Average	**66.4**	**74.9**

By Linear Regression of Y on X

Slope , mw = **1.0195** **Intercept, bw =** **7.1880**

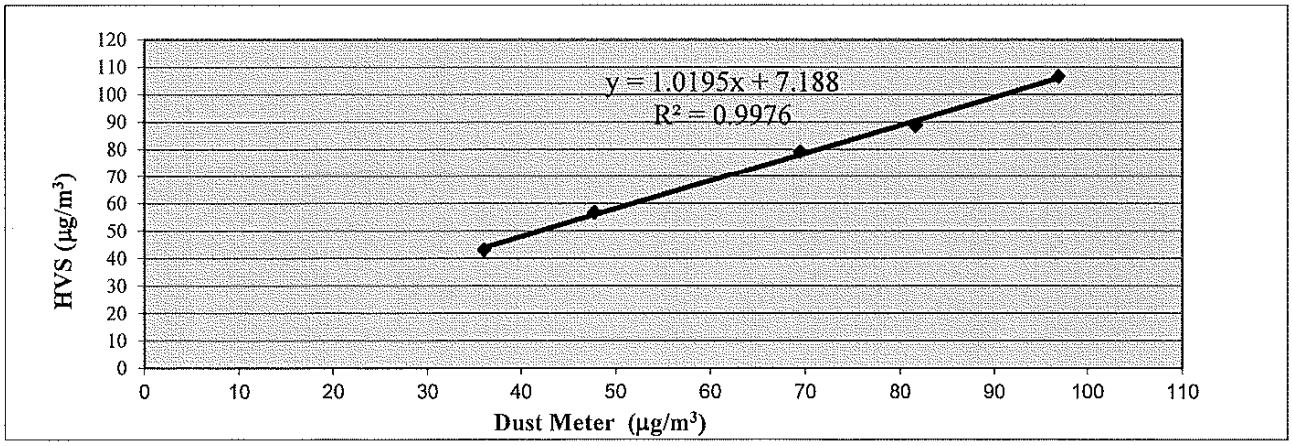
Correlation coefficient* = **0.9988**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	74.9
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	66.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] **1.128**



QC Reviewer: LEE MAN HIN Signature: [signature] Date: 8/7/23

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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.:	38174A
Date of Issue:	2023-05-08
Date Received:	2023-05-05
Date Tested:	2023-05-05
Date Completed:	2023-05-08
Next Due Date:	2023-07-07
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)	1.178

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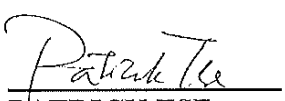
For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
General Manager

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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:	5-May-23	5-May-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	32	41
2	47	53
3	63	76
4	77	90
5	90	103
Average	**61.7**	**72.7**

By Linear Regression of Y on X

Slope , mw = **1.0956** **Intercept, bw =** **5.1073**

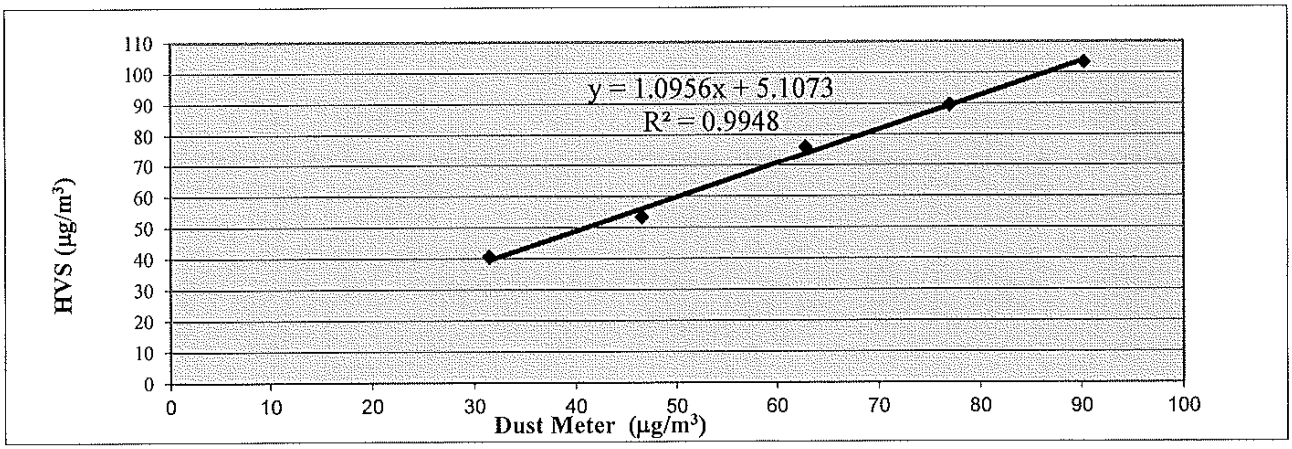
Correlation coefficient* = **0.9974**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	72.7
Particaulate Concentration by Dust Meter (μg/m³)	61.7
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.178**



QC Reviewer: [signature] Signature: [signature] Date: 5/5/2023

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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.:	38570A
Date of Issue:	2023-07-10
Date Received:	2023-07-08
Date Tested:	2023-07-08
Date Completed:	2023-07-10
Next Due Date:	2023-09-09
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)	1.180

****

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PATRICK TSE
General Manager

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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:	8-Jul-23	8-Jul-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m^3) **X-axis**	Mass concentration (μg/m^3) **Y-axis**
1	34	43
2	49	57
3	67	79
4	76	89
5	92	107
Average	**63.5**	**74.9**

By Linear Regression of Y on X

Slope , mw = **1.1047** **Intercept, bw =** **4.7548**

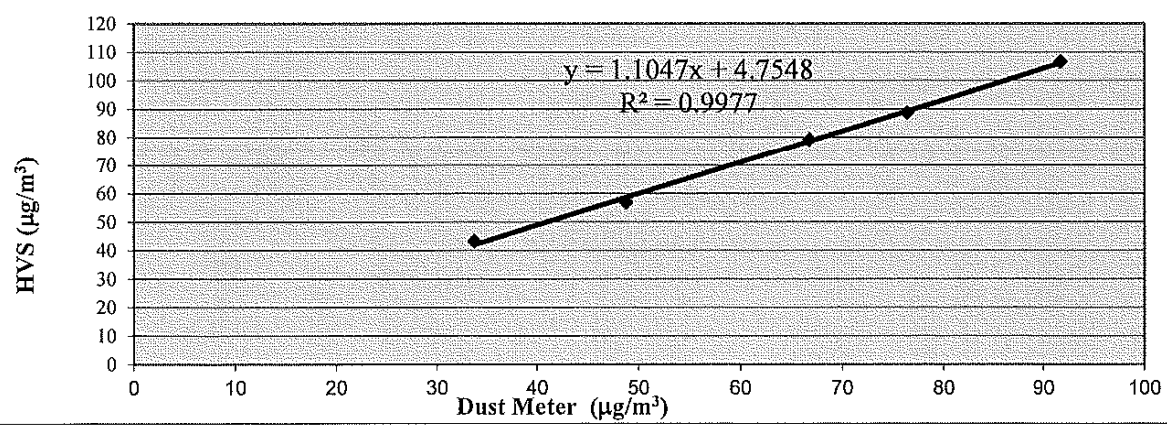
Correlation coefficient* = **0.9989**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m^3)	74.9
Particaulate Concentration by Dust Meter (μg/m^3)	63.5
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m^3)] **1.180**



QC Reviewer: LEE MAN HEE Signature: [signature] Date: 8/7/23

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Website : www.wellab.com.hk

TEST REPORT

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

Test Report No.:	38570B
Date of Issue:	2023-07-10
Date Received:	2023-07-08
Date Tested:	2023-07-08
Date Completed:	2023-07-10
Next Due Date:	2023-09-09
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)	1.186

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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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:	8-Jul-23	8-Jul-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	33	43
2	48	57
3	67	79
4	77	89
5	91	107
Average	**63.1**	**74.9**

By Linear Regression of Y on X

Slope , mw = **1.0996** **Intercept, bw =** **5.4713**

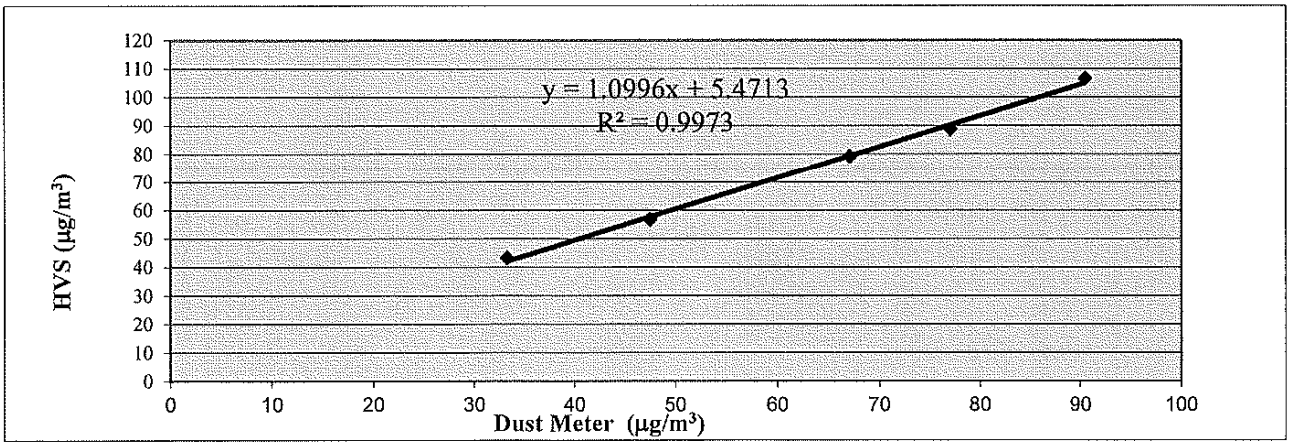
Correlation coefficient* = **0.9987**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	74.9
Particaulate Concentration by Dust Meter (µg/m^3)	63.1
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.186**



QC Reviewer: Lee Mun Hee Signature: lee Date: 8/7/23

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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.:	38570
Date of Issue:	2023-07-10
Date Received:	2023-07-08
Date Tested:	2023-07-08
Date Completed:	2023-07-10
Next Due Date:	2023-09-09
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)	1.123

****

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

PATRICK TSE
General Manager

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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:	8-Jul-23	8-Jul-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m^3) **X-axis**	Mass concentration (μg/m^3) **Y-axis**
1	37	43
2	50	57
3	68	79
4	81	89
5	97	107
Average	**66.7**	**74.9**

By Linear Regression of Y on X

Slope , mw = **1.0545** **Intercept, bw =** **4.5425**

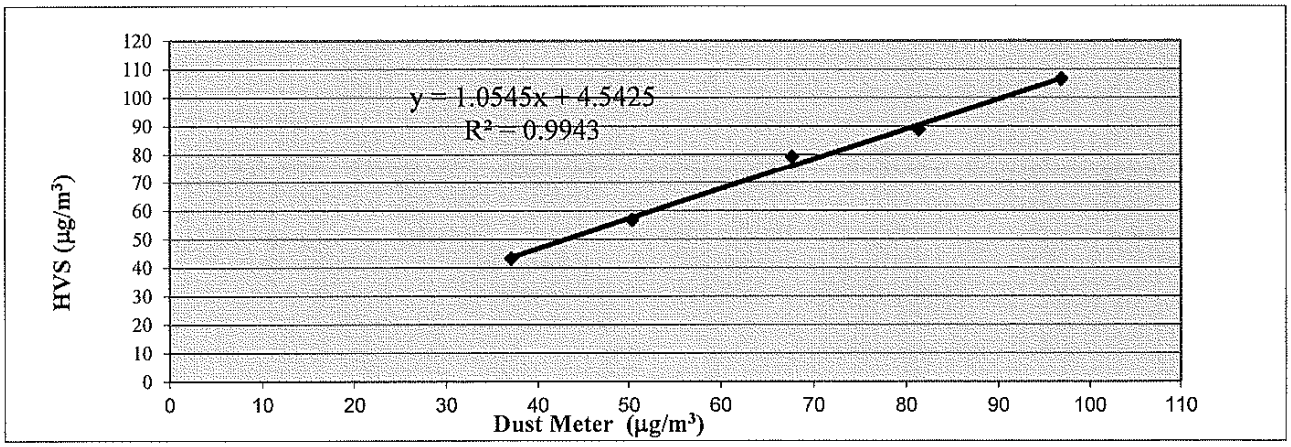
Correlation coefficient* = **0.9971**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m^3)	74.9
Particaulate Concentration by Dust Meter (μg/m^3)	66.7
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m^3)] **1.123**



QC Reviewer: LEE MAN HEE Signature: [signature] Date: 8/7/23

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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.:	38469
Date of Issue:	2023-06-26
Date Received:	2023-06-23
Date Tested:	2023-06-23
Date Completed:	2023-06-26
Next Due Date:	2023-08-25
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)	1.145

****

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PATRICK TSE
General Manager

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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:	23-Jun-23	23-Jun-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	17	20
2	29	37
3	54	62
4	66	74
5	89	99
Average	**51.2**	**58.6**

By Linear Regression of Y on X

Slope , mw = **1.0773** **Intercept, bw =** **3.4629**

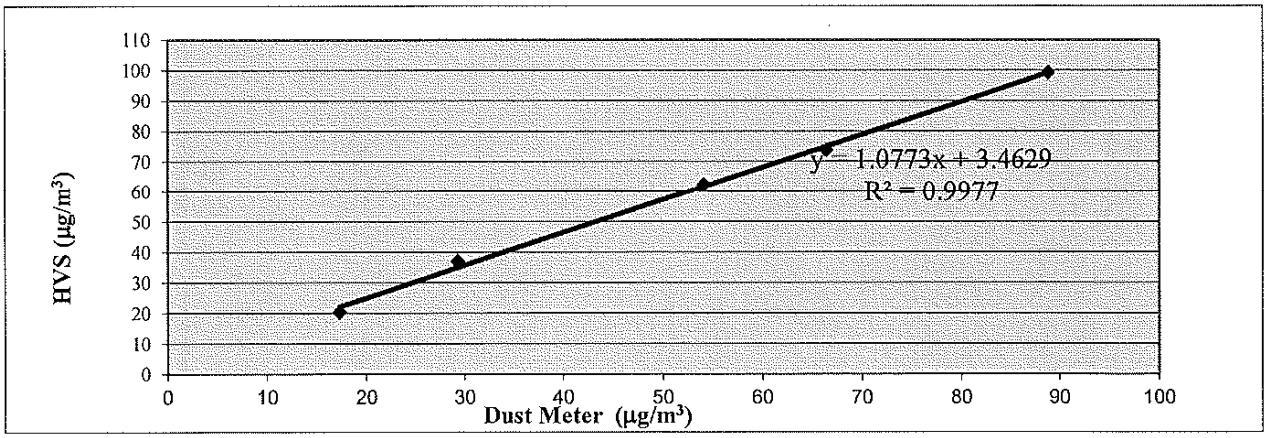
Correlation coefficient* = **0.9988**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	58.6
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	51.2
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] **1.145**



QC Reviewer: LEE MAN HIN Signature: Date: 24/6/23

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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.:	38469A
Date of Issue:	2023-06-26
Date Received:	2023-06-23
Date Tested:	2023-06-23
Date Completed:	2023-06-26
Next Due Date:	2023-08-25
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)	1.129

****

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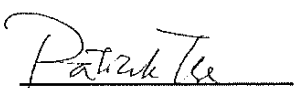

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General Manager

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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-Jun-23	23-Jun-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	16	20
2	30	37
3	55	62
4	69	74
5	88	99
Average	**51.9**	**58.6**

By Linear Regression of Y on X

Slope , mw = 1.0640 **Intercept, bw =** 3.3756

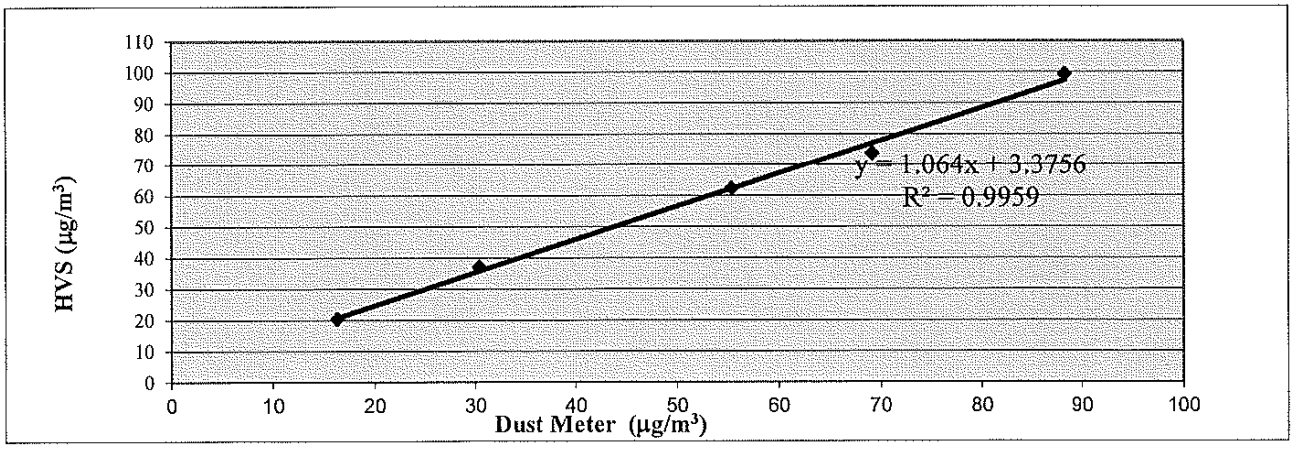
Correlation coefficient* = 0.9980

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	58.6
Particaulate Concentration by Dust Meter (µg/m^3)	51.9
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] 1.129



QC Reviewer: CBB MBN MBN Signature: [signature] Date: 24/6/23

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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.:	38174D
Date of Issue:	2023-05-08
Date Received:	2023-05-05
Date Tested:	2023-05-05
Date Completed:	2023-05-08
Next Due Date:	2023-07-07
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)	1.144

****

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PATRICK TSE
General Manager

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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:	5-May-23	5-May-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	33	41
2	47	53
3	68	76
4	79	90
5	91	103
Average	**63.5**	**72.7**

By Linear Regression of Y on X

Slope , mw = 1.0980 **Intercept, bw =** 2.9181

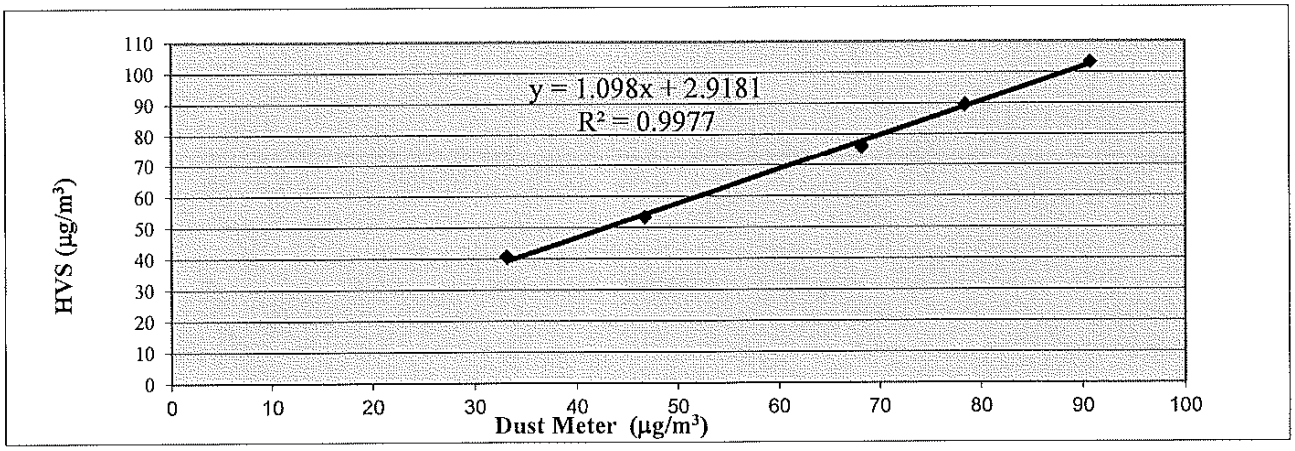
Correlation coefficient* = 0.9988

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	72.7
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	63.5
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] 1.144



QC Reviewer: [illegible] Signature: [illegible] Date: 8/5/2023

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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.:	38570D
Date of Issue:	2023-07-10
Date Received:	2023-07-08
Date Tested:	2023-07-08
Date Completed:	2023-07-10
Next Due Date:	2023-09-09
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)	1.106

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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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:	8-Jul-23	8-Jul-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	38	43
2	51	57
3	70	79
4	83	89
5	96	107
Average	**67.7**	**74.9**

By Linear Regression of Y on X

Slope , mw = **1.0676** **Intercept, bw =** **2.6230**

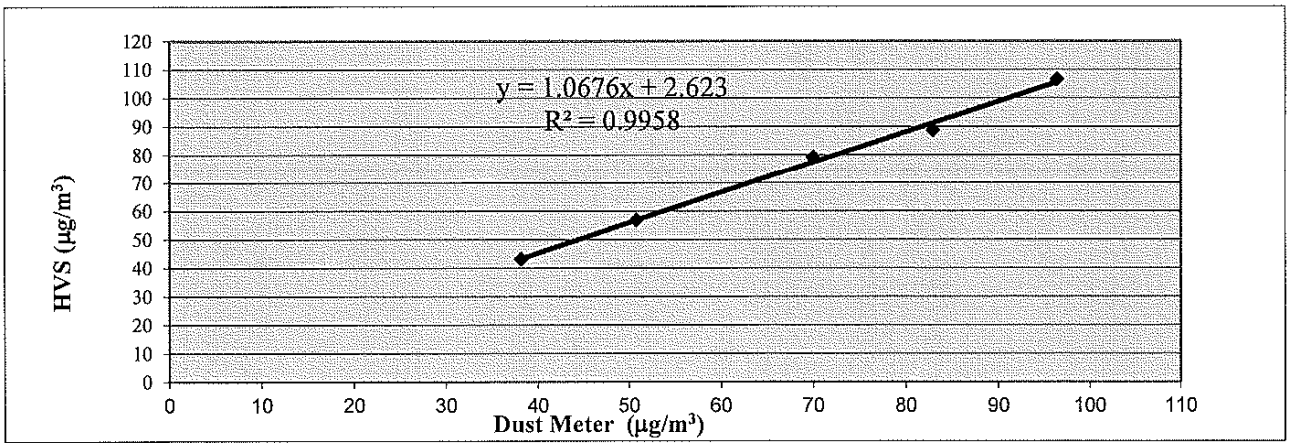
Correlation coefficient* = **0.9979**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	74.9
Particaulate Concentration by Dust Meter (µg/m^3)	67.7
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.106**



QC Reviewer: Lee Mun Hee Signature: hee Date: 8/7/23

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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.:	38469B
Date of Issue:	2023-06-26
Date Received:	2023-06-23
Date Tested:	2023-06-23
Date Completed:	2023-06-26
Next Due Date:	2023-08-25
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)	1.184

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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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:	23-Jun-23	23-Jun-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m^3) **X-axis**	Mass concentration (μg/m^3) **Y-axis**
1	16	20
2	27	37
3	54	62
4	63	74
5	87	99
Average	**49.5**	**58.6**

By Linear Regression of Y on X

Slope , mw = **1.0837** **Intercept, bw =** **4.9752**

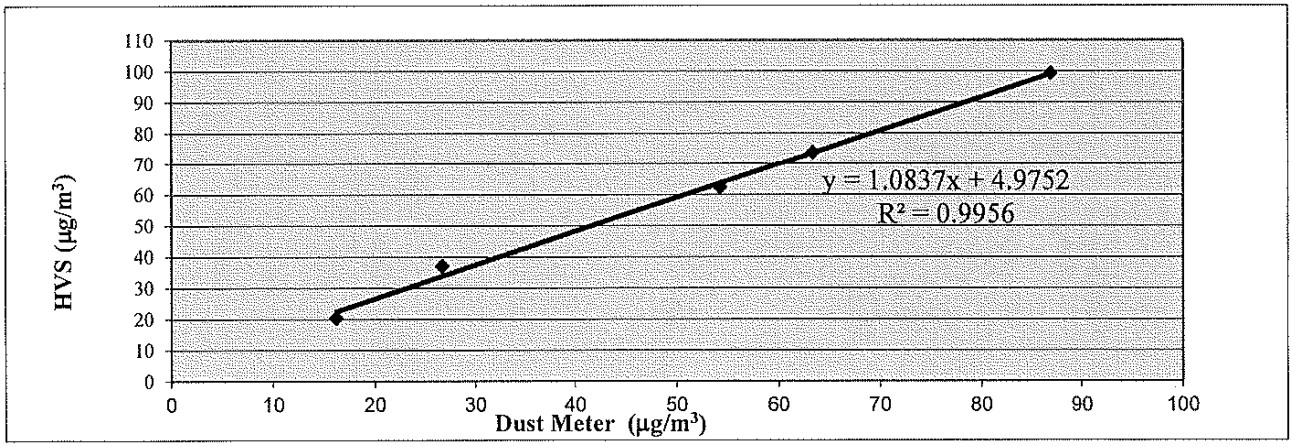
Correlation coefficient* = **0.9978**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m^3)	58.6
Particaulate Concentration by Dust Meter (μg/m^3)	49.5
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m^3)] **1.184**



QC Reviewer: Lee Mon Hee Signature: hei Date: 24/6/23

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Website : www.wellab.com.hk

TEST REPORT

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

Test Report No.:	38469C
Date of Issue:	2023-06-26
Date Received:	2023-06-23
Date Tested:	2023-06-23
Date Completed:	2023-06-26
Next Due Date:	2023-08-25
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.	: X23811
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-09

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)	1.136

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
Laboratory Manager

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TSP - Total Suspended Particulates (1 hr Dust Meter)
Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-09	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23811	2203
Calibration Date:	23-Jun-23	23-Jun-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	15	20
2	31	37
3	54	62
4	66	74
5	92	99
Average	**51.6**	**58.6**

By Linear Regression of Y on X

Slope , mw = **1.0267** **Intercept, bw =** **5.6437**

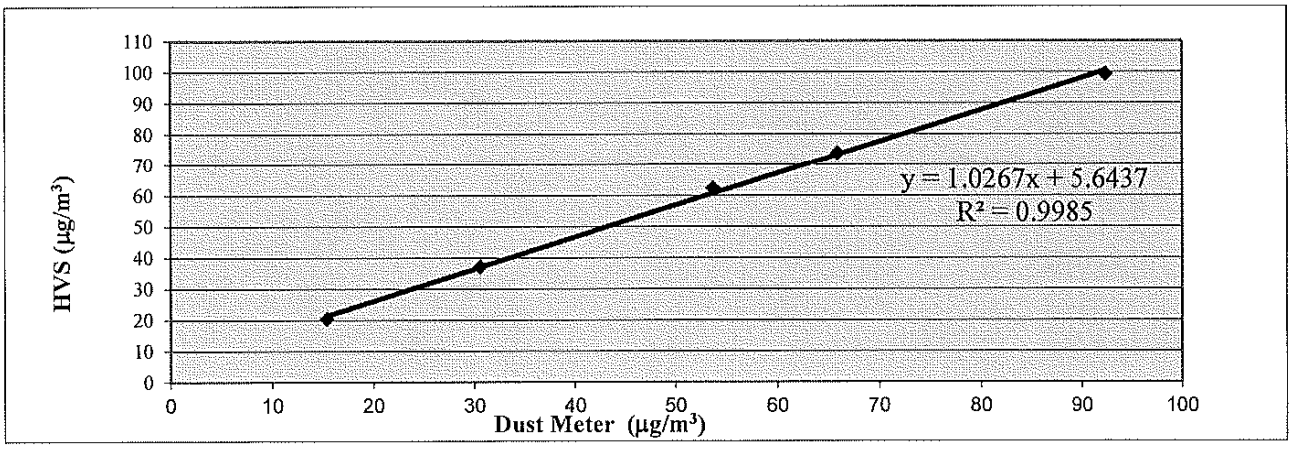
Correlation coefficient* = **0.9993**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	58.6
Particaulate Concentration by Dust Meter (µg/m^3)	51.6
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.136**



QC Reviewer: LEE MUN YEW Signature: _____ Date: 24/6/23

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WELLAB LIMITED
Room 1714, Technology Park
18 On Lai Street, Shatin
New Territories, Hong Kong
Tel: 2898 7388 Fax: 2898 7076
Website : www.wellab.com.hk

TEST REPORT

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

Test Report No.:	38469D
Date of Issue:	2023-06-26
Date Received:	2023-06-23
Date Tested:	2023-06-23
Date Completed:	2023-06-26
Next Due Date:	2023-08-25
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)	1.214

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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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-Jun-23	23-Jun-23
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m^3) **X-axis**	Mass concentration (μg/m^3) **Y-axis**
1	15	20
2	27	37
3	50	62
4	63	74
5	87	99
Average	**48.3**	**58.6**

