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 June 2022

(Version 1.0)

Certified By	Dr. Priscilla Choy (Environmental Team Leader)

REMARKS:

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

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

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Agreement No. CE 33/2019 (EP)
Independent Environmental Checker for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas – Investigation

Monthly Environmental Monitoring and Audit Report No. 32 (June 2022)

14 July 2022
BY EMAIL

Dear Sir,

We refer to email of 14 July 2022 attaching the Monthly Environmental Monitoring and Audit Report No. 32 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, EP-467/2013/A, EP-468/2013/A, EP-469/2013, EP-470/2013, 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
Mott MacDonald Hong Kong Limited

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EXECUTIVE SUMMARY

Introduction

1. This is the 32nd 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 June 2022.

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	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	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 New Development Area, 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

<table>
<tr><th rowspan="2">EM&A Activities</th><th rowspan="2">Monitoring Station (s)</th><th colspan="7">Works Contracts</th></tr>
<tr><th>ND/2019/01</th><th>ND/2019/02</th><th>ND/2019/03</th><th>ND/2019/04</th><th>ND/2019/05</th><th>ND/2019/06</th><th>ND/2019/07</th></tr>
<tr><td rowspan="4">1-hr Total Suspended Particulates (TSP) Monitoring</td><td>FLN-DMS1</td><td rowspan="3">N/A</td><td rowspan="4">N/A</td><td>2, 8, 14, 20, 24 and 30 June 22</td><td>2, 8, 14, 20, 24 and 30 June 22</td><td>N/A</td><td rowspan="4">N/A</td><td rowspan="4">N/A</td></tr>
<tr><td>FLN-DMS3</td><td>N/A</td><td>N/A</td><td>2, 8, 14, 20, 24 and 30 June 22</td></tr>
<tr><td>FLN-DMS5</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td rowspan="2">N/A</td></tr>
<tr><td>KTN-DMS4</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>N/A</td></tr>
<tr><td rowspan="4">24-hr TSP Monitoring</td><td>FLN-DMS1</td><td rowspan="3">N/A</td><td rowspan="4">N/A</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>N/A</td><td rowspan="4">N/A</td><td rowspan="4">N/A</td></tr>
<tr><td>FLN-DMS3</td><td>N/A</td><td>N/A</td><td>1, 7, 13, 17, 23 and 29 June 22</td></tr>
<tr><td>FLN-DMS5A</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td rowspan="2">N/A</td></tr>
<tr><td>KTN-DMS4</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>1, 7, 13, 17, 23 and 29 June 22</td><td>N/A</td></tr>
<tr><td rowspan="6">Noise Monitoring</td><td>CP-FLN-NMS1</td><td colspan="3">N/A</td><td colspan="3">2, 8, 14, 24 and 30 June 22</td><td rowspan="6">N/A</td></tr>
<tr><td>CP-FLN-NMS2</td><td colspan="4">N/A</td><td>2, 8, 14, 24 and 30 June 22</td><td>N/A</td></tr>
<tr><td>CP-KTN-NMS2</td><td rowspan="3">1, 7, 13, 23 and 29 June 22</td><td rowspan="3">N/A</td><td colspan="4" rowspan="3">N/A</td></tr>
<tr><td>CP-KTN-NMS3</td></tr>
<tr><td>CP-KTN-NMS5</td></tr>
</table>

	CP-KTN-NMS6	N/A	1, 7, 13, 23 and 29 June 22					
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*	1, 2, 8, 10, 14, 16, 23, 24, 28 and 30 June 22	1, 8, 16, 23 and 30 June 22	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	16 June 22	N/A*	16 June 22	16 June 22	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	9 and 15 June 22	9 and 15 June 22	15 June 22	15 June 22	15 June 22	N/A*	N/A*
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		2, 8, 14, 20, 24 and 30 June 22	N/A	2, 8, 14, 20, 24 and 30 June 22	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	1, 4, 6, 8, 10, 13, 15, 17, 20, 22, 24, 27 and 29 June 22	N/A	1, 4, 6, 8, 10, 13, 15, 17, 20, 22, 24, 27 and 29 June 22	N/A	N/A	N/A
Landfill Gas Monitoring		29 June 22	N/A	N/A	N/A	N/A	N/A	N/A
Built Heritage Monitoring		N/A	N/A	N/A	N/A	Daily assessment subject to construction works conducted within assessment area	N/A	N/A
Environmental Site Inspection		7, 15, 21 and 28 June 22	1, 8, 17, 23 and 29 June 22	2, 10, 17, 21 and 28 June 22	2, 8, 16, 23 and 30 June 22	6, 16, 20 and 27 June 22	2, 8, 16, 23 and 30 June 22	2, 10, 17, 24 and 29 June 22

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

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 [1]	DO	0	1	1	0	0	0
	Turbidity	0	2	2	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

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. One (1) Limit Level for DO, two (2) Limit Level for turbidity of impact water quality monitoring were recorded. After investigation, all exceedances were considered non-project related. 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. Built heritage monitoring was carried out in the reporting month by the Contractor under ND/2019/05 for surveyed cultural heritage. No Limit Level exceedance was recorded.

Ecological Monitoring

11. All ecological monitoring was conducted as scheduled in the reporting month. The monitoring result is shown in **Appendix L** and will be compared with the Action/Limit level after the issuance of Final Baseline Ecological Report.

Complaint Log

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

Notification of Summons and Successful Prosecutions

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

Reporting Changes

14. 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

15. The major site activities for the coming two months are shown in **Table IV.**

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

Contract No.	Site Activities (July 2022 to September 2022)
ND/2019/01	(a) Site Clearance, remove of existing structures, tree felling in Portion 1a (b) Site clearance, backfilling, ground investigation, sheet piling, excavation and drainage in Portion 1b (c) Site clearance, demolition of existing structures in Portion 1c (d) Site clearance, tree felling in Portion 1e (e) Site clearance, tree felling, temporary road construction, site formation work in Portion 2 (f) Site clearance, backfilling, excavation, tree felling and drainage works in Portion 3 (g) Site Clearance, sheet piling and excavation, drainage works and temporary road constructure, watermain in Portion 5 (h) Site Clearance, sheet piling and excavation, pipes laying, backfilling, construction of KB01 retaining wall in Portion 6a (i) Operation of HAC treatment facility in Portion 6b (j) Site Clearance, (k) sheet piling and excavation, pipes laying in Portion 7 (l) Construction of retaining wall, slope cutting, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water reservoir, pipe pile wall of WSD's maintenance access, backfilling works in Portion 8a (m) Grouting for receiving pit , trenchless works, excavation, ELS for jacking pit at LWSC's car park in Portion 8b (n) Site clearance, Sheet piling and excavation, drainage works , GI works and retaining wall in Portion 9b (o) Stockpile of soil, excavation in Portion 9c (p) Excavation, sheet piling for ELS, drainage works, road construction, utilities laying in Portion 10a (q) Sheet piling and excavation, drainage works in Portion 10b (r) Construction of MBR in Portion 11b (s) Construction of temporary sewage pumping station in Portion 14
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 - Drainage works at Yin Kong Road - Construction of Pai Lau (b) Portion 2 to Portion 20C - Erection of Permanent Boundary Structure - Construction of Irrigation Channel - Construction works of Type 1 Storage House - Construction works of Type 2 Storage House - Construction of Tea House - Construction of Decking & Sluices - Construction of Composting Facility - Construction works of Bird Hide - Construction works of Outdoor Classroom

Contract No.	Site Activities (July 2022 to September 2022)
	- Wetland Creation & Restoration works - Construction of Compacted Earth Path/ Walkway - Construction of Wetland Boardwalk
ND/2019/04	(a) Tree felling (b) Predrill (c) Bored piling (d) Excavation (e) Sheet piling and ELS
ND/2019/05	(a) <u>North Team Works</u> - Pre-drilling for bored piles at B2-03-P3, P5, P6 - Bored piling at B1& B2(Portion II), C1(Portion II) & D2-01. - ELS and Pile cap construction at C1-01b, C1-02b, C1-03, C1-04, C2-02, C2-03a, C2-04a, C3-01a, C3-02, D1-02 & E2-01 - C3-03 & C3-04 Portal Beam - Raft footing construction at C4-02 - Pier construction at C1-01b, C1-02b, C1-03, C1-04, C2-01, C2-02, C3-03a, C3-04ab, C4-02, D1-02, D1-03, D1-04, E1-04 & E2-01. (b) <u>Viaduct Works</u> - Segment fabrication for bridge C2 & C3 & D1 & E1. - Remaining components of Launching Girder (LG) delivery to site. - Erection of 1st pair non match cast segments at pier C4-03. - LG pre-assembly between pier C4-03 to C4-04a/bM. - Cast in-situ SOP construction at Pier E2-02, E3-03. - 1st set FT delivery. To be used in July-2022. - 2nd set FT fabrication and delivery. To be used in July-2022. - 3rd set FT design and fabrication. To be used in Feb-2023. - 4th set FT design and fabrication. To be used in May-2023. - Complete construction of pile caps E2-01 and D2-01 and installation of cast-in rotation bridge components. - Bridge rotation system fabrication completion and delivery to site (c) <u>South Team Works</u> - Venton Area – Construct new road (section from Venton to Kei Kee). - Portion 13 – UU ducts laying after backfilling completed at FW 52 bay 1 to bay 3. - Portion 17 and 18 – Construction of DN 600 and DN450 sewer. RW 52 bay 4a, 4b and 5 - Portion 18 – 132kv ducts laying and Gas main laying. - TWSR (West) – Backfilling and form new road behind FW06 and FS04 slope works. - TWSR (East) – Form new road - HKY FB (East) – construction of P01 - Portion 11 – DN1200 and DN600 watermain laying work. - E2-03 – Pile cap and Pier construction. - E3-01 – Pier construction. - E3-02 – Cap and Pier construction - D2-02 – Pier construction. - D2-03 – Cap and Pier construction. - E3-04a – Piling works. - E3-04b, E3-05M and E4-01 – predrilling and piling.

Contract No.	Site Activities (July 2022 to September 2022)
	- NB109 – base slab construction.
ND/2019/06	The construction phase has been completed and handed over to AFCD since 4 April 2022.
ND/2019/07	(a) Site clearance at Portion 4 (b) Erection of site hoarding at Portion 4 (c) C&D waste disposal at Portion 1, 2, 4 and 5 (d) G.I. works at Portion 4 (e) Construction of box culvert at Portion 2 (f) Filling works at Portion 1, 2 and 4 (g) Tree felling / Disposal of yard waste at Portion 4 (h) Construction of site haul road at Portion 4 (i) Drainage works, Sewerage works at Portion 1, 3, 4 and 5 (j) Mini piling works at Portion 4 (k) Construction of noise barrier at Portion 4 and 5 (l) Waterworks at Portion 1

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 32nd EM&A Report which summarises the key findings of the EM&A programme in June 2022.

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	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	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(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(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
- 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. Felix Fan	3152 3551	3547 1658
Supervisor / Supervisor's Representative (AECOM)	Chief Resident Engineer	Mr. Alan Lee	6398 5982	2645 3900
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. Kenneth Chan	9300 2182	
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Vincent Hung	6742 5596	
Contract No. ND/2019/04 Contractor (Daewoo – Chun Wo – Kwan Lee Joint Venture)	Site Agent	Mr. Bear Ding	6483 6198	--
	Environmental Officer	Ms. Donna Tso	9283 7167	
	Environmental Supervisor	Ms. Peggie Hon	9714 3308	
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.)	Site Agent	Mr. Anson Chan	9349 1320	2363 2162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms. Gloria Wong	64398946	
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 (June 2022)
ND/2019/01	(a) Site clearance, tree felling, demolition of existing structures and site formation works at Portion 1a (b) sheet piling, excavation, tree felling , backfilling, and drainage at Portion 1b (c) Site clearance, demolition of existing structures at Portion 1c and 1e (d) Site clearance, tree felling, temporary road construction and site formation works at Portion 2 (e) Site clearance, excavation, backfilling at Portion 3 (f) Site clearance, sheet piling, excavation, drainage works, watermain, backfill and road work at Portion 5 (g) Site clearance, drainage works, backfilling, Retaining wall KB01 construction at Portion 6a (h) Operation of HAC soil treatment facility at Portion 6b (i) Site clearance, sheet piling and excavation, drainage works, site formation works at Portion 7 (j) Construction of retaining wall, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water service reservoir, and backfilling works at Portion 8a (k) Site clearance, ELS for jacking pit at LWSC's car park and sheet piling for receiving pit at Portion 8b (l) Site clearance, Sheet piling and excavation, retaining wall and drainage works at Portion 9b (m) Stockpile of soil, excavation at Portion 9c (n) Excavation, drainage works and road work and utilities works at Portion 10a (o) Sheet piling and excavation at Portion 10b (p) Construction of MBR at Portion 11b (q) Construction of temporary sewage pumping station at Portion 14 (r) Construction of CLC at Portion 16
ND/2019/02	(a) Pipe Jacking (b) Backfilling (c) Concreting (d) ELS (e) bedding an pipe laying (f) Sheet Pile Installation
ND/2019/03	(a) Portion 1 & Portion 1A - Drainage works at Yin Kong Road - Construction of Pai Lau (b) Long Valley - Erection of Permanent Boundary Structure - Construction of Compacted Earth Path / Walkway - Construction of Ditches - Construction of Irrigation Channel - Construction of Decking & Sluices - Construction of Wetland Boardwalk - Construction of Type 1 Storage House - Construction of Type 2 Storage House - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works

Contract No.	Site Activities (June 2022)
ND/2019/04	(a) Tree felling (b) Predrill (c) Bored piling (d) Excavation (e) Sheet piling and ELS
ND/2019/05	(a) The rotary drilling rigs, one is located at C2-02 and C2-03. The second is located at B2-02. The RCD rig is located at E3-04 and another RCD rig located at D2-01. (b) C4-01 Portal Beam, C4-03 cross head, E2-02 SOP cast in-situ and E3-03 SOP cast in-situ are in progress. (c) TWSR-East drainage and watermain from Ch100 to Ch450 install works are in progress.
ND/2019/06	The construction phase was completed and handed over to AFCD since 4 April 2022.
ND/2019/07	(a) Site clearance at Portion 4 (b) Erection of site hoarding at Portion 4 (c) C&D waste disposal in Portion 1, 2, 4 and 5 (d) G.I. works at Portion 4 (e) Construction of box culvert in Portion 2 (f) Filling works in Portion 1, 2 and 4 (g) Tree felling / Disposal of yard waste in Portion 4 (h) Construction of site haul road in Portion 4 (i) Drainage works and Sewerage works at Portion 1, 3, 4 and 5 (j) Mini piling works at Portion 4 (k) Construction of noise barrier at Portion 4 and 5 (l) 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	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	21/11/2013	N/A	Valid
ND/2019/02	EP-469/2013	21/11/2013	N/A	Valid
ND/2019/03	EP-468/2013/A	27/01/2017	N/A	Valid
	EP-473/2013/A	27/01/2017	N/A	Valid
ND/2019/04	EP/473/2013/A	27/01/2017	N/A	Valid
	EP/546/2017	16/11/2017	N/A	Valid
ND/2019/05	EP-473/2013/A	27/01/2017	N/A	Valid
ND/2019/06	EP-475/2013/A	13/01/2017	N/A	Valid
Construction Noise Permit (CNP)				
ND/2019/01	GW-RN0036-22	23/01/2022	16/07/2022	Valid
	GW-RN0388-22	11/05/2022	10/11/2022	Valid
	GW-RN0172-22	25/03/2022	24/09/2022	Valid
	GW-RN0173-22	08/03/2022	07/09/2022	Valid
	GW-RN0285-22	08/04/2022	07/10/2022	Valid
	GW-RN0480-22	14/06/2022	13/07/2022	Valid
ND/2019/02	GW-RN0047-22	01/02/2022	31/07/2022	Valid
ND/2019/03	GW-RN0055-22	01/03/2022	31/08/2022	Valid
ND/2019/04	GW-RN0162-22	03/03/2022	02/06/2022	Expired in the reporting month
ND/2019/05	GW-RN0496-22	17/06/2022	30/06/2022	Valid
	GW-RN0316-22	28/04/2022	27/07/2022	Valid
ND/2019/06	GW-RN0054-22	13/02/2022	12/08/2022	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid
ND/2019/02	454012	05/03/2020	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/04	461184	23/10/2020	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
ND/2019/07	459393	28/08/2020	N/A	Valid
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

Contract No.	Permit / Licence No.	Valid Period		Status
		From	To	
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	02/02/2021	28/02/2025	Valid
	WT00037412-2021	15/04/2021	30/04/2026	Valid
	WT00037564-2021	19/04/2021	30/04/2026	Valid
	WT00037886-2021	28/06/2021	30/06/2026	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	16/04/2021	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). **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 EP-467/2013/A EP-468/2013/A	ND/2019/01	KTN-DMS4	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

Monitoring Equipment

3.4 As the power supply for High Volume Sampler (HVS) for TSP monitoring at FLN-DMS 5A and KTN-DMS 4 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.

3.5 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.

3.6 HVS for 24-hour TSP monitoring will be adopted once secured supply of electricity become available at FLN-DMS 5A and KTN-DMS 4.

3.7 **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	Dust Monitor (1-hour and 24-hour TSP)	Met One Instruments	AEROCET-831	6
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

3.8 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.

3.9 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

3.10 **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

3.11 Direct reading dust meter was deployed for the air quality monitoring as shown in **Table 3.2**.

3.12 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

3.13 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)

3.14 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

3.15 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

3.16 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.

3.17 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

3.18 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

3.19 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

3.20 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	64.7	32.5 – 99.7	303	500
FLN-DMS3	66.2	29.1 – 100.3	301	500
FLN-DMS5	40.2	16.5 – 63.2	279	500
KTN-DMS4	36.3	19.9 – 72.6	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	54.6	35.0 – 80.9	150	260
FLN-DMS3	31.9	25.7 – 46.6	165	260
FLN-DMS5A	53.8	20.1 – 108.7	153	260
KTN-DMS4	50.6	30.2 – 101.9	192	260

3.21 All 1-hour and 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.

3.22 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	Excavator, piling, mobile crane, dump truck, road traffic

Event and Action Plan

3.23 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	6
Acoustical Calibrator	Brüel & Kjær	4231	1
	SVANTEK	SV30A	2

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]	67.3 – 69.0	69.9	75
ND/2019/04				
ND/2019/05				
	CP-FLN-NMS2[2]	56.6 – 67.8	59.6	
ND/2019/01	CP-KTN-NMS2[3]	56.0 – 61.6	58.6	
	CP-KTN-NMS3[4]	58.1 – 61.4	51.6	
ND/2019/01	CP-KTN-NMS5	55.3 – 60.2	57.2	
ND/2019/02	CP-KTN-NMS6	56.3 – 61.4	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 $4^{o}C$ 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	**3**

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 (ºC) • 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 (ºC) • 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. 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 The summary of exceedance recorded in the reporting month is shown in **Appendix O** and summarised in the **Table 5.6**.

Table 5.6 Summary of Water Quality Exceedances

Station	Exceedance Level	DO	Turbidity	SS	Total Number of Non-project Related Exceedances	Total Number of project Related Exceedances
SYR-IS1	Action Level	0	0	0	0	0
	Limit Level	0	0	0	0	0
NTR-IS1	Action Level	0	0	0	0	0
	Limit Level	0	1	0	1	0
SHST-IS2	Action Level	0	0	0	0	0
	Limit Level	0	1	0	1	0
MWR-IS3	Action Level	0	0	0	0	0
	Limit Level	1	0	0	1	0
Total	Action Level	0	0	0	0	0
	Limit Level	1	2	0	3	0

* Exceedances record date: 13/06/2022

5.38 One (1) Limit Level for DO, two (2) Limit Level for turbidity of impact water quality monitoring were recorded. All exceedances were recorded on 13 June 2022. After investigation, all exceedances were considered due to the other external factors rather than the contract works due to the following reasons:

1. No pollution discharge from site area was observed.

2. Station NTR-IS1 and SHST-IS2: Water from upstream of Ng Tung River, Siu Hang San Tsuen River and Ma Wat River which outside the project site boundary were observed muddy and may led to the increase of turbidity level in the water body. Organic material is anticipated in adverse water quality causing reduction in DO levels due to decomposition of organic matter by microorganisms.

3. Water quality mitigation measures at the nearby construction site (i.e., Contract No. ND/2019/04) were observed properly maintained including silt curtain, green barriers with impervious sheeting to direct site runoff to water pump to the treatment facilities and hydro-

seeding surrounding the works etc.

4. Control Station value already exceeded either the Action or Limit Levels.

5. Station MWR-IS3: Influx of the muddy water outside site boundary may led to decrease in DO levels due to the decomposition of organic matter by microorganisms.

Event and Action Plan

5.39 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 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)
02/06/2022	KTN-DMS4(A)	0.41	9.36	11.7
08/06/2022		0.18		
14/06/2022		0.85		
20/06/2022		0.33		
24/06/2022		0.26		
30/06/2022		0.20		

6.15 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 1,126.8m3 of arsenic soil transported to soil treatment plant and 1,250m3 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	Rasi 700 BIO (Serial No. 330055)	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 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, construction vibration monitoring was conducted for built heritage features at FL02 and FL27 when 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)
EP-473/2013/A	ND/2019/05	FL02	Grave	Northwest side of Shung Him Tong Tsuen, at the hillside behind On Lok Garden
		FL27	Monument	Opposite to Shung Him Tong Public Toilet, at the bottom of slope feature

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
EP-473/2013/A	ND/2019/05	FL02 and FL27	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 HFL05, FL02, FL04, FL24, FL27 and FL36 under ND/2019/05 for EP-473/2013/A. As HFL05, FL04, FL24, FL27 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 was 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 Copies of calibration certificates of the monitoring equipment employed by the Contractor of the construction vibration monitoring are attached in **Appendix C**.

Results and Observations

8.7 In the reporting month, construction vibration monitoring was carried out by the Contractor for the built heritage features at FL02 and FL27 on a daily basis when 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, no additional night-time avifauna monitoring in Long Valley was carried out in the reporting month.

Date of avifauna monitoring: 1, 2, 8, 10, 14, 16, 23, 24, 28, 30 June 2022

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. The location of Transects T1, T2, T3 and T5 is shown in **Figure 9** for reference.

Monitoring Parameters

9.7 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.

9.8 Other information at the time of survey such as weather condition, tidal condition, tide level and noticeable natural or anthropogenic activities were documented.

9.9 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

9.10 In total, 33 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 15 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendices L1k and L1l** respectively.

9.11 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.

9.12 Along transect T5 in Long Valley, species with conservation interest such as *Himantopus himantopus*, which is a passage migrant, was commonly observed in wet agricultural land.

9.13 Construction works were observed in T5 in the reporting month.

9.14 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.

9.15 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 included the usage of remote control boats and helicopters.

9.16 Avifauna monitoring in construction phase was conducted during the reporting month and the detailed results are attached in **Appendix L1**.

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

Monitoring Requirements and Protocol

9.17 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.

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

Monitoring Frequency

9.19 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: 16 June 2022

Monitoring Location

9.20 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

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

Monitoring Parameters

9.22 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

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

Monitoring Status

9.24 According to the Updated EM&A Manual, quantitative aquatic fauna replicate surveys of stream fauna was required to be carried out on a monthly basis during wet season.

9.25 In the survey of aquatic fauna, a total of 20 aquatic invertebrate species were recorded in Ma Tso Lung Stream and Siu Hang San Tsuen Stream. There were 4 fish species recorded in the reporting month. 2 species of conservation importance, namely *Cyprinus carpio* and *Oreochromis mossambicus*, were recorded. Both species are introduced species.

9.26 For the monitoring on 16 June 2022, two monitoring stations, MS_01 & MS_05, were found dried-up. No aquatic invertebrate nor fish species was recorded in those stations.

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

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

Monitoring Requirements and Protocol

9.28 As required under Section 12.3.2.17 of the Updated EM&A Manual, monitoring of measures to minimise impacts should be carried out during the construction phase.

9.29 The purpose of survey is to monitor the effectiveness of measures to minimise impacts on ecologically sensitive habitats from disturbance and pollution by standard faunal transect surveys.

Mammal survey

9.30 Mammal survey should be performed during both day and night times, in areas along the transect routes which may potentially be utilized by terrestrial mammals. Field signs such as droppings, footprints, diggings and burrows left by larger terrestrial mammals should be observed. Mammals directly observed should be recorded, and identification should be made as accurate as possible form the field signs observed.

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

Herpetofauna survey (Amphibians and Reptiles)

9.32 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.

9.33 Active searching of appropriate microhabitats such as stones, pond bunds, crevices and leaf debris should be performed mainly. Observation of exposed, basking and foraging reptiles should also be conducted. Nomenclature of amphibian and reptile should be based on Chan et al. (2005) and Karsen et al. (1998), respectively.

Insect survey (Butterfly and Dragonfly)

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

Monitoring Frequency

9.35 Monitoring surveys of ecological sensitive receivers such as mammals, insects (butterflies

and dragonflies), and herpetofauna was undertaken on a monthly bases.

Date of monitoring surveys of ecological sensitive receivers: 9, 15 June 2022

Monitoring Location

9.36 The transect routes in the reporting month according to the construction works are as follows:

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

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

Monitoring Parameters

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

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

Monitoring Results

Mammal

9.39 During the survey, a total of 4 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 2 species of conservation importance was recorded, namely bats *Pipistrellus abramus and Cynopterus sphinx.*

9.40 Domestic cat, *Felis catus* was found at T1. Domestic dog, *Canis lupus familiaris*, was found at T5, where associated with human settlements.

9.41 Echolocation calls of bats were recorded with a bat detector. The bat detector would list out possible bat species having similar echolocation calls in pattern and frequency. The structure of the echolocation calls from the recordings was later analysed to identify species as far as possible (the lack of literature on echolocation call structure makes the field identification of some bat species in Hong Kong difficult, and some species could only be identified to genus level, or remain unidentified from the recordings).

9.42 Identification of bat species encountered in the surveys was made with consideration of the possible bat species suggested by the bat detector, the distribution of suggested bat species in Hong Kong, previous records of bat species in the EIA Report and Baseline Monitoring Report, and the structure of echolocation calls of the recordings (including call structure, frequency, duration, inter pulse interval etc., with reference to relevant literatures).

9.43 *Pipistrellus abramus* was recorded with FM/QCF call structure and frequency around 45 kHz to 68 kHz (Ma et al., 2010, p.319). The above characteristics were further compared

with data from relevant literatures to confirm the identities. References were also made to Tong (2016).

9.44 Bat species, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm during the monitoring at T4. *Pipistrellus abramus* was recorded in flight at nighttime at T1, T3, T4 and T5.

Herpetofauna (Amphibians and Reptiles)

9.45 Along the transects, a total of 9 herpetofauna species was observed. No species of conservation importance were recorded. Species including toads, frogs, lizards and geckos were recorded near wetland habitats and watercourse. Transect T1 had the highest species diversity among all transects.

Insects (Butterfly and Dragonfly)

9.46 During the insect survey, a total of 29 butterfly species and 16 odonata species were recorded from the transects. 1 species of conservational interest was recorded, namely *Charaxes marmax.* Transect T1 had higher butterfly species diversity than other transects.

9.47 Odonata were recorded this month at all transects. 1 species recorded was of particular conservation importance, namely *Potamarcha congener*.

9.48 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna monitoring during construction phase was conducted in the reporting month and the results are attached in **Appendices L4 to L7**.

9.49 For the monitoring conducted on 15 June 2022 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

Details of the Influencing Factors

Major Activities

9.50 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.

9.51 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. *Acridotheres cristatellus* and *Bubulcus coromandus* were observed foraging near the excavators.

9.52 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.

9.53 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 T5.

Weather Conditions

9.54 According to the observation during survey, temperature and the rain flow records in the reporting month (Reference: http://www.weather.gov.hk/wxinfo/pastwx/metob202206.htm), weather conditions might pose influence towards the monitoring results.

9.55 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	7, 15, 21 and 28 June 22	1, 8, 17, 23 and 29 June 22	2, 10, 17, 21 and 28 June 22	2, 8, 16, 23 and 30 June 22	6, 16, 20 and 27 June 22	2, 8, 16, 23 and 30 June 22	2, 10, 17, 24 and 29 June 22
Joint Site Audit with representative of the *Supervisor's* Representative, the Contractor and IEC	15 June 22	17 June 22	21 June 22	8 June 22	16 June 22	N/A	10 June 22

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. ET would record the environmental deficiency, if any, for NDTWM (EP-475/2013/A) during the 1-year defect correction period under Contract ND/2019/04 site inspection and would email weekly those inspection records to the Project Team of Contract ND/2019/06 for information.

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	08/06/2022	Muddy surface runoff were observed entering water bodies such as drainage, spilling pass pre-existing sandbags and earth bunds. Contractor was urged to enhance water mitigation measures immediately, to ensure no further muddy runoff will enter water bodies, especially throughout rainy season.	Improvement/Rectification was observed during follow-up audit session on 17 June 2022.
Air Quality	01/06/2022	Faded NRMM label shall be replaced.	Improvement/Rectification was observed during follow-up audit session on 8 June 2022.
Waste / Chemical Management	17/06/2022	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 23 June 2022.
Ecology	25/05/2022	The silt curtain should be properly surrounded the works and ensure it is intact.	Improvement/Rectification was observed during follow-up audit session on 1 June 2022.
	17/06/2022	Silt curtain should be properly maintained.	Improvement/Rectification was observed during follow-up audit session on 23 June 2022.
Contract No.: ND/2019/03			
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Contract No.: ND/2019/04			
Water Quality			
Air Quality	02/06/2022	The stockpiles of dusty materials should be covered properly at the site area next to wholesale market.	Improvement/Rectification was observed during follow-up audit session on 8 June 2022.
	23/06/2022	To replace faded NRMM labels.	Improvement/Rectification was observed during follow-up audit session on 23 June 2022.
Waste / Chemical Management	16/06/2022	General refuse should be disposed of regularly and properly.	
Contract No.: ND/2019/05			
Air Quality	20/06/2022	Dusty stockpile should be covered by impervious sheets properly.	Improvement/Rectification was observed during follow-up audit session on 27 June 2022.

Parameters	Date	Observations and Recommendations	Follow-up
	27/06/2022	Dusty stockpile should be covered by impervious sheeting properly.	Follow-up action is needed to be reported in the following month.
Waste / Chemical Management	20/06/2022	Drip tray should be provided properly.	Improvement/Rectification was observed during follow-up audit session on 27 June 2022.
Contract No.: ND/2019/06			
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Contract No.: ND/2019/07			
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Implementation Status of Environmental Mitigation Measures

10.4 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	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]

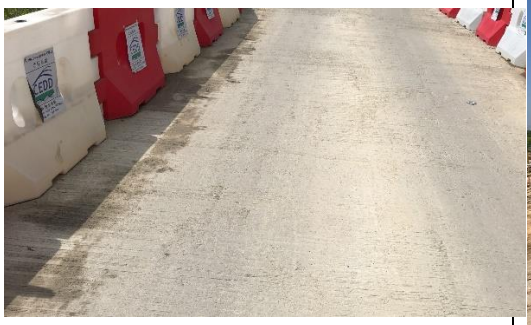
EP-473/2013/A	2.13	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.	∧[1]
EP-475/2013/A	2.7	To minimise adverse impacts on habitats of ecological importance in the 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		

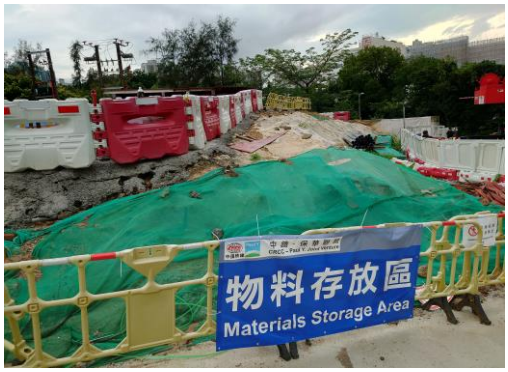
Remark:
[1]: Barrier fences might be subjected to change according to the phasing plan designed at detailed design stage

Implementation Status of Water Quality Mitigation Measures

10.5 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	Regular clearance of water for wheel washing facility
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

10.6 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.

10.7 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.

10.8 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)

10.9 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.

10.10 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.

10.11 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.

10.12 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. A regular meeting was held monthly (on 10 June 2022 in the reporting month) to share the progress of LVNP with different stakeholders, including CEDD, AFCD, CA, HKBWS, Contractor, ET, IEC and farmers.

10.13 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

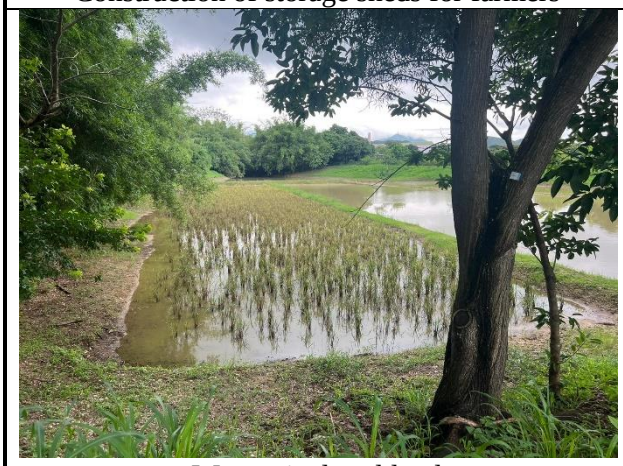
Chinese arrowhead pond

Creation of wetland with designated habitat for biodiversity conservation

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

Retention of washing bay for amphibians breeding

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 *Hirundo rustica* was recorded
 Wet agricultural land	 Provision of noise barrier for noisy works in Long Valley

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

11.1 One (1) Limit Level for DO, two (2) Limit Level for turbidity, three (3) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, all exceedances were considered due to the other external factors rather than the contract works. No Action/Limit Level exceedance for air quality, construction noise, ambient arsenic, landfill gas monitoring and build heritage monitoring was recorded in the reporting month. The summary of exceedance recorded in the reporting month is shown in Appendix O.

11.2 Ecological monitoring was carried out in the reporting month. The results will be compared with Action and Limit Levels after issuance of the Final Baseline Ecological Report.

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 two 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 (July to September 2022)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance	Portions 1a, 1b, 1c, 1e, 2, 3, 5, 6a, 7, 9b	- 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. - Entirely 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. - Erect solid dull green hoarding. **Noise** - Regular inspect of construction plants in good
	(b) GI works	Portions 1b, 9b		
	(c) Excavation	Portions 1b, 3, 5, 6a, 7, 8b, 9b, 9c, 10a, 10b		
	(d) Construction of retaining wall	Portions 6a, 8a, 9b		
	(e) Site Formation	Portions 2		
	(f) Demolition of existing structure	Portions 1a, 1c		
	(g) Construction of temporary site haul road	Portions 2, 5, 10a		
	(h) Operation of HAC treatment facility	Portions 6b		

	Drainage Works	Portions 1b, 5, 6a, 7, 8a, 9b, 10a, 10b, 11b		condition. - 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. - 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.
	(i) Grouting	Portion 8b		
	(j) Construction of reservoir	Portion 8a		
	(k) Sheet piling / ELS	Portions 1b, 5, 6a, 7, 8b, 9b, 10a, 10b		

ND/2019/02	(a) Pipe Jacking	Portions 1 & 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. - 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	Air, Noise, Waste	
	(c) Concreting	Portions 3, 9 & 10	Air, Noise, Water, Waste, Ecology	
	(d) Bedding & Pipe Laying	Portion 3	Air, Noise, Water, Waste, Ecology	
	(e) ELS	Portions 3 & 7	Air, Noise, Water, Waste, Ecology	
	(f) Sheet Pile Installation	Portions 3, 4 & 7	Air, Noise, Water, Waste	
	(g) Cut and Fill of Slope	Portion 7	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. - 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.
	(b) Site Clearance	Sections 7, 8 and 9	- Waste - Air pollution - Noise pollution	
	(c) Tree Felling	Sections 6, 7, 8 and 9	- Waste - Air pollution - Noise pollution	

				- Waste should be sorted and disposed according to Waste Management Plan. - No direct discharge of wastewater in storm water drainage is allowed. Wastewater must be desilted before discharging according to water discharge license.
ND/2019/04	(a) Sheet piling	Bridge A2, A3, Portion K	- 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) Bored piling	Bridge A1, A2, A3	- Air, Noise, Water, Waste	
	(c) Predrill	Bridge A3, Portion K	- Air, Noise, Water, Waste	
	(d) Excavation & ELS	Portion H, Bridge A2, A3	- Air, Noise, Waste	
	(e) Site clearance	Portion K	- Air, Noise, Waste	
	(f) Tree felling	Portion Q, R	- Air, Noise, Waste	
ND/2019/05	(a) Pre-drilling for bored piles	B1 & B2(Portion II), C1(Portion II) & C1 03	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and	- 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.
	(b) Bored piling	B1(Portion I), B1&B2(Portion II), C1(Portion II), C1 02b, C1 03, C2 02, C2 03a, C2 03b, C3 02, C3 03a, C3		

		04a, D2 01, E2 01.	Visual - Cultural Heritage	- 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 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
	(c) Pile Piling	D2 03		
	(d) Interface Coring works	D2-02 , B1 01 P8, B1 02b P2, C1 04a P1, C2 01 P5, C2 02 P1, C2 02 P3 & C2 02 P6		
	(e) ELS & Pile Cap Construction	C1-04, C3 04b, D1 01, D1 02, D1 03, D1 04, E1 01, E1 02, E1 03 & E1 04 E2 03, E3 01, E3 03, D2 02		
	(f) Bailey bridge construction & Portal Beam	C4-01		
	(g) Footing construction	C4-02		
	(h) Utilities Diversion/construction Works and Permanent Road Works	Venton Area Portion 1 1, Portion 13, Portion 17 and 18		
	(i) Pier / Column Construction	C3-03b, C4 03, C4 04aM, C4 04bM, D1 01, E1 01, E1 02, E1 03 & E1 04		
	(j) Haul road construction	B2-03 to C1 02a at Portion II		
	(k) Launching Girder & Form Traveler Fabrication	CTC Storage Yard		

	(l) Slope works	RW06, FS04		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. - 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 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.
	(m) Demolition	HD Warehouse		
ND/2019/06	Site clearance	Portions 4, 5	N/A	N/A
ND/2019/07	(a) Site Clearnace	Portions 4	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and	- 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 oriented so that noise is directed away from nearby NSRs.
	(b) Erection of site hoarding	Portions 3, 4		
	(c) C&D waste disposal	Portion 1, 2, 4, 5		
	(d) Ground Investigation works	Portion 4		
	(e) Construction of box culvert	Portions 2		
	(f) Filling works	Portions 1, 2, 4		

	(g) Tree felling / Disposal of yard waste	Portions 4, 5	Visual	- Mobile plant to be sited as far away from NSRs as possible practicable. - All open stockpiles of construction materials of more than 50m^3 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. - 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 of 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
	(h) Construction of site haul road	Portions 4		
	(i) Drainage Works	Portion 1, 3, 4, 5		
	(j) Sewerage works	Portion 1, 3, 4, 5		
	(k) Construction of Noise Barrier	Portion 5		
	(l) Waterworks	Portion 1		

				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 June 2022 in accordance with the Updated EM&A Manual.

13.2 One (1) Limit Level for DO, two (2) Limit Level for turbidity of impact water quality monitoring were recorded. After investigation, all exceedances were considered due to the other external factors rather than the contract works.

13.3 No Action/Limit Level exceedance for air quality, construction noise, ambient arsenic, landfill gas monitoring and build heritage monitoring was recorded in the reporting month.

Contract No. ND/2019/01

13.4 Environmental site inspection were conducted on 7, 15, 21 and 28 June 22 by ET in the reporting month.

Contract No. ND/2019/02

13.5 Environmental site inspection were conducted on 1, 8, 17, 23 and 29 June 22 by ET in the reporting month.

Contract No. ND/2019/03

13.6 Environmental site inspection were conducted on 2, 10, 17, 21 and 28 June 22 by ET in the reporting month.

Contract No. ND/2019/04

13.7 Environmental site inspection were conducted on 2, 8, 16, 23 and 30 June 22 by ET in the reporting month.

Contract No. ND/2019/05

13.8 Environmental site inspections were conducted on 6, 16, 20 and 27 June 22 by ET in the reporting month.

Contract No. ND/2019/06

13.9 Environmental site inspections were conducted on 2, 8, 16, 23 and 30 June 22 by ET in the reporting month.

Contract No. ND/2019/07

13.10 Environmental site inspections were conducted on 2, 10, 17, 24 and 29 June 22 by ET in the reporting month.

13.11 No environmental complaint was received in the reporting month. No notification of summons or successful prosecutions was received in the reporting month.

13.12 The ET would keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

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.

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.

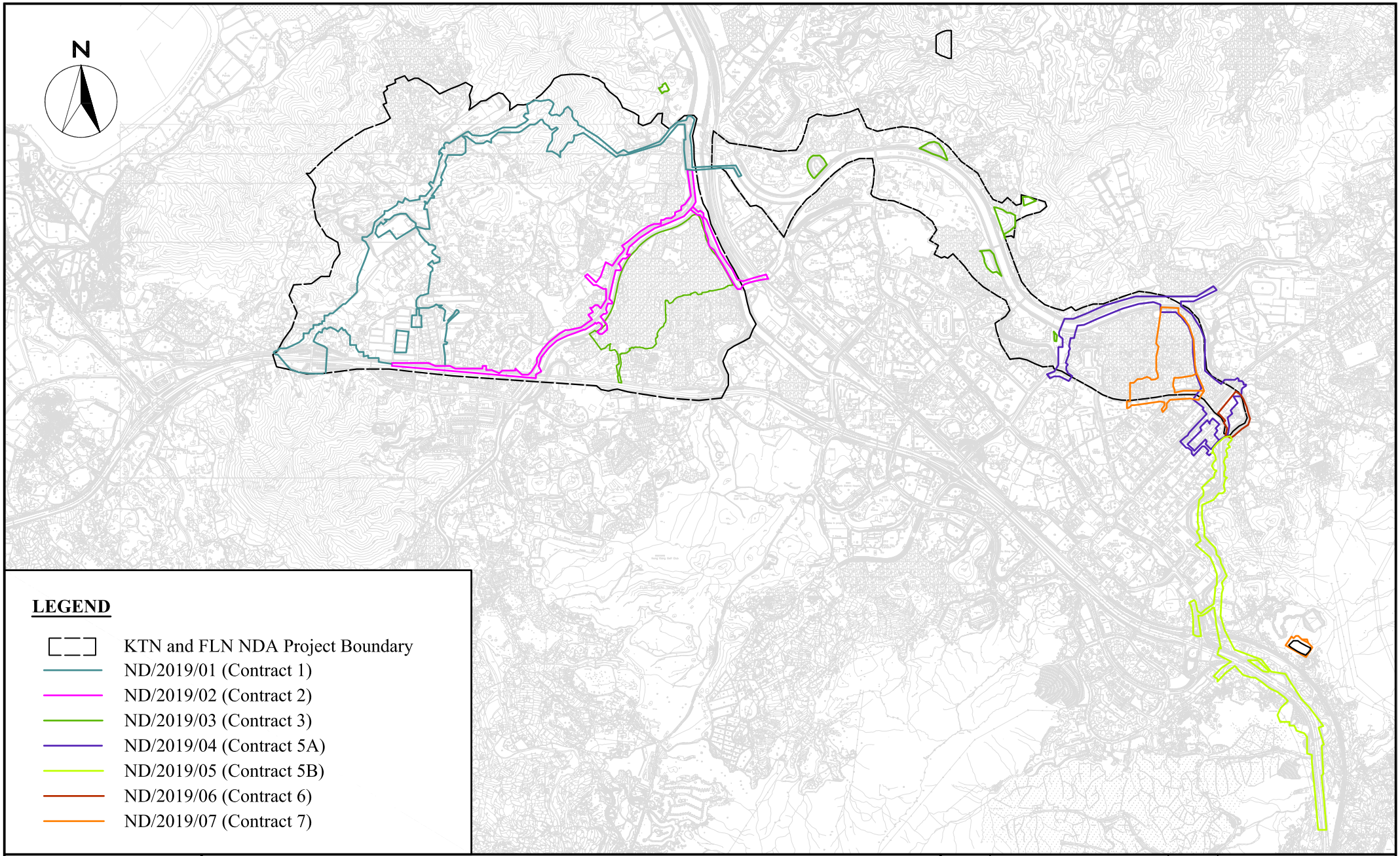
Ecology

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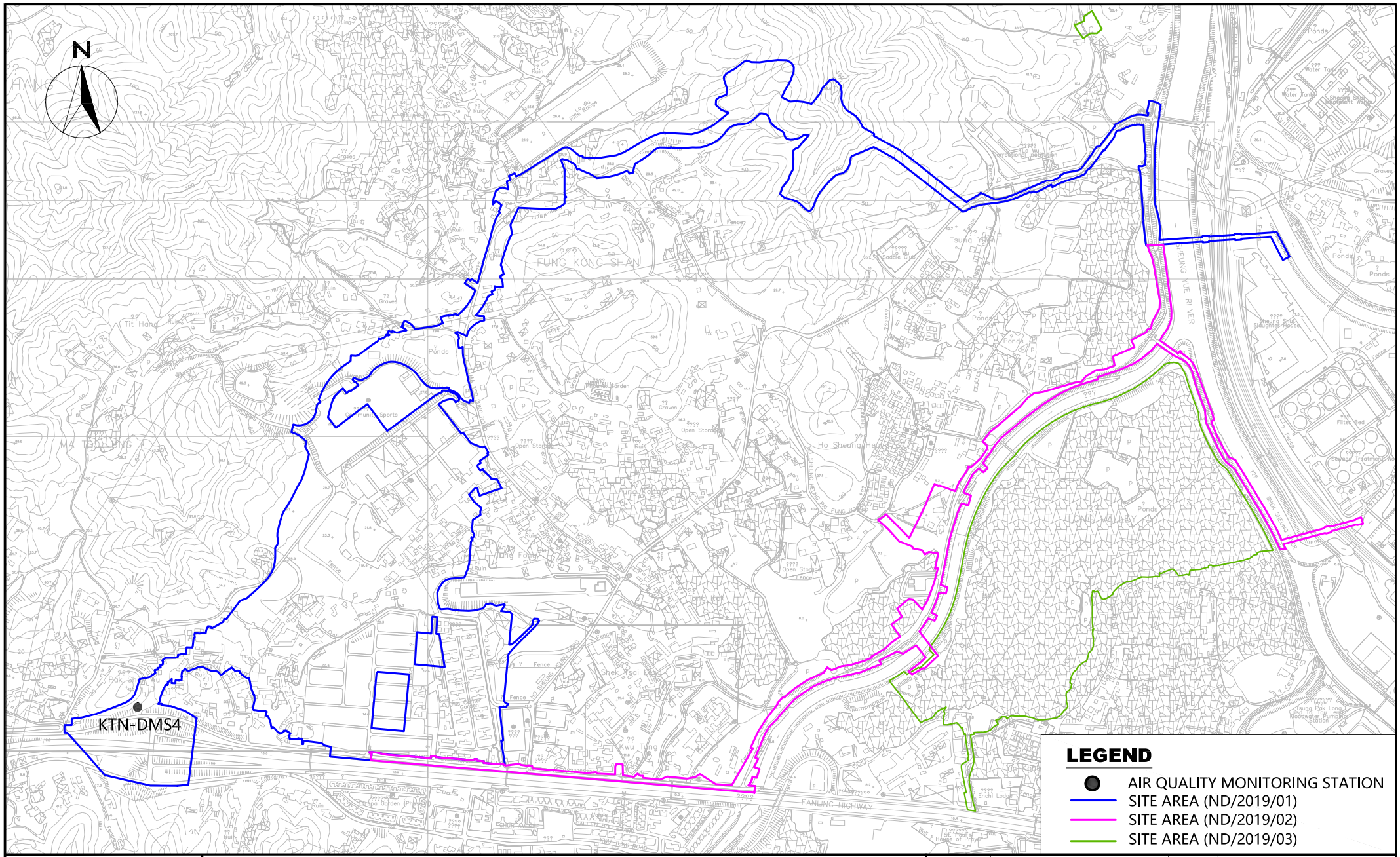
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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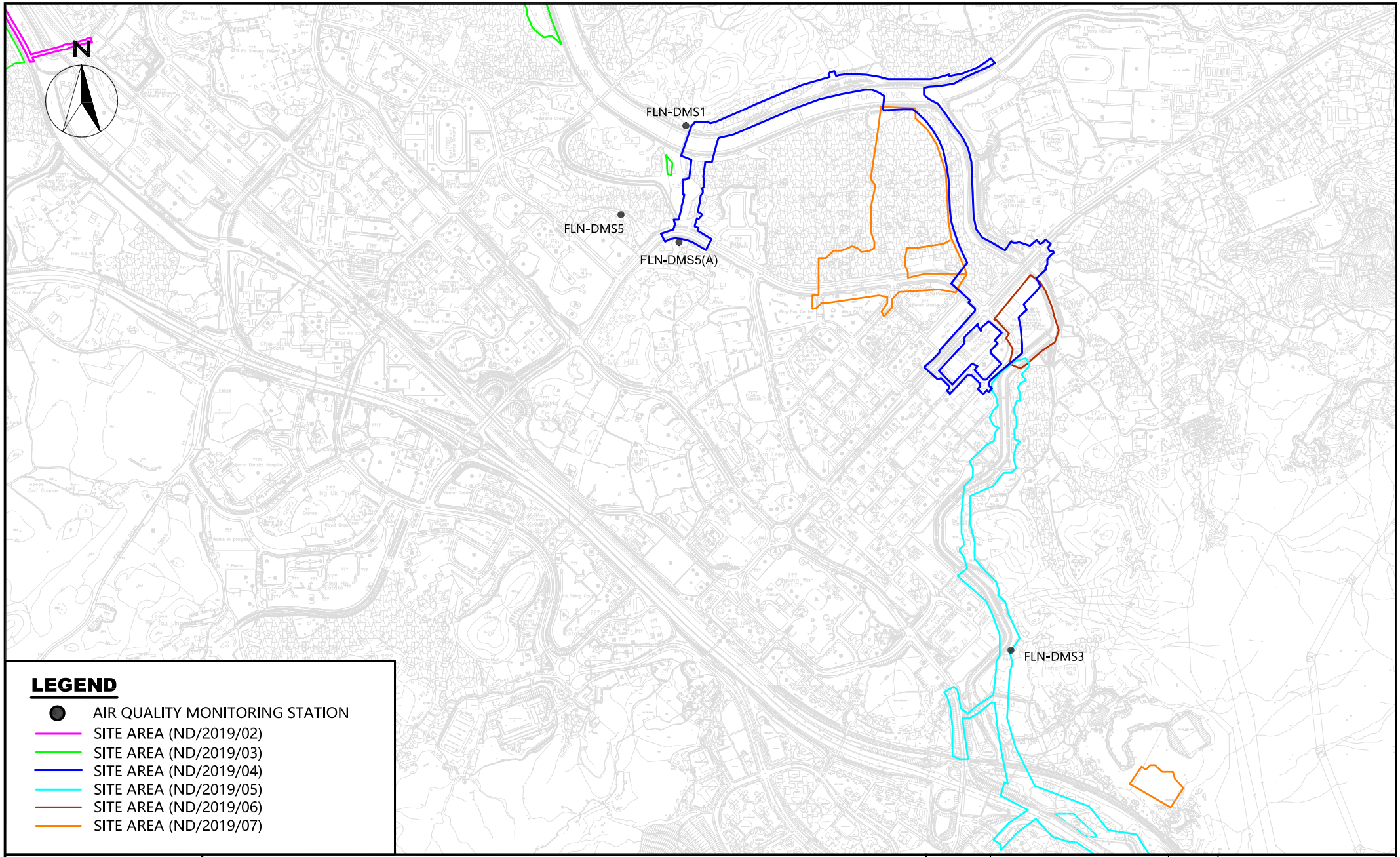
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (KTN)