By Linear Regression of Y on X

Slope , mw = **1.0699** **Intercept, bw =** **6.9634**

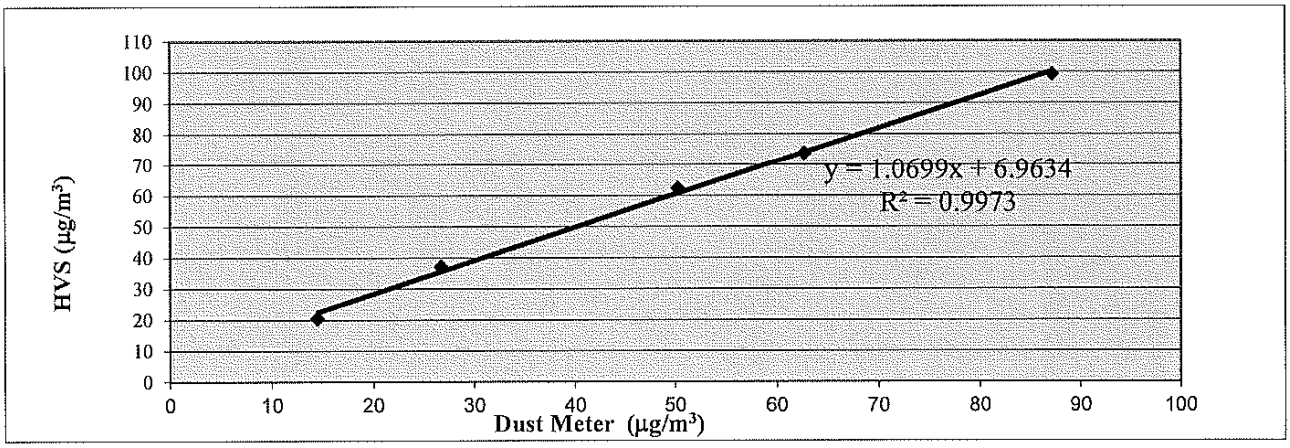
Correlation coefficient* = **0.9986**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m^3)	58.6
Particaulate Concentration by Dust Meter (μg/m^3)	48.3
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m^3)] **1.214**



QC Reviewer: Lee Man Hee Signature: [signature] Date: 24/6/23

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. Cal./230505

Equipment No.: WA-12-09 Serial No. 2203

Model No. TE-5170 Cal. Date: 5-May-23

Operator: HL

Ambient Condition			
Temperature, Ta (K)	294.3	Pressure, Pa (mmHg)	761.2

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	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	11.9	3.47	61.23	7.5	2.76
2	9.4	3.09	54.50	6.0	2.47
3	8.6	2.95	52.16	5.7	2.40
4	5.7	2.40	42.60	3.6	1.91
5	3.6	1.91	34.01	2.5	1.59

By Linear Regression of Y on X

Slope , mw = 0.0437 **Intercept, bw :** 0.0881

Correlation coefficient* = 0.9981

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.82**

Remarks:

Conducted by: Hk MW HLY Signature: Date: 5/5/2023

Checked by: Ho Ka chun Signature: Date: 5/5/23

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. Cal./230623

Equipment No.: WA-12-09 Serial No. 2203

Model No. TE-5170 Cal. Date: 23-Jun-23

Operator: HL

Ambient Condition			
Temperature, Ta (K)	293.3	Pressure, Pa (mmHg)	757

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	**mc x 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	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.0	3.48	61.42	7.8	2.81
2	9.4	3.08	54.44	6.2	2.50
3	8.8	2.98	52.70	5.7	2.40
4	5.6	2.38	42.19	3.9	1.99
5	3.7	1.94	34.44	2.7	1.65

By Linear Regression of Y on X

Slope , mw = 0.0425 **Intercept, bw :** 0.1868

Correlation coefficient* = 0.9995

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.01**

Remarks:

Conducted by: CE MOW 462 Signature: Date: 23/6/2023

Checked by: Ho Ka Chu Signature: Date: 23/6/2023

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. Cal./230708

Equipment No.: WA-12-09 Serial No. 2203

Model No. TE-5170 Cal. Date: 8-Jul-23

Operator: HL

Ambient Condition			
Temperature, Ta (K)	294	Pressure, Pa (mmHg)	760.3

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0574	Intercept, bc	-0.04292
Last Calibration Date:	16-Jan-23	**mc x 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	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.0	3.49	61.48	8.0	2.85
2	9.8	3.15	55.63	6.5	2.57
3	8.3	2.90	51.25	5.7	2.40
4	5.7	2.40	42.60	4.0	2.01
5	3.6	1.91	34.01	2.4	1.56

By Linear Regression of Y on X

Slope , mw = 0.0463 **Intercept, bw :** 0.0111

Correlation coefficient* = 0.9988

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 3.95

Remarks:

Conducted by: 許 明 煌 Signature: Date: 8/7/2023

Checked by: 盧 家 鼎 Signature: Date: 8/7/23

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

Station	FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	File No.	WMA20002/20/0019
Date:	16-Jun-23	Next Due Date:	15-Aug-23
Model No.	TE-5170	Operator:	HL
Equipment No.:	WA-12-20	Serial No.	3223

Ambient Condition			
Temperature, Ta (K)	299.6	Pressure, Pa (mmHg)	755.3

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	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	14.1	3.73	65.74	9.6	3.08
2	12.6	3.53	62.19	8.7	2.93
3	9.8	3.11	54.93	6.9	2.61
4	5.3	2.29	40.60	4.2	2.04
5	3.6	1.89	33.59	2.9	1.69

By Linear Regression of Y on X

Slope , mw = **0.0426** **Intercept, bw =** **0.2800**

Correlation coefficient* = **0.9996**

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.52**

Remarks:

Conducted by: Lee Man Hin Signature: Date: 16/6/2023

Checked by: Ho Ka Chun Signature: Date: 16/6/2023

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

Station	FLN-DMS3 - House near Tong Hang	File No.	WMA20002/17/0019
Date:	16-Jun-23	Next Due Date:	15-Aug-23
Model No.	TE-5170	Operator:	HL
Equipment No.:	WA-12-17	Serial No.	3218

Ambient Condition			
Temperature, Ta (K)	299.7	Pressure, Pa (mmHg)	755.6

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	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	14.3	3.76	66.20	9.6	3.08
2	11.6	3.39	59.70	7.7	2.76
3	9.5	3.06	54.10	6.8	2.59
4	5.8	2.39	42.43	4.4	2.09
5	3.6	1.89	33.59	2.8	1.66

By Linear Regression of Y on X

Slope , mw = **0.0426** **Intercept, bw :** **0.2526**

Correlation coefficient* = **0.9985**

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.40**

Remarks:

Conducted by: Ho Man Hei Signature: Date: 16/6/2023

Checked by: Ho Lee Chi Signature: Date: 16/6/23

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RSP - Respirable Suspended Particulates Sampler (PM 10)
Field Calibration Report

Station	KTN-DMS4A - Temporary Structure at Pak Shek Au	File No.	WMA20002/03/0019
Date:	3-Jul-23	Next Due Date:	2-Sep-23
Model No.	TE-6070X	Operator:	HL
Equipment No.:	WA-11-03	Serial No.	3225

Ambient Condition			
Temperature, Ta (K)	298.8	Pressure, Pa (mmHg)	758.5

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	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) **X -axis**	Qa (3) (m^3/min) **X -axis**	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ **Y-axis**
1	10.7	10.65	57.56	57.83	1.64	8	1.86
2	8.6	8.56	51.68	51.92	1.47	6.7	1.70
3	6.7	6.67	45.71	45.92	1.30	5.4	1.53
4	4.8	4.78	38.80	38.98	1.10	4	1.32
5	2.1	2.09	25.92	26.04	0.74	2	0.93

By Linear Regression of Y on X

Slope , mw = 0.0295 **Intercept, bw =** 0.1680

Correlation coefficient* = 0.9998

(1) DEL Hc = ΔH x (Pa/760*298/Ta)

(2) Qstd = $\{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\}/mc$ (m3/min)

(3) Qa = Qstd x (Ta / Pa) x (760 / 298) (m3/min)

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = 40.12

Sampler Well - Type Manometer Set Point, SSP

SSP = [(mw x SFR + bw)^2 x Pa] / (Ta + 30) = 4.21

Remarks:

Conducted by: [illegible] Signature: [signature] Date: 3/7/2023

Checked by: [illegible] Signature: [signature] Date: 3/7/2023

TISCH Environmental

RECALIBRATION DUE DATE:
January 16, 2024

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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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
QSTD	**m=**	**2.02881**	**QA**	**m=**	**1.27041**
	b=	**-0.04292**		**b=**	**-0.02681**
	r=	**0.99998**		**r=**	**0.99998**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
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

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

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WELLAB LIMITED
Room 1714, Technology Park
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New Territories, Hong Kong
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Website : www.wellab.com.hk

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

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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.:	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

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New Territories, Hong Kong
Tel: 2898 7388 Fax: 2898 7076
Website : www.wellab.com.hk

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

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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.:	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

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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.:	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:
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PATRICK TSE
General Manager

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Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	37018
Date of Issue:	2022-08-22
Date Received:	2022-08-19
Date Tested:	2022-08-19
Date Completed:	2022-08-22
Next Due Date:	2023-08-21
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2412367
Equipment No.	: N-02-03

Test Conditions:

Room Temperatre	: 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 ± 0.1dB
At 114 dB SPL	114.0	114.0 ± 0.1dB

Remark: This report supersedes the one dated 2019-08-20 with certificate number 31951.

****

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General Manager

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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.:	37163
Date of Issue:	2022-10-02
Date Received:	2022-09-30
Date Tested:	2022-10-02
Date Completed:	2022-10-02
Next Due Date:	2023-10-01
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

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

Patrick Tse
PATRICK TSE
General Manager

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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.:	37018A
Date of Issue:	2022-08-22
Date Received:	2022-08-19
Date Tested:	2022-08-19
Date Completed:	2022-08-22
Next Due Date:	2023-08-21
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 Temperatre	: 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

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1801, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37163A
Date of Issue:	2022-10-02
Date Received:	2022-09-30
Date Tested:	2022-10-02
Date Completed:	2022-10-02
Next Due Date:	2023-10-01
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

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Miss Mei Ling Tang**

Test Report No.:	38605
Date of Issue:	2023-05-31
Date Received:	2023-05-30
Date Tested:	2023-05-30 to 2023-05-31
Date Completed:	2023-05-31
Page:	1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-21
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J100882
- EXO Optical DO Sensor, Ti	599100-01	17B102223
- EXO conductivity/Temperature Sensor, Ti	599870	17B100797
- EXO Turbidity Sensor, Ti	599101-01	17B100797
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103628

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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General Manager

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TEST REPORT

Test Report No.:	38605
Date of Issue:	2023-05-31
Date Received:	2023-05-30
Date Tested:	2023-05-30 to 2023-05-31
Date Completed:	2023-05-31
Page:	2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (μS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 μS/cm)	13200	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	20.002	-0.002	N/A

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.06	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.89	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.20	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.08	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
8.26	8.12	Difference between Titration value and instrument reading <0.2mg/L	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.24	9.0-11.0	Pass
50 NTU	51.07	45.0-55.0	Pass
100 NTU	103.5	90.0-110.0	Pass

Depth performance checking

Water Depth	Instrument Readings (m)	Accetance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass

**********END OF REPORT**********

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Miss Mei Ling Tang**

Test Report No.:	38423
Date of Issue:	2023-06-21
Date Received:	2023-06-20
Date Tested:	2023-06-20 to 2023-06-21
Date Completed:	2023-06-21
Page:	1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-42	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J102314
- EXO Optical DO Sensor, Ti	599100-01	16J100949
- EXO conductivity/Temperature Sensor, Ti	599870	17A105111
- EXO Turbidity Sensor, Ti	599101-01	16J101144
- EXO pH Sensor Assembly, Guarded, Ti	599701	16J101306

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

****

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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Website: www.wellab.com.hk

TEST REPORT

Test Report No.:	38423
Date of Issue:	2023-06-21
Date Received:	2023-06-20
Date Tested:	2023-06-20 to 2023-06-21
Date Completed:	2023-06-21
Page:	2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (μS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 μS/cm)	13100	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	20.001	-0.001	N/A

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.02	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.88	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.20	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.09	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
8.18	8.05	Difference between Titration value and instrument reading <0.2mg/L	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.04	9.0-11.0	Pass
50 NTU	50.22	45.0-55.0	Pass
100 NTU	101.5	90.0-110.0	Pass

Depth performance checking

Water Depth	Instrument Readings (m)	Accetance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass

**********END OF REPORT**********

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1-3 Wing Yip Street, Kwai Chung
N.T., Hong Kong
T: +852 2610 1044 | F: +852 2610 2021

CERTIFICATE OF ANALYSIS

CONTACT:	MR FUNG	**WORK ORDER:**	HK2238648
CLIENT:	AECOM ASIA COMPANY LIMITED		
ADDRESS:	1501-10, 15/F, TOWER 1, GRAND CENTRAL PLAZA, 138 SHATIN RURAL COMMITTEE ROAD, SHATIN, NEW TERRITORIES, HONG KONG	**SUB BATCH:**	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	03-Oct-2022
		DATE OF ISSUE:	13-Oct-2022

SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.
The performance of the equipment stated in this report is checked with independent reference material and results are compared against a calibrated secondary source.
The "Instrument Specification" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.
The "Date of next Calibration" is recommended according to best practice principles as practised by the laboratory or quoted from relevant international standards.
The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type:	Landfill Gas Analyser
Service Nature:	Performance Check
Scope:	Carbon dioxide, Methane and Oxygen
Brand Name/ Model No.:	OPTIMA7 Biogas
Serial No./Equipment No.:	331555
Date of Calibration:	11 October, 2022

GENERAL COMMENTS

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

Ms Chan Ka Yu, Karen
Manager - Organics

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Work Order: HK2238648
Sub- Batch: 0
Client: AECOM ASIA COMPANY LIMITED
Date of Issue: 13-Oct-2022

Equipment Type: Landfill Gas Analyser
Brand Name/ Model No.: OPTIMA7 Biogas
Serial No./ Equipment No.: 331555
Date of Calibration: 11 October, 2022 Date of next Calibration: 11 October, 2023

Parameters:

Methane

Calibrated Gas Standard, %	Monitor Readout, %	% error	Instrument Specification, %
0.0 (Nitrogen)	0.00	0.00	± 0.30
1.0	1.02	0.02	± 0.30
2.5	2.45	-0.05	± 0.30
50.0	48.57	-1.43	± 2.50

Carbon Dioxide

Calibrated Gas Standard, %	Monitor Readout, %	% error	Instrument Specification, %
0.0 (Nitrogen)	0.00	0.00	± 0.30
1.0	1.08	0.08	± 0.30
2.5	2.58	0.08	± 0.30
10.0	10.02	0.02	± 0.50
50.0	47.50	-2.50	± 2.50

Oxygen

Calibrated Gas Standard, %	Monitor Readout, %	% error	Instrument Specification, %
0.0 (Nitrogen)	0.00	0.00	± 0.20
0.5	0.43	-0.07	± 0.20
2.5	2.54	0.04	± 0.20
10.0	10.14	0.14	± 0.20

Ms Chan Ka Yu, Karen
Manager - Organics

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APPENDIX D
ENVIRONMENTAL MONITORING SCHEDULES

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 (July 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Jul
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
	1hr TSP* X3 KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **24hr TSP** FLN-DMS1, FLN-DMS3	
9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
	1hr TSP* X3 FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3	
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
		24hr RSP (Arsenic) KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
	24hr RSP (Arsenic) KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	
30-Jul	31-Jul					
	1hr TSP* X3 KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3					

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	**1hr TSP and 24hr TSP** 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	**24hr RSP (Arsenic)** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A(1)	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A(2)	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013(3)	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(4)	ND/2019/03	**1hr TSP and 24hr TSP** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A(5)	ND/2019/05	**1hr TSP and 24hr TSP** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A(6)	ND/2019/03	**1hr TSP** FLN-DMS5 - Noble Hill **24hr TSP** FLN-DMS5A - Good View New Village	--
	ND/2019/04		--
EP-473/2013/A(7)	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A(8)	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 exceeds500m. 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 (July 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Jul
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
	~~**Water Quality Monitoring**~~ ~~River Beas, River Indus and near Siu Hang San Tsuen Stream~~		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
30-Jul	31-Jul					
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream					

*The water quality monitoring on 17 July 2023 was cancelled due to the adverse weather.

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	**River Beas** SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	**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

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas

Impact Ecological Monitoring Schedule (July 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Jul
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 10:00 Low tide: Start time: 15:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 10:00 Low tide: Start time: 16:00		Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution T3, T4, T5		
9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
				Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 08:00 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 09:00 Low tide: Start time: 14:00	
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
	~~Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution~~ **~~T1, T6~~**	Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream **MS_01 - MS_15**	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 10:00 Low tide: Start time: 16:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 10:00 Low tide: Start time: 16:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution **T1, T6**	
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 14:00 Low tide: Start time: 08:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 14:00 Low tide: Start time: 10:00				
30-Jul	31-Jul					

*The ecological monitoring on 17 July 2023 was cancelled due to the adverse weather.

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Egretry Monitoring Schedule for July 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Jul
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
			Egretry Monitoring Ho Sheung Heung Egretry Site, Compensation Site A1-7 FLN and B1-7 FLN, Meanders of Split Colony			
30-Jul	31-Jul					

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 July 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Jul
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06) Site Inspection (ND/2019/03)	Site Inspection (ND/2019/07)	
9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
	Site Inspection (ND/2019/05)		Site Inspection (ND/2019/02) Site Inspection (ND/2019/01)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
		Site Inspection (ND/2019/01) Site Inspection (ND/2019/03)	Site Inspection (ND/2019/02) Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/07)	
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)		Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07) Site Inspection (ND/2019/02)	
30-Jul	31-Jul					
	Site Inspection (ND/2019/05)					

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 (August 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Aug	2-Aug	3-Aug	4-Aug	5-Aug
		1hr TSP* X3 FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **24hr TSP** FLN-DMS1, FLN-DMS3	
6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug
	1hr TSP* X3 FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3	
13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug
		24hr RSP (Arsenic) KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		
20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug
	24hr RSP (Arsenic) KTN-DMS4A	**1hr TSP* X3** KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug		
	1hr TSP* X3 KTN-DMS4(B), FLN-DMS5 **24hr TSP*** KTN-DMS4(B), FLN-DMS5A **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A		

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	**1hr TSP and 24hr TSP** 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	**24hr RSP (Arsenic)** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A(1)	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A(2)	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013(3)	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(4)	ND/2019/03	**1hr TSP and 24hr TSP** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A(5)	ND/2019/05	**1hr TSP and 24hr TSP** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A(6)	ND/2019/03	**1hr TSP** FLN-DMS5 - Noble Hill **24hr TSP** FLN-DMS5A - Good View New Village	--
	ND/2019/04		--
EP-473/2013/A(7)	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A(8)	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 exceeds500m. 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 (August 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Aug	2-Aug	3-Aug	4-Aug	5-Aug
			Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug		
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** 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	**River Beas** SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	**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

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 (August 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Aug	2-Aug	3-Aug	4-Aug	5-Aug
		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 11:00 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 09:00 Low tide: Start time: 15:00			
6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug
	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 08:00 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 14:00 Low tide: Start time: 19:00				
13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug
		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 09:00 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 09:00 Low tide: Start time: 15:00	Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream **MS_01 - MS_15**	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution **T1, T6**	
20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug
	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 10:00 Low tide: Start time: 17:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 13:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution T3, T4, T5			
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug		
			Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 09:00 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 10:00 Low tide: Start time: 16:00		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Egretry Monitoring Schedule for August 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Aug	2-Aug	3-Aug	4-Aug	5-Aug
6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug
13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug
20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug		
	Egretry Monitoring Ho Sheung Heung Egretry Site, Compensation Site A1-7 FLN and B1-7 FLN, Meanders of Split Colony					

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

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 August 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Aug	2-Aug	3-Aug	4-Aug	5-Aug
			Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
6-Aug	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug		
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc.)

APPENDIX E
AIR QUALITY AND AMBIENT ARSENIC MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Jul-23	13:00	Cloudy	30.1
4-Jul-23	14:00	Cloudy	37.2
4-Jul-23	15:00	Cloudy	30.8
10-Jul-23	8:30	Sunny	25.3
10-Jul-23	9:30	Sunny	30.3
10-Jul-23	10:30	Sunny	35.6
14-Jul-23	9:00	Sunny	70.9
14-Jul-23	10:00	Sunny	30.2
14-Jul-23	11:00	Sunny	81.3
20-Jul-23	14:15	Fine	63.9
20-Jul-23	15:15	Fine	70.9
20-Jul-23	16:15	Fine	73.1
26-Jul-23	13:00	Sunny	82.4
26-Jul-23	14:00	Sunny	100.6
26-Jul-23	15:00	Sunny	92.2
		Minimum	25.3
		Maximum	100.6
		Average	57.0

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Jul-23	9:00	Sunny	31.9
4-Jul-23	10:00	Sunny	30.7
4-Jul-23	11:00	Sunny	37.0
10-Jul-23	8:50	Sunny	74.1
10-Jul-23	9:50	Sunny	41.5
10-Jul-23	10:50	Sunny	41.6
14-Jul-23	8:45	Sunny	66.7
14-Jul-23	9:45	Sunny	34.9
14-Jul-23	10:45	Sunny	29.6
20-Jul-23	9:00	Cloudy	53.2
20-Jul-23	10:00	Cloudy	62.4
20-Jul-23	11:00	Cloudy	57.2
26-Jul-23	8:30	Sunny	57.3
26-Jul-23	9:30	Sunny	64.2
26-Jul-23	10:30	Sunny	74.7
		Minimum	29.6
		Maximum	74.7
		Average	50.5

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
3-Jul-23	9:00	Cloudy	39.9
3-Jul-23	10:00	Cloudy	14.6
3-Jul-23	11:00	Cloudy	20.9
7-Jul-23	13:30	Cloudy	31.7
7-Jul-23	14:30	Cloudy	37.1
7-Jul-23	15:30	Cloudy	44.1
13-Jul-23	13:30	Sunny	30.1
13-Jul-23	14:30	Sunny	23.1
13-Jul-23	15:30	Sunny	19.8
19-Jul-23	14:00	Cloudy	45.5
19-Jul-23	15:00	Cloudy	37.6
19-Jul-23	16:00	Cloudy	31.5
25-Jul-23	13:00	Sunny	27.8
25-Jul-23	14:00	Sunny	46.1
25-Jul-23	15:00	Sunny	20.9
31-Jul-23	13:00	Cloudy	16.4
31-Jul-23	14:00	Cloudy	17.7
31-Jul-23	15:00	Cloudy	18.2
		Minimum	14.6
		Maximum	46.1
		Average	29.1

Location KTN-DMS4(B) - Temporary Structure at Pak Shek Au			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
3-Jul-23	9:00	Sunny	12.3
3-Jul-23	10:00	Sunny	19.1
3-Jul-23	11:00	Sunny	22.6
7-Jul-23	13:00	Cloudy	31.3
7-Jul-23	14:00	Cloudy	23.6
7-Jul-23	15:00	Cloudy	24.4
13-Jul-23	13:00	Sunny	27.7
13-Jul-23	14:00	Sunny	16.6
13-Jul-23	15:00	Sunny	20.5
19-Jul-23	13:00	Cloudy	36.4
19-Jul-23	14:00	Cloudy	26.7
19-Jul-23	15:00	Cloudy	28.4
25-Jul-23	13:00	Sunny	18.7
25-Jul-23	14:00	Sunny	23.7
25-Jul-23	15:00	Sunny	23.8
31-Jul-23	13:00	Cloudy	23.3
31-Jul-23	14:00	Cloudy	30.4
31-Jul-23	15:00	Cloudy	24.8
		Minimum	12.3
		Maximum	36.4
		Average	24.1

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^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
3-Jul-23	Cloudy	299.3	2.9295	2.9748	0.0453	8042.9	8066.9	24.0	1.22	1.22	1.22	1755.7	25.8
7-Jul-23	Sunny	301.8	2.9615	3.0553	0.0938	8066.9	8090.9	24.0	1.21	1.21	1.21	1748.3	53.7
13-Jul-23	Sunny	300.7	2.8997	3.0001	0.1004	8090.9	8114.9	24.0	1.22	1.22	1.22	1750.7	57.3
19-Jul-23	Cloudy	301.2	2.9557	3.0162	0.0605	8114.9	8138.9	24.0	1.21	1.21	1.21	1745.1	34.7
25-Jul-23	Sunny	300.4	2.8813	2.9914	0.1101	8138.9	8162.9	24.0	1.22	1.22	1.22	1751.5	62.9
31-Jul-23	Cloudy	301.4	2.9050	2.9998	0.0948	8162.9	8186.9	24.0	1.21	1.22	1.21	1746.2	54.3
												Min	25.8
												Max	62.9
												Average	48.1

Location FLN-DMS3 - House near Tong Hang

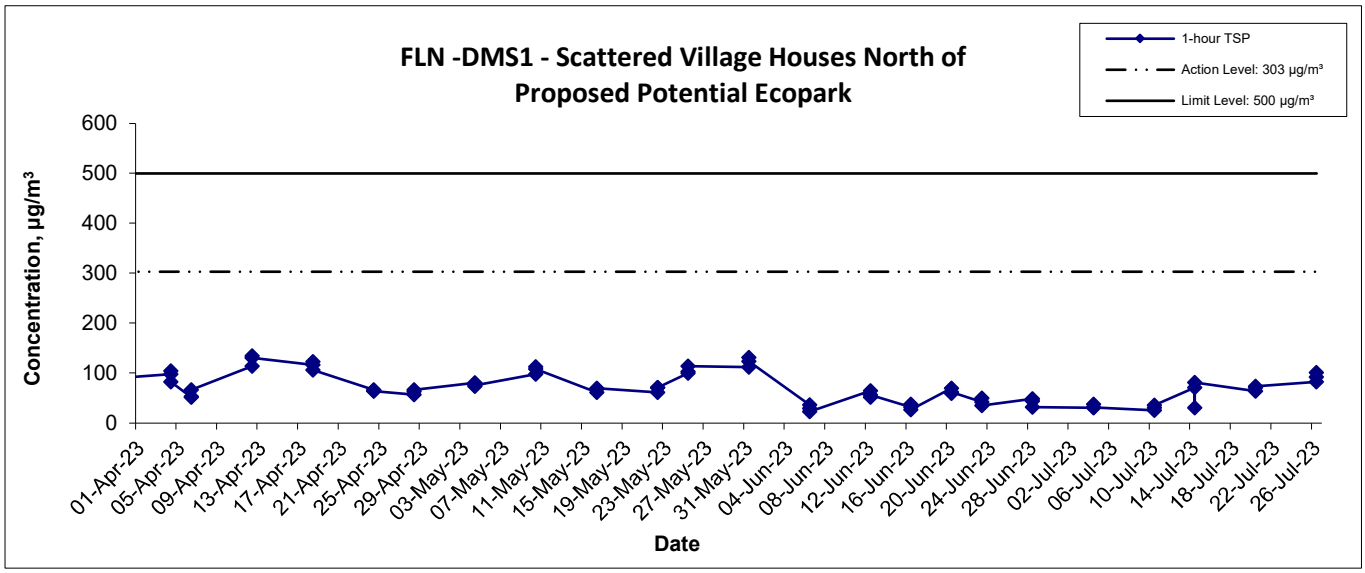
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
3-Jul-23	Cloudy	299.3	2.9382	2.9762	0.0380	9205.4	9229.4	24.0	1.22	1.22	1.22	1759.3	21.6
7-Jul-23	Sunny	301.8	2.9217	2.9654	0.0437	9229.4	9253.4	24.0	1.22	1.22	1.22	1751.9	24.9
13-Jul-23	Sunny	300.7	2.9118	2.9363	0.0245	9253.4	9277.4	24.0	1.22	1.22	1.22	1754.3	14.0
19-Jul-23	Cloudy	301.2	2.8817	2.9303	0.0486	9277.4	9301.4	24.0	1.21	1.22	1.21	1748.8	27.8
25-Jul-23	Sunny	300.4	2.9285	2.9820	0.0535	9301.4	9325.4	24.0	1.22	1.22	1.22	1755.1	30.5
31-Jul-23	Cloudy	301.4	2.9335	2.9846	0.0511	9325.4	9349.4	24.0	1.21	1.22	1.22	1749.9	29.2
												Min	14.0
												Max	30.5
												Average	24.7

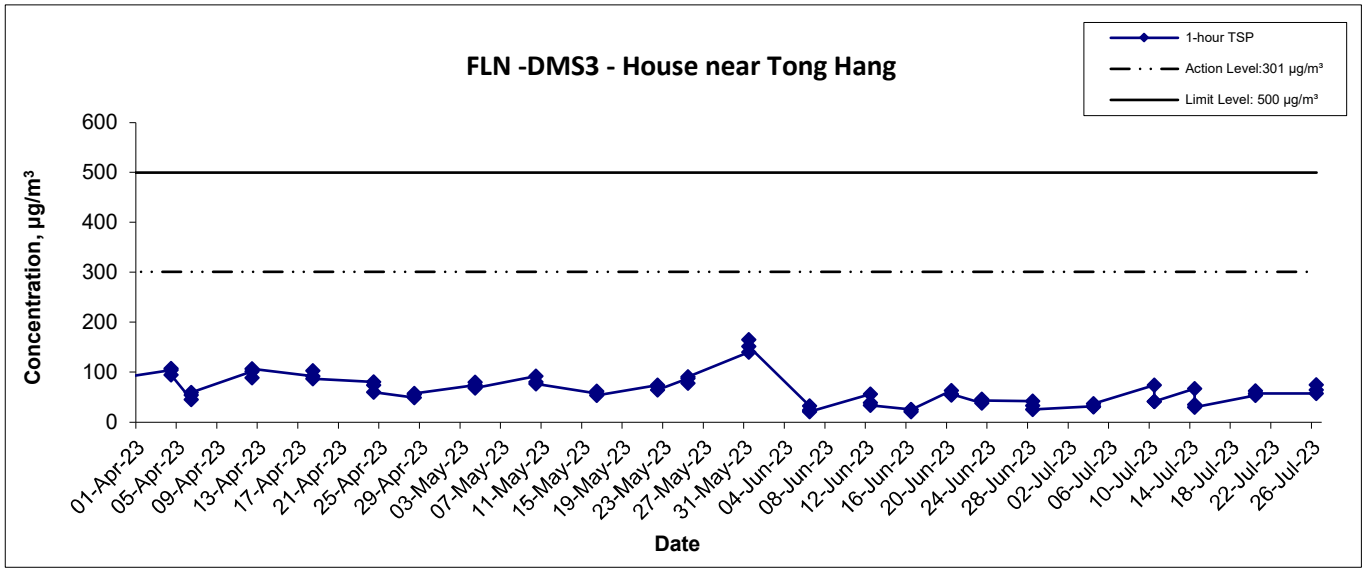
Appendix E - 24-hour TSP Monitoring Results

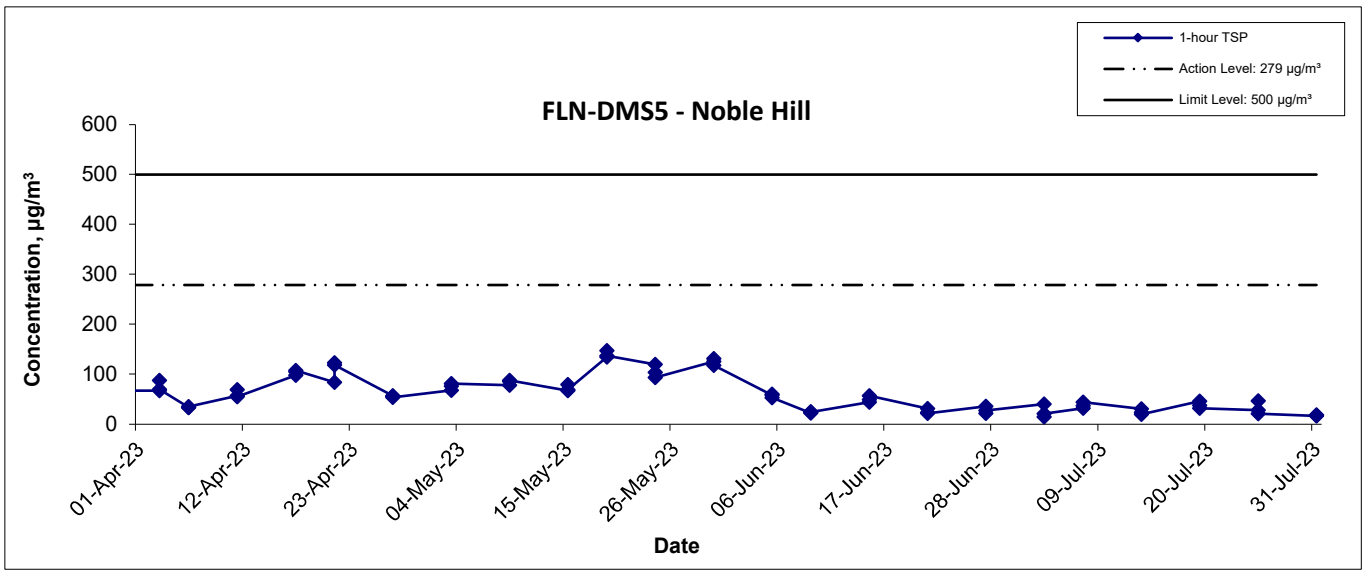
Location FLN-DMS5A - Good View New Village			
Date	Time	Weather	Particulate Concentration (μg/m^3)
3-Jul-23	9:00	Cloudy	69.4
7-Jul-23	10:30	Cloudy	34.4
13-Jul-23	9:07	Sunny	29.1
19-Jul-23	9:30	Cloudy	48.5
25-Jul-23	11:45	Sunny	44.6
31-Jul-23	12:00	Cloudy	68.7
		Minimum	29.1
		Maximum	69.4
		Average	49.1

Location KTN-DMS4(B) - Temporary Structure at Pak Shek Au			
Date	Time	Weather	Particulate Concentration (μg/m^3)
3-Jul-23	9:00	Cloudy	38.1
7-Jul-23	13:00	Cloudy	36.1
13-Jul-23	10:25	Sunny	29.9
19-Jul-23	9:00	Cloudy	40.8
25-Jul-23	12:00	Sunny	30.5
31-Jul-23	12:00	Cloudy	24.8
		Minimum	24.8
		Maximum	40.8
		Average	33.4

1-hr TSP Concentration Levels

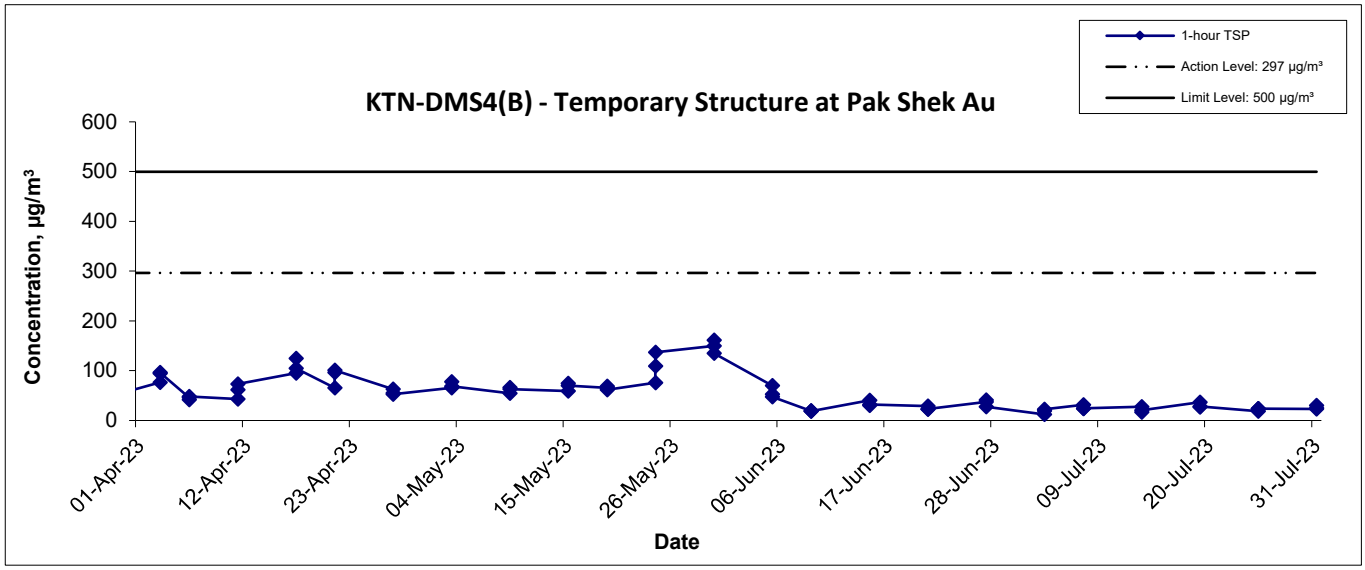






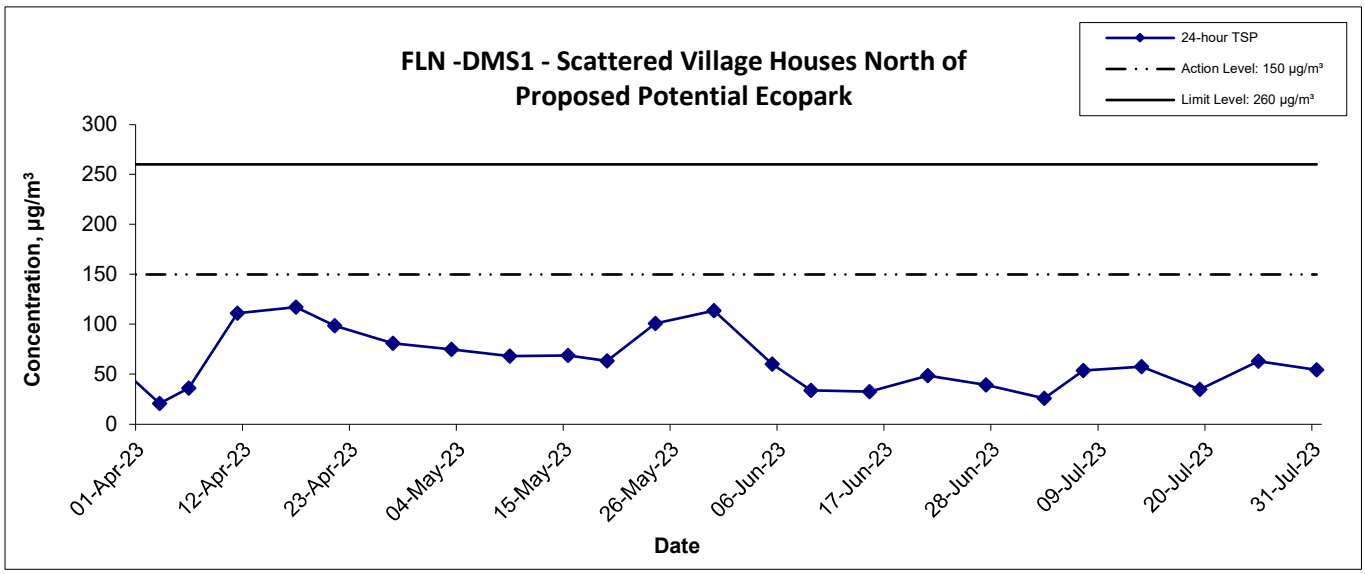
Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: E	WELLAB 匯力 consulting . testing . research

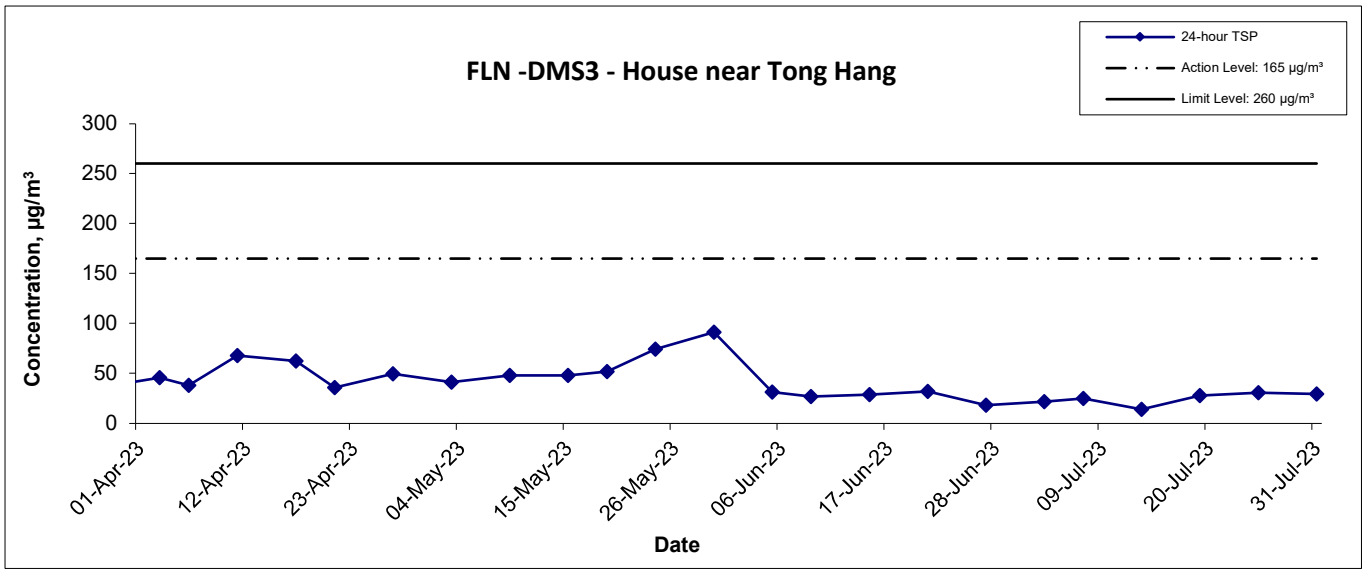
1-hr TSP Concentration Levels

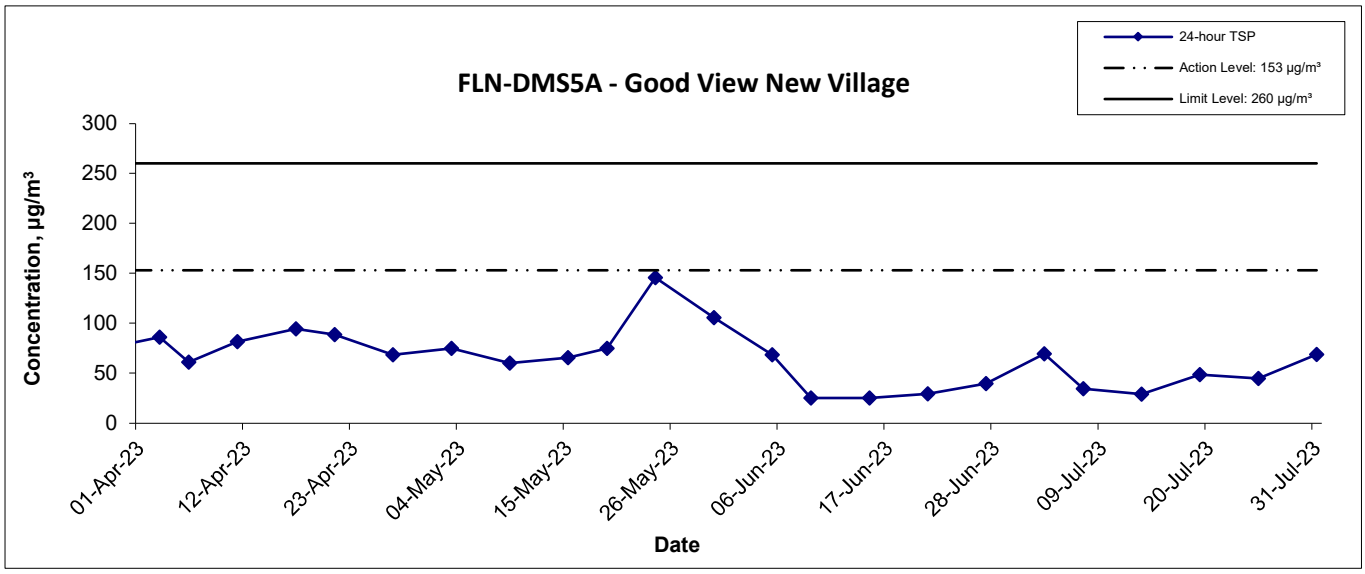


Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S Date Jul 23	Project No. WMA20002 Appendix E	WELLAB 匯力 consulting . testing . research

24-hr TSP Concentration Levels

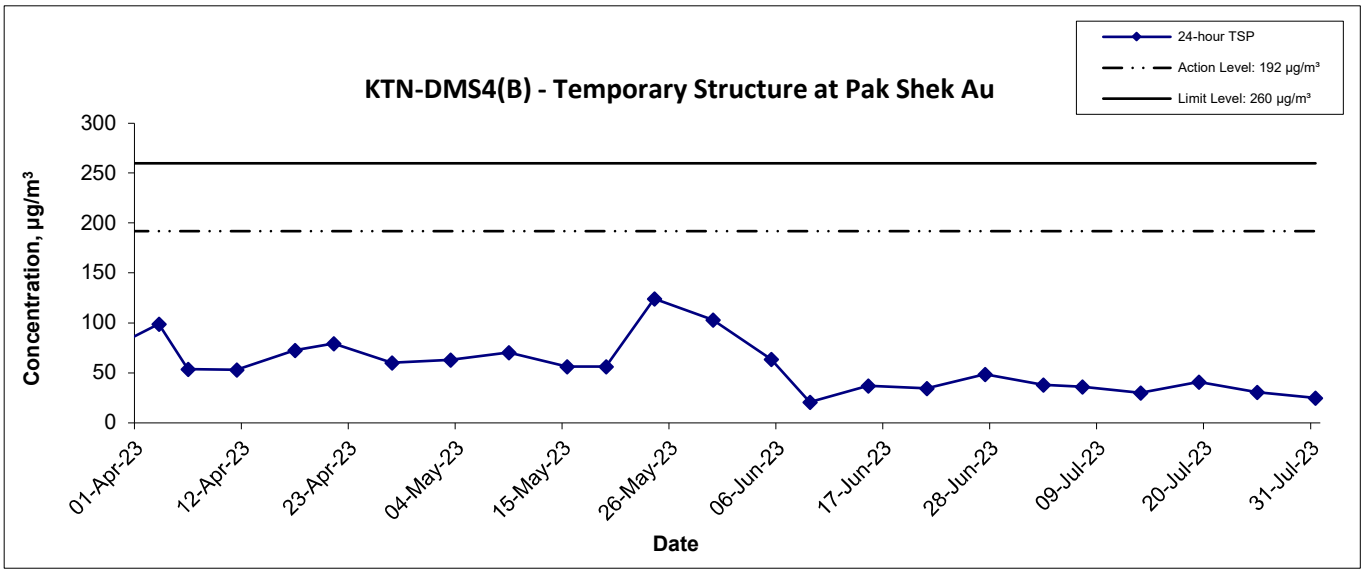






Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: E	WELLAB 匯力 consulting . testing . research

24-hr TSP Concentration Levels

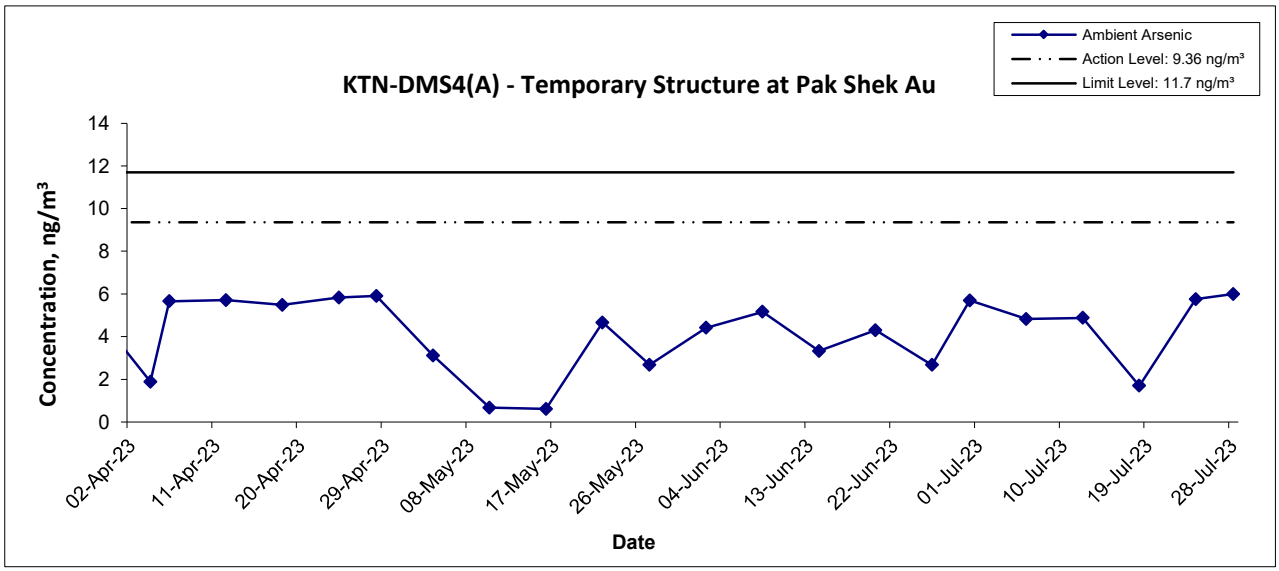


Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: E	WELLAB 匯力 consulting . testing . research

Appendix E - Ambient Arsenic Monitoring Results

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au			
Date	Arsenic (μg)	Standard Volume, Vstd (m^3)	Ambient Arsenic Concentration (ng/m^3)
6-Jul-23	7.9	1635.7	4.83
12-Jul-23	8.0	1640.6	4.88
18-Jul-23	2.8	1646.4	1.70
24-Jul-23	9.4	1635.0	5.75
28-Jul-23	9.9	1650.1	6.00

Ambient Arsenic



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 Ambient Arsenic Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: E	WELLAB 匯力 consulting . testing . research

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	38509
Date of Issue:	2023-07-12
Date Received:	2023-07-07
Date Tested:	2023-07-07
Date Completed:	2023-07-12
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 38509
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	220411/069
Sample No.	38509-1
Arsenic (µg)	7.9

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

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New Territories, Hong Kong
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Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	QC38509
Date of Issue:	2023-07-12
Date Received:	2023-07-07
Date Tested:	2023-07-07
Date Completed:	2023-07-12
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)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	100	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	104	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 (%)	102	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38509

****

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General Manager

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TEST REPORT

Report No.:	QC38509
Date of Issue:	2023-07-12
Date Received:	2023-07-07
Date Tested:	2023-07-07
Date Completed:	2023-07-12

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	83	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	1	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	99	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38509

**********END OF REP ORT**********

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	38542
Date of Issue:	2023-07-19
Date Received:	2023-07-13
Date Tested:	2023-07-13
Date Completed:	2023-07-19
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 38542
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	220411/070
Sample No.	38542-1
Arsenic (µg)	8.0

Remarks: 1) < = less than
2) Results for the test material reported as received

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General Manager

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Report No.:	QC38542
Date of Issue:	2023-07-19
Date Received:	2023-07-13
Date Tested:	2023-07-13
Date Completed:	2023-07-19

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)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	102	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 (%)	97	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38542

****

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PATRICK TSE
General Manager

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New Territories, Hong Kong
Tel: 2898 7388 Fax :2898 7076
Website : www.wellab.com.hk

TEST REPORT

Report No.:	QC38542
Date of Issue:	2023-07-19
Date Received:	2023-07-13
Date Tested:	2023-07-13
Date Completed:	2023-07-19

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	120	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	6	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	109	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38542

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Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	38598
Date of Issue:	2023-07-24
Date Received:	2023-07-19
Date Tested:	2023-07-19
Date Completed:	2023-07-24
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 38598
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	220411/071
Sample No.	38598-1
Arsenic (µg)	2.8

Remarks: 1) < = less than
2) Results for the test material reported as received

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Report No.:	QC38598
Date of Issue:	2023-07-24
Date Received:	2023-07-19
Date Tested:	2023-07-19
Date Completed:	2023-07-24

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)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	103	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	96	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 (%)	112	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38598

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General Manager

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TEST REPORT

Report No.:	QC38598
Date of Issue:	2023-07-24
Date Received:	2023-07-19
Date Tested:	2023-07-19
Date Completed:	2023-07-24

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	83	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	7	RPD≤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 38598

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	38599
Date of Issue:	2023-07-28
Date Received:	2023-07-25
Date Tested:	2023-07-25
Date Completed:	2023-07-28
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 38599
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	220411/072
Sample No.	38599-1
Arsenic (µg)	9.4

Remarks: 1) < = less than
2) Results for the test material reported as received

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Report No.:	QC38599
Date of Issue:	2023-07-28
Date Received:	2023-07-25
Date Tested:	2023-07-25
Date Completed:	2023-07-28

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)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	86	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	99	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 (%)	112	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38599

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General Manager

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TEST REPORT

Report No.:	QC38599
Date of Issue:	2023-07-28
Date Received:	2023-07-25
Date Tested:	2023-07-25
Date Completed:	2023-07-28

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	97	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	8	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	95	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38599

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	38600
Date of Issue:	2023-08-03
Date Received:	2023-07-31
Date Tested:	2023-07-31
Date Completed:	2023-08-03
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 38600
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	220411/073
Sample No.	38600-1
Arsenic (µg)	9.9

Remarks: 1) < = less than
2) Results for the test material reported as received

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	QC38600
Date of Issue:	2023-08-03
Date Received:	2023-07-31
Date Tested:	2023-07-31
Date Completed:	2023-08-03

QC report:

Method Blank

Parameter	Method Blank	Acceptance
Arsenic (μg)	<0.036	<0.036

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	92	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	99	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 (%)	112	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38600

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TEST REPORT

Report No.:	QC38600
Date of Issue:	2023-08-03
Date Received:	2023-07-31
Date Tested:	2023-07-31
Date Completed:	2023-08-03

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	97	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	14	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	108	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 38600

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APPENDIX F
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix F - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
4-Jul-23	Cloudy	16:30	69.4	72.9	61.8	68.1	69.9
		16:35	67.1	69.4	62.9		
		16:40	68.2	71.8	60.9		
		16:45	66.7	70.1	60.5		
		16:50	68.1	71.2	60.6		
		16:55	68.5	72.5	62.3		
10-Jul-23	Sunny	13:00	57.8	58.6	57.1	62.7	
		13:05	60.3	61.4	58.4		
		13:10	63.6	64.3	62.9		
		13:15	64.1	65.0	63.3		
		13:20	63.6	64.2	63.0		
		13:25	63.7	64.6	63.0		
20-Jul-23	Sunny	13:00	67.2	70.5	60.5	67.5	
		13:05	69.5	71.8	61.3		
		13:10	66.9	70.0	62.0		
		13:15	66.1	68.6	61.3		
		13:20	66.7	69.5	61.4		
		13:25	67.6	70.9	62.7		
26-Jul-23	Sunny	15:30	67.4	69.7	63.3	67.7	
		15:35	68.6	71.6	63.7		
		15:40	68.7	70.8	63.5		
		15:45	67.5	70.0	62.2		
		15:50	67.1	70.1	61.9		
		15:55	66.8	69.7	62.8		

Location CP-FLN-NMS2 - Scattered Village House in Tong Hang (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
4-Jul-23	Sunny	09:20	66.0	66.7	65.4	65.8	59.6
		09:25	66.3	66.9	65.7		
		09:30	64.7	65.8	65.2		
		09:35	65.4	66.0	64.9		
		09:40	66.1	66.8	65.4		
		09:45	66.0	66.7	65.3		
10-Jul-23	Sunny	09:25	70.2	72.2	64.1	67.9	
		09:30	66.6	70.2	60.9		
		09:35	66.8	70.5	58.1		
		09:40	67.9	71.4	60.0		
		09:45	67.4	70.4	60.9		
		09:50	67.2	70.4	57.6		
20-Jul-23	Cloudy	09:20	58.3	58.9	57.7	58.4	
		09:25	58.6	58.7	57.8		
		09:30	58.3	58.6	57.9		
		09:35	58.3	58.7	58.0		
		09:40	58.3	58.8	57.9		
		09:45	58.3	58.9	57.6		
26-Jul-23	Sunny	08:35	61.4	64.9	58.8	62.1	
		08:40	60.4	61.3	58.6		
		08:45	59.7	60.1	58.8		
		08:50	62.5	64.3	59.5		
		08:55	63.5	64.3	62.6		
		09:00	63.8	64.5	63.2		

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_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
3-Jul-23	Cloudy	09:15	47.8	50.5	44.4	47.6	58.6
		09:20	51.8	54.2	45.0		
		09:25	46.2	48.7	42.4		
		09:30	45.2	46.6	40.9		
		09:35	44.8	45.0	41.1		
		09:40	44.0	45.1	41.7		
13-Jul-23	Sunny	09:15	55.1	56.3	53.5	55.9	
		09:20	56.8	60.2	53.9		
		09:25	54.3	55.4	53.3		
		09:30	54.1	54.7	53.3		
		09:35	53.4	53.9	52.7		
		09:40	58.9	60.0	52.9		
19-Jul-23	Cloudy	09:55	53.8	54.4	53.1	53.5	
		10:00	53.6	54.5	52.9		
		10:05	53.2	53.6	52.8		
		10:10	53.2	53.6	52.7		
		10:15	52.9	53.4	52.5		
		10:20	54.0	55.4	52.7		
25-Jul-23	Sunny	13:45	51.2	56.3	44.5	52.8	
		13:50	50.1	52.6	45.6		
		13:55	54.4	55.1	45.5		
		14:00	54.6	55.7	46.2		
		14:05	49.8	52.3	46.1		
		14:10	54.0	57.5	42.6		
31-Jul-23	Cloudy	09:20	53.4	54.5	52.1	59.0	
		09:25	53.7	54.8	52.3		
		09:30	56.6	58.6	53.3		
		09:35	57.4	58.7	52.0		
		09:40	64.1	68.6	52.8		
		09:45	58.6	61.3	52.4		

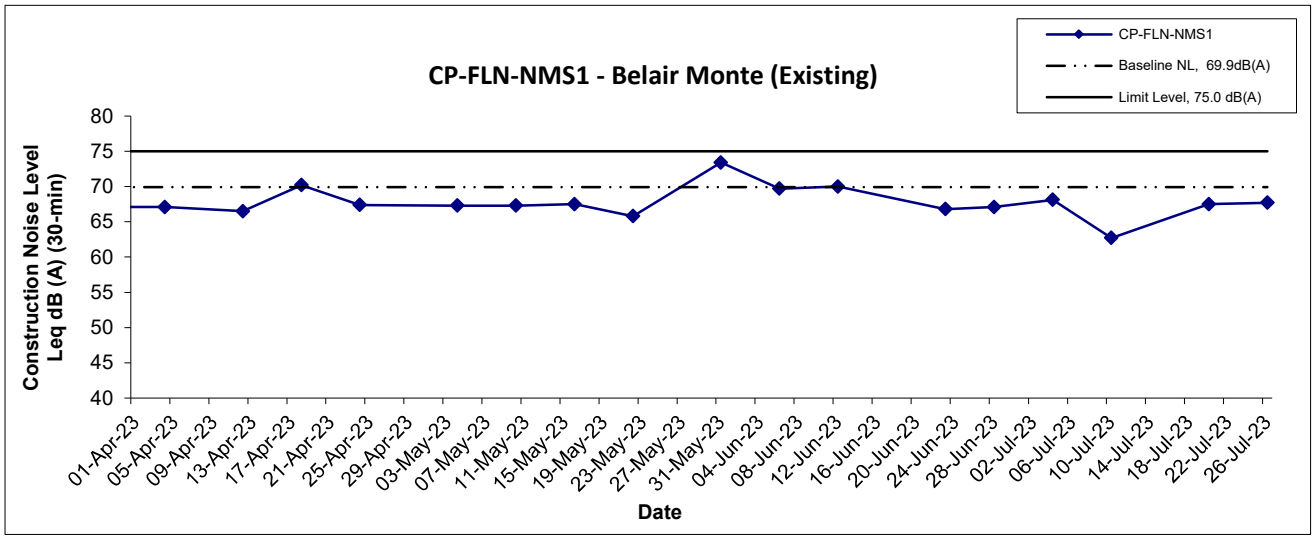
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
3-Jul-23	Cloudy	09:55	56.7	57.0	53.5	56.6	51.6
		10:00	59.6	61.5	56.2		
		10:05	54.2	55.6	52.7		
		10:10	55.8	56.5	52.4		
		10:15	54.1	55.7	52.7		
		10:20	56.7	58.7	52.1		
13-Jul-23	Sunny	09:25	50.6	53.8	46.2	46.5	
		09:30	45.1	47.3	42.2		
		09:35	43.1	44.1	41.9		
		09:40	46.9	49.7	42.0		
		09:45	44.2	45.7	42.3		
		09:50	44.1	45.5	42.7		
19-Jul-23	Cloudy	10:35	59.9	61.5	55.2	55.7	
		10:40	59.3	60.9	54.9		
		10:45	53.9	55.4	49.7		
		10:50	46.8	50.2	42.6		
		10:55	47.8	52.2	43.2		
		11:00	48.1	52.8	43.3		
25-Jul-23	Sunny	13:50	66.1	73.1	50.3	62.2	
		13:55	54.8	56.1	52.9		
		14:00	53.5	53.9	52.1		
		14:05	66.9	74.7	50.0		
		14:10	53.8	56.9	50.3		
		14:15	50.4	52.3	47.8		
31-Jul-23	Cloudy	09:58	57.3	59.1	53.0	55.7	
		10:03	54.5	55.9	53.2		
		10:08	54.2	55.0	52.8		
		10:13	53.8	54.5	53.1		
		10:18	56.7	59.6	53.5		
		10:23	56.4	60.0	54.0		