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



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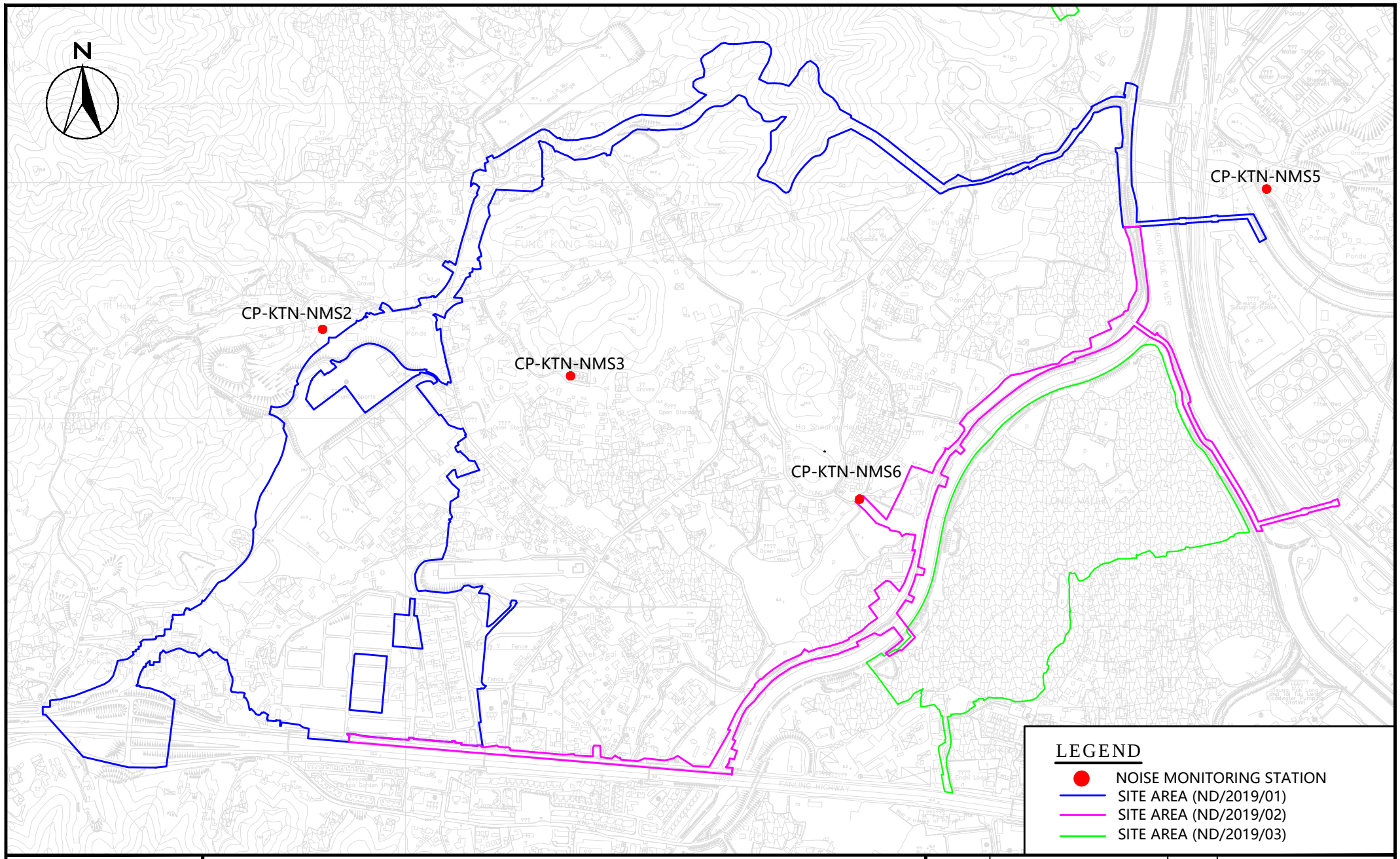
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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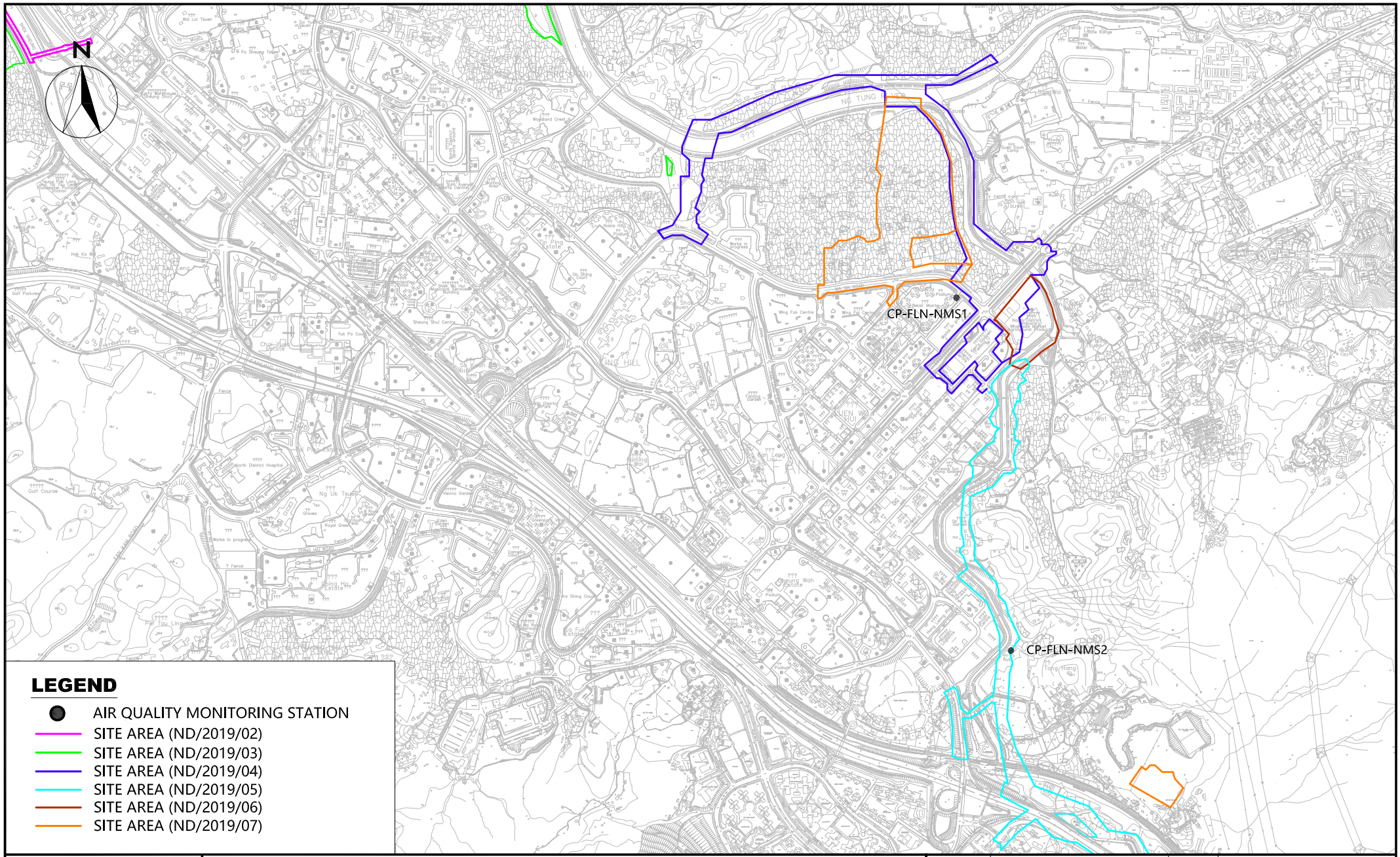
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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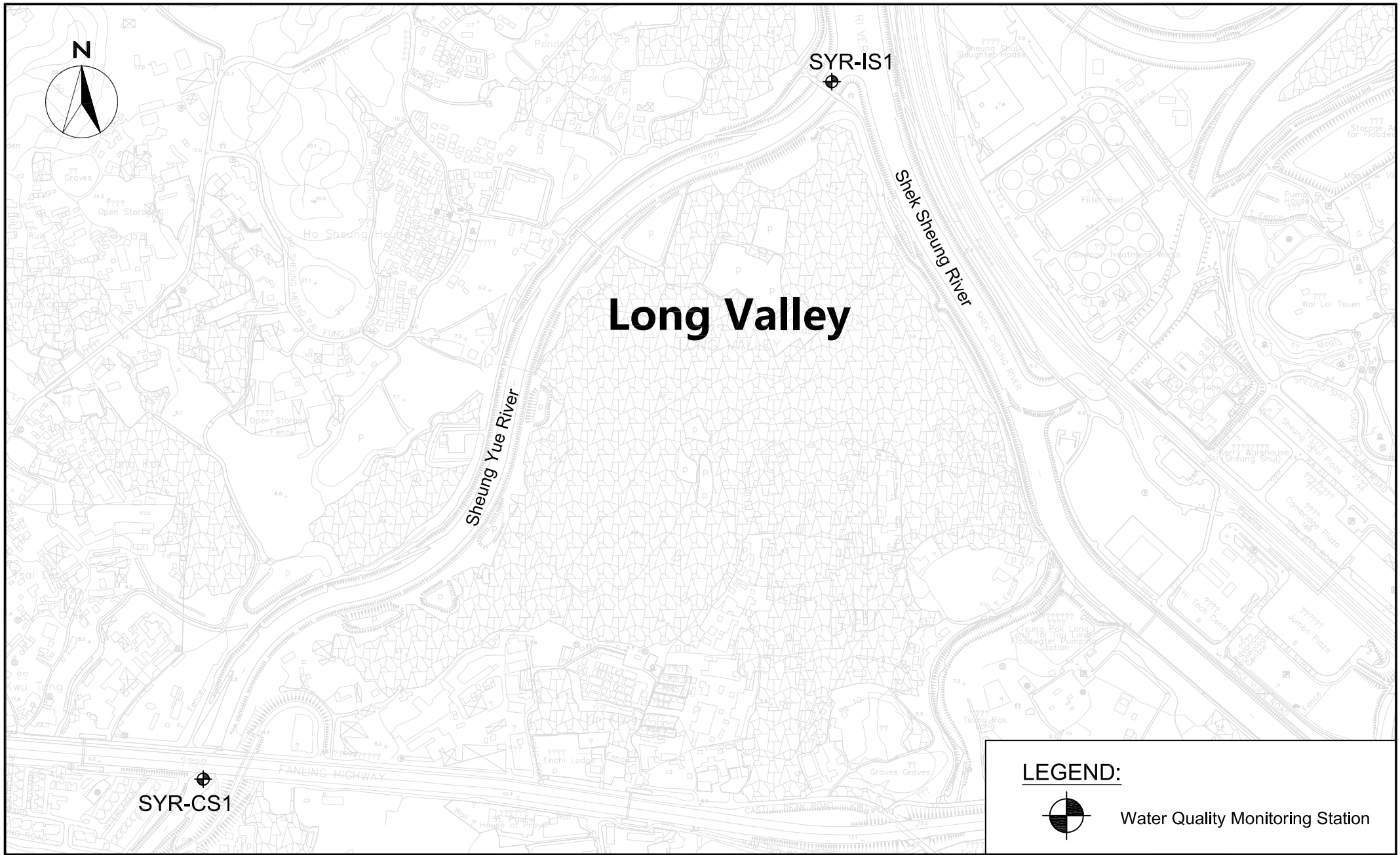
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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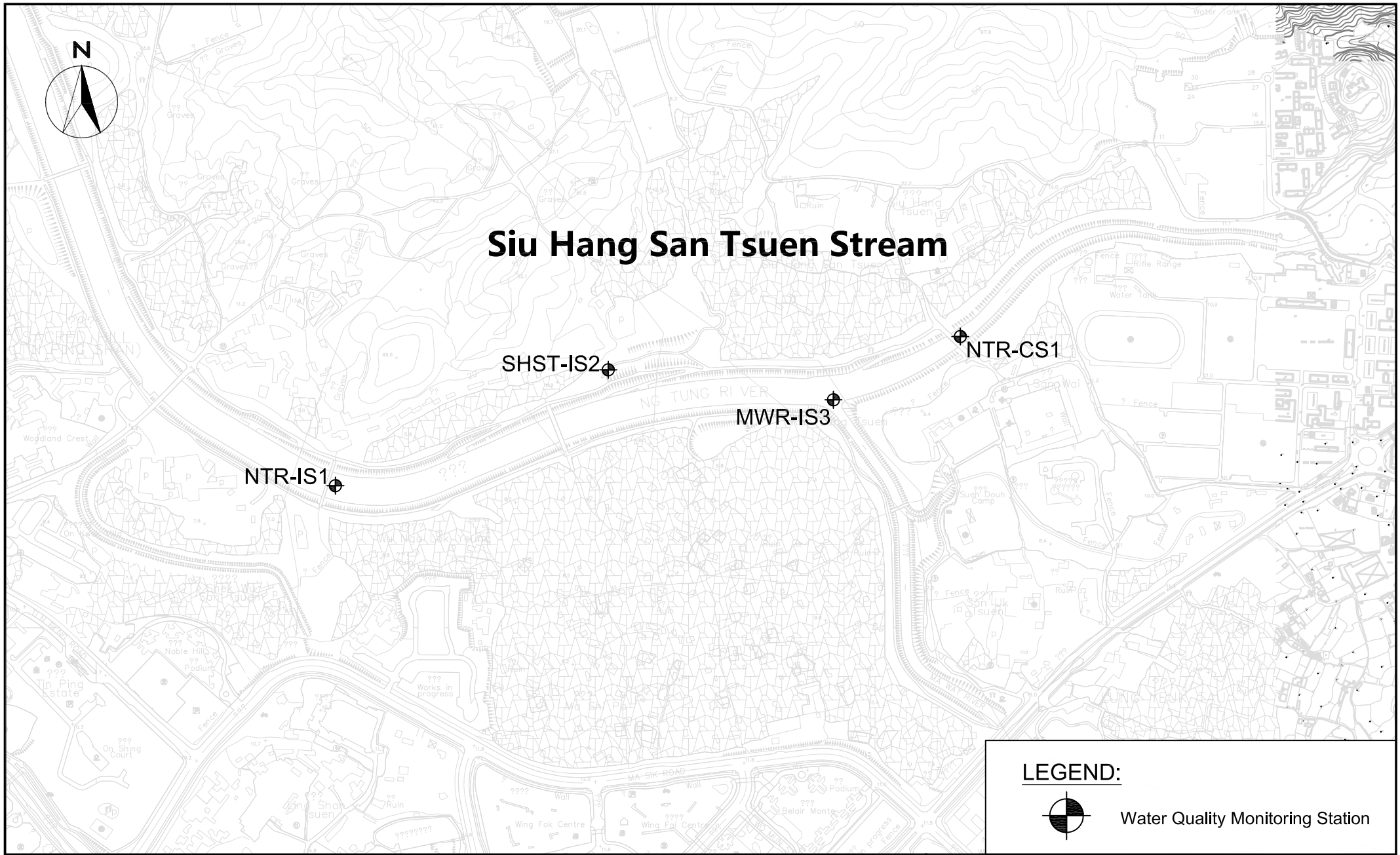
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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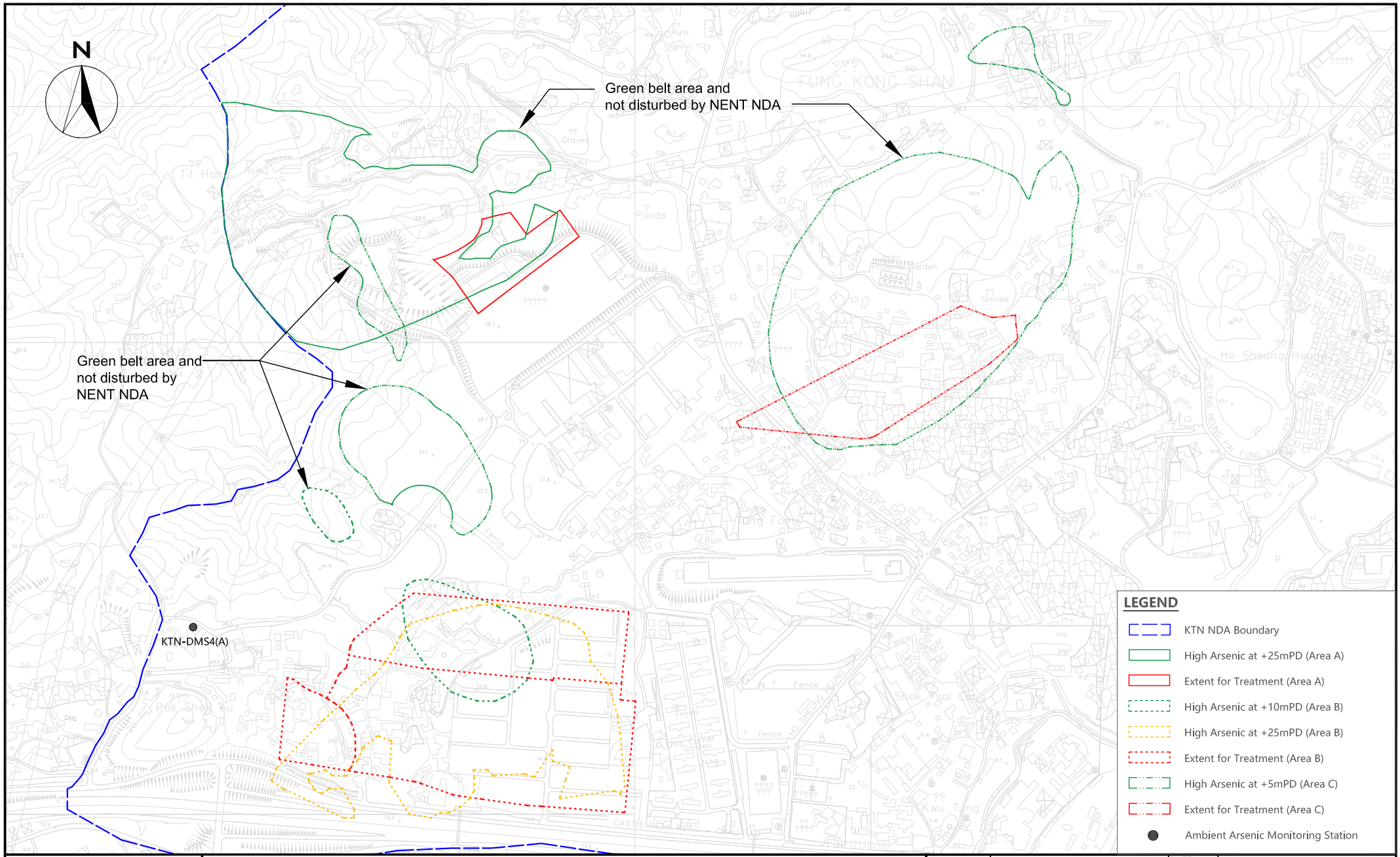
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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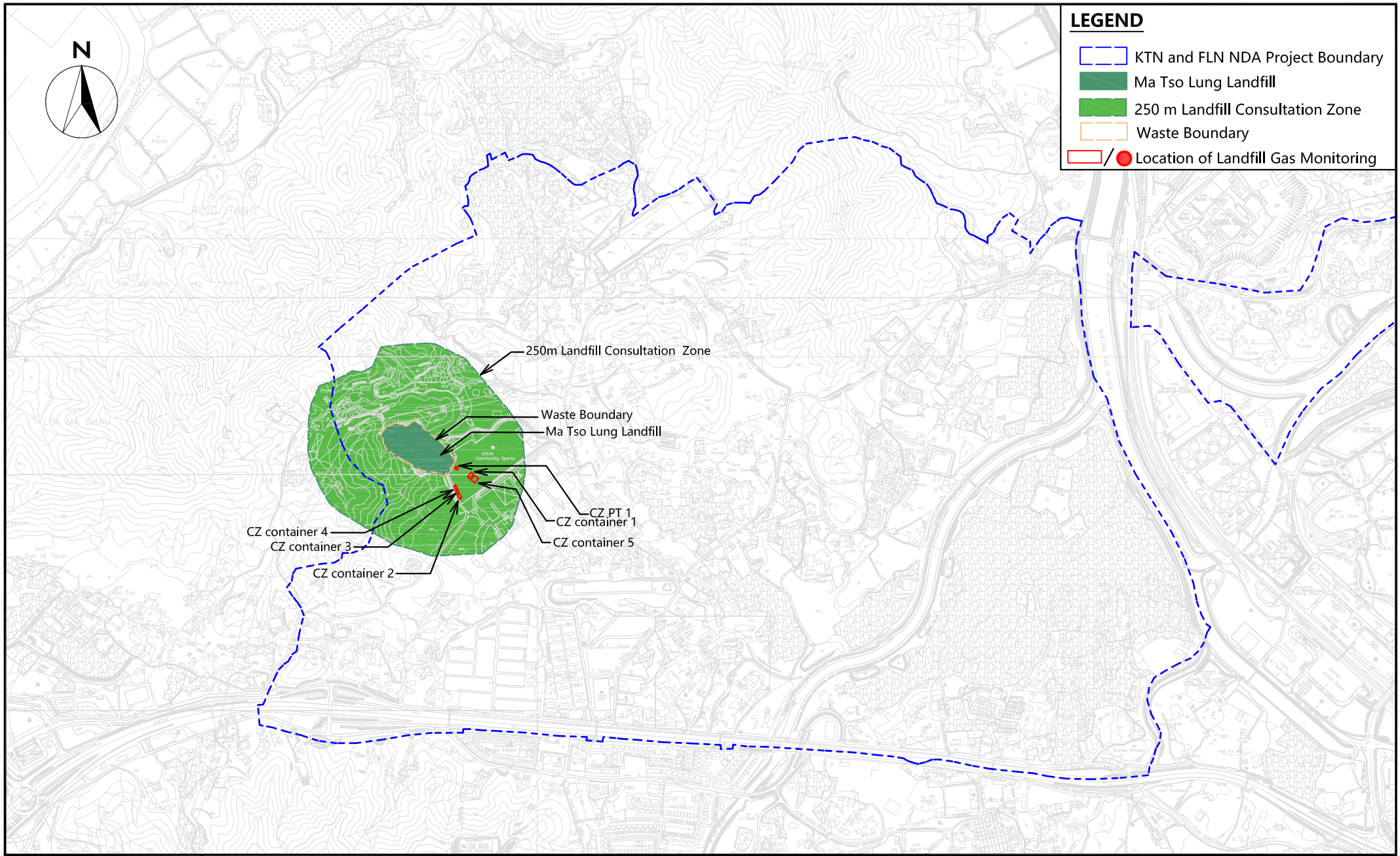
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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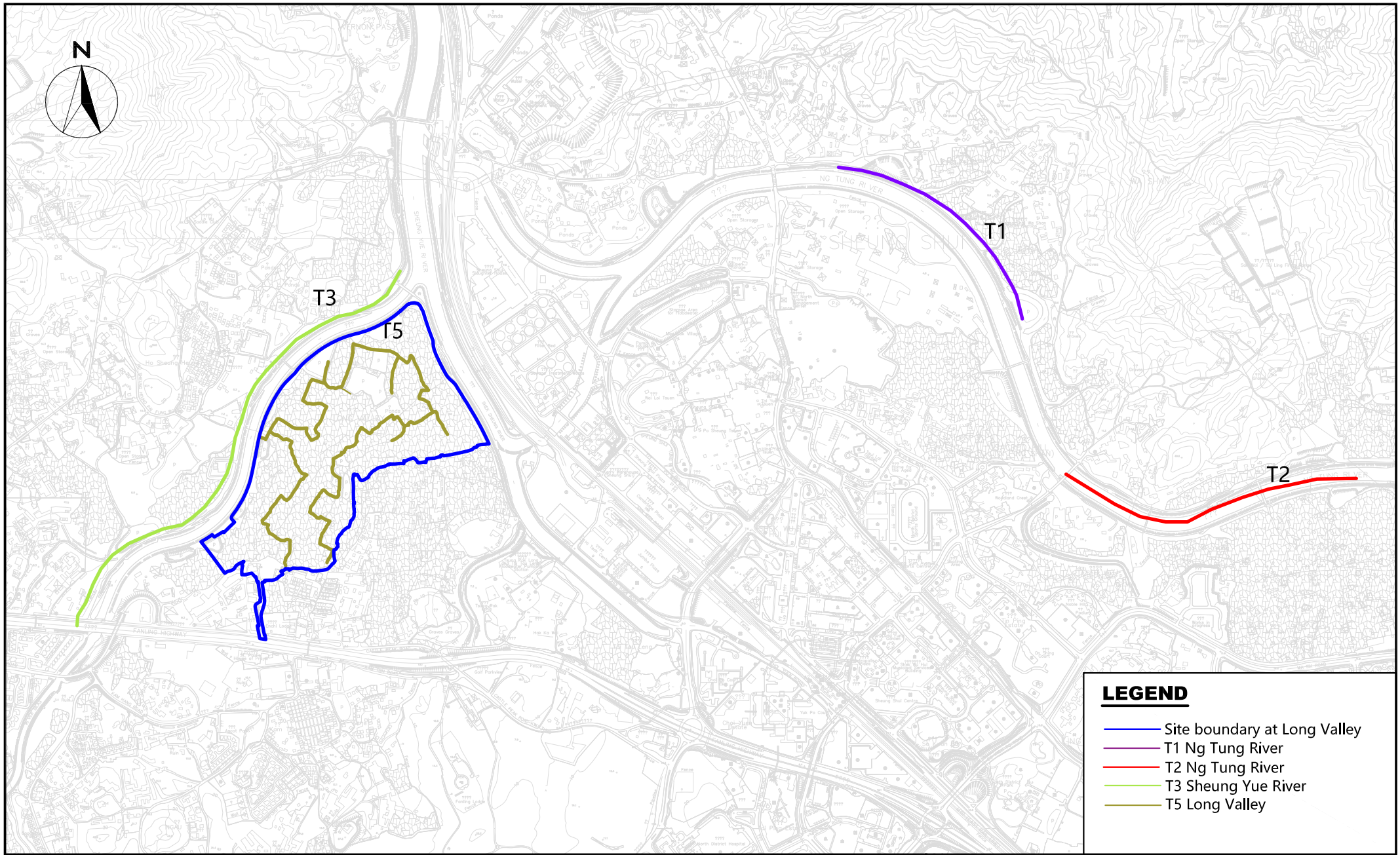
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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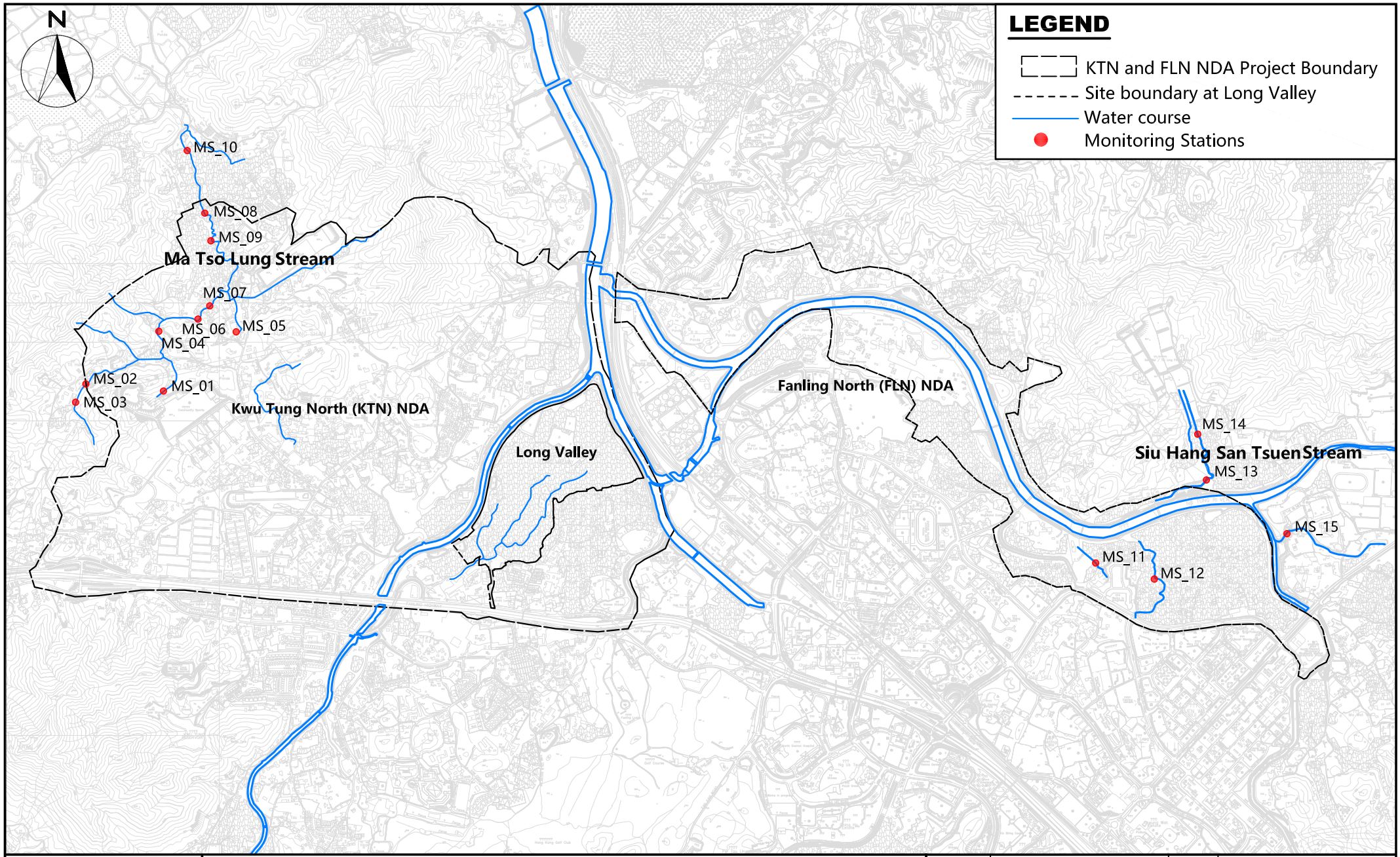
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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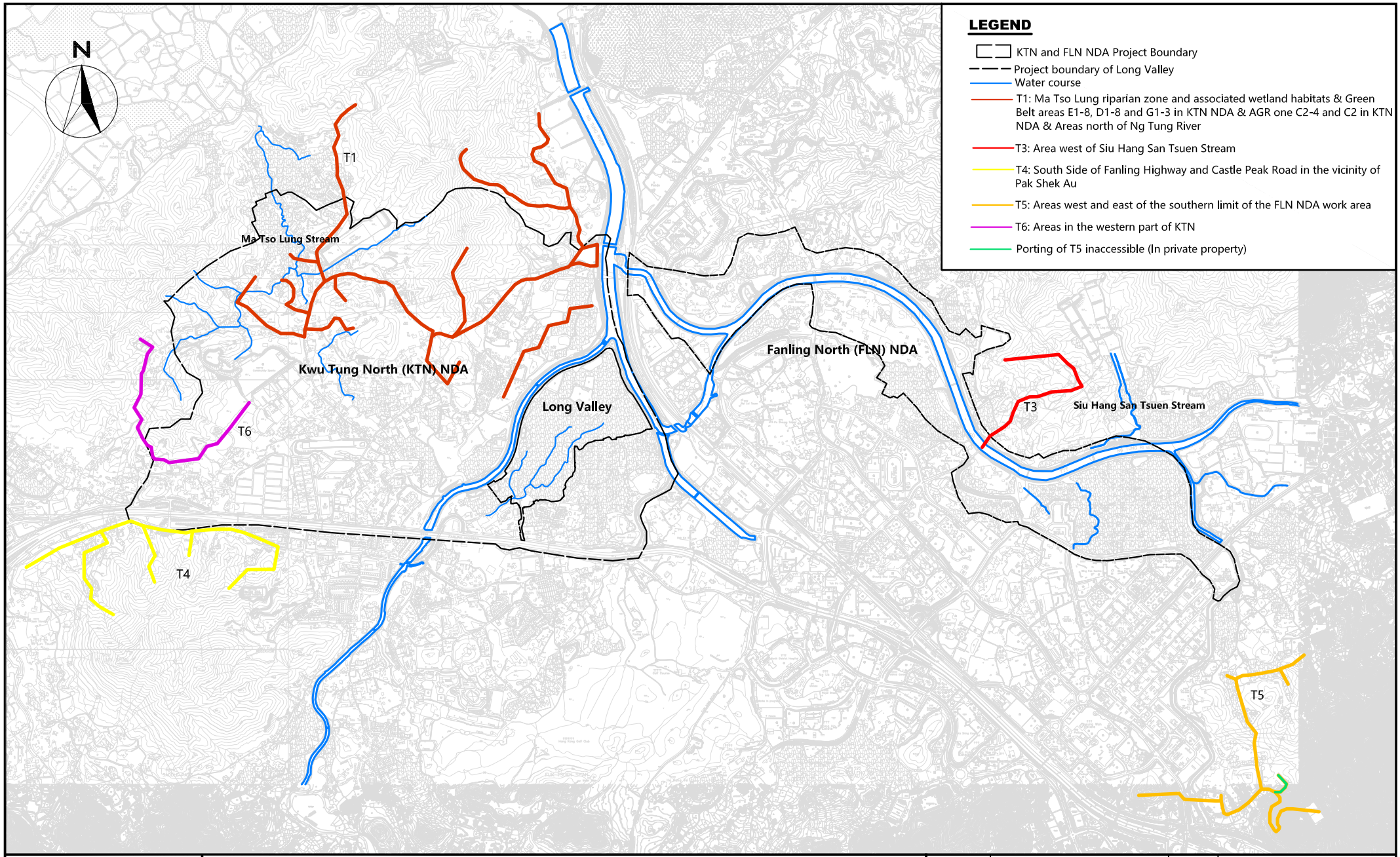
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

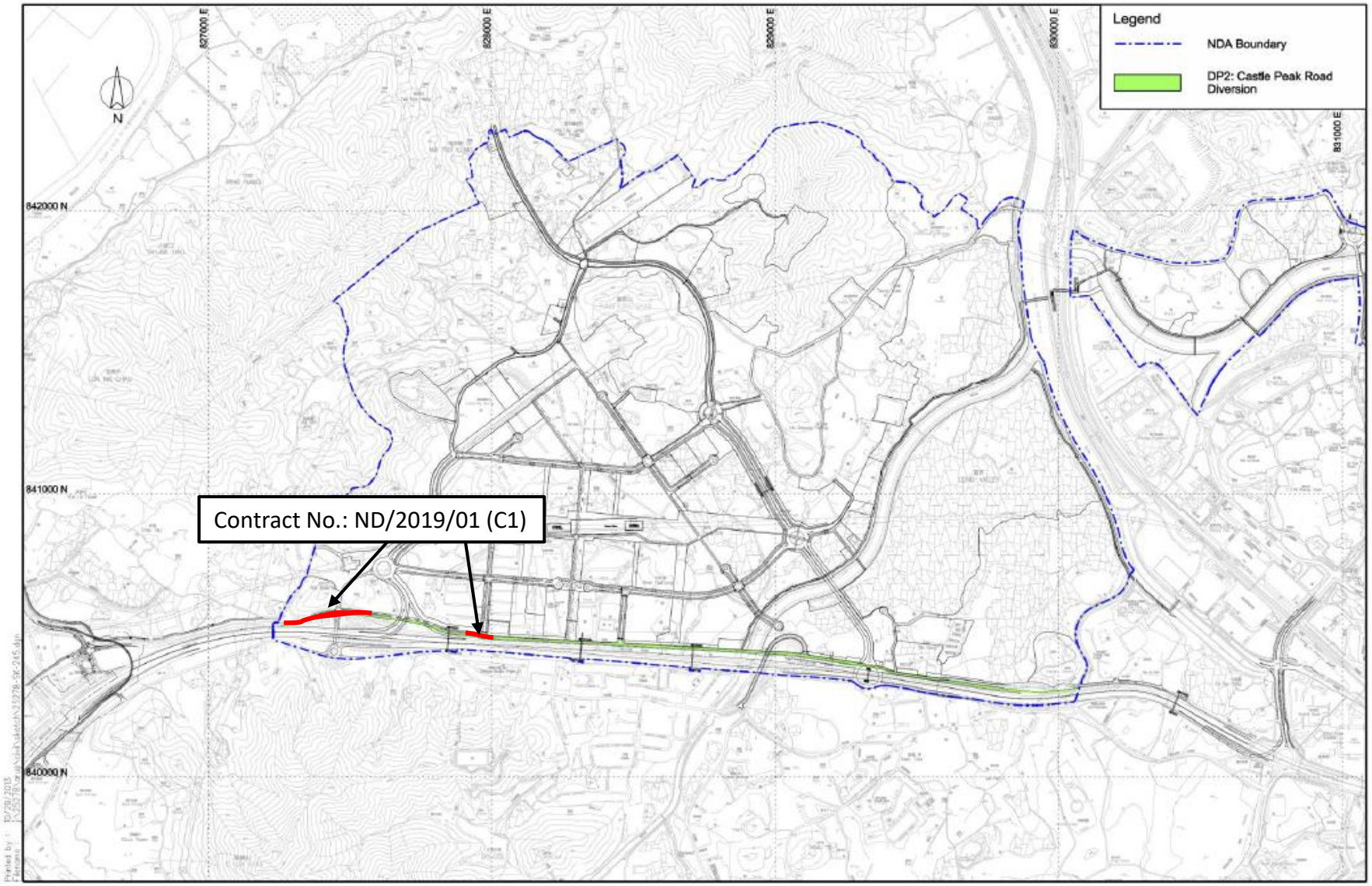
Location of Transect Route of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)

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



Project Title: Castle Peak Road Diversion

Figure 1: Location Plan for Castle Peak Road Diversion Project

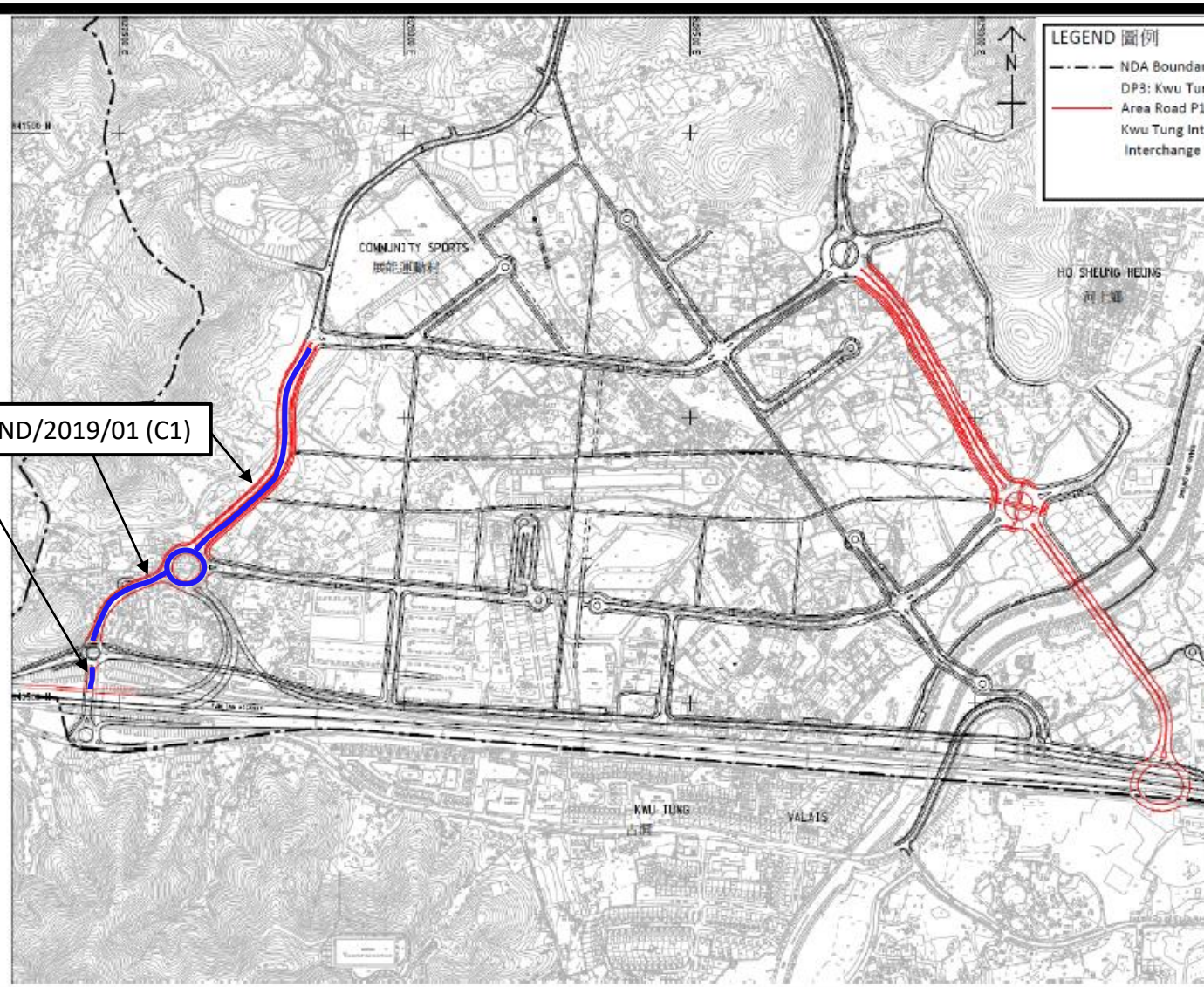
(Extracted from Drawing No. SK/245 of North East New Territories New Development Area Planning and Engineering Study)

Environmental Permit No: EP-466/2013

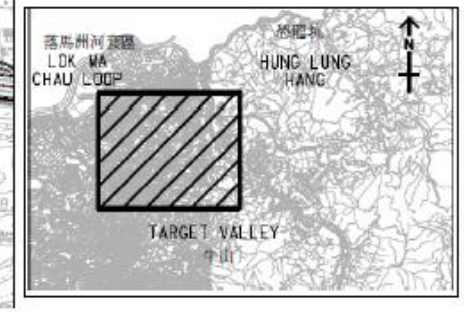
Figure 13

Site Layout Plan of Contract ND/2019/01

under EP-467-2013-A



KEY PLAN 索引圖



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))

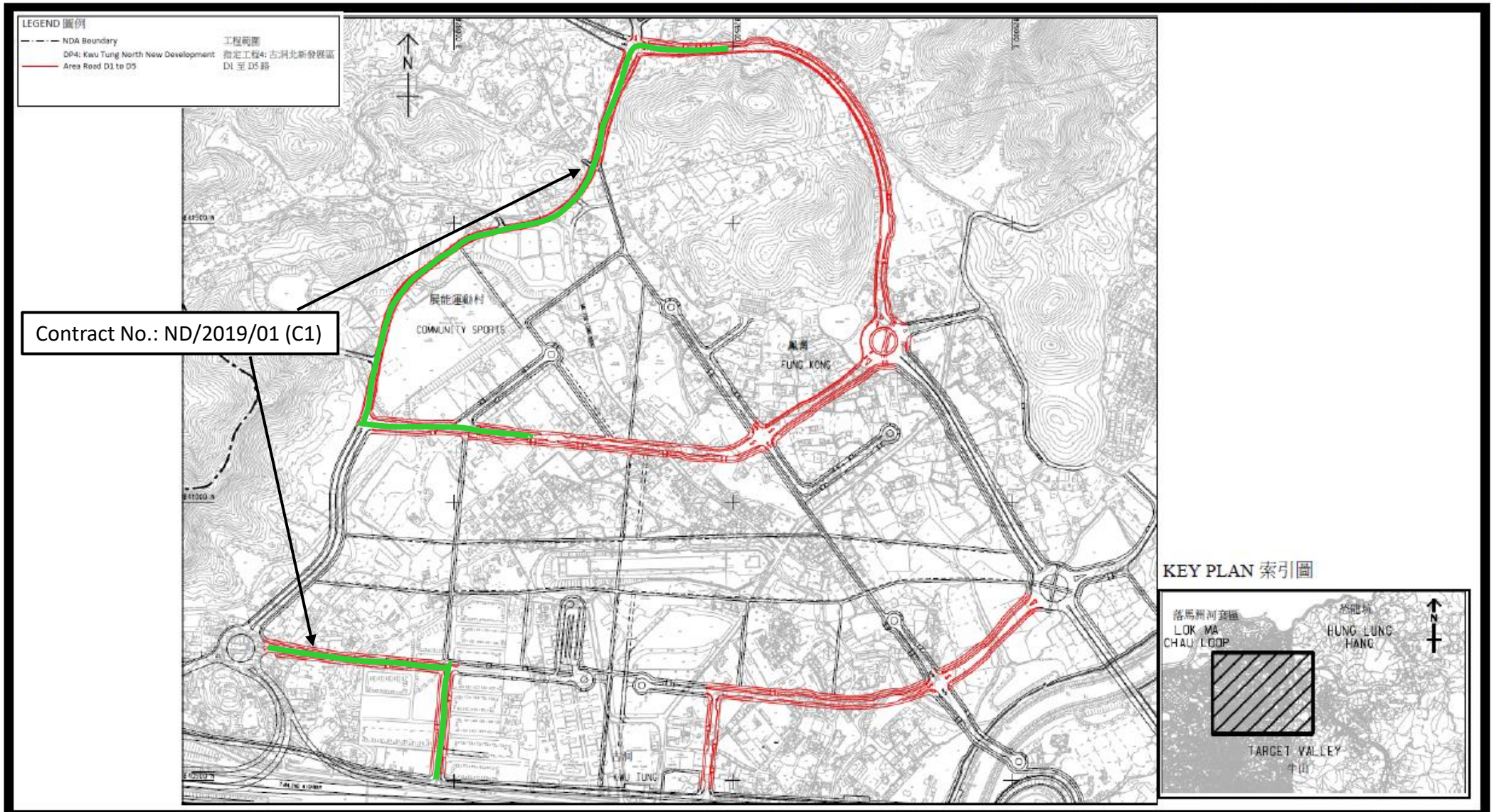
圖1：交匯處改善工程位置 (示意圖)
(本圖是根據申請更改環境許可證(編號: VEP-523/2016)圖1.2編制)

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

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

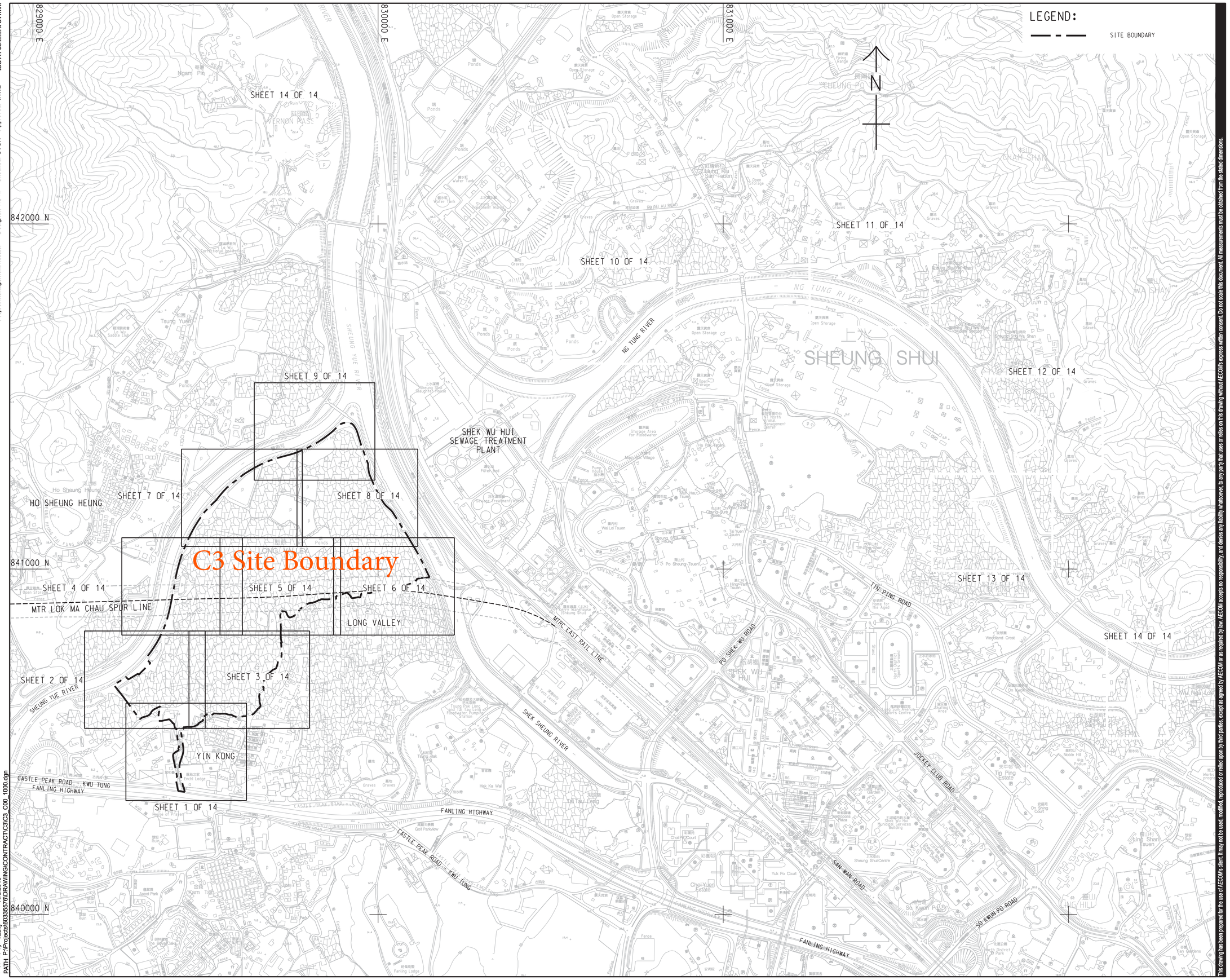
Figure 1: Location Plan for The Project (Indicative)
(This figure was prepared based on Figure 1.4 of VEP application (No.: VEP-524/2016))

圖1：工程項目位置 (示意圖)
(本圖是根據申請更改環境許可證(編號: VEP-524/2016)圖1.4編制)

Figure 15

Site Layout Plan of Contract ND/2019/03

under EP-468-2013-A



Sang Hing - Kuly Venture

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

CLIENT 業主

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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ISO A1 594mm x 841mm

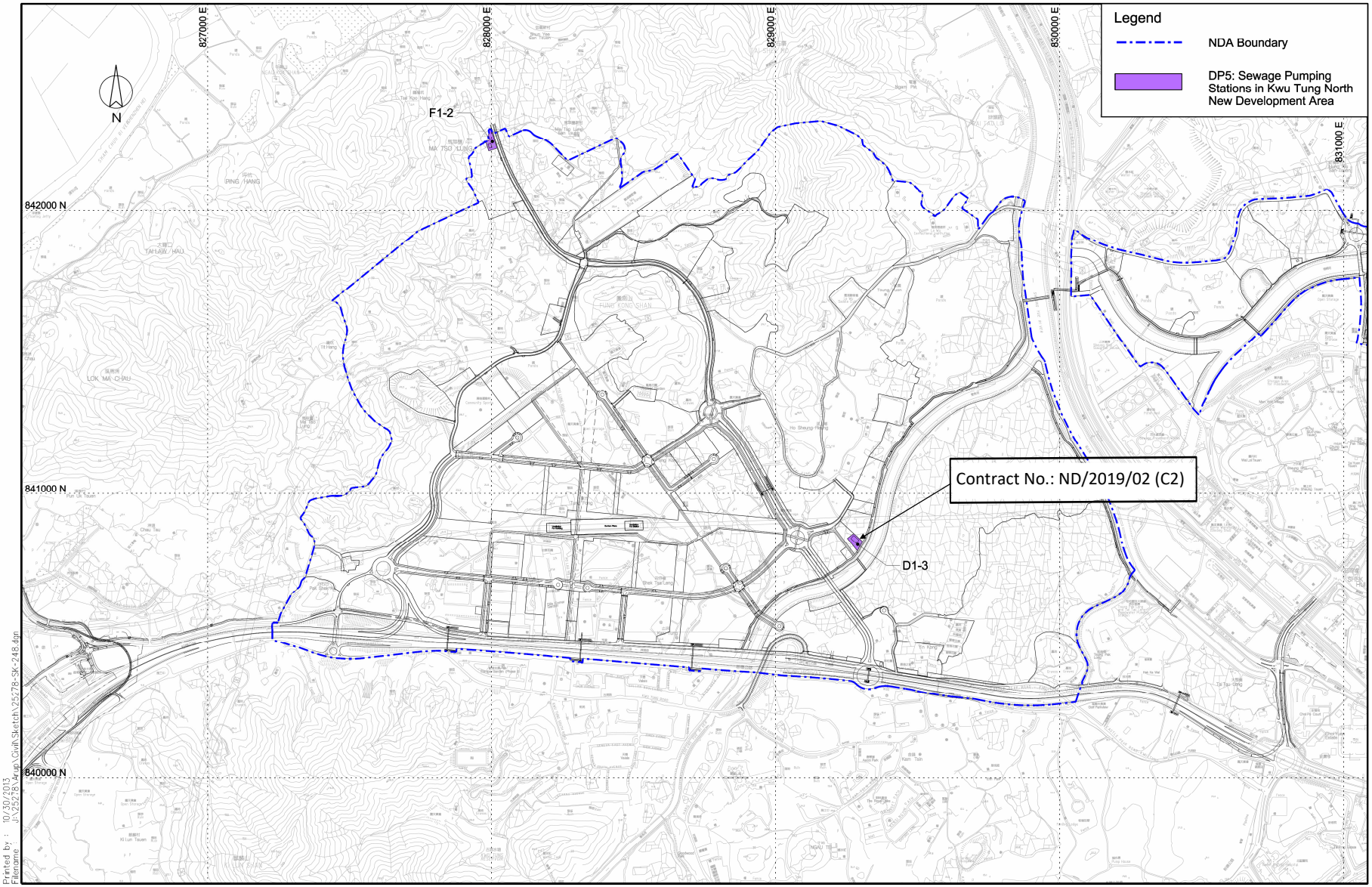
Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL

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

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

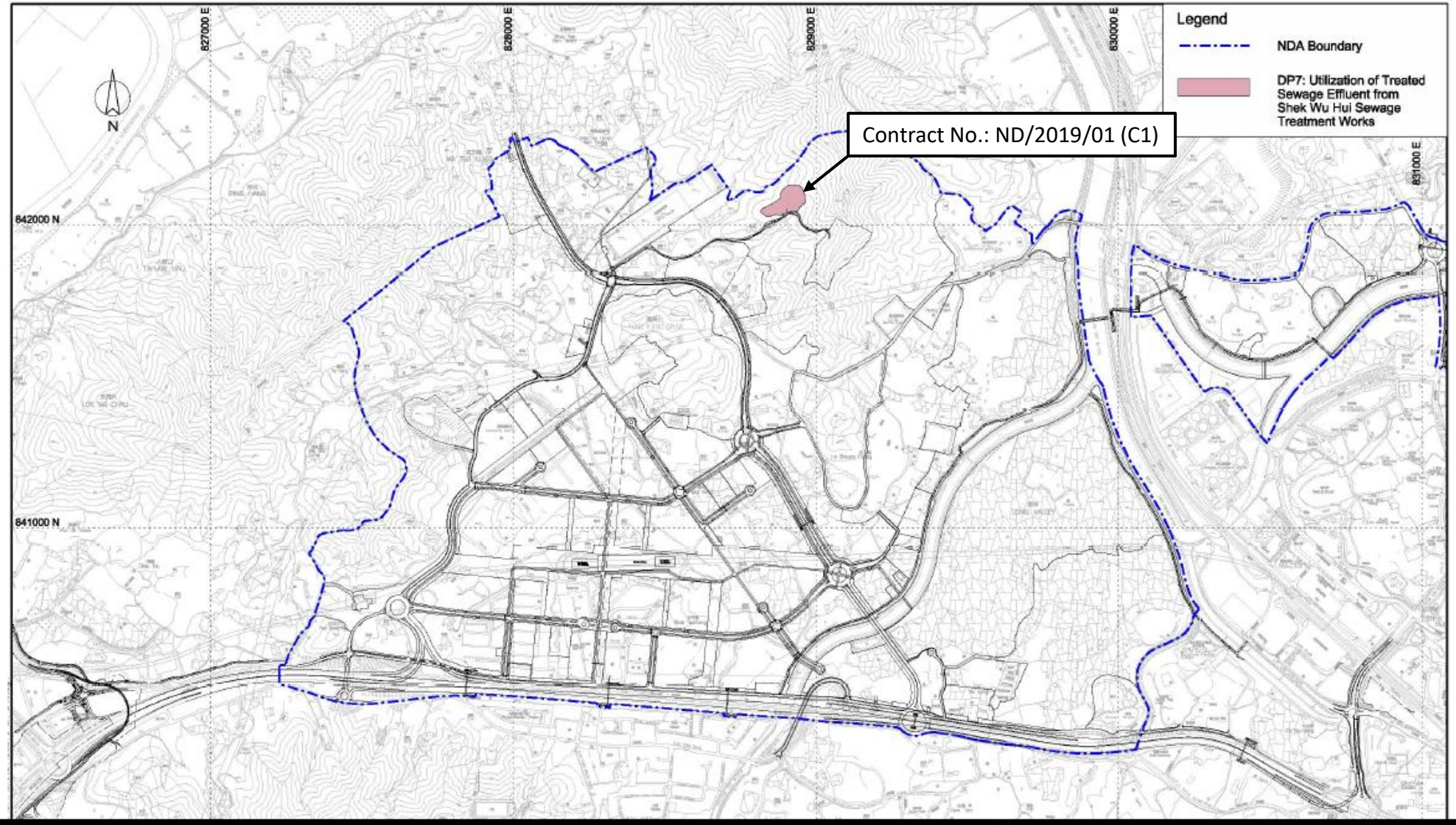
(Extracted from Drawing No. SK/248 of North East New Territories New Development Area Planning and Engineering Study)

Environmental Permit No: EP-469/2013

Figure 17

Site Layout Plan of Contract ND/2019/01

under EP-470-2013



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

Figure 1: Location Plan for the Project

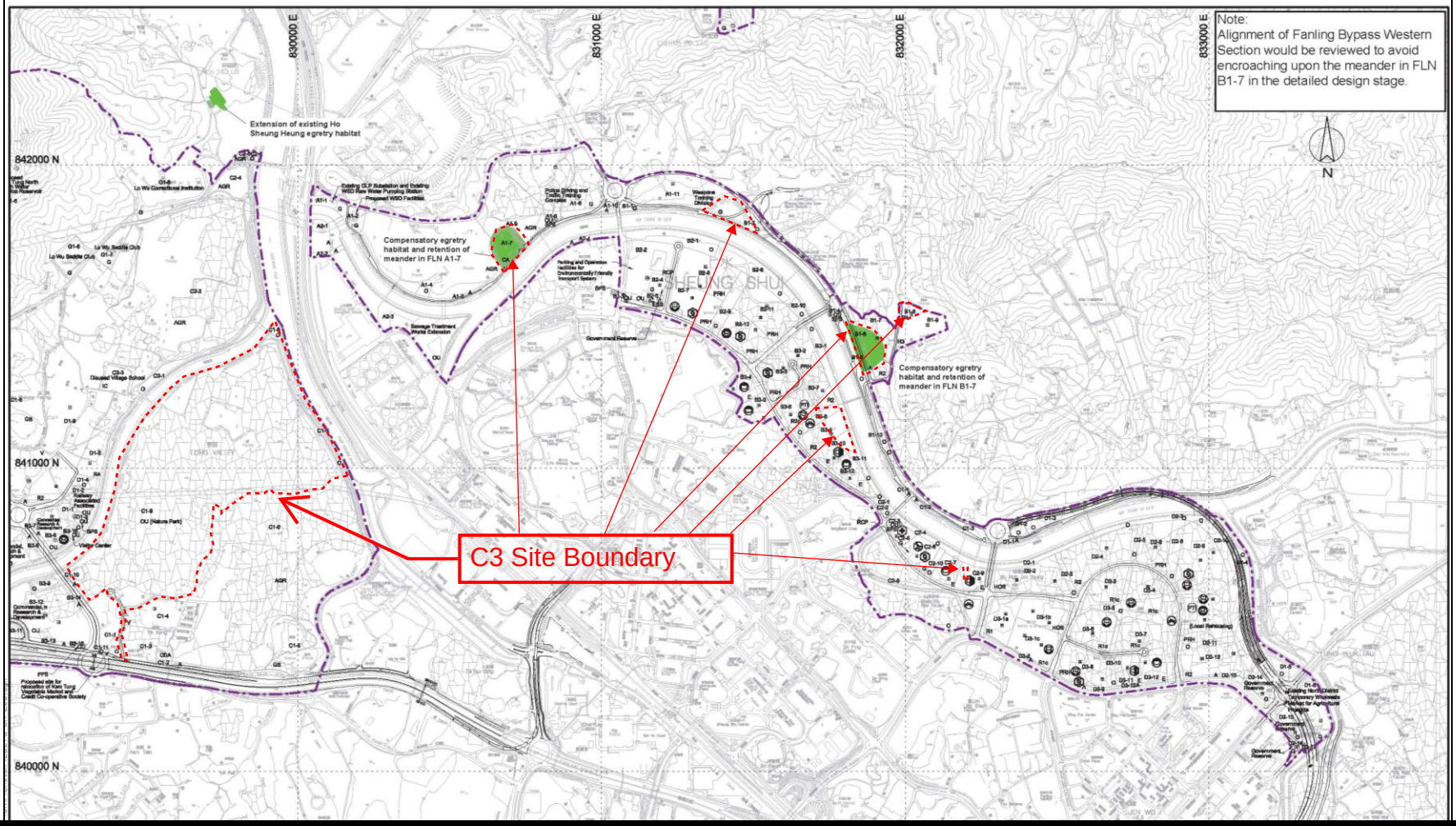
(Extracted from Drawing No. SK/249 of North East New Territories New Development Area Planning and Engineering Study)

Environmental Permit No: EP-470/2013

Figure 18

Site Layout Plan of Contract ND/2019/03

under EP-473-2013-A



Project Title:	**Fanling Bypass Eastern Section**
工程名稱:	粉嶺繞道東段
Figure 2:	**Location of Alternative Egretry Sites and Retained Meanders**
圖 2:	替代鷺鳥林選址和保留河曲的位置

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

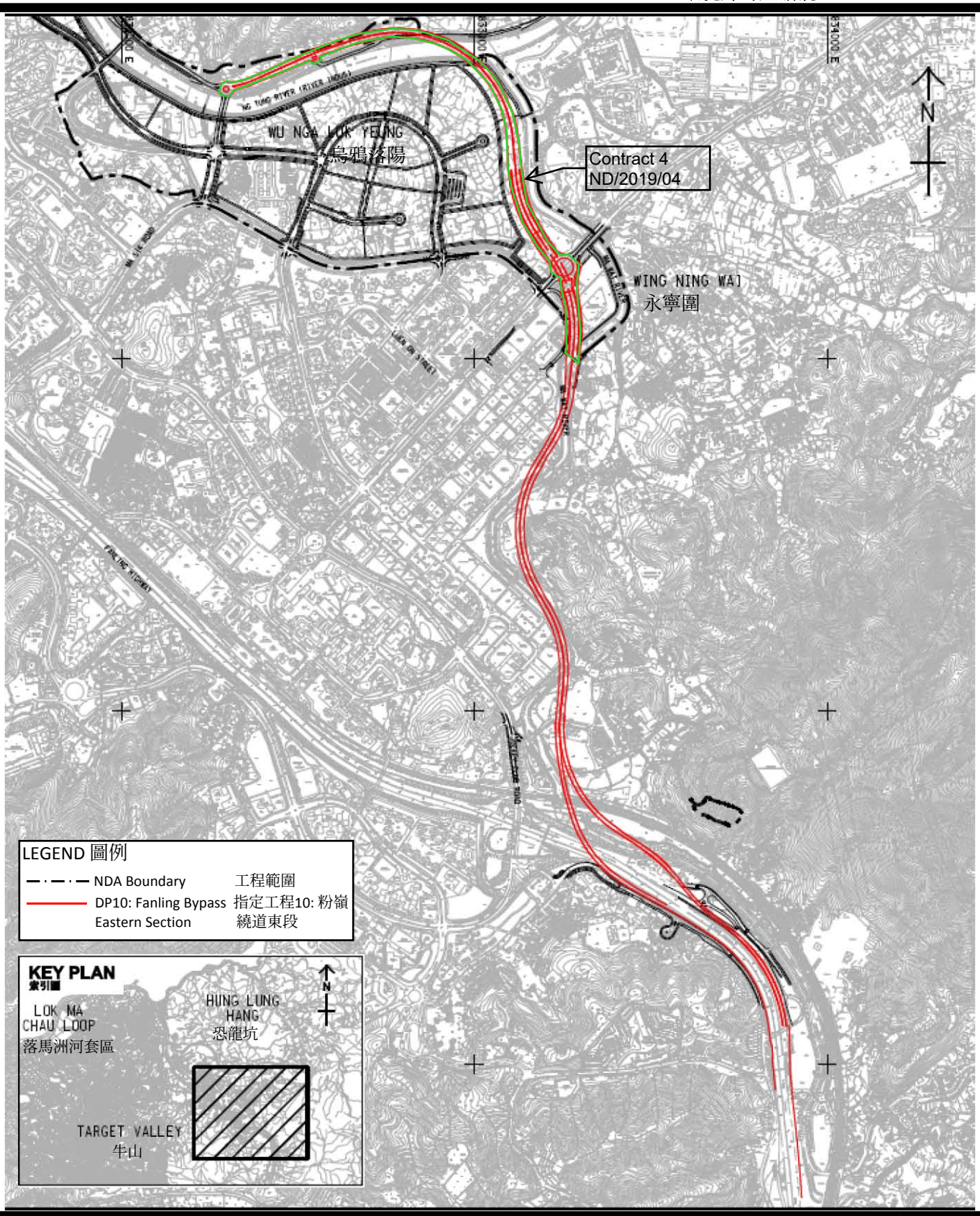
(摘錄自新界東北新發展區規劃及工程研究 圖: SK/254)

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

Figure 19

Site Layout Plan of Contract ND/2019/04

under EP-473-2013-A



Project Title: Fanling Bypass Eastern Section

工程名稱: 粉嶺繞道東段

Figure 1: Location Plan for the Project (Indicative)

圖 1: 工程項目位置 (示意圖)

This figure was prepared based on Figure 1.1 of VEP application (No.:VEP-526/2016)

本圖是根據申請更改環境許可證(編號: VEP-526/2016)圖1.1編制

Environmental Permit No: EP-473/2013/A

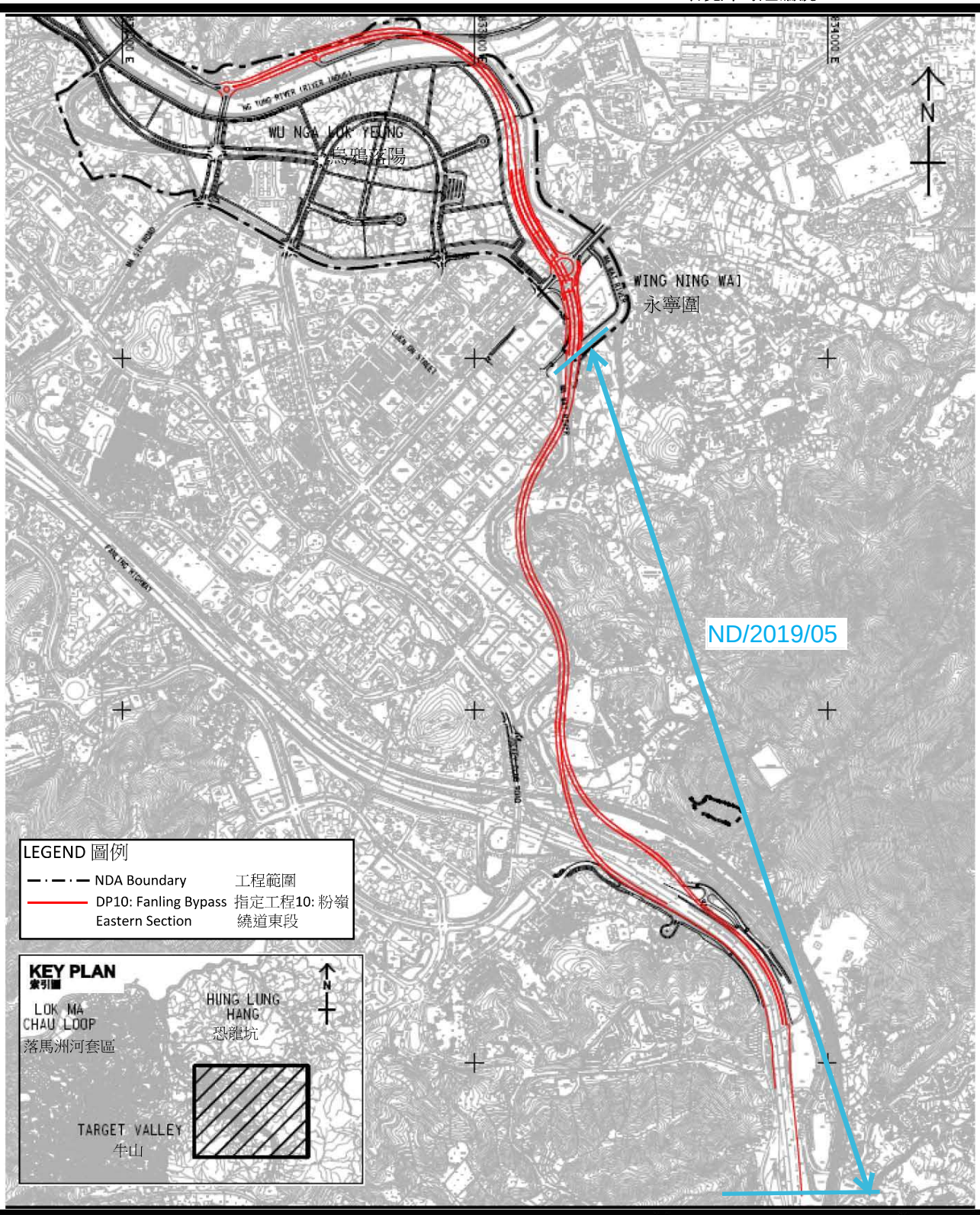
環境許可證編號:

EP-473/2013/A

Figure 20

Site Layout Plan of Contract ND/2019/05

under EP-473-2013-A



Project Title: Fanling Bypass Eastern Section

工程名稱: 粉嶺繞道東段

Figure 1: Location Plan for the Project (Indicative)

圖 1: 工程項目位置 (示意圖)

This figure was prepared based on Figure 1.1 of VEP application (No.:VEP-526/2016)

本圖是根據申請更改環境許可證(編號: VEP-526/2016)圖1.1編制

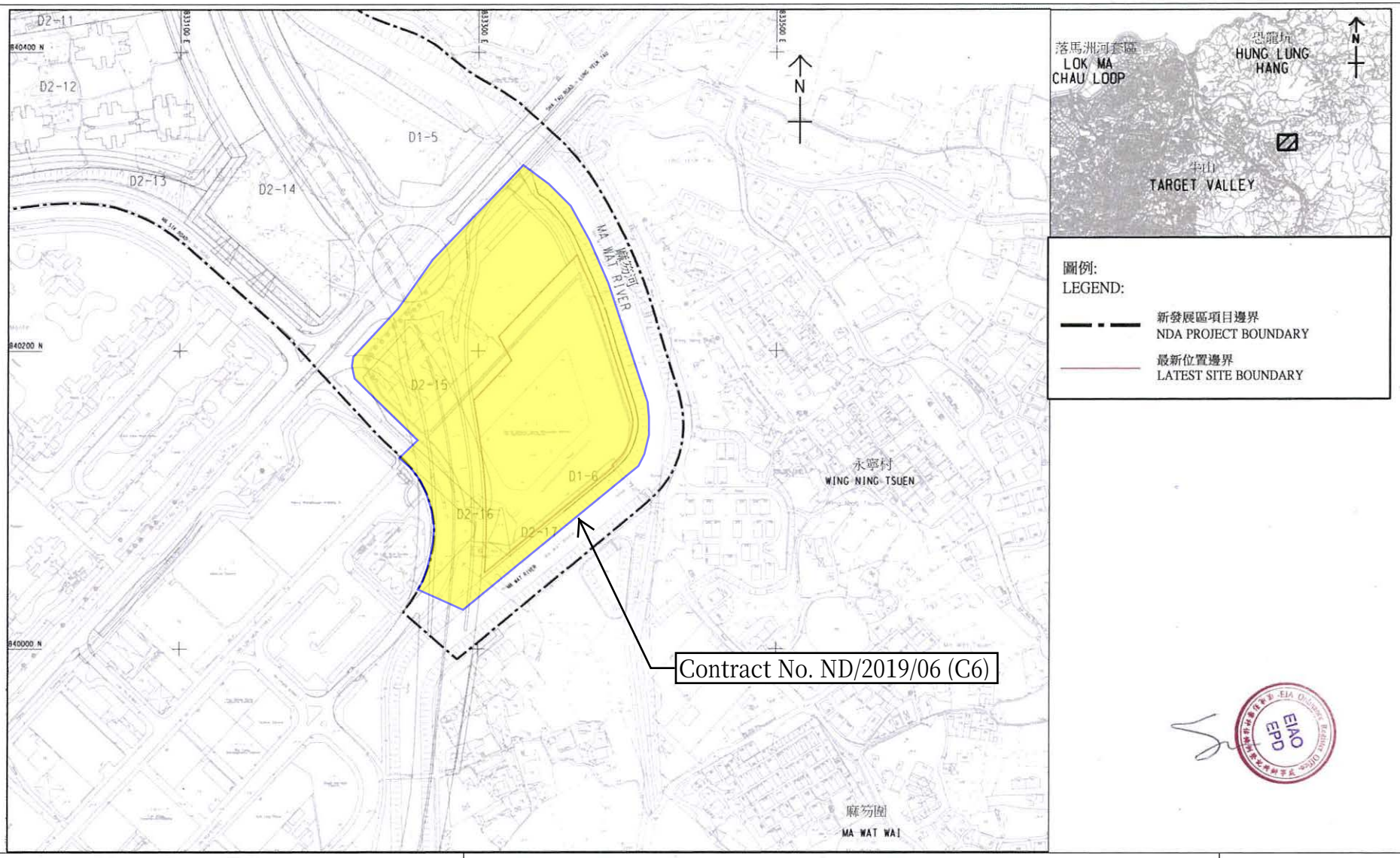
Environmental Permit No: EP-473/2013/A

環境許可證編號: EP-473/2013/A

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

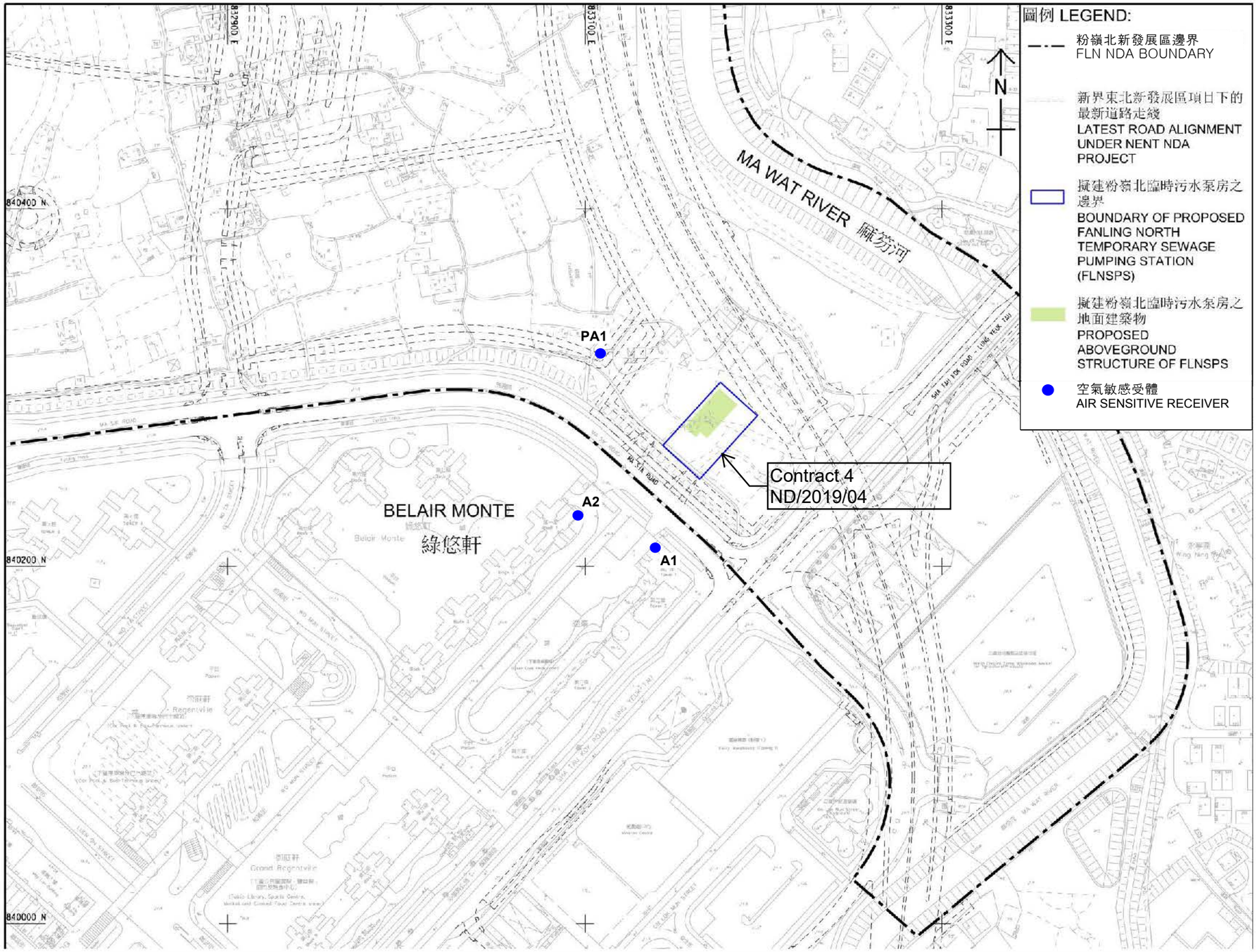
Environmental Permit No.: EP-475/2013/A
環境許可證編號 ：**EP-475/2013/A**

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

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

AECOM

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 (2022-05-25) Rev.0 Portion 9b changes						
2.0 - Site Access Dates						
AD-1000	Poriton 1a	0	25-Jun-22*		-354	CD(7d)
AD-1020	Portion 1c	0	25-Jun-22*		-170	CD(7d)
AD-1230	Poriton 12	0	25-Jun-22*		-354	CD(7d)
AD-1240	Poriton 13	0	25-Jun-22*		-170	CD(7d)
3.0 - Site Completion Dates						
3.1 Sectional Work Completion (Orignial Contract Completion Date)						
SC0-1130	Section 9 - all works in Area F	0		06-Sep-22*	0	CD(7d)
SC0-1140	Section 10A - all works in Area J	0		06-Jul-22*	0	CD(7d)
3.2 Planned Sectional Work Completeion						
SC-1010	Section 2A - all works in Area C1	0		07-Jul-22*	-151	CD(7d)
6.0 - Prelimiaries and General Requirements						
6.2 - General Submissions						
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	05-Aug-22	556	CD(7d)
GS-1290	Preparation and Submission of Fully Corodinated BIM	1345	21-Aug-20 A	28-Feb-26*	-23	CD(7d)
6.3 - Subletting Packages						
SP-1180	E&M works and Lift Installation for Pak Shek Au Pedestrian Subway	110	06-Jul-22	23-Oct-22	556	CD(7d)
7.0 Construction						
Section 1						
S1-1022	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0		25-Jun-22	-211	CD(7d)
S1-1024	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Jun-22	-246	CD(7d)
S1-1026	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Jun-22	-246	CD(7d)
S1-1028	Delay in Fabrication & Supply of Structural Steel Members for NB 35 due to the Severe Outbreak of Omicron (EWN 055)	0		25-Jun-22	-144	CD(7d)
S1-1030	Obstruction for the Construction of Proposed Footpath and Cycle Track along Road L1 in Area H at Portion 7 (EWN 067)	0		25-Jun-22	-126	CD(7d)
S1-1032	DN200 Fresh Watermain to Existing Watermain for MWSC Site between Po Lau Road and Castle Peak Road (CNE 072)	0		25-Jun-22	-211	CD(7d)
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)						
KD1 - Provision of Site Access and EVA to MWSC						
Civil Works						
Road D1 (Stage 1)						
S1K1-2000	Construct & maintain Temporary drainage	18	25-Jun-22	16-Jul-22	-198	WD(6d)
S1K1-2010	Pressure test for Fresh & Flushing watermains (around 190m)	12	28-Apr-22 A	09-Jul-22	-192	WD(6d)
S1K1-2014	Underground utilities (under footpath)	18	03-May-21 A	16-Jul-22	-198	WD(6d)
Road D1 (Stage 2) Castle Peak road junction						
S1K1-2024	Construct & maintain Temporary drainage	133	25-Jun-22	01-Dec-22	1214	WD(6d)
S1K1-2028	Underground Drainage (around 40m)	15	20-Dec-21 A	13-Jul-22	-183	WD(6d)
S1K1-2030	Underground Sewerage (around 40m)	20	20-Dec-21 A	19-Jul-22	-188	WD(6d)
S1K1-2032	Underground Fresh & Flushing watermains (around 40m)	30	24-Jan-22 A	30-Jul-22	-198	WD(6d)
S1K1-2033	Pressure test for Fresh & Flushing watermains (around 40m)	12	01-Aug-22	13-Aug-22	-198	WD(6d)
S1K1-2034	Underground utilities (around 40m)	42	16-Feb-22 A	13-Aug-22	-198	WD(6d)
S1K1-2036	Road works - Formation & Sub base	30	15-Aug-22	19-Sep-22	-198	WD(6d)
S1K1-2038	Road works - Road kerb	25	20-Sep-22	20-Oct-22	-198	WD(6d)
Road L1						
S1K1-2100	Construct & maintain Temporary drainage	24	25-Jun-22	23-Jul-22	-133	WD(6d)
S1K1-2109	Pressure test for Fresh & Flushing watermains (around 120m)	12	28-Apr-22 A	09-Jul-22	-121	WD(6d)

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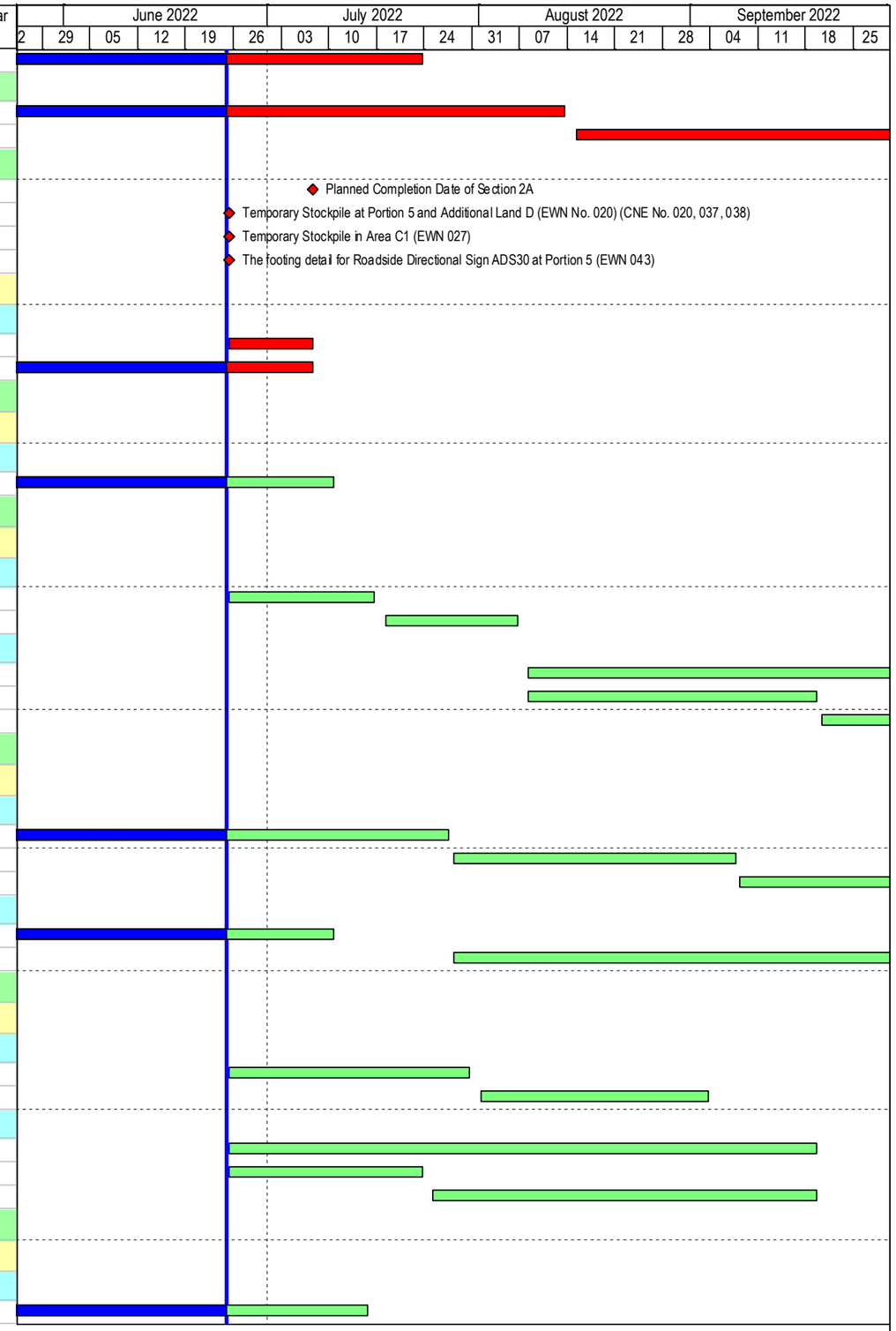
S1K1-2110	Underground utilities (under footpath)	18	05-Nov-21 A	23-Jul-22	-133	WD(6d)
Smart Road Lightings System Installation						
S1K1-3020	Procurement and delivery of smart road lighting system	50	01-Nov-21 A	13-Aug-22	-176	CD(7d)
S1K1-3030	Installation of smart road lighting system	46	15-Aug-22	10-Oct-22	-143	WD(6d)
Section 2A						
S2A-1000	Planned Completion Date of Section 2A	0		07-Jul-22	-151	CD(7d)
S2A-1006	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0		25-Jun-22	-154	CD(7d)
S2A-1008	Temporary Stockpile in Area C1 (EWN 027)	0		25-Jun-22	-154	CD(7d)
S2A-1010	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0		25-Jun-22	-154	CD(7d)
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)						
Soil Treatment						
S2AP5-2000	Construct & maintain Temporary drainage	10	25-Jun-22	07-Jul-22	-122	WD(6d)
S2AP5-2020	Remaining works (Site formation, proof rolling, chain Link fence, open channel)	10	11-Apr-22 A	07-Jul-22	-122	WD(6d)
Section 2B						
Portion 9a in Area C2 (Soil Treatment & Interface with HD's Contractors)						
Interface with HD's Contractor to carry out GI						
S2BP9a-3020	HD's Contractor to carry out GI in Area C2 (Stage 3)	16	06-May-22 A	10-Jul-22	300	CD(7d)
Section 3						
Portion 1a in Area E (Soil Treatment & Interface with HKHS's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S3P1a-1040	Prepare Arsenic Assessment Report	18	25-Jun-22	16-Jul-22	707	WD(6d)
S3P1a-1050	Arsenic Treatment Plan	18	18-Jul-22	06-Aug-22	707	WD(6d)
Soil Treatment						
S3P1a-2000	Construct & maintain Temporary drainage	84	08-Aug-22	16-Nov-22	929	WD(6d)
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed, interim soil to be excavated / treated : 1260m3 / 400m3)	36	08-Aug-22	19-Sep-22	707	WD(6d)
S3P1a-2020	Backfilling to the formation levels	48	20-Sep-22	16-Nov-22	929	WD(6d)
Section 4A						
Portion 1b in Area D1 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S4AP1b-1020	Site Clearance & Tree Felling	27	24-Mar-22 A	27-Jul-22	86	WD(6d)
S4AP1b-1040	Prepare Arsenic Assessment Report	36	28-Jul-22	07-Sep-22	86	WD(6d)
S4AP1b-1050	Arsenic Treatment Plan	36	08-Sep-22	22-Oct-22	86	WD(6d)
Interface with HD's Contractor to carry out GI						
S4AP1b-3020	HD's Contractor to carry out GI in Area D1 (Stage 1A/2/2A)	16	06-May-22 A	10-Jul-22	150	CD(7d)
S4AP1b-3030	HD's Contractor to carry out GI in Area D1 Zone B (Stage 3)	90	28-Jul-22	25-Oct-22	133	CD(7d)
Section 4B						
Portion 1c in Area D2 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S4BP1c-1040	Prepare Arsenic Assessment Report	30	25-Jun-22	30-Jul-22	336	WD(6d)
S4BP1c-1050	Arsenic Treatment Plan	30	01-Aug-22	03-Sep-22	336	WD(6d)
Soil Treatment						
S4BP1c-2000	Construct & maintain Temporary drainage	72	25-Jun-22	19-Sep-22	324	WD(6d)
S4BP1c-2010	Remove soil (original assumed 2868m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	25-Jun-22*	23-Jul-22	324	WD(6d)
S4BP1c-2020	Backfilling to the formation levels	48	25-Jul-22	19-Sep-22	324	WD(6d)
Section 4C						
Portion 1b in Area D3 (Soil Treatment & Interface with ArchSD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S4CP1b-1020	Site Clearance & Tree Felling	17	14-Mar-22 A	15-Jul-22	24	WD(6d)



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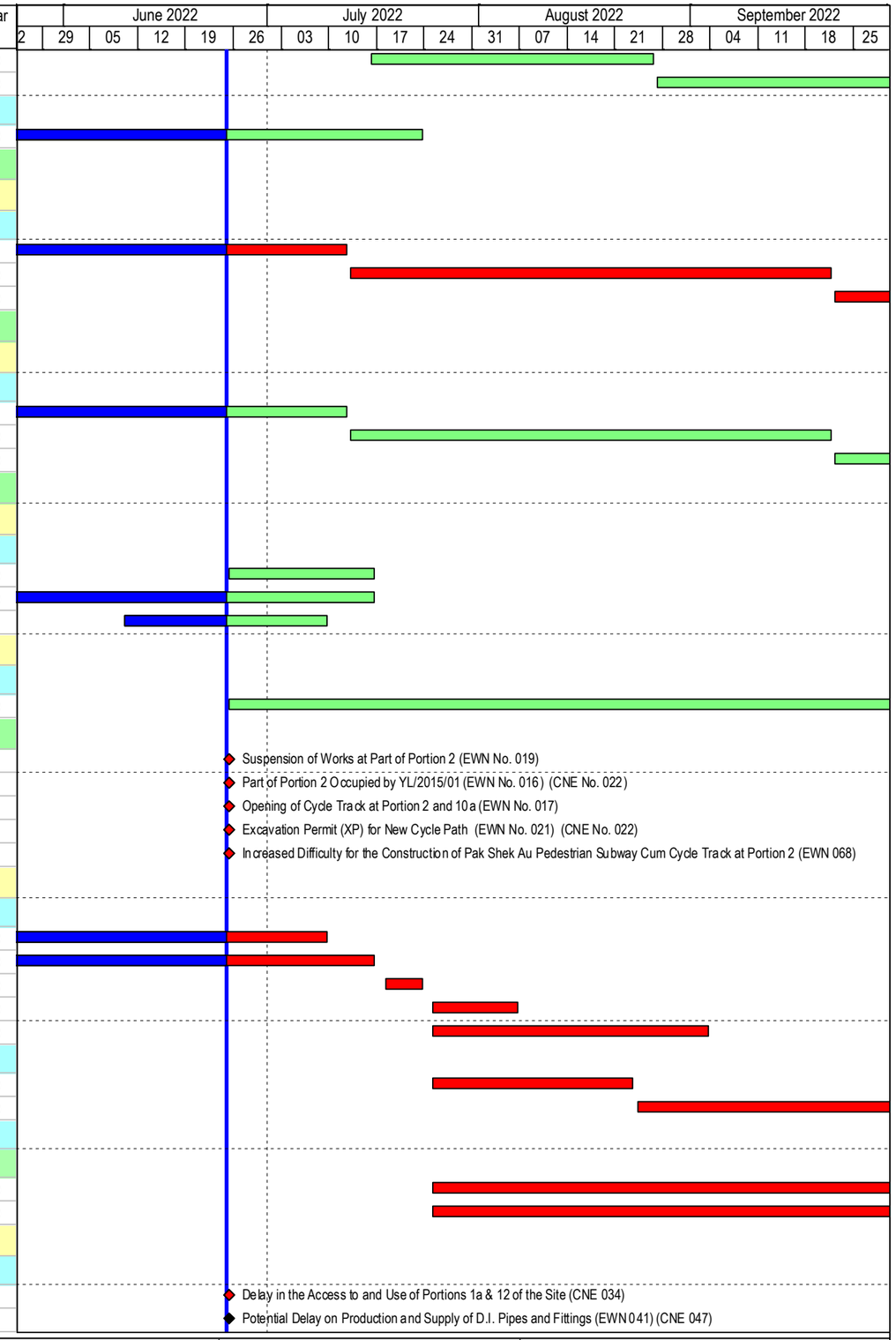
S4CP1b-1040	Prepare Arsenic Assessment Report	36	16-Jul-22	26-Aug-22	24	WD(6d)
S4CP1b-1050	Arsenic Treatment Plan	36	27-Aug-22	11-Oct-22	24	WD(6d)
Interface with ArchSD's Wet Market Contractor to carry out GI						
S4CP1b-3010	ArchSD's Wet Market Contractor to carry out GI in Area D3	24	07-Jan-22 A	23-Jul-22	161	WD(6d)
Section 6A						
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)						
Preparation work/Tree Survey/Site Clearance/GI						
S6AP1e-1012	Approval & Acceptance of Tree Felling Application	18	11-Nov-21 A	12-Jul-22	-107	CD(7d)
S6AP1e-1020	Site Clearance & Tree Felling	60	13-Jul-22	21-Sep-22	-84	WD(6d)
S6AP1e-1040	Prepare Arsenic Assessment Report	36	22-Sep-22	04-Nov-22	-84	WD(6d)
Section 6B						
Portion 1e in Area G2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S6BP1e-1012	Approval & Acceptance of Tree Felling Application	18	11-Nov-21 A	12-Jul-22	749	CD(7d)
S6BP1e-1020	Site Clearance & Tree Felling	60	13-Jul-22	21-Sep-22	609	WD(6d)
S6BP1e-1040	Prepare Arsenic Assessment Report	36	22-Sep-22	04-Nov-22	609	WD(6d)
Section 7 (Subject to excision)						
KD2 - Portion 11b in Area K (Laying sewer rising mains and connect to existing MBR)						
Sewerage Works						
S7P11b-1015	Construct & maintain Temporary drainage	18	25-Jun-22	16-Jul-22	1329	WD(6d)
S7P11b-1060	Construction of MBR & Civil works	18	08-Apr-21 A	16-Jul-22	1329	WD(6d)
S7P11b-1080	Testing & Commissioning (T&C) of E&M equipment for MBR	15	10-Jun-22 A	09-Jul-22	240	CD(7d)
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)						
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area I, J, K						
S7P11b-3010	Erection of temporary noise barrier in Area K, Portion 11b (115m, 1 gang)	130	25-Jun-22	28-Nov-22	79	WD(6d)
Section 8						
S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Jun-22	-611	CD(7d)
S8-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0		25-Jun-22	-611	CD(7d)
S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-Jun-22	-611	CD(7d)
S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Jun-22	-611	CD(7d)
S8-1020	Increased Difficulty for the Construction of Pak Shek Au Pedestrian Subway Cum Cycle Track at Portion 2 (EWN 068)	0		25-Jun-22	-346	CD(7d)
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)						
Preparation work						
S8P2-0016	Site clearance / Tree Felling (Stage 2)	12	16-Nov-21 A	09-Jul-22	-493	WD(6d)
S8P2-0018	Construction of temporary road	18	24-Nov-21 A	16-Jul-22	-499	WD(6d)
S8P2-0020	Traffic diversion to temp road	6	18-Jul-22	23-Jul-22	-499	WD(6d)
S8P2-1016	Remaining Ground investigation (0 / 1 GI completed)	12	25-Jul-22	06-Aug-22	-242	WD(6d)
S8P2-1018	Site clearance after Road Diversion	36	25-Jul-22	03-Sep-22	-266	WD(6d)
Soil Treatment						
S8P2-2010	Remove soil (original assumed 6898m3) (0/1 EGI completed, interim soil to be excavated / treated : 0m3/0m3) Clean Soil	26	25-Jul-22*	23-Aug-22	-499	WD(6d)
S8P2-2020	Backfilling to the formation levels	48	24-Aug-22	21-Oct-22	-304	WD(6d)
Civil Work						
Construction of Pak Shek Au Junction						
S8P2-4100	Cut slope with soil nail construction at existing slope KS34	180	25-Jul-22	28-Feb-23	-330	WD(6d)
S8P2-4110	Expose existing UU & ELS for Drainage & Water Main	100	25-Jul-22	21-Nov-22	-330	WD(6d)
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)						
Preparation work						
S8P1a-0100	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Jun-22	-404	CD(7d)
S8P1a-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Jun-22	42	CD(7d)



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S8P1a-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Jun-22	42	CD(7d)
S8P1a-1002	Tree survey and prepare tree felling and transplant report	33	26-Jul-21 A	03-Aug-22	-328	WD(6d)
S8P1a-1004	Approval & Acceptance of Tree Felling Application	30	04-Aug-22	02-Sep-22	-404	CD(7d)
S8P1a-1010	Site clearance	48	03-Sep-22	01-Nov-22	-330	WD(6d)
S8P1a-1050	Archaeologiacl Survey	72	08-Jul-22	30-Sep-22	-268	WD(6d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)						
Preparation work						
S8P3-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Jun-22	273	CD(7d)
S8P3-0103	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Jun-22	273	CD(7d)
S8P3-0104	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Jun-22	273	CD(7d)
Soil Treatment						
S8P3-2010	Remove soil (original assumed 1597m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	13-Jul-22*	09-Aug-22	39	WD(6d)
S8P3-2020	Backfilling to the formation levels	48	10-Aug-22	07-Oct-22	39	WD(6d)
Civil Work						
S8P3-3000	Construct & maintain Temporary drainage	465	13-Jul-22	31-Jan-24	39	WD(6d)
S8P3-3010.0	Underground Drainage work (SMH1007 to 1009)	90	25-Jun-22	12-Oct-22	135	WD(6d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P5-0102	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Jun-22	-49	CD(7d)
S8P5-0104	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Jun-22	-49	CD(7d)
S8P5-0106	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Jun-22	-49	CD(7d)
S8P5-0108	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Jun-22	39	CD(7d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P5-2005	Construct & maintain Temporary drainage	554	25-Jun-22	07-May-24	-48	WD(6d)
Civil Work						
S8P5-4002	Divert Local Road	291	19-Apr-22 A	16-Jun-23	-40	WD(6d)
S8P5-4004.02	Underground Fresh & Flushing watermains (South bound Carriageway)	142	20-Jul-22	06-Jan-23	-40	WD(6d)
S8P5-4014	Drainage works across DJ watermain (SMH1006a and pipe laying to 1006) (CNE 060, EC-1086)	90	24-Aug-22	09-Dec-22	-18	WD(6d)
S8P5-4014.0	Condition Survey for Drainage works across DJ watermain PMI 162 - (0 / 4 Trial Pits completed)	50	25-Jun-22*	23-Aug-22	-40	WD(6d)
Portion 6a & 6b in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
S8P6a-0002	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Jun-22	-328	CD(7d)
S8P6a-0003	Entrustment of Works for Installation of District Cooling System (DCS) pipelines along Road D4-1 (EWN 033)	0		25-Jun-22	11	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P6a-1010	Site Clearance & Tree Felling	18	15-Feb-20 A	16-Jul-22	66	WD(6d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P6a-2004	Construct & maintain Temporary drainage	540	25-Jun-22	19-Apr-24	-41	WD(6d)
Civil Work						
S8P6a-4002	Road D4 - Underground Sewerage work (MH KT1.02 to Plug end)	74	24-Aug-22	21-Nov-22	-40	WD(6d)
S8P6a-4010.06	Road D4 (between SMH1002A and KT1001) - Underground Drainage work	48	25-Jun-22	20-Aug-22	-40	WD(6d)
S8P6a-4010.08	Road D4 (SMHKT1001A and pipe laying to KT1001) - Underground Drainage work	48	22-Aug-22	19-Oct-22	-40	WD(6d)
S8P6a-4018.02	Construction of Concrete Barrier Stem Wall KB01 Stage 3 (Bay 4 to 12) (4 / 9 bays completed)	68	21-Feb-22 A	14-Sep-22	-26	WD(6d)
S8P6a-4054	Confirmation of Details for DCS pipes at D4-1 Road (EWN 030)	0		25-Jun-22*	-328	CD(7d)
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)						
S8P9b-0003	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Jun-22	-328	CD(7d)
S8P9b-0004	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Jun-22	-197	CD(7d)
S8P9b-3112	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0		25-Jun-22	-197	CD(7d)
S8P9b-3114	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0		25-Jun-22	-197	CD(7d)
S8P9b-3116	Level Different between Road A3 and Road D4-1 (CNE 055)	0		25-Jun-22	-197	CD(7d)
S8P9b-3118	New Formed Feature KW18 L-Shape Retaining Wall abutting Road D4-1 and A3 (EWN 062) Cancelled	0		25-May-22 A		CD(7d)
S8P9b-3120	Strong Objection from the Local Villager for the Construction of L-Shape Retaining Wall KW02 at Road D4-1 (EWN 063)	0		25-Jun-22	-190	CD(7d)
S8P9b-3122	Requesting for Additional Concrete Vehicular Access by the Local Villager adjacent 9b of the Site (EWN 064)	0		25-Jun-22	-165	CD(7d)

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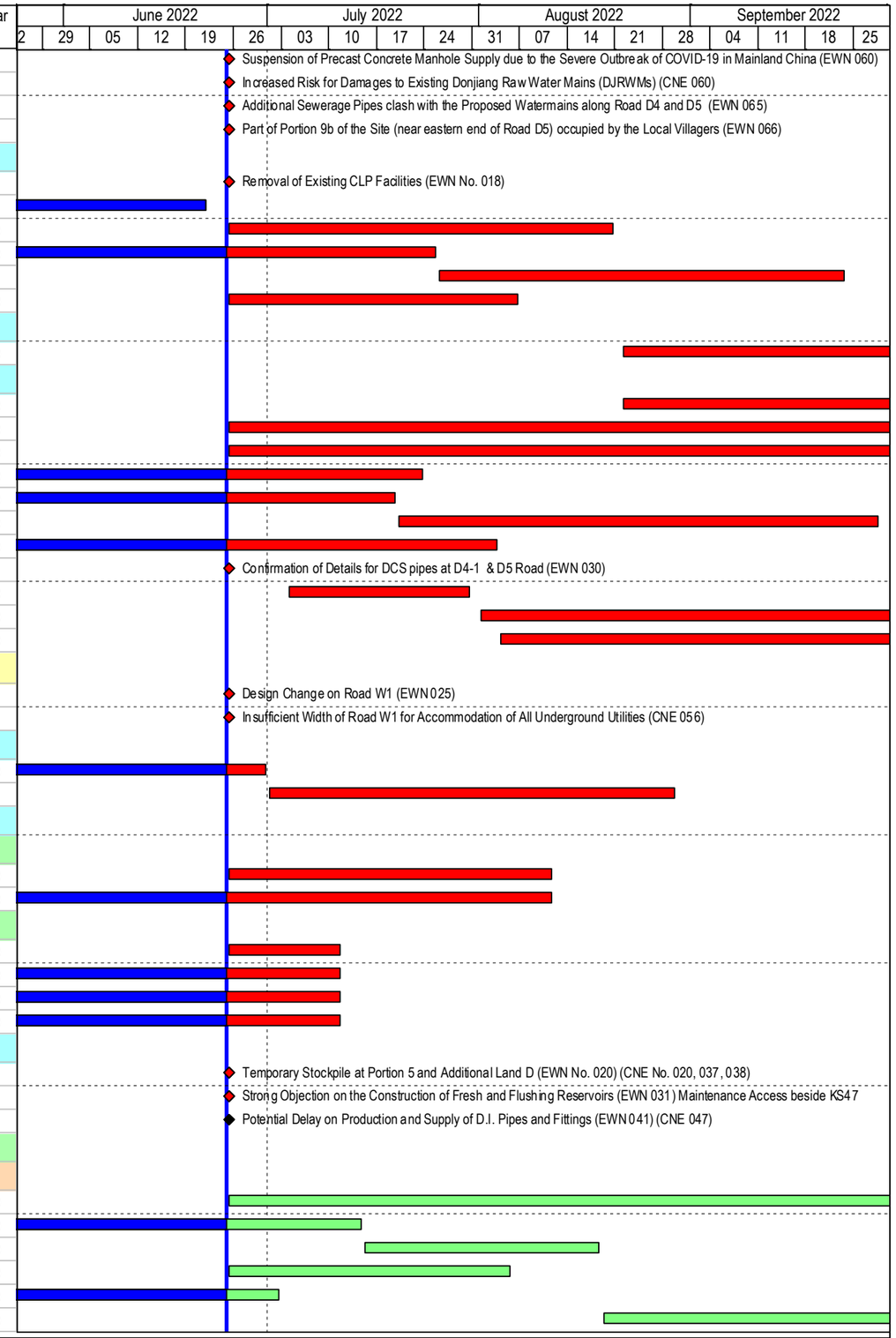
S8P9b-3124	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0		25-Jun-22	-310	CD(7d)
S8P9b-3126	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Jun-22	-87	CD(7d)
S8P9b-3128	Additional Sewerage Pipes clash with the Proposed Watermains along Road D4 and D5 (EWN 065)	0		25-Jun-22	-251	CD(7d)
S8P9b-3130	Part of Portion 9b of the Site (near eastern end of Road D5) occupied by the Local Villagers (EWN 066)	0		25-Jun-22	-310	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Jun-22	-310	CD(7d)
S8P9b-1002	Submission & Acceptance of Tree Felling Application	0	05-May-21 A	22-Jun-22 A		CD(7d)
S8P9b-1010	Site clearance & Tree Felling	48	25-Jun-22	20-Aug-22	-208	WD(6d)
S8P9b-1015	Ground investigation (10 / 13 GI completed)	25	22-Feb-21 A	25-Jul-22	-236	WD(6d)
S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	26-Jul-22	23-Sep-22	-293	CD(7d)
S8P9b-1040	Arsenic Treatment Plan (Stage 2)	36	25-Jun-22	06-Aug-22	-196	WD(6d)
Soil Treatment						
S8P9b-2010	Remove soil (original assumed 15758m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	40	22-Aug-22*	10-Oct-22	-188	WD(6d)
Civil Work						
S8P9b-3010	Slopeworks for new feature KS19 (with about 200 nos. of soil nails)	80	22-Aug-22	25-Nov-22	-188	WD(6d)
S8P9b-3015	Construct & maintain Temporary drainage	744	25-Jun-22	21-Dec-24	-250	WD(6d)
S8P9b-3030	Excavation for retaining wall (4701m3)	90	25-Jun-22	12-Oct-22	-250	WD(6d)
S8P9b-3040.02	Construction of retaining wall KW04 (3 / 3 footing completed & 2 / 3 stem wall completed)	24	24-Dec-21 A	23-Jul-22	-184	WD(6d)
S8P9b-3040.04	Construction of retaining wall KW03 (3 / 3 footing completed & 2 / 3 stem wall completed) Stage 1	20	21-Feb-22 A	19-Jul-22	-170	WD(6d)
S8P9b-3040.06	Construction of retaining wall KW02 (0 / 2 footing completed & 0 / 2 stem wall completed)	60	20-Jul-22	28-Sep-22	-170	WD(6d)
S8P9b-3058.04	Road D5 - Construction of Underground Drainage Manhole SMH KT7102 to SMH KT7103	33	17-Jan-22 A	03-Aug-22	-221	WD(6d)
S8P9b-3100	Confirmation of Details for DCS pipes at D4-1 & D5 Road (EWN 030)	0		25-Jun-22*	-328	CD(7d)
S8P9b-3200	Construct Temporary Decking over nullah	24	04-Jul-22*	30-Jul-22	-218	WD(6d)
S8P9b-3202	Divert Ma Tso Lung Road & Demolish Existing Decking over nullah	200	01-Aug-22	30-Mar-23	-218	WD(6d)
S8P9b-3220	Underground utilities & Drainage work (Road D4-2, D4-1 CH950 to 1000, Road D5 CH0 to 150)	200	04-Aug-22	03-Apr-23	-221	WD(6d)
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)						
S8P8a-1106	Design Change on Road W1 (EWN 025)	0		25-Jun-22	-227	CD(7d)
S8P8a-3090	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0		25-Jun-22	-227	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P8a-1030	Ground investigation (2 / 3 GI completed) to Fresh Water Service Reservoir	5	21-Dec-20 A	30-Jun-22	-105	WD(6d)
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	01-Jul-22	29-Aug-22	-130	CD(7d)
Forming Site Access and Site Formation						
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)						
S8P8a-1105	Construct & maintain Temporary drainage	40	25-Jun-22	11-Aug-22	-195	WD(6d)
S8P8a-1160	General excavation for remaining of Road W1	40	11-Jun-20 A	11-Aug-22	-195	WD(6d)
Stage 2 General Excavation near Fresh Water Servie Reservior (Excavation Volume 299396 m3)						
S8P8a-1208	Construct & maintain Temporary drainage	13	25-Jun-22	11-Jul-22	-168	WD(6d)
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	13	01-Dec-20 A	11-Jul-22	-168	WD(6d)
S8P8a-1230	General excavation for New Feature KS49 and adjacent road	13	11-Jan-21 A	11-Jul-22	-168	WD(6d)
S8P8a-1250	General excavation for remaining of Road W2	13	14-Dec-20 A	11-Jul-22	-168	WD(6d)
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying & road						
S8K8-6000	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0		25-Jun-22	-242	CD(7d)
S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-Jun-22	-196	CD(7d)
S8K8-6006	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Jun-22	26	CD(7d)
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)						
Civil Works						
S8K8-1005	Construct & maintain Temporary drainage	154	25-Jun-22	27-Dec-22	21	WD(6d)
S8K8-1030.054	Waiting for supply of DI pipes (EWN 041, CNE 047 EC-1054)	16	02-Dec-21 A	14-Jul-22	21	WD(6d)
S8K8-1030.056	Construction of Outlet Chamber (after DI pipe supply recommenced)	30	15-Jul-22	18-Aug-22	21	WD(6d)
S8K8-1030.46	Construction of Roof Slab bay 5 (GL 12 - 15 & GL D - G)	35	25-Jun-22	05-Aug-22	32	WD(6d)
S8K8-1030.47	Construction of Roof Slab bay 5a (GL 12 - 15 & GL A - D)	6	13-May-22 A	02-Jul-22	32	WD(6d)
S8K8-1040	Backfilling (6559m3)	108	19-Aug-22	27-Dec-22	21	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-06)

Data Date: 25-Jun-22 **Run Date: 28-Jun-22**

Project ID: ND201901-RP-27.0-2
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THE 3-MONTH ROLLING PROGRAMME

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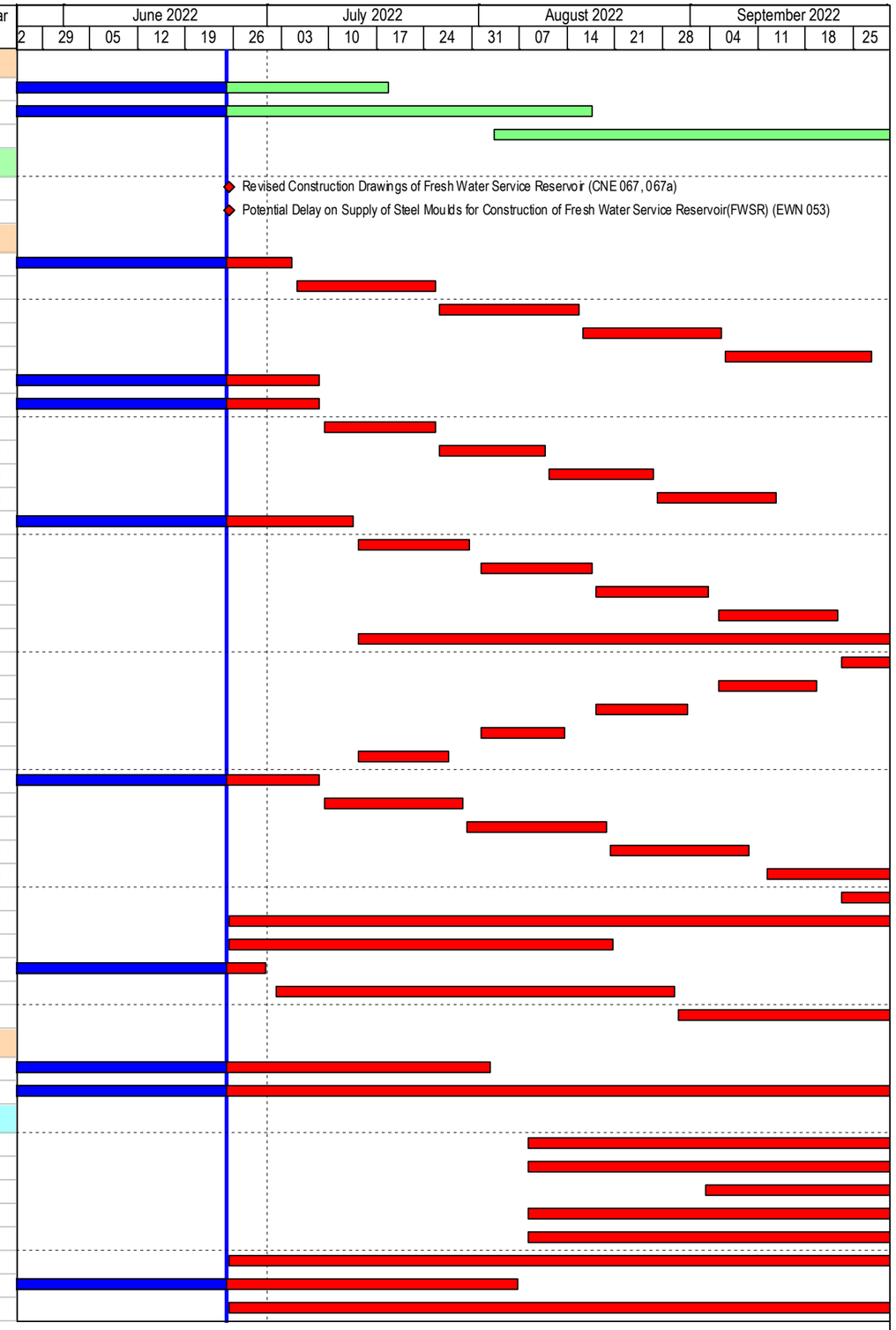
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
E&M Works						
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	24	01-Feb-21 A	18-Jul-22	56	CD(7d)
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	54	01-Feb-21 A	17-Aug-22	26	CD(7d)
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	03-Aug-22	01-Oct-22	26	CD(7d)
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)						
S8K8-6034	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0		25-Jun-22	-39	CD(7d)
S8K8-6044	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)	0		25-Jun-22	-28	CD(7d)
Civil Works						
S8K8-1000.06	Base Slab - bay 5b	7	25-Apr-22 A	04-Jul-22	-46	WD(6d)
S8K8-1000.08	Base Slab - bay 7	18	05-Jul-22	25-Jul-22	-46	WD(6d)
S8K8-1000.10	Base Slab - bay 8	18	26-Jul-22	15-Aug-22	-46	WD(6d)
S8K8-1000.12	Base Slab - bay 9	18	16-Aug-22	05-Sep-22	-46	WD(6d)
S8K8-1000.14	Base Slab - bay 6	18	06-Sep-22	27-Sep-22	-46	WD(6d)
S8K8-1000.24	Pad Footing - GL 8 & 10 / C-G	11	25-Apr-22 A	08-Jul-22	-90	WD(6d)
S8K8-1000.26	Pad Footing - GL 11 / C-G	11	20-May-22 A	08-Jul-22	-90	WD(6d)
S8K8-1000.28	Pad Footing - GL 3-5 / L-Q	14	09-Jul-22	25-Jul-22	-90	WD(6d)
S8K8-1000.30	Pad Footing - GL 6 & 7 / L-Q	14	26-Jul-22	10-Aug-22	-90	WD(6d)
S8K8-1000.32	Pad Footing - GL 8 & 10 / L-Q	14	11-Aug-22	26-Aug-22	-90	WD(6d)
S8K8-1000.34	Pad Footing - GL 11 / L-Q	14	27-Aug-22	13-Sep-22	-90	WD(6d)
S8K8-1000.40	Cover Slab - No. 14	15	09-May-22 A	13-Jul-22	-98	WD(6d)
S8K8-1000.42	Cover Slab - No. 15 Stage 1	15	14-Jul-22	30-Jul-22	-98	WD(6d)
S8K8-1000.44	Cover Slab - No. 16	15	01-Aug-22	17-Aug-22	-98	WD(6d)
S8K8-1000.48	Cover Slab - No. 17 Stage 1	15	18-Aug-22	03-Sep-22	-98	WD(6d)
S8K8-1000.50	Cover Slab - No. 17 Stage 2	15	05-Sep-22	22-Sep-22	-98	WD(6d)
S8K8-1000.60	Columns (152 nos)	208	14-Jul-22	22-Mar-23	-34	WD(6d)
S8K8-1000.70	Baffle Wall - GL 10 / J-P	12	23-Sep-22	08-Oct-22	-98	WD(6d)
S8K8-1000.72	Baffle Wall - GL 7 / M-S	12	05-Sep-22	19-Sep-22	-95	WD(6d)
S8K8-1000.74	Baffle Wall - GL 4 / J-P	12	18-Aug-22	31-Aug-22	-92	WD(6d)
S8K8-1000.78	Baffle Wall - GL 7 / A-F	12	01-Aug-22	13-Aug-22	-89	WD(6d)
S8K8-1000.80	Baffle Wall - GL 4 / D-J	12	14-Jul-22	27-Jul-22	-86	WD(6d)
S8K8-1002.02	Wall - No. 3	11	20-May-22 A	08-Jul-22	-44	WD(6d)
S8K8-1002.04	Wall - No. 2	18	09-Jul-22	29-Jul-22	-44	WD(6d)
S8K8-1002.06	Wall - No. 5	18	30-Jul-22	19-Aug-22	-44	WD(6d)
S8K8-1002.08	Wall - No. 6	18	20-Aug-22	09-Sep-22	-44	WD(6d)
S8K8-1002.10	Wall - No. 7	18	12-Sep-22	03-Oct-22	-44	WD(6d)
S8K8-1002.26	Wall - No. 1T	20	23-Sep-22	18-Oct-22	-98	WD(6d)
S8K8-3000	Construct & maintain Temporary drainage	477	25-Jun-22	29-Jan-24	-98	WD(6d)
S8K8-3026	Construction of Sub soil drainage (Stage 2)	48	25-Jun-22	20-Aug-22	-33	WD(6d)
S8K8-3043	Up Hill Recieving Pit - GI works (7/7 completed)	5	25-Apr-22 A	30-Jun-22	-267	WD(6d)
S8K8-3046	Up Hill Recieving Pit - Pipe Pile along Access Road (194 nos.)	50	02-Jul-22	29-Aug-22	-267	WD(6d)
S8K8-3048	Up Hill Recieving Pit - Excavation and wate installation to raod profile	52	30-Aug-22	01-Nov-22	-267	WD(6d)
E&M Works						
S8K8-4010	Design and Approval for E&M works for KTN FWSR	39	20-Dec-21 A	02-Aug-22	-121	CD(7d)
S8K8-4020	Submission and Approval of E&M plants & materials for KTN FWSR	153	15-Mar-22 A	03-Dec-22	-121	CD(7d)
Remaining Civil Work in Portion 8a Area A						
S8P8a-2558	Construct & maintain Temporary drainage	163	08-Aug-22	22-Feb-23	-101	WD(6d)
S8P8a-2560	Excavation for retaining wall KW06 bay 1 - bay 7 (bays 0/7 completed)	100	08-Aug-22	05-Dec-22	-101	WD(6d)
S8P8a-2562	Construction of retaining wall KW06 bay 1 - bay 7 (bays 0/7 completed)	140	03-Sep-22	22-Feb-23	-101	WD(6d)
S8P8a-2598	Construct & maintain Temporary drainage	232	08-Aug-22	19-May-23	-195	WD(6d)
S8P8a-2600	Excavation for retaining wall KW05 bay 8 - bay 16 (bays 0/9 completed)	120	08-Aug-22	29-Dec-22	-195	WD(6d)
S8P8a-2628	Construct & maintain Temporary drainage	110	25-Jun-22	04-Nov-22	-195	WD(6d)
S8P8a-2630	Excavation for retaining wall KW05 bay 1 - bay 7 (bays 0/7 completed)	36	31-Mar-22 A	06-Aug-22	-195	WD(6d)
S8P8a-2632	Construction of retaining wall KW05 bay 1 - bay 7 (bays 0/7 completed)	110	25-Jun-22	04-Nov-22	-195	WD(6d)



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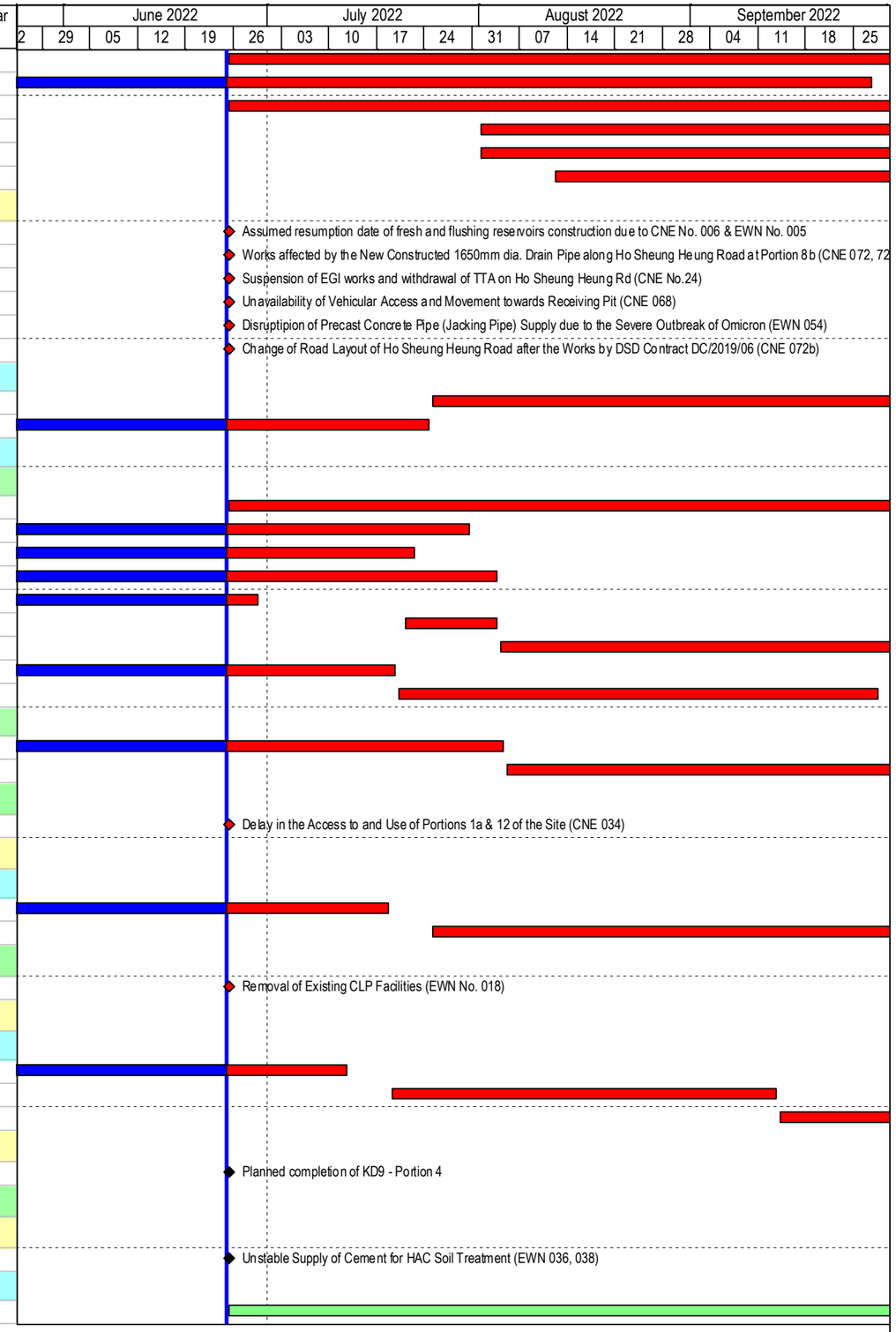
S8P8a-2658	Construct & maintain Temporary drainage	220	25-Jun-22	18-Mar-23	-182	WD(6d)
S8P8a-2660	Excavation for retaining wall KW11 bay 1 - bay 11 (bays 0/11 completed)	79	31-Mar-22 A	27-Sep-22	-182	WD(6d)
S8P8a-2662	Construction of retaining wall KW11 bay 1 - bay 11 (bays 0/11 completed)	220	25-Jun-22	18-Mar-23	-182	WD(6d)
S8P8a-3046	Construct & maintain Temporary drainage	670	01-Aug-22	31-Oct-24	-195	WD(6d)
S8P8a-3048	Backfill to level of utilities laying	263	01-Aug-22	19-Jun-23	-195	WD(6d)
S8P8a-3050	Underground utilities & Draiange work (605m drain and 23 M/H, 2 gang)	400	12-Aug-22	13-Dec-23	-195	WD(6d)
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)						
S8P8b-1002	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	0		25-Jun-22	-329	CD(7d)
S8P8b-1003	Works affected by the New Constructed 1650mm dia. Drain Pipe along Ho Sheung Heung Road at Portion 8b (CNE 072, 72a)	0		25-Jun-22	-516	CD(7d)
S8P8b-1004	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0		25-Jun-22	-329	CD(7d)
S8P8b-1005	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0		25-Jun-22	-157	CD(7d)
S8P8b-1006	Disruptipion of Precast Concrete Pipe (Jacking Pipe) Supply due to the Severe Outbreak of Omicron (EWN 054)	0		25-Jun-22	-157	CD(7d)
S8P8b-1008	Change of Road Layout of Ho Sheung Heung Road after the Works by DSD Contract DC/2019/06 (CNE 072b)	0		25-Jun-22	-516	CD(7d)
Preparation work						
S8P8b-1010	Site clearance & Tree Felling	66	25-Jul-22	12-Oct-22	-290	WD(6d)
S8P8b-1070	Approval & Acceptance of Tree Felling Application	30	22-Jan-22 A	24-Jul-22	-359	CD(7d)
Construction of Watermains						
Construction of watermains by trenchless method						
S8P8b-4000	Construct & maintain Temporary drainage	875	25-Jun-22	09-Jun-25	-284	WD(6d)
S8P8b-4010.01	Construction of receiving pit at Portion 8b near Sheung Yue River (Resume construction)	30	17-May-22 A	30-Jul-22	-122	WD(6d)
S8P8b-4010.07	Resubmit & Approval of CIA Report & Pipe Jacking Method Statement	23	13-Apr-22 A	22-Jul-22	-115	WD(6d)
S8P8b-4012.04	Sheung Yue River - Procurement & Testing of DN1200 Jacking pipes	33	04-May-22 A	03-Aug-22	-125	WD(6d)
S8P8b-4012.06	Sheung Yue River - Gantry Construction at Jacking Pit	4	11-May-22 A	29-Jun-22	-108	WD(6d)
S8P8b-4012.07	Sheung Yue River - Set up for Pipe Jacking works	12	21-Jul-22	03-Aug-22	-125	WD(6d)
S8P8b-4012.08	Sheung Yue River - DN1200 Pipe Jacking (Length 180m approx.) outside MTR Zone	60	04-Aug-22	15-Oct-22	-125	WD(6d)
S8P8b-4066	Up Hill Pipe Jacking Pit - Pipe Pile Construction (140 nos.)	20	11-Apr-22 A	19-Jul-22	-144	WD(6d)
S8P8b-4068	Up Hill Pipe Jacking Pit - ELS, Excavation & Toe Grouting	60	20-Jul-22	28-Sep-22	-144	WD(6d)
Construction of watermains by open trench method						
S8P8b-5000	Consultation with Cyclist Association for works along DSD maintenance Road	34	04-Apr-22 A	04-Aug-22	-58	WD(6d)
S8P8b-5002	DSD Maintenance Road - Stage 1 Laying flushing water main (100m Approx) (5 working day per week)	100	05-Aug-22*	02-Dec-22	-38	WD(6d)
Section 9						
S9-1002	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Jun-22	-354	CD(7d)
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)						
Preparation work/Tree Survey/Site Clearance/Gl						
S9P12-1012	Approval & Acceptance of Tree Felling Application	24	29-Mar-22 A	18-Jul-22	-229	CD(7d)
S9P12-1020	Site Clearance & Tree Felling	60	25-Jul-22	05-Oct-22	-183	WD(6d)
Section 10A						
S10A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Jun-22	-62	CD(7d)
Portion 1e in Area J (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/Gl						
S10AP1e-1012	Approval & Acceptance of Tree Felling Application	18	11-Nov-21 A	12-Jul-22	-239	CD(7d)
S10AP1e-1020	Site Clearance & Tree Felling	48	19-Jul-22	13-Sep-22	-191	WD(6d)
S10AP1e-1040	Prepare Arsenic Assessment Report	30	14-Sep-22	20-Oct-22	-191	WD(6d)
Portion 4 in Area J (Soil Treatment & Temp. Noise Barriers along Castle Peak Road)						
S10AP4-1000	Planned completion of KD9 - Portion 4	0		25-Jun-22	299	CD(7d)
Section 11						
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)						
S11P6b-1002	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038)	0		25-Jun-22	818	CD(7d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant						
S11P6b-2005	Construct & maintain Temporary drainage	951	25-Jun-22	06-Sep-25	98	WD(6d)