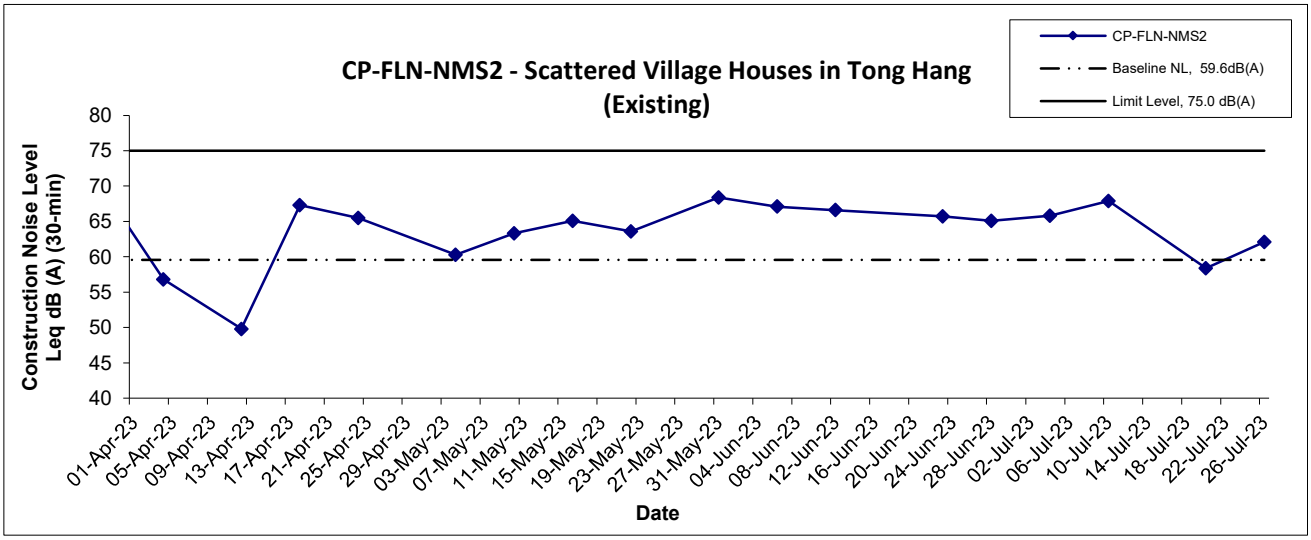
Appendix F - Noise Monitoring Results

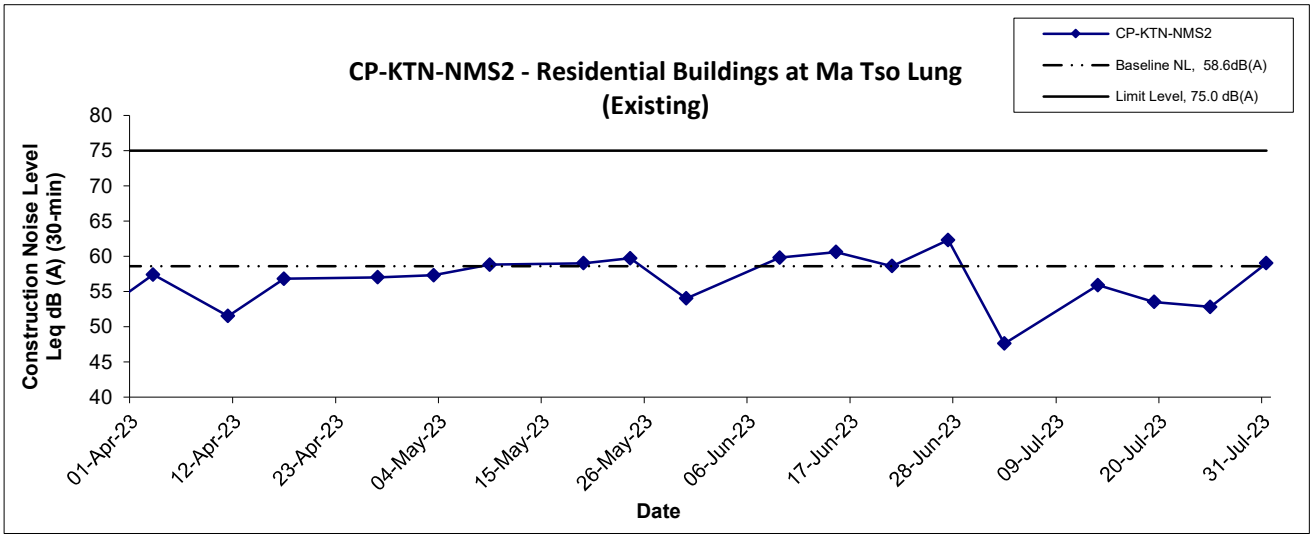
Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
3-Jul-23	Cloudy	11:30	54.7	56.2	52.9	55.4	57.2
		11:35	56.2	58.4	54.3		
		11:40	57.4	60.8	54.7		
		11:45	53.9	55.7	53.6		
		11:50	55.1	56.3	53.8		
		11:55	53.8	54.7	53.3		
13-Jul-23	Sunny	10:50	57.7	59.8	55.3	61.0	
		10:55	59.0	61.3	55.9		
		11:00	57.9	60.0	55.2		
		11:05	58.5	61.3	55.9		
		11:10	57.4	59.0	55.5		
		11:15	66.3	70.8	56.0		
19-Jul-23	Cloudy	11:30	58.1	61.6	53.2	57.9	
		11:35	57.0	58.4	55.2		
		11:40	56.5	57.7	55.3		
		11:45	57.1	58.9	55.4		
		11:50	60.5	64.7	54.5		
		11:55	57.1	59.7	54.9		
25-Jul-23	Sunny	14:50	70.2	74.2	55.6	64.9	
		14:55	59.3	62.3	55.7		
		15:00	59.9	62.9	55.2		
		15:05	58.8	61.9	55.0		
		15:10	59.2	61.1	54.7		
		15:15	66.8	70.1	54.9		
31-Jul-23	Cloudy	11:30	56.8	57.9	55.4	61.1	
		11:35	66.6	71.9	55.7		
		11:40	58.3	59.6	56.0		
		11:45	58.0	59.3	55.9		
		11:50	58.6	58.9	56.6		
		11:55	58.2	59.9	56.6		

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_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
3-Jul-23	Cloudy	10:35	56.4	57.7	54.8	57.1	55.1
		10:40	56.1	57.0	54.9		
		10:45	57.1	57.8	55.1		
		10:50	56.9	58.9	55.2		
		10:55	59.3	59.6	55.4		
		11:00	55.9	57.5	53.7		
13-Jul-23	Sunny	10:30	55.3	57.0	52.3	54.3	
		10:35	53.3	54.0	52.0		
		10:40	53.6	54.1	52.0		
		10:45	56.8	60.3	52.1		
		10:50	52.1	52.6	51.6		
		10:55	52.7	53.2	51.9		
19-Jul-23	Cloudy	09:10	57.4	60.0	53.8	57.0	
		09:15	57.6	60.7	53.4		
		09:20	58.5	61.0	50.6		
		09:25	54.9	57.1	51.1		
		09:30	55.9	59.4	50.9		
		09:35	56.5	56.9	50.6		
25-Jul-23	Sunny	09:45	57.6	57.9	48.6	56.0	
		09:50	56.8	58.6	49.2		
		09:55	56.7	59.7	49.9		
		10:00	54.7	56.8	49.2		
		10:05	54.4	54.8	49.0		
		10:10	55.1	58.3	49.4		
31-Jul-23	Cloudy	10:45	55.4	56.0	54.1	56.8	
		10:50	56.2	56.6	54.2		
		10:55	58.7	60.4	55.1		
		11:00	55.8	56.7	55.1		
		11:05	57.8	60.6	54.6		
		11:10	56.0	56.7	54.5		

Noise Levels

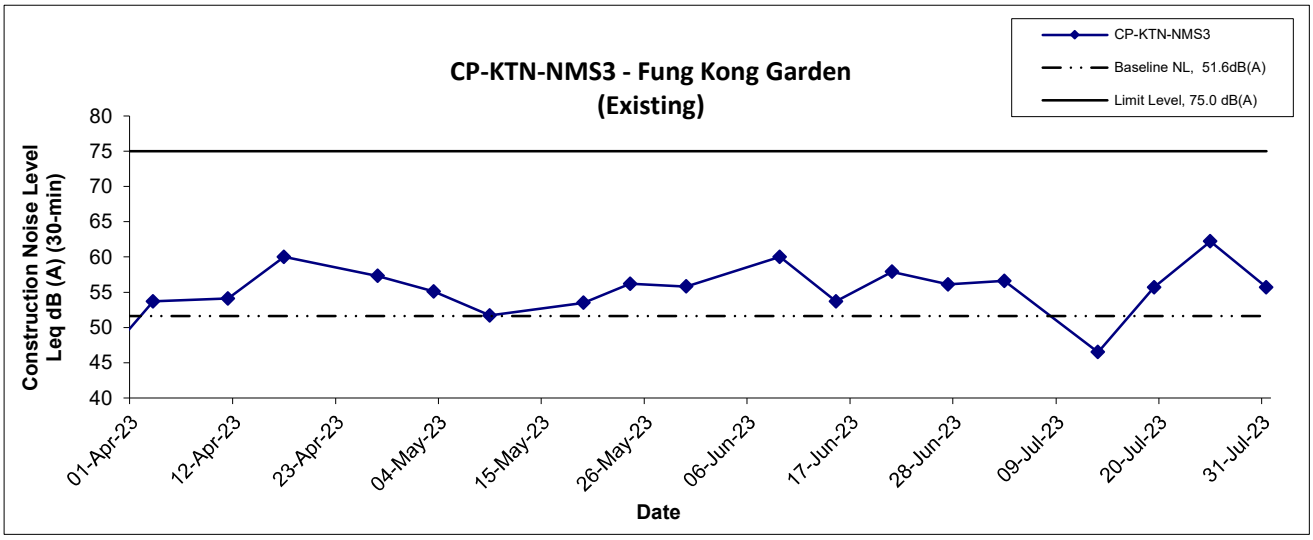


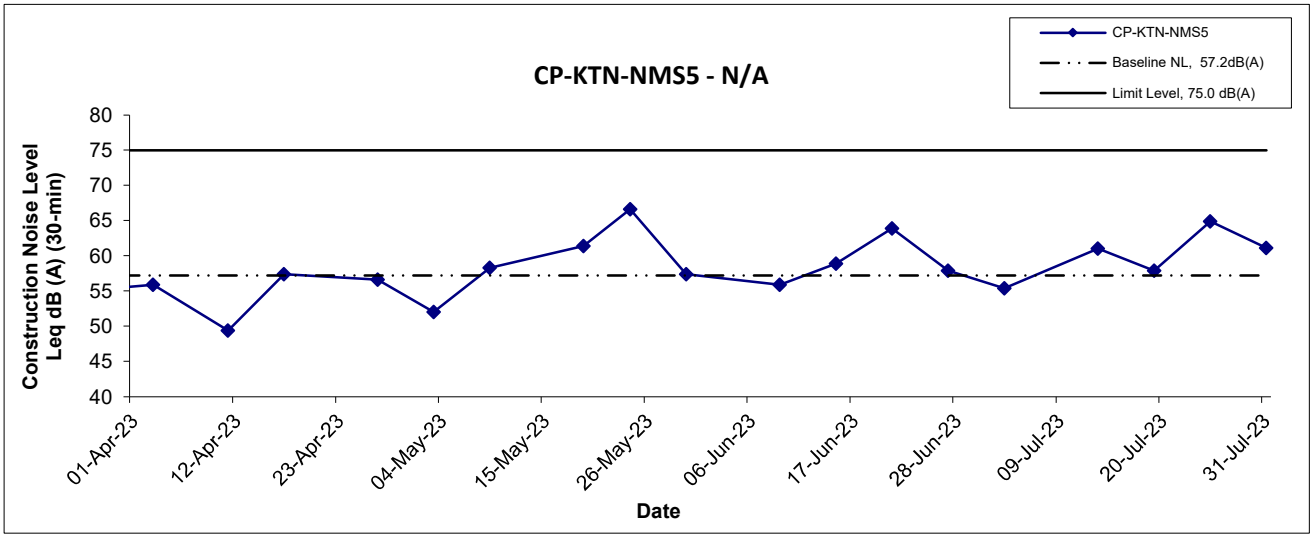


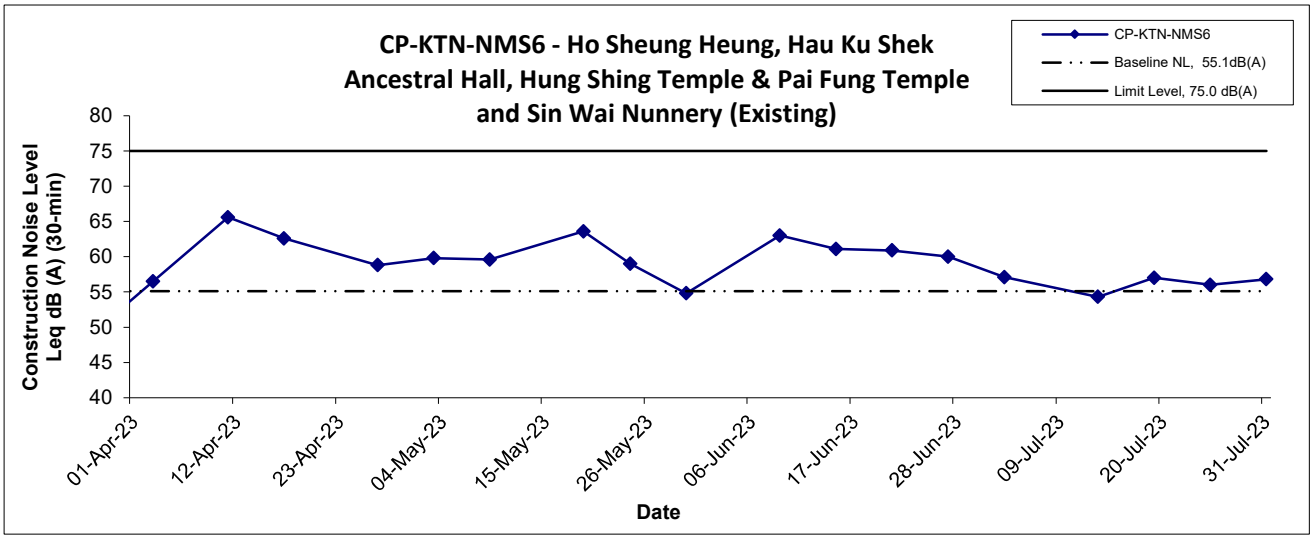


Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: F	WELLAB 匯力 consulting . testing . research

Noise 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 Construction Noise Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: F	WELLAB 匯力 consulting . testing . research

APPENDIX G
WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

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
3-Jul-23	Sunny	08:22	Middle	0.2	26.4 26.4	26.4	7.0 7.0	7.0	0.1 0.1	0.1	62.4 62.4	62.4	5.0 5.0	5.0	9.0 8.8	8.9	7 7	7.0	13 12	12.5
5-Jul-23	Sunny	10:05	Middle	0.2	27.2 27.2	27.2	7.9 7.9	7.9	0.1 0.1	0.1	81.5 81.3	81.4	6.5 6.5	6.5	7.6 7.6	7.6	8 8	8.0	8 8	8.0
7-Jul-23	Sunny	14:06	Middle	0.2	30.8 30.8	30.8	8.4 8.3	8.4	0.2 0.2	0.2	86.6 86.3	86.5	6.5 6.4	6.5	5.1 5.1	5.1	5 5	5.0	11 10	10.5
10-Jul-23	Sunny	10:15	Middle	0.2	29.6 29.6	29.6	7.0 7.0	7.0	0.1 0.1	0.1	79.5 79.2	79.4	6.1 6.0	6.1	3.2 3.2	3.2	6 6	6.0	10 10	10.0
12-Jul-23	Sunny	11:09	Middle	0.2	30.2 30.2	30.2	7.7 7.7	7.7	0.1 0.1	0.1	83.7 83.5	83.6	6.3 6.3	6.3	4.0 4.0	4.0	6 6	6.0	11 11	11.0
14-Jul-23	Sunny	10:39	Middle	0.1	30.2 30.2	30.2	7.2 7.2	7.2	0.1 0.1	0.1	87.5 87.5	87.5	6.6 6.6	6.6	3.8 3.8	3.8	5 4	4.5	12 11	11.5
19-Jul-23	Cloudy	10:31	Middle	0.2	27.4 27.4	27.4	7.0 7.0	7.0	0.1 0.1	0.1	90.3 90.0	90.2	7.1 7.1	7.1	10.5 10.5	10.5	10 9	9.5	11 11	11.0
21-Jul-23	Cloudy	11:38	Middle	0.2	28.9 28.9	28.9	8.0 8.0	8.0	0.1 0.1	0.1	82.3 82.1	82.2	6.3 6.3	6.3	5.0 5.0	5.0	6 6	6.0	11 13	12.0
24-Jul-23	Sunny	09:11	Middle	0.2	28.2 28.2	28.2	7.7 7.7	7.7	0.1 0.1	0.1	89.5 89.4	89.5	7.0 7.0	7.0	4.5 4.5	4.5	6 6	6.0	14 14	14.0
26-Jul-23	Sunny	11:24	Middle	0.2	31.1 30.9	31.0	7.4 7.4	7.4	0.1 0.1	0.1	90.1 89.5	89.8	6.7 6.7	6.7	4.7 4.7	4.7	4 5	4.5	12 11	11.5
28-Jul-23	Sunny	10:04	Middle	0.1	29.9 29.9	29.9	7.6 7.6	7.6	0.1 0.1	0.1	76.8 76.7	76.8	5.8 5.8	5.8	5.3 5.3	5.3	5 5	5.0	11 10	10.5
31-Jul-23	Sunny	11:33	Middle	0.2	28.8 28.8	28.8	7.2 7.2	7.2	0.1 0.1	0.1	94.0 93.9	94.0	7.3 7.2	7.3	23.0 22.8	22.9	11 9	10.0	16 17	16.5

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
3-Jul-23	Sunny	08:33	Middle	0.5	28.2 28.2	28.2	7.0 7.0	7.0	0.2 0.2	0.2	84.7 84.6	84.7	6.6 6.6	6.6	35.6 35.2	35.4	31 30	30.5	4 4	4.0
5-Jul-23	Sunny	10:21	Middle	0.5	29.0 29.0	29.0	7.2 7.2	7.2	0.2 0.2	0.2	87.9 87.6	87.8	6.8 6.7	6.8	33.4 33.3	33.4	20 23	21.5	3 3	3.0
7-Jul-23	Sunny	14:21	Middle	0.5	31.8 31.8	31.8	7.9 7.8	7.9	0.2 0.2	0.2	85.0 85.4	85.2	6.2 6.3	6.3	18.4 18.2	18.3	16 14	15.0	7 6	6.5
10-Jul-23	Sunny	10:23	Middle	0.3	31.1 31.2	31.2	7.2 7.2	7.2	0.1 0.1	0.1	124.3 124.5	124.4	9.2 9.2	9.2	37.2 37.2	37.2	41 37	39.0	10 10	10.0
12-Jul-23	Sunny	11:23	Middle	0.3	30.0 30.0	30.0	7.5 7.4	7.5	0.1 0.1	0.1	85.0 85.3	85.2	6.4 6.4	6.4	18.0 17.7	17.9	20 20	20.0	12 12	12.0
14-Jul-23	Sunny	10:57	Middle	0.2	32.3 32.3	32.3	6.8 6.8	6.8	0.2 0.2	0.2	95.3 96.0	95.7	6.9 7.0	7.0	11.1 11.1	11.1	9 10	9.5	10 8	9.0
19-Jul-23	Cloudy	10:45	Middle	0.8	28.5 28.5	28.5	6.3 6.3	6.3	0.2 0.2	0.2	83.0 82.5	82.8	6.4 6.4	6.4	23.8 24.1	24.0	24 22	23.0	6 6	6.0
21-Jul-23	Cloudy	11:52	Middle	1.2	31.3 31.3	31.3	6.7 6.7	6.7	0.2 0.2	0.2	88.7 90.4	89.6	6.6 6.7	6.7	19.2 19.1	19.2	20 19	19.5	6 6	6.0
24-Jul-23	Sunny	09:24	Middle	0.2	30.4 30.4	30.4	7.4 7.4	7.4	0.1 0.1	0.1	101.5 101.5	101.5	7.6 7.6	7.6	25.9 26.2	26.1	40 41	40.5	14 14	14.0
26-Jul-23	Sunny	11:32	Middle	0.3	33.2 33.2	33.2	7.4 7.3	7.4	0.1 0.1	0.1	117.4 118.8	118.1	8.4 8.5	8.5	21.2 21.1	21.2	24 23	23.5	10 10	10.0
28-Jul-23	Sunny	10:23	Middle	0.4	30.5 30.5	30.5	7.4 7.3	7.4	0.1 0.1	0.1	86.4 87.9	87.2	6.5 6.6	6.6	10.5 10.5	10.5	8 8	8.0	11 11	11.0
31-Jul-23	Sunny	11:45	Middle	0.5	29.4 29.4	29.4	6.6 6.6	6.6	0.1 0.1	0.1	86.2 86.1	86.2	6.6 6.6	6.6	37.8 37.8	37.8	26 24	25.0	17 17	17.0

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
3-Jul-23	Sunny	10:26	Middle	0.2	27.5 27.4	27.5	7.0 7.0	7.0	0.1 0.1	0.1	97.7 97.7	97.7	7.7 7.7	7.7	6.7 6.8	6.8	12 12	12.0
5-Jul-23	Sunny	11:35	Middle	0.2	29.0 28.9	29.0	7.3 7.3	7.3	0.1 0.1	0.1	108.1 108.1	108.1	8.3 8.3	8.3	10.4 10.3	10.4	6 6	6.0
7-Jul-23	Sunny	15:29	Middle	0.2	32.1 32.1	32.1	7.3 7.3	7.3	0.1 0.1	0.1	119.1 119.1	119.1	8.7 8.7	8.7	23.4 23.7	23.6	20 18	19.0
10-Jul-23	Sunny	09:22	Middle	0.2	29.0 29.0	29.0	7.0 7.0	7.0	0.1 0.1	0.1	106.4 106.4	106.4	8.2 8.2	8.2	7.7 7.7	7.7	7 8	7.5
12-Jul-23	Sunny	12:38	Middle	0.2	30.3 30.3	30.3	7.2 7.2	7.2	0.1 0.1	0.1	112.4 112.4	112.4	8.4 8.4	8.4	9.0 9.0	9.0	11 10	10.5
14-Jul-23	Sunny	10:09	Middle	0.2	29.5 29.5	29.5	7.0 7.0	7.0	0.1 0.1	0.1	107.2 107.2	107.2	8.2 8.2	8.2	10.1 10.2	10.2	13 14	13.5
19-Jul-23	Cloudy	09:14	Middle	0.3	27.7 27.7	27.7	7.2 7.2	7.2	0.1 0.1	0.1	96.5 96.4	96.5	7.6 7.6	7.6	9.2 9.1	9.2	15 16	15.5
21-Jul-23	Cloudy	12:50	Middle	0.2	30.0 30.0	30.0	7.1 7.1	7.1	0.1 0.1	0.1	116.6 116.6	116.6	8.8 8.8	8.8	8.6 8.8	8.7	9 9	9.0
24-Jul-23	Sunny	12:25	Middle	0.2	30.3 30.3	30.3	6.7 6.7	6.7	0.1 0.1	0.1	110.0 110.1	110.1	8.3 8.3	8.3	9.5 9.6	9.6	9 9	9.0
26-Jul-23	Sunny	10:12	Middle	0.2	30.2 30.2	30.2	6.9 6.9	6.9	0.1 0.1	0.1	110.8 111.5	111.2	8.4 8.4	8.4	9.7 9.9	9.8	7 7	7.0
28-Jul-23	Sunny	11:38	Middle	0.2	30.4 30.4	30.4	7.2 7.2	7.2	0.1 0.1	0.1	109.1 109.1	109.1	8.2 8.2	8.2	11.0 11.0	11.0	6 6	6.0
31-Jul-23	Sunny	10:57	Middle	0.3	28.7 28.7	28.7	7.2 7.2	7.2	0.1 0.1	0.1	105.1 105.1	105.1	8.1 8.1	8.1	8.6 8.7	8.7	9 11	10.0

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
3-Jul-23	Sunny	09:40	Middle	0.7	27.7 27.7	27.7	7.3 7.3	7.3	0.1 0.1	0.1	87.2 87.1	87.2	6.9 6.9	6.9	7.4 7.2	7.3	4 4	4.0
5-Jul-23	Sunny	10:40	Middle	0.7	29.6 29.6	29.6	7.7 7.6	7.7	0.1 0.1	0.1	101.7 101.7	101.7	7.7 7.7	7.7	8.5 8.6	8.6	6 6	6.0
7-Jul-23	Sunny	14:47	Middle	0.5	32.3 32.3	32.3	7.9 7.9	7.9	0.1 0.1	0.1	126.8 127.3	127.1	9.2 9.3	9.3	13.8 14.4	14.1	13 11	12.0
10-Jul-23	Sunny	08:27	Middle	0.2	28.9 28.9	28.9	6.8 6.8	6.8	0.1 0.1	0.1	94.4 94.7	94.6	7.3 7.3	7.3	8.7 8.7	8.7	8 8	8.0
12-Jul-23	Sunny	11:46	Middle	0.5	32.2 32.2	32.2	8.1 8.1	8.1	0.1 0.1	0.1	145.4 145.9	145.7	10.6 10.6	10.6	10.2 10.1	10.2	10 10	10.0
14-Jul-23	Sunny	09:19	Middle	0.2	30.4 30.4	30.4	6.9 6.9	6.9	0.1 0.1	0.1	112.0 112.0	112.0	8.4 8.4	8.4	11.1 11.2	11.2	5 5	5.0
19-Jul-23	Cloudy	10:05	Middle	0.1	29.5 29.5	29.5	6.4 6.4	6.4	0.1 0.1	0.1	106.7 107.1	106.9	8.1 8.2	8.2	10.2 10.1	10.2	15 13	14.0
21-Jul-23	Cloudy	12:30	Middle	0.3	31.5 31.5	31.5	7.1 7.1	7.1	0.1 0.1	0.1	122.1 122.4	122.3	9.0 9.0	9.0	8.4 8.4	8.4	10 10	10.0
24-Jul-23	Sunny	10:45	Middle	0.1	30.7 30.6	30.7	7.8 7.8	7.8	0.1 0.1	0.1	127.0 127.1	127.1	9.5 9.5	9.5	8.4 8.5	8.5	7 9	8.0
26-Jul-23	Sunny	09:37	Middle	0.1	30.2 30.2	30.2	7.0 7.0	7.0	0.1 0.1	0.1	121.3 121.3	121.3	9.1 9.1	9.1	8.7 8.8	8.8	7 6	6.5
28-Jul-23	Sunny	10:42	Middle	0.1	31.1 31.1	31.1	7.6 7.6	7.6	0.1 0.1	0.1	125.2 125.5	125.4	9.3 9.3	9.3	12.6 12.4	12.5	6 7	6.5
31-Jul-23	Sunny	10:38	Middle	0.2	29.7 29.7	29.7	7.6 7.6	7.6	0.1 0.1	0.1	115.5 115.6	115.6	8.8 8.8	8.8	9.4 9.5	9.5	8 9	8.5

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

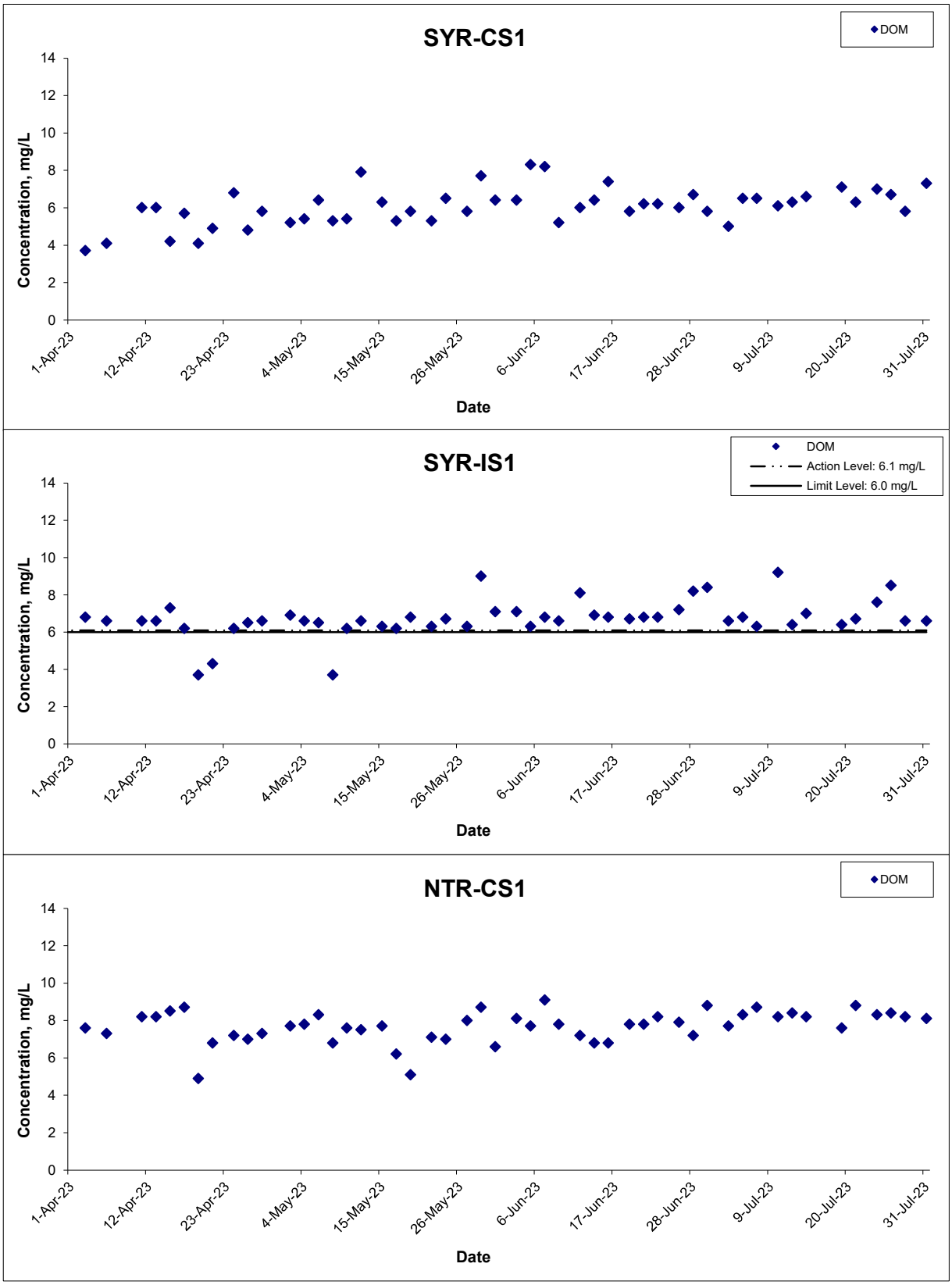
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Jul-23	Sunny	09:48	Middle	0.2	26.6 26.6	26.6	7.2 7.1	7.2	0.1 0.1	0.1	88.7 89.5	89.1	7.1 7.2	7.2	7.6 7.5	7.6	12 13	12.5
5-Jul-23	Sunny	10:51	Middle	0.2	26.9 26.9	26.9	7.4 7.4	7.4	0.1 0.1	0.1	90.8 90.0	90.4	7.3 7.2	7.3	10.3 10.4	10.4	6 7	6.5
7-Jul-23	Sunny	14:59	Middle	0.2	28.3 28.3	28.3	7.8 7.8	7.8	0.1 0.1	0.1	92.7 93.5	93.1	7.2 7.3	7.3	13.2 13.4	13.3	7 7	7.0
10-Jul-23	Sunny	08:34	Middle	0.2	27.1 27.1	27.1	7.3 7.3	7.3	0.1 0.1	0.1	95.0 95.3	95.2	7.6 7.6	7.6	8.7 8.9	8.8	7 7	7.0
12-Jul-23	Sunny	11:57	Middle	0.2	27.6 27.6	27.6	7.5 7.5	7.5	0.1 0.1	0.1	91.2 90.3	90.8	7.2 7.1	7.2	8.9 9.0	9.0	8 7	7.5
14-Jul-23	Sunny	09:30	Middle	0.2	27.9 27.8	27.9	7.2 7.2	7.2	0.1 0.1	0.1	97.4 97.2	97.3	7.6 7.6	7.6	9.3 9.2	9.3	6 5	5.5
19-Jul-23	Cloudy	09:50	Middle	0.3	27.9 27.8	27.9	6.6 6.6	6.6	0.1 0.1	0.1	93.6 93.0	93.3	7.3 7.3	7.3	9.8 9.9	9.9	10 10	10.0
21-Jul-23	Cloudy	12:16	Middle	0.2	27.1 27.1	27.1	7.9 7.9	7.9	0.1 0.1	0.1	91.9 92.9	92.4	7.3 7.4	7.4	8.2 8.2	8.2	9 9	9.0
24-Jul-23	Sunny	10:54	Middle	0.2	27.2 27.2	27.2	7.9 7.7	7.8	0.1 0.1	0.1	91.8 92.8	92.3	7.3 7.4	7.4	9.5 9.4	9.5	9 9	9.0
26-Jul-23	Sunny	09:47	Middle	0.2	27.2 27.2	27.2	7.1 7.0	7.1	0.1 0.1	0.1	95.5 94.5	95.0	7.6 7.5	7.6	10.0 9.8	9.9	7 7	7.0
28-Jul-23	Sunny	10:54	Middle	0.2	27.7 27.7	27.7	7.3 7.3	7.3	0.1 0.1	0.1	97.1 96.3	96.7	7.6 7.6	7.6	11.2 11.2	11.2	6 6	6.0
31-Jul-23	Sunny	10:28	Middle	0.2	27.4 27.4	27.4	7.9 7.8	7.9	0.1 0.1	0.1	91.6 91.3	91.5	7.3 7.2	7.3	8.8 8.9	8.9	12 11	11.5

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

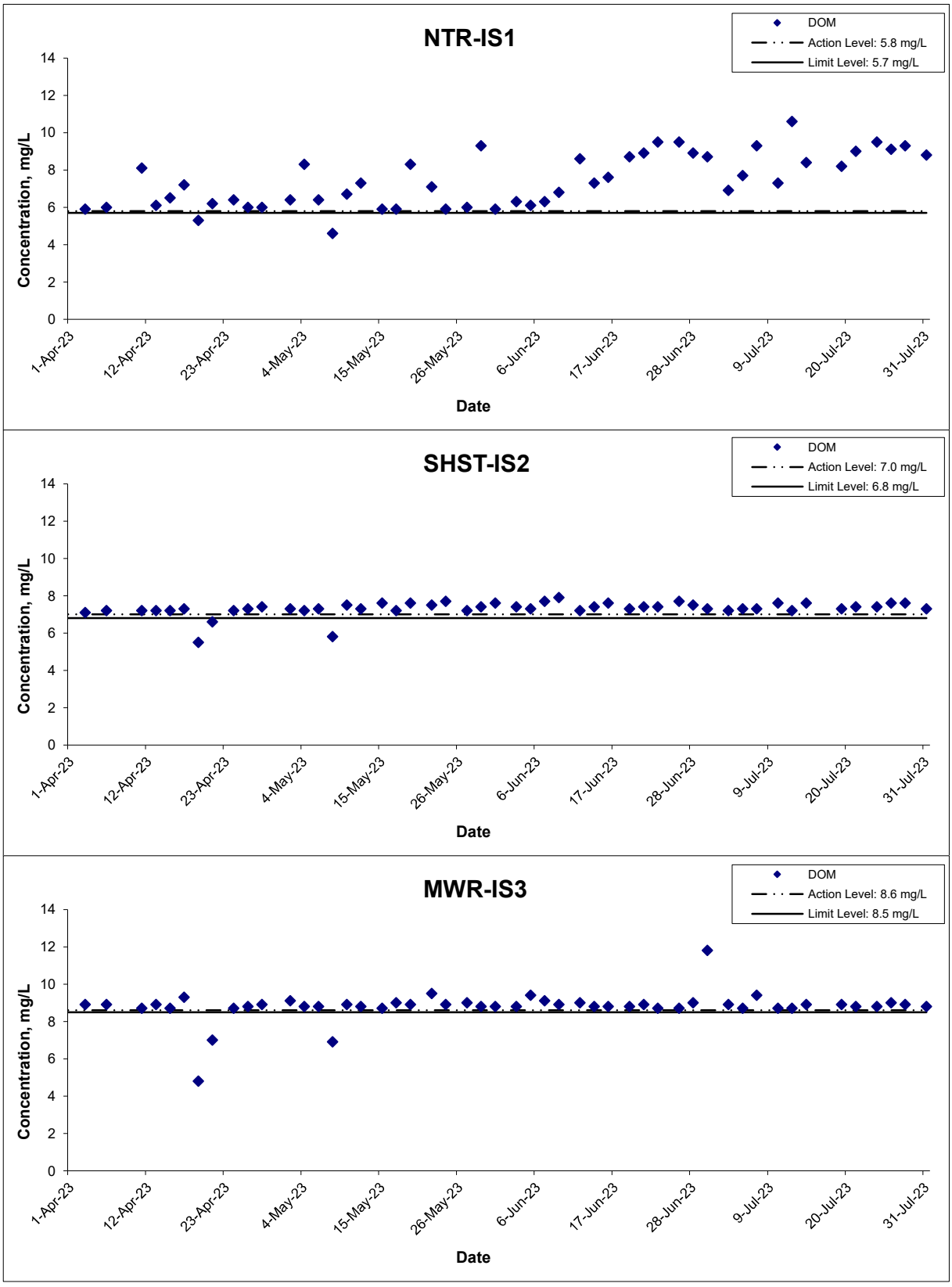
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Jul-23	Sunny	10:22	Middle	0.2	27.9 27.9	27.9	7.2 7.2	7.2	0.1 0.1	0.1	112.2 113.2	112.7	8.8 8.9	8.9	7.2 7.4	7.3	13 14	13.5
5-Jul-23	Sunny	11:21	Middle	0.2	29.0 29.0	29.0	7.5 7.5	7.5	0.1 0.1	0.1	112.7 112.7	112.7	8.7 8.7	8.7	9.3 9.4	9.4	6 6	6.0
7-Jul-23	Sunny	15:22	Middle	0.2	32.3 32.3	32.3	7.8 7.7	7.8	0.1 0.1	0.1	128.6 128.9	128.8	9.3 9.4	9.4	11.0 11.0	11.0	14 12	13.0
10-Jul-23	Sunny	09:19	Middle	0.2	29.1 29.1	29.1	7.2 7.2	7.2	0.1 0.1	0.1	113.4 113.8	113.6	8.7 8.7	8.7	4.9 4.7	4.8	7 8	7.5
12-Jul-23	Sunny	12:28	Middle	0.2	30.6 30.6	30.6	7.9 7.8	7.9	0.1 0.1	0.1	116.7 116.2	116.5	8.7 8.7	8.7	9.7 9.4	9.6	10 11	10.5
14-Jul-23	Sunny	10:00	Middle	0.2	29.2 29.1	29.2	7.5 7.5	7.5	0.1 0.1	0.1	115.2 115.5	115.4	8.8 8.9	8.9	4.3 4.1	4.2	6 7	6.5
19-Jul-23	Cloudy	09:23	Middle	0.3	27.7 27.7	27.7	6.8 6.8	6.8	0.1 0.1	0.1	112.9 113.1	113.0	8.9 8.9	8.9	8.5 8.5	8.5	6 7	6.5
21-Jul-23	Cloudy	12:58	Middle	0.2	29.9 29.9	29.9	7.1 7.1	7.1	0.1 0.1	0.1	117.2 114.8	116.0	8.9 8.7	8.8	7.2 7.1	7.2	9 9	9.0
24-Jul-23	Sunny	12:18	Middle	0.2	30.1 30.1	30.1	6.9 6.9	6.9	0.1 0.1	0.1	115.3 116.0	115.7	8.7 8.8	8.8	5.6 6.0	5.8	6 5	5.5
26-Jul-23	Sunny	10:08	Middle	0.2	30.4 30.4	30.4	7.0 7.0	7.0	0.1 0.1	0.1	120.4 120.4	120.4	9.0 9.0	9.0	5.7 5.4	5.6	11 13	12.0
28-Jul-23	Sunny	11:25	Middle	0.2	30.2 30.2	30.2	7.5 7.5	7.5	0.1 0.1	0.1	118.1 116.6	117.4	8.9 8.8	8.9	11.4 11.4	11.4	10 11	10.5
31-Jul-23	Sunny	11:13	Middle	0.3	29.0 29.0	29.0	7.0 7.0	7.0	0.1 0.1	0.1	114.0 114.4	114.2	8.8 8.8	8.8	8.4 8.4	8.4	5 5	5.0

Dissolved Oxygen (Middle)



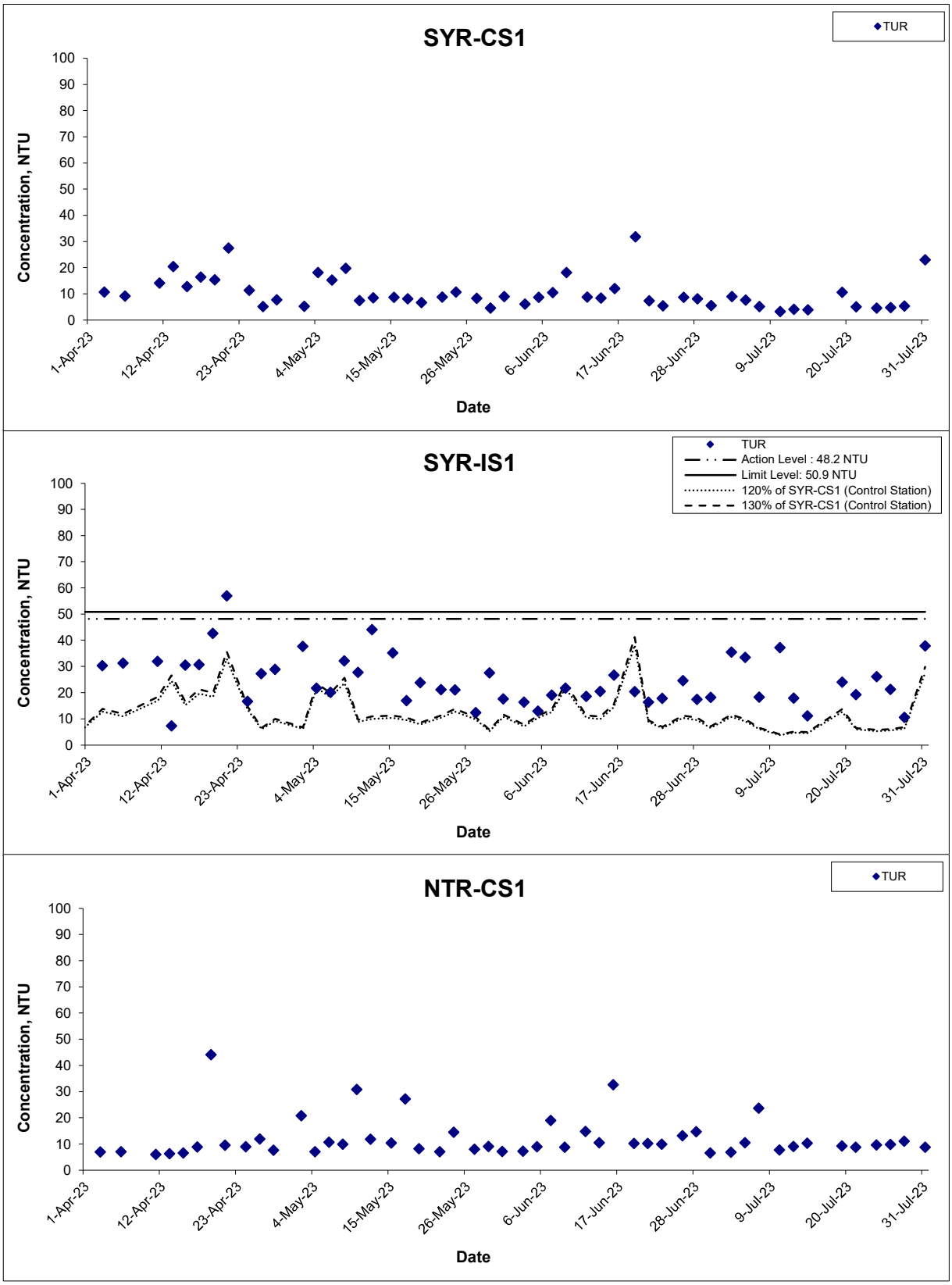
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Jul 23	Appendix: G	

Dissolved Oxygen (Middle)



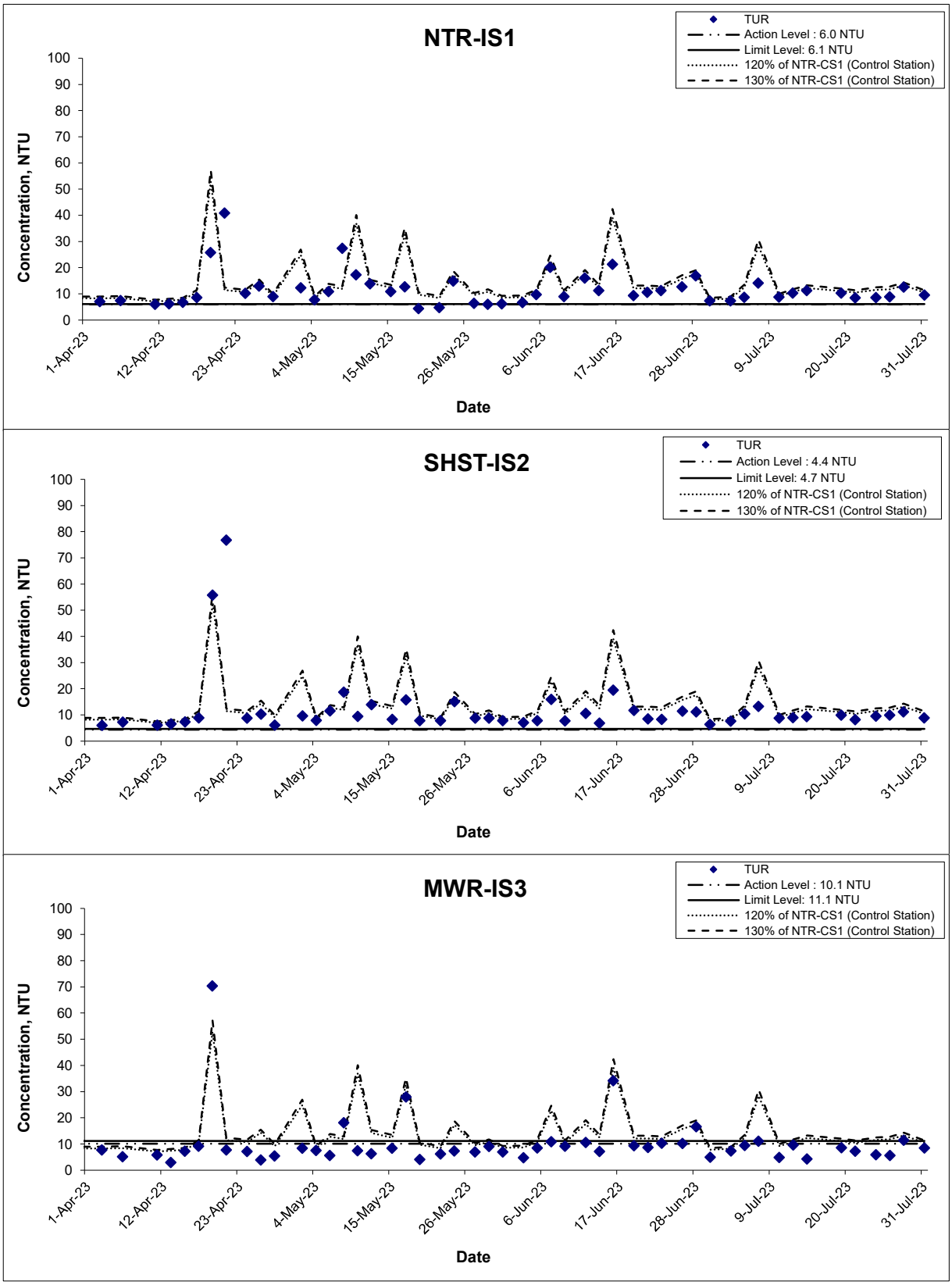
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Jul 23	Project No.: WMA20002 Appendix: G	WELLAB 匯力 consulting . testing . research

Turbidity (Depth-averaged)



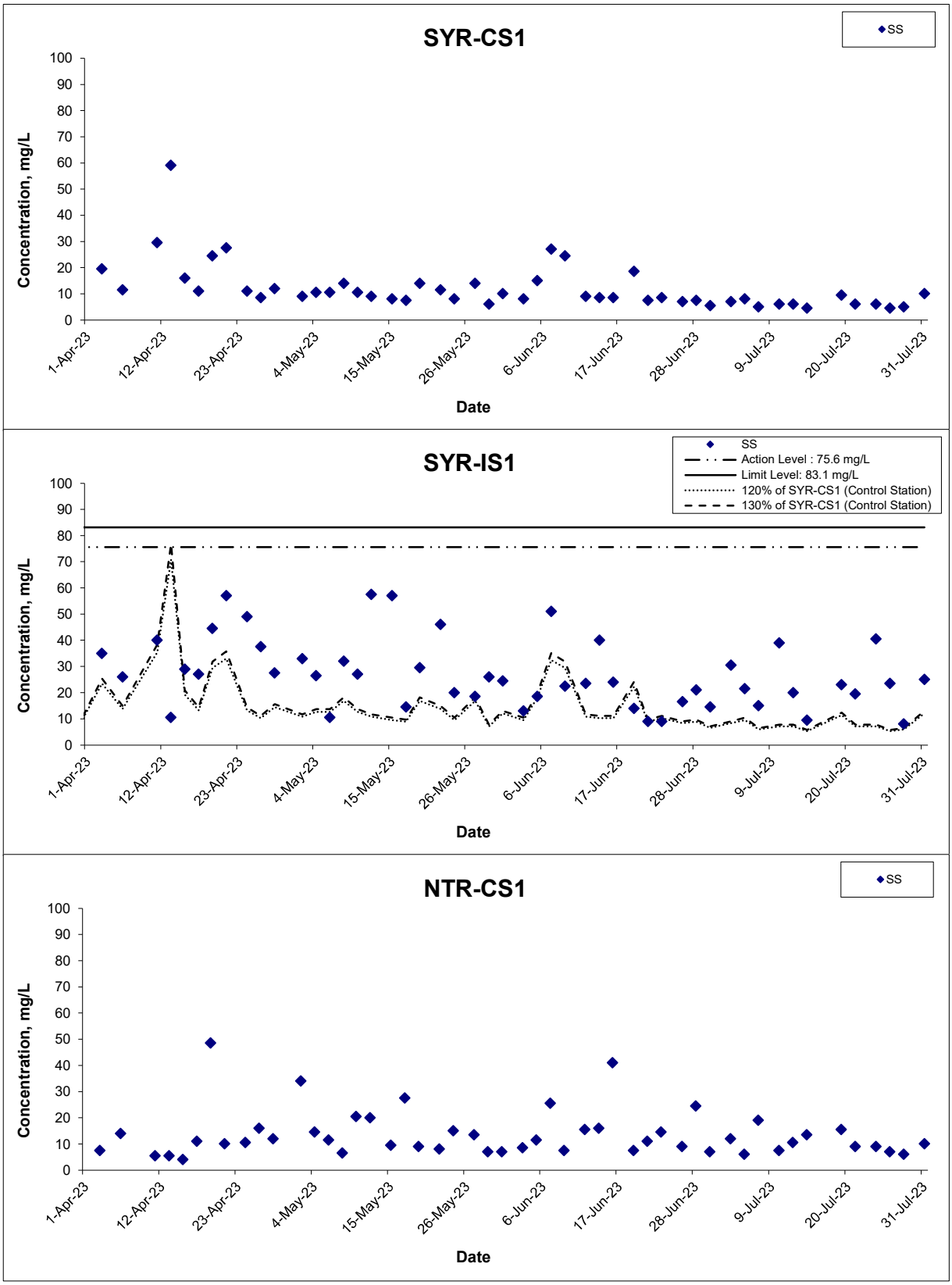
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Jul 23	Appendix: G	

Turbidity (Depth-averaged)



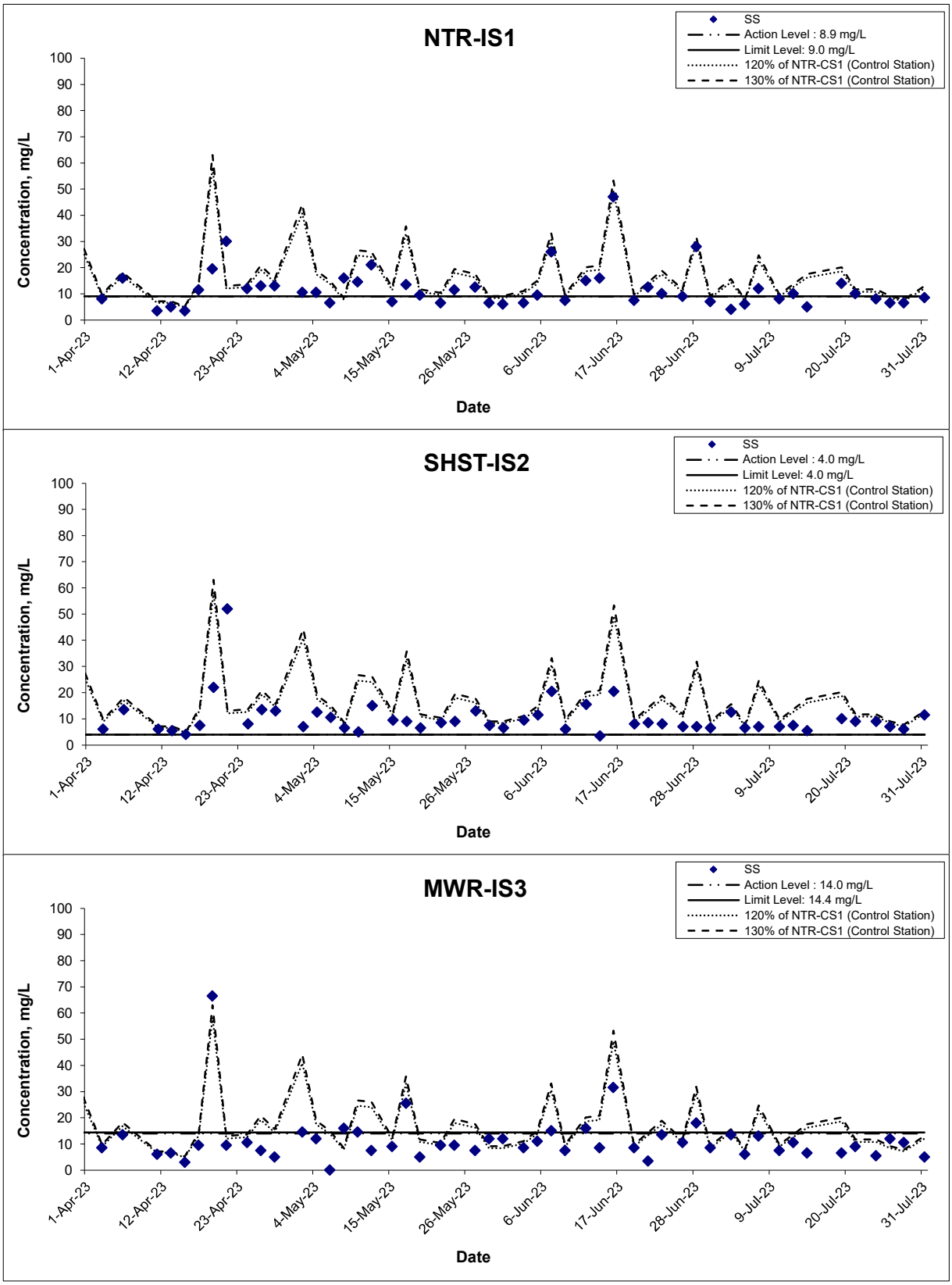
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
		Date Jul 23	Appendix G	

Suspended Solids (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	WELLAB 匯力 consulting . testing . research
		Date: Jul 23	Appendix: G	

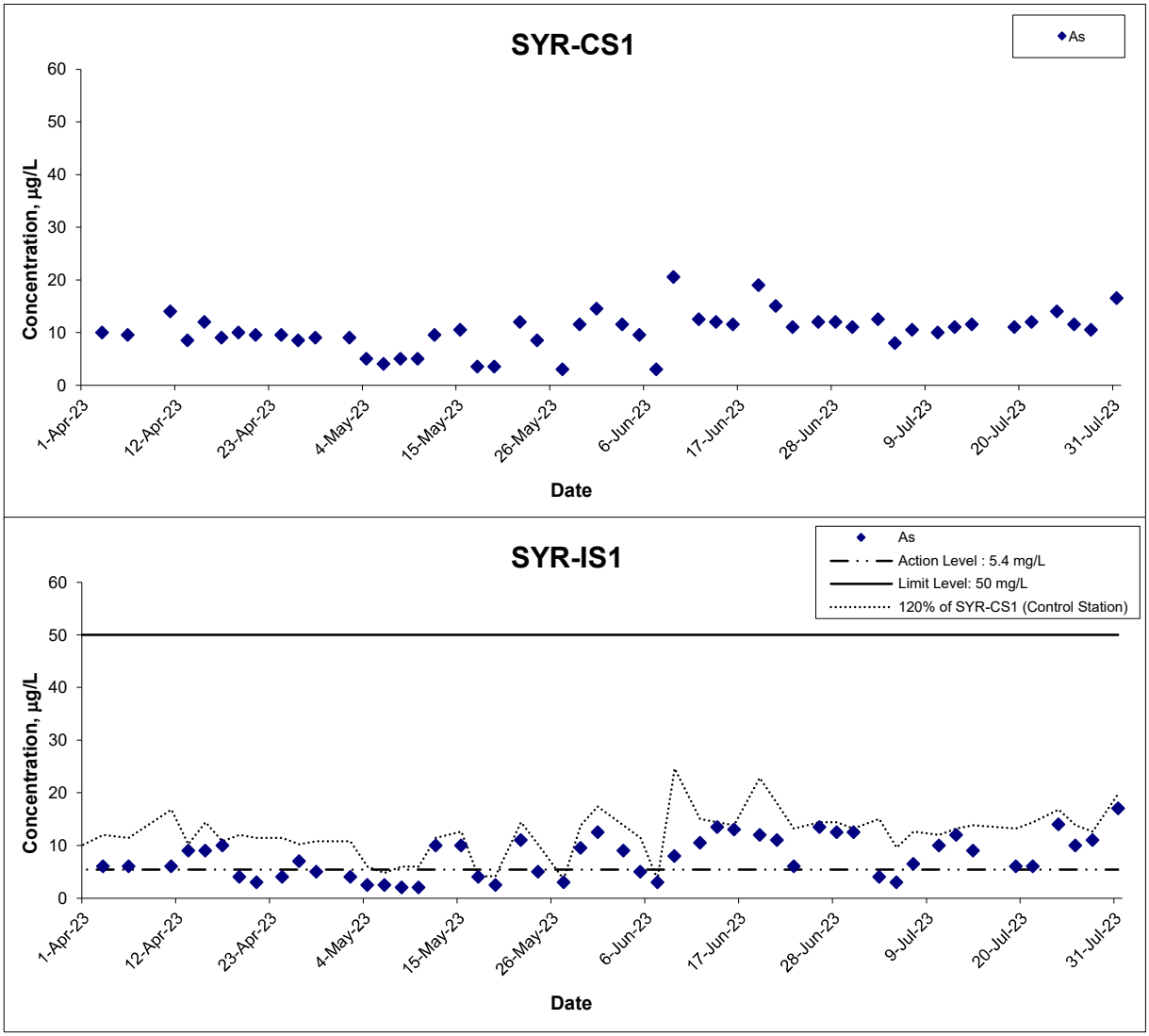
Suspended Solids (Depth-averaged)



Remarks: The graphical point at zero concentration is presented as below the reporting limit.