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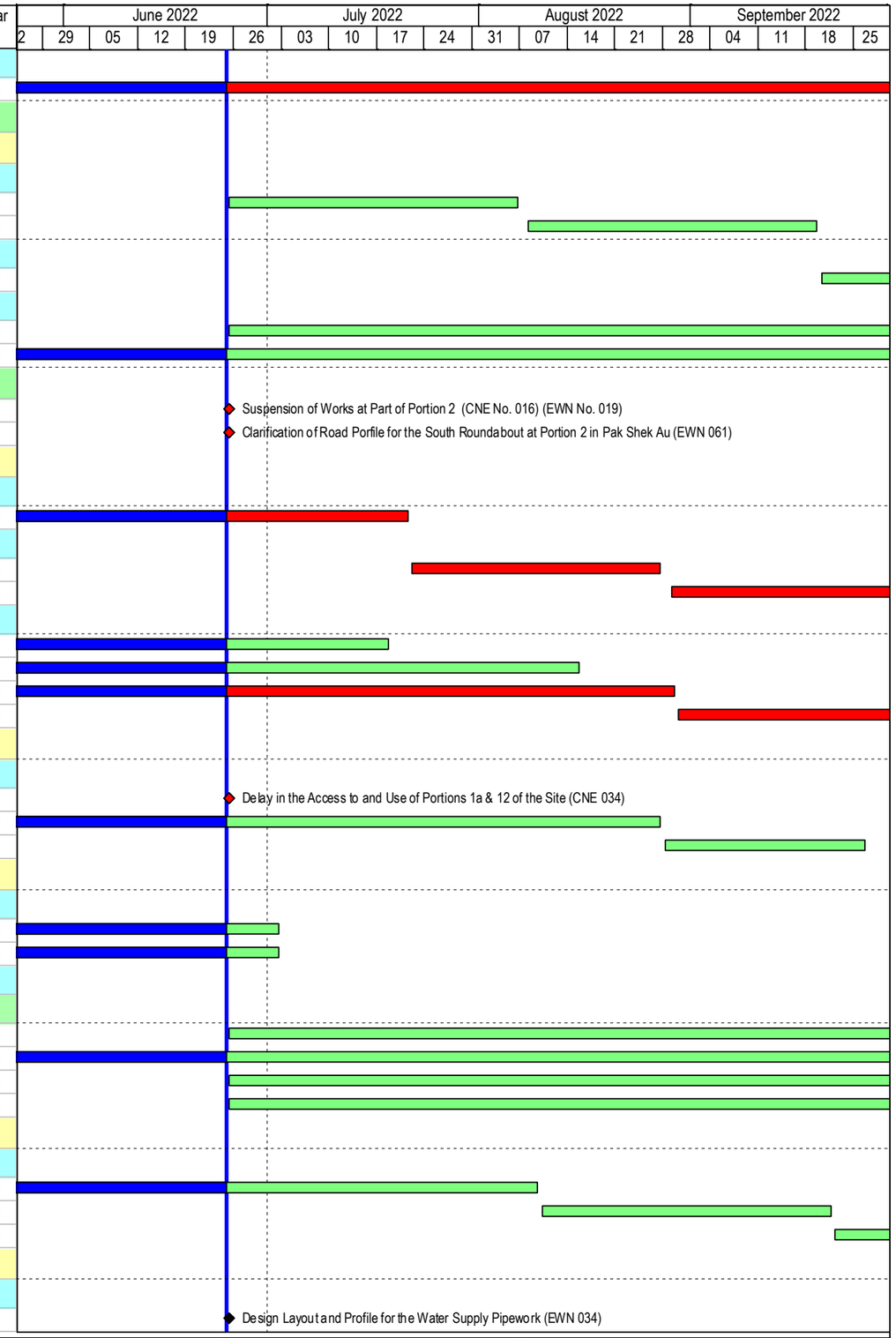
Operation and Dismantling of the Soil Treatment Plant						
S11P6b-3010	Provide treatment to high arsenic-containing soil	805	03-Dec-20 A	11-Mar-25*	-26	WD(6d)
Section 12A						
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S12P10b-1040	Prepare Arsenic Assessment Report	36	25-Jun-22	06-Aug-22	428	WD(6d)
S12P10b-1050	Arsenic Treatment Plan	36	08-Aug-22	19-Sep-22	428	WD(6d)
Soil Treatment						
S12P10b-2010	Remove soil (original assumed 440m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	24	20-Sep-22	19-Oct-22	428	WD(6d)
Civil Work						
S12P10b-3000	Construct & maintain Temporary drainage	422	25-Jun-22	22-Nov-23	234	WD(6d)
S12P10b-3010	Underground utilities & Drainage work (158m drain and 5 M/H)	344	13-Oct-21 A	19-Aug-23	228	WD(6d)
Section 13						
S13-1012	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0		25-Jun-22	-32	CD(7d)
S13-1025	Clarification of Road Porfile for the South Roundabout at Portion 2 in Pak Shek Au (EWN 061)	0		25-Jun-22	-61	CD(7d)
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P2-1030	Site clearance	22	06-Dec-21 A	21-Jul-22	-27	WD(6d)
Soil Treatment						
S13P2-2010	Remove soil (original assumed 10854m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	32	22-Jul-22	27-Aug-22	-27	WD(6d)
S13P2-2020	Backfilling to the formation levels	80	29-Aug-22	02-Dec-22	-27	WD(6d)
Civil Works						
S13P2- 3150	Revised Slope KS38 - Approval & Acceptance of Initial Tree Survey report	24	15-Jan-21 A	18-Jul-22	657	CD(7d)
S13P2- 3170	Revised Slope KS38 - Approval & Acceptance of tree felling and transplant report	28	16-Apr-21 A	15-Aug-22	657	CD(7d)
S13P2- 4010	West Quadrant - Site formation of south roundabout	55	03-Jan-22 A	29-Aug-22	-50	WD(6d)
S13P2- 4020	West Quadrant - Construction of fill slope, draft wall & reconstruction of existing slope	102	30-Aug-22	30-Dec-22	-50	WD(6d)
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1a-0900	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Jun-22	-354	CD(7d)
S13P1a-1000	Tree survey and prepare tree felling and transplant report	54	04-Aug-21 A	27-Aug-22	225	WD(6d)
S13P1a-1002	Approval & Acceptance of Tree Felling Application	30	28-Aug-22	26-Sep-22	279	CD(7d)
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P7-1030	Prepare Arsenic Assessment Report	6	16-Jul-20 A	02-Jul-22	626	WD(6d)
S13P7-1040	Arsenic Treatment Plan	6	09-Nov-20 A	02-Jul-22	626	WD(6d)
Civil Work						
Underground Utilities						
S13P7-3000	Construct & maintain Temporary drainage	452	25-Jun-22	29-Dec-23	574	WD(6d)
S13P7-3011	Underground drainage (309m drain and 8 M/H)	168	18-Jun-21 A	20-Jan-23	626	WD(6d)
S13P7-3012	Underground sewage (about 150m and 3 M/H)	304	25-Jun-22	04-Jul-23	576	WD(6d)
S13P7-3013	Underground watermains	298	25-Jun-22	26-Jun-23	562	WD(6d)
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1b-1010	Site clearance	38	24-Mar-22 A	09-Aug-22	566	WD(6d)
S13P1b-1030	Prepare Arsenic Assessment Report	36	10-Aug-22	21-Sep-22	566	WD(6d)
S13P1b-1040	Arsenic Treatment Plan	36	22-Sep-22	04-Nov-22	566	WD(6d)
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P6a-1003	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Jun-22	508	CD(7d)



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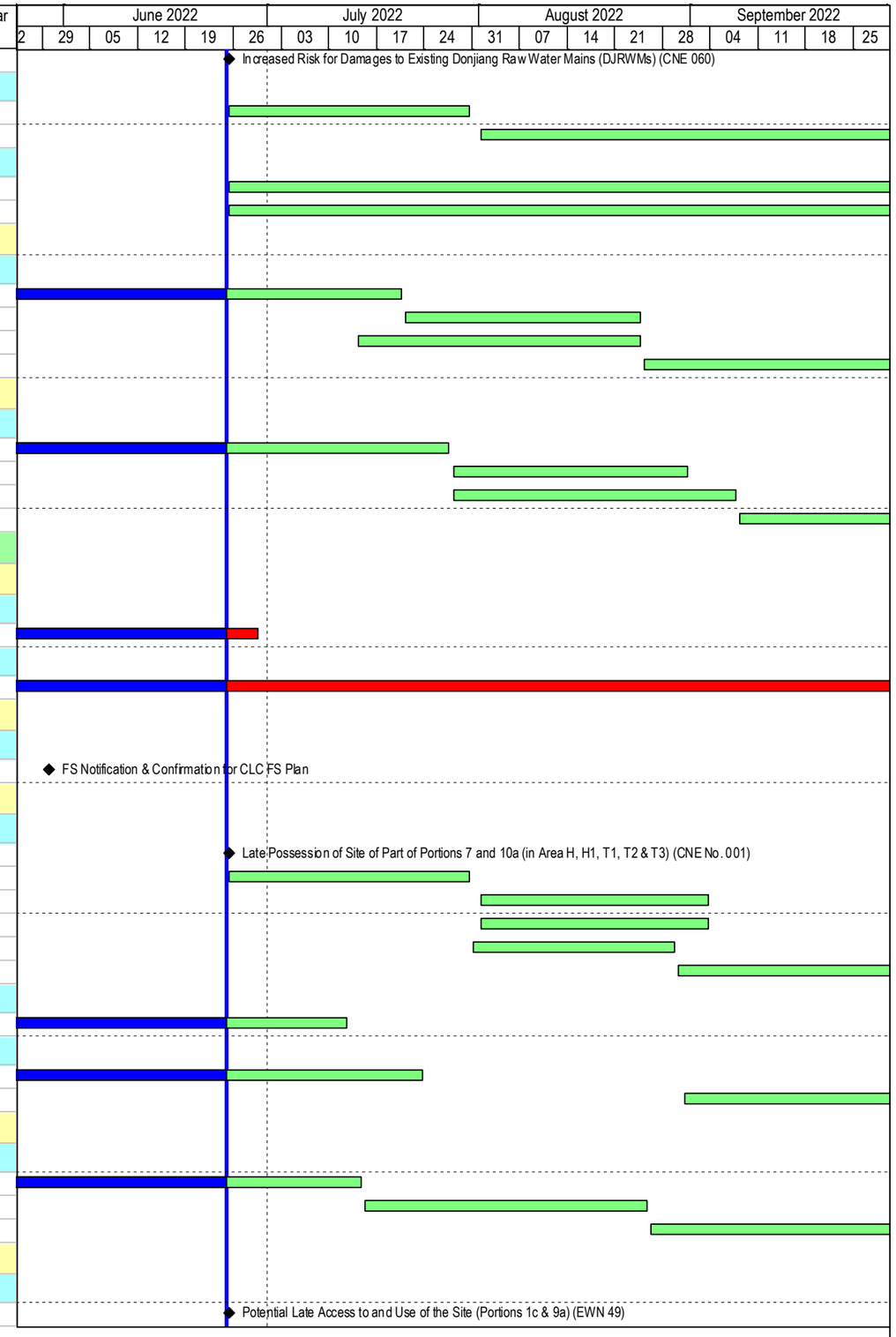
S13P6a-1004	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-Jun-22	508	CD(7d)
Soil Treatment						
S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	30	25-Jun-22*	30-Jul-22	485	WD(6d)
S13P6a-2020	Backfilling to the formation levels	60	01-Aug-22	12-Oct-22	485	WD(6d)
Civil Work						
S13P6a-3000	Construct & maintain Temporary drainage	575	25-Jun-22	01-Jun-24	415	WD(6d)
S13P6a-3012	Drainage works across DJ watermain (CNE 060, EC-1086)	160	25-Jun-22	04-Jan-23	415	WD(6d)
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1c-1010	Site clearance	21	15-Mar-22 A	20-Jul-22	435	WD(6d)
S13P1c-1025	Site investigation for Noise Barriers	30	21-Jul-22	24-Aug-22	435	WD(6d)
S13P1c-1030	Prepare Arsenic Assessment Report	36	14-Jul-22	24-Aug-22	435	WD(6d)
S13P1c-1040	Arsenic Treatment Plan	36	25-Aug-22	08-Oct-22	435	WD(6d)
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P9a-1010	Site clearance	27	15-Mar-22 A	27-Jul-22	557	WD(6d)
S13P9a-1025	Site investigation for Noise Barriers	30	28-Jul-22	31-Aug-22	599	WD(6d)
S13P9a-1030	Prepare Arsenic Assessment Report	36	28-Jul-22	07-Sep-22	557	WD(6d)
S13P9a-1040	Arsenic Treatment Plan	36	08-Sep-22	22-Oct-22	557	WD(6d)
Section 14						
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	29-Jun-22	-26	WD(6d)
Operation and Dismantling of the Soil Treatment Plant						
S14P7S3-3010	Stock Pile of Treated Soil	688	20-Nov-20 A	22-Oct-24	-26	WD(6d)
Portion 16 in Area Q (Soil Treatment & Construction of CLC)						
KD7 - Complete the construction works of Community Liaison Centre in Area Q						
S14P16-3060	FS Notification & Confirmation for CLC FS Plan	0		30-May-22 A		CD(7d)
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P7T-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	0		25-Jun-22	229	CD(7d)
S14P7T-1010	Tree survey and prepare tree felling and transplant report (Area T1)	30	25-Jun-22	30-Jul-22	157	WD(6d)
S14P7T-1012	Ground investigation (0 / 1 GI completed) (Area T1)	30	01-Aug-22	03-Sep-22	183	WD(6d)
S14P7T-1020	Site clearance (Area T1)	30	01-Aug-22	03-Sep-22	183	WD(6d)
S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	31-Jul-22	29-Aug-22	193	CD(7d)
S14P7T-1024	Tree felling works (Area T1)	30	30-Aug-22	06-Oct-22	158	WD(6d)
Land Contamination Assessment						
S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	14	04-Dec-20 A	12-Jul-22	39	WD(6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J						
S14P7T-3000	Construct temporary noise barrier along Castle Peak Road in Area T2 and T3 (100m)	24	26-Apr-21 A	23-Jul-22	49	WD(6d)
S14P7T-3010	Construct temporary noise barrier along Castle Peak Road in Area T1 (50m)	170	31-Aug-22*	25-Mar-23	17	WD(6d)
Portion 1b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-1020	Site Clearance & Tree Felling	16	28-Mar-22 A	14-Jul-22	631	WD(6d)
S14P1b-1030	Environmental ground investigation and laboratory test (0 / 1 EGI completed)	36	15-Jul-22	25-Aug-22	631	WD(6d)
S14P1b-1040	Prepare Arsenic Assessment Report	36	26-Aug-22	10-Oct-22	631	WD(6d)
Portion 1c & 9a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Jun-22	767	CD(7d)



Build King – Richwell Engineering Joint Venture

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- Critical Work
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- Milestone
- Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-06)

Data Date: 25-Jun-22 **Run Date: 28-Jun-22**

Project ID: ND201901-RP-27.0-2
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME			
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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S14P1c-1001	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 52)	0		25-Jun-22	767	CD(7d)
S14P1c-1010	Tree survey and prepare tree felling and transplant report (No Trees)	0	25-May-22 A	08-Jun-22 A		WD(6d)
S14P1c-1012	Approval & Acceptance of Tree felling Application	30	09-Jun-22 A	24-Jul-22	767	CD(7d)
S14P1c-1040	Prepare Arsenic Assessment Report	36	25-Jul-22	03-Sep-22	625	WD(6d)
S14P1c-1050	Arsenic Treatment Plan	36	05-Sep-22	19-Oct-22	625	WD(6d)
Portion 6a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6a-1040	Prepare Arsenic Assessment Report	36	25-Jun-22	06-Aug-22	683	WD(6d)
S14P6a-1050	Arsenic Treatment Plan	36	08-Aug-22	19-Sep-22	683	WD(6d)
Portion 6b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6b-1017	Tree felling	30	25-Jun-22	30-Jul-22	647	WD(6d)
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	01-Aug-22	06-Aug-22	647	WD(6d)
S14P6b-1040	Prepare Arsenic Assessment Report	36	08-Aug-22	19-Sep-22	647	WD(6d)
S14P6b-1050	Arsenic Treatment Plan	36	20-Sep-22	02-Nov-22	647	WD(6d)
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1f-1040	Prepare Arsenic Assessment Report	36	25-Jun-22	06-Aug-22	743	WD(6d)
S14P1f-1050	Arsenic Treatment Plan	36	08-Aug-22	19-Sep-22	743	WD(6d)
Interim Community Liaison Centre (CLC)						
S14P1f-2030	Occupation of interim CLC	20	18-May-20 A	14-Jul-22	890	CD(7d)
S14P1f-2040	Dismanlting of interim CLC	12	15-Jul-22	28-Jul-22	727	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	13-Jul-22	764	WD(6d)
Soil Treatment						
S14P9c-2000	Construct & maintain Temporary drainage	26	25-Jun-22	26-Jul-22	1023	WD(6d)
S14P9c-2020	Backfilling to the formation levels	26	18-Oct-21 A	26-Jul-22	1023	WD(6d)
Portion 13 in Area S4 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P13-1000	Potential Late Access to and Use of the Site (Portions 13) (EWN 50)	0		25-Jun-22	1657	CD(7d)
S14P13-1010	Tree survey and prepare tree felling and transplant report	60	25-Jun-22	03-Sep-22	41	WD(6d)
S14P13-1012	Approval & Acceptance of Tree felling Application	30	05-Sep-22	12-Oct-22	41	WD(6d)
Cycle Track from Area H to Area N						
S14CT-0100	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0		25-Jun-22	797	CD(7d)
Underground Utilities underneath Cycle Track						
S14CT-1000	Construct & maintain Temporary drainage	428	25-Jun-22	29-Nov-23	621	WD(6d)
S14CT-1020	Underground Utilities in Portion 1a	90	29-Jul-22	14-Nov-22	651	WD(6d)
S14CT-1030	Underground Utilities in Portion 5 (Stage 2)	240	29-Jul-22	19-May-23	621	WD(6d)
S14CT-1036	Underground Utilities in Portion 5 (Stage 1) (SMHKT 3002 to 3005)	28	01-Dec-21 A	28-Jul-22	621	WD(6d)
Portion 1b (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-1104	Site clearance & Tree felling	36	12-Mar-22 A	06-Aug-22	209	WD(6d)
S14P1b-1108	Environmental ground investigation and laboratory test (0 / 2 EGI) MTRC Zone	30	08-Aug-22	12-Sep-22	209	WD(6d)
S14P1b-1110	Prepare Arsenic Assessment Report	30	13-Sep-22	19-Oct-22	209	WD(6d)
S14P1b-1112	Arsenic Treatment Plan	30	13-Sep-22	19-Oct-22	209	WD(6d)
Civil Works						
S14P1b-1300	Underground Drainage (around 120m, 4 nos MH)	72	25-Jan-22 A	19-Sep-22	851	WD(6d)
Portion 3 (Soil Treatment & Civil Works)						

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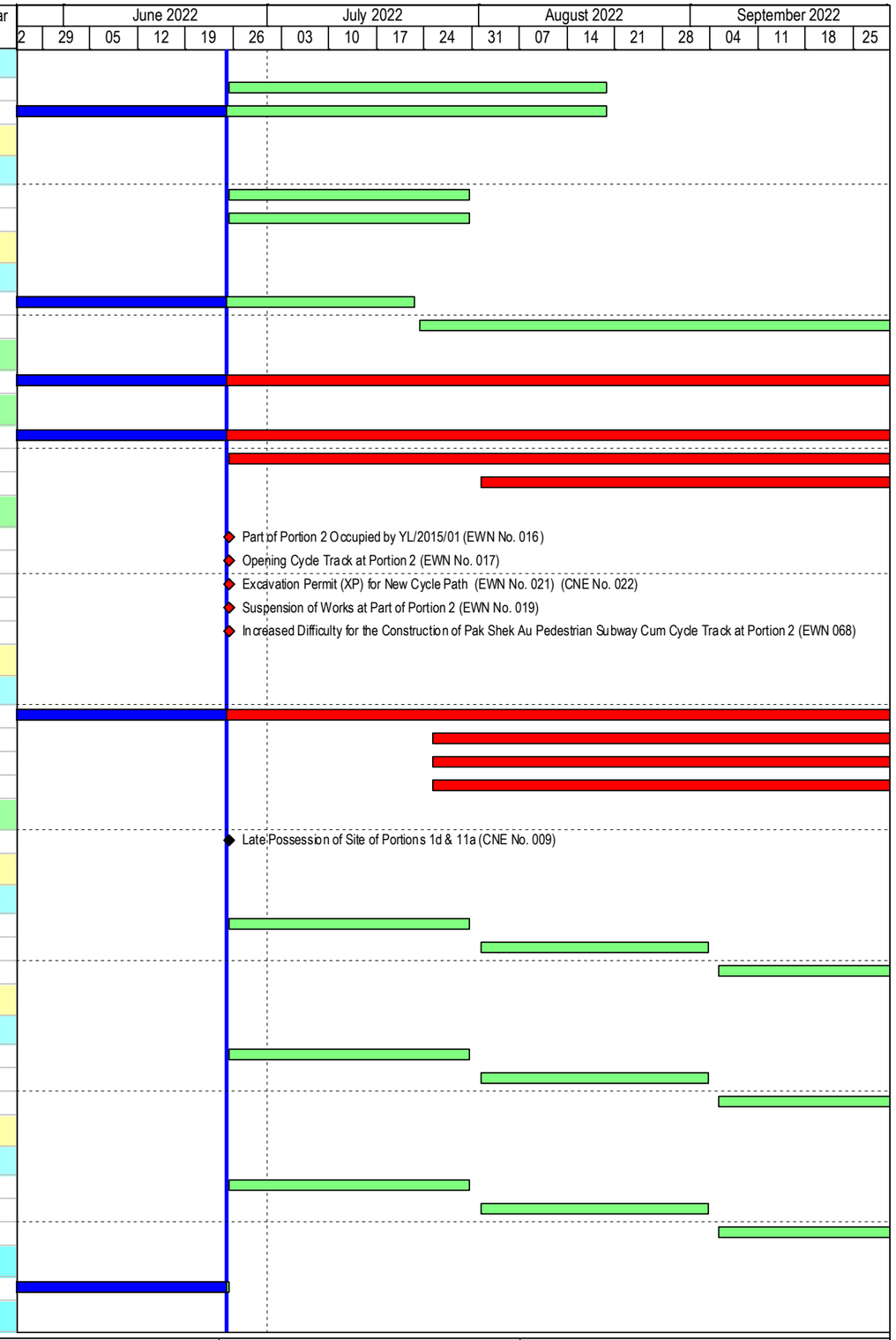
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Soil Treatment						
S14P3-1200	Construct & maintain Temporary drainage	47	25-Jun-22	19-Aug-22	804	WD(6d)
S14P3-1204	Backfilling to the formation levels	47	15-Nov-21 A	19-Aug-22	804	WD(6d)
Portion 5 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P5-1108	Prepare Arsenic Assessment Report	30	25-Jun-22	30-Jul-22	673	WD(6d)
S14P5-1110	Arsenic Treatment Plan	30	25-Jun-22	30-Jul-22	673	WD(6d)
Portion 1e (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1e-2010	Approval & Acceptance of Tree felling Application	28	11-Nov-21 A	22-Jul-22	776	CD(7d)
S14P1e-2020	Site clearance & Tree felling	60	23-Jul-22	03-Oct-22	632	WD(6d)
Section 15						
S15-1000	Presevation and protection of tree	1326	06-Dec-19 A	09-Feb-26	-34	CD(7d)
Section 18 (Subject to excision)						
S18-1040	Watermain laying work in Portion 5	291	20-Sep-21 A	16-Jun-23	-26	WD(6d)
S18-1050	Watermain laying work in Portion 6a & 6b	380	25-Jun-22	03-Oct-23	-41	WD(6d)
S18-1075	Watermain laying work in Portion 8a	350	01-Aug-22	03-Oct-23	-135	WD(6d)
Section 20 (Subject to excision)						
S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0		25-Jun-22	-346	CD(7d)
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-Jun-22	-346	CD(7d)
S20-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Jun-22	-346	CD(7d)
S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Jun-22	-346	CD(7d)
S20-1022	Increased Difficulty for the Construction of Pak Shek Au Pedestrian Subway Cum Cycle Track at Portion 2 (EWN 068)	0		25-Jun-22	-346	CD(7d)
Construction of Pedestrian Subway cum Cycle Track Stage 2 (South of Castle Peak Road)						
Civil and Structural Work						
S20S2-7320	ELS, Excavation & UU suspension works for subway	178	28-Apr-22 A	25-Feb-23	-305	WD(6d)
S20S2-7330	Access ramp and tunnel in Portion 1a	310	25-Jul-22	08-Aug-23	-305	WD(6d)
S20S2-7350	Access ramp and tunnel in Portion 2	310	25-Jul-22	08-Aug-23	-305	WD(6d)
S20S2-7370	Raft Foundation Construction CSD	170	25-Jul-22	16-Feb-23	-300	WD(6d)
Section 21 (Subject to excision)						
S21-1013	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0		25-Jun-22	675	CD(7d)
Portion 1b in Area M (Soil Treatment)						
Preparation work						
S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	25-Jun-22	30-Jul-22	548	WD(6d)
S21P1b-1012	Approval & Acceptance of Tree felling Application	30	01-Aug-22	03-Sep-22	548	WD(6d)
S21P1b-1020	Site Clearance & Tree Felling	60	05-Sep-22	16-Nov-22	548	WD(6d)
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)						
Preparation work						
S21P1d-1010	Tree survey and prepare tree felling and transplant report	30	25-Jun-22	30-Jul-22	548	WD(6d)
S21P1d-1012	Approval & Acceptance of Tree felling Application	30	01-Aug-22	03-Sep-22	548	WD(6d)
S21P1d-1020	Site Clearance & Tree Felling	60	05-Sep-22	16-Nov-22	548	WD(6d)
Portion 11a in Area M (Soil Treatment)						
Preparation work						
S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	25-Jun-22	30-Jul-22	543	WD(6d)
S21P11a-1012	Approval & Acceptance of Tree felling Application	30	01-Aug-22	03-Sep-22	543	WD(6d)
S21P11a-1020	Site Clearance & Tree Felling	60	05-Sep-22	16-Nov-22	543	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-Jun-22	548	WD(6d)
9.0 - Major EWN / CNE						



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ND/2019/01 - 3 Month Rolling Programme (2022-06)

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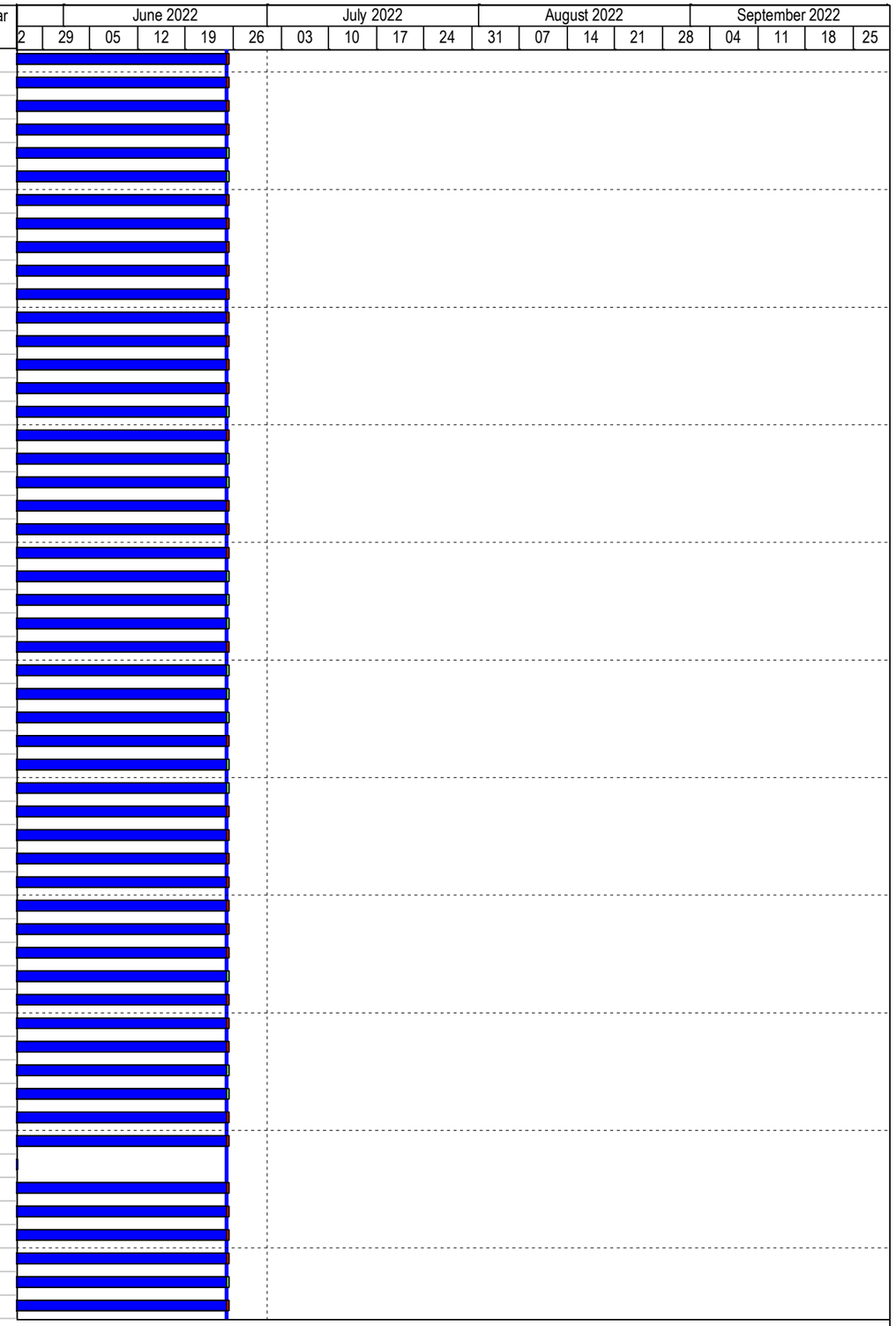
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
EC-1006	Strong Objection on the Construction of Service Reservoirs at Portions 8a & 8b (CNE No. 006) (EWN No. 005)	0	18-Mar-20 A	25-Jun-22	-329	CD(7d)
EC-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0	23-Dec-19 A	25-Jun-22	-611	CD(7d)
EC-1018	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017) (CNE No. 022)	0	04-Aug-20 A	25-Jun-22	-611	CD(7d)
EC-1021	Removal of Existing CLP Facilities - (both Overhead and Underground) within Portion 5, 6a, 7, 9b and 10a (EWN No. 018)	0	02-Apr-20 A	25-Jun-22	-310	CD(7d)
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Jun-22	1657	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-Jun-22	1657	CD(7d)
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-Jun-22	-611	CD(7d)
EC-1029	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0	15-Sep-20 A	25-Jun-22	-242	CD(7d)
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0	19-Oct-20 A	25-Jun-22	-611	CD(7d)
EC-1036	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0	08-Jan-21 A	25-Jun-22	-329	CD(7d)
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-Jun-22	-227	CD(7d)
EC-1040	Temporary Stockpile in Area C1 (EWN 027)	0	31-May-21 A	25-Jun-22	-154	CD(7d)
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-Jun-22	-328	CD(7d)
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-Jun-22	-196	CD(7d)
EC-1046	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0	06-Jul-21 A	25-Jun-22	-404	CD(7d)
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-Jun-22	11	CD(7d)
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-Jun-22	-197	CD(7d)
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038) (CNE 049)	0	27-Sep-21 A	25-Jun-22	818	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-Jun-22	1657	CD(7d)
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0	06-Oct-21 A	25-Jun-22	-211	CD(7d)
EC-1054	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0	11-Oct-21 A	25-Jun-22	-246	CD(7d)
EC-1055	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0	16-Oct-21 A	25-Jun-22	-246	CD(7d)
EC-1056	Inclement Weather on 8th October 2021 (CNE 036)	0	08-Oct-21 A	25-Jun-22	1657	CD(7d)
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039)	0	09-Oct-21 A	25-Jun-22	1657	CD(7d)
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040)	0	13-Oct-21 A	25-Jun-22	1657	CD(7d)
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-Jun-22	-154	CD(7d)
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-Jun-22	1657	CD(7d)
EC-1062	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058)	0	13-Dec-21 A	25-Jun-22	227	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-Jun-22	1657	CD(7d)
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-Jun-22	-176	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-Jun-22	767	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-Jun-22	1657	CD(7d)
EC-1067	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0	29-Nov-21 A	25-Jun-22	-197	CD(7d)
EC-1068	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0	02-Dec-21 A	25-Jun-22	-197	CD(7d)
EC-1069	Level Different between Road A3 and Road D4-1 (CNE 055)	0	08-Dec-21 A	25-Jun-22	-197	CD(7d)
EC-1070	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0	04-Jan-22 A	25-Jun-22	-227	CD(7d)
EC-1071	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0	14-Dec-21 A	25-Jun-22	-39	CD(7d)
EC-1072	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0	29-Dec-21 A	25-Jun-22	-157	CD(7d)
EC-1074	Works affected by the New Constructed 1650mm dia. Drain Pipe along Ho Sheung Heung Road at Portion 8b (CNE 072, 72a)	0	21-Feb-22 A	25-Jun-22	-516	CD(7d)
EC-1075	Works affecred by the Sever Outbreak of Omicron (CNE 073) (EWN 058)	0	25-Feb-22 A	25-Jun-22	1657	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-Jun-22	-28	CD(7d)
EC-1077	Disruption of Precast Concrete Pipe (Jacking Pipe) Supply due to the Severe Outbreak of Omicron (EWN 054)	0	25-Feb-22 A	25-Jun-22	-157	CD(7d)
EC-1078	Delay in Fabrication & Supply of Structural Steel Members for NB 35 due to the Severe Outbreak of Omicron (EWN 055)	0	01-Mar-22 A	25-Jun-22	-144	CD(7d)
EC-1079	Delay in Supply of Precast Concrete Pipe due to the Severe Outbreak of Omicron (EWN 056)	0	16-Feb-22 A	25-Jun-22	1657	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-Jun-22	1657	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-Jun-22	-310	CD(7d)
EC-1082	Clarification of Road Porfile for the South Roundabout at Portion 2 in Pak Shek Au (EWN 061)	0	25-Mar-22 A	25-Jun-22	-61	CD(7d)
EC-1083	New Formed Feature KW18 L-Shape Retaining Wall abutting Road D4-1 and A3 (EWN 062) Cancelled	0	29-Mar-22 A	25-May-22 A		CD(7d)
EC-1084	Strong Objection from the Local Villager for the Construction of L-Shape Retaining Wall KW02 at Road D4-1 (EWN 063)	0	11-Apr-22 A	25-Jun-22	-190	CD(7d)
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-Jun-22	-165	CD(7d)
EC-1086	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0	31-Mar-22 A	25-Jun-22	-87	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-Jun-22	-516	CD(7d)
EC-1088	Design Changes to the Permanent Street Lighting Works (CNE 074)	0	04-Mar-22 A	25-Jun-22	1657	CD(7d)
EC-1089	Additional Sewerage Pipes clash with the Proposed Watermains along Road D4 and D5 (EWN 065)	0	27-Apr-22 A	25-Jun-22	-251	CD(7d)



Build King – Richwell Engineering Joint Venture

- Planned Work
- Critical Work
- Actual Work
- Milestone
- Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-06)

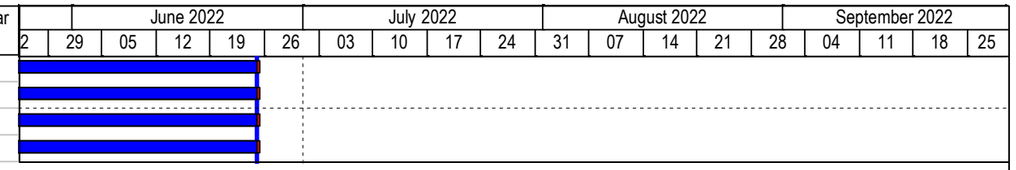
Data Date: 25-Jun-22 **Run Date: 28-Jun-22**

Project ID: ND201901-RP-27.0-2
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
28-Jun-22	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
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-Jun-22	-310	CD(7d)
EC-1091	Obstruction for the Construction of Proposed Footpath and Cycle Track along Road L1 in Area H at Portion 7 (EWN 067)	0	19-May-22 A	25-Jun-22	-126	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-Jun-22	-346	CD(7d)
EC-1093	DN200 Fresh Watermain to Existing Watermain for MWSC Site between Po Lau Road and Castle Peak Road (CNE 072)	0	18-May-22 A	25-Jun-22	-211	CD(7d)



Build King – Richwell Engineering Joint Venture

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ND/2019/01 - 3 Month Rolling Programme (2022-06)

Data Date: 25-Jun-22 **Run Date: 28-Jun-22**

Project ID: ND201901-RP-27.0-2
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME			
Date	Revision	Checked	Approved
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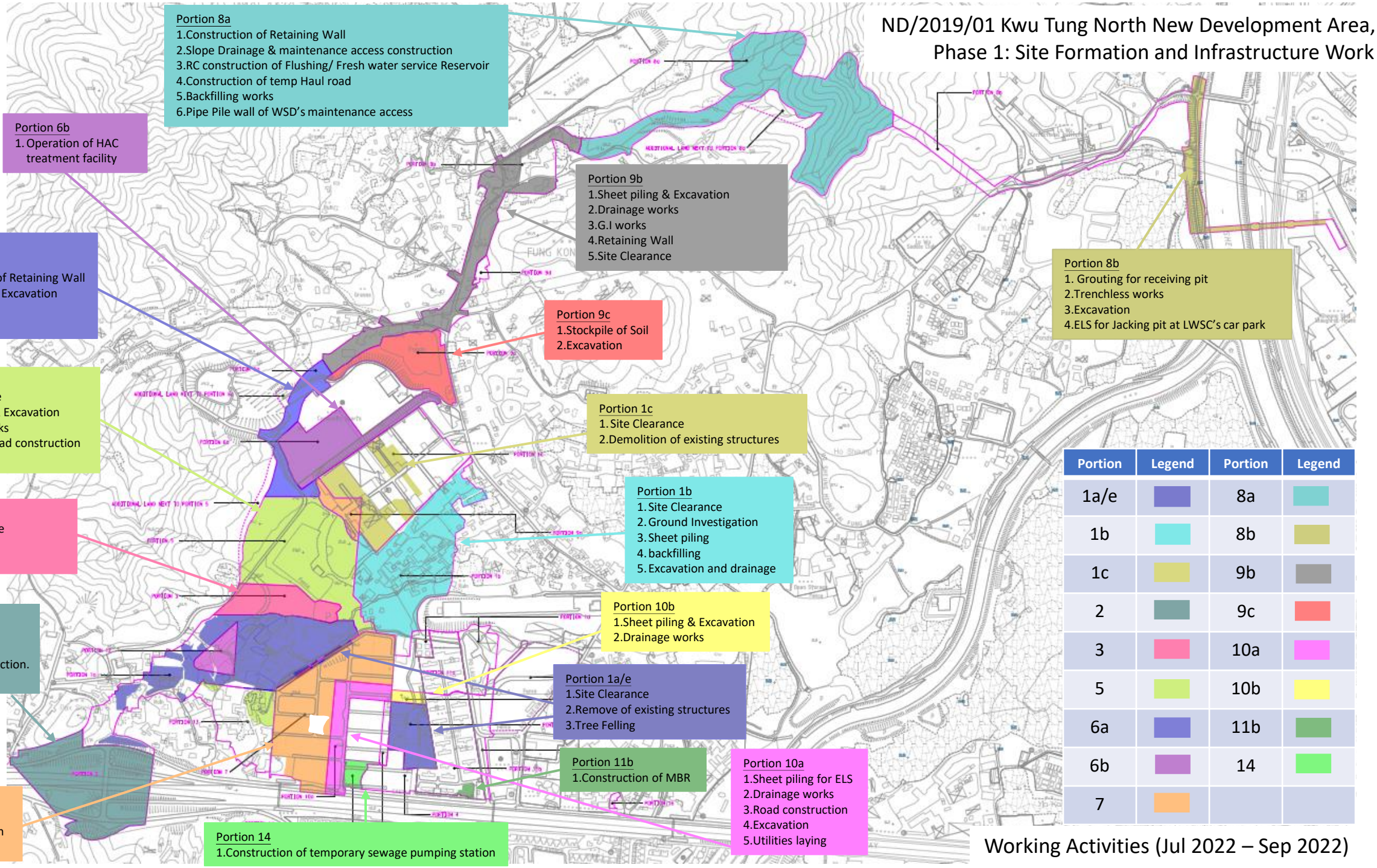
ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work



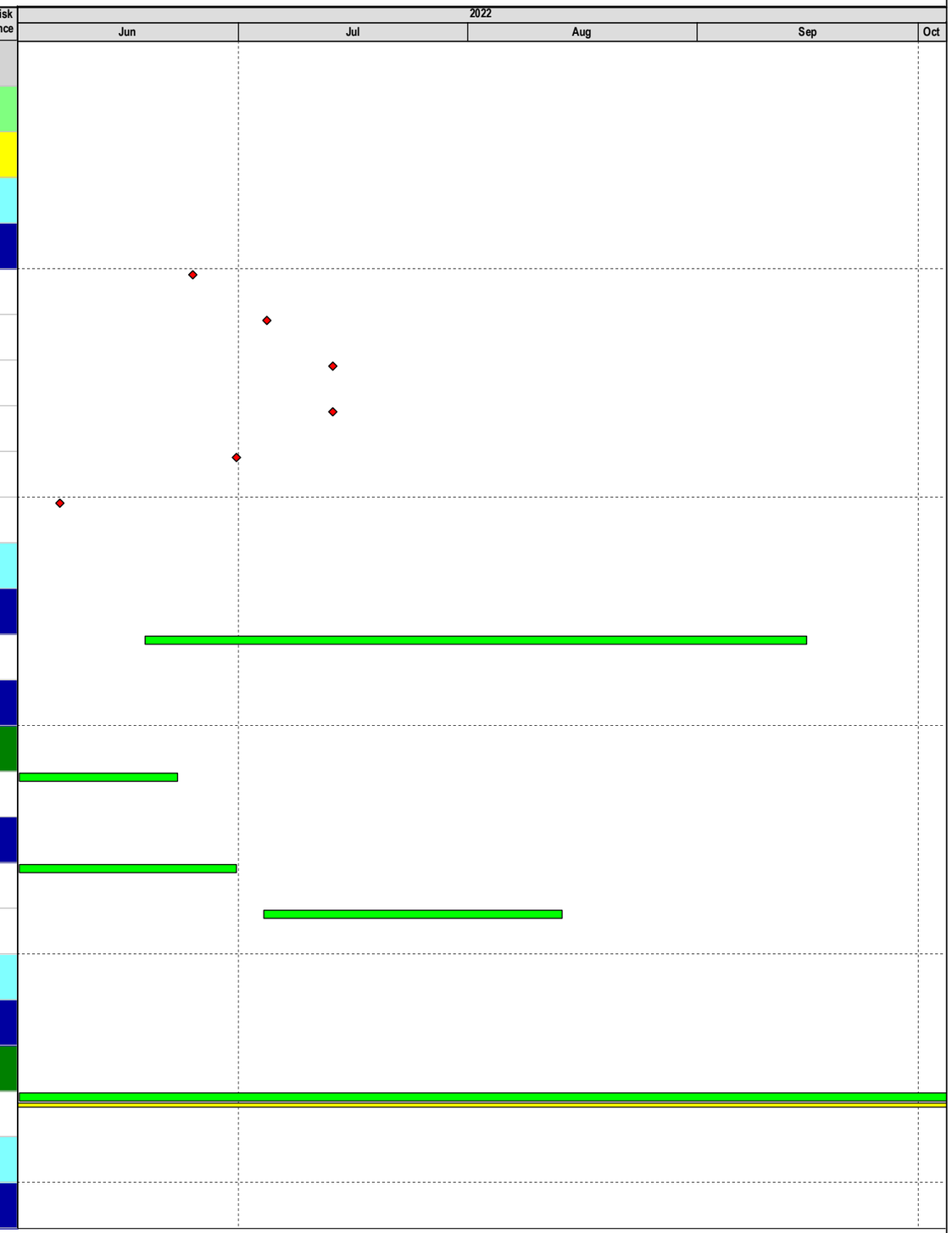
Portion	Legend	Portion	Legend
1a/e		8a	
1b		8b	
1c		9b	
2		9c	
3		10a	
5		10b	
6a		11b	
6b		14	
7			

Working Activities (Jul 2022 – Sep 2022)

Construction Programme of ND/2019/02

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
ND-2019-02 KTNNDA Phase 1:Roads and Drains between		1912	1130	30-Sep-20	04-Jul-25	10-Apr-20 A	04-Jul-25	167	
Programme Data		1912	1130	30-Sep-20	04-Jul-25	10-Apr-20 A	04-Jul-25	167	
Preliminaries		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167	
Subletting		31	31			06-Jun-22	13-Jul-22	0	
Specialist Subcontractors		31	31			06-Jun-22	13-Jul-22	0	
SC-1195-1	Award of subcontract - ABWF works (Package 1 - Wet Trade: Finishes, Ceiling, Raised Floor etc..)	0	0				24-Jun-22*	-43	
SC-1195-2	Award of subcontract - ABWF works (Package 2 - Timber Door, Windows, Louvre and Steel Door)	0	0				04-Jul-22*	0	
SC-1195-3	Award of subcontract - ABWF works (Package 3 - Skylight, Roller Shutter, Fall Arrest, Fence, Handrail,	0	0				13-Jul-22*	-45	
SC-1195-4	Award of subcontract - ABWF works (Package 4 - Sundry Metal Works, Toilet Cubicle, PV Panel, HR,	0	0				13-Jul-22*	0	
SC-1205	Award of subcontract - Construction of Temporary Sewerage System	0	0				30-Jun-22*	0	
SC-1210	Award of subcontract - Grout Curtain of SPS	0	0				06-Jun-22*	0	
Statutory Submission		609	107			07-Dec-21 A	15-Sep-22	621	
HyD		90	90			18-Jun-22	15-Sep-22	621	
XP-1020	Excavation permit (XP) application for Portion 5	90	90			18-Jun-22*	15-Sep-22	621	0
MTRC		21	18			29-Apr-22 A	22-Jun-22	583	
Method Statement Submission and Approval		21	18			29-Apr-22 A	22-Jun-22	583	
MTRC-0900	Approval of Method Statement for pipe laying work of rising main nearby MTRC area	21	18			29-Apr-22 A	22-Jun-22	583	0
TPRP		207	62			07-Dec-21 A	13-Aug-22	174	
TPRP-1040	Tree Felling Proposal Submission and Approval for FMH1.30A (CSF-477)	80	25			07-Dec-21 A	30-Jun-22	174	0
TPRP-1050	Tree Felling (26 nos)	36	36			04-Jul-22	13-Aug-22	174	0
Site Offices & Preliminaries		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167	
Site Offices & Preliminaries		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167	
Temporary office for RE		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167	
SP-1000b	Maintenance of container office	1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167	0
Contractor's Design		121	56			28-Mar-22 A	26-Jul-22	65	
Temporary Works Design		121	56			28-Mar-22 A	26-Jul-22	65	



Primary Baseline
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Critical ...
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Data Date: 31-May-22
Project Start: 03-Feb-20
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Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
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Three Months Rolling Programme (Jun to Sep 2022)

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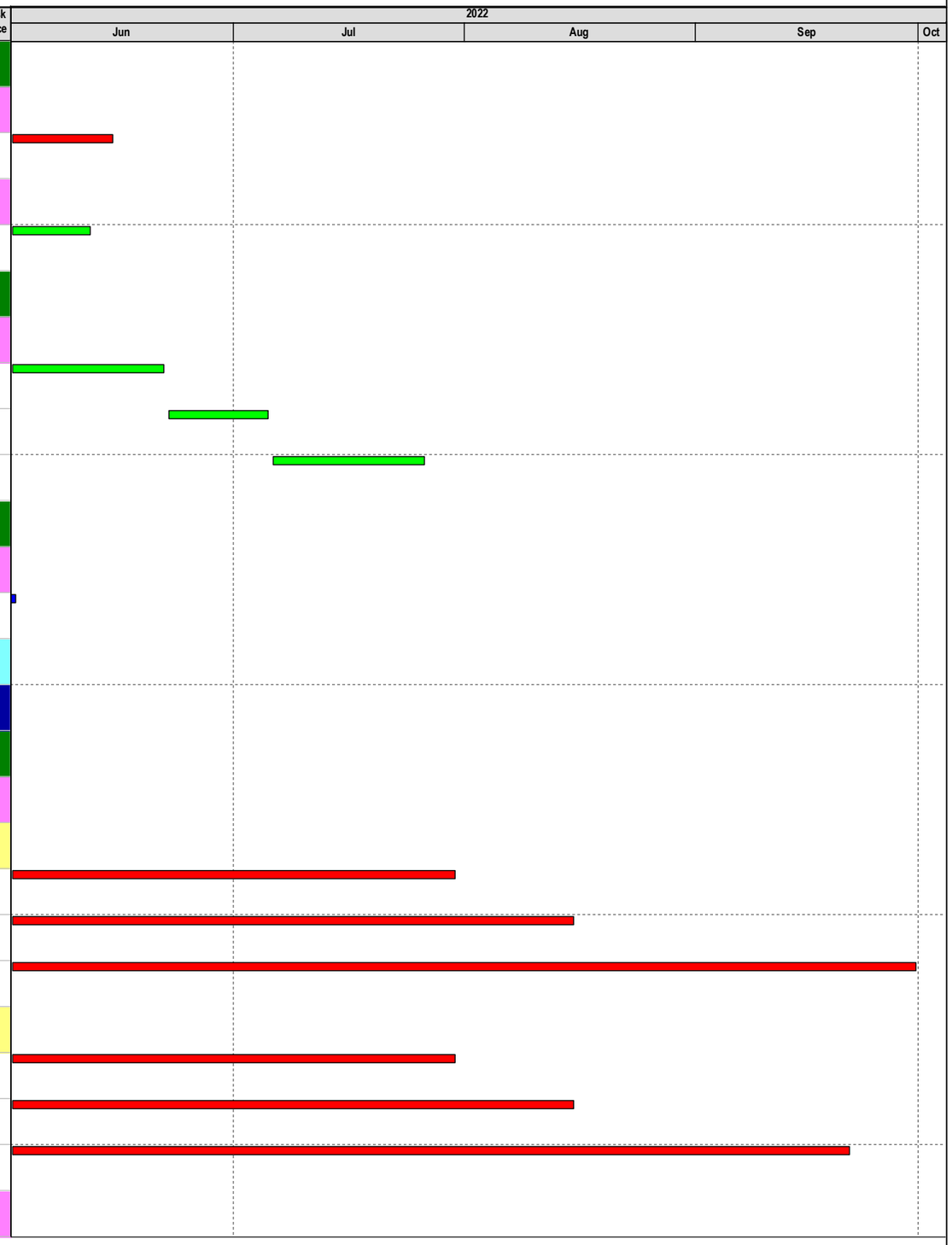
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
Footbridge FK2		63	11			28-Mar-22 A	14-Jun-22	17	
Formwork Design (Bridge Pier) - CSF576		10	11			28-Mar-22 A	14-Jun-22	-32	
TWD-1330	Formwork and Falsework Design (Bridge Pier) - 2nd submission to PM & Approval	10	11			28-Mar-22 A	14-Jun-22	-32	
Falsework Design (Bridge Deck) - CSF584		14	9			26-May-22 A	11-Jun-22	19	
TWD-1360	Falsework Design (Bridge Deck) - 2nd submission to PM & Approval	14	9			26-May-22 A	11-Jun-22	19	
Sewage Pumping Station		56	56			01-Jun-22	26-Jul-22	65	
Formwork Design		56	56			01-Jun-22	26-Jul-22	65	
TWD-1030	Formwork and Falsework Design - 1st submission to PM & review	21	21			01-Jun-22*	21-Jun-22	65	
TWD-1040	Formwork and Falsework Design - Review and Resubmission	14	14			22-Jun-22	05-Jul-22	65	
TWD-1050	Formwork and Falsework Design - 2nd submission to PM & Approval	21	21			06-Jul-22	26-Jul-22	65	
Visitor Centre		14	0			23-Apr-22 A	01-Jun-22 A		
Formwork Design for Superstructure - CSF598		14	0			23-Apr-22 A	01-Jun-22 A		
TWD-1390	Formwork and Falsework Design - 2nd submission to PM & Approval	14	0			23-Apr-22 A	01-Jun-22 A		
E&M Submission		433	233	22-Jul-21	18-Oct-21	13-Nov-21 A	19-Jan-23	72	
Visitor Centre		357	193			13-Nov-21 A	19-Jan-23	59	
BS Shop Drawings Submission (Visitor Centre)		254	102			13-Nov-21 A	30-Sep-22	-16	
CSD/ CBWD		241	102			13-Nov-21 A	30-Sep-22	-16	
CBWD (CSF 495)		210	102			20-Dec-21 A	30-Sep-22	-23	
CBW-VC1000	Shop Drawing Preparation and submission for Visitor Centre (CBWD)	178	50			20-Dec-21 A	30-Jul-22	-23	0
CBW-VC1010	1st round comment by PM & review	154	63			12-Feb-22 A	15-Aug-22	-23	0
CBW-VC1020	2nd submission to PM & approval	106	102			27-Apr-22 A	30-Sep-22	-23	0
CSD (CSF 508)		241	95			13-Nov-21 A	21-Sep-22	-9	
CBW-VC1060	Shop Drawing Preparation and submission for Visitor Centre (CSD)	185	50			13-Nov-21 A	30-Jul-22	-9	0
CBW-VC1070	1st round comment by PM & review	143	63			24-Jan-22 A	15-Aug-22	-9	0
CBW-VC1080	2nd submission to PM & approval	127	95			04-Apr-22 A	21-Sep-22	-9	0
MVAC (CSF 451)		21	21			21-Jun-22	15-Jul-22	49	



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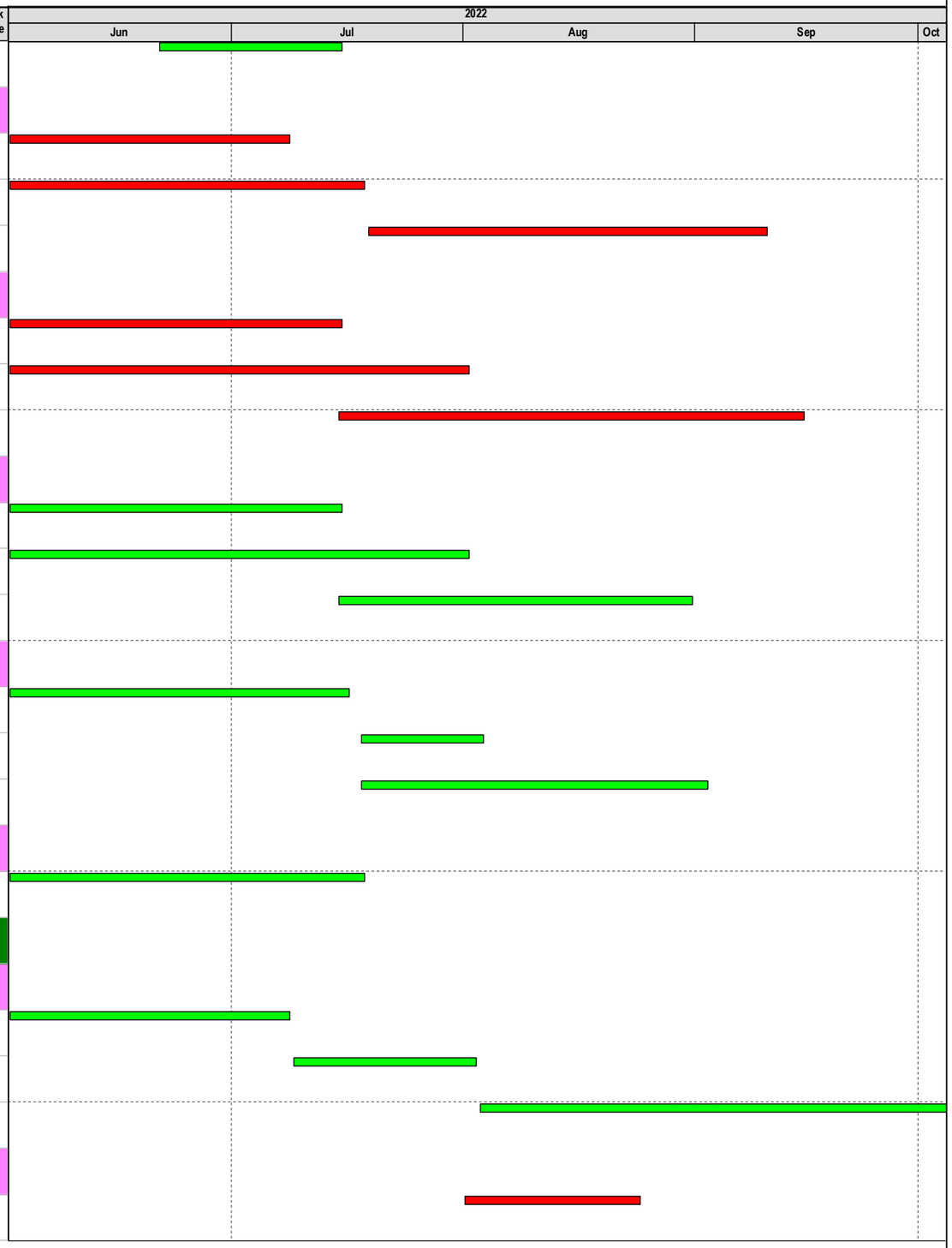
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
MVAC-VC1090	2nd submission to PM & approval	21	21			21-Jun-22*	15-Jul-22	49	0
FS		238	86			26-Nov-21 A	10-Sep-22	0	
FS-VC-1030	Shop Drawing Preparation and submission for Visitor Centre (FS)	203	31			26-Nov-21 A	08-Jul-22	0	0
FS-VC-1040	1st submission to PM & review	200	39			15-Dec-21 A	18-Jul-22	0	0
FS-VC-1050	2nd submission to PM & approval	121	47			19-Apr-22 A	10-Sep-22	0	0
PD		244	90			29-Nov-21 A	15-Sep-22	-4	
PD-VC-1030	Shop Drawing Preparation and submission for Visitor Centre (PD)	191	37			29-Nov-21 A	15-Jul-22	-4	0
PD-VC-1040	1st submission to PM & review	188	51			15-Dec-21 A	01-Aug-22	-4	0
PD-VC-1050	2nd submission to PM & approval	54	54			15-Jul-22*	15-Sep-22	-4	0
ELE		201	77			31-Dec-21 A	31-Aug-22	9	
ELE-VC-1030	Shop Drawing Preparation and submission for Visitor Centre (ELE)	161	37			31-Dec-21 A	15-Jul-22	9	0
ELE-VC-1040	1st submission to PM & review	166	51			12-Jan-22 A	01-Aug-22	9	0
ELE-VC-1050	2nd submission to PM & approval	41	41			15-Jul-22	31-Aug-22	9	0
ELV		218	79			13-Dec-21 A	02-Sep-22	7	
ELV-VC-1030	Shop Drawing Preparation and submission for Visitor Centre (ELV)	177	38			13-Dec-21 A	16-Jul-22	7	0
ELV-VC-1040	1st submission to PM & review	166	15			12-Jan-22 A	03-Aug-22	7	0
ELV-VC-1050	2nd submission to PM & approval	41	41			18-Jul-22*	02-Sep-22	7	0
Lift (CSF-643)		80	39			26-Apr-22 A	18-Jul-22	38	
LT-VC1020	2nd submission to PM & approval	80	39			26-Apr-22 A	18-Jul-22	38	0
BS Materials Submission & Procurement (Visitor Centre)		267	193			04-Mar-22 A	19-Jan-23	59	
PD		148	148			20-Apr-22 A	25-Nov-22	104	
PD-VC1010	Submersible Pump - 1st round comment by PM & review	25	31			20-Apr-22 A	08-Jul-22	104	0
PD-VC1020	Submersible Pump - 2nd submission to PM & approval	21	21			09-Jul-22	02-Aug-22	104	0
PD-VC1030	Procurement & Delivery of Submersible Pump (16wks)	96	96			03-Aug-22	25-Nov-22	104	0
FS		42	42			01-Aug-22	17-Sep-22	-63	
FS-VC1000	Material Submission - Sprinkler Pump & Local Control Panel	21	21			01-Aug-22*	24-Aug-22	-63	0