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	WELLAB 匯力 consulting . testing . research
	Date: Jul 23	Appendix: 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 Date Jul 23	Project No. WMA20002 Appendix G	WELLAB 匯力 consulting . testing . research

APPENDIX H
LABORATORY TESTING REPORTS FOR LABORATORY ANALYSIS

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WELLAB LIMITED
Room 1714, Technology Park
18 On Lai Street, Shatin
New Territories, Hong Kong
Tel: 2898 7388 Fax: 2898 7076
Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38445
Date of Issue:	2023-07-07
Date Received:	2023-07-03
Date Tested:	2023-07-03
Date Completed:	2023-07-07
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38445
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. : WMA20002/230703
Sampling Date : 2023-07-03

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.	38445-2	38445-3	38445-5	38445-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	31	30
Arsenic (µg/L)	13	12	4	4

Remarks: 1) < = less than

**********END OF REPORT**********

PREPARED AND CHECKED BY:
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PATRICK TSE
General Manager

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Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38445A
Date of Issue:	2023-07-07
Date Received:	2023-07-03
Date Tested:	2023-07-03
Date Completed:	2023-07-07
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38445A
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. : WMA20002/230703
Sampling Date : 2023-07-03

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.	38445-8	38445-9	38445-11	38445-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	12	4	4

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38445-14	38445-15	38445-17	38445-18
Total Suspended Solids dried at 103-105°C (mg/L)	12	13	13	14

Remarks: 1) < = less than

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38450
Date of Issue:	2023-07-11
Date Received:	2023-07-05
Date Tested:	2023-07-05
Date Completed:	2023-07-11
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38450
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. : WMA20002/230705
Sampling Date : 2023-07-05

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.	38450-2	38450-3	38450-5	38450-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	20	23
Arsenic (µg/L)	8	8	3	3

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38450A
Date of Issue:	2023-07-11
Date Received:	2023-07-05
Date Tested:	2023-07-05
Date Completed:	2023-07-11
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38450A
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. : WMA20002/230705
Sampling Date : 2023-07-05

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.	38450-8	38450-9	38450-11	38450-12
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	6	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38450-14	38450-15	38450-17	38450-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	6	6

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38455
Date of Issue:	2023-07-13
Date Received:	2023-07-07
Date Tested:	2023-07-07
Date Completed:	2023-07-13
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38455
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. : WMA20002/230707
Sampling Date : 2023-07-07

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.	38455-2	38455-3	38455-5	38455-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	16	14
Arsenic (µg/L)	11	10	7	6

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38455A
Date of Issue:	2023-07-13
Date Received:	2023-07-07
Date Tested:	2023-07-07
Date Completed:	2023-07-13
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38455A
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. : WMA20002/230707
Sampling Date : 2023-07-07

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.	38455-8	38455-9	38455-11	38455-12
Total Suspended Solids dried at 103-105°C (mg/L)	20	18	13	11

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38455-14	38455-15	38455-17	38455-18
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	14	12

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38482
Date of Issue:	2023-07-14
Date Received:	2023-07-10
Date Tested:	2023-07-10
Date Completed:	2023-07-14
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38482
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. : WMA20002/230710
Sampling Date : 2023-07-10

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.	38482-2	38482-3	38482-5	38482-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	41	37
Arsenic (µg/L)	10	10	10	10

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38482A
Date of Issue:	2023-07-14
Date Received:	2023-07-10
Date Tested:	2023-07-10
Date Completed:	2023-07-14
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38482A
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. : WMA20002/230710
Sampling Date : 2023-07-10

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.	38482-8	38482-9	38482-11	38482-12
Total Suspended Solids dried at 103-105°C (mg/L)	7	8	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38482-14	38482-15	38482-17	38482-18
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	7	8

Remarks: 1) < = less than

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38490
Date of Issue:	2023-07-18
Date Received:	2023-07-12
Date Tested:	2023-07-12
Date Completed:	2023-07-18
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38490
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. : WMA20002/230712
Sampling Date : 2023-07-12

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.	38490-2	38490-3	38490-5	38490-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	20	20
Arsenic (µg/L)	11	11	12	12

Remarks: 1) < = less than

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38490A
Date of Issue:	2023-07-18
Date Received:	2023-07-12
Date Tested:	2023-07-12
Date Completed:	2023-07-18
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38490A
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. : WMA20002/230712
Sampling Date : 2023-07-12

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.	38490-8	38490-9	38490-11	38490-12
Total Suspended Solids dried at 103-105°C (mg/L)	11	10	10	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38490-14	38490-15	38490-17	38490-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	7	10	11

Remarks: 1) < = less than

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38498
Date of Issue:	2023-07-20
Date Received:	2023-07-14
Date Tested:	2023-07-14
Date Completed:	2023-07-20
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38498
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. : WMA20002/230714
Sampling Date : 2023-07-14

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.	38498-2	38498-3	38498-5	38498-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	4	9	10
Arsenic (µg/L)	12	11	10	8

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38498A
Date of Issue:	2023-07-20
Date Received:	2023-07-14
Date Tested:	2023-07-14
Date Completed:	2023-07-20
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38498A
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. : WMA20002/230714
Sampling Date : 2023-07-14

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.	38498-8	38498-9	38498-11	38498-12
Total Suspended Solids dried at 103-105°C (mg/L)	13	14	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38498-14	38498-15	38498-17	38498-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	5	6	7

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38527
Date of Issue:	2023-07-25
Date Received:	2023-07-19
Date Tested:	2023-07-19
Date Completed:	2023-07-25
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38527
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. : WMA20002/230719
Sampling Date : 2023-07-19

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.	38527-2	38527-3	38527-5	38527-6
Total Suspended Solids dried at 103-105°C (mg/L)	10	9	24	22
Arsenic (µg/L)	11	11	6	6

Remarks: 1) < = less than

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TEST REPORT

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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38527A
Date of Issue:	2023-07-25
Date Received:	2023-07-19
Date Tested:	2023-07-19
Date Completed:	2023-07-25
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38527A
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. : WMA20002/230719
Sampling Date : 2023-07-19

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.	38527-8	38527-9	38527-11	38527-12
Total Suspended Solids dried at 103-105°C (mg/L)	15	16	15	13

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38527-14	38527-15	38527-17	38527-18
Total Suspended Solids dried at 103-105°C (mg/L)	10	10	6	7

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Marco Ma**

Report No.:	38535
Date of Issue:	2023-07-27
Date Received:	2023-07-21
Date Tested:	2023-07-21
Date Completed:	2023-07-27
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38535
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. : WMA20002/230721
Sampling Date : 2023-07-21

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.	38535-2	38535-3	38535-5	38535-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	20	19
Arsenic (µg/L)	11	13	6	6

Remarks: 1) < = less than

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ATTN: **Mr. Marco Ma**

Report No.:	38535A
Date of Issue:	2023-07-27
Date Received:	2023-07-21
Date Tested:	2023-07-21
Date Completed:	2023-07-27
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38535A
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. : WMA20002/230721
Sampling Date : 2023-07-21

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.	38535-8	38535-9	38535-11	38535-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	9	10	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38535-14	38535-15	38535-17	38535-18
Total Suspended Solids dried at 103-105°C (mg/L)	9	9	9	9

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38553
Date of Issue:	2023-07-28
Date Received:	2023-07-24
Date Tested:	2023-07-24
Date Completed:	2023-07-28
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38553
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. : WMA20002/230724
Sampling Date : 2023-07-24

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.	38553-2	38553-3	38553-5	38553-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	40	41
Arsenic (µg/L)	14	14	14	14

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Marco Ma**

Report No.:	38553A
Date of Issue:	2023-07-28
Date Received:	2023-07-24
Date Tested:	2023-07-24
Date Completed:	2023-07-28
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38553A
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. : WMA20002/230724
Sampling Date : 2023-07-24

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.	38553-8	38553-9	38553-11	38553-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	9	7	9

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38553-14	38553-15	38553-17	38553-18
Total Suspended Solids dried at 103-105°C (mg/L)	9	9	6	5

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38558
Date of Issue:	2023-08-01
Date Received:	2023-07-26
Date Tested:	2023-07-26
Date Completed:	2023-08-01
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38558
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. : WMA20002/230726
Sampling Date : 2023-07-26

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.	38558-2	38558-3	38558-5	38558-6
Total Suspended Solids dried at 103-105°C (mg/L)	4	5	24	23
Arsenic (µg/L)	12	11	10	10

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38558A
Date of Issue:	2023-08-01
Date Received:	2023-07-26
Date Tested:	2023-07-26
Date Completed:	2023-08-01
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38558A
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. : WMA20002/230726
Sampling Date : 2023-07-26

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.	38558-8	38558-9	38558-11	38558-12
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	7	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38558-14	38558-15	38558-17	38558-18
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	11	13

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38563
Date of Issue:	2023-08-03
Date Received:	2023-07-28
Date Tested:	2023-07-28
Date Completed:	2023-08-03
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38563
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. : WMA20002/230728
Sampling Date : 2023-07-28

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.	38563-2	38563-3	38563-5	38563-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	8	8
Arsenic (µg/L)	11	10	11	11

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38563A
Date of Issue:	2023-08-03
Date Received:	2023-07-28
Date Tested:	2023-07-28
Date Completed:	2023-08-03
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38563A
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. : WMA20002/230728
Sampling Date : 2023-07-28

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.	38563-8	38563-9	38563-11	38563-12
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	6	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38563-14	38563-15	38563-17	38563-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	10	11

Remarks: 1) < = less than

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	38580
Date of Issue:	2023-08-04
Date Received:	2023-07-31
Date Tested:	2023-07-31
Date Completed:	2023-08-04
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 38580
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. : WMA20002/230731
Sampling Date : 2023-07-31

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.	38580-2	38580-3	38580-5	38580-6
Total Suspended Solids dried at 103-105°C (mg/L)	11	9	26	24
Arsenic (µg/L)	16	17	17	17

Remarks: 1) < = less than

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Marco Ma**

Report No.:	38580A
Date of Issue:	2023-08-04
Date Received:	2023-07-31
Date Tested:	2023-07-31
Date Completed:	2023-08-04
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 38580A
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. : WMA20002/230731
Sampling Date : 2023-07-31

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.	38580-8	38580-9	38580-11	38580-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	11	8	9

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	38580-14	38580-15	38580-17	38580-18
Total Suspended Solids dried at 103-105°C (mg/L)	12	11	5	5

Remarks: 1) < = less than

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APPENDIX I
QUALITY CONTROL REPORTS FOR SS AND ARSENIC LABORATORY ANALYSIS

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APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
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ATTN: **Mr. Marco Ma**

Report No.:	QC38445
Date of Issue:	2023-07-07
Date Received:	2023-07-03
Date Tested:	2023-07-03
Date Completed:	2023-07-07

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 (%)	102	117	80-120
Arsenic (%)	106	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	1	RPD≤5%
Arsenic (%)	7	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 38445.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Marco Ma**

Report No.:	QC38450
Date of Issue:	2023-07-11
Date Received:	2023-07-05
Date Tested:	2023-07-05
Date Completed:	2023-07-11
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 (%)	82	85	80-120
Arsenic (%)	99	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 (%)	2	4	RPD≤5%
Arsenic (%)	2	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 38450.

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APPLICANT: **Wellab Limited (EM&A Department)**
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Report No.:	QC38455
Date of Issue:	2023-07-13
Date Received:	2023-07-07
Date Tested:	2023-07-07
Date Completed:	2023-07-13
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 (%)	108	83	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 (%)	114	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	6	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 38455.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Marco Ma**

Report No.:	QC38482
Date of Issue:	2023-07-14
Date Received:	2023-07-10
Date Tested:	2023-07-10
Date Completed:	2023-07-14
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 (%)	108	108	80-120
Arsenic (%)	107	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	91	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	1	RPD≤5%
Arsenic (%)	1	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 38482.

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APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Marco Ma**

Report No.:	QC38490
Date of Issue:	2023-07-18
Date Received:	2023-07-12
Date Tested:	2023-07-12
Date Completed:	2023-07-18
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	104	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 (%)	107	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 38490.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Marco Ma**

Report No.:	QC38498
Date of Issue:	2023-07-20
Date Received:	2023-07-14
Date Tested:	2023-07-14
Date Completed:	2023-07-20

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 (%)	90	111	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 (%)	99	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	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 38498.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Marco Ma**

Report No.:	QC38527
Date of Issue:	2023-07-25
Date Received:	2023-07-19
Date Tested:	2023-07-19
Date Completed:	2023-07-25
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 (%)	96	111	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 (%)	101	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	1	RPD≤5%
Arsenic (%)	6	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 38527.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Marco Ma**

Report No.:	QC38535
Date of Issue:	2023-07-27
Date Received:	2023-07-21
Date Tested:	2023-07-21
Date Completed:	2023-07-27
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 (%)	104	105	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 (%)	93	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	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 38535.

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APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Marco Ma**

Report No.:	QC38553
Date of Issue:	2023-07-28
Date Received:	2023-07-24
Date Tested:	2023-07-24
Date Completed:	2023-07-28
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 (%)	107	84	80-120
Arsenic (%)	105	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	86	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	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 38553.

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Report No.:	QC38558
Date of Issue:	2023-08-01
Date Received:	2023-07-26
Date Tested:	2023-07-26
Date Completed:	2023-08-01

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 (%)	91	118	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 (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	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 38558.

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Marco Ma**

Report No.:	QC38563
Date of Issue:	2023-08-03
Date Received:	2023-07-28
Date Tested:	2023-07-28
Date Completed:	2023-08-03
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 (%)	83	101	80-120
Arsenic (%)	106	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 (%)	3	4	RPD≤5%
Arsenic (%)	7	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 38563.

**********END OF REPORT**********

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Shatin, N.T.

ATTN: **Mr. Marco Ma**

Report No.:	QC38580
Date of Issue:	2023-08-04
Date Received:	2023-07-31
Date Tested:	2023-07-31
Date Completed:	2023-08-04
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 (%)	109	107	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 (%)	95	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	3	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 38580.

**********END OF REPORT**********

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRCIK TSE
General Manager

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APPENDIX J
LANDFILL GAS MONITORING RESULTS

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 & Infrastucture works

堆填區附近區域(Consultation Zone)每月氣體監察記錄

			氧氣 O2	甲烷 CH4	二氧化碳 CO_2
日期及時間	位置	氣體及安全標準	>19%	<10% LEL	<0.5%
13-07-2023 9:42	CZ PT 1		20.40	0.01	0.02
13-07-2023 9:40	CZ container 1		20.42	0.01	0.02
13-07-2023 9:32	CZ container 2		20.40	0.02	0.02
13-07-2023 9:34	CZ container 3		20.36	0.01	0.02
13-07-2023 9:36	CZ container 4		20.44	0.02	0.02
13-07-2023 9:38	CZ container 5		20.38	0.02	0.02

Prepared by : Y L Chan (Safety Officer) Date : 13-07-2023

APPENDIX K
BUILT HERITAGE MONITORING RESULTS

No construction vibration monitoring was conducted for built heritage when no pile driving operation was conducted within assessment area of the construction works.

APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 3 & 4 July 2023, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			4/7/2023 (T1 & T2), 3/7/2023 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			3.10, 2.91					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		4								6
Black Kite	*Milvus migrans*	黑鳶	R, WV		1								
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R			2	2	10	2	6			4
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC		1							
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			2						
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				2						
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	1	4	4	2	1			2
Cinereous Tit	*Parus cinereus*	蒼背山雀	R			3							
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1	3						
Common Myna	*Acridotheres tristis*	家八哥	UR				2						
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		1								
Crested Myna	*Acridotheres cristatellus*	八哥	R		1	1	1		4				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						40				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1	2						1
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	1							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			4/7/2023 (T1 & T2), 3/7/2023 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			3.10, 2.91					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC		1							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	5	11	6	2	4			2
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		3								
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R			2	1						
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)		1							
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						2			1	
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		6	4	2						
Rock Dove	*Columba livia*	原鴿	R			23			13				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						100				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			1	7		13				8
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		3	2							
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						2				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			1						1
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1			2				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		3	1						1	
Total No. of Species					11	18	13	3	11	3	0	2	7
Total No. of Conservation Interest Species					3	8	6	2	2	2	0	0	4

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			4/7/2023 (T1 & T2), 3/7/2023 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			3.10, 2.91					
					Start Time			1000, 1000					
					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;; UR – Uncommon resident; CWV - Common Winter Visitor; OV - Occasional 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)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered 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, 3 & 4 July 2023, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			4/7/2023 (T1 & T2), 3/7/2023 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.32					
					Start Time			1500, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		1	1	1		1				
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		2	2	3						3
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv			2							
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3	2	2		4			1	
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC		1	1						
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				9		17			1
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R						3				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	2	3	1					
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		5		2						
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			2						
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1	1							
Common Myna	*Acridotheres tristis*	家八哥	UR		1								
Crested Myna	*Acridotheres cristatellus*	八哥	R		5	10			13				5
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			4	4		7				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1	1						
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)		1	1						1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			4/7/2023 (T1 & T2), 3/7/2023 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.32					
					Start Time			1500, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	3								
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC		2	1						
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	4	15	3	8	4			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		4	6	2		2				
Oriental Magpie	*Pica serica*	喜鵲	R										1
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R			4			4				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R					2					
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM										5
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R		2								
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		3	1			2				
Rock Dove	*Columba livia*	原鴿	R			6	10		17				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R					80					
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			4							
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		1	6			4				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1			3				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					1	1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			4/7/2023 (T1 & T2), 3/7/2023 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.32					
					Start Time			1500, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						20				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	2								
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R				1					1	
Total No. of Species					16	20	15	6	15	2	0	2	6
Total No. of Conservation Interest Species					5	7	8	3	1	2	0	0	2

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; Sv – Summer Visitor; UR – Uncommon resident;
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)
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, 13 & 14 July 2023, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			13/7/2023 (T1 & T2), 14/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.17, 2.21					
					Start Time			0800, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				3						15
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R				2		5			3	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			8		15			2	2
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		3			2					
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	1	4	2	1	3			2
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1							
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R						1				
Crested Myna	*Acridotheres cristatellus*	八哥	R		2		2						1
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)									2
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						11				3
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	4	4				1			
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										1
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC			2						
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	6	19	10	10	3	3			1
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC			5						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			13/7/2023 (T1 & T2), 14/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.17, 2.21					
					Start Time			0800, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				1		2				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		1		1		3				
Plain Prinia	*Prinia inornata*	純色鱲鶯	R						6			5	
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM										1
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				1		2				1
Rock Dove	*Columba livia*	原鴿	R						11				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R				3						2
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R				6		8				3
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R				1		6				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV				3		6				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		2							1	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			1		1				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鱲鶯	R		1		2					2	
Total No. of Species					8	4	17	3	15	3	0	5	12
Total No. of Conservation Interest Species					3	4	6	2	4	3	0	1	4

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			13/7/2023 (T1 & T2), 14/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.17, 2.21					
					Start Time			0800, 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; 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
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 L1d. Avifauna Species Recorded for Water Birds Monitoring, 13 & 14 July 2023, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			13/7/2023 (T1 & T2), 14/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.59, 0.62					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				1		8				8
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv				2						
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R			2	2		3				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						18			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	2	5	5	1	5			
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1							
Crested Myna	*Acridotheres cristatellus*	八哥	R		2	1	2						10
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				1		10				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	2	3	1						
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV										1
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										1
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	22	13		2	7			1
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鸝	R									1	
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		1		2						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			13/7/2023 (T1 & T2), 14/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.59, 0.62					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						10				
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM										2
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				1						
Rock Dove	*Columba livia*	原鴿	R			8			15				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						20				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		4	2	4		8				
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R				1						
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV				1						2
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						2				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					2				
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						3				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									4	
Total No. of Species					6	8	13	1	13	3	0	2	7
Total No. of Conservation Interest Species					3	4	3	1	3	3	0	0	1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			13/7/2023 (T1 & T2), 14/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.59, 0.62					
					Start Time			1400, 1400					
					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 – Spring migrant; UR – Uncommon resident; 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)
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 L1e. Avifauna Species Recorded for Water Birds Monitoring, 19 & 20 July 2023, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			2.53, 2.66					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										17
Besra	*Accipiter virgatus*	松雀鷹	R, CPM	Cap.586									1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R						1				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				18		31			17
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	4	2	5	2				2
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		1								
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC				3					
Common Myna	*Acridotheres tristis*	家八哥	UR				2		5				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				1						
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		2								
Crested Myna	*Acridotheres cristatellus*	八哥	R		2				1				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			7			15				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	2							
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC		1							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	13	6	7	4	6			5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			2.53, 2.66					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		3				6				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						1				
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV						2				
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)	1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R		2								
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		1	3							
Rock Dove	*Columba livia*	原鴿	R			11			16				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						40				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2		11		61				18
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R			1							
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1								
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		2								
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						4				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	1	1	1						
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC				27					
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		2	1							
Total No. of Species					15	10	6	5	13	2	0	0	6

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			2.53, 2.66					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Conservation Interest Species					5	5	3	5	2	2	0	0	4

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;UR – Uncommon resident; CWV - Common Winter Visitor; OV – Occasional 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)
(EN): Endangered 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 L1f. Avifauna Species Recorded for Water Birds Monitoring, 19 & 20 July 2023, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.37, 1.17					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R									1	1
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				1						5
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3	3	3	1	5				
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC			1						1
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				4		37			4
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R						2				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	1	6	2	4	2			5
Cinereous Tit	*Parus cinereus*	蒼背山雀	R						3				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1						1
Common Moorhen	*Gallinula chloropus*	黑水雞	R							3			
Common Myna	*Acridotheres tristis*	家八哥	UR						14				
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		2	2							
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1							
Crested Myna	*Acridotheres cristatellus*	八哥	R				2						78
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				2		25				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.37, 1.17					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)			1		1				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	2	2	1			1			1
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV							1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1		1						
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC		1							
Large Hawk-Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	Sv									1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	7	11	21		8	5			1
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC					6				
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		1	1			1			5	
Oriental Magpie	*Pica serica*	喜鵲	R						2				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R			1							
Plain Prinia	*Prinia inornata*	純色鷦鶯	R					1	4			4	
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		1	2			3				
Rock Dove	*Columba livia*	原鴿	R			5	1		10				6
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R				30	15					45
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			2	7		7				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.37, 1.17					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		3	2							
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2	3	1	1	5				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						5			2	1
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						30				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			2						1
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC				3		3			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		2	3	3	1				4	
Total No. of Species					11	15	17	8	19	7	0	6	13
Total No. of Conservation Interest Species					4	5	8	3	4	5	0	0	7

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			20/7/2023 (T1 & T2), 19/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.37, 1.17					
					Start Time			1600, 1600					
					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)
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, 24 & 25 July 2023, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.88, 2.11					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		1							1	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		2		2		8			23	
Besra	*Accipiter virgatus*	松雀鷹	R, CPM	Cap.586									1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1	1			5			11	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				20		29			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R				2		2				1
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	3	5	2	12	3			5
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		1	2							
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC				1					
Common Myna	*Acridotheres tristis*	家八哥	UR						3				
Common Redshank	*Tringa totanus*	紅腳鷸	PM	RC				1					
Crested Myna	*Acridotheres cristatellus*	八哥	R			2			18				18
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			1			116				99
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	2							
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)					1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.88, 2.11					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				1			1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	2		1						
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		4								
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC		1							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	4	13	1	1	14	7			2
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC						20			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R		1								2
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	PM, WV	RC				1					
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		1	3	7						
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R			1	2						1
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)	1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R		1	1			1				
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		4	2							
Rock Dove	*Columba livia*	原鴿	R			14	1		12				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						25				
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						2				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5	2	6		87				7

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.88, 2.11					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		6	2							
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2		1		2	3			
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						1				
White-rumped Munia	*Lonchura striata*	白腰文鳥	R					25	4				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	1		1						
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC				4					3
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1	1	1						
Total No. of Species					19	16	13	8	17	6	0	3	10
Total No. of Conservation Interest Species					6	4	5	6	3	4	0	0	4

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)
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

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.88, 2.11					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1h. Avifauna Species Recorded for Water Birds Monitoring, 24 & 25 July 2023, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.19, 1.09					
					Start Time			0800, 0800					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		1				1				11
Black Kite	*Milvus migrans*	黑鳶	R, WV		1								
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1				3			2	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				16	1	8	6		5
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		1				1				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	5	4	4	5	1	4			5
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		1	3							
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1	2					
Common Myna	*Acridotheres tristis*	家八哥	UR		1								
Common Redshank	*Tringa totanus*	紅腳鷸	PM	RC				1					
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1								
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		2								
Crested Myna	*Acridotheres cristatellus*	八哥	R		2				1				4
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						22				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	2	1					1		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.19, 1.09					
					Start Time			0800, 0800					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV							1			1
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										4
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC		1							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	15	16	14	5	4	7			3
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC						1			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R		2	2						1	
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		1	2							
Rock Dove	*Columba livia*	原鴿	R			2			5				
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R										3
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	2	2		8				8
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		1								1
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1	5						5
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						2				
White-rumped Munia	*Lonchura striata*	白腰文鳥	R					10					
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	1	1			2				1
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC						5			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/7/2023 (T1 & T2), 24/7/2023 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.19, 1.09					
					Start Time			0800, 0800					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		2	2							
Total No. of Species					19	12	5	6	12	6	2	2	12
Total No. of Conservation Interest Species					4	4	3	5	4	5	2	0	4

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 – Scarce winter visitor; 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 L1i, Waterbirds Recorded in July 2023

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	LC	T2: River bank, In flight T3: River bank, River bed T5: in flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	RC	T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Chinese Pond Heron	*Ardeola bacchus*	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	*Tringa nebularia*	青腳鷸	RC	T3: River bank, River bed, in flight T5: Wet Agricultural Land, In flight	Abundant winter visitor and migrant. Found in Deep Bay area.
Common Kingfisher	*Alcedo atthis*	普通翠鳥		T1: River bank, In flight T2: River bank, In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Moorhen	*Gallinula chloropus*	黑水雞		T5: Shallow Water Habitat	Common winter visitor, resident and migrant. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Redshank	*Tringa totanus*	紅腳鷸	RC	T5: Wet Agricultural Land	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Sandpiper	*Actitis hypoleucos*	磯鷸		T1: River bank T3: River bank	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	(LC)	T5: In flight	Resident and common passage migrant. Widely distributed in Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Great Egret	*Ardea alba*	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Shallow Water Habitat, Pond, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	*Tringa ochropus*	白腰草鷸		T3: River bank, River bed, In flight T5: 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.
Grey Heron	*Ardea cinerea*	蒼鷺	PRC	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Intermediate Egret	*Ardea intermedia*	中白鷺	RC	T2: River bank, In flight T3: River bank, River bed, In flight	Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cap D'Aguilar.
Little Egret	*Egretta garzetta*	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 Grebe	*Tachybaptus ruficollis*	小鸊鷉	LC	T5: Shallow Water Habitat	Common resident. Found in Deep Bay area.
Little Ringed Plover	*Charadrius dubius*	金眶鴴	LC	T3: River bank, River bed, In flight T5: Dry Agricultural Land, Shallow Water Habitat	Resident, common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	RC	T5: Wet Agricultural Land	Abundant winter visitor and migrant. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Sai Kung.
Pied Kingfisher	*Ceryle rudis*	斑魚狗	(LC)	T1: In flight T2: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥		T1: River bank T5: Wet Agricultural Land, Dry Agricultural Land	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	(LC)	T2: River bank, In flight T3: River bank, River bed, In flight T5: Dry Agricultural Land, In flight	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	*Tringa glareola*	林鷸	LC	T5: Dry Agricultural Land, 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)
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 L1j. Birds Recorded in July 2023

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Asian Koel	*Eudynamys scolopacea*	噪鵑	R	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv	
Besra	*Accipiter virgatus*	松雀鷹	R, CPM	Cap.586
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv	
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R	
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)
Cinereous Tit	*Parus cinereus*	蒼背山雀	R	
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R	
Common Moorhen	*Gallinula chloropus*	黑水雞	R	
Common Myna	*Acridotheres tristis*	家八哥	UR	
Common Redshank	*Tringa totanus*	紅腳鷸	PM	RC
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM	
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R	
Crested Myna	*Acridotheres cristatellus*	八哥	R	
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R	
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV	
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R	
Intermediate Egret	*Ardea intermedia*	中白鷺	CPM	RC
Large Hawk-Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	Sv	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R	
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	PM, WV	RC
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R	
Oriental Magpie	*Pica serica*	喜鵲	R	
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R	
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV	
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)
Plain Prinia	*Prinia inornata*	純色鵐鶯	R	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R	
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Red-whiskered bulbul	*Pycnonotus jocosus*	紅耳鵯	R	
Rock Dove	*Columba livia*	原鴿	R	
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R	
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R	
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R	
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R	
White-rumped Munia	*Lonchura striata*	白腰文鳥	R	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R	

Note:
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 & Summer Visitor; SWV – Scarce winter visitor;
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
VU: Vulnerable on IUCN Red List of Threatened Species.
(VU): Vulnerable in China Red Data Book 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 L2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring, 18 July, 2023

Common Name	Scientific Name	Conservation Status	Occurrence Status	Date: 18 July 2023									
				Weather: Storm									
				Methods: Kick-netting, sweep netting and direct observation									
				Abundance									
				MS_01*	MS_02	MS_03	MS_04	MS_05*	MS_06	MS_07	MS_08	MS_09	MS_10
Apple Snail	*Pomacea canaliculata*	-	Introduced			+							
Atyid shrimp	*Caridina* sp.	-	-									++	
Black Threadtail	*Prodasineura autumnalis*	-	Native		+								
Bladder Snail	*Physella acuta*	-	-			+	+						
Blood Worm	Chironomidae	-	-		+	+	+		+		++		+
Caddisfly	*Hydroptila* sp.	-	-									+	
Chinese River Snail	*Sinotaia guangdungensis*	-	Native		+	+	+				+	+	++
Common Blue Skimmer	*Orthetrum glaucum*	-	Native										+
Crimson Dropwing	*Trithemis aurora*	-	Native			+					+		
Freshwater Snail	*Radix plicatulus*	-	-										
Golden Freshwater Clam	*Corbicula fluminea*	-	Native								++	+	
Indigo Dropwing	*Trithemis festiva*	-	Native				+					+	
Leech	*Hirudinea*	-	-		++							+	
Mayfly	*Baetis* sp.	-	-								++		
	Cloeon sp.										++		
	Cloeon sp.	-	-								+		

Ram's Horn Snail	*Gyraulus convexiusculus*	-	Introduced		++	+				+	+		
Red-rimmed Melania	*Melanoides tuberculata*	-	Introduced		++	+			+		+++	+++	
Water Strider	*Metrocoris sp.*	-	-				+						
	Microvelia sp.	-	-				+		+		+		
	Ptilomera tigrina	-	Native				++				+		
Yellow Featherlegs	*Copera marginipes*	-	Native		+		+				+		
Total No. of species				0	7	7	8	0	3	1	12	7	3
Total No. of Conservation Interest Species				0	0	0	0	0	0	0	0	0	0

Note: *: dried-up station
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

Common Name	Scientific Name	Conservation Status	Occurece Status	Date: 18 July 2023				
				Weather: Storm				
				Methods: Kick-netting, sweep netting and direct observation				
				Abundance				
				MS_11	MS_12	MS_13	MS_14	MS_15
Apple Snail	*Pomacea canaliculata*	-	Introduced		+++	+		+
Atyid shrimp	*Caridina* sp.	-	-				+++	
Black Threadtail	*Prodasineura autumnalis*	-	Native					
Bladder Snail	*Physella acuta*	-	-					+++
Blood Worm	Chironomidae	-	-					+++
Caddisfly	*Hydroptila* sp.	-	-					
Chinese River Snail	*Sinotaia guangdungensis*	-	Native			+		
Common Blue Skimmer	*Orthetrum glaucum*	-	Native					
Crimson Dropwing	*Trithemis aurora*	-	Native					
Freshwater Snail	*Radix plicatulus*	-	-					+
Golden Freshwater Clam	*Corbicula fluminea*	-	Native			+	++	++
Indigo Dropwing	*Trithemis festiva*	-	Native					
Leech	*Hirudinea*	-	-					
Mayfly	*Baetis* sp.	-	-					
	Cloeon sp.							
	Cloeon sp.	-	-					
Ram’s Horn Snail	*Gyraulus convexiusculus*	-	Introduced					
Red-rimmed Melania	*Melanoides tuberculata*	-	Introduced				+	
Water Strider	*Metrocoris sp.*	-	-					

	Microvelia sp.	-	-					
	Ptilomera tigrina	-	Native					
Yellow Featherlegs	*Copera marginipes*	-	Native					
Total No. of species				0	1	7	3	5
Total No. of Conservation Interest Species				0	0	0	0	0

Appendix L3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring, 18 July 2023

Common Name	Scientific Name	Conservation Status	Occurrence Status	Date: 18 July 2023									
				Weather: Storm									
				Methods: Kick-netting, sweep netting and direct observation									
				Abundance									
				MS_01*	MS_02	MS_03	MS_04	MS_05*	MS_06	MS_07	MS_08	MS_09	MS_10
Mosquito Fish	*Gambusia affinis*	-	Introduced										
Mozambique Tilapia	*Oreochromis mossambicus*	VU	Introduced				+						
Nile Tilapia	*Oreochromis niloticus*	-	Introduced						+				
Total No. of species				0	0	0	1	0	1	0	0	0	0
Total No. of Conservation Interest Species				0	0	0	0	0	0	0	0	0	0

Note:
VU: Vulnerable on IUCN Red List of Threatened Species.
(VU): Vulnerable on China Red Data Book of Endangered Species.

Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

Common Name	Scientific Name	Conservation Status	Occurrence Status	Date: 18 July 2023				
				Weather: Storm				
				Methods: Kick-netting, sweep netting and direct observation				
				Abundance				
				MS_11	MS_12	MS_13	MS_14	MS_15
Mosquito Fish	*Gambusia affinis*	-	Introduced			++	++	
Mozambique Tilapia	*Oreochromis mossambicus*	VU	Introduced					+
Nile Tilapia	*Oreochromis niloticus*	-	Introduced					+
Total No. of species				0	0	1	1	2
Total No. of Conservation Interest Species				0	0	0	0	1

Note:
VU: Vulnerable on IUCN Red List of Threatened Species.
(VU): Vulnerable on China Red Data Book of Endangered Species.

Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

Appendix L4. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 6 & 21 July 2023

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	*Felis catus*	野貓		Introduced		+			+
Domestic Dog	*Canis lupus familiaris*	野狗		Introduced	+		+++		+++
Domestic Ox	*Bos taurus*	黃牛		Introduced	++				
Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Cap. 170	Native		++	+++	+++	+++
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Cap. 170, (NT)	Native	+++				
Total No. of species					3	2	2	1	3
Total No. of Conservation Interest Species					2	1	1	0	2
Total No. of Native Species					1	1	1	1	1

Note:

Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)

(NT): Near Threatened in the Red List of China's Vertebrates

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

Local Restrictedness Column has been removed as said information is no longer available.

Appendix L5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 6 & 21 July 2023

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Amphibian									
Asian Common Toad	*Bufo melanostictus*	黑眶蟾蜍	-	Native		+++	+	+++	
Asiatic Painted Forg	*Kaloula pulchra pulchra*	花狹口蛙	-	Native				+	
Brown Tree Frog	*Polypedates megacephalus*	斑腿泛樹蛙	-	Native			+		
Gunther's Frog	*Hylarana guentheri*	沼蛙	-	Native	++	+++	+	+++	
Paddy Frog	*Fejervarya limnocharis*	澤蛙	-	Native				++	
Reptile									
Bowring’s Gecko	*Hemidactylus bowringii*	原尾蜥虎	-	Native				++	
Chinese gecko	*Gekko chinensis*	中國壁虎	-	Native			+	+	
Long-tailed Skink	*Eutropis longicaudata*	長尾南蜥	-	Native			+		
Total No. of species					1	2	5	6	0
Total No. of Conservation Interest Species					0	0	0	0	0
Total No. of Native Species					1	2	5	6	0

Note:
(EN): Near Threatened in Red List of China Vertebrates
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 L6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 6 & 21 July 2023

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Angled Castor	*Ariadne ariadne*	波蛺蝶		-			+	+	
Blue Admiral	*Kaniska canace*	琉璃蛺蝶		-				+	+
Blue-spotted Crow	*Euploea midamus*	藍點紫斑蝶		-	+		+	+	
Chestnut Bob	*Iambrix salsala*	雅弄蝶		-				+	
Chocolate Pansy	*Junonia iphita*	鉤翅眼蛺蝶		-				+	+
Colour Sergeant	*Athyma nefte*	相思帶蛺蝶		-	+			+	
Common Bluebottle	*Graphium sarpedon*	青鳳蝶		-	+	+	+	++	
Common Five-ring	*Ypthima baldus*	矍眼蝶		-	++			+++	
Common Grass Yellow	*Eurema hecabe*	寬邊黃粉蝶		-	++	++	+		
Common Jay	*Graphium doson axion*	木蘭青鳳蝶		-			+	+	
Common Jester	*Symbrenthia lilaea*	散紋盛蛺蝶		-	+			+	
Common Mormon	*Papilio polytes*	玉帶鳳蝶		-	+++	++	+++	++	+
Common Palmfly	*Elymnias hypermnestra*	翠袖鋸眼蝶		-				+	
Common Sailer	*Neptis hylas*	中環蛺蝶		-	+	+	+	+	
Danaid Eggfly	*Hypolimnas misippus*	金斑蛺蝶	LC	-	+				
Dark Brand Bush Brown	*Mycalesis mineus*	小眉眼蝶		-	++	+	+		
Gaudy Baron	*Euthalia lubentina*	紅斑翠蛺蝶		-	++			+	

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Five-dot Sergeant	*Parathyma sulpitia*	殘鍔線蛺蝶		-	+			+	
Forest Hopper	*Astictopterus jama*	腌翅弄蝶			+				
Formosan Swift	*Borbo cinnara*	秈弄蝶		-	+				
Great Egg-fly	*Hypolimnas bolina*	幻紫斑蛺蝶		-	+++		++		
Great Mormon	*Papilio memnon*	美鳳蝶		-	+	+++			
Great Orange Tip	*Hebomoia glaucippe*	鶴頂粉蝶		-	+	+			
Indian Cabbage White	*Pieris canidia*	東方菜粉蝶		-	+	++		+	
Large Faun	*Faunis eumeus*	串珠環蝶		-					
Lemon Emigrant	*Catopsilia pomona*	遷粉蝶		-	+++	+++	+++	+++	
Lemon Pansy	*Junonia lemonias*	蛇眼蛺蝶		-			+		
Lime Butterfly	*Papilio demoleus*	達摩鳳蝶		-		+			
Metallic Cerulean	*Jamides alecto*	素雅灰蝶		-				+	
Mottled Emigrant	*Mottled Emigrant*	梨花遷粉蝶		-			+		
Pale Grass Blue	*Pseudozizeeria maha*	酢漿灰蝶		-	++	++	+++	+	
Paris Peacock	*Papilio paris*	巴黎翠鳳蝶		-	+			++	
Plain Tiger	*Danaus chrysippus*	金斑蝶		-			+	+	
Plum Judy	*Abisara echerius*	蛇目褐蜆蝶		-			+	+	+++
Red Helen	*Papilio Helenus*	玉斑鳳蝶		-	+			+	
Red Ring Skirt	*Hestina assimilis*	黑脈蛺蝶		-	+		+	+	
Shan Nawab	*Polyura nepenthes*	忘憂尾蛺蝶		-				+	
Short-banded Sailer	*Phaedyma columella*	柱菲蛺蝶						+	
Small White	*Pieris rapae*	菜粉蝶			+	+		+	

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status*	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
South China Bush Brown	*Mycalesis mineus*	平頂眉眼蝶			+			+	
Southern Sullied Sailer	*Neptis clinia*	珂環蛺蝶			++				
Spangle	*Papilio protenor*	藍鳳蝶			++	+	+	++	
Swallowtail	*Papilio xuthus*	柑橘鳳蝶	R				+		
Tailed Jay	*Graphium agamemnon*	統帥青鳳蝶				+		++	
Tailless Line Blue	*Prosotas dubiosa*	疑波灰蝶			+++		+		
Tawny Rajah	*Charaxes bernardus*	白帶螯蛺蝶			+		+		
Three-spot Grass Yellow	*Eurema blanda*	劈黃粉蝶			++	+	+		
Water Snow Flat	*Tagiades litigiosus*	沾邊裙弄蝶			+				
White-edged Blue Baron	*Euthalia phemius*	尖翅翠蛺蝶			++			++	
Total No. of species					32	15	21	31	4
Total No. of Conservation Interest Species					1	0	1	0	0

Note:

*Very limited data are available for the occurrence status (being native to Hong Kong) of butterflies

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

LC: Local Concern (Fellowes et al., 2002)

R: Rare (Chan et al. (2011))

Appendix L7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring, 6 & 21 July 2023

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Amber-winged Glider	*Hydrobasileus croceus*	臀斑楔翅蜻		Native			+		+
Blue Chaser	*Potamarcha congener*	濕地狹翅蜻	LC	Native	++			+	
Blue Dasher	*Brachydiplax flavovittata*	藍額疏脈蜻		Native	+				
Common Blue Skimmer	*Orthetrum glaucum*	黑尾灰蜻		Native				++	
Common Flangetail	*Ictinogomphus pertinax*	霸王葉春蜓		Native	+				
Common Red Skimmer	*Orthetrum pruinosum*	赤褐灰蜻		Native			+	+++	
Elusive Adjutant	*Aethriamanta brevipennis*	紅腹異蜻		Non-native	++				
Forest Chaser	*Lyriothemis elegantissima*	華麗寬腹蜻		Native	+				
Green Skimmer	*Orthetrum sabina*	狹腹灰蜻		Native	+				
Lesser emperor	Anax parthenope julius	碧偉蜓		Native	+				
Marsh Skimmer	*Orthetrum luzonicum*	呂宋灰蜻		Native			+	+	
Orange-tailed Sprite	*Ceriagrion auranticum*	翠胸黃蟌		Native	+				

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts	Date: 21/7/2023 (T1,6) , 6/7 /2023 (T3,4,5)				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Pied Skimmer	*Pseudothemis zonata*	玉帶蜻		Native	++				+
Red-faced Skimmer	*Orthetrum chrysis*	華麗灰蜻		Native			+		
Russet Percher	*Neurothemis fulvia*	網脈蜻		Native	+				
Saddlebag Glider	*Tramea virginia*	華斜痣蜻		Native	+				++
Variegated Flutterer	*Rhyothemis variegata*	斑麗翅蜻		Native	+		+		
Wandering Glider	*Pantala flavescens*	黃蜻		Native	+++	+	+	+	+++
Total No. of species					13	1	6	5	4
Total No. of Conservation Interest Species					1	0	0	0	0
Total No. of Native Species					12	1	6	5	4

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

LC: Local Concern (Fellowes et al., 2002)

APPENDIX M
WEATHER CONDITION

APPENDIX M –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 July 23	28.9	82	4.7
2 July 23	27.5	89	15.6
3 July 23	28.9	83	3.6
4 July 23	29.3	82	10.6
5 July 23	30.4	77	Trace
6 July 23	30.3	77	Trace
7 July 23	30.4	76	0.3
8 July 23	30.4	76	0
9 July 23	30.5	77	Trace
10 July 23	30.7	75	0
11 July 23	30.7	76	0
12 July 23	30.7	74	0
13 July 23	30.9	71	0
14 July 23	31.3	71	0
15 July 23	31.1	74	2.5

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 July 23	**29.7**	**75**	**4.9**
17 July 23	**28.4**	**85**	**29**
18 July 23	**29.2**	**86**	**10.9**
19 July 23	**28.7**	**88**	**3.9**
20 July 23	**29.6**	**80**	**4.8**
21 July 23	**29.7**	**79**	**Trace**
22 July 23	**30.6**	**76**	**0**
23 July 23	**30.6**	**77**	**Trace**
24 July 23	**30.7**	**76**	**0**
25 July 23	**30.7**	**73**	**0**
26 July 23	**32**	**72**	**0**
27 July 23	**32.2**	**67**	**6.9**
28 July 23	**31.5**	**72**	**0**
29 July 23	**29.8**	**84**	**21**
30 July 23	**29.2**	**87**	**10**
31 July 23	**29.1**	**84**	**46.5**

* The above information was extracted from the daily weather summary by Hong Kong Observatory.

**Trace means rainfall less than 0.05 mm.

APPENDIX N
EVENT ACTION PLANS

Appendix N:

Table N-1: Event / Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
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.
LIMIT LEVEL				
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; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Review proposals on remedial measures submitted by Contractor; 5. Discuss remedial measures with IEC and Contractor and ER; and 6. Review submit proposal and ensure the effectiveness of the implemented mitigation measures.	1. Discuss with ET, ER and Contractor on the implemented mitigation measures; 2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review submit proposal and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	1. Review proposals on remedial measures submitted by Contractor; 2. Discuss with IEC, ET and Contractor on the Implemented mitigation measures; 3. Make agreement on the remedial measures to be implemented; and 4. Supervise the implementation of agreed remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 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; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment,	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise	1. Discuss with ET, IEC and Contractor on the proposed mitigation measures; 2. Make agreement on the remedial measures to be implemented; and	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the non-compliance in writing; 3. Rectify unacceptable

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	Contractor's working methods and other relative information; 4. Discuss remedial measures with IEC, contractor and ER; and 5. Review submit proposal and ensure the agreed remedial measures are implemented	the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures	practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 5. Consider changes of working methods; 6. Discuss mitigation measures with IEC, ER and Contractor; 7. Review the submit	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; and 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of

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	1. Conduct addition site investigation on the same day; 2. Inform IEC, contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Discuss mitigation measures with IEC, ER and Contractor; and 5. Review the submit proposal and ensure the agreed remedial measures are implemented.	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; 4. Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and 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.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify Unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 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 6. Implement the agreed remedial measures. 7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of Limit level.

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_2	<19% v/v	Increase underground ventilation to restore O_2 to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O_2 level to >19%
CH_4	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH_4 to <10% LEL
CO_2	>0.5% v/v	Increase ventilation to restore C O_2 to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO_2 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
ACTION LEVEL				
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.			
LIMIT LEVEL				
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;

	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.	their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures	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 exceedanceis abated.	3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

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**
AVIFAUNA MONITORING				
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.	1. Check monitoring data and repeat data analysis to confirm findings; 2. Identify potential source(s) of impact; 3. Immediately inform IEC, Contractor and PP. 4. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; 5. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 6. Conduct necessary site inspections/audits to ensure all remedial measures are properly	1.Check monitoring data, analysis and investigation by ET; 2.Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3.Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4.Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 5.Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3.Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4.Supervise the instigated further mitigation measure(s).

	implemented by the Contractor, as agreed with the PP.	feedback the audit results to the PP.		
General Site Inspection				
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

	2. Immediately inform IEC, Contractor and PP. 3. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; 4. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 5. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.	ET, and Contractor on the need for further mitigation measure(s); 3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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.	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 3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	increased site inspection and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

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
Construction Phase				
Action Level	1. Check monitoring	1.Check monitoring data,	1. Confirm receipt of	1. Check the monitoring

exceeded.	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 implemented by the Contractor, as agreed with the PP.	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.	notification of the exceedance of Action Level in writing; and 2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	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).

Limit Level Exceeded.	1. Check monitoring data and repeat data analysis to confirm findings; 2. Identify potential source(s) of impact; 3. Immediately inform IEC, Contractor and PP. 4. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; 5. Discuss with the PP, IEC, and Contractor on the need for 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.	1.Check monitoring data, analysis and investigation by ET; 2.Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3.Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4.Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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.	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3.Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4.Supervise the instigated further mitigation measure(s).
Operational Phase				
Action Level	1. Check monitoring	1.Check monitoring	1. Confirm receipt of	1. Check the monitoring

exceeded.	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 implemented by the Contractor, as agreed with the PP.	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.	notification of the exceedance of Action Level in writing; and 2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	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).

Limit Level exceeded.	1. Check monitoring data and repeat data analysis to confirm findings; 2. Identify potential source(s) of impact; 3. Immediately inform IEC, Contractor and PP. 4. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; 5. Discuss with the PP, IEC, and Contractor on the need for 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.	1.Check monitoring data, analysis and investigation by ET; 2.Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3.Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4.Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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.	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

Table N-6.3 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

EVENT	RESPONSE			
	ET	**IEC**	**Contractor**	**Project Proponent**
Construction Phase				
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.	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; 6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and	1. Check monitoring data, analysis and investigation by ET; 2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

	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.		
Operational Phase				
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.	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	1. Check monitoring data, analysis and investigation by ET; 2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

	impact(s) identified; 6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.	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.		

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**
Construction Phase				
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	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	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

	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 implemented by the Contractor, as agreed with the PP.	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.		3. Supervise the instigated further mitigation measure(s).
Limit 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	1.Check monitoring data, analysis and investigation by ET; 2.Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s),	1. Check the monitoring results and findings from ET and IEC; 2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the

	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; 6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.	3.Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4.Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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.	then propose and implement the further mitigation measure(s); and 3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).
Operational Phase				

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 implemented by the Contractor, as agreed with the PP.	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).

Limit 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; 6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 7. Conduct necessary	1. Check monitoring data, analysis and investigation by ET; 2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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.	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

	site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.			

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**
Construction Phase				
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.	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	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).

	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 implemented by the Contractor, as agreed with the PP.	results to the PP.		
Limit 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.	1. Check monitoring data, analysis and investigation by ET; 2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4. Review the remedial measure(s) proposed by the Contractor and advise the PP	1. Confirm receipt of notification of the exceedance of Limit Level in writing; 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 3. 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 and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

	5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; 6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.	accordingly; and 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.		
Operational Phase				
Action Level exceeded.	1. Check monitoring data and repeat data analysis to confirm findings; 2. Review relevant ecological data to	1.Check monitoring data, analysis and investigation by ET; 2.Review the remedial measure(s) proposed by the Contractor and	1. Confirm receipt of notification of the exceedance of Action Level in writing; and 2. Propose and implement the	1. Check the monitoring results and findings from ET and IEC; 2. Discuss the need for increased site inspection/audit

	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 implemented by the Contractor, as agreed with the PP.	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.	remedial measures(s) to mitigate the impact(s) identified.	frequency proposed by ET with IEC and the Contractor; and 3. Supervise the instigated further mitigation measure(s).
Limit Level exceeded.	1. Check monitoring data and repeat data analysis to confirm findings;	1. Check monitoring data, analysis and investigation by ET;	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. 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; 6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and 7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed	2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s); 3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly; 4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and 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.	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 3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.	2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor; 3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and 4. Supervise the instigated further mitigation measure(s).

	with the PP.			

APPENDIX O
SUMMARY OF EXCEEDANCE

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	$L_{eq(30\ min.)}$ 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_2 (% v/v) CH_4 (% LEL) CO_2 (%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
	Aquatic Fauna	0	0	0	0
	Non-Aquatic Fauna	6	6	0	0
	General Site Inspection (LVNP)	0	0	0	0

APPENDIX P
SITE AUDIT SUMMARY

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	230704
Date	4 July 2023 (Tuesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230627), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		4 July 2023
Checked by	Dr. Priscilla Choy		4 July 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	230712
Date	12 July 2023 (Wednesday)
Time	14:00 – 15:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230704), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		15 July 2023
Checked by	Dr. Priscilla Choy		15 July 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	230718
Date	18 July 2023 (Tuesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230712), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		18 July 2023
Checked by	Dr. Priscilla Choy		18 July 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

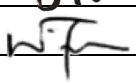
ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work

Weekly Site Inspection Record Summary

Checklist Reference Number	230725
Date	25 July 2023 (Tuesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230718), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Him Ng		27 July 2023
Checked by	Dr. Priscilla Choy		27 July 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	230705
Date	5 July 2023 (Wednesday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230628), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		7 July 2023
Checked by	Dr. Priscilla Choy		7 July 2023

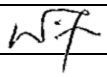
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	230712
Date	12 July 2023 (Wednesday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230705), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		15 July 2023
Checked by	Dr. Priscilla Choy		15 July 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	230719
Date	19 July 2023 (Wednesday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230719-R02	• The exposed slopes next to Sheung Yue River should be covered by tarpaulin sheets and maintained regularly and properly to prevent muddy water discharge during rainstorm.	D 7
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
230719-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
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230712), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		20 July 2023
Checked by	Dr. Priscilla Choy		20 July 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	230728
Date	28 July 2023 (Wednesday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
230728-R03	• Faded NRMM label should be replaced.	B 24
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230728-R02	• The exposed slopes next to Sheung Yue River should be covered by tarpaulin sheets and maintained regularly and properly to prevent muddy water discharge during rainstorm.	D 7
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
230728-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
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:230712), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		31 July 2023
Checked by	Dr. Priscilla Choy		31 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230706
Date	6 July, 2023 (Thursday)
Time	14:00 - 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
230706-R01	• Dusty stockpiles should be covered with tarpaulin sheets.	B 2
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230706-R02	• Provide sand bags to prevent muddy water discharge.	D 3
230706-O01	• Provide adequate wheel-washing facilities for each vehicle exits.	D 12 (i, ii, iv, v)
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow-up on previous audit section (Ref. No.:230630), item no. 230630-R01, 230630-R02 and 230630-O01 were remarked as 230706-R01, 230706-R02 and 230706-O01 respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Adrian Lam		6 July 2023
Checked by	Dr. Priscilla Choy		6 July 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	230714
Date	14 July, 2023 (Friday)
Time	10:00 - 11:00

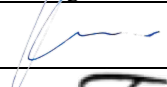
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
230714-R01	• Dusty stockpiles should be covered with tarpaulin sheets.	B 2
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230714-R02	• Provide sand bags to prevent muddy water discharge.	D 3
230714-O01	• Provide adequate wheel-washing facilities for each vehicle exits.	D 12 (i, ii, iv, v)
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow-up on previous audit section (Ref. No.:230706), item no. 230706-R01, 230706-R02 and 230706-O01 were remarked as 230714-R01, 230714-R02 and 230714-O01 respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Him Ng		17 July 2023
Checked by	Dr. Priscilla Choy		17 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230718
Date	18 July, 2023 (Tuesday)
Time	14:00 - 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
230718-R01	• Dusty stockpiles should be covered with tarpaulin sheets.	B 2
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230718-R02	• Provide sand bags to prevent muddy water discharge.	D 3
230718-O01	• Provide adequate wheel-washing facilities for each vehicle exits.	D 12 (i, ii, iv, v)
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow-up on previous audit section (Ref. No.:230714), item no. 230714-R01, 230714-R02 and 230714-O01 were remarked as 230718-R01, 230718-R02 and 230718-O01 respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Marco Ma		20 July 2023
Checked by	Dr. Priscilla Choy		20 July 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	230728
Date	28 July 2023 (Friday)
Time	10:00 - 11:00

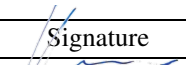
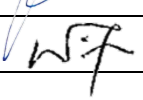
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
230728-R01	• Dusty stockpiles should be covered with tarpaulin sheets.	B 2
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230728-R02	• Provide sand bags to prevent muddy water discharge.	D 3
230728-O01	• Provide adequate wheel-washing facilities for each vehicle exits.	D 12 (i, ii, iv, v)
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow-up on previous audit section (Ref. No.:230718), item no. 230718-R01, 230718-R02 and 230718-O01 were remarked as 230728-R01, 230728-R02 and 230728-O01 respectively. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Him Ng		28 July 2023
Checked by	Dr. Priscilla Choy		28 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230706
Date	6 July 2023 (Thursday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
230706-R01	• Provide maintenance for 2m high solid barrier at the lower reaches of Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	Follow-up on previous audit section (Ref. No.: 230629), item 230629-R01 was observed improved/rectified by the Contractor. Item 230629-R02 was remarked as 230706-R01. Follow-up action is needed to be review.	

	Name	Signature	Date
Recorded by	Marco Ma		7 July 2023
Checked by	Dr. Priscilla Choy		7 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230713
Date	13 July 2023 (Thursday)
Time	14:00 – 15:30

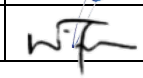
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
230713-R01	• Provide maintenance for 2m high solid barrier at the lower reaches of Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	Follow-up on previous audit section (Ref. No.: 230706), item 230706-R01 was remarked as 230713-R01. Follow-up action is needed to be review.	

	Name	Signature	Date
Recorded by	Adrian Lam		17 July 2023
Checked by	Dr. Priscilla Choy		17 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230719
Date	19 July 2023 (Wednesday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
230719-R01	• Provide maintenance for 2m high solid barrier at the lower reaches of Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	Follow-up on previous audit section (Ref. No.: 230713), item 230713-R01 was remarked as 230719-R01. Follow-up action is needed to be review.	