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Three Months Rolling Programme (Jun to Sep 2022)

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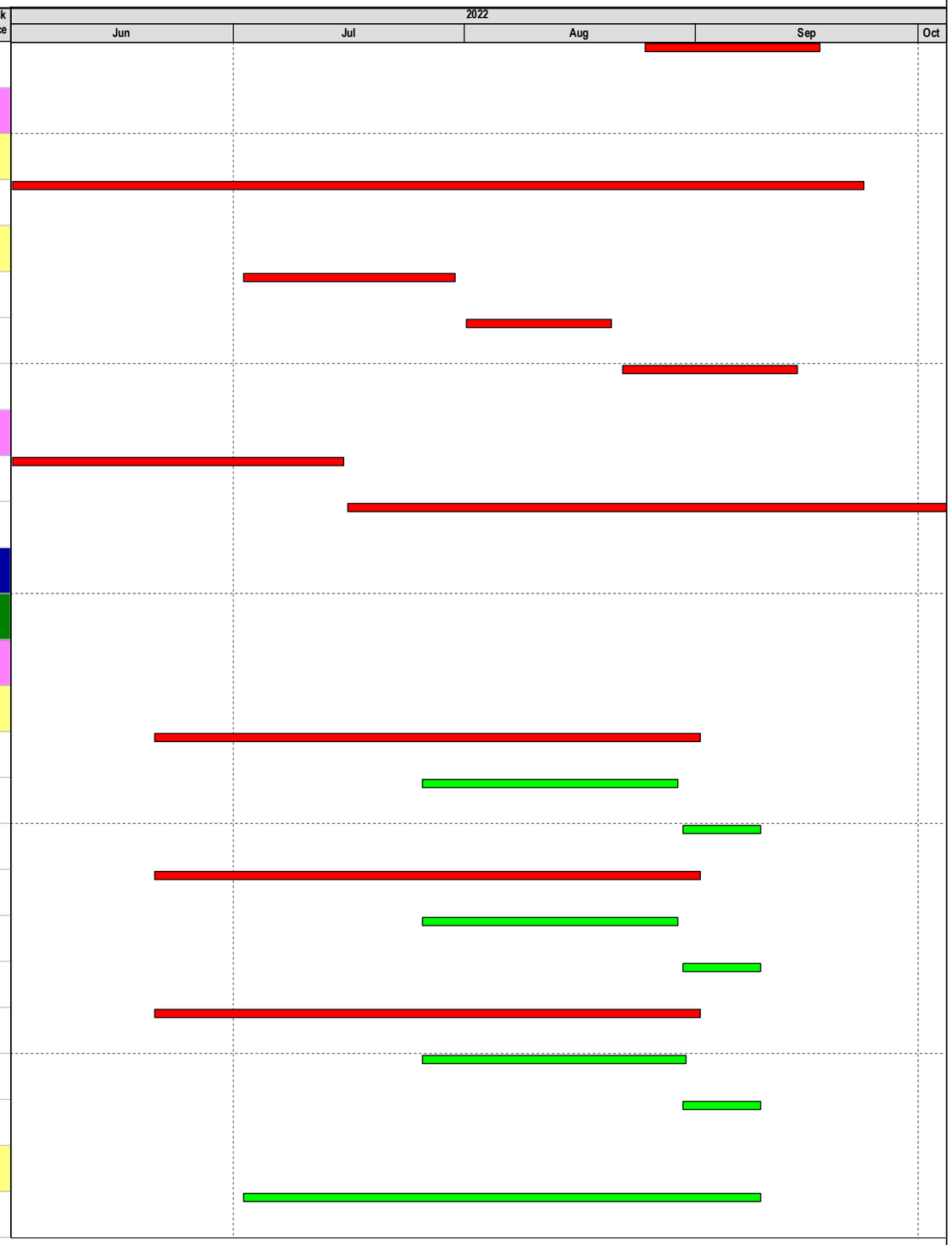
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
FS-VC1010	Sprinkler Pump & Local Control Panel - 1st round comment by PM & review	21	21			25-Aug-22	17-Sep-22	-63	0
ELE		129	96			14-Apr-22 A	23-Sep-22	-7	
Genset		65	96			14-Apr-22 A	23-Sep-22	-7	
ELE-VC1020	Genset - 2nd submission to PM & approval	65	96			14-Apr-22 A	23-Sep-22	-7	0
Switchboard		64	64			02-Jul-22	14-Sep-22	-59	
ELV-VC1040	Material Submission - Switchboard	25	25			02-Jul-22*	30-Jul-22	-59	0
ELV-VC1050	Switchboard - 1st round comment by PM & review	18	18			01-Aug-22	20-Aug-22	-59	0
ELV-VC1060	Switchboard - 2nd submission to PM & approval	21	21			22-Aug-22	14-Sep-22	-59	0
Lift (CSF-539)		267	193			04-Mar-22 A	19-Jan-23	-58	
LT-VC1050	Lift and Equipment - 2nd submission to PM & approval	117	37			04-Mar-22 A	15-Jul-22	-58	0
LT-VC1060	Procurement & Delivery of - Lift Car and Equipment (26wks)	156	156			16-Jul-22	19-Jan-23	-58	0
Sewerage Pumping Station		276	122			25-Nov-21 A	26-Oct-22	130	
BS Shop Drawings Submission (SPS)		245	91			25-Nov-21 A	16-Sep-22	10	
Sewage Pumping Station		245	91			25-Nov-21 A	16-Sep-22	10	
CSD/ CBWD		70	70			20-Jun-22	09-Sep-22	16	
CBW-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (CBWD)	63	63			20-Jun-22*	01-Sep-22	0	0
CBW-SPS1010	Sewage Pumping Station - 1st round comment by PM & review	30	30			26-Jul-22	29-Aug-22	16	0
CBW-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	10	10			30-Aug-22	09-Sep-22	16	0
CL-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (Conduit Layout)	63	63			20-Jun-22*	01-Sep-22	0	0
CL-SPS1010	Sewage Pumping Station - 1st round comment by PM & review	30	30			26-Jul-22	29-Aug-22	16	0
CL-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	10	10			30-Aug-22	09-Sep-22	16	0
CSD-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (CSD)	63	63			20-Jun-22*	01-Sep-22	0	0
CSD-SPS1010	Sewage Pumping Station - 1st round comment by PM & review	31	31			26-Jul-22	30-Aug-22	16	0
CSD-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	10	10			30-Aug-22	09-Sep-22	16	0
MVAC		66	66			02-Jul-22	16-Sep-22	10	
MVAC-SPS1010	Shop Drawing Preparation and submission for Sewage Pumping Station (MVAC)	60	60			02-Jul-22*	09-Sep-22	10	0



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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
MVAC-SPS1020	Sewage Pumping Station - 1st submission to PM & review	30	30			20-Jul-22	23-Aug-22	10	0
MVAC-SPS1030	Sewage Pumping Station - 2nd submission to PM & approval	21	21			24-Aug-22	16-Sep-22	10	0
FS		216	71			06-Dec-21 A	24-Aug-22	30	
FS-SPS1010	Shop Drawing Preparation and submission for Sewage Pumping Station (FS)	170	37			06-Dec-21 A	15-Jul-22	30	0
FS-SPS1020	Sewage Pumping Station - 1st submission to PM & review	160	50			18-Jan-22 A	30-Jul-22	30	0
FS-SPS1030	Sewage Pumping Station - 2nd submission to PM & approval	21	21			01-Aug-22	24-Aug-22	30	0
PD		231	77			25-Nov-21 A	31-Aug-22	24	
PD-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (PD)	191	37			25-Nov-21 A	15-Jul-22	24	0
PD-SPS1010	Sewage Pumping Station - 1st submission to PM & review	188	51			15-Dec-21 A	01-Aug-22	24	0
PD-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	41	41			15-Jul-22*	31-Aug-22	24	0
SPS Design		213	77			03-Jan-22 A	31-Aug-22	24	
SD-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (SPS Design)	160	37			03-Jan-22 A	15-Jul-22	24	0
SD-SPS1010	Sewage Pumping Station - 1st submission to PM & review	30	51			18-Jan-22 A	01-Aug-22	24	0
SD-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	41	41			15-Jul-22*	31-Aug-22	24	0
ELE		201	77			31-Dec-21 A	31-Aug-22	24	
ELE-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (ELE)	161	37			31-Dec-21 A	15-Jul-22	24	0
ELE-SPS1010	Sewage Pumping Station - 1st submission to PM & review	166	51			12-Jan-22 A	01-Aug-22	24	0
ELE-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	41	41			15-Jul-22	31-Aug-22	24	0
ELV		199	77			04-Jan-22 A	31-Aug-22	24	
ELV-SPS1000	Shop Drawing Preparation and submission for Sewage Pumping Station (ELV)	159	37			04-Jan-22 A	15-Jul-22	24	0
ELV-SPS1010	Sewage Pumping Station - 1st submission to PM & review	166	14			12-Jan-22 A	01-Aug-22	24	0
ELV-SPS1020	Sewage Pumping Station - 2nd submission to PM & approval	41	41			15-Jul-22*	31-Aug-22	24	0
BS Materials Submission & Procurement (SPS)		60	60			15-Aug-22	26-Oct-22	130	
SWP		60	60			15-Aug-22	26-Oct-22	130	
Surge Analysis		60	60			15-Aug-22	26-Oct-22	130	
SWP-SPS1400	Preparation and Submission of Surge Analysis Report	60	60			15-Aug-22*	26-Oct-22	130	0

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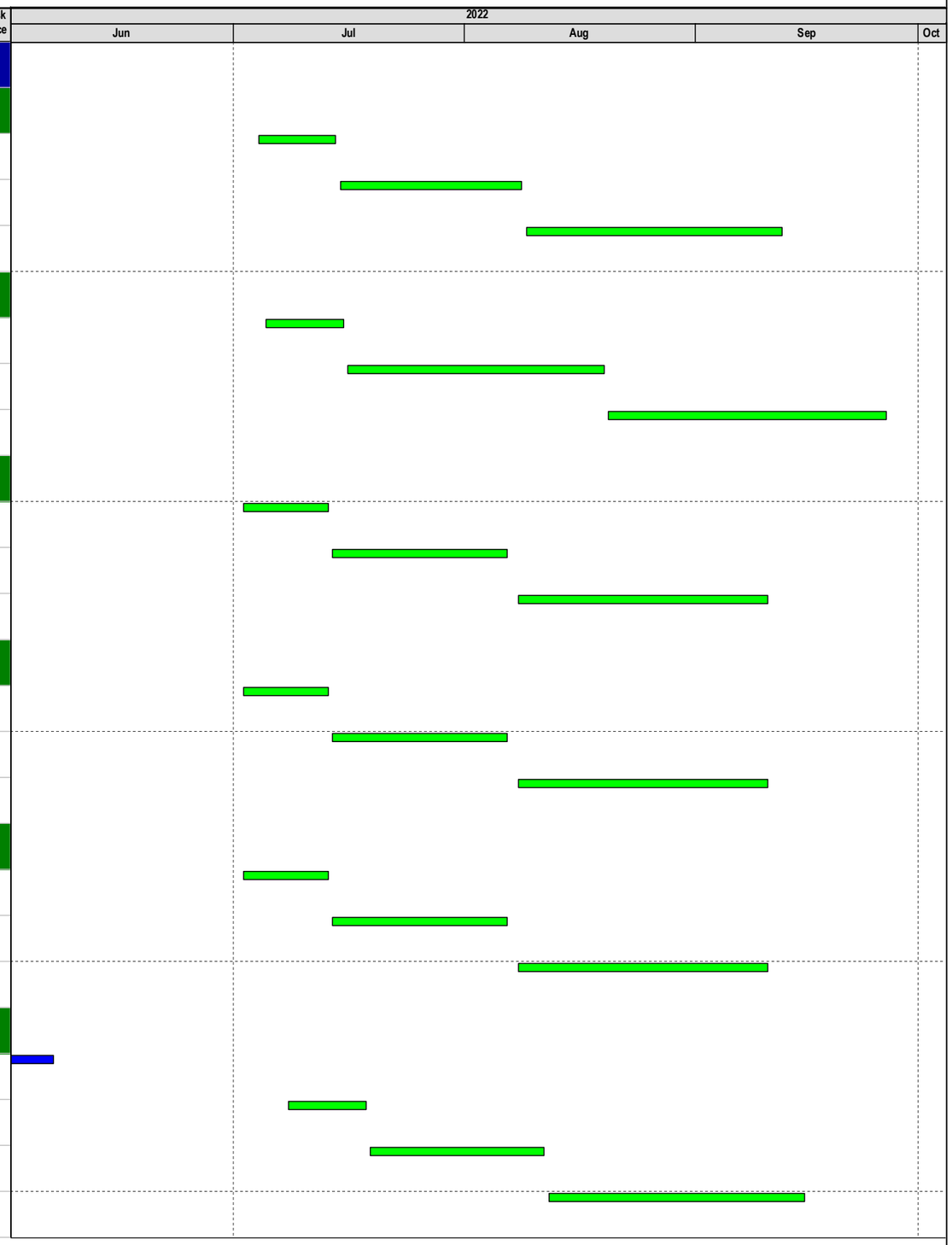
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
Footbridge FK2 Road lighting		113	73	22-Jul-21	18-Oct-21	14-May-22 A	26-Sep-22	13	
Electrical schematic (CSF-445)		61	61	22-Jul-21	18-Oct-21	04-Jul-22	12-Sep-22	24	
RD-ES1020	Footbridge Electrical Schematic - 2nd submission to PM & approval	10	10	22-Jul-21	02-Aug-21	04-Jul-22*	14-Jul-22	24	0
RD-ES1030	Footbridge Electrical Schematic - 1st submission to HyD	21	21	03-Aug-21	03-Sep-21	15-Jul-22	08-Aug-22	24	0
RD-ES1040	Footbridge Electrical Schematic - Re-submission to HyD and approval	30	30	04-Sep-21	18-Oct-21	09-Aug-22	12-Sep-22	24	0
EL System - Electrical and lighting layout (CSF-494)		71	71			05-Jul-22	26-Sep-22	13	
RD-EL1020	Electrical and lighting layout - 2nd submission to PM & approval	10	10			05-Jul-22*	15-Jul-22	13	0
RD-EL1030	Electrical and lighting layout - 1st submission to HyD	30	30			16-Jul-22	19-Aug-22	13	0
RD-EL1040	Electrical and lighting layout - Re-submission to HyD and approval	31	31			20-Aug-22	26-Sep-22	13	0
Materials Submission (CSF-693)		61	61			02-Jul-22	10-Sep-22	25	
RD-MS1020	Material Submission - 2nd submission to PM & approval	10	10			02-Jul-22	13-Jul-22	25	0
RD-MS1030	Material Submission - 1st submission to HyD	21	21			14-Jul-22	06-Aug-22	25	0
RD-MS1040	Material Submission - Re-submission to HyD and approval	30	30			08-Aug-22	10-Sep-22	25	0
Drawing Submission of Road Lighting Layout (CSF-703)		61	61			02-Jul-22	10-Sep-22	25	
RD-RL1020	Road Lighting Layout - 2nd submission to PM & approval	10	10			02-Jul-22	13-Jul-22	25	0
RD-RL1030	Road Lighting Layout - 1st submission to HyD	21	21			14-Jul-22	06-Aug-22	25	0
RD-RL1040	Road Lighting Layout - Re-submission to HyD and approval	30	30			08-Aug-22	10-Sep-22	25	0
Lux Simulation Report (CSF-717)		61	61			02-Jul-22	10-Sep-22	25	
RD-LUX1020	Lux Simulation Report - 2nd submission to PM & approval	10	10			02-Jul-22	13-Jul-22	25	0
RD-LUX1030	Lux Simulation Report - 1st submission to HyD	21	21			14-Jul-22	06-Aug-22	25	0
RD-LUX1040	Lux Simulation Report - Re-submission to HyD and approval	30	30			08-Aug-22	10-Sep-22	25	0
Internal Arrangement of PB-01 (CSF-726)		105	60			14-May-22 A	15-Sep-22	21	
RD-PB1010	Internal Arrangement drawings of PB-01 - 1st submission to PM & review	19	0			14-May-22 A	06-Jun-22 A		0
RD-PB1020	Internal Arrangement drawings of PB-01 - 2nd submission to PM & approval	9	9			08-Jul-22	18-Jul-22	21	0
RD-PB1030	Internal Arrangement drawings of PB-01 - 1st submission to HyD	21	21			19-Jul-22	11-Aug-22	21	0
RD-PB1040	Internal Arrangement drawings of PB-01 - Re-submission to HyD and approval	30	30			12-Aug-22	15-Sep-22	21	0



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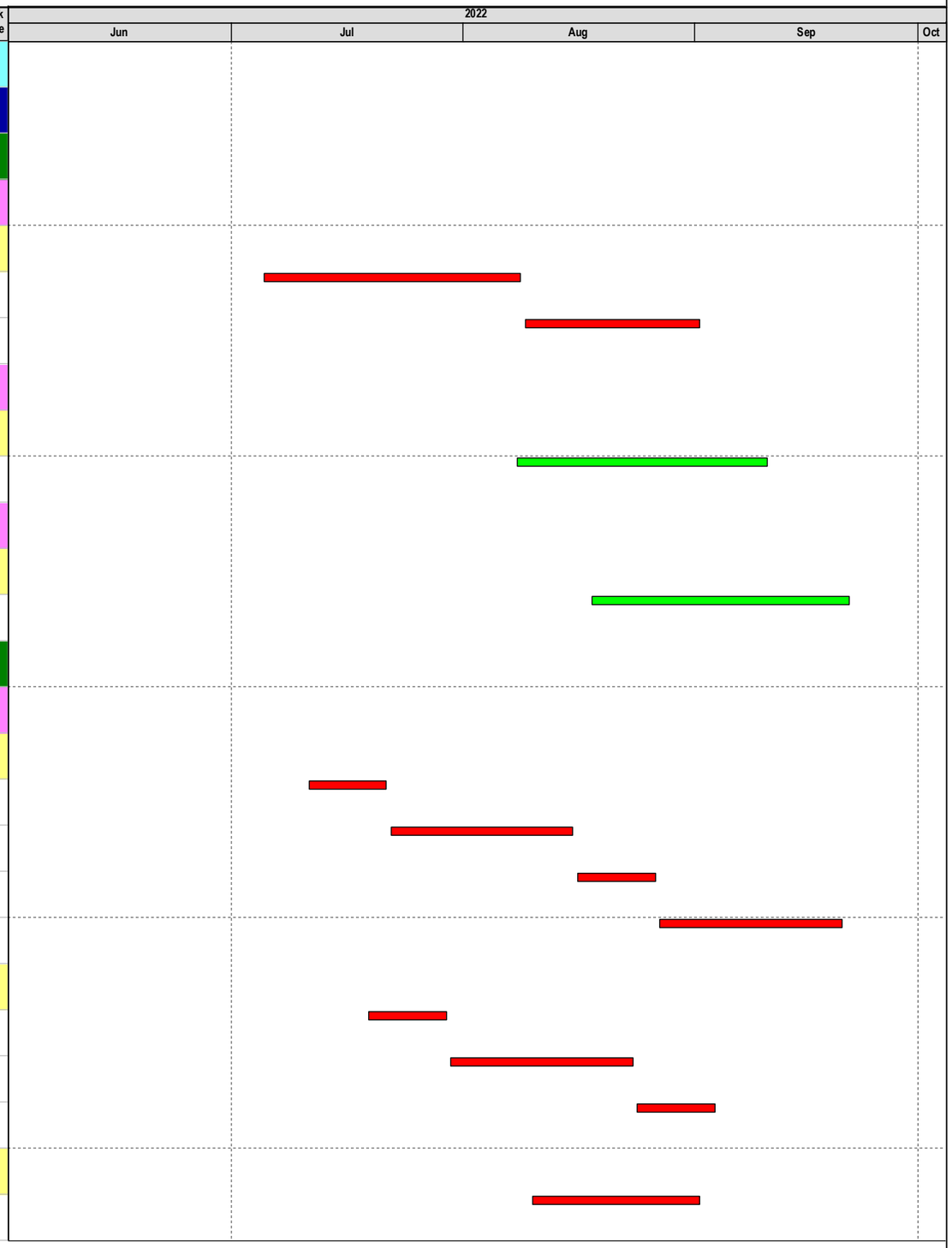
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
ABWF Submission and Mock Up		68	68			05-Jul-22	21-Sep-22	38	
Visitor Centre		68	68			05-Jul-22	21-Sep-22	38	
ABWF Shop Drawing Submission (Visitor Centre)		68	68			05-Jul-22	21-Sep-22	38	
Package 1		51	51			05-Jul-22	01-Sep-22	-3	
Suspended Ceiling		51	51			05-Jul-22	01-Sep-22	-3	
ABWF-P1-1000	Shop Drawing Submission - Suspended Ceiling	30	30			05-Jul-22	08-Aug-22	-3	0
ABWF-P1-1010	Suspended Ceiling - 1st round comment by PM & review	21	21			09-Aug-22	01-Sep-22	-3	0
Package 2 Doors / Windows		30	30			08-Aug-22	10-Sep-22	5	
Window / Lourves		30	30			08-Aug-22	10-Sep-22	5	
ABWF-P2-1210	Shop Drawing Submission - Window / Louvres	30	30			08-Aug-22*	10-Sep-22	5	0
Package 3 Fences / Skylight		30	30			18-Aug-22	21-Sep-22	38	
Skylight		30	30			18-Aug-22	21-Sep-22	38	
ABWF-P3-1000	Shop Drawing Submission - Skylight	30	30			18-Aug-22	21-Sep-22	38	0
Mock Up (Visitor Centre)		62	62			11-Jul-22	20-Sep-22	-2	
By Package 1		62	62			11-Jul-22	20-Sep-22	-20	
Plastering / Tile Adhesive		62	62			11-Jul-22	20-Sep-22	-43	
ABWF-VC1000	Fabrication of Mock Up - Plastering / Tile Adhesive	10	10			11-Jul-22	21-Jul-22	-43	0
ABWF-VC1010	Mock Up 1st round comment by PM & review	21	21			22-Jul-22	15-Aug-22	-43	0
ABWF-VC1020	Mock Up modification, 2nd round comment by PM & approval	10	10			16-Aug-22	26-Aug-22	-43	0
ABWF-VC1030	Material Procurement of Plastering material / Tile Adhesive	21	21			27-Aug-22	20-Sep-22	-43	0
Internal tiling works		41	41			19-Jul-22	03-Sep-22	-6	
ABWF-VC1160	Fabrication of Mock Up - Internal tiling works	10	10			19-Jul-22	29-Jul-22	-6	0
ABWF-VC1170	Mock Up 1st round comment by PM & review	21	21			30-Jul-22	23-Aug-22	-6	0
ABWF-VC1180	Mock Up modification, 2nd round comment by PM & approval	10	10			24-Aug-22	03-Sep-22	-6	0
External suspended Baffle Ceiling		20	20			10-Aug-22	01-Sep-22	-37	
ABWF-VC1360	Fabrication of Mock Up - External Suspended Baffle Ceiling	20	20			10-Aug-22	01-Sep-22	-37	0



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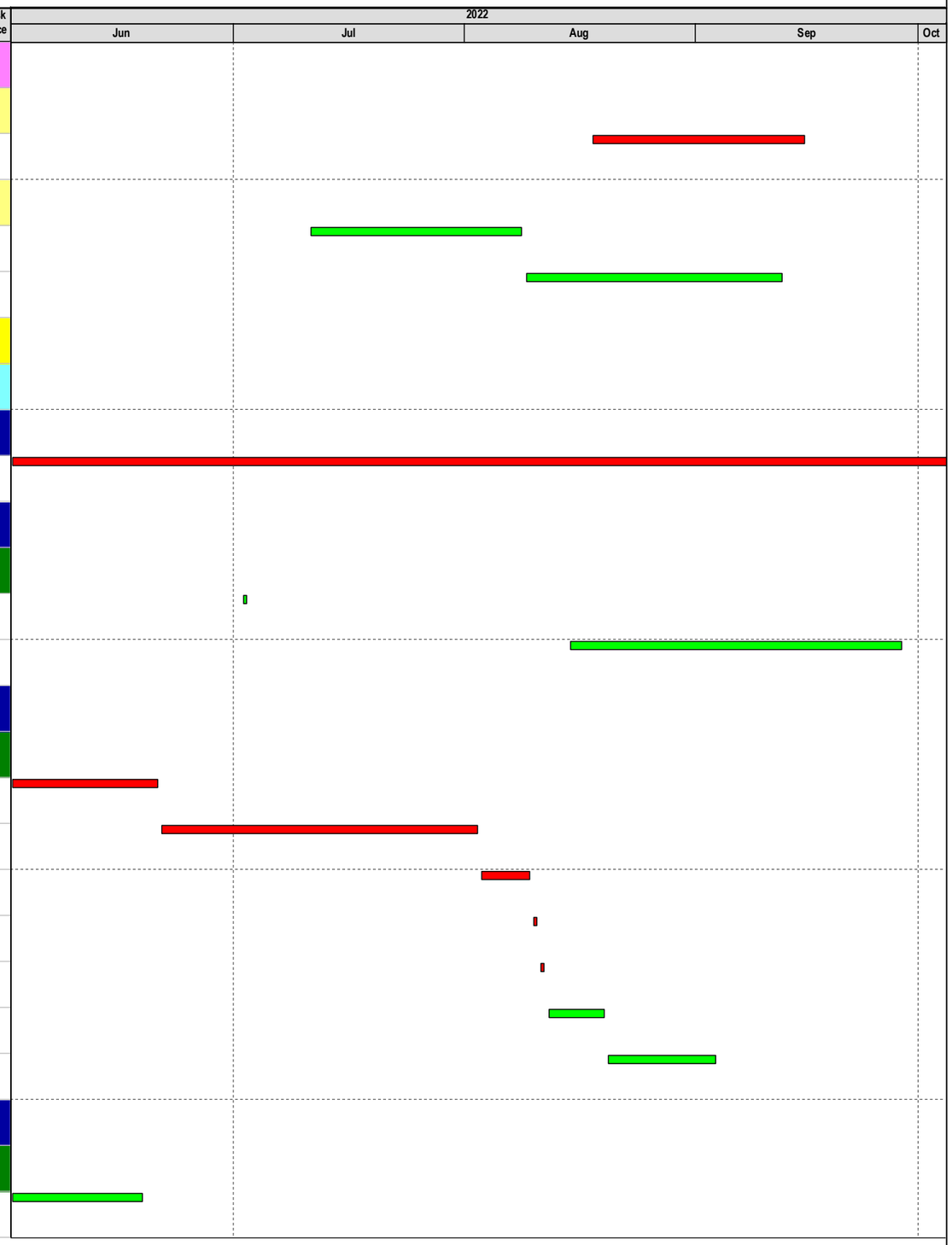
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
By Package 4		58	58			11-Jul-22	15-Sep-22	2	
Tactile Warning Accessories		25	25			18-Aug-22	15-Sep-22	-45	
ABWF-VC1520	Fabrication of Mock Up - Tactile Warning Accessories	25	25			18-Aug-22	15-Sep-22	-45	0
Painting		55	55			11-Jul-22	12-Sep-22	5	
ABWF-VC1560	Fabrication of Mock Up - Painting	25	25			11-Jul-22	08-Aug-22	5	0
ABWF-VC1570	Mock Up 1st round comment by PM & review	30	30			09-Aug-22	12-Sep-22	5	0
Works in Section 2		1422	776	27-Feb-21	02-May-23	10-Apr-20 A	24-Dec-24	0	
Portion 2 - Road & Drains		1327	776	13-Jul-21	26-Aug-21	03-Aug-20 A	24-Dec-24	0	
Pre-construction works		1327	776			03-Aug-20 A	24-Dec-24	0	
P2-1070	Tree Protection and Preservation	1327	776			03-Aug-20 A	24-Dec-24	0	4
Sewer Installation from KT1.29A to KT1.30A by pipejacking		75	75	13-Jul-21	26-Aug-21	02-Jul-22	28-Sep-22	174	
ELS of Launching shaft at FMH_KT1.30A		75	75	13-Jul-21	26-Aug-21	02-Jul-22	28-Sep-22	174	
P2-3140	Set up works area for tree felling & ELS works	1	1	13-Jul-21	15-Jul-21	02-Jul-22	02-Jul-22	174	0
P2-3150	ELS for launching shaft at FMH_KT1.30A	38	38	16-Jul-21	26-Aug-21	15-Aug-22	28-Sep-22	174	6
Pipe Jacking		91	80			19-May-22 A	03-Sep-22	378	
(KT6003A to KT2003) (IL: 6.0-6.4mPD) 2100mm dia		91	80			19-May-22 A	03-Sep-22	378	
P2-8190	Set Up Pipe Jacking TBM	27	16			19-May-22 A	20-Jun-22	-36	0
P2-8195	Pipe Jacking from KT6003A to KT2003 (2.1 dia) (115m ~3m/day)	36	36			21-Jun-22	02-Aug-22	-36	5
P2-8200	Pre-treatment grouting at receiving pit, set up exit ring and form opening	6	6			03-Aug-22	09-Aug-22	-36	0
P2-8375	Lift Out TBM at receiving pit	1	1			10-Aug-22	10-Aug-22	-36	0
P2-8385	Pushing the remaining pipeline to designated location at receiving pit	1	1			11-Aug-22	11-Aug-22	-36	0
P2-8395	Demolish and remove slurry pipe, power cable, lubrication pipe	7	7			12-Aug-22	19-Aug-22	378	0
P2-8405	Lining Welding works	13	13			20-Aug-22	03-Sep-22	378	0
Manhole Construction		71	60			19-May-22 A	11-Aug-22	-36	
FMH_KT1.23		71	60			19-May-22 A	11-Aug-22	-36	
P2-8290	Manhole FMH_KT1.23 construction	21	15			19-May-22 A	18-Jun-22	9	1



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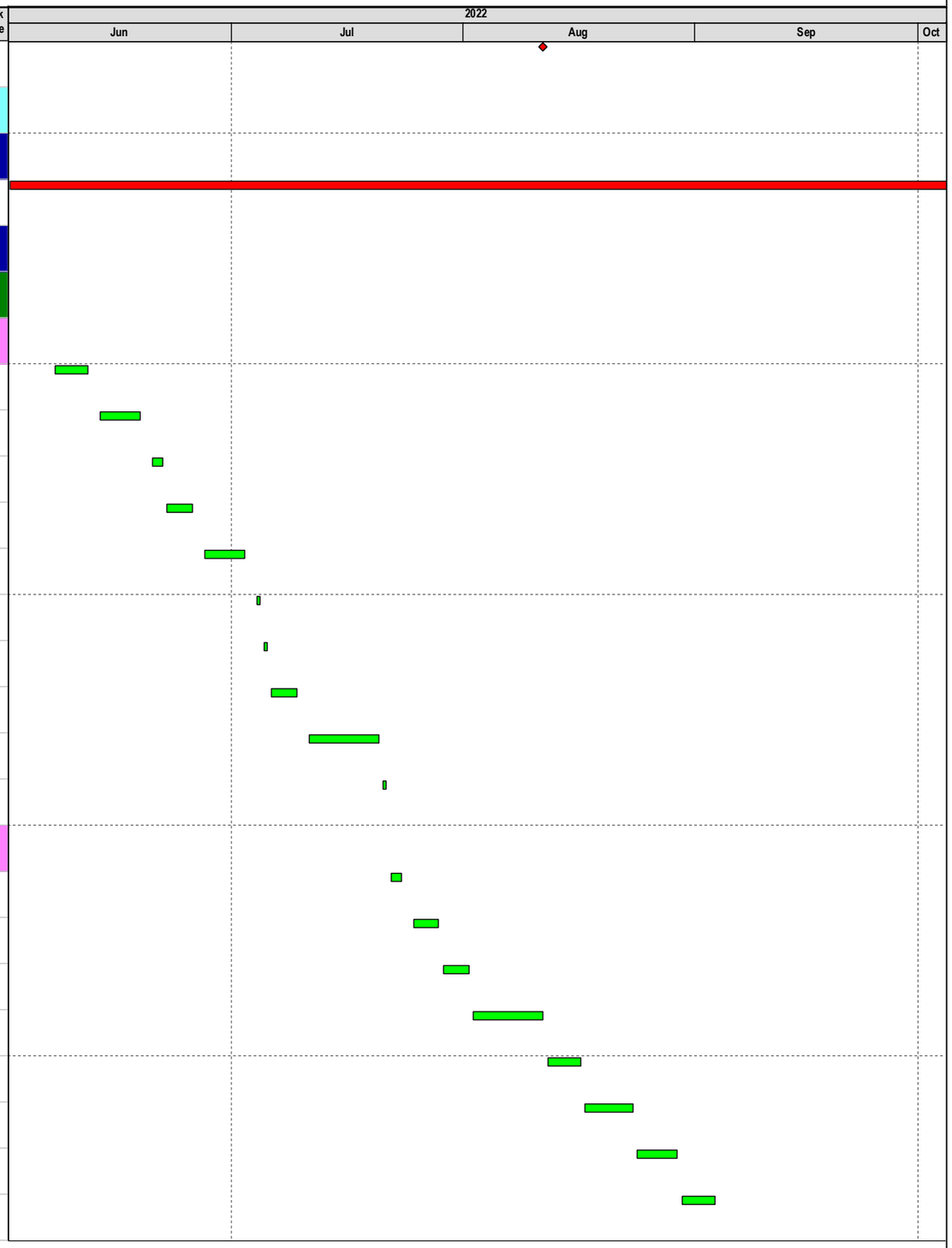
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P2-8293	Handover cofferdam to C1	0	0				11-Aug-22*	-36	1
Portion 3 - Road & Drains		1327	776	06-May-22	02-May-23	03-Aug-20 A	24-Dec-24	0	
Pre-construction works		1327	776	06-May-22	06-May-22	03-Aug-20 A	24-Dec-24	0	
P3-1060	Tree Protection and Preservation	1327	776	06-May-22	06-May-22	03-Aug-20 A	24-Dec-24	0	4
Drainage Outfall_6013 constuction by Open Cut (By CE-067)		76	76			07-Jun-22	03-Sep-22	68	
Manhole SMH_KT6013A & FMH_KT1.36A		76	76			07-Jun-22	03-Sep-22	68	
SMH_KT6013A		38	38			07-Jun-22	21-Jul-22	68	
P3-5335	Dismantle of scaffolding of manhole KT1.36A	5	5			07-Jun-22	11-Jun-22	68	2
P3-5340	Mass Concrete and side backfill for formwork erection of lower portion of manhole KT6013A	6	6			13-Jun-22	18-Jun-22	68	2
P3-5345	Dismantle 3rd Layer Strut	2	2			20-Jun-22	21-Jun-22	68	2
P3-5610	Formwork erection of manhole KT6013A (lower portion)	4	4			22-Jun-22	25-Jun-22	68	2
P3-5620	Rebar fixing of manhole KT6013A (lower portion)	5	5			27-Jun-22	02-Jul-22	68	2
P3-5630	Concreting of manhole KT6013A (lower portion)	1	1			04-Jul-22	04-Jul-22	68	2
P3-5640	Dismantle of formwork (lower portion)	1	1			05-Jul-22	05-Jul-22	68	2
P3-5730	Formwork erection of manhole KT6013A:(Middle portion)	4	4			06-Jul-22	09-Jul-22	68	2
P3-5740	Rebar fixing of manhole KT6013A:(Middle portion)	9	9			11-Jul-22	20-Jul-22	68	2
P3-5750	Concreting of manhole KT6013A:(Middle portion)	1	1			21-Jul-22	21-Jul-22	68	2
Drainage Installation		38	38			22-Jul-22	03-Sep-22	68	
P3-5645	Dismantle of formwork (Middle portion)	2	2			22-Jul-22	23-Jul-22	68	2
P3-5647	Backfill to Middle Part of Manhole	4	4			25-Jul-22	28-Jul-22	68	2
P3-5650	Dismantle 2nd Layer Strut	3	3			29-Jul-22	01-Aug-22	68	2
P3-5670	ELS between Manhole KT6013A to Outfall	9	9			02-Aug-22	11-Aug-22	68	2
P3-5680	Laying of 3m dia. Mild Steel drain	4	4			12-Aug-22	16-Aug-22	68	2
P3-5690	Backfill drain trench to Existing Ground Level	6	6			17-Aug-22	23-Aug-22	68	2
P3-5700	Dismantle the 1st layer strut	5	5			24-Aug-22	29-Aug-22	68	2
P3-5720	Backfill to original ground level and remove Sheet Pile	5	5			30-Aug-22	03-Sep-22	68	2



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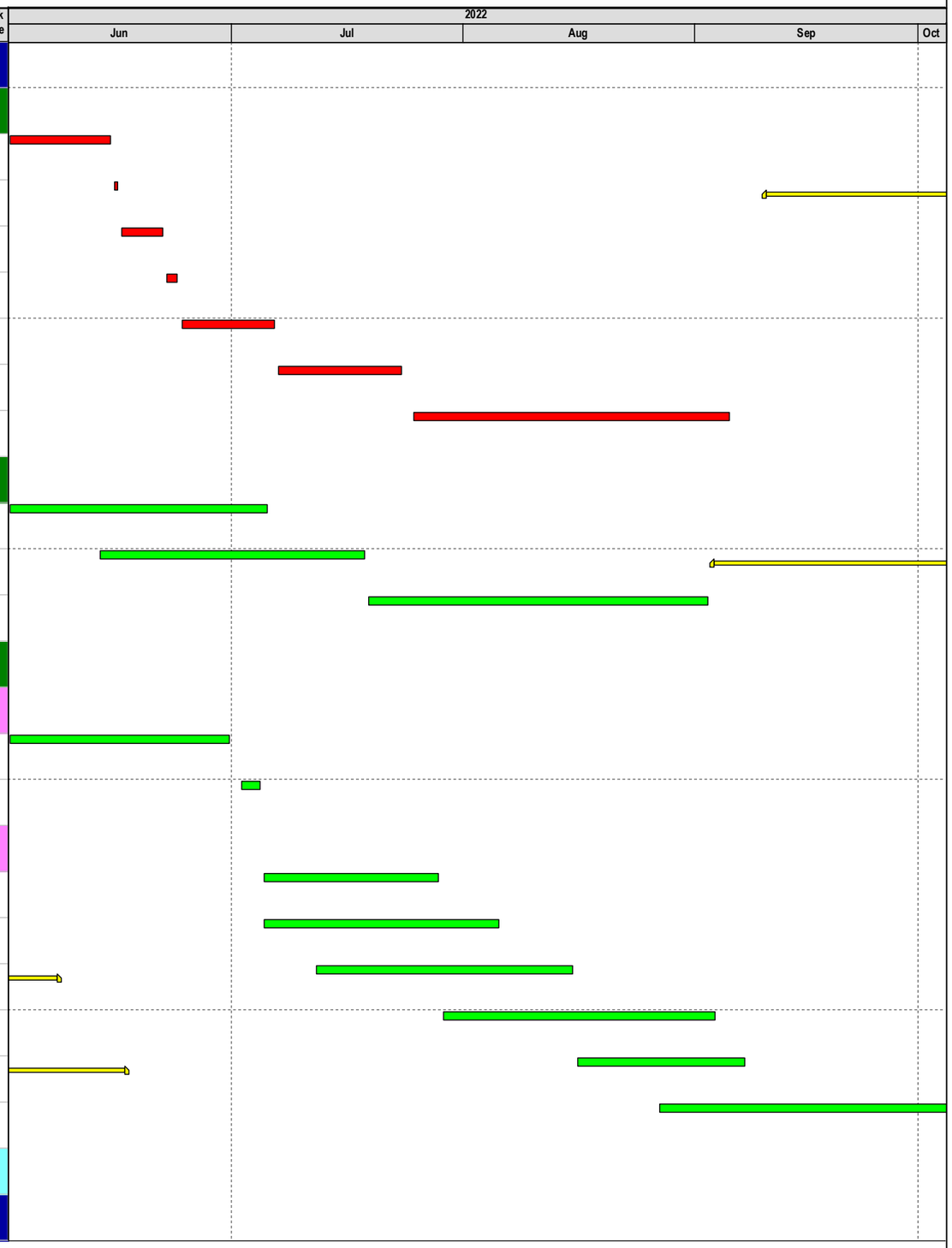
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
Sewer Pipeline Installation (KT1.33A to KT1.41A)		182	105	16-May-22	02-May-23	01-Mar-22 A	06-Oct-22	79	
KT1.39A - KT1.38A (99m) (Pipe Jacking by CE-074)		102	81	10-Sep-22	02-May-23	07-May-22 A	05-Sep-22	0	
P3-2556	Pipe Jacking of 800 Concrete Pipe (1.39A to 1.38A) (99m ~3m/d)	37	11			07-May-22 A	14-Jun-22	0	2
P3-3000	TBM reach the sheet pile at receiving pit	1	1	10-Sep-22	06-Jan-23	15-Jun-22	15-Jun-22	0	0
P3-3002	Pre- treatment grouting, setup the exit ring, cutting sheet pile	5	5			16-Jun-22	21-Jun-22	0	0
P3-3004	TBM break through, setup guide rail, lifting out the TBM, jacking the remaining pipe to designated location, air	2	2			22-Jun-22	23-Jun-22	0	0
P3-3006	Demolish & removal of the slurry pipe, power cable inside the jacking pipe,	10	10			24-Jun-22	06-Jul-22	0	0
P3-3010	Set up Pipe Jacking Equipment (2nd pipe)	15	15	10-Mar-23	10-Mar-23	07-Jul-22	23-Jul-22	0	0
P3-3020	Pipe Jacking of 800 Concrete Pipe (1.39A to 1.38A) (99m ~3m/d)	37	37	10-Mar-23	02-May-23	25-Jul-22	05-Sep-22	0	2
KT1.38A - KT1.37A (99m) (Open Cut by CE-075)		81	79	03-Sep-22	05-Oct-22	30-May-22 A	02-Sep-22	85	
P3-2265	Backfilling of drain to at grade level KT1.37A	40	28			30-May-22 A	05-Jul-22	85	2
P3-2270	Construction of Manhole KT1.37A	30	30	03-Sep-22	05-Oct-22	13-Jun-22	18-Jul-22	85	2
P3-2275	Backfilling of manhole to at grade level KT1.37A	40	40			19-Jul-22	02-Sep-22	85	2
KT1.37A - KT1.36A (90m) (Open Cut by CE-068)		182	105	16-May-22	16-Jun-22	01-Mar-22 A	06-Oct-22	79	
Tree Removal		104	27			01-Mar-22 A	04-Jul-22	79	
P3-2009.4	Application and Approval for tree felling of T0937	78	25			01-Mar-22 A	30-Jun-22	79	2
P3-2009.5	Tree felling works of T0937 to release working space for sheet piling	2	2			02-Jul-22	04-Jul-22	79	2
After Tree Removal		179	78	16-May-22	16-Jun-22	04-Mar-22 A	06-Oct-22	79	
P3-2009.6	Sheet Pile Installation for open trench at KT1.37A - KT1.36A (River side After tree removal)	21	21			05-Jul-22	28-Jul-22	79	2
P3-2009.7	Sheet Pile Installation for open trench at KT1.37A - KT1.36A (Cycle Track Side to close the entire trench)	103	28			04-Mar-22 A	05-Aug-22	87	2
P3-2010	Soft Excavation to 1st strut level	30	30	16-May-22	07-Jun-22	12-Jul-22	15-Aug-22	79	2
P3-2010.1	Installation of strut S1	32	32			29-Jul-22	03-Sep-22	79	2
P3-2020	Soft Excavation to 2nd strut level	20	20	23-May-22	16-Jun-22	16-Aug-22	07-Sep-22	79	2
P3-2020.1	Installation of strut S2	32	32			27-Aug-22	06-Oct-22	79	2
Portion 4 - Road & Drains		1327	776	27-Feb-21	16-Feb-23	03-Aug-20 A	24-Dec-24	0	
Pre-construction works		1327	776	27-Feb-21	10-May-21	03-Aug-20 A	24-Dec-24	0	



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P4-1050	Tree Protection and Preservation	1327	776	27-Feb-21	10-May-21	03-Aug-20 A	24-Dec-24	0	4
Rising Main Installation by Open Cut (CHB 0 to 493 & CHB515 to 943.4		103	96	28-Jan-23	16-Feb-23	24-May-22 A	23-Sep-22	56	
Rising Main CHB255 to CHB370 (120M)		103	96	28-Jan-23	16-Feb-23	24-May-22 A	23-Sep-22	56	
P4-3210	Sheet Pile Installation for open trench (600 pcs)	49	49	28-Jan-23	11-Feb-23	24-May-22 A	29-Jul-22	56	
P4-3212	Soft Excavation to 1st strut level	57	57			23-Jun-22	29-Aug-22	56	
P4-3214	Installation of strut S1	58	58			27-Jun-22	02-Sep-22	56	
P4-3216	Soft Excavation to 2nd strut level	42	42			19-Jul-22	05-Sep-22	56	
P4-3218	Installation of strut S2	44	44			30-Jul-22	19-Sep-22	56	
P4-3220	Soft Excavation to F.L.	39	39	02-Feb-23	16-Feb-23	09-Aug-22	23-Sep-22	56	
Sewage Rising Main Installation by Pipe Jacking CHB493 to CHB514 (2		72	72			15-Jul-22	11-Oct-22	191	
P4-5405	Tentative Completion Date of Ho Sheung Heung Pai Lau	0	0				15-Jul-22*	191	6
P4-5407	Haul Road Modification	14	14			16-Jul-22	01-Aug-22	191	6
P4-5410	Site Setup, Set up TTA & Plant Mobilization	14	14			02-Aug-22	17-Aug-22	191	6
P4-5420	Instrumentation Installation and Monitoring Works	6	6			18-Aug-22	24-Aug-22	191	3
P4-5430	ELS for Launching Pit (3 layers of strut)	38	38			25-Aug-22	11-Oct-22	191	4
P4-5440	ELS for Receiving Pit (3 layers of strut)	38	38			25-Aug-22	11-Oct-22	191	3
Portion 5 - Sewage Rising Main		1422	776			10-Apr-20 A	24-Dec-24	0	
Preparation Works		1422	776			10-Apr-20 A	24-Dec-24	0	
P5-5030	Tree Protection and Preservation	1422	776			10-Apr-20 A	24-Dec-24	0	4
Portion 7 - Kwu Tung North Sewage Pumping station		1327	776			03-Aug-20 A	24-Dec-24	0	
Sewage Pumping Station		1327	776			03-Aug-20 A	24-Dec-24	0	
Site Preparation		1327	776			03-Aug-20 A	24-Dec-24	0	
P7-1040	Tree Protection and Preservation	1327	776			03-Aug-20 A	24-Dec-24	0	4
Excavation		90	80			20-May-22 A	03-Sep-22	1	
1st Stage		1	1			02-Jun-22	02-Jun-22	63	
P7-3125.8	Blinding Casting of Portion 1 & 2	1	1			02-Jun-22*	02-Jun-22	63	5

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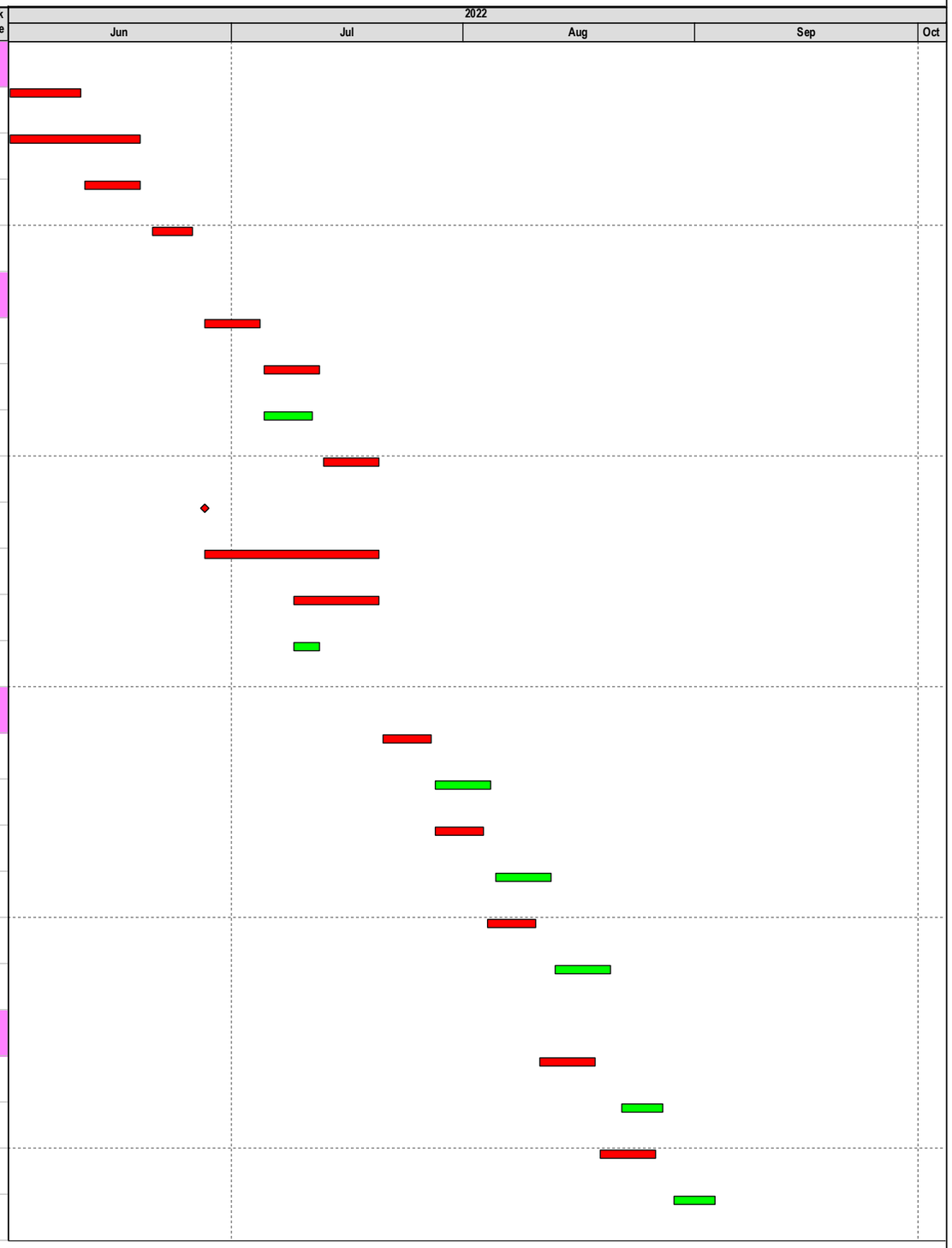
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
2nd Stage Portion 3-6 1st level (+4.5mPD)		31	21			20-May-22 A	25-Jun-22	0	
P7-3127	Soft Excavation and extend the slope to Portion 4 (600cu m)	14	8			20-May-22 A	10-Jun-22	0	1
P7-3130	Installation of strut S1 (+4.5mPD) at Portion 4	18	15			20-May-22 A	18-Jun-22	0	1
P7-3250	Soft Excavation and extend the slope to Portion 6 (200cu m)	7	7			11-Jun-22	18-Jun-22	0	1
P7-3260	Installation of strut S1 (+4.5mPD) at Portion 6	6	6			20-Jun-22	25-Jun-22	0	1
3rd Stage Portion 3-6 2nd level (+2.2mPD)		20	20			27-Jun-22	20-Jul-22	0	
P7-3130.1	Soft Excavation to 2nd level of strut at Portion 3 (+1.47mPD)	6	6			27-Jun-22	04-Jul-22	0	1
P7-3131	Installation of 2nd level of strut at Portion 3 (+2.2mPD)	7	7			05-Jul-22	12-Jul-22	0	1
P7-3132	Soft Excavation to 2nd strut level (+1.47mPD) at Portion 4 to 6 (~980cu.m)	6	6			05-Jul-22	11-Jul-22	1	1
P7-3132.1	Installation of 2nd level of strut at Portion 4-6 (+2.2mPD)	7	7			13-Jul-22	20-Jul-22	0	1
P7-3133	Plant mobilization of Grout Curtain Installation	0	0			27-Jun-22		0	1
P7-3134	Grout Curtain Installation at Portion 3 (23nos)	20	20			27-Jun-22	20-Jul-22	0	1
P7-3270	Grout Curtain Installation at Portion 4 (11nos)	10	10			09-Jul-22	20-Jul-22	0	1
P7-3520	Installation of Dewatering Well (6nos)	3	3			09-Jul-22	12-Jul-22	7	1
4th Stage Portion 3-6 3rd level (-0.5mPD)		27	27			21-Jul-22	20-Aug-22	1	
P7-3160	Soft Excavation from +1.47mPD to -1.5mPD at Portion 3 (~1730 cu.m)	6	6			21-Jul-22	27-Jul-22	0	5
P7-3170	Installation of strut S3 (-0.5mPD) at Portion 3	7	7			28-Jul-22	04-Aug-22	1	5
P7-3180	Soft Excavation from +1.47mPD to -1.5mPD at Portion 4 (~1730 cu.m)	6	6			28-Jul-22	03-Aug-22	0	5
P7-3190	Installation of strut S3 (-0.5mPD) at Portion 4	7	7			05-Aug-22	12-Aug-22	1	5
P7-3200	Soft Excavation from +1.47mPD to -1.5mPD at Portion 5-6	6	6			04-Aug-22	10-Aug-22	0	5
P7-3210	Installation of strut S3 (-0.5mPD) at Portion 5-6	7	7			13-Aug-22	20-Aug-22	1	1
5th Stage Portion 3-6 4th level (-1.5mPD)		21	21			11-Aug-22	03-Sep-22	1	
P7-3220	Soft Excavation from -1.5mPD to -2.5mPD at Portion 3 (~600 cu.m)	7	7			11-Aug-22	18-Aug-22	0	5
P7-3230	Installation of strut S4 (-1.5mPD) at Portion 3	6	6			22-Aug-22	27-Aug-22	1	5
P7-3280	Soft Excavation from -1.5mPD to -2.5mPD at Portion 4(~600 cu.m)	7	7			19-Aug-22	26-Aug-22	0	5
P7-3290	Installation of strut S4 (-1.5mPD) at Portion 4	6	6			29-Aug-22	03-Sep-22	1	5



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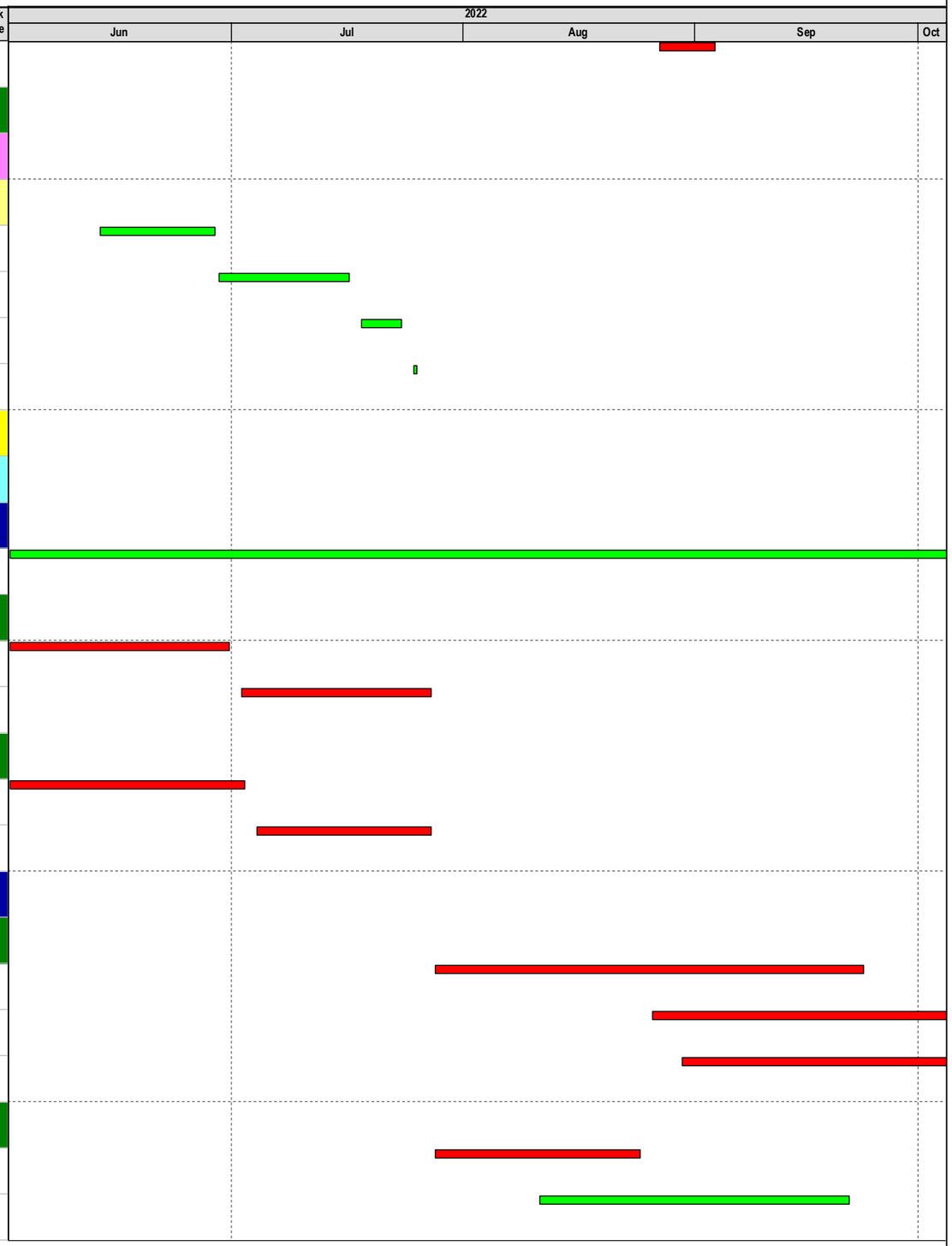
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P7-3300	Soft Excavation from -1.5mPD to -2.5mPD at Portion 5-6(~600 cu.m)	7	7			27-Aug-22	03-Sep-22	0	5
Station Structure		36	36			13-Jun-22	25-Jul-22	56	
Basement to G/F Wall & G/F Slab		36	36			13-Jun-22	25-Jul-22	56	
+1.55mPD (1st Pour)		36	36			13-Jun-22	25-Jul-22	56	
P7-BF1280	Cutting Pile Head and Capping Plate Installation	14	14			13-Jun-22*	28-Jun-22	56	2
P7-BF1330	Rebar fixing of basement Slab	15	15			29-Jun-22	16-Jul-22	56	1
P7-BF1340	Base Slab Shutters	6	6			18-Jul-22	23-Jul-22	56	1
P7-BF1350	Base Slab (+1.55mPD) Concreting (+2.7mPD) (312m3)	1	1			25-Jul-22	25-Jul-22	56	1
Works in Section 3		1327	226	14-Oct-22	09-Nov-22	03-Aug-20 A	02-Mar-23	1	
Portion 8 - Roads & Drains		1327	226	14-Oct-22	09-Nov-22	03-Aug-20 A	02-Mar-23	1	
Pre-construction works		1327	226			03-Aug-20 A	02-Mar-23	1	
P8-1055	Tree Protection and Preservation	1327	226			03-Aug-20 A	02-Mar-23	1	4
CLP Cable Relocation		190	47			09-Dec-21 A	27-Jul-22	-382	
P8-1060	KT1.40 - KT1.41 Application & Approval for the relocation of existing power cables by CLP	90	25			09-Dec-21 A	30-Jun-22	-382	2
P8-1070	KT1.40 - KT1.41 Relocation of existing power cables by CLP	22	22			02-Jul-22	27-Jul-22	-382	2
HyD Pilllar Box / Lighting Relocation		69	47			06-May-22 A	27-Jul-22	-382	
P8-9050	Approval of proposal for temp trafiic / pedestrian route lighting KT1.40 - KT1.41	48	26			06-May-22 A	02-Jul-22	-382	2
P8-9060	Relocation works of existing streetlight and pillar boxes	21	21			04-Jul-22	27-Jul-22	-382	2
Sewer Pipeline Installation		86	86	14-Oct-22	09-Nov-22	28-Jul-22	08-Nov-22	20	
KT1.40A - KT1.41A (99m) (Open Cut by CE-071)		86	86			28-Jul-22	08-Nov-22	-382	
P8-5140	Sheet Pile Installation for open trench (Open Trench from 1.40A to 1.41A)	49	49			28-Jul-22	23-Sep-22	-382	
P8-5150	Soft Excavation to 1st strut level	57	57			26-Aug-22	03-Nov-22	-382	
P8-5160	Installation of strut S1	58	58			30-Aug-22	08-Nov-22	-382	
Sewer Installation at SMH_KT5101A to OF5101(50m) (Open Cut)		59	59	14-Oct-22	28-Oct-22	28-Jul-22	07-Oct-22	36	
P8-3010	Sheet Pile Installation	24	24	14-Oct-22	21-Oct-22	28-Jul-22	24-Aug-22	-10	1
P8-3020	Soft Excavation to 1st strut level	36	36	17-Oct-22	24-Oct-22	11-Aug-22	21-Sep-22	15	1