	Name	Signature	Date
Recorded by	Marco Ma		20 July 2023
Checked by	Dr. Priscilla Choy		20 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230727
Date	27 July 2023 (Wednesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	Follow-up on previous audit section (Ref. No.: 230719), item 230719-R01 was observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		31 July 2023
Checked by	Dr. Priscilla Choy		31 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230703
Date	3 July 2023 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
230703-R01	• Sandbag barrier should be enhanced to prevent surface runoff at D2-01.	D 4
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 230626), all environmental deficiency were observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		4 July 2023
Checked by	Dr. Priscilla Choy		4 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230710
Date	10 July 2023 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 230703), item no. 230703-R01 was observed improved/rectified by the Contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Him Ng		10 July 2023
Checked by	Dr. Priscilla Choy		10 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230720
Date	20 July 2023 (Thursday)
Time	09:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 230710), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		20 July 2023
Checked by	Dr. Priscilla Choy		20 July 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	230724
Date	24 July 2023 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 230720), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		25 July 2023
Checked by	Dr. Priscilla Choy		25 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230731
Date	31 July 2023 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
230731-R01	• Provide drip tray for chemical/fuel containers.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 230724), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Him Ng		1 August 2023
Checked by	Dr. Priscilla Choy		1 August 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/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	230706
Date	6 July 2023 (Thursday)
Time	13:30 - 14:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230629), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		7 July 2023
Checked by	Dr. Priscilla Choy		7 July 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/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	230713
Date	13 July 2023 (Wednesday)
Time	13:30 - 14:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230706), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		14 July 2023
Checked by	Dr. Priscilla Choy		14 July 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/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	230719
Date	19 July 2023 (Wednesday)
Time	13:30 - 14:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230713), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		20 July 2023
Checked by	Dr. Priscilla Choy		20 July 2023

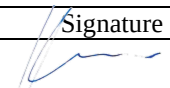
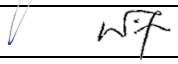
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	230727
Date	27 July 2023 (Thursday)
Time	13:30 - 14:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230719), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		31 July 2023
Checked by	Dr. Priscilla Choy		31 July 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	230707
Date	7 July 2023 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230630), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		7 July 2023
Checked by	Dr. Priscilla Choy		7 July 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	230714
Date	14 July 2023 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230707), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		18 July 2023
Checked by	Dr. Priscilla Choy		18 July 2023

Weekly Site Inspection Record Summary

Checklist Reference Number	230721
Date	21 July 2023 (Friday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230714), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Him Ng		24 July 2023
Checked by	Dr. Priscilla Choy		24 July 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	230728
Date	28 July 2023 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 230721), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Him Ng		28 July 2023
Checked by	Dr. Priscilla Choy		28 July 2023

APPENDIX Q
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

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 Dust Impact							
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/m2 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	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase • 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; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • 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; • 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; • When there are open excavation and reinstatement works,	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
		hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • 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; • 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; • 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; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • 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; • 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; • 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					^ ^ ^ ^ ^ N/A 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
		• 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.					^
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	^
Noise Impact (Construction Phase)							
S4.9	N1	Implement the following good site management practices: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • 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; • Plant known to emit noise strongly in one direction, where	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
		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; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					^ ^
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	^

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
			representative locations		noise monitoring stations		
Water Quality Impact (Construction Phase)							
S5.7	W1	Construction Runoff and Site Drainage 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: **Stormwater Pollution Control Plan** • 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. • 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^3 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	Control construction runoff	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
		inputs from a variety of sources and suited to applications where the influent is pumped. • 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. • 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. • 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. • 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. • 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					^ ^ 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
		foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than $50m^3$ 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. • 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. • 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. • 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					^ ^ ^ ^

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
		public roads and drains. • 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. • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. • 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. • 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.					N/A ^ ^ ^
S5.7	W2	<u>*Stream Diversion*</u> • 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.	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	#

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S5.7	W3	*Groundwater from Contaminated Area* • 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. • 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. • 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. • 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.	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	*Sewage from Workforce* 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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		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. 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.					
Waste Management (Construction Waste)							
S7.6	WM1	*Waste Reduction Measures* 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: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; • proper storage and site practices to minimize the potential for	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^ ^

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		damage and contamination of construction materials; • plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc); • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.					^ N/A ^
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	*Good Site Practice* The following good site practices are recommended throughout the construction activities: • 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; • Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^

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		• Provision of sufficient waste disposal points and regular collection for disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;					^ ^ *
S7.6	WM4	*Storage of Waste* The following recommendation should be implemented to minimize the impacts: • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse;	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM5	*Collection and Transportation of Waste* The following recommendation should be implemented to minimize the	Minimize waste impact	Contractor	All construction	Construction	

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		impacts: • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste transportation; • Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.	from storage		sites	phase	^ ^ ^ ^
S7.6	WM6	<u>*Excavated and C&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: • Maintain temporary stockpiles and reuse excavated fill material for backfilling; • Carry out on-site sorting; • Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a recording system for the amount of waste generated,	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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		recycled and disposed of for checking; Standard formwork should be used as far as practicable in order to minimize the arising of C&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. Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					N/A ^
S7.6	WM7	*Contaminated Soil* 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.	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	^
S7.6	WM8	*Chemical Waste* 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	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	*General Waste* • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. • A reputable waste collector should be employed to remove general refuse on a daily basis.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM10	*Sewage* • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	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
Land Contamination							
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

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
			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 • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table; • Excavation should be carried out during dry season as far as	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

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
		possible to minimize runoff from excavated soils; • 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; • 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; • 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.					^
S 8.7.2 and Appendix 8.4	LC8	Solidification/Stabilization • The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system; • Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission; • The mixing facilities should be sited as far apart as	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	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
		practicable from the nearby noise sensitive receivers; • Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching; • Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area; • If stockpile of treated soil is required, the 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 site run-off during rainy season; and If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.					^ ^ *
S 8.7.2 and Appendix 8.4	LC9	<u>Safety Measures</u> • Set up a list of safety measures for site workers; • Provide written information and training on safety for site workers; • Keep a log-book and plan showing the zones requiring treatment and clean zones; • Maintain a hygienic working environment; • Avoid dust generation; • Provide face and respiratory protection gear to site workers if	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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		necessary; • Provide personal protective clothing (e.g. chemical resistant • jackboot, liquid tight gloves) to site workers if necessary; • Provide first aid training and materials to site worker; • Bulk earth moving equipment should be utilized as much as possible to minimize worker Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.					
Landfill Gas Hazard							
S10.6	LFG1	• 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. • Buildings or structures within the MTLL should be at ground level with raised floor slabs which are less prone to gas ingress. • 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. • For the low risk category, the provision of barriers to the movement of gas is recommended. Measures recommended	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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		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. • 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. • 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.					
S10.6	LFG2	• 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. • Safety officers, specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in	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	^ ^

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
		adverse circumstances, should be present on all worksites throughout the works. • 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. • 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. • 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. • Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premizes, e.g. shipping containers, where this is not possible should be well ventilated prior to entry. • 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.					^ ^ ^ ^ ^

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		• 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.					^
		• 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.					N/A
		• During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use.					^

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		• Ongoing gas monitoring should be considered for offices, stores etc set up on site.					^
S10.6	LFG3	Utility Companies • 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 QLFGHA. • 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. • 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. Building Management • 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	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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		precautions required to be taken. • 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. • 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. • Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard,					

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		particularly in areas where a gas membrane has been installed. Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products. • 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. • 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					

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		phase.					
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	Undertaking Further Archaeological Survey to Cover the Outstanding Areas 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.	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	Undertaking Survey-cum-Rescue Excavation 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	Undertaking Preservation in-situ for Site 7 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

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
		Authority under the AM Ordinance.					
S11.6.1	CH4	Undertaking Induction Training 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	Undertaking Archaeological Impact Assessment before Construction at A1 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	Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9 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	Undertaking baseline condition survey and baseline vibration impact assessment 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	Undertaking baseline condition survey and baseline vibration impact assessment 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	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages 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	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages 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
Cultural Heritage (Construction Phase)							
S11.6.1	CH13	Inform Upon Archaeological Discovery 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	Watertable Monitoring 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	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	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	^
Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)							
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		
Landscape and Visual (Construction)							
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 – Exiting 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	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. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted,	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	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.12.9 MM7	LV9	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 *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.					
S.12.9 MM8	LV10	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					N/A

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		locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus 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, Rhaphiolepis indica, and Rhododendron simsii*. 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.					

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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	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 / 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	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 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	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	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. 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. 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)	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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		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. 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)			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	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
S.12.9 MM16	LV20	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	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
Ecology (Prior to Construction Phase or throughout the project)							
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

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
		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 egretry.	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 egretry. 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 egretry and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design 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
			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

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
					northern and northeastern boundaries.		
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. Measures to include the following: • 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; • Angled glass to be used only for smaller panes in buildings with a limited amount of glass; • The use of glass that reflects UV light (primarily visible to birds, but not to humans) to reduce collisions; • 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;	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

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
		• 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					
	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	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. 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. 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.	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.	^

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
Ecology (Construction Phase)							
S13.9	E12	Compensatory egretry 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 Egretry outside breeding season	Compensate for loss of Man Kam To Road egretry habitat. Avoid mortality of breeding egrets	Project Proponent/ Detailed Design Consultant/ Contractor	FLN area A1-7 500m from Man Kam To Road Egretry.	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.	^

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
S13.9	E14	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. 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. 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 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

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.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.	^

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
S13.9	E17	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. 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.	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	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	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
					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

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
		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, 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, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.	avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation.				
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, transplantation 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

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
		translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. 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 Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and *Sommaniathelphusa zanklon*. Capture any *Sommaniathelphusa zanklon* found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP	and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation				
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
Specific Mitigation Measures for Designated Projects							
DP2- Castle Peak Road Diversion (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							

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 – Exiting trees to be retained within the Project Site should be carefully protected during construction.	Protect and Preserve Trees	Government/ Detailed	Onsite	Prior to Construction	^

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		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. 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.		Design Consultant/ Contractor		and Construction Phase	
S.12.A9 MM5	LV6-DP2	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.	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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		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 VegetationMaintenance 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	*Onsite*	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	*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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		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 *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus 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, Rhaphiolepis indica, and Rhododendron simsii.* 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.					
S.12.A9	LV10-	Vertical Greening – Planting of climbers to grow up vertical surfaces were	Soften hard surfaces and	Government	*On appropriate*	Prior to	N/A

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MM9	DP2	appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed Design Consultant/ Contractor	*structures*	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	*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
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	*On viaducts or along roads.*	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	*Onsite where possible. Otherwise consider offsite locations*	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 asconsideration 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	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	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
		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.					
S.12.A9 MM15	LV15-DP2	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
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP2	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	^

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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	^
Ecology (Detailed Design, Construction and Operational Phases)							
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.	^
Ecology (Construction Phase)							
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

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
			plantation of ecological significance.	Proponent / Contractor	E1-8 and G1-3.	phase.	
Cultural Heritage (Construction Phase)							
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
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)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
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	^

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
MM14.4	DP3	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.	watercourses	Design Consultant/ Contractor	*particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section*	And Construction Phase	
S.12.A9 MM4	LV5-DP3	Tree Protection & Preservation – Exiting 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. 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	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
		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	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. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.	Transplant Trees where suitable for transplantation	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.A9 MM6	LV7-DP3	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	To avoid substantial slope cutting and fill slopes. To prevent erosion and	Government Detailed Design Consultant/	*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
		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.	subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Contractor		Maintenance in Operation Phase	
S.12.A9 MM7	LV8-DP3	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. 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 *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.	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
S.12.A9	LV9-	Woodland Compensatory Planting –Specific Woodland compensatory	Reprovide areas of	Project	*In areas*	Prior to	N/A

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MM8	DP3	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 *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus 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, Rhaphiolepis indica, and Rhododendron simsii.* 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	woodland to compensate for those areas of quality woodland lost.	Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*identified in the EIA Landscape Mitigation Plans and as agreed with AFCD*	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	*On appropriate structures*	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	*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
S.12.A9	LV12-	Road Greening –For viaducts, soft landscaping should be provided to soften	To soften the hard,	Government	*On viaducts or*	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	*along roads.*	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	*Onsite where possible. Otherwise consider offsite locations*	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	*Channelized watercourse, particularly the*	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	*Ma Wat River Channel Diversion*	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	*E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA*	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
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	*Throughout NDAs*	Construction Phase	N/A

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		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
Ecology (Detailed Design, Construction and Operational Phases)							
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.	^
Ecology (Construction Phase)							
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
DP4- KTN NDA Road D1 to D5 (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
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/	Throughout NDAs,	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/	Throughout NDAs, particularly for reservoirs	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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		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 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.	into the surrounding landscape				
S.12.A9	LV4-	Tree Protection & Preservation – Exiting trees to be retained within the	Protect and Preserve Trees	Government /	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
MM4	DP4	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. 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.		Detailed Design Consultant/ Contractor		and Construction Phase	
S.12.A9 MM5	LV5-DP4	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	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

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
		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 Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii are suggested..					
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 Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora,	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
		Xanthoxlyum avicennaeHibiscus 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, Rhaphiolepis indica, and Rhododendron simsii. 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.					
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
Landscape and Visual (Construction)							
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	Throughout NDAs	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.					
Ecology (Prior to Detailed Design Prior to Construction Phase)							
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
Ecology (Detailed Design, Construction and Operational Phases)							
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
Ecology (Construction Phase)							
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

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 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
Cultural Heritage (Pre-construction Phase)							
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

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
		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.		Archaeologist	potential located within the work extent of DP4		
S11.6.1	CH3-DP4	Undertaking Induction Training 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

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
		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	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages 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	Undertaking baseline condition survey and baseline vibration impact assessment 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	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	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH7-DP4	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	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP5- New sewage pumping stations (SPSs) in KTN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
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
		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 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.	general and integrate as best possible into the surrounding landscape				
S.12.B9 MM4	LV4-DP5	Tree Protection & Preservation – Exiting 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	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
		(Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor‟s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.		Consultant/ Contractor		Construction Phase	
S.12.B9 MM5	LV5-DP5	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.	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

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		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 *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.					
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 *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum*	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
		avicennaeHibiscus 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 omentosa, Rhaphiolepis indica, and Rhododendron simsii. 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.					
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	*On appropriate structures*	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	*On appropriate buildings*	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	*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
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	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	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.					
Landscape and Visual (Construction)							
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	*Throughout NDAs*	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	*Throughout NDAs*	Construction and Operation Phases	^
Ecology (Construction Phase)							
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence	Minimize dust,	Contractor.	*Interface*	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
		between active works areas and all areas/habitats of ecological importance.	disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.		*between areas/habitats of ecological importance and works areas (all sides of KTN area F1-2).*		
DP7-Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works (SWHSTW)							
Landscape and Visual (Construction Phase and Operational Phase)							
S.12.9 MM4	LV1-DP7	Tree Protection & Preservation – Exiting 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. 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	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
		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	*On appropriate structures*	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	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
DP10- Fanling Bypass Eastern Section (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
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	*Throughout NDAs,*	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	*Throughout NDAs, particularly for reservoirs*	Prior to Construction	N/A
S.12.D9 MM4	LV3-DP10	Tree Protection & Preservation – Exiting 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	*Onsite*	Prior to Construction and 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
		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	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. 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	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

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	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.D9 MM7	LV6-DP10	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 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 *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma*	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
		dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii are suggested.					
S.12.D9 MM8	LV7-DP10	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 *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus 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,*	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
		Rhaphiolepis indica, and Rhododendron simsii. *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.*					
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	*On appropriate structures*	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	*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
S.12.D9M	LV10-	Road Greening –For viaducts, soft landscaping should be provided to	To soften the hard, straight	Government/	*On viaducts or*	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	*along roads.*	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	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	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.					
Landscape and Visual (Construction)							
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	*Throughout NDAs*	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	*Throughout NDAs*	Construction and Operation phases	^
Ecology (Detailed Design, Construction and Operational Phases)							
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/	*Throughout NDAs*	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.	
Ecology (Construction Phase)							
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.	*FLN area D1-3.*	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.	*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).*	Construction phase.	*
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures	To minimize the potential impacts during Construction phase on any	Contractor.	*Identified potential vibration impacted built*	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		*heritage features*	survey and baseline vibration impact assessment,	
DP12-Reprovision of temporary wholesale market in FLN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
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
		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.					
S.12.D9 MM4	LV4-DP12	Tree Protection & Preservation – Exiting 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. 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	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	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. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	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	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are	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
		completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Consultant/ Contractor		Maintenance in Operation Phase	
S.12.D9 MM7	LV7-DP12	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 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 *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia,*	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
		Rhodomyrtus tomentosa, Rhaphiolepis indica, and *Rhododendron simsii* 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
Landscape and Visual (Construction)							
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

APPENDIX R
WASTE GENERATION IN THE REPORTING MONTH

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^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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											
September											
October											
November											
December											
Total	11.239	0.000	7.422	0.000	3.817	20.219	2.929	1.766	0.037	24.036	2.926

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^3)	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000kg)**	**(in '000kg)**	**(in '000kg)**	**(in '000kg)**	**(in '000m^3)**
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^3.
(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m^3; soil = 2.0 tonnes/m^3
excavated: rock = 2.0 tonnes/m^3; soil = 1.8 tonnes/m^3
broken concrete and bitumen = 2.4 tonnes/m^3
C&D Waste = 0.9 tonnes/m^3
Slurry = 1.0 tonnes/m3
(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)	(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
Sub-total	10,734.11	0.00	5,000.00	10,734.11	0.00	5,397.14	0.0017	0.12	0.0068	0.054	595.72
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.32
Aug											
Sept											
Oct											
Nov											
Dec											
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.32
Total	10,734.11	0.00	5,000.00	10,734.11	0.00	5,397.14	0.00	0.12	0.01	0.05	786.04

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 (see Note 2)	Chemicals 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)	(in tonnes)
Total:	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^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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
Jul	0.07	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total	2.04	0.00	0.00	0.50	1.53	0.00	0.00	0.00	0.00	0.00	0.00
Aug											
Sep											
Oct											
Nov											
Dec											
Total	1.97	0.00	0.00	0.50	1.46	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^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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].

DCK JV

Appendix F
Contract No.: ND/2019/04

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												
Sept												
Oct												
Nov												
Dec												
Sub-total	677.11	0.00	0.00	0.00	537.28	0.00	0.00	0.00	0.00	0.00	0.00	139.83
Total	53,964.02	0.00	0.00	30,323.34	20,946.88	1,794.18	62.72	0.18	0.00	0.01	0.00	836.71

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

DCK JV

Appendix F

Contract No.: ND/2019/04

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 (see Note 3)	Chemicals 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)	(in tonnes)
	141,782.30	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: Louise Poon (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^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(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												
Sep-23												
Oct-23												
Nov-23												
Dec-23												
Total in 2023	13.639	0.000	2.952	0.000	10.687	0.000	4.293	5.304	0.195	15.490	0.000	526.210
Total of the Project since 2020	106.981	0.000	13.671	2.857	90.453	5.110	141.997	14.736	4.015	798.303	24.882	3615.120

*Approx. estimation for each dump truck is 6m3/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 106.981 (in '000m3) (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											
Sep											
Oct											
Nov											
Dec											
Total	0.212	0.000	0.000	0.000	0.212	35.778	0.000	0.000	0.001	0.000	0.131

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 Gernerated = a+b+c+d..

APPENDIX S
COMPLAINT LOG

Appendix S - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13th 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)	11th 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)	27th 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)	7th 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 *Supervisor*, 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)	13th 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)	22nd 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)	28th 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)	4th February 2021	A complaint was received from EPD call on 2nd February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1st 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 1st 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)	16th February 2021	A complaint was received from EPD call on 10th February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7th February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7th 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)	2nd March 2021	A complaint was received from EPD call on 24th 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 *supervisor* 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)	1st 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)	15th March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9th 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)	9th 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 24th and 25th 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)	9th 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
				snipe was found; 2. Arrange concrete pump for concreting works to minimise noise impact; 3. Provide water spraying on the exposed earth to dampen the dusty surface; 4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found; 5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland; 6. Provide 2m dull green site boundary fence along Long Valley work areas; and 7. Block the main accesses by temporary barrier to avoid human disturbance.	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	23rd 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.	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. The following mitigation measures will keep implemented and inspected: 1. Installation of silt curtain, geotextiles and concrete blocks for excavation works at Ng Tung River with regular inspection; 2. Exposed slope paved with concrete to prevent muddy runoff; 3. Setting up wastewater treatment plants at	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)	28th 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 28th and 29th 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)	17th 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)	2nd 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.	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. 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. The Contractor has been implement following mitigation measure upon received the complaint: • Rearranged the traffic route and informed the concrete lorry drivers not to use Chau Tau Road; • Keep monitoring the effectiveness of the wheel washing facilities at site exist; and • Clean up the public road immediately if soil deposit was observed.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-09-02	Not specified (ND/2019/01)	3rd September 2021	A complaint was referred by EPD regarding C&D waste stored on site.	Refer to the photos provided by the complainant, the mentioned C&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 3rd September 2021, all C&D waste were stored within the site boundary, no odour perceived during site inspection. The Contractor has been implement following mitigation measure upon received the complaint: • Sort out the non-inert waste from the felled trees; • Remove the general refuse if possible, otherwise, coved by tarpaulin sheet; and • Relocate or transport the yard waste to other places which are not easy visible by public. 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.	Closed
COM-2021-11-01	Close to Shek Wu San Tsuen (ND/2019/04)	3rd November 2021	A complaint was referred from EPD on 22th November 2021, about various issues including suspected environmental nuisances from the captioned Project from a member of public on 3rd Nov 2021. He followed-up again on 19th Nov 2021.	Site inspection was conducted by contractor and EPD inspectors on 25th 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. Air quality monitoring was carried out at location FLN-DMS1 - Scattered Village	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				Houses North of Proposed Potential Ecopark and Location FLN-DMS5 - Noble Hill near Shek Wu San Tsuen in accordance with the EM&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. The Contractor has been implement following mitigation measure upon received the complaint: • 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 • 增加自動灑水系統	
COM-2021-12-01	On Kui Street along Ma Wat River (ND/2019/05)	13rd 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。"	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: • Tightness of flexible pipe joint • Worker's awareness and knowledge on proper handling of pipe leakage • Readiness of contingency tools and equipment for the pipe leakage The Contractor has been implement following mitigation measure upon received the complaint: • Doubling pipe clamps at each joint to strengthen the connection tightness and	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				seal • Briefing workers for proper spillage handling • Well readiness of contingency tools and equipment for handling of leakage • Designating responsible supervisor for regular pipeline condition check and monitoring • Daily inspection for pipeline condition by responsible supervisors before works • Erection of bunding/sandbags along the works area to effectively stop any potential leakage/surface runoff • 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 • Specific trainings of proper handling of leakage adjacent to the river/drainage for JV managerial and supervisory staff	
COM-2022-01-01	Close to Shek Wu San Tsuen (ND/2019/04)	13rd 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)	28th 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，產生很大的嗓音及很多廢氣。 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)	17th February 2022	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 & 16 Feb 2022 respectively. 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」 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。」	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. 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. In addition, it is reported that suspected contaminated water was discharging to Ma Wat River from surrounding industrial buildings near C5 contract site. Based on the findings of investigation, no foam	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				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)	2nd 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 "	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. 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.	Closed
COM-2022-03-02	Near Ho Sheung Heung (ND/2019/02)	23rd 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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			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 "	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 Portion11. 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. 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. 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. Based on the findings of investigation, all plants	

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)	5th 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。"	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。" 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. 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	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)	5th 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松並無異常，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)	5th 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冇，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)	21st 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冇人工作.故亦不一需要長時間開發電機，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"	alternatively (one is solely for standby purpose) for power supply of site works and containers. 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). 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. 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). 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 For odour mitigation measures, on top of currently	

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)	27th 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"	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. EPD carried out complaint investigation at Portion 1b / 1c on 26 July 2022 at 11:00, no adverse comment was given. 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. 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.	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)	29th July 2022	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. Based on peripheral inspection, the muddy water was spotted.	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. 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. Meanwhile, below are some JV's regular preventive measures for water pollution control: 1. 18 nos. of wastewater treatment facilities are operating for different working areas including B2-03 and C2-02; 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.	Closed
COM-2022-08-08	Ma Wat River near Lamp Post EB1339 (ND/2019/05)	8th August 2022	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. The complaint content: "近電燈柱	**Noise** 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	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			EB1339 沿麻荏河一帶，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。"	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. **Air** 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. 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.	
COM-2022-08-16a	Ma Wat River near Lamp Post EB1339 (ND/2019/05)	16th 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
			August 2022. EPD forwarded the case to ET through email on 17 August 2022. The complaint content: " 本人留意到近麻荏村的麻荏河有大量水泥水流入河，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，建築物和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。"	investigation are focusing on these two works area locations. 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. 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 & C4-02 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	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				submitted to EPD. 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. 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. 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.	
COM-2022-08-16b	Ma Sik Road and Sha Tau Kok Road near Lung Yeuk Tau (ND/2019/04)	16th 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	Investigation was conducted by contractor and reply as follow: "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	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 mesh 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)	1st 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
				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." 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.	
COM-2022-09-29	Construction site nearby Dills Corner Garden Blk 5 (ND/2019/02)	29th 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！"	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. 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	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)	7th 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)	17th 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	28th 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)	31st 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)	10th 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)	7th December 2022	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? 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荏河流中，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。 高空掉建築物很危險"	The investigation results are as follows: 1. The works area vicinity to lamp post VD6513 is Piers C4-03. There are viaduct construction works above the concerned lamp post. 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: A. Cleaned up the expanding foam and metal nails, B. Tightened and securely fixed the safety net, C. Sealed up those water-filled barriers without lids and their damaged parts. 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.	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)	12th 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. From Contract Number (ND/2019/01): 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
				accumulated mud and cause the wastewater become turbid / muddy. 9. Visual comparison was conducted with ET on17 January 2023, the colour of the glass bottle collected from wastewater treatment plant looks clear when compare with the standard solution. 10. During the ad-hoc inspection on 27 January 2023, inadequate treated wastewater discharge from nearby private construction site was observed. Mitigation Measures and Follow-Up Actions: 1. Properly store the chemical with covered tarpaulin to prevent lumping; 2. A refresher training for WWTP operation and maintenance by supplier was provided to foreman and designated workers; 3. Repair the damaged u-channel; 4. Arrange to clear the accumulated sludge in the channel; and 5. Keep closely monitoring such as daily visual inspection on the WWTP and clear the accumulated sludge in the channel. <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	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				complaint location. 1. Joint inspection for the issue was conducted by EPD and DSD on 11 January 2023. 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. 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 workfront with potential risk of polluted runoff has been installed sheet pile and canvas was provided to intercept runoff due to rainwater. 4. Checking and maintenance of wastewater treatment facilities have been carried out by supplier before the joint inspection by EPD and DSD. 5. Training on proper wastewater treatment and discharge has been provided for site staff to raise the awareness of site staff at all levels.Conclusion: Based on the findings of investigation, CW-KL	

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)	3rd 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.	The investigation result as follows: 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 & VIII) from upper stream of Ma Wat River. 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. 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, 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				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. 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.	

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)	8th 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	The investigation result as follows: 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. 2. There was no foundation work carried out at or near Drills Corner Garden under ND/2019/01. 3. The nearest site area Portion 1e was a temporary storage area for construction material where no construction works carried out. 4. However, piling work was identified next to the Drills Corner Garden which was not belonged to ND/2019/01. 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. 6. As there was no foundation work carried out under ND/2019/01, no mitigation measures or follow-up actions were proposed.	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)	3rd 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	The investigation result as follows: 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. 2. There are stockpiling works for the temporary storage, internal transferring and sorting of inert materials in the concerned area. 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. 4. Resources allocation is listed as below, (a) Four full-time workers and one supervisory staff (b) Wheel washing bay supplemented with water pipes (c) Proper temporary drainage system (cutoff drain, water pumps, sump pits, bunding, etc.,) (d) One set of wastewater treatment facilities (e) Fully hard paved haul road 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.	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		

APPENDIX T
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix T - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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APPENDIX U
SUMMARY TABLE FOR REQUIRED SUBMISSION UNDER ENVIRONMENTAL PERMIT

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
DP2	EP-466/2013/A	Castle Peak Road Diversion	1	12-Aug-20	C1-DP2						
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	1	12-Aug-20	C1-DP3						
DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	1	1-Jun-20 (for C1) 3-Jul-20 (for C3)	C1-DP4		C3-DP4				
DP5	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area	1	28-Oct-20		C2-DP5					
DP7	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	1	23-Mar-20	C1-DP7						
DP10	EP-473/2013/A	Fanling Bypass Eastern Section	1	6-Oct-20 (for C3) 23-Feb-21 (for C4) 1-Aug-20 (for C5)			C3-DP10	C4-DP10	C5-DP10		
DP12	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area	1	29-Oct-19						C6-DP12	
DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station	1	16-Feb-21				C4-DP14			

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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction.	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	**Deposit**	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	**To Conduct -** 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	**Deposit** - 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	**For Approva**l - 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	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project.	Resubmitted to EPD on 14 July 2023	
2.10	Traffic Noise Mitigation Plan	Before construction	**Submit**	At least one month before commencement of construction	To be submitted before commencement of Remaining Phase works	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction.	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing** -- 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	**Upload** -- 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	
			Maintain	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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	**Deposit**	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	**For Approval**	no later than 1 month before the commencement of consturction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	**Deposit -** 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	**Deposit**	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 on 14 July 2023
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing --** 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	**Upload --** 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	
			Maintain	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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	**Deposit**	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	**To Conduct -** 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	**Deposit -** 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	**For Approva**l - 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	**For Approval**	prior to the commencement of construction	Resubmitted 17 August 2022	EPD approved 31 August 2022
2.9	Habitat Creation and Management Plan	Others	**For Approval**	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	**For Approval**	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	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing --** 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	**Upload --** 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	
			Maintain	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

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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 17 September 2020	
2.5	Location Plans	Before construction	**Deposit**	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	**Deposit**	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	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing --** 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	**Upload --** 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	
			Maintain	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

DP7	EP-470/2013	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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing --** 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	**Upload --** 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	
			Maintain	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

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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 17 March 2021	
2.5	Location Plans	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 10 December 2020	
2.6	Relocation Plan for Rose Bitterling	Before construction	**Approval**	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	Deposited 5 May 2022	EPD Satisfied 18 May 2022
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	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	**To Conduct -** 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	**Deposit -** 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	**For Approva**l - 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	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing** -- 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	**Upload** -- 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	
			Maintain	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

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	**Establish -** 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	**Deposit**	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	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.6	Landscape Plan	Others	**Deposit**	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	**Submit**	at least 2 weeks before the commencement of construction	Submited by Pre-construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	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	**Set up and Notify in writing** -- 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	**Upload** -- 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	
			Maintain	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

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	