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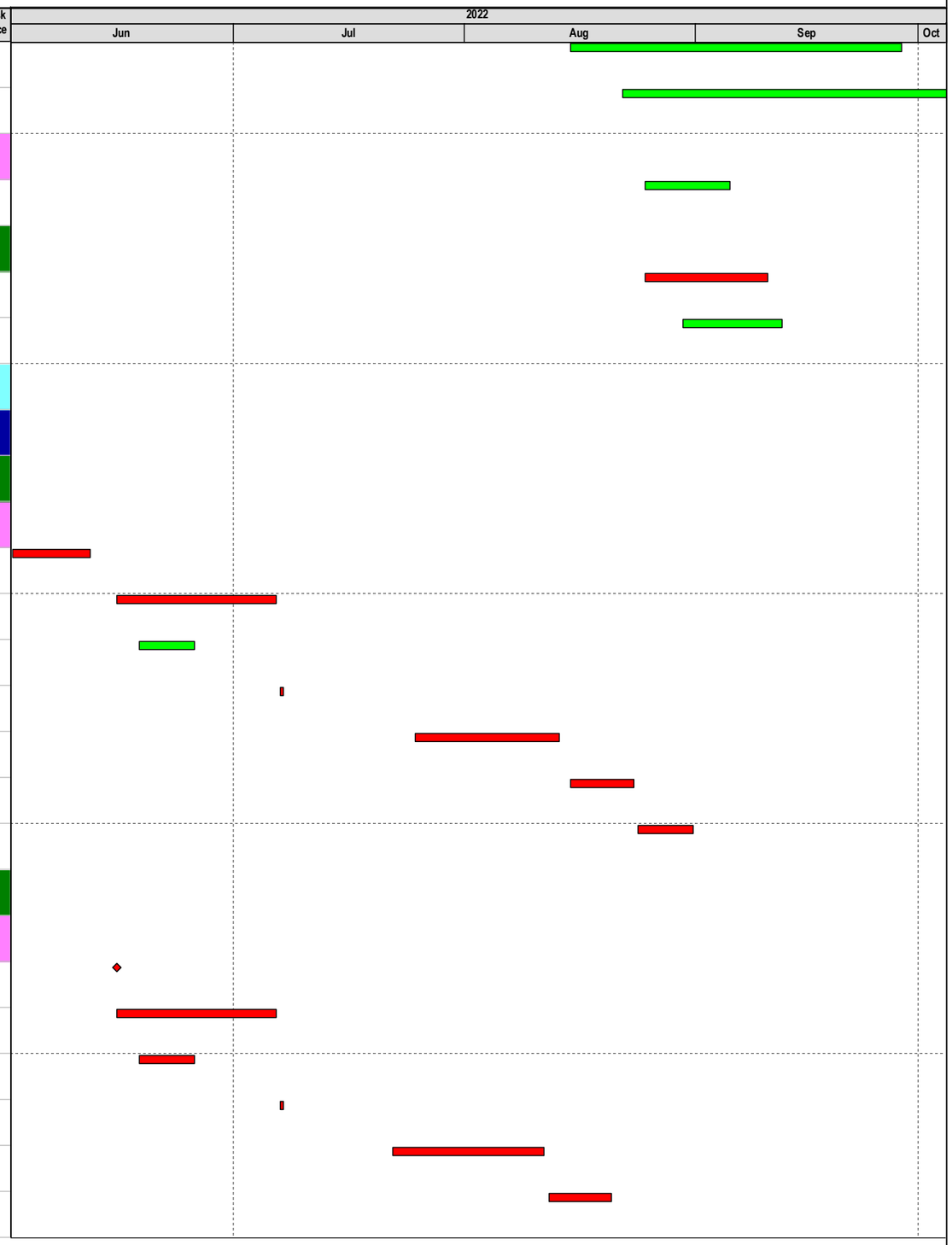
P8-3025	Installation of strut S1	38	38			15-Aug-22	28-Sep-22	36	1
P8-3030	Soft Excavation to 2nd strut level	38	38	19-Oct-22	28-Oct-22	22-Aug-22	07-Oct-22	36	1
Outfall 5101		10	10			25-Aug-22	05-Sep-22	5	
P8-OF3301	Sheet Pile Installation at Outfall	10	10			25-Aug-22	05-Sep-22	5	0
Sewer Installation at SMH_KT5103 to OF 5103 (50m) (Open Cut)		16	16	18-Oct-22	09-Nov-22	25-Aug-22	12-Sep-22	66	
P8-3210	Sheet Pile Installation	15	15	18-Oct-22	03-Nov-22	25-Aug-22	10-Sep-22	-10	1
P8-3220	Soft Excavation to 1st strut level	12	12	24-Oct-22	09-Nov-22	30-Aug-22	12-Sep-22	66	1
Portion 9 - Footbridge		78	77			31-May-22 A	31-Aug-22	-2	
Footbridge Construction		78	77			31-May-22 A	31-Aug-22	-2	
South River Embankment		78	77			31-May-22 A	31-Aug-22	-2	
Superstructure		78	77			31-May-22 A	31-Aug-22	-2	
P9-1639	Modification of Working Platform for Pier construction	10	9			31-May-22 A	11-Jun-22	0	3
P9-1640	Falsework & formwork erection of Pier	18	18			15-Jun-22	06-Jul-22	-2	3
P9-1650	Rebar Fixing of Pier	7	7			18-Jun-22	25-Jun-22	6	2
P9-1660	Concreting the Pier	1	1			07-Jul-22	07-Jul-22	-2	0
P9-1664	Erection of Falsework and Soffit Formwork for Bridge Deck	18	18			25-Jul-22	13-Aug-22	-2	5
P9-1670	Rebar Fixing of Bridge Deck	8	8			15-Aug-22	23-Aug-22	-2	2
P9-1680	Formwork for Bridge Deck	7	7			24-Aug-22	31-Aug-22	-2	2
North River Embankment		65	65			15-Jun-22	30-Aug-22	-32	
Superstructure		65	65			15-Jun-22	30-Aug-22	-32	
P9-1597	Delivery of pier formwork (North Portion)	0	0			15-Jun-22*		-32	3
P9-1600	Falsework & formwork erection of Pier	18	18			15-Jun-22	06-Jul-22	-32	3
P9-1610	Rebar Fixing of Pier	7	7			18-Jun-22	25-Jun-22	-24	2
P9-1620	Concreting the Pier	1	1			07-Jul-22	07-Jul-22	-32	0
P9-1624	Erection of Falsework and Soffit Formwork for Bridge Deck	18	18			22-Jul-22	11-Aug-22	-32	5
P9-1625	Rebar Fixing of Bridge Deck	8	8			12-Aug-22	20-Aug-22	-32	2



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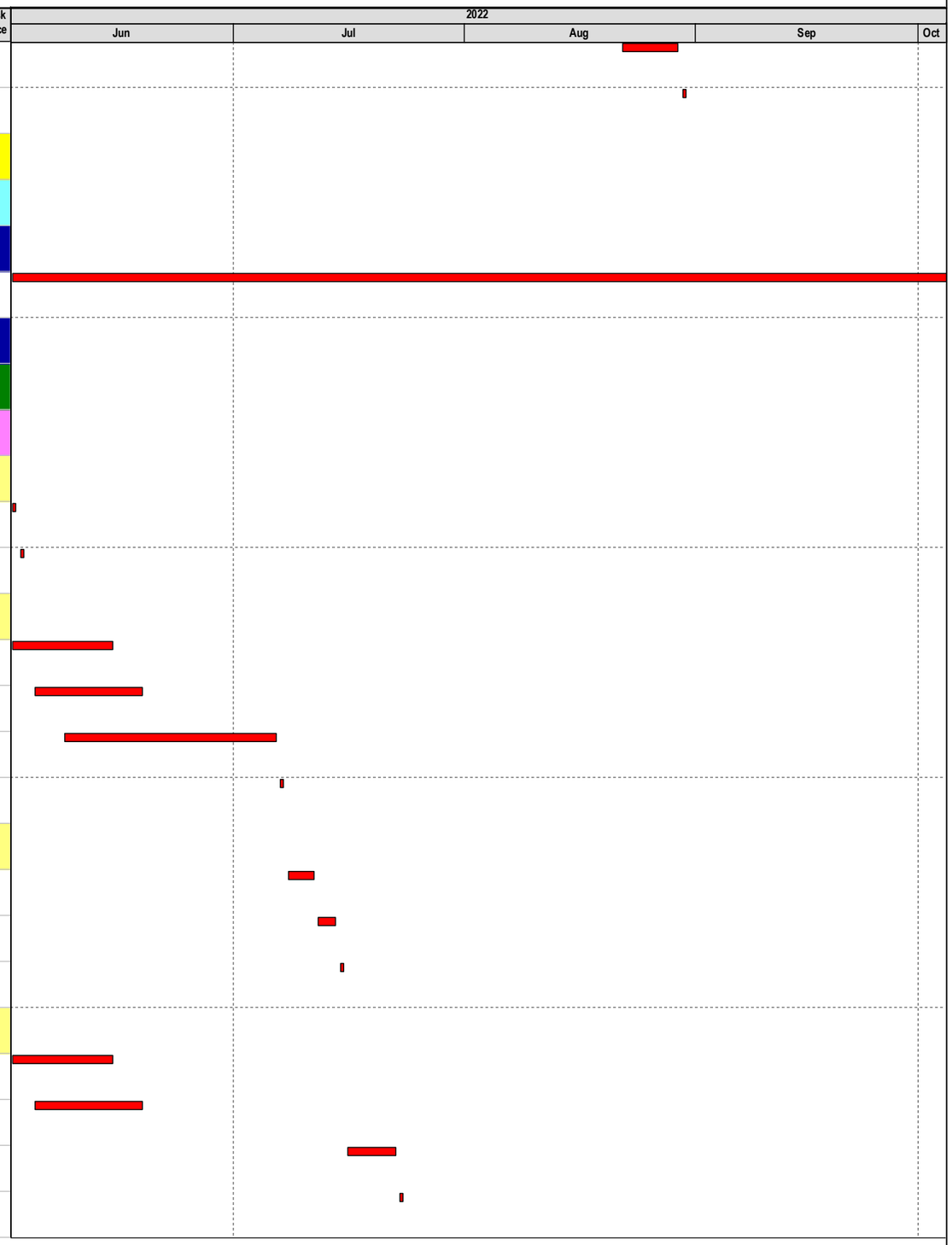
P9-1635	Formwork for Bridge Deck	7	7			22-Aug-22	29-Aug-22	-32	2
P9-1645	Concreting of Bridge Deck	1	1			30-Aug-22	30-Aug-22	-32	0
Works in Section 4		1327	404			03-Aug-20 A	29-Sep-23	0	
Portion 10 - Visitor Centre		1327	404			03-Aug-20 A	29-Sep-23	0	
Pre-construction works		1327	404			03-Aug-20 A	29-Sep-23	0	
P10-1040	Tree Protection and Preservation	1327	404			03-Aug-20 A	29-Sep-23	0	4
Visitor Centre		92	80			18-May-22 A	03-Sep-22	157	
Substructure		92	80			18-May-22 A	03-Sep-22	-65	
Basement Walls		69	57			18-May-22 A	08-Aug-22	-67	
Basement Retaining Wall Bay 1		14	2			18-May-22 A	02-Jun-22	-18	
P10-2120.51	Basement wall (2nd side) Formwork to +7.6mPD	13	1			18-May-22 A	01-Jun-22	-18	2
P10-2120.61	Concreting of Basement wall to +7.6mPD	1	1			02-Jun-22	02-Jun-22	-18	2
Basement Retaining Wall Bay 2		31	30			31-May-22 A	07-Jul-22	-106	
P10-2120.116	Basement wall Falsework and working platform to +7.6mPD	12	11			31-May-22 A	14-Jun-22	-106	2
P10-2120.126	Basement wall Rebar Fixing to +7.6mPD	13	13			04-Jun-22	18-Jun-22	-106	2
P10-2120.136	Basement wall (2nd side) Formwork to +7.6mPD	24	24			08-Jun-22	06-Jul-22	-106	2
P10-2120.146	Concreting of Basement wall to +7.6mPD	1	1			07-Jul-22	07-Jul-22	-106	2
Column C4, C5, C8, C9, C12, C13 & C17		7	7			08-Jul-22	15-Jul-22	-106	
P10-2120.636	Basement Column Rebar Fixing to +7.6mPD	3	3			08-Jul-22	11-Jul-22	-106	2
P10-2120.646	Basement Column Formwork to +7.6mPD	3	3			12-Jul-22	14-Jul-22	-106	2
P10-2120.656	Concreting of Columns to +7.6mPD	1	1			15-Jul-22	15-Jul-22	-106	2
Basement Retaining Wall Bay 3 (Incl. Staircase)		45	44			31-May-22 A	23-Jul-22	-106	
P10-2120.676	Basement wall Falsework and working platform to +7.6mPD	12	11			31-May-22 A	14-Jun-22	-84	2
P10-2120.686	Basement wall Rebar Fixing to +7.6mPD	13	13			04-Jun-22	18-Jun-22	-84	2
P10-2120.696	Basement wall (2nd side) Formwork to +7.6mPD	6	6			16-Jul-22	22-Jul-22	-106	2
P10-2120.706	Concreting of Basement wall to +7.6mPD	1	1			23-Jul-22	23-Jul-22	-106	2



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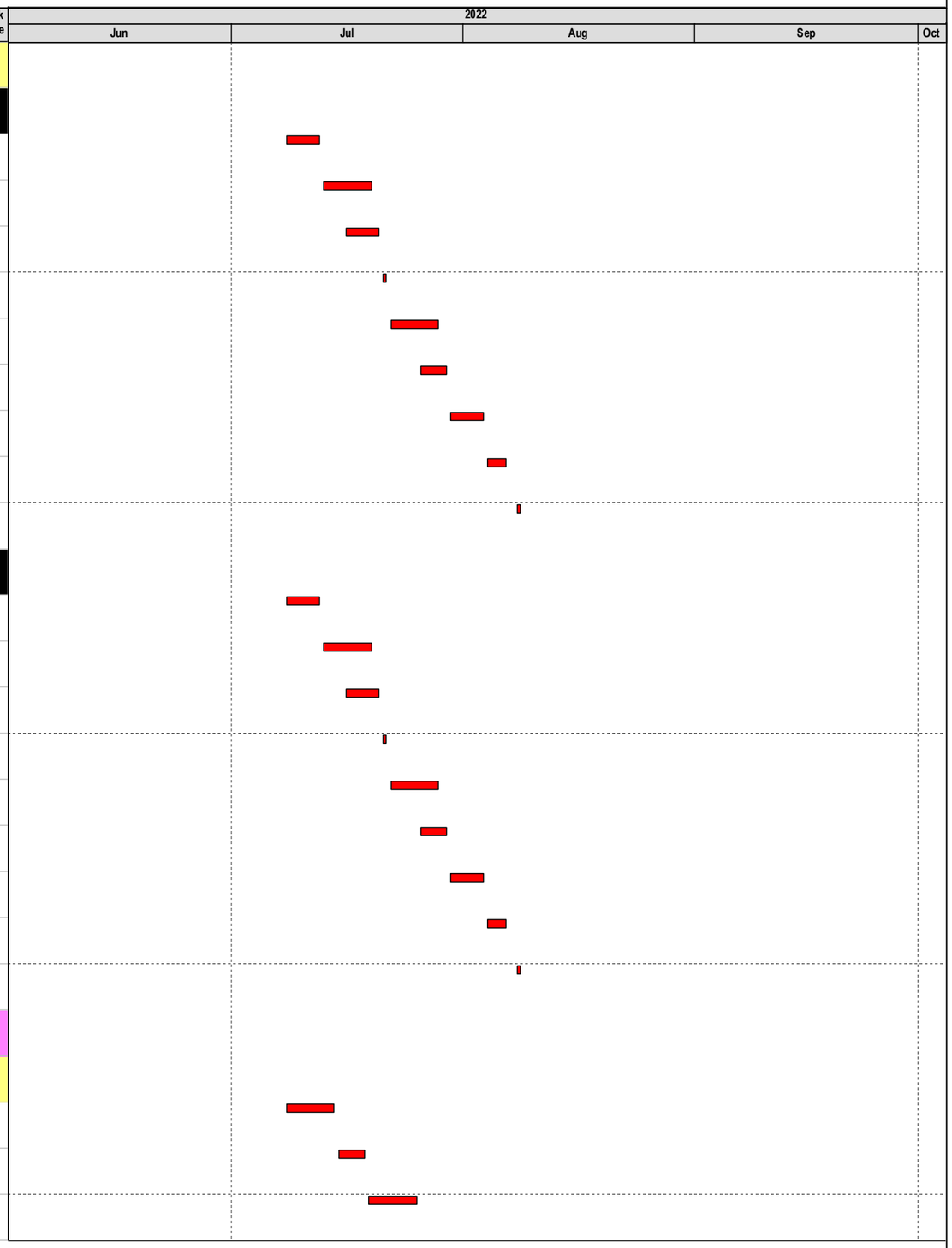
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
Basement Water Tank		27	27			08-Jul-22	08-Aug-22	-67	
Rain water Tank and Irrigation water Tank		27	27			08-Jul-22	08-Aug-22	-67	
P10-2120.446	Dismantle formwork for retaining wall	4	4			08-Jul-22	12-Jul-22	-67	2
P10-2120.456	Water Tanks Slab formwork	6	6			13-Jul-22	19-Jul-22	-67	2
P10-2120.466	Water Tanks Slab Rebar Fixing	4	4			16-Jul-22	20-Jul-22	-67	2
P10-2120.486	Concreting of Water Tanks Slab	1	1			21-Jul-22	21-Jul-22	-67	2
P10-2120.536	Water Tanks Wall formwork	6	6			22-Jul-22	28-Jul-22	-67	2
P10-2120.546	Water Tanks Wall Rebar Fixing	4	4			26-Jul-22	29-Jul-22	-67	2
P10-2120.556	Erect Props for supporting water tank top slab soffit formwork	4	4			30-Jul-22	03-Aug-22	-67	2
P10-2120.566	Water tank top slab Rebar Fixing	3	3			04-Aug-22	06-Aug-22	-67	2
P10-2120.576	Water tank wall and top slab concreting	1	1			08-Aug-22	08-Aug-22	-67	2
FS water Tanks		27	27			08-Jul-22	08-Aug-22	-90	
P10-2120.496	Dismantle formwork for retaining wall	4	4			08-Jul-22	12-Jul-22	-90	2
P10-2120.506	Water Tanks Slab formwork	6	6			13-Jul-22	19-Jul-22	-90	2
P10-2120.516	Water Tanks Slab Rebar Fixing	4	4			16-Jul-22	20-Jul-22	-90	2
P10-2120.526	Concreting of Water Tanks Slab	1	1			21-Jul-22	21-Jul-22	-90	2
P10-2120.586	Water Tanks Wall formwork	6	6			22-Jul-22	28-Jul-22	-90	2
P10-2120.596	Water Tanks Wall Rebar Fixing	4	4			26-Jul-22	29-Jul-22	-90	2
P10-2120.606	Erect Props for supporting water tank top slab soffit formwork	4	4			30-Jul-22	03-Aug-22	-90	2
P10-2120.616	Water tank top slab Rebar Fixing	3	3			04-Aug-22	06-Aug-22	-90	2
P10-2120.626	Water tank wall and top slab concreting	1	1			08-Aug-22	08-Aug-22	-90	2
High Level Pile Cap & Column		50	50			08-Jul-22	03-Sep-22	-65	
C19 to C22		49	49			08-Jul-22	02-Sep-22	-78	
P10-2120.156	Dismantling of Basement wall formwork	6	6			08-Jul-22	14-Jul-22	-78	2
P10-2120.166	Concrete rectification and Touch Up works	3	3			15-Jul-22	18-Jul-22	-78	2
P10-2120.176	Basement Wall Waterproofing & Testing	6	6			19-Jul-22	25-Jul-22	-78	2



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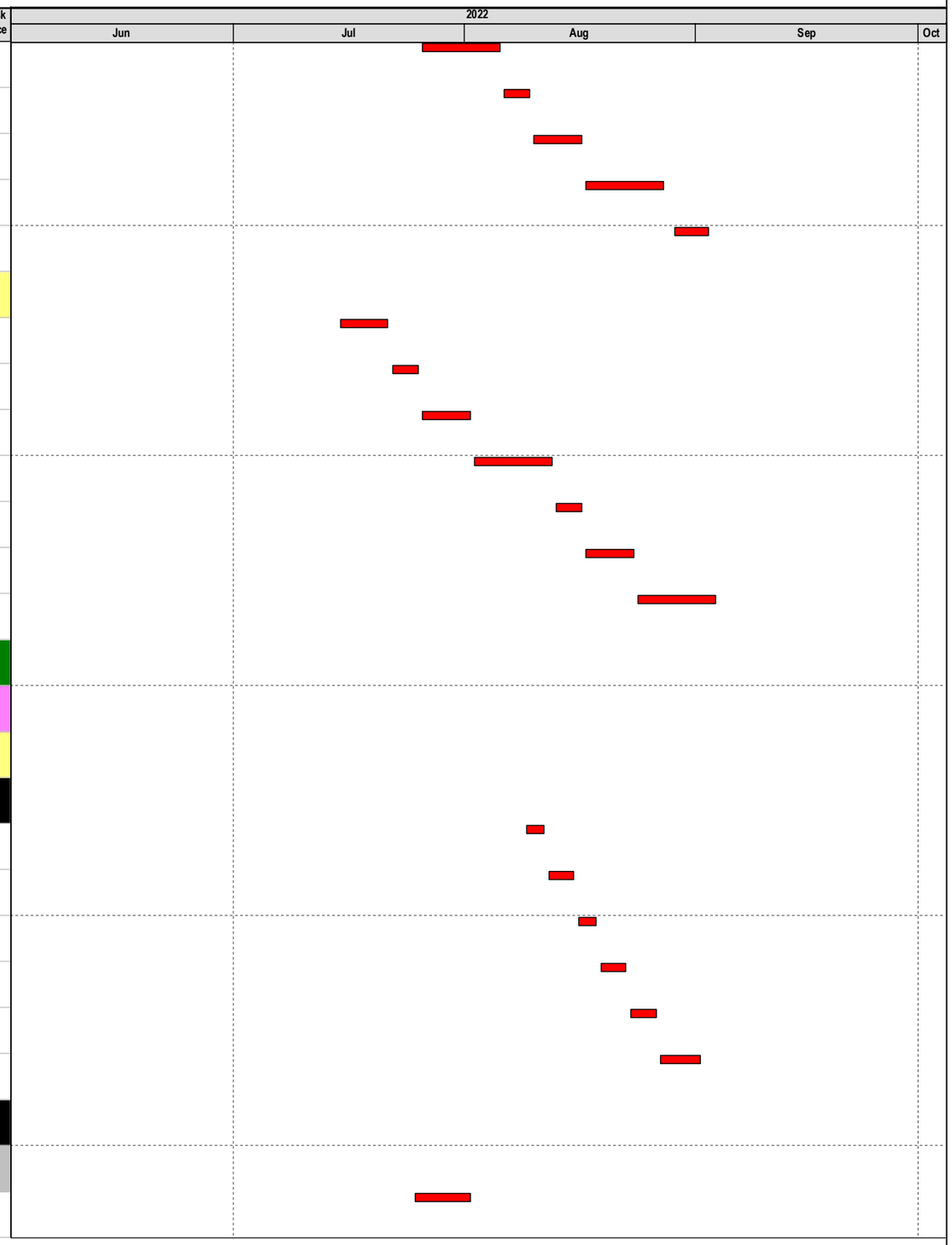
P10-2120.196	Backfill of Temp. Slope & level formation of high level slab	10	10			26-Jul-22	05-Aug-22	-78	2
P10-2120.206	Grout Breaking of Socket H Piles	3	3			06-Aug-22	09-Aug-22	-78	2
P10-2120.216	High Level Pile Head treatment and Capping Plate Installation	6	6			10-Aug-22	16-Aug-22	-78	2
P10-2120.226	Backfill with Grade 200 Rockfill	10	10			17-Aug-22	27-Aug-22	-78	1
P10-2120.266	Rebar fixing of Pile Cap and Columns	5	5			29-Aug-22	02-Sep-22	-78	1
C3, C6, C10, C14 & C18		44	44			15-Jul-22	03-Sep-22	-65	
P10-2120.296	Dismantling of Basement wall formwork	6	6			15-Jul-22	21-Jul-22	-65	2
P10-2120.306	Concrete rectification and Touch Up works	3	3			22-Jul-22	25-Jul-22	-65	2
P10-2120.316	Basement Wall Waterproofing & Testing	6	6			26-Jul-22	01-Aug-22	-65	2
P10-2120.317	Backfill of Temp. Slope & level formation of high level slab	10	10			02-Aug-22	12-Aug-22	-65	2
P10-2120.318	Grout Breaking of Socket H Piles	3	3			13-Aug-22	16-Aug-22	-65	2
P10-2120.319	High Level Pile Head treatment and Capping Plate Installation	6	6			17-Aug-22	23-Aug-22	-65	2
P10-2120.326	Backfill with Grade 200 Rockfill	10	10			24-Aug-22	03-Sep-22	-65	1
Superstructure		34	34			25-Jul-22	01-Sep-22	-67	
Ground Floor to Roof Floor		34	34			25-Jul-22	01-Sep-22	-67	
B/F to G/F Wall and G/F Slab		34	34			25-Jul-22	01-Sep-22	-67	
Bay 1		21	21			09-Aug-22	01-Sep-22	-67	
P10-2350	Erection of falsework and working platform for B/F to G/F wall	3	3			09-Aug-22	11-Aug-22	-67	1
P10-2360	Erection of One Side Formwork for B/F to G/F Wall	3	3			12-Aug-22	15-Aug-22	-67	1
P10-2370	Rebar Fixing for B/F to G/F Wall	3	3			16-Aug-22	18-Aug-22	-67	1
P10-2380	Erection of remaining side formwork for B/F to G/F Wall	3	3			19-Aug-22	22-Aug-22	-67	1
P10-2390	Erection of falsework and working platform for G/F Slab	4	4			23-Aug-22	26-Aug-22	-67	1
P10-2400	Erection of Formwork for G/F Slab	5	5			27-Aug-22	01-Sep-22	-67	1
Bay 2		32	32			25-Jul-22	30-Aug-22	-106	
Tx Room Cable Trench		24	24			25-Jul-22	20-Aug-22	-106	
P10-2120.716	Bearing wall formwork supporting cable trench	7	7			25-Jul-22	01-Aug-22	-106	2



Primary Baseline
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Data Date: 31-May-22
Project Start: 03-Feb-20
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Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
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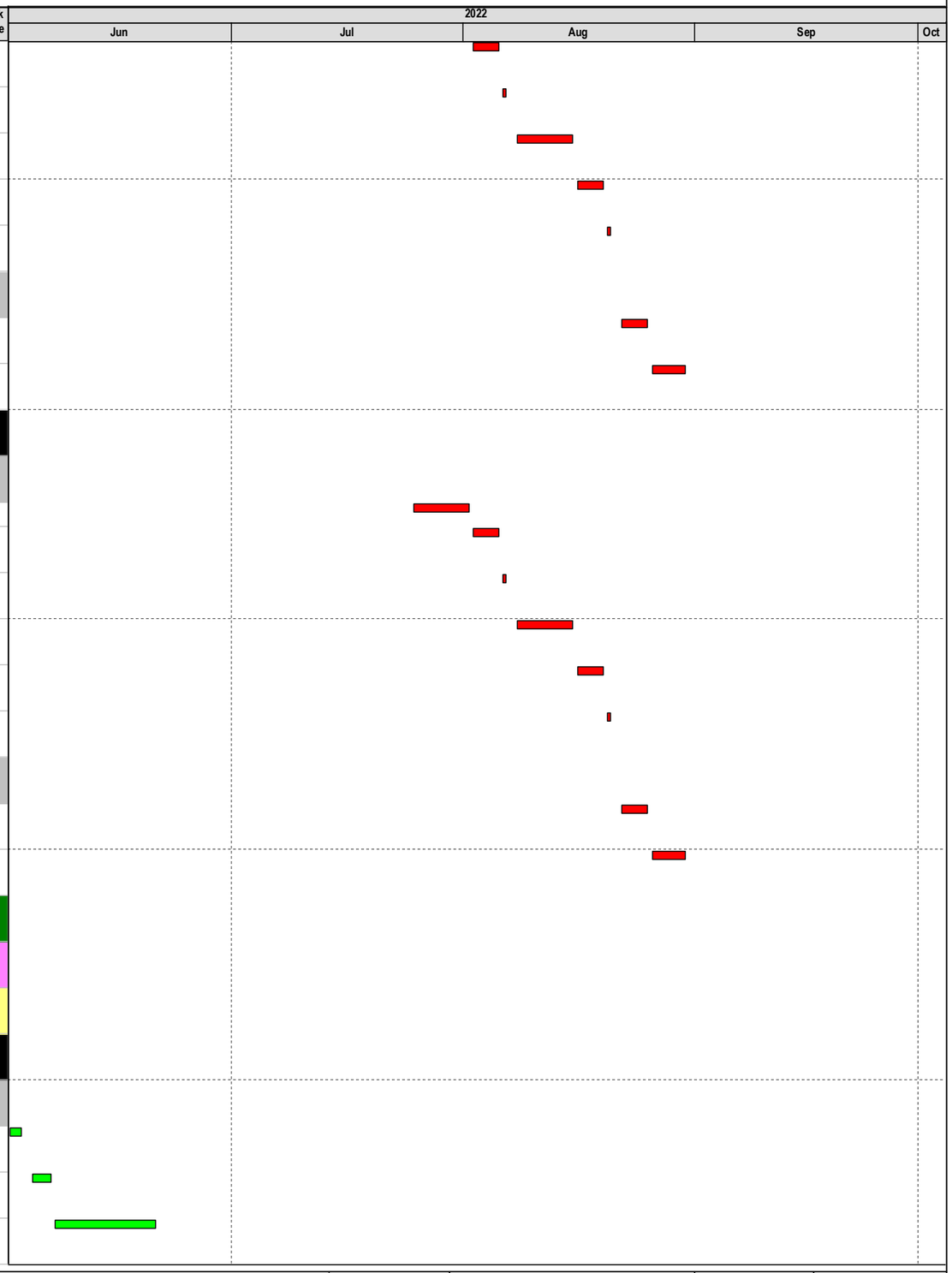
Three Months Rolling Programme (Jun to Sep 2022)

Date	Revision	Checked	Approved
02-Jul-22	Rev 0 (Three Months Rolling Progr...	TW	

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P10-2120.726	Bearing wall Rebar fixing supporting cable trench	4	4			02-Aug-22	05-Aug-22	-106	2
P10-2120.736	Bearing wall concreting supporting cable trench	1	1			06-Aug-22	06-Aug-22	-106	2
P10-2120.746	Cable trench Beam / Slab formwork	7	7			08-Aug-22	15-Aug-22	-106	2
P10-2120.756	Cable trench Beam / Slab Rebar fixing	4	4			16-Aug-22	19-Aug-22	-106	2
P10-2120.766	Cable trench Beam / Slab Concreting	1	1			20-Aug-22	20-Aug-22	-106	2
Beam and Slab		8	8			22-Aug-22	30-Aug-22	-106	
P10-2440	Erection of falsework and working platform for B/F to G/F wall	4	4			22-Aug-22	25-Aug-22	-106	1
P10-2450	Erection of One Side Formwork for B/F to G/F Wall	4	4			26-Aug-22	30-Aug-22	-106	1
Bay 3		32	32			25-Jul-22	30-Aug-22	-91	
Tx Room Cable Trench		24	24			25-Jul-22	20-Aug-22	-91	
P10-2120.776	Bearing wall formwork supporting cable trench	7	7			25-Jul-22	01-Aug-22	-91	2
P10-2120.786	Bearing wall Rebar fixing supporting cable trench	4	4			02-Aug-22	05-Aug-22	-91	2
P10-2120.796	Bearing wall concreting supporting cable trench	1	1			06-Aug-22	06-Aug-22	-91	2
P10-2120.806	Cable trench Beam / Slab formwork	7	7			08-Aug-22	15-Aug-22	-91	2
P10-2120.816	Cable trench Beam / Slab Rebar fixing	4	4			16-Aug-22	19-Aug-22	-91	2
P10-2120.826	Cable trench Beam / Slab Concreting	1	1			20-Aug-22	20-Aug-22	-91	2
Beam and Slab		8	8			22-Aug-22	30-Aug-22	-91	
P10-2530	Erection of falsework and working platform for B/F to G/F wall	4	4			22-Aug-22	25-Aug-22	-91	1
P10-2540	Erection of One Side Formwork for B/F to G/F Wall	4	4			26-Aug-22	30-Aug-22	-91	1
ABWF / E&M Works		77	77			01-Jun-22	31-Aug-22	160	
Ground Floor		77	77			01-Jun-22	31-Aug-22	148	
BOH		77	77			01-Jun-22	31-Aug-22	148	
Equipment Room		77	77			01-Jun-22	31-Aug-22	148	
ABWF		28	28			01-Jun-22	05-Jul-22	125	
P10-GFER1000	Setting Out	2	2			01-Jun-22	02-Jun-22	125	0
P10-GFER1010	Erect Scaffolding for wall and ceiling finishes	2	2			04-Jun-22	06-Jun-22	125	0
P10-GFER1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12			07-Jun-22	20-Jun-22	125	0



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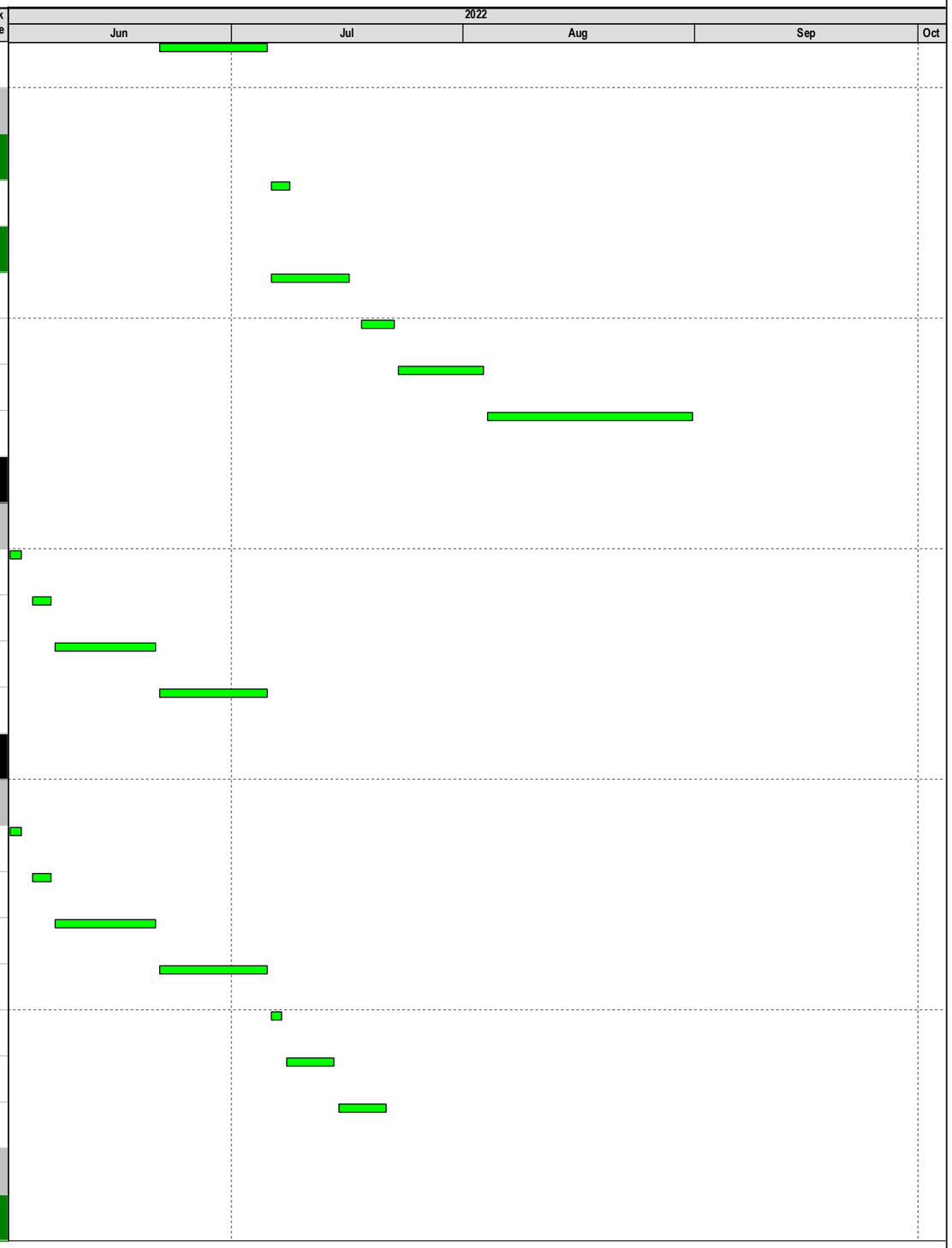
Three Months Rolling Programme (Jun to Sep 2022)

Date	Revision	Checked	Approved
02-Jul-22	Rev 0 (Three Months Rolling Progr...	TW	

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P10-GFER1030	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12			21-Jun-22	05-Jul-22	125	0
BS Works		49	49			06-Jul-22	31-Aug-22	148	
MVAC		3	3			06-Jul-22	08-Jul-22	125	
P10-GFER1090	Setting out for all equipment / MOS inspection	3	3			06-Jul-22	08-Jul-22	125	0
EL		49	49			06-Jul-22	31-Aug-22	148	
P10-GFER1110	Setting out for all equipment / MOS inspection	10	10			06-Jul-22	16-Jul-22	146	0
P10-GFER1120	Installation of cable containment	5	5			18-Jul-22	22-Jul-22	148	0
P10-GFER1130	Cable wiring	10	10			23-Jul-22	03-Aug-22	148	0
P10-GFER1140	Installation of Lighting fitting and small power provision	24	24			04-Aug-22	31-Aug-22	148	0
Cleaners Store		28	28			01-Jun-22	05-Jul-22	121	
ABWF		28	28			01-Jun-22	05-Jul-22	121	
P10-GFCS1000	Setting Out	2	2			01-Jun-22	02-Jun-22	121	0
P10-GFCS1010	Erect Scaffolding for wall and ceiling finishes	2	2			04-Jun-22	06-Jun-22	121	0
P10-GFCS1020	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12			07-Jun-22	20-Jun-22	121	0
P10-GFCS1030	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12			21-Jun-22	05-Jul-22	121	0
Maintenance Corridor		67	67			01-Jun-22	19-Aug-22	140	
ABWF		42	42			01-Jun-22	21-Jul-22	140	
P10-GF-MC1020	Setting Out	2	2			01-Jun-22	02-Jun-22	140	0
P10-GF-MC1030	Erect Scaffolding for wall and ceiling finishes	2	2			04-Jun-22	06-Jun-22	140	0
P10-GF-MC1040	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12			07-Jun-22	20-Jun-22	140	0
P10-GF-MC1050	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12			21-Jun-22	05-Jul-22	140	0
P10-GF-MC1060	Floor Screeding	2	2			06-Jul-22	07-Jul-22	140	0
P10-GF-MC1070	Access Panel Installation	6	6			08-Jul-22	14-Jul-22	140	0
P10-GF-MC1080	Floor epoxy Painting	6	6			15-Jul-22	21-Jul-22	140	0
BS Works		25	25			22-Jul-22	19-Aug-22	140	
PD		25	25			22-Jul-22	19-Aug-22	140	



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Three Months Rolling Programme (Jun to Sep 2022)

Date	Revision	Checked	Approved
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Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P10-GF-MC1000	Water piping works Installation	15	15			22-Jul-22	08-Aug-22	140	0
P10-GF-MC1010	Floor Drain Installation	10	10			09-Aug-22	19-Aug-22	140	0
1st Floor		77	77			01-Jun-22	31-Aug-22	160	
Office & Office Room 1 & 2		77	77			01-Jun-22	31-Aug-22	148	
P10-1FOF-1000	Access Date of 1/F Office Room 1 & 2 Fitting Out	0	0			01-Jun-22		136	
ABWF		30	30			01-Jun-22	07-Jul-22	143	
P10-1FOF-1010	Setting Out	2	2			01-Jun-22	02-Jun-22	136	0
P10-1FOF-1020	Erect Scaffolding for wall and ceiling finishes	2	2			04-Jun-22	06-Jun-22	136	0
P10-1FOF-1030	Ceiling Finishes (Touch up, Skim Coat and 1st coat Painting)	12	12			07-Jun-22	20-Jun-22	136	0
P10-1FOF-1040	Wall Finishes (Wall plastering, Skim Coat and 1st Coat Painting)	12	12			21-Jun-22	05-Jul-22	136	0
P10-1FOF-1050	Floor Screeding	2	2			06-Jul-22	07-Jul-22	143	0
BS Works		49	49			06-Jul-22	31-Aug-22	148	
MVAC		3	3			06-Jul-22	08-Jul-22	136	
P10-1FOF-1100	Setting out for all equipment / MOS inspection	3	3			06-Jul-22	08-Jul-22	136	0
EL		49	49			06-Jul-22	31-Aug-22	148	
P10-1FOF-1120	Setting out for all equipment / MOS inspection	10	10			06-Jul-22	16-Jul-22	148	0
P10-1FOF-1130	Installation of cable containment	5	5			18-Jul-22	22-Jul-22	148	0
P10-1FOF-1140	Cable wiring	10	10			23-Jul-22	03-Aug-22	148	0
P10-1FOF-1150	Installation of Lighting fitting and small power provision	24	24			04-Aug-22	31-Aug-22	148	0
External Area		25	25			01-Jun-22	30-Jun-22	212	
P10-1F-EXT1000	Access Date of 1/F External Area Fitting Out	0	0			01-Jun-22		212	
ABWF		25	25			01-Jun-22	30-Jun-22	212	
P10-1F-EXT1010	Erection of external scaffolding	25	25			01-Jun-22	30-Jun-22	212	3
Works in Section 5		595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22	2	
Portion 11 - Village Resite Area		595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22	2	
Preliminary Works		595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22	2	

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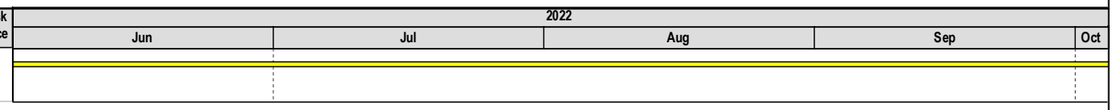
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P11-1005	Temporary Storage Area	595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22	2	0



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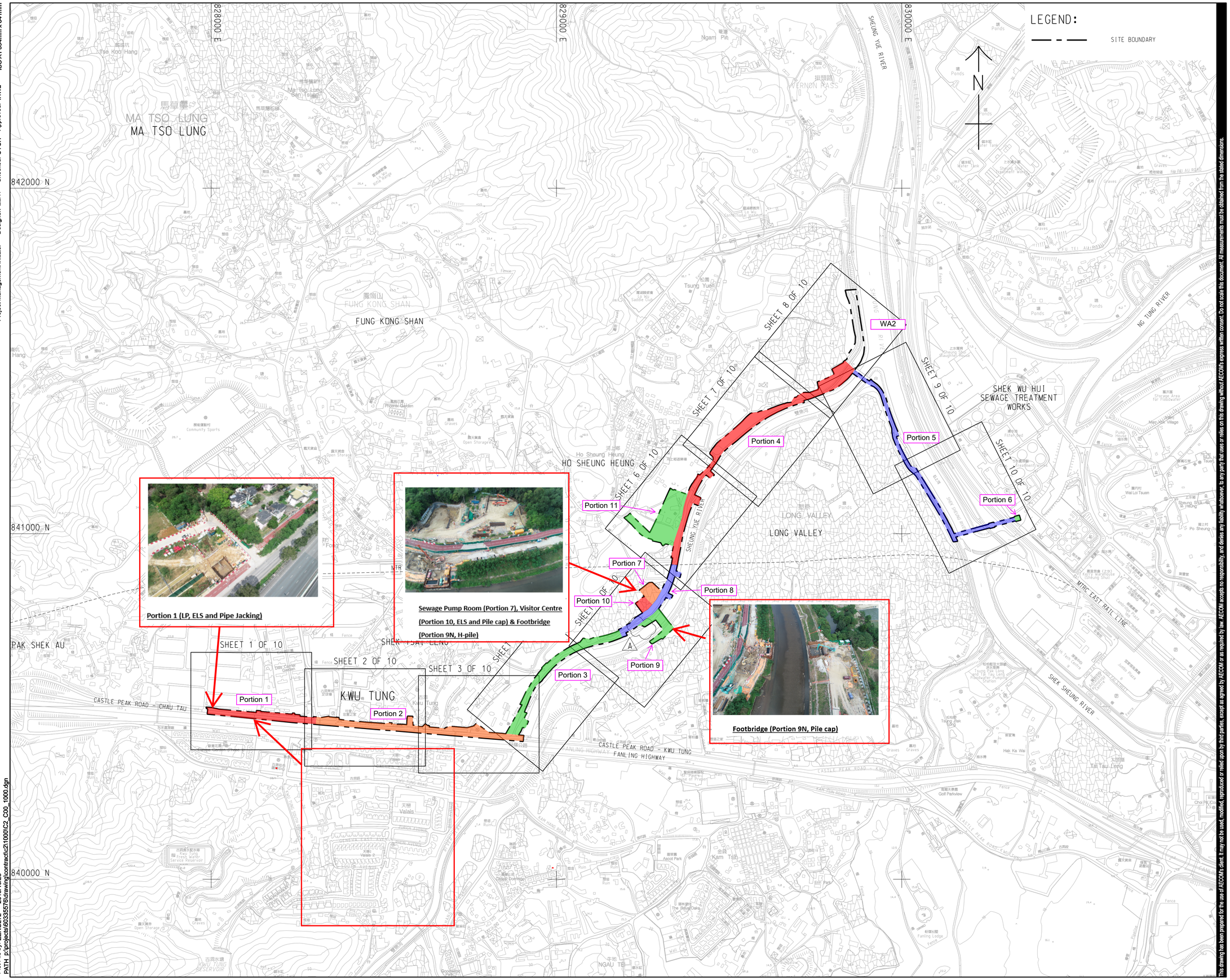

Project Management Initials: Designer: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/10/25
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AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

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

STATUS
階段

SCALE
比例
A1 1 : 5000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/02

SHEET TITLE
圖紙名稱
KEY PLAN

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

Construction Programme of ND/2019/03

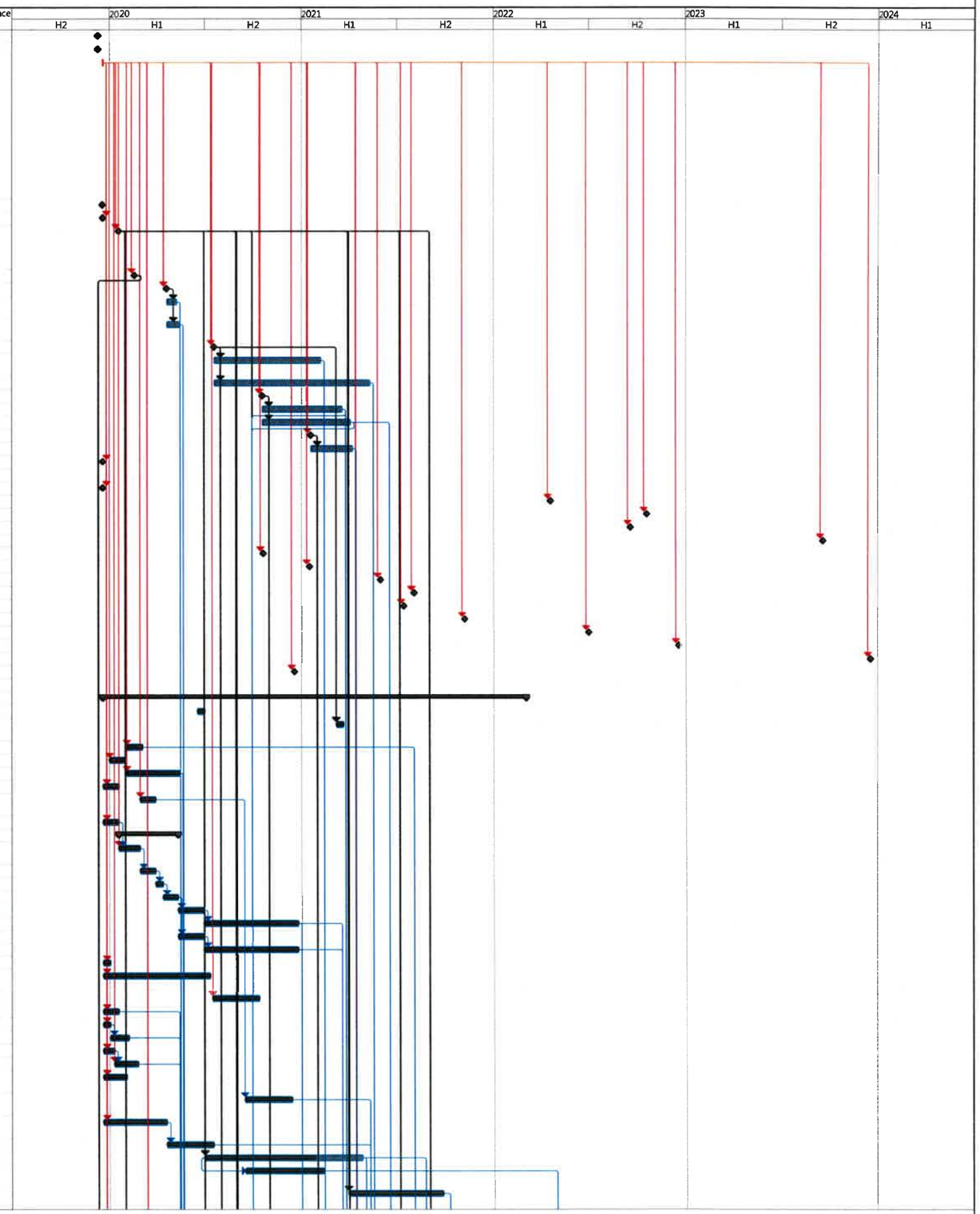
Contract No. ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park

Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
1		**Contract Key Dates**	0 days	Tue 10/12/19	Tue 10/12/19			1516 days	0%	
2		**1.1 Contract Date**	**0 days**	**Tue 10/12/19**	**Tue 10/12/19**			**1516 days**	**0%**	
3		**1.2 Starting Date**	**1 day**	**Thu 19/12/19**	**Thu 19/12/19**		**59,61,62,63,42,5,57,45,47,44,43,3 days,6FS+30 days,7FS+60 days,8FS+121 days,11FS+212 days,14FS+304 days,19,17FS+396 days,55,56,22FS+851 days,23FS+1034 days,24FS+1003 days,26FS+273 days,27FS+394 days,28FS+528 days,29FS+592 days,30FS+572 ...**	**-490 days**	**0%**	
4		**1.3 Site Access Dates**	0 days	Thu 19/12/19	Thu 19/12/19			1507 days	0%	
5		Portions 25, 26, 27	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%	
6		Portions 1, 5, 6A, 7, 8A, 9A, 9C, 9E, 9F, 9G, 10A, 10B, 11A, 11B, 12A, 12C, 12D, 13A, 15B, 15C, 16, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 18/1/20	Sat 18/1/20	3FS+30 days	,70,71,73,82,141,232,253,275,305,6 days,77FS+30 days,78,79	392 days	0%	
7		Portions 23, 24	0 days	Mon 17/2/20	Mon 17/2/20	3FS+60 days	349	1446 days	0%	
8		Portions 15A, 18, 19, 20, 20C, 22	0 days	Sat 18/4/20	Sat 18/4/20	3FS+121 days	9,10	1360 days	0%	
9		Delay of Site Access Dates: Portion 15A, 18, 19, 20 (Structure has not been handed over)	19 days	Sun 19/4/20	Thu 7/5/20	8	209,276,306	1366 days	0%	
10		Delay of Site Access Dates: Portion 22 (Structure has not been handed over)	25 days	Sun 19/4/20	Wed 13/5/20	8	350	1360 days	0%	
11		Portions 1A, 2, 2A, 3, 4, 4A, 4B, 5A, 6, 8, 7A, 7B	0 days	Sat 18/7/20	Sat 18/7/20	3FS+212 days	83,126,142,233,277,39,12,13	161.8 days	0%	
12		Delay of Site Access for Area with Structure & Tudigong in Portion 1A	203 days	Sun 19/7/20	Sat 6/2/21	11	117	1091 days	0%	
13		Delay of Site Access Dates: 4B,5A	296 days	Sun 19/7/20	Mon 10/5/21	11	145	161.8 days	0%	
14		Portions 8B, 9, 9B, 9D, 10, 11, 12, 12B, 13, 14	0 days	Sun 18/10/20	Sun 18/10/20	3FS+304 days	223,254,307,15,16	1035 days	0%	
15		Delay of Site Access Date: Portion 9D	151 days	Mon 19/10/20	Thu 18/3/21	14	234,237	1051 days	0%	
16		Delay of Site Access for Area with Structure in Portion 8B, 9B	167 days	Mon 19/10/20	Sat 3/4/21	14	234,241	1035 days	0%	
17		Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 18/1/21	Mon 18/1/21	3FS+396 days	334,255,278,308,18	-490 days	0%	
18		Delay of Site Access for Area with Structure in Portion 16B	79 days	Tue 19/1/21	Wed 7/4/21	17	262	1031 days	0%	
19		Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%	
20										
21		**1.4 Completion of the works**	**0 days**	**Thu 19/12/19**	**Thu 19/12/19**	**3**		**1506 days**	**0%**	
22		Section 1	0 days	Mon 18/4/22	Mon 18/4/22	3FS+851 days		655 days	0%	
23		Section 2	0 days	Tue 18/10/22	Tue 18/10/22	3FS+1034 days		472 days	0%	
24		Section 3	0 days	Sat 17/9/22	Sat 17/9/22	3FS+1003 days		503 days	0%	
25		Section 3A	0 days	Sun 17/9/23	Sun 17/9/23	3FS+1368 days		138 days	0%	
26	✓	Section 4	0 days	Wed 21/10/20	Wed 21/10/20	3FS+273 days		0 days	100%	
27	✓	Section 5	0 days	Sat 16/1/21	Sat 16/1/21	3FS+394 days		0 days	100%	
28		Section 6	0 days	Sun 30/5/21	Sun 30/5/21	3FS+528 days		978 days	0%	
29		Section 7	0 days	Mon 2/8/21	Mon 2/8/21	3FS+592 days		914 days	0%	
30		Section 8	0 days	Tue 13/7/21	Tue 13/7/21	3FS+572 days		934 days	0%	
31		Section 9	0 days	Sat 6/11/21	Sat 6/11/21	3FS+688 days		818 days	0%	
32		Section 10	0 days	Thu 30/6/22	Thu 30/6/22	3FS+924 days		582 days	0%	
33		Section 11	0 days	Sun 18/12/22	Sun 18/12/22	3FS+1095 days		411 days	0%	
34		Section 11A	0 days	Mon 18/12/23	Mon 18/12/23	3FS+1460 days		46 days	0%	
35		Section 12	0 days	Fri 18/12/20	Fri 18/12/20	3FS+365 days		1141 days	0%	
36										
37		**2. Preliminary works**	**805 days**	**Fri 20/12/19**	**Thu 3/3/22**			**701 days**	**86%**	
38	✓	Set up Project Manager's Accommodation in WA1 (1st part)	14 days	Wed 17/6/20	Tue 30/6/20			0 days	100%	
39	✓	Set up Project Manager's Accommodation in Portion 3 (2nd part)	14 days	Mon 8/3/21	Sun 21/3/21	11		0 days	100%	
40	✓	Prepare, submit & Approve ICE	30 days	Mon 3/2/20	Tue 3/3/20	3	178	0 days	100%	
41	✓	Prepare, submit & Approve Traffic Consultant	30 days	Wed 1/1/20	Thu 30/1/20	3		0 days	100%	
42	✓	Prepare, submit & Approve Landscape Team Leader	100 days	Mon 3/2/20	Tue 12/5/20	3	75	0 days	100%	
43	✓	Prepare, submit & Approve Agricultural Specialist	30 days	Fri 20/12/19	Sat 18/1/20	3		0 days	100%	
44	✓	Prepare, submit & Approve Constructed / Treatment Wetland Specialist	30 days	Fri 28/2/20	Sat 28/3/20	3	64	0 days	100%	
45	✓	Prepare, submit & Approve Ecological Team Leader	30 days	Fri 20/12/19	Sat 18/1/20	3	47	0 days	100%	
46	✓	**Habitat Survey**	**112 days**	**Sun 19/1/20**	**Sat 9/5/20**			**0 days**	**100%**	
47	✓	Submission/approval of Habitat Surveys Method Statement and Programme	40 days	Sun 19/1/20	Thu 27/2/20	3,45	48	0 days	100%	
48	✓	Habitat Surveys	30 days	Fri 28/2/20	Sat 28/3/20	47	49	0 days	100%	
49	✓	Submission of Habitat Record	14 days	Sun 29/3/20	Sat 11/4/20	48	50	0 days	100%	
50	✓	Approval of Habitat Survey Record	28 days	Sun 12/4/20	Sat 9/5/20	49	53,51	0 days	100%	
51	✓	Prepare and Submit Wetland Restoration Proposal	50 days	Sun 10/5/20	Sun 28/6/20	50	52	0 days	100%	
52	✓	Approval of Wetland Restoration Proposal	180 days	Mon 29/6/20	Fri 25/12/20	51	237,258,281,311	0 days	100%	
53	✓	Prepare and Submit Wetland Creation Proposal	50 days	Sun 10/5/20	Sun 28/6/20	50	54	0 days	100%	
54	✓	Approval of Wetland Cretation Proposal	180 days	Mon 29/6/20	Fri 25/12/20	53	237,258,281,311	0 days	100%	
55	✓	Prepare and Submit Ecological Protection Plan	14 days	Fri 20/12/19	Thu 2/1/20	3		0 days	100%	
56	✓	Prepare, Submit and Approval of Maintenance Proposal for Stage 1 Maintenance Works	204 days	Fri 20/12/19	Fri 10/7/20	3		0 days	100%	
57	✓	Prepare, submit & Approve G.I. Contractor	90 days	Wed 15/7/20	Mon 12/10/20	3		0 days	100%	
58	✓	Prepare and submit Smart Card Sysytem	30 days	Fri 20/12/19	Sat 18/1/20	3	75	0 days	100%	
59	✓	Prepare, submit Draft Safety Plan	14 days	Fri 20/12/19	Thu 2/1/20	3	60	0 days	100%	
60	✓	Review & Approve Safety Plan	35 days	Fri 3/1/20	Thu 6/2/20	59	75	0 days	100%	
61	✓	Prepare, Submit Draft Environmental Management Plan	21 days	Fri 20/12/19	Thu 9/1/20	3	62	0 days	100%	
62	✓	Review & Approve Environmental Management Plan	45 days	Fri 10/1/20	Sun 23/2/20	3,61	75	0 days	100%	
63	✓	Prepare, submit & Approve Site Management Plan for Trip Ticket System	45 days	Fri 20/12/19	Sun 2/2/20	3		0 days	100%	
64	✓	Submission and Approval of Construction Method for water treatment wetland	90 days	Tue 15/9/20	Sun 13/12/20	44	145	0 days	100%	
65	✓	Submission of Proposal for Source of Water for Water Treatment Wetland	120 days	Fri 20/12/19	Fri 17/4/20	3	66	0 days	100%	
66	✓	Approval of Source of Water for Water Treatment Wetland	90 days	Sat 18/4/20	Thu 16/7/20	65	145	0 days	100%	
67		Design/submission/approval of Lodging Facilities	300 days	Tue 30/6/20	Sun 25/4/21	6	131,68SS,130	19 days	70%	
68	✓	Design / Submission / approval of Sewerage System of Lodging Facilities	150 days	Wed 16/9/20	Fri 12/2/21	67SS	134	0 days	100%	
69	✓	Design/submission/approval of alluminium roofing system, timber for wall/floor/soffit for Birdhide	180 days	Tue 30/3/21	Sat 25/9/21	6	159	0 days	100%	



Revised Programme: June 2022

Data Date : 2022-6-3

Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline

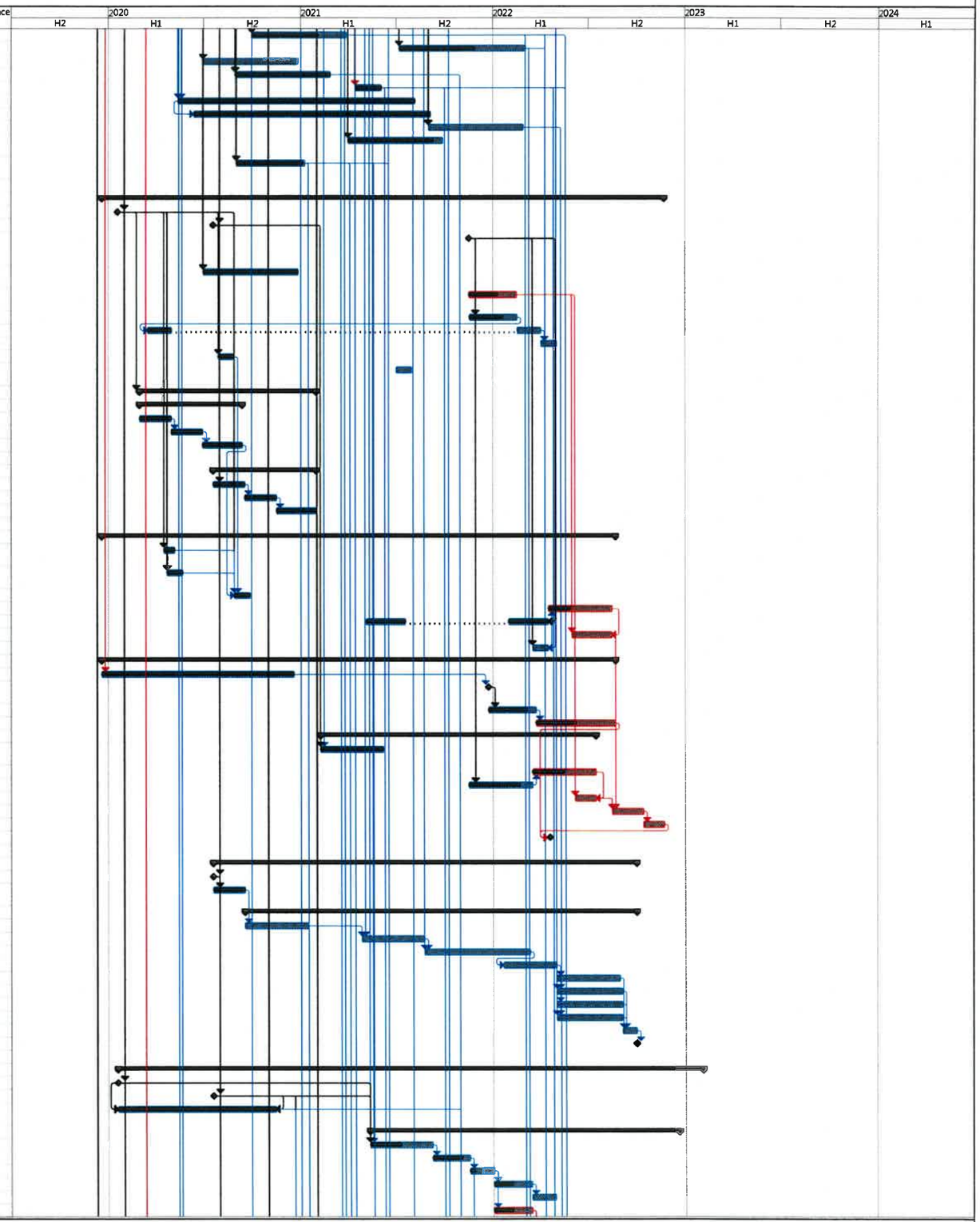
Contract No. ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park

Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
70	Design/submission/approval of E&M works for Facilities	180 days	Wed 30/9/20	Sun 28/3/21	6	134,184,171,136,162,161	328 days	70%	
71	Design/submission/approval of Plumbing works for Facilities	240 days	Wed 7/7/21	Thu 3/3/22	6	162,171	108 days	60%	
72	Design/submission/approval and supply of Lighting	180 days	Tue 30/6/20	Sat 26/12/20	6		1133 days	0%	
73	Design/submission/approval and supply of park facilities	180 days	Sun 30/8/20	Thu 25/2/21	6	165	0 days	100%	
74	Submission and Approval for Fire Extinguisher	50 days	Wed 14/4/21	Wed 2/6/21	3	161,171,191,198,290,184	0 days	100%	
75	Tree survey and submission	450 days	Wed 13/5/20	Thu 5/8/21	42,60,62,58	76SS+30 days	0 days	100%	
76	Tree felling / Site clearance	450 days	Fri 12/6/20	Sat 4/9/21	75SS+30 days		0 days	100%	
77	Design/submission/approval of Entrance gantry signages	180 days	Wed 1/9/21	Sun 27/2/22	6FS+30 days	173	142 days	0%	
78	Design/submission/approval of Irrigation system for landscape softworks	180 days	Thu 1/4/21	Mon 27/9/21	6		858 days	90%	
79	Design/submission/approval of Irrigation Channel and other associated facilities	130 days	Tue 1/9/20	Fri 8/1/21	6	244,265,295,324	287 days	97%	
80									
81	**3. Section 1 of the works (Portions 1 and 1A)**	**1068 days**	**Fri 20/12/19**	**Mon 21/11/22**			**438 days**	**73%**	
82	Site Access in Portion 1	0 days	Sat 18/1/20	Sat 18/1/20	6	106,92FS+30 days,105,104,90	0 days	100%	
83	Site Access in Portion 1A	0 days	Sat 18/7/20	Sat 18/7/20	11	117,99	0 days	100%	
84	Compensation Event No. 39 (PMI-038)- Widening of Yin Kong Road and Revising Associated Facilities	0 days	Wed 17/11/21	Wed 17/11/21		87,108FF+150 days,119,110	156 days	0%	
85	Design/submission/approval and supply of Road Lighting System along Yin Kong Road	180 days	Tue 30/6/20	Sat 26/12/20	6FS+30 days		0 days	100%	
86	Design/submission/approval and supply of Road Lighting System along Yin Kong Road (PMI 038, CE039)	90 days	Wed 17/11/21	Mon 14/2/22		109,120	-113 days	60%	
87	Application for XP for constructionof Yin Kong Road	90 days	Thu 18/11/21	Tue 15/2/22	84	88	642 days	70%	
88	Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 16/3/20	Fri 1/4/22	87	89	642 days	50%	
89	Application of Traffic Advice and Road Work Advice	30 days	Sat 2/4/22	Sun 1/5/22	88		642 days	0%	
90	Submission of Utilities Detection Report	30 days	Wed 29/7/20	Thu 27/8/20	82	106	0 days	100%	
91	Additional Widening works for Yin Kong Road (to be approved by Relevant Department)	30 days	Thu 1/7/21	Fri 30/7/21			917 days	0%	
92	**Relocation of Utilities (by Others)**	**335 days**	**Sun 1/3/20**	**Fri 29/1/21**	**82FS+30 days**		**0 days**	**100%**	
93	**Relocation of CLP Pole at Yin Kong Road in (Portion 1)**	**195 days**	**Sun 1/3/20**	**Fri 11/9/20**			**0 days**	**100%**	
94	Planning for Relocation	60 days	Sun 1/3/20	Wed 29/4/20		95	0 days	100%	
95	Construction of New Pole	60 days	Thu 30/4/20	Sun 28/6/20	94	96	0 days	100%	
96	Outage and Diversion of Underground Cable	75 days	Mon 29/6/20	Fri 11/9/20	95	106	0 days	100%	
97									
98	**Relocation of CLP Pole at Yin Kong Road (Portion 1A)**	**195 days**	**Sun 19/7/20**	**Fri 29/1/21**			**0 days**	**100%**	
99	Planning for Relocation	60 days	Sun 19/7/20	Wed 16/9/20	83	100	0 days	100%	
100	Construction of New Pole	60 days	Thu 17/9/20	Sun 15/11/20	99	101	0 days	100%	
101	Outage and Diversion of Underground Cable	75 days	Mon 16/11/20	Fri 29/1/21	100		0 days	100%	
102									
103	**Site Works (under Portion 1)**	**975 days**	**Fri 20/12/19**	**Sat 20/8/22**			**0 days**	**74%**	
104	Compensation Event No. 002 - Construction of Chain Link Fence and Gate adjacent to Yin Kong Road	21 days	Thu 16/4/20	Wed 6/5/20	82	106	0 days	100%	
105	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 22/4/20	Thu 21/5/20	82	106	0 days	100%	
106	Remove existing fencing and site clearance	30 days	Fri 28/8/20	Sat 26/9/20	82,90,96,104,105		0 days	100%	
107	Road widening	120 days	Sat 16/4/22	Sat 13/8/22	108,110	109FF	-217 days	35%	
108	Drainage works	150 days	Wed 5/5/21	Fri 15/4/22	84FF+150 days	107,110FF	0 days	100%	7 days
109	Lighting and installation of street fruniture	76 days	Mon 30/5/22	Sat 13/8/22	86,107FF	121	-217 days	0%	4 days
110	Additional Dwarf Wall	30 days	Thu 17/3/22	Fri 15/4/22	84,108FF	107	42 days	0%	
111	**Construction of Pai Lau**	**975 days**	**Fri 20/12/19**	**Sat 20/8/22**			**0 days**	**85%**	
112	Instruction from PM	365 days	Fri 20/12/19	Fri 18/12/20	3	113	0 days	100%	
113	Compensation Event No. 36 (PMI-036)- Design and Construction of Yin Kong Village Pai Lau	0 days	Fri 24/12/21	Fri 24/12/21	112	114	0 days	100%	
114	Design/Submission/approval	90 days	Fri 24/12/21	Wed 23/3/22	113	115	75 days	80%	
115	Construction of Pai Lau	150 days	Thu 24/3/22	Sat 20/8/22	114	123	-124 days	50%	7 days
116	**Site Works (under Portion 1A)**	**523 days**	**Sun 7/2/21**	**Thu 14/7/22**			**0 days**	**69%**	
117	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	120 days	Sun 7/2/21	Sun 6/6/21	83,12		0 days	100%	
118	Road Widening	120 days	Thu 17/3/22	Thu 14/7/22	119	120FF	-187 days	50%	
119	Drainage works	120 days	Wed 17/11/21	Wed 16/3/22	84	118	60 days	80%	7 days
120	Lighting and installation of street fruniture	40 days	Sun 5/6/22	Thu 14/7/22	86,118FF	121	-187 days	0%	4 days
121	Paving block on footway	60 days	Sun 14/8/22	Wed 12/10/22	109,120	122	-217 days	0%	
122	bituminous pavement on carriageway	40 days	Thu 13/10/22	Mon 21/11/22	121	123	-217 days	0%	
123	**Completion of Section 1 of the works**	**0 days**	**Mon 18/4/22**	**Mon 18/4/22**	**122,115**		**-217 days**	**0%**	
124									
125	**4. Section 2 of the works (Portions 2 and 2A)**	**803 days**	**Sat 18/7/20**	**Thu 29/9/22**			**19 days**	**5%**	
126	Site Access in Portions 2 and 2A	0 days	Sat 18/7/20	Sat 18/7/20	11	127	0 days	100%	
127	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Sun 19/7/20	Wed 16/9/20	126	129	0 days	100%	
128	**Construction of lodging facility & associated facilities**	**743 days**	**Thu 17/9/20**	**Thu 29/9/22**			**19 days**	**0%**	
129	Excavation and formation preparation	120 days	Thu 17/9/20	Thu 14/1/21	127	130	120 days	0%	
130	Construction of foundation / pavement	120 days	Mon 26/4/21	Mon 23/8/21	129,67	131	19 days	0%	
131	Supply of logging units	200 days	Tue 24/8/21	Fri 11/3/22	130,67	132FS-50 days	19 days	0%	
132	Installation of lodging units	100 days	Fri 21/1/22	Sat 30/4/22	131FS-50 days	133,134,135,136	19 days	0%	3 days
133	Installation of furniture / facility	120 days	Sun 1/5/22	Sun 28/8/22	132	137	24 days	0%	
134	Installation of E&M works	125 days	Sun 1/5/22	Fri 2/9/22	70,68,132	137	19 days	0%	5 days
135	Installation of Fire Services	125 days	Sun 1/5/22	Fri 2/9/22	132	137	19 days	0%	
136	Installation of plumbing works	125 days	Sun 1/5/22	Fri 2/9/22	70,132	137	19 days	0%	5 days
137	Testing and commissioning	27 days	Sat 3/9/22	Thu 29/9/22	136,134,135,133	138	19 days	0%	
138	**Completion of Section 2 of the works**	**0 days**	**Thu 29/9/22**	**Thu 29/9/22**	**137**		**19 days**	**0%**	
139									
140	**5. Section 3 of the works (Portions 3, 4, 4A, 4B, 5, 5A, 6 & 6A)**	**1111 days**	**Sat 18/1/20**	**Thu 2/2/23**			**365 days**	**40%**	
141	Site Access in Portions 5 and 6A	0 days	Sat 18/1/20	Sat 18/1/20	6	145,143SS	0 days	100%	
142	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 18/7/20	Sat 18/7/20	11	156,145,143FF+20 days	0 days	100%	
143	General site clearance / demolition work / Removal of Asbesto Containing Material	300 days	Sun 19/1/20	Fri 13/11/20	141SS,142FF+20 days	165,156	0 days	100%	
144	**Construction of water treatment wetland**	**588 days**	**Tue 11/5/21**	**Mon 19/12/22**			**410 days**	**52%**	
145	Excavation for sedimentation pond	120 days	Tue 11/5/21	Tue 7/9/21	64,141,142,66,13	146	101.8 days	50%	
146	Excavation for macophyte zones - down stream	71 days	Wed 8/9/21	Wed 17/11/21	145	147,153	45 days	80%	
147	Bedding preparation	45 days	Thu 18/11/21	Sat 1/1/22	146	148,150	36 days	20%	
148	Excavation for macophyte zones - mid stream	72 days	Sun 2/1/22	Mon 14/3/22	147	149	645 days	50%	
149	Bedding preparation	45 days	Tue 15/3/22	Thu 28/4/22	148		645 days	0%	
150	Excavation for macophyte zones - upstream	72 days	Sun 2/1/22	Mon 14/3/22	147	151	-138 days	50%	



Revised Programme: June 2022

Data Date : 2022-6-3

Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline

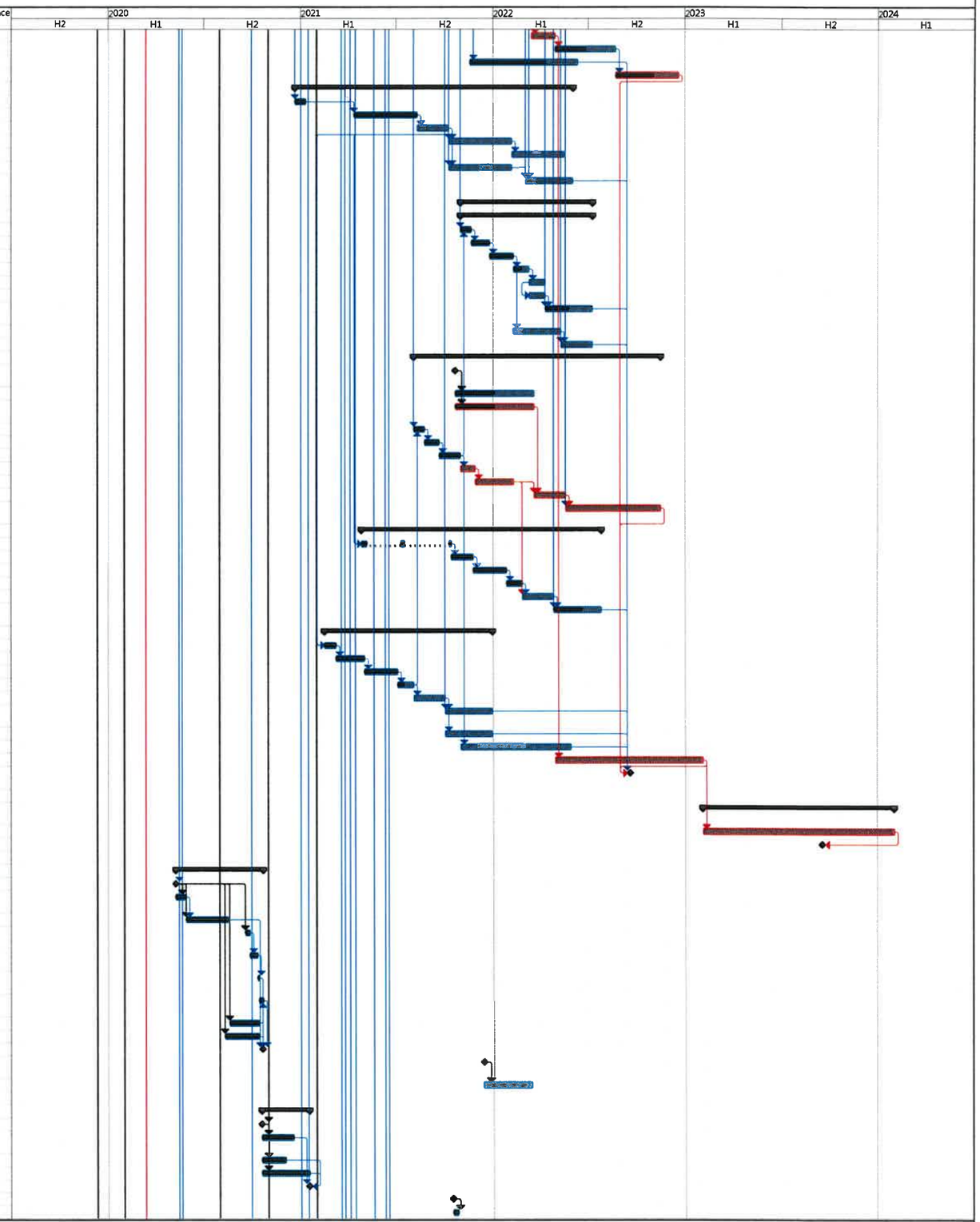
Contract No. ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park

Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
151		Bedding preparation	45 days	Tue 15/3/22	Thu 28/4/22	150	152,201	-138 days	0%	
152		Excavation for open water zone	115 days	Fri 29/4/22	Sun 21/8/22	151	154	72 days	50%	
153		Construction of wetland broadwalk	205 days	Thu 18/11/21	Fri 10/6/22	146	202	99 days	70%	
154		Construction of Inlet and outlet structures	120 days	Mon 22/8/22	Mon 19/12/22	152	202	-93 days	60%	
155		**Construction of birdhide**	**528 days**	**Mon 21/12/20**	**Wed 1/6/22**			**611 days**	**22%**	
156	✓	Excavation and formation preparation	21 days	Mon 21/12/20	Sun 10/1/21	142,143	157	0 days	100%	
157	✓	Construction of base slab	120 days	Mon 12/4/21	Mon 9/8/21	156	158	0 days	100%	
158		Installation of steel structural frame	60 days	Tue 10/8/21	Fri 8/10/21	157	159,186,161,193	134 days	0%	
159		Installation of timber wall / roof	120 days	Sat 9/10/21	Sat 5/2/22	158,69	160	627 days	0%	4 days
160		Installation of timber rised flooring	100 days	Sun 6/2/22	Mon 16/5/22	159		627 days	0%	
161		Installation of E&M, Fire Services System	120 days	Sat 9/10/21	Sat 5/2/22	158,70,74	162	134 days	0%	
162		Testing & commissioning	90 days	Fri 4/3/22	Wed 1/6/22	70,71,161	202	108 days	0%	
163		**Construction of farmer's forum / open area**	**251 days**	**Sun 31/10/21**	**Fri 8/7/22**			**71 days**	**37%**	
164		**Construction of tea house pavilion**	**251 days**	**Sun 31/10/21**	**Fri 8/7/22**			**71 days**	**57%**	
165	✓	Construction of base slab	21 days	Sun 31/10/21	Sat 20/11/21	143,180,73	166	0 days	100%	
166	✓	Construction of walls with columns	35 days	Sun 21/11/21	Sat 25/12/21	165	167	0 days	100%	
167	✓	Installation of roof steel structure	45 days	Sun 26/12/21	Tue 8/2/22	166	168,172	0 days	100%	
168		Installation of recycled timber strip for roof	30 days	Wed 9/2/22	Thu 10/3/22	167	169	116 days	50%	
169		Installation of recycled timber strip for walls	30 days	Fri 11/3/22	Sat 9/4/22	168	170SS	116 days	0%	
170		Supply and installation of bench	30 days	Fri 11/3/22	Sat 9/4/22	169SS	171	116 days	0%	
171		Installation of plumbing works / E&M works with testing & commissioning	90 days	Sun 10/4/22	Fri 8/7/22	170,70,71,74	202	71 days	50%	
172		Construction of paving slab for open area	90 days	Wed 9/2/22	Mon 9/5/22	167	173	71 days	0%	4 days
173		Construction of entrance gantry signages	60 days	Tue 10/5/22	Fri 8/7/22	172,77	202	71 days	0%	4 days
174		**Construction of Type 1 storage house**	**469 days**	**Tue 3/8/21**	**Mon 14/11/22**			**445 days**	**33%**	
175	✓	Compensation Event No. 58 (PMI-059)-Type 1 Storage House Revision	0 days	Thu 21/10/21	Thu 21/10/21		176,177	0 days	100%	
176		Design of Fire Services (CE No. 058)	150 days	Thu 21/10/21	Sat 19/3/22	175		685 days	50%	
177		Design of Plumbing Works (CE No. 058) & Approval by WSD	150 days	Thu 21/10/21	Sat 19/3/22	175	183	-58 days	50%	
178	✓	Excavation and formation preparation	21 days	Tue 3/8/21	Mon 23/8/21	40,196	179	0 days	100%	
179	✓	Construction of base slab	28 days	Tue 24/8/21	Mon 20/9/21	178	180	0 days	100%	
180	✓	Construction of walls and roof	40 days	Tue 21/9/21	Sat 30/10/21	179	181,165,200	0 days	100%	
181		Installation of aluminium louvre / GMS door	28 days	Sun 31/10/21	Sat 27/11/21	180	182	-19 days	0%	
182		Installation of recycled timber strip / external finishing	73 days	Sun 28/11/21	Tue 8/2/22	181	190,183	-19 days	0%	3 days
183		Installation of Plumbing Works (CE No. 058)	60 days	Sun 20/3/22	Wed 18/5/22	182,177	184	-58 days	0%	
184		Installation of E&M works & Fire Services with testing & commissioning	180 days	Thu 19/5/22	Mon 14/11/22	70,74,183	202	-58 days	0%	
185		**Construction of outdoor classroom shelter**	**455.2 days**	**Mon 26/4/21**	**Mon 25/7/22**			**54.8 days**	**69%**	
186	✓	Excavation and formation preparation	21 days	Mon 26/4/21	Wed 13/10/21	158	187	0 days	100%	
187	✓	Construction of base slab	42 days	Wed 13/10/21	Wed 24/11/21	186	188	0 days	100%	
188	✓	Construction of concrete columns	63 days	Wed 24/11/21	Wed 26/1/22	187	189	0 days	100%	3 days
189	✓	Installation of steel roof frame with corrugated sheet	30 days	Wed 26/1/22	Fri 25/2/22	188	190	0 days	100%	
190		Installation of recycled timber strip roofing	60 days	Fri 25/2/22	Tue 26/4/22	189,182	191	108.8 days	0%	
191		Installation of E&M works and Fire Services with testing & comissioning	90 days	Tue 26/4/22	Mon 25/7/22	190,74	202	54.8 days	60%	
192		**Construction of storage compositing facility**	**319 days**	**Mon 15/2/21**	**Thu 30/12/21**			**261 days**	**47%**	
193	✓	Excavation and formation preparation	22 days	Mon 15/2/21	Mon 8/3/21	158	194	0 days	100%	
194	✓	Construction of base slab	54 days	Tue 9/3/21	Sat 1/5/21	193	195	0 days	100%	
195	✓	Construction of concrete columns	63 days	Sun 2/5/21	Sat 3/7/21	194	196	0 days	100%	3 days
196		Installation of steel roof frame with corrugated sheet	30 days	Sun 4/7/21	Mon 2/8/21	195	197,178	261 days	40%	
197		Installation of recycled timber strip roofing	60 days	Tue 3/8/21	Fri 1/10/21	196	198,199	261 days	0%	
198		Installation of E&M works & Fire Services with testing & commissioning	90 days	Sat 2/10/21	Thu 30/12/21	197,74	202	261 days	0%	
199		**Construction of entry landing with drop bar**	**90 days**	**Sat 2/10/21**	**Thu 30/12/21**	**197**	**202**	**261 days**	**0%**	
200		**Construction of walkway**	**210 days**	**Sun 31/10/21**	**Sat 28/5/22**	**180**	**202**	**112 days**	**0%**	
201		**Landscaping softworks**	**280 days**	**Fri 29/4/22**	**Thu 2/2/23**	**151**	**202,205**	**-138 days**	**0%**	
202		**Completion of Section 3 of the works**	**0 days**	**Sat 17/9/22**	**Sat 17/9/22**	**162,171,173,184,191,198,199**		**-138 days**	**0%**	
203										
204		**6. Section 3A of the works (Establishment works for Section 2 and 3)**	**365 days**	**Fri 3/2/23**	**Fri 2/2/24**			**-138 days**	**0%**	
205		Establishment works for landscape softworks	365 days	Fri 3/2/23	Fri 2/2/24	201	206FF	-138 days	0%	
206		**Completion of Section 3A of the Works**	**0 days**	**Sun 17/9/23**	**Sun 17/9/23**	**205FF**		**-138 days**	**0%**	
207										
208	✓	**7. Section 4 of the works (Portion 18)**	**167 days**	**Thu 7/5/20**	**Wed 21/10/20**			**0 days**	**100%**	
209	✓	Site Access in Portion 18	0 days	Thu 7/5/20	Thu 7/5/20	9	210,211,216,217,212	0 days	100%	
210	✓	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	20 days	Fri 8/5/20	Wed 27/5/20	209	211	0 days	100%	
211	✓	General maintenance to exisitng wetland	80 days	Thu 28/5/20	Sat 15/8/20	209,210	218	0 days	100%	7 days
212	✓	Compensation Event No. 020 - Inclement Weather Conditions in August 2020	8.5 days	Fri 18/9/20	Sat 26/9/20	209	213	0 days	100%	
213	✓	Compensation Event No. 021 - Inclement Weather Conditions in September 2020	14.5 days	Sat 26/9/20	Sat 10/10/20	212	214	0 days	100%	
214	✓	Compensation Event No. 028 - Inclement Weather Conditions in October 2020	3 days	Sun 11/10/20	Tue 13/10/20	213	218	0 days	100%	
215	✓	Compensation Event No. 026 - Provision of Root Barriers behind Gabion Walls of Irrigation Channel	8 days	Wed 14/10/20	Wed 21/10/20	216	218	0 days	100%	
216	✓	Construction of Irrigation Channel	56 days	Wed 19/8/20	Tue 13/10/20	209	215	0 days	100%	
217	✓	Construction of Metal Wire Railing	65 days	Mon 10/8/20	Tue 13/10/20	209	218	0 days	100%	
218	✓	**Completion of Section 4 of the works**	**0 days**	**Wed 21/10/20**	**Wed 21/10/20**	**211,217,214,215**		**0 days**	**100%**	
219	✓	Compensation Event No. 69 (PMI-055)- Additional Stairway at Portion 18	0 days	Tue 14/12/21	Tue 14/12/21		220	0 days	100%	
220		Additional Stariway at Portion 18	90 days	Tue 14/12/21	Sun 13/3/22	219		691 days	0%	
221										
222	✓	**8. Section 5 of the works (Portion 14)**	**90 days**	**Sun 18/10/20**	**Sat 16/1/21**			**0 days**	**100%**	
223	✓	Site Access in Portion 14	0 days	Sun 18/10/20	Sun 18/10/20	14	226,224,225	0 days	100%	
224	✓	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Mon 19/10/20	Thu 17/12/20	223	227	0 days	100%	
225	✓	General maintenance to exisiting wetland	45 days	Mon 19/10/20	Wed 2/12/20	223	227FF	0 days	100%	
226	✓	Boundary Structure - Metal Wire Railing	90 days	Mon 19/10/20	Sat 16/1/21	223	227FF	0 days	100%	
227		**Completion of Section 5 of the works**	**0 days**	**Sat 16/1/21**	**Sat 16/1/21**	**226FF,225FF,224**		**0 days**	**0%**	
228	✓	Compensation Event No. 32 (PMI-032) - Soil Replacement Works in P	0 days	Sat 16/10/21	Sat 16/10/21		229	0 days	100%	
229	✓	Soil Replacement Works	10 days	Sat 16/10/21	Mon 25/10/21	228		0 days	100%	



Revised Programme: June 2022

Data Date : 2022-6-3

Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline

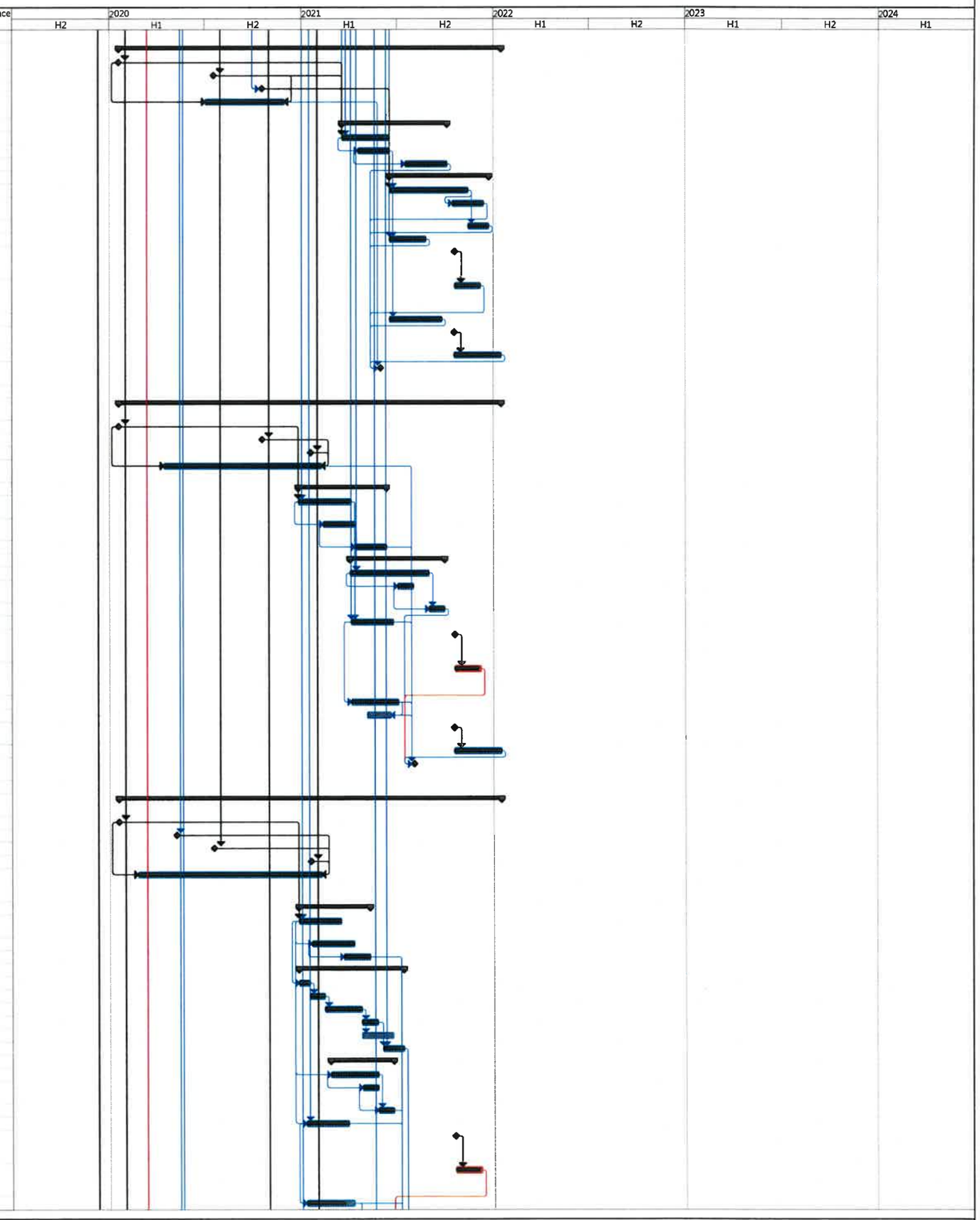
Contract No. ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park

Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
230										
231	✓	**9. Section 6 of the works (Portions 8,8A,8B and 9,9A~9G)**	**728 days**	**Sat 18/1/20**	**Sat 15/1/22**			**0 days**	**100%**	
232	✓	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 18/1/20	Sat 18/1/20	6	237,235SS	0 days	100%	
233	✓	Site Access in Portion 8	0 days	Sat 18/7/20	Sat 18/7/20	11	235FF+10 days,237	0 days	100%	
234	✓	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 18/10/20	Sun 18/10/20	15,16	235FF+10 days,237,241	0 days	100%	
235	✓	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	150 days	Fri 3/7/20	Sun 29/11/20	232SS,233FF+10 days,234FF+10 days	250	0 days	100%	
236	✓	**Wetland Restoration / Wetland Creation**	**200 days**	**Fri 19/3/21**	**Mon 4/10/21**			**0 days**	**100%**	
237	✓	Excavation	90 days	Fri 19/3/21	Wed 16/6/21	232,54,52,233,234,15	238SS+30 days	0 days	100%	
238	✓	Backfilling	60 days	Sun 18/4/21	Wed 16/6/21	237SS+30 days	239SS+90 days,241,244,247	0 days	100%	
239	✓	Agricultural Planting	80 days	Sat 17/7/21	Mon 4/10/21	238SS+90 days	250	0 days	100%	
240	✓	**Construction of Storage Sheds**	**190 days**	**Thu 17/6/21**	**Thu 23/12/21**			**0 days**	**100%**	
241	✓	Construction of concrete structure	150 days	Thu 17/6/21	Sat 13/11/21	238,234,16	242FS-30 days,243	0 days	100%	4 days
242	✓	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	60 days	Fri 15/10/21	Mon 13/12/21	241FS-30 days	250	0 days	100%	
243	✓	Installation of GMS roofing structure with recycle timber	40 days	Sun 14/11/21	Thu 23/12/21	241	250	0 days	100%	
244	✓	Construction of Channel	70 days	Thu 17/6/21	Wed 25/8/21	238,79	250	0 days	100%	7 days
245	✓	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 19/10/21	Tue 19/10/21		246	0 days	100%	
246	✓	Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	50 days	Tue 19/10/21	Tue 7/12/21	245	250	0 days	100%	
247	✓	Construction of walkway	100 days	Thu 17/6/21	Fri 24/9/21	238	250	0 days	100%	7 days
248	✓	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 18/10/21	Mon 18/10/21		249	0 days	100%	
249	✓	Construction of Drainage Ditches in Section 6	90 days	Mon 18/10/21	Sat 15/1/22	248	250	0 days	100%	
250		**Completion of Section 6 of the works**	**0 days**	**Sun 30/5/21**	**Sun 30/5/21**	9,243,244,247,235,242,249,2		**-230 days**	**0%**	
251										
252		**10. Section 7 of the works (Portions 10,10A,10B, 13,13A and 16,16A,16B)**	**728 days**	**Sat 18/1/20**	**Sat 15/1/22**			**0 days**	**95%**	
253	✓	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 18/1/20	Sat 18/1/20	6	258,256SS	0 days	100%	
254	✓	Site Access in Portions 10, 13	0 days	Sun 18/10/20	Sun 18/10/20	14	256FF+20 days	0 days	100%	
255	✓	Site Access in Portions 16A, 16B	0 days	Mon 18/1/21	Mon 18/1/21	17	256FF+20 days	0 days	100%	
256	✓	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	300 days	Tue 14/4/20	Sun 7/2/21	253SS,254FF+20 days,255FF+20 days	272	0 days	100%	
257	✓	**Wetland Restoration / Wetland Creation**	**167 days**	**Sat 26/12/20**	**Thu 10/6/21**			**0 days**	**100%**	
258	✓	Excavation	100 days	Sat 26/12/20	Sun 4/4/21	253,54,52	259SS+47 days,265	0 days	100%	
259	✓	Backfilling	60 days	Thu 11/2/21	Sun 11/4/21	258SS+47 days	260SS+60 days	0 days	100%	
260	✓	Agricultural Planting	60 days	Mon 12/4/21	Thu 10/6/21	259SS+60 days	272	0 days	100%	
261	✓	**Construction of storage sheds**	**180 days**	**Sat 3/4/21**	**Wed 29/9/21**			**0 days**	**100%**	
262	✓	Construction of concrete structure	150 days	Sat 3/4/21	Mon 30/8/21	18	263SS+90 days,264	0 days	100%	
263	✓	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	30 days	Fri 2/7/21	Sat 31/7/21	262SS+90 days	264SS+30 days	0 days	100%	
264	✓	Installation of GMS roofing structure with recycle timber	30 days	Tue 31/8/21	Wed 29/9/21	263SS+30 days,262	272	0 days	100%	
265	✓	Construction of Channel	80 days	Mon 5/4/21	Wed 23/6/21	79,258	268SS,272	0 days	100%	7 days
266	✓	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 19/10/21	Tue 19/10/21		267	0 days	100%	
267		Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	50 days	Tue 19/10/21	Tue 7/12/21	266	272	-127 days	90%	
268	✓	Construction of walkway	90 days	Mon 5/4/21	Sat 3/7/21	265SS	269FF-15 days,272	0 days	100%	6 days
269		Construction of entry landing with drop bar	45 days	Wed 5/5/21	Fri 18/6/21	268FF-15 days	272	45 days	0%	
270	✓	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 18/10/21	Mon 18/10/21		271	0 days	100%	
271	✓	Construction of Drainage Ditches in Section 7	90 days	Mon 18/10/21	Sat 15/1/22	270	272	0 days	100%	
272		**Completion of Section 7 of the works**	**0 days**	**Mon 2/8/21**	**Mon 2/8/21**	0,264,265,268,269,256,271,2		**-166 days**	**0%**	
273										
274		**11. Section 8 of the works (Portions 7,7A,7B, 17,17A,17B, 19,19A,19B,19C, 20,20A,20B&20C)**	**728 days**	**Sat 18/1/20**	**Sat 15/1/22**			**748 days**	**90%**	
275	✓	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 18/1/20	Sat 18/1/20	6	281,279SS	0 days	100%	
276	✓	Site Access in Portions 19, 20, 20C	0 days	Thu 7/5/20	Thu 7/5/20	9	279FF+20 days	0 days	100%	
277	✓	Site Access in Portions 7A, 7B	0 days	Sat 18/7/20	Sat 18/7/20	11	279FF+20 days	0 days	100%	
278	✓	Site Access in Portions 17A, 17B	0 days	Mon 18/1/21	Mon 18/1/21	17	279FF+20 days	0 days	100%	
279	✓	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	350 days	Mon 24/2/20	Sun 7/2/21	275SS,276FF+20 days,277FF+20 days,278FF+20 days		0 days	100%	
280	✓	**Wetland Restoration / Wetland Creation**	**135 days**	**Sat 26/12/20**	**Sun 9/5/21**			**0 days**	**100%**	
281	✓	Excavation	80 days	Sat 26/12/20	Mon 15/3/21	275,54,52	282SS+25 days,292SS+60 days,285SS,295SS	0 days	100%	
282	✓	Backfilling	80 days	Wed 20/1/21	Fri 9/4/21	281SS+25 days	283SS+60 days	0 days	100%	
283	✓	Agricultural Planting	50 days	Sun 21/3/21	Sun 9/5/21	282SS+60 days	302	0 days	100%	
284		**Construction of Type 2 storage house**	**199 days**	**Sat 26/12/20**	**Mon 12/7/21**			**935 days**	**76%**	
285	✓	Excavation and formation preparation	21 days	Sat 26/12/20	Fri 15/1/21	281SS	286	0 days	100%	
286	✓	Construction of base slab	28 days	Sat 16/1/21	Fri 12/2/21	285	287	0 days	100%	
287	✓	Construction of walls and roof	70 days	Sat 13/2/21	Fri 23/4/21	286	288,289	0 days	100%	
288	✓	Installation of aluminium louvre / GMS door	30 days	Sat 24/4/21	Sun 23/5/21	287	290	0 days	100%	
289		Installation of recycled timber strip / external finishing	60 days	Sat 24/4/21	Tue 22/6/21	287		955 days	0%	
290	✓	Installation of E&M works with testing & commissioning	40 days	Thu 3/6/21	Mon 12/7/21	288,74	302	0 days	100%	
291	✓	**Construction of storage sheds**	**120 days**	**Wed 24/2/21**	**Wed 23/6/21**			**0 days**	**100%**	
292	✓	Construction of concrete structure	90 days	Wed 24/2/21	Mon 24/5/21	281SS+60 days	293SS+60 days,294	0 days	100%	
293	✓	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	30 days	Sun 25/4/21	Mon 24/5/21	292SS+60 days	294SS+21 days	0 days	100%	
294	✓	Installation of GMS roofing structure with recycle timber	30 days	Tue 25/5/21	Wed 23/6/21	293SS+21 days,292	302	0 days	100%	
295	✓	Construction of Channel	80 days	Sat 9/1/21	Mon 29/3/21	79,281SS	298SS,302	0 days	100%	7 days
296	✓	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 19/10/21	Tue 19/10/21		297	0 days	100%	
297		Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	50 days	Tue 19/10/21	Tue 7/12/21	296	302	-147 days	90%	
298		Construction of walkway	90 days	Sat 9/1/21	Thu 8/4/21	295SS	299FF,302	96 days	80%	7 days



Revised Programme: June 2022

Data Date : 2022-6-3

Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline

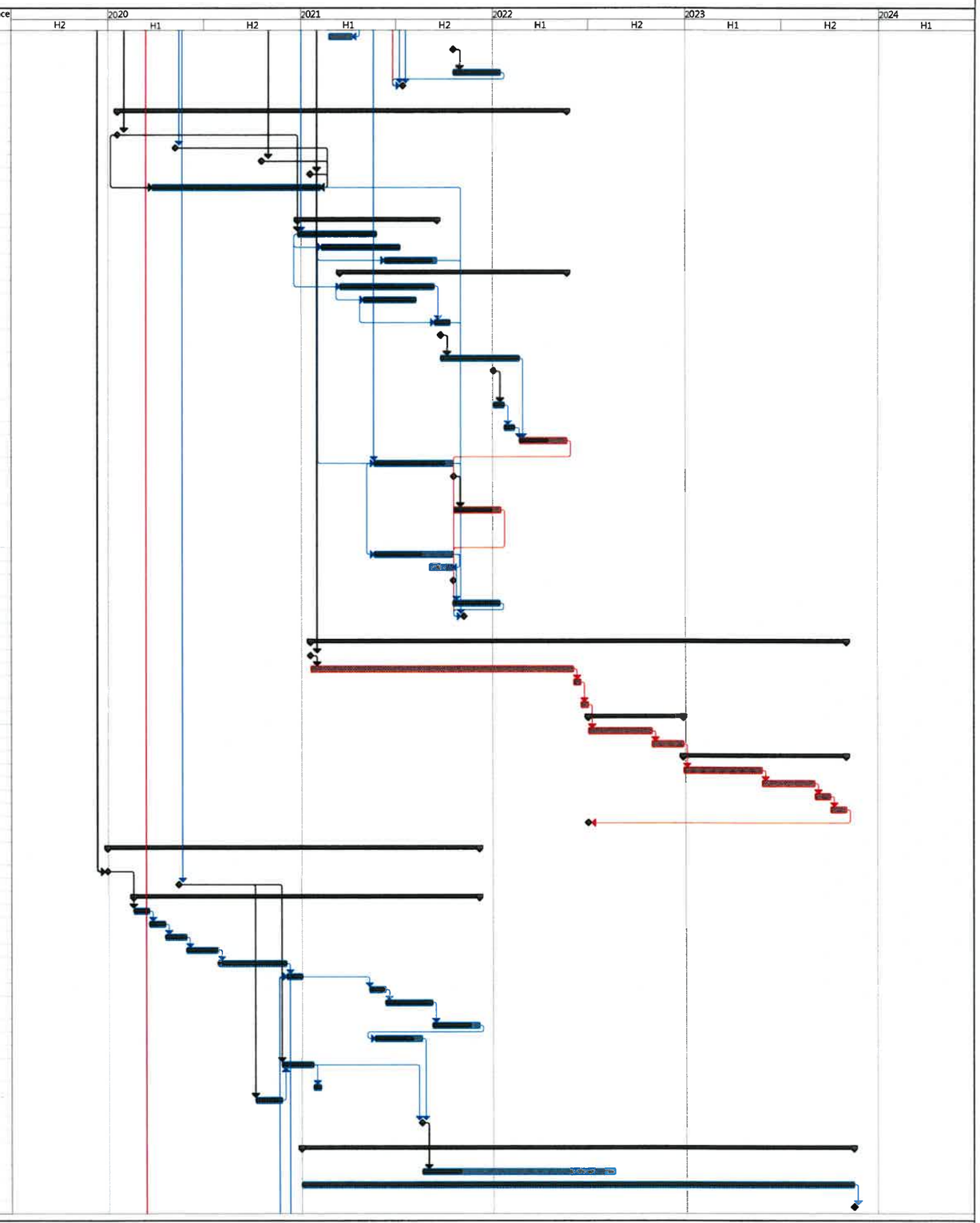
Contract No. ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park

Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
299		Construction of entry landing with drop bar	45 days	Tue 23/2/21	Thu 8/4/21	298FF		1030 days	0%	
300	✓	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 18/10/21	Mon 18/10/21		301	0 days	100%	
301	✓	Construction of Drainage Ditches in Section 8	90 days	Mon 18/10/21	Sat 15/1/22	300	302	0 days	100%	
302		**Completion of Section 8 of the works**	**0 days**	**Tue 13/7/21**	**Tue 13/7/21**	**283,290,294,295,298,301,297**		**-186 days**	**0%**	
303										
304		**12. Section 9 of the works (Portions 11,11A,11B, 12,12A~12D, and 15,15A~15C)**	**854 days**	**Sat 18/1/20**	**Sat 21/5/22**			**622 days**	**90%**	
305	✓	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 18/1/20	Sat 18/1/20	6	311,309SS	0 days	100%	
306	✓	Site Access in Portion 15A	0 days	Thu 7/5/20	Thu 7/5/20	9	309FF+20 days	0 days	100%	
307	✓	Site Access in Portions 11, 12, 12B	0 days	Sun 18/10/20	Sun 18/10/20	14	309FF+20 days	0 days	100%	
308	✓	Site Access in Portion 15	0 days	Mon 18/1/21	Mon 18/1/21	17	309FF+20 days	0 days	100%	
309	✓	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	320 days	Wed 25/3/20	Sun 7/2/21	305SS,306FF+20 days,307FF+20 days,308FF+20 days	331	0 days	100%	
310		**Wetland Restoration / Wetland Creation**	**265 days**	**Sat 26/12/20**	**Thu 16/9/21**			**51 days**	**98%**	
311	✓	Excavation	150 days	Sat 26/12/20	Mon 24/5/21	305,54,52	312SS+45 days,315SS+80 days	0 days	100%	
312	✓	Backfilling	150 days	Tue 9/2/21	Thu 8/7/21	311SS+45 days	313SS+120 days,324SS+100 days	0 days	100%	
313		Agricultural Planting	100 days	Wed 9/6/21	Thu 16/9/21	312SS+120 days	331	51 days	90%	
314		**Construction of storage sheds**	**432 days**	**Tue 16/3/21**	**Sat 21/5/22**			**0 days**	**94%**	
315	✓	Construction of concrete structure	180 days	Tue 16/3/21	Sat 11/9/21	311SS+80 days	316SS+45 days,317	0 days	100%	
316	✓	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	100 days	Fri 30/4/21	Sat 7/8/21	315SS+45 days	317SS+21 days	0 days	100%	
317	✓	Installation of GMS roofing structure with recycle timber	30 days	Sun 12/9/21	Mon 11/10/21	316SS+21 days,315	331	0 days	100%	3 days
318	✓	Compensation Event No. 59 (PMI-060) - Provision of Dangerous Goods Store at Storage Shed 30	0 days	Fri 24/9/21	Fri 24/9/21		319	0 days	100%	
319	✓	Design of Fire Services	150 days	Fri 24/9/21	Sun 20/2/22	318	323	0 days	100%	
320	✓	Compensation Event No. 76 (PMI-070) - Additional Fill Slope Foundation Works for Storage Shed 30	0 days	Mon 3/1/22	Mon 3/1/22		321	0 days	100%	
321	✓	Construction of Fill Slope Foundation Works for Storage Shed SS30	20 days	Mon 3/1/22	Sat 22/1/22	320	322	0 days	100%	
322	✓	Construction of Storage Shed SS30	20 days	Sun 23/1/22	Fri 11/2/22	321	323	0 days	100%	
323		Installation of E&M works & Fire Services with testing & commissioning	90 days	Mon 21/2/22	Sat 21/5/22	319,322	331	-196 days	60%	
324		Construction of Channel	150 days	Thu 20/5/21	Sat 16/10/21	312SS+100 days,79	327SS,331	21 days	90%	4 days
325	✓	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 19/10/21	Tue 19/10/21		326	0 days	100%	
326		Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	90 days	Tue 19/10/21	Sun 16/1/22	325	331	-71 days	80%	
327		Construction of walkway	150 days	Thu 20/5/21	Sat 16/10/21	324SS	328FF,331	21 days	60%	4 days
328		Construction of entry landing with drop bar	45 days	Thu 2/9/21	Sat 16/10/21	327FF	330	839 days	0%	
329	✓	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 18/10/21	Mon 18/10/21			0 days	100%	
330	✓	Construction of Drainage Ditches in Section 9	90 days	Sun 17/10/21	Fri 14/1/22	328	331	0 days	100%	
331		**Completion of Section 9 of the works**	**0 days**	**Sat 6/11/21**	**Sat 6/11/21**	**3,317,324,327,309,330,326,3**		**-196 days**	**0%**	
332										
333		**13. Section 10 of the works (Portion 21)**	**1018 days**	**Mon 18/1/21**	**Thu 2/11/23**			**-490 days**	**0%**	
334		Site Access in Portion 21	0 days	Mon 18/1/21	Mon 18/1/21	17	335	-490 days	0%	
335		Local Objection for commencement of Works	500 days	Tue 19/1/21	Thu 2/6/22	334	336	-490 days	0%	
336		General site clearance / demolition work / Removal of Asbesto Containing Material	14 days	Fri 3/6/22	Thu 16/6/22	335	337	-490 days	0%	
337		Erect site hoarding	14 days	Fri 17/6/22	Thu 30/6/22	336	339	-490 days	0%	
338		**Archaeological Impacts Mitigation Measures**	**180 days**	**Fri 1/7/22**	**Tue 27/12/22**			**-490 days**	**0%**	
339		Archaeological survey	120 days	Fri 1/7/22	Fri 28/10/22	337	340	-490 days	0%	
340		Archaeological impact assessment	60 days	Sat 29/10/22	Tue 27/12/22	339	342	-490 days	0%	
341		**Site formation work and infrastructure works at Wa Shan**	**310 days**	**Wed 28/12/22**	**Thu 2/11/23**			**-490 days**	**0%**	
342		Site formation / slope works	150 days	Wed 28/12/22	Fri 26/5/23	340	343	-490 days	0%	4 days
343		Drainage works	100 days	Sat 27/5/23	Sun 3/9/23	342	344	-490 days	0%	4 days
344		Paving block on footway	30 days	Mon 4/9/23	Tue 3/10/23	343	345	-490 days	0%	
345		bituminous pavement on carriageway	30 days	Wed 4/10/23	Thu 2/11/23	344	346FF	-490 days	0%	
346		**Completion of Section 10 of the works**	**0 days**	**Thu 30/6/22**	**Thu 30/6/22**	**345FF**		**-490 days**	**0%**	
347										
348		**14. Section 11 of the works (Portions 22, 23, 24 and remainder works)**	**706 days**	**Tue 31/12/19**	**Sun 5/12/21**			**560 days**	**95%**	
349	✓	Site Access in Portions 23, 24	0 days	Tue 31/12/19	Tue 31/12/19	7	352	0 days	100%	
350	✓	Site Access in Portion 22	0 days	Wed 13/5/20	Wed 13/5/20	10	363,365	0 days	100%	
351		**Egretray Site Protion 23 & 24**	**657 days**	**Tue 18/2/20**	**Sun 5/12/21**			**560 days**	**94%**	
352	✓	General site clearance	30 days	Tue 18/2/20	Wed 18/3/20	349	353	0 days	100%	
353	✓	Erect site hoarding (Deleted)	30 days	Thu 19/3/20	Fri 17/4/20	352	354	0 days	100%	
354	✓	Preliminary Survey	40 days	Sat 18/4/20	Wed 27/5/20	353	355	0 days	100%	
355	✓	Submission of mehtodology for translocation	60 days	Thu 28/5/20	Sun 26/7/20	354	356	0 days	100%	
356	✓	Approval of Methodology for Translocation	130 days	Mon 27/7/20	Thu 3/12/20	355	357,376	0 days	100%	
357	✓	Translocation works	30 days	Fri 4/12/20	Sat 2/1/21	356,377	358	0 days	100%	
358	✓	Planting in Portion 23 & 24	30 days	Mon 10/5/21	Tue 8/6/21	357	359	0 days	100%	
359	✓	Provision of Railing and Gate at Portion 23 (Under PMI 026 / CE 019)	90 days	Wed 9/6/21	Mon 6/9/21	358	360	0 days	100%	
360		Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Tue 7/9/21	Sun 5/12/21	359	361FS-200 days	560 days	80%	10 days
361		Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Thu 20/5/21	Tue 17/8/21	360FS-200 days	366	488 days	80%	10 days
362										
363	✓	Preparation Works for Landscaping work at existing Ho Sheung Heung Egretry Site (Portion 22)	60 days	Wed 25/11/20	Sat 23/1/21	350,365	366,364	0 days	100%	10 days
364	✓	Planting for Ho Sheung Heung Egretry Site	14 days	Sun 24/1/21	Sat 6/2/21	363		0 days	100%	
365	✓	Compensation Event No. 017 - Removal of Existing Unsafe Sheds	50 days	Tue 6/10/20	Tue 24/11/20	350	363	0 days	100%	
366		**Completion of Section 11 of the works**	**0 days**	**Tue 17/8/21**	**Tue 17/8/21**	**363,361**	**369**	**488 days**	**0%**	
367										
368		**15. Section 11A of the works (Establishment works for Section 11)**	**1050 days**	**Fri 1/1/21**	**Thu 16/11/23**			**78 days**	**79%**	
369		Establishment works	365 days	Wed 18/8/21	Wed 17/8/22	366		534 days	20%	
370	✓	Compensation Event No. 15 Provisionof Decoys and Broadcast of Bird Sound in Portions 23 & 24	1050 days	Fri 1/1/21	Thu 16/11/23		371	0 days	100%	
371		**Completion of Section 11A of the works**	**0 days**	**Thu 16/11/23**	**Thu 16/11/23**	**370**		**32 days**	**0%**	



Revised Programme: June 2022

Data Date : 2022-6-3

Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline

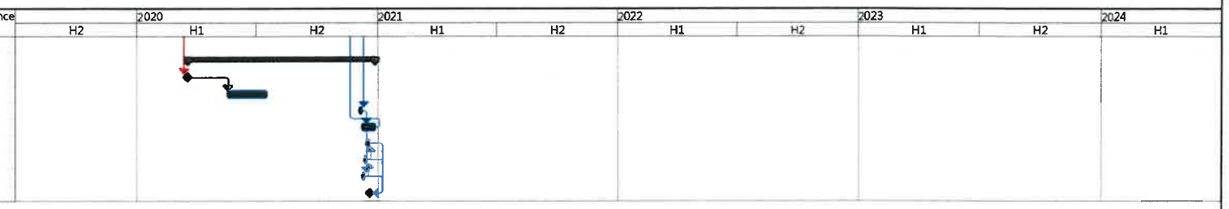
Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park

Project Programme of the Works

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
372										
373	✓	**16. Section 12 of the works (Portions 25, 26 and 27)**	**284 days**	**Wed 18/3/20**	**Sun 27/12/20**			**0 days**	**100%**	
374	✓	Site Access in Portions 25, 26, 27	0 days	Wed 18/3/20	Wed 18/3/20	3FS+90 days	375FS+60 days	0 days	100%	
375	✓	Boundary Site Area	60 days	Mon 18/5/20	Thu 16/7/20	374FS+60 days		0 days	100%	
376	✓	Preparation for translocation works	4 days	Fri 4/12/20	Mon 7/12/20	356	380,377	0 days	100%	
377	✓	Compensation Event No. 11 - Translocation of Rose Bitterling	20 days	Tue 8/12/20	Sun 27/12/20	376	357	0 days	100%	
378	✓	Collection site C1 (Portion 25)	5 days	Mon 14/12/20	Fri 18/12/20	379	381FF	0 days	100%	
379	✓	Collection site C2 (Portion 26)	3 days	Fri 11/12/20	Sun 13/12/20	380	381FF,378	0 days	100%	
380	✓	Collcetion site C3 (Portion 27)	3 days	Tue 8/12/20	Thu 10/12/20	376	381FF,379	0 days	100%	
381	✓	**Completion of Section 12 of the works**	**0 days**	**Fri 18/12/20**	**Fri 18/12/20**	**378FF,379FF,380FF**		**0 days**	**100%**	



Revised Programme: June 2022

Data Date : 2022-6-3

Task		Summary		Rolled Up Milestone		External Tasks		Inactive Milestone		Duration-only		Start-only		External Milestone	
Critical Task		Rolled Up Task		Rolled Up Progress		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Progress	
Milestone		Rolled Up Critical Task		Split		Group By Summary		Manual Task		Manual Summary		External Tasks		Deadline	

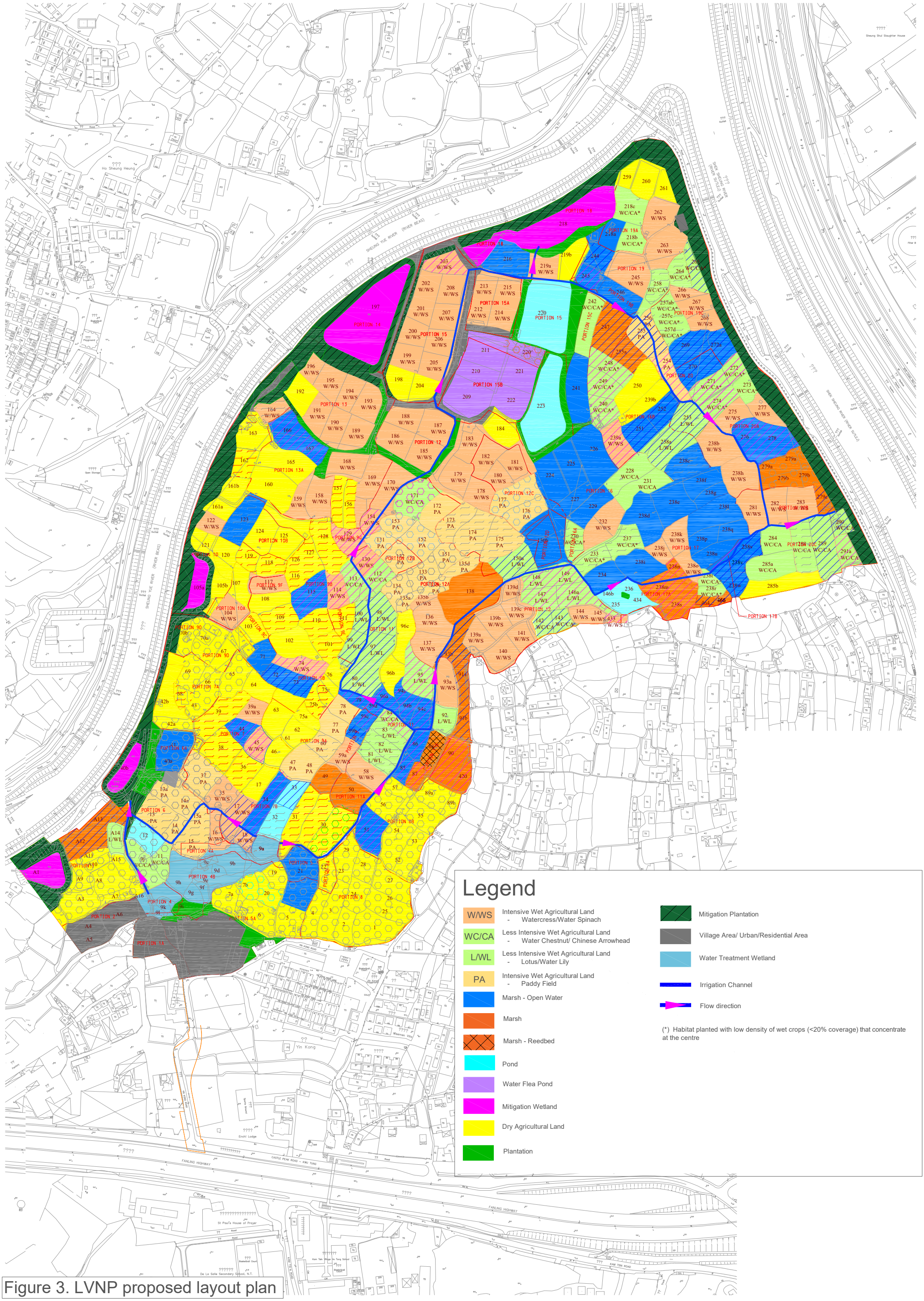


Figure 3. LVNP proposed layout plan

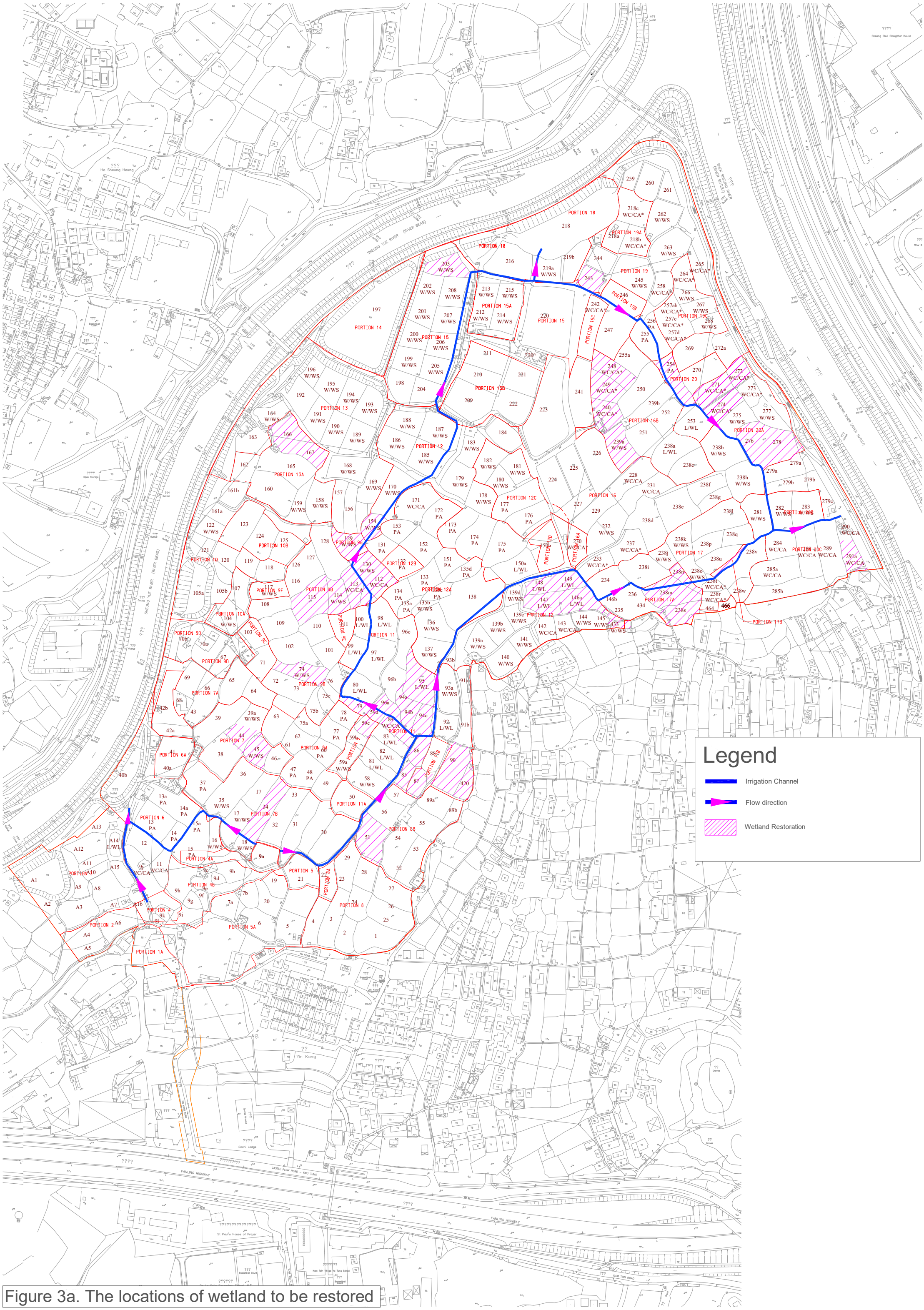


Figure 3a. The locations of wetland to be restored

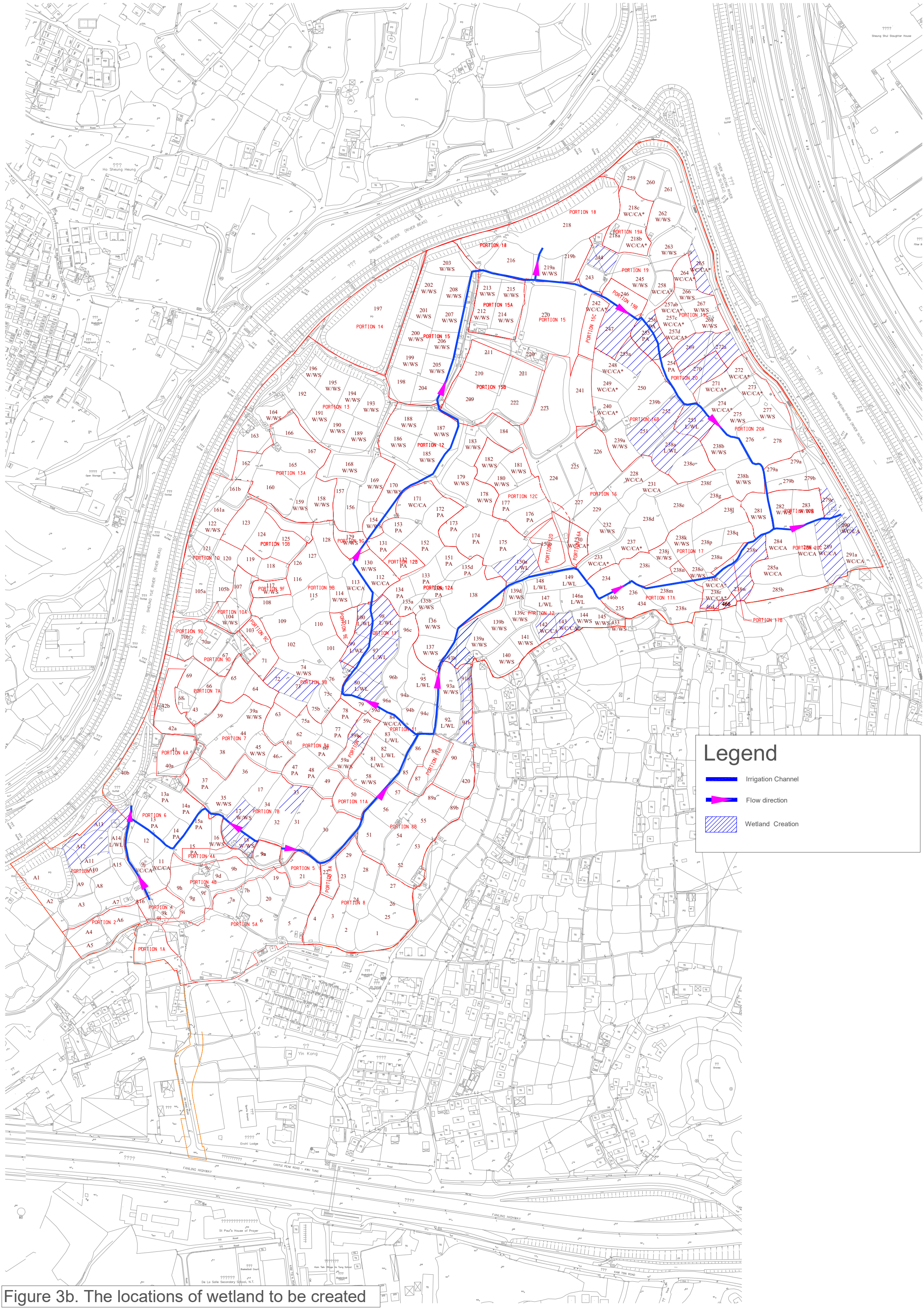


Figure 3b. The locations of wetland to be created

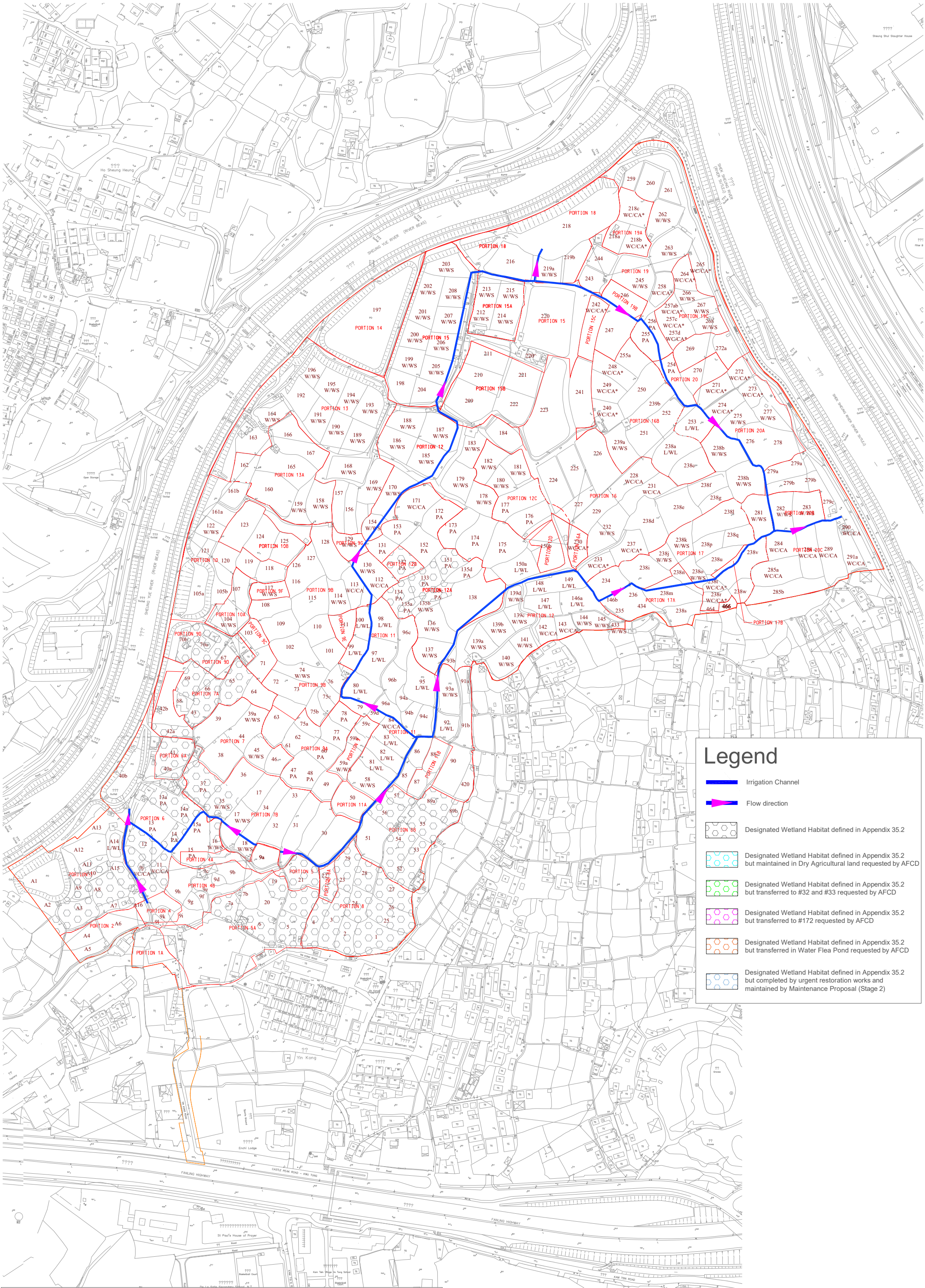


Figure 3c. Designated wetland habitats in Appendix 35.2

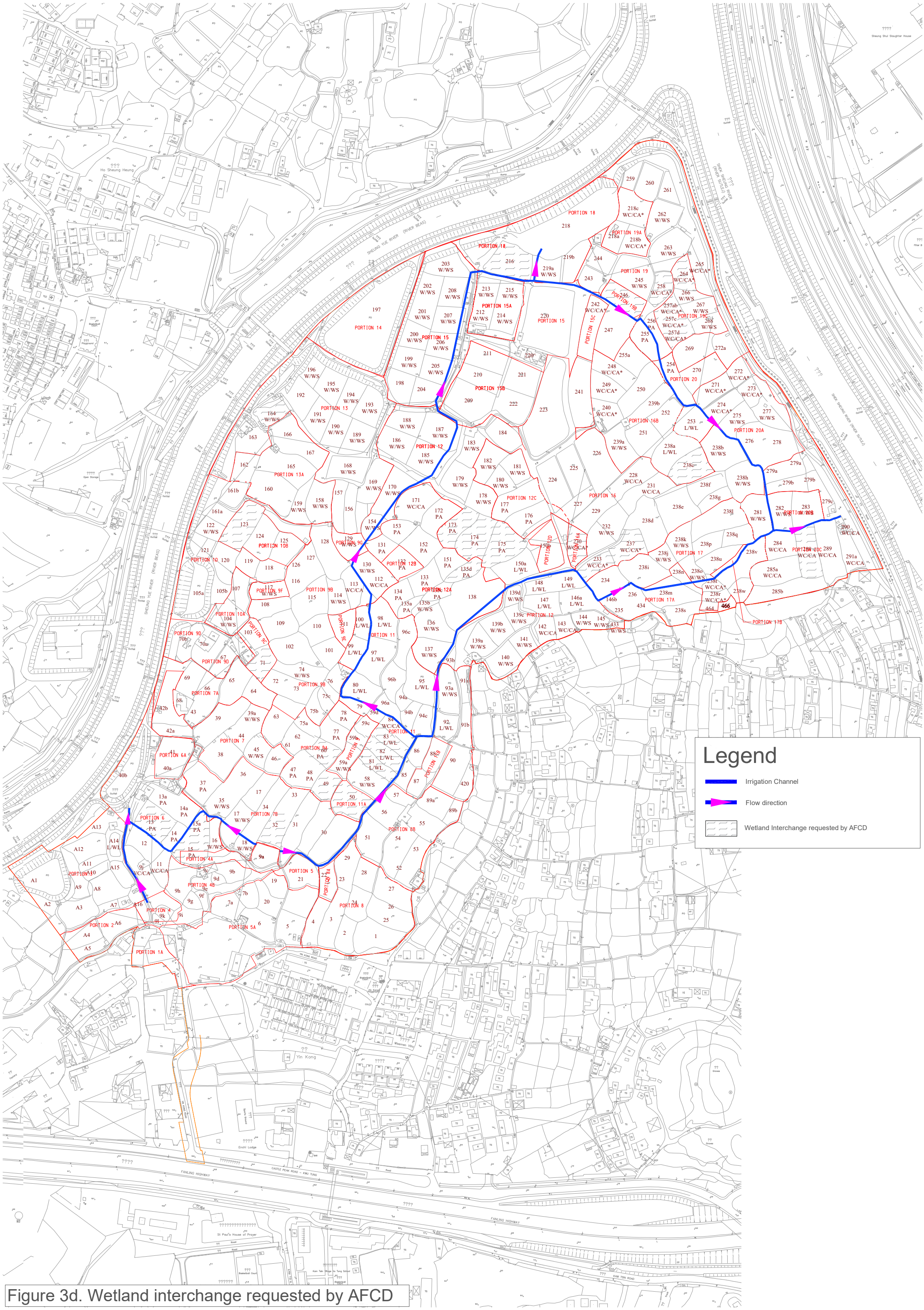
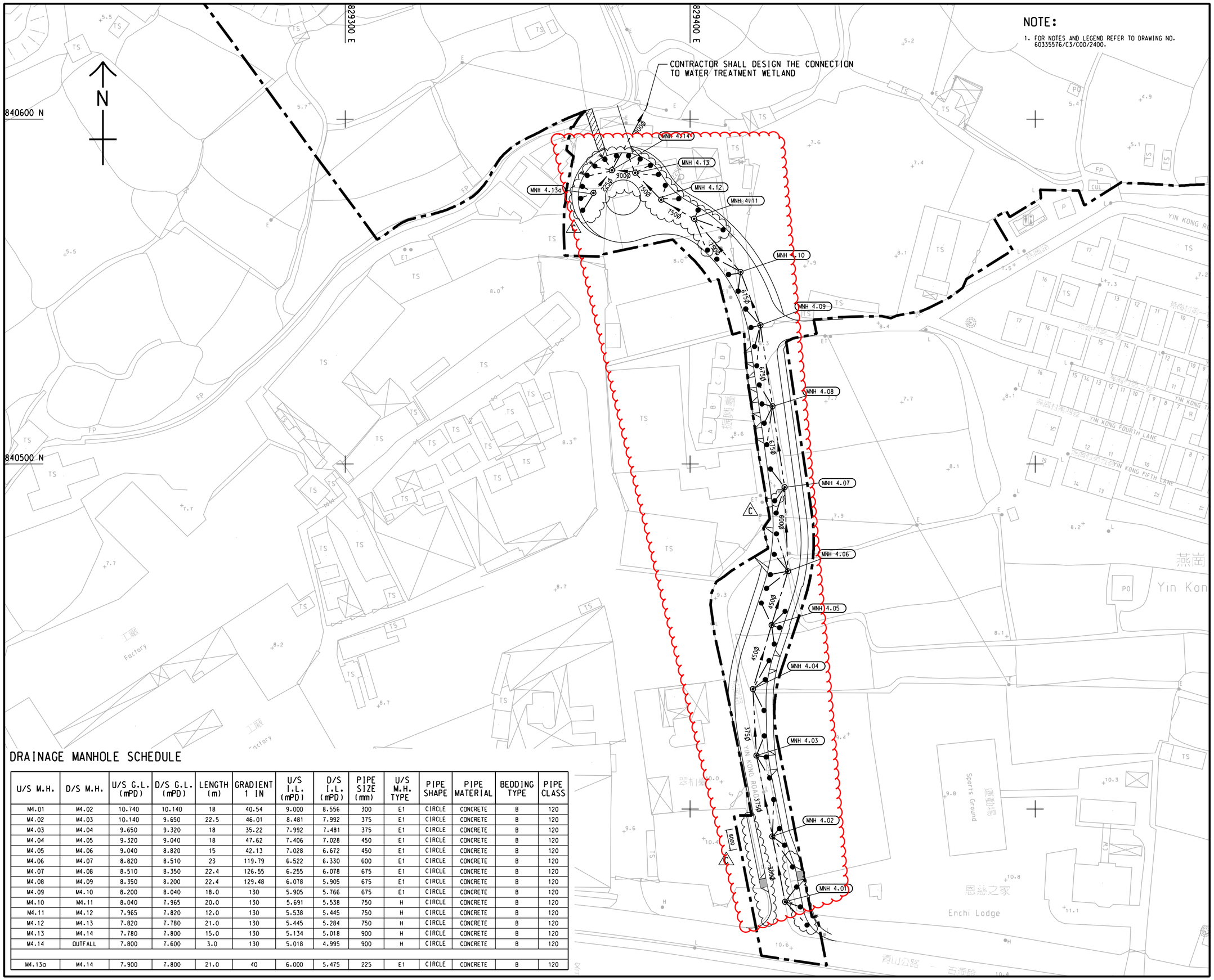


Figure 3d. Wetland interchange requested by AFCD



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	PREPARED	APPROVED
KLC	DF	PY

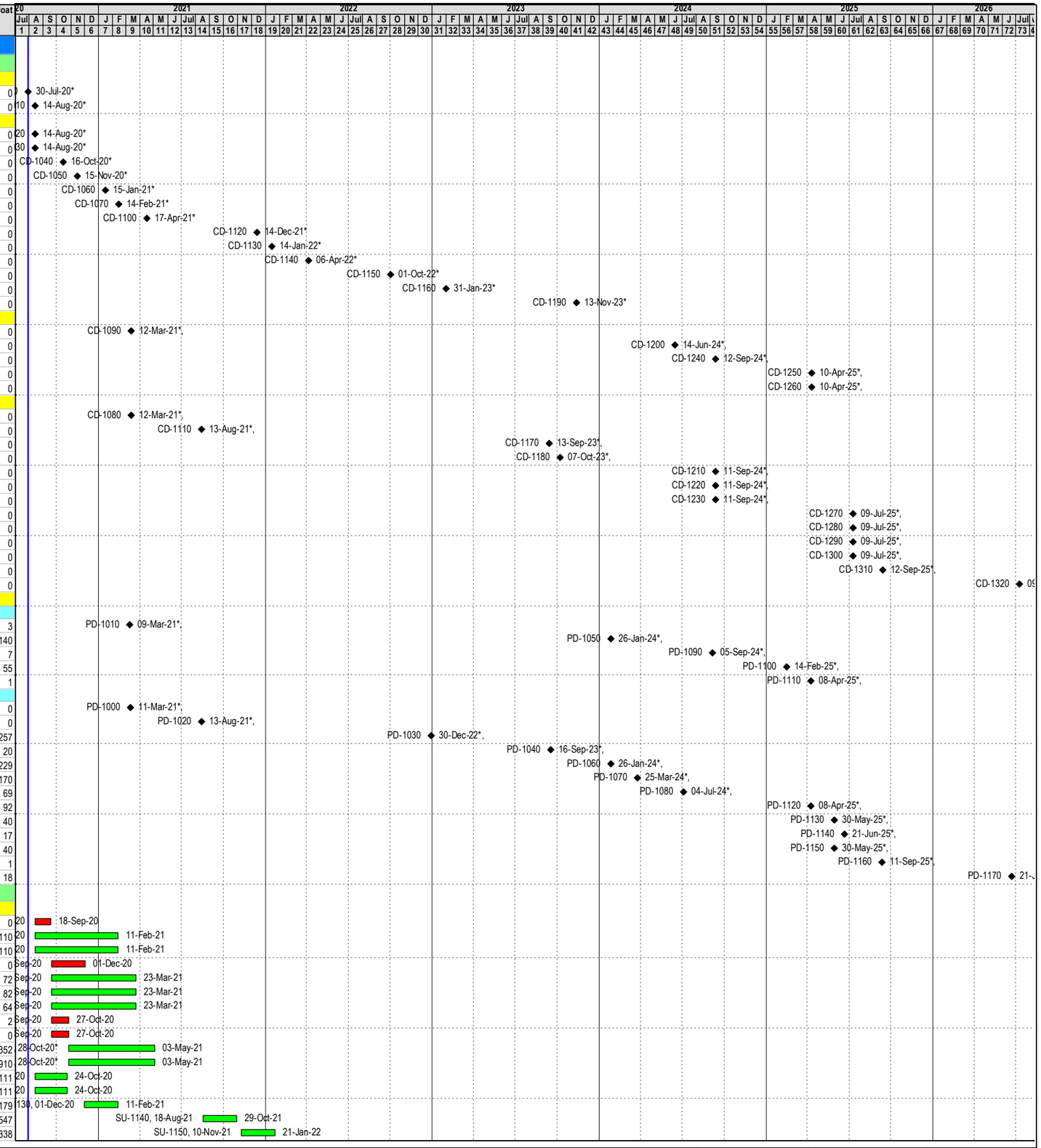
SKETCH NO. ND/2019/03/R10/130/0052 REV. C

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	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
20201021 Revised 1st program submission							
Project Contractual Dates							
Contractual Dates							
CD-1000	Contract Date	0	30-Jul-20*		30-Jul-20		0
CD-1010	Starting Date	0	14-Aug-20*		14-Aug-20		0
Access Date of Each Portion							
CD-1020	Access date of Portion O (Upon PM Instruction for need of TTA)	0	14-Aug-20*		14-Aug-20		0
CD-1030	Contract Access date of Portion A,C,G, J, Q, R, S, T, U, V, W and X (0 days)	0	14-Aug-20*		14-Aug-20		0
CD-1040	Contract Access date of Portion I (63 days)	0	16-Oct-20*		15-Oct-20		0
CD-1050	Contract Access date of Portion D (93 days)	0	15-Nov-20*		15-Nov-20		0
CD-1060	Contract Access date of Portion F, H and N (154 days)	0	15-Jan-21*		15-Jan-21		0
CD-1070	Contract Access date of Portion B (184 days)	0	14-Feb-21*		14-Feb-21		0
CD-1100	Contract Access date of Portion E (246 days)	0	17-Apr-21*		17-Apr-21		0
CD-1120	Contract Access date of Portion L (487 days)	0	14-Dec-21*		14-Dec-21		0
CD-1130	Contract Access date of Portion K, K1 and K2 (518 days)	0	14-Jan-22*		14-Jan-22		0
CD-1140	Contract Access date of Portion M (600 days)	0	06-Apr-22*		06-Apr-22		0
CD-1150	Planned Access date of Portion P (60 days after Completion of Section 3)	0	01-Oct-22*		01-Oct-22		0
CD-1160	Contract Access date of Portion Y (900 days)	0	31-Jan-23*		31-Jan-23		0
CD-1190	Contract Access date of Portion P (60 days after Completion of Section 3)	0	13-Nov-23*		13-Nov-23		0
Key Dates							
CD-1090	Contract KD1:Formation of construction access for contractor of Contract No.ND/2019/07 (	0		12-Mar-21*		12-Mar-21	0
CD-1200	Contract KD2:Completion of sewage pumping station and associated rising mains and sew	0		14-Jun-24*		14-Jun-24	0
CD-1240	Contract KD3:Completion of all works for the opening between Lung Yeuk Tau Interchange	0		12-Sep-24*		12-Sep-24	0
CD-1250	Contract KD4: Completion of all works necessary for underpass and associated Stormwate	0		10-Apr-25*		10-Apr-25	0
CD-1260	Contract KD5: Completion of all works necessary for the traffic detection system (1700 day	0		10-Apr-25*		10-Apr-25	0
Contract Sectional Completion Date							
CD-1080	S1 Site clearance & fencing-off Portion I, formation of vehicular access, design & construct	0		12-Mar-21*		12-Mar-21	0
CD-1110	S2 All works within Portion W excluding landscape softworks (365 days)	0		13-Aug-21*		13-Aug-21	0
CD-1170	S3 All works within Portion K1 including landscape softworks (1125 days)	0		13-Sep-23*		13-Sep-23	0
CD-1180	S4 All works within Portion Q, R, S, T, U, V, X & Y,Junction improvement works at Sui Wan	0		07-Oct-23*		07-Oct-23	0
CD-1210	S5 Al works within Portion N including landscape softworks (1490 days)	0		11-Sep-24*		11-Sep-24	0
CD-1220	S6 Reprovisioned public toilet and refuse collection point facility within Portion J (1490 day	0		11-Sep-24*		11-Sep-24	0
CD-1230	S10A Establishment works for landscape softworks in Portion K1 (1490 days)	0		11-Sep-24*		11-Sep-24	0
CD-1270	S8 Preservation and Protection of existing trees (1790 days)	0		09-Jul-25*		09-Jul-25	0
CD-1280	S7 All works necessary for the commissioning of traffic detection system along Fanling Byp	0		09-Jul-25*		09-Jul-25	0
CD-1290	S9 All landscape softworks not covered by other sections of the works (1790 days)	0		09-Jul-25*		09-Jul-25	0
CD-1300	S11 Remainder of the works not covered by other sections of the works (1790 days)	0		09-Jul-25*		09-Jul-25	0
CD-1310	S10B Establishment works for landscape softworks in Portion N (1855 days)	0		12-Sep-25*		12-Sep-25	0
CD-1320	S10C Establishment works for landscape softworks in Section 9(2155 days)	0		09-Jul-26*		09-Jul-26	0
Planned Key Dates & Sectional Completion Date							
Planned Key Dates							
PD-1010	Planned KD1:Formation of construction access for contractor of Contract No.ND/2019/07 (	0		09-Mar-21*		12-Mar-21	3
PD-1050	Planned KD2:Completion of sewage pumping station and associated rising mains (1400 da	0		26-Jan-24*		14-Jun-24	140
PD-1090	Planned KD3:Completion of all works necessary for opening between Interchange and Far	0		05-Sep-24*		12-Sep-24	7
PD-1100	Planned KD4: Completion of all works necessary for underpass and associated Stormwate	0		14-Feb-25*		10-Apr-25	55
PD-1110	Planned KD5: Completion of all works necessary for the traffic detection system (1700 days)	0		08-Apr-25*		10-Apr-25	1
Planned Sectional Completion Dates							
PD-1000	S1 Site clearance & fencing-off Portion I, formation of vehicular access, design & construct	0		11-Mar-21*		11-Mar-21	0
PD-1020	S2 All works within Portion W excluding landscape softworks (365 days)	0		13-Aug-21*		13-Aug-21	0
PD-1030	S3 All works within Portion K1 including landscape softworks (1125 days)	0		30-Dec-22*		13-Sep-23	257
PD-1040	S4 All works within Portion Q, R, S, T, U, V, X & Y,Junction improvement works at Sui Wan	0		16-Sep-23*		06-Oct-23	20
PD-1060	S5 Al works within Portion N including landscape softworks (1490 days)	0		26-Jan-24*		11-Sep-24	229
PD-1070	S10A Establishment works for landscape softworks in Portion K1 (1490 days)	0		25-Mar-24*		11-Sep-24	170
PD-1080	S6 Reprovisioned public toilet and refuse collection point facility within Portion J (1490 day	0		04-Jul-24*		11-Sep-24	69
PD-1120	S7 All works necessary for the commissioning of traffic detection system along Fanling Byp	0		08-Apr-25*		09-Jul-25	92
PD-1130	S9 All landscape softworks not covered by other sections of the works (1790 days)	0		30-May-25*		09-Jul-25	40
PD-1140	S11 Remainder of the works not covered by other sections of the works (1790 days)	0		21-Jun-25*		09-Jul-25	17
PD-1150	S8 Preservation and Protection of existing trees (1790 days)	0		30-May-25*		09-Jul-25	40
PD-1160	S10B Establishment works for landscape softworks in Portion N (1855 days)	0		11-Sep-25*		12-Sep-25	1
PD-1170	S10C Establishment works for landscape softworks in Section 9(2155 days)	0		21-Jun-26*		09-Jul-26	18
Preliminary Works							
Subletting of Major Subcontract Package							
SU-1000	Prepare, submit & accept subletting procedure	30	15-Aug-20	18-Sep-20	15-Aug-20	18-Sep-20	0
SU-1010	Subletting for Bored Pile Foundation Works	150	14-Aug-20	11-Feb-21	24-Dec-20	02-Jul-21	110
SU-1020	Subletting for Socket-H Pile Foundation Works	150	14-Aug-20	11-Feb-21	24-Dec-20	02-Jul-21	110
SU-1030	Subletting for TTA consultant	60	19-Sep-20	01-Dec-20	19-Sep-20	01-Dec-20	0
SU-1040	Subletting for ELS & Excavation Works	150	19-Sep-20	23-Mar-21	16-Dec-20	23-Jun-21	72
SU-1050	Subletting for RC works (Underpass, Depressed Rd, Retaining Walls)	150	19-Sep-20	23-Mar-21	30-Dec-20	06-Jul-21	82
SU-1060	Subletting for water mains Works	150	19-Sep-20	23-Mar-21	07-Dec-20	12-Jun-21	64
SU-1070	Subletting for Tree Specialists	30	19-Sep-20	27-Oct-20	22-Sep-20	29-Oct-20	2
SU-1080	Subletting for Design consultant	30	19-Sep-20	27-Oct-20	19-Sep-20	27-Oct-20	0
SU-1090	Subletting for Noise Barrier Works	150	28-Oct-20*	03-May-21	04-Jan-22	11-Jul-22	352
SU-1100	Subletting for Bridge Segment	150	28-Oct-20*	03-May-21	23-Nov-23	30-May-24	910
SU-1110	Subletting for Predrilling	60	14-Aug-20	24-Oct-20	28-Dec-20	11-Mar-21	111
SU-1120	Subletting for GI works	60	14-Aug-20	24-Oct-20	28-Dec-20	11-Mar-21	111
SU-1130	Subletting for drainage works	60	01-Dec-20	11-Feb-21	14-Jul-21	23-Sep-21	179
SU-1140	Subletting for pre-stressing works	60	18-Aug-21	29-Oct-21	26-Jun-23	05-Sep-23	547
SU-1150	Subletting for road lighting works	60	10-Nov-21	21-Jan-22	31-Dec-22	15-Mar-23	338



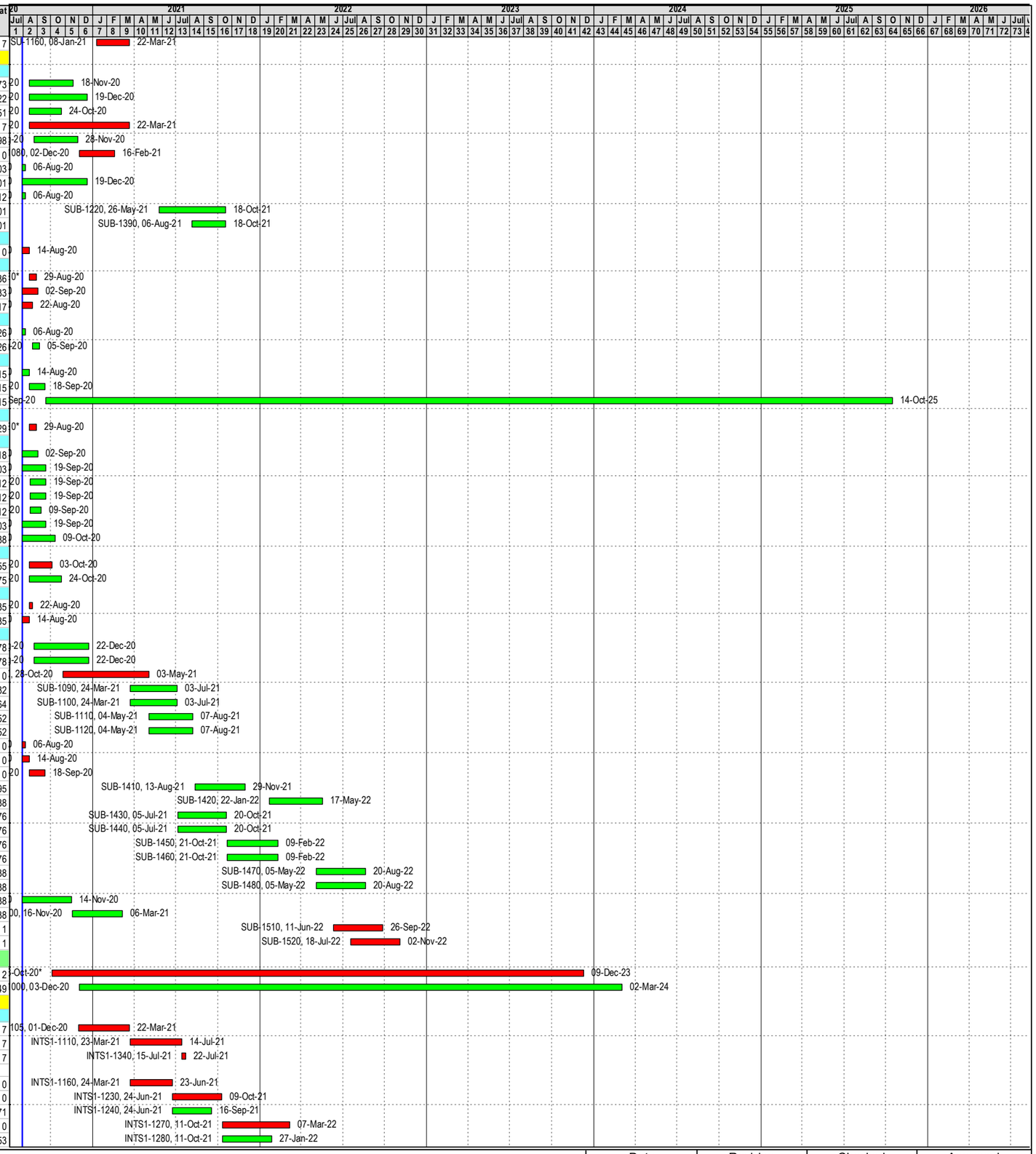
Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26
Page 1 of 7

ND/2019/04
Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
SU-1160	Subletting for bituminous works	60	08-Jan-21	22-Mar-21	16-Jan-21	02-Apr-21	7
Submission							
Statutory submission							
SUB-1000	Prepare, submit & accept design for ELS works and Temp Works	80	14-Aug-20	18-Nov-20	15-Mar-21	23-Jun-21	173
SUB-1010	Prepare, submit & obtain consent from DSD for CDIA	107	14-Aug-20	19-Dec-20	17-May-21	23-Sep-21	222
SUB-1020	Submit & Approval for Excavation Permit on Footpath	60	14-Aug-20	24-Oct-20	17-Feb-21	03-May-21	151
SUB-1030	Submit & Approval for Excavation Permit on Carriageway	180	14-Aug-20	22-Mar-21	22-Aug-20	02-Apr-21	7
SUB-1060	Prepare, submit & accept Tree Preservation and Removal Plan	80	25-Aug-20	28-Nov-20	21-Dec-20	02-Apr-21	98
SUB-1080	Prepare, submit, processing & approval for TTA (Major TTA preparation)	60	02-Dec-20	16-Feb-21	02-Dec-20	16-Feb-21	0
SUB-1130	Notice to CIC, Labour Dept, PCFB, EPD	7	30-Jul-20	06-Aug-20	07-Aug-21	16-Aug-21	303
SUB-1140	Request UU drawings	120	30-Jul-20	19-Dec-20	03-Dec-21	04-May-22	401
SUB-1150	Apply waste producer Licence	7	30-Jul-20	06-Aug-20	18-Aug-21	26-Aug-21	312
SUB-1220	Irrigation system and design submissions to WSD	120	26-May-21	18-Oct-21	29-Sep-22	24-Feb-23	401
SUB-1390	Interfacing Management plan and Detail interface document	60	06-Aug-21	18-Oct-21	10-Dec-22	24-Feb-23	401
Insurance & Guarantee							
SUB-1160	Receipts of payment for the insurance policy - Contractors All Risks Policy	14	30-Jul-20	14-Aug-20	30-Jul-20	14-Aug-20	0
Contractor's management							
SUB-1170	Arrangement with a bank to implement payment of wages and written delaration for workers	14	14-Aug-20*	29-Aug-20	24-Sep-20	13-Oct-20	36
SUB-1180	Sub-contractor Management Plan (SMP)	30	30-Jul-20	02-Sep-20	05-Sep-20	13-Oct-20	33
SUB-1190	Proposal on process of the selection of suppliers (Plant, Materials, Equipment, insurance)	21	30-Jul-20	22-Aug-20	19-Aug-20	12-Sep-20	17
Staffing Organization							
SUB-1200	Name, qualifications and experience of Key Persons	7	30-Jul-20	06-Aug-20	30-May-26	06-Jun-26	1726
SUB-1210	Submission for the Contractor's key people	14	21-Aug-20	05-Sep-20	23-Jun-26	09-Jul-26	1726
Programme							
SUB-1230	1st Programme	14	30-Jul-20	14-Aug-20	22-Apr-21	08-May-21	215
SUB-1380	Revised Program	30	15-Aug-20	18-Sep-20	10-May-21	15-Jun-21	215
SUB-1530	Monthly progress program (every month)	1500	19-Sep-20	14-Oct-25	16-Jun-21	09-Jul-26	215
BIM model							
SUB-1240	Propose and establish a BIM team	14	14-Aug-20*	29-Aug-20	17-Sep-20	05-Oct-20	29
Safety, Health & Environmental							
SUB-1250	Construction Health and Safety Plan	30	30-Jul-20	02-Sep-20	25-Aug-21	30-Sep-21	318
SUB-1260	Environmental Management Plan	45	30-Jul-20	19-Sep-20	07-Aug-21	30-Sep-21	303
SUB-1270	Waste Management Plan (WMP)	30	17-Aug-20	19-Sep-20	04-Sep-21	12-Oct-21	312
SUB-1280	Construction Noise Mitigation Plan(s) to EPD	30	17-Aug-20	19-Sep-20	04-Sep-21	12-Oct-21	312
SUB-1290	Trip ticket system (TTS) proposal	21	17-Aug-20	09-Sep-20	04-Sep-21	30-Sep-21	312
SUB-1300	Site Management Plan for implementation of trip ticket system (TTS) for the contract	45	30-Jul-20	19-Sep-20	07-Aug-21	30-Sep-21	303
SUB-1310	Risk assessment for working in hot weather	60	30-Jul-20	09-Oct-20	21-Jul-21	30-Sep-21	288
Access/ TTA							
SUB-1320	Site Traffic Safety Management Plan (STSMP)	42	14-Aug-20	03-Oct-20	20-Oct-20	08-Dec-20	55
SUB-1400	Proposal Security system for the site	60	14-Aug-20	24-Oct-20	21-Jul-21	30-Sep-21	275
Record Photos and Project Video							
SUB-1330	Propose a professional photographer	7	15-Aug-20	22-Aug-20	25-Sep-20	05-Oct-20	35
SUB-1340	Propose a professional video production Company and a competent Video Director	14	30-Jul-20	14-Aug-20	09-Sep-20	24-Sep-20	35
Preparation for relevant works							
SUB-1040	Liaison with Villagers (e.g. Siu Hang San Tsuen)	100	25-Aug-20	22-Dec-20	27-Nov-20	02-Apr-21	78
SUB-1050	Condition Survey & CIA	100	25-Aug-20	22-Dec-20	27-Nov-20	02-Apr-21	78
SUB-1070	Prepare, submit, processing & approval for Alternative Design (including Acabas)	150	28-Oct-20	03-May-21	28-Oct-20	03-May-21	0
SUB-1090	Prepare, submit & accept work submission for design for RC and MiC works	80	24-Mar-21	03-Jul-21	07-Jul-21	09-Oct-21	82
SUB-1100	Prepare, submit & accept work submission for watermain diversion Works	80	24-Mar-21	03-Jul-21	15-Jun-21	16-Sep-21	64
SUB-1110	Prepare, submit & accept work submission for Noise Barrier Works	80	04-May-21	07-Aug-21	11-Jul-22	15-Oct-22	352
SUB-1120	Prepare, submit & accept work submission for erect NB steel post & panel	80	04-May-21	07-Aug-21	11-Jul-22	15-Oct-22	352
SUB-1350	The brand and model of underground services detection equipment	7	30-Jul-20	06-Aug-20	30-Jul-20	06-Aug-20	0
SUB-1360	Hoarding Plan	14	30-Jul-20	14-Aug-20	30-Jul-20	14-Aug-20	0
SUB-1370	Weather protection schedule	30	15-Aug-20	18-Sep-20	15-Aug-20	18-Sep-20	0
SUB-1410	Electrical and Mechanical Works for Lift Installation	90	13-Aug-21	29-Nov-21	09-Apr-22	30-Jul-22	195
SUB-1420	Road lighting system	90	22-Jan-22	17-May-22	16-Mar-23	07-Jul-23	338
SUB-1430	Electrical System for Public toilet and pumping station	90	05-Jul-21	20-Oct-21	14-Jun-23	28-Sep-23	576
SUB-1440	Building Services System	90	05-Jul-21	20-Oct-21	14-Jun-23	28-Sep-23	576
SUB-1450	Bio-treatment Plant for Public Toilet	90	21-Oct-21	09-Feb-22	29-Sep-23	18-Jan-24	576
SUB-1460	Pump systems and associated E&M Plants	90	21-Oct-21	09-Feb-22	29-Sep-23	18-Jan-24	576
SUB-1470	Traffic Control and Surveillance System (TCSS)	90	05-May-22	20-Aug-22	26-Jun-23	11-Oct-23	338
SUB-1480	Traffic Detector System	90	05-May-22	20-Aug-22	26-Jun-23	11-Oct-23	338
SUB-1490	Skateboard Park and Ancillary Block of On Lok Road	90	30-Jul-20	14-Nov-20	21-May-21	04-Sep-21	238
SUB-1500	Park layout and facilities at San Uk Tsuen Sitting	90	16-Nov-20	06-Mar-21	06-Sep-21	22-Dec-21	238
SUB-1510	Crash cushion system.	90	11-Jun-22	26-Sep-22	13-Jun-22	28-Sep-22	1
SUB-1520	Access facilities	90	18-Jul-22	02-Nov-22	19-Jul-22	04-Nov-22	1
Construction Works							
CW-0000	Initial Tree Survey	945	03-Oct-20*	09-Dec-23	06-Oct-20	12-Dec-23	2
CW-1000	Tree Felling and Protection	960	03-Dec-20	02-Mar-24	10-Feb-22	10-May-25	349
Civil Works around Interchange							
Stage 1							
INTS1-1105	Design, submit, processing & approval for the application of TTA no.1	90	01-Dec-20	22-Mar-21	09-Dec-20	02-Apr-21	7
INTS1-1110	Road works for Major TTA No.1 (Implementation of Road realignment works for shift traffic	90	23-Mar-21	14-Jul-21	03-Apr-21	22-Jul-21	7
INTS1-1340	Implemetation of Major TTA no.1 (shift traffic lsnrd og Ma Sik road)	7	15-Jul-21	22-Jul-21	23-Jul-21	30-Jul-21	7
Construction of Utrough/ Underpass (Portion H)							
INTS1-1160	Piling Works for Underpass Bay C5 to C8 (total 36 nos. socket-H, 4d/pile, 2no. workfronts)	72	24-Mar-21	23-Jun-21	24-Mar-21	23-Jun-21	0
INTS1-1230	ELS and Excavation	90	24-Jun-21	09-Oct-21	24-Jun-21	09-Oct-21	0
INTS1-1240	Piling Works for Underpass Bay C1 to C4 (total 36 nos. socket-H, 4d/pile, 2no. workfronts)	72	24-Jun-21	16-Sep-21	25-May-22	18-Aug-22	271
INTS1-1270	Structure Works for Bay C5 to C8 (13m/bay, 60days/bay, 2no. workfronts)	120	11-Oct-21	07-Mar-22	11-Oct-21	07-Mar-22	0
INTS1-1280	ELS and Excavation Bay C1 to C4	90	11-Oct-21	27-Jan-22	19-Aug-22	05-Dec-22	253



Actual Work ◆ ◆ Milestone

Remaining Work

Critical Remaining Work

Data Date: 30-Jul-20
Project Start: 30-Jul-20
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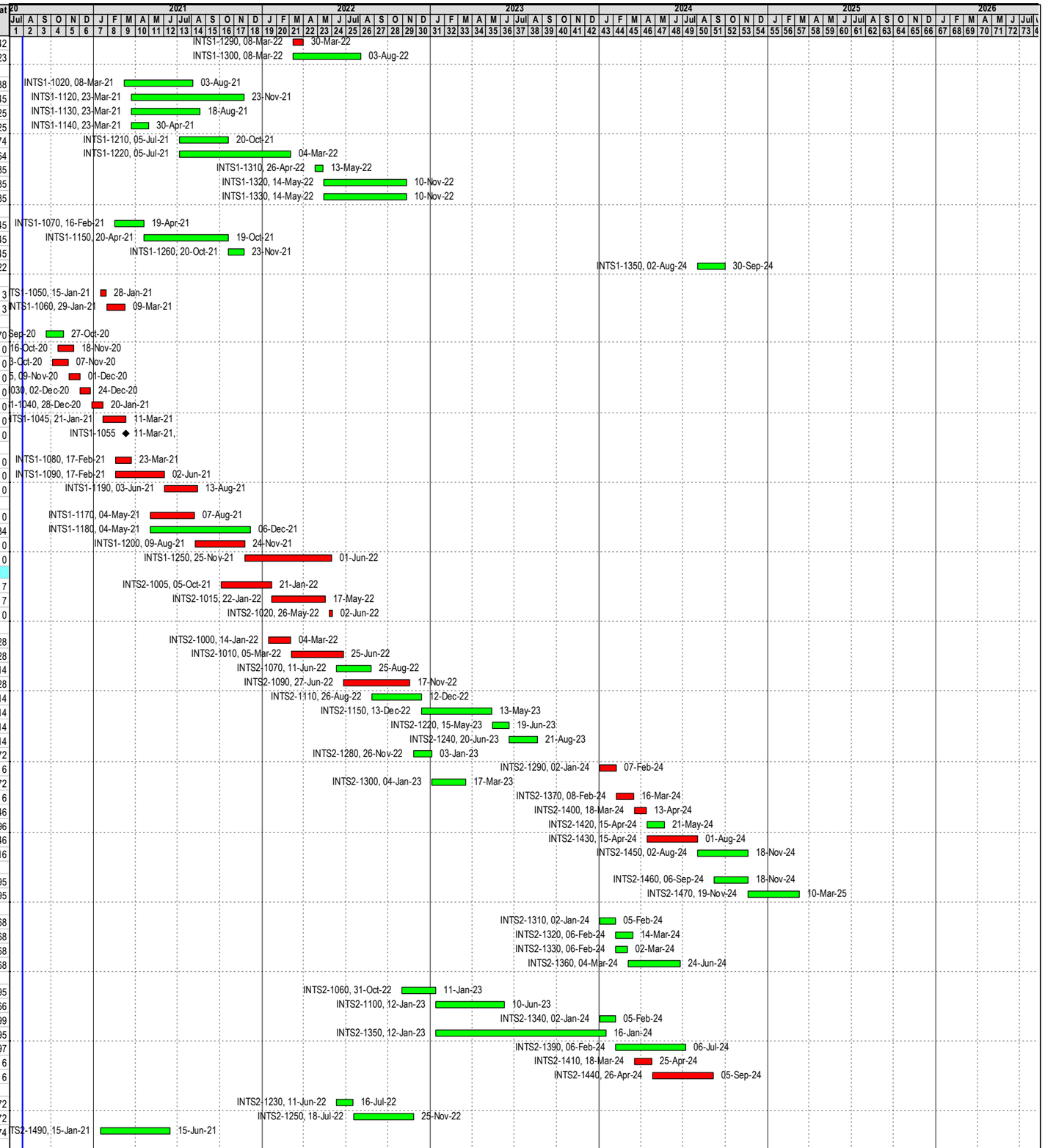
Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
INTS1-1290	Backfilling and Construction of Temp. Rd for next TTA stage (TTA no.2)	20	08-Mar-22	30-Mar-22	30-Apr-22	25-May-22	42
INTS1-1300	Structure Works for Bay C1 to C4 (13m/bay, 60days/bay, 2no. workfronts)	120	08-Mar-22	03-Aug-22	06-Dec-22	06-May-23	223
UU Works (Portion H)							
INTS1-1020	UU Works on footpath of Sha Tau Kok Road near San Uk Tsuen Sitting Out Area (around :	120	08-Mar-21	03-Aug-21	23-Dec-21	25-May-22	238
INTS1-1120	Rising Mains on Ma Sik Rd	200	23-Mar-21	23-Nov-21	17-Sep-21	25-May-22	145
INTS1-1130	UU Works before TTA at Ma Sik Road	120	23-Mar-21	18-Aug-21	23-Dec-21	25-May-22	225
INTS1-1140	UU Works on Ma Sik Road (west bound) near Kerry Warehouse	30	23-Mar-21	30-Apr-21	23-Dec-21	29-Jan-22	225
INTS1-1210	Watermains DN600 near Ma Wat River (approx. 50m)	90	05-Jul-21	20-Oct-21	31-Jan-22	25-May-22	174
INTS1-1220	Water Pipes on Ma Sik Rd	200	05-Jul-21	04-Mar-22	17-Sep-21	25-May-22	64
INTS1-1310	Minor TTA for Retaining Wall FW32 and FW33	14	26-Apr-22	13-May-22	13-Apr-23	28-Apr-23	285
INTS1-1320	Retaining Wall FW32 and 33 (141m, 20 bays, 15d/bay,2 teams)	150	14-May-22	10-Nov-22	29-Apr-23	28-Oct-23	285
INTS1-1330	UU Works along FW32 and 33	150	14-May-22	10-Nov-22	29-Apr-23	28-Oct-23	285
Temporary Traffic Deck at Ma Wat River (Portion O)							
INTS1-1070	Piling for temporary deck	50	16-Feb-21	19-Apr-21	13-Aug-21	12-Oct-21	145
INTS1-1150	Installation of bridge steel frame and decking	150	20-Apr-21	19-Oct-21	13-Oct-21	14-Apr-22	145
INTS1-1260	Reinstate of San Uk Tsuen Sitting Out Area	30	20-Oct-21	23-Nov-21	19-Apr-22	25-May-22	145
INTS1-1350	Removal of the temporary deck	50	02-Aug-24	30-Sep-24	09-May-26	09-Jul-26	522
Site Formation at Portion C, F, G, H and J							
INTS1-1050	Site clearance work and setup TTA (early start by direct labour)	12	15-Jan-21	28-Jan-21	19-Jan-21	01-Feb-21	3
INTS1-1060	Site Formation for Contractor of Contract No.ND/2019/07 access	31	29-Jan-21	09-Mar-21	02-Feb-21	12-Mar-21	3
Site Formation at Portion I							
INTS1-1000	Design and Approval for temporary structure	30	19-Sep-20	27-Oct-20	14-Dec-20	20-Jan-21	70
INTS1-1010	Site clearance work (early start by direct labour)	28	16-Oct-20	18-Nov-20	15-Oct-20	18-Nov-20	0
INTS1-1015	Subletting asbesto consultant and contractor	30	03-Oct-20	07-Nov-20	03-Oct-20	07-Nov-20	0
INTS1-1025	Asbestos containing material survey	20	09-Nov-20	01-Dec-20	09-Nov-20	01-Dec-20	0
INTS1-1030	Asbestos abatement plan	20	02-Dec-20	24-Dec-20	02-Dec-20	24-Dec-20	0
INTS1-1040	Removal of asbesto material (5houses, 4d/house, 1 workfronts)	20	28-Dec-20	20-Jan-21	28-Dec-20	20-Jan-21	0
INTS1-1045	Site Formation and Construction for temporary structure	40	21-Jan-21	11-Mar-21	21-Jan-21	11-Mar-21	0
INTS1-1055	Amendment for temporary structure to suit the different site formation levels in future	0		11-Mar-21		11-Mar-21	0
Site Formation at Portion W							
INTS1-1080	Minor TTA at Portion W	30	17-Feb-21	23-Mar-21	17-Feb-21	23-Mar-21	0
INTS1-1090	Demolition of existing bus layby and construct new carriage way	85	17-Feb-21	02-Jun-21	17-Feb-21	02-Jun-21	0
INTS1-1190	Landscaping works	60	03-Jun-21	13-Aug-21	03-Jun-21	13-Aug-21	0
Piling works and Stormwater Pumping Station (Portion H)							
INTS1-1170	Piling Works for Stormwater Pumping Station (total 20nos. socket H piles, 4d/pile,1 nos) ar	80	04-May-21	07-Aug-21	04-May-21	07-Aug-21	0
INTS1-1180	Piling Works for Lift tower and Footbridge F6 (part D) (total 44nos. socket H piles, 4d/pile)	180	04-May-21	06-Dec-21	13-Oct-21	25-May-22	134
INTS1-1200	ELS for Stormwater Pumping Station	90	09-Aug-21	24-Nov-21	09-Aug-21	24-Nov-21	0
INTS1-1250	Construction of Stormwater Pumping Station underground structure (up to +10.15mPD)	150	25-Nov-21	01-Jun-22	25-Nov-21	01-Jun-22	0
Stage 2							
INTS2-1005	Design, submit, processing & approval for TTA no.2	90	05-Oct-21	21-Jan-22	13-Oct-21	29-Jan-22	7
INTS2-1015	Temp. road works for TTA no.02 (INTS1-1290)	90	22-Jan-22	17-May-22	31-Jan-22	25-May-22	7
INTS2-1020	Implementation of Major TTA No.2 (shift two bounds of Sha Tau Kok Rd)	7	26-May-22	02-Jun-22	26-May-22	02-Jun-22	0
Construction of Underpass (Portion F, H, J, K)							
INTS2-1000	Piling Works for Underpass Bay C14 to C15 (20 nos.socket-H, 4d/pile, 2no. workfronts)	40	14-Jan-22	04-Mar-22	19-Feb-22	07-Apr-22	28
INTS2-1010	ELS and Excavation for Bay C14 to C15	90	05-Mar-22	25-Jun-22	08-Apr-22	29-Jul-22	28
INTS2-1070	Piling Works for Underpass Bay C9 to C11(total 32 nos. socket-H, 4d/pile, 2no. workfronts)	64	11-Jun-22	25-Aug-22	27-Oct-22	12-Jan-23	114
INTS2-1090	Structure Works for Bay C14 to C15	120	27-Jun-22	17-Nov-22	30-Jul-22	20-Dec-22	28
INTS2-1110	ELS and Excavation Bay C9 to C11	90	26-Aug-22	12-Dec-22	13-Jan-23	06-May-23	114
INTS2-1150	Structure Works for Bay C9 to C11 (13m/bay, 60days/bay, 2no. workfronts)	120	13-Dec-22	13-May-23	08-May-23	27-Sep-23	114
INTS2-1220	Road and Drainage Works on Sha Tak Kok Rd Northbound above Bay C9/C10,including L	30	15-May-23	19-Jun-23	28-Sep-23	04-Nov-23	114
INTS2-1240	Piling Works for Underpass Bay C12 and C13 (13 nos. socket-H, 4d/pile, before abandon e	52	20-Jun-23	21-Aug-23	06-Nov-23	08-Jan-24	114
INTS2-1280	Road and Drainage Works on STK Rd southbound above Underpass Bay 11 and 12	30	26-Nov-22	03-Jan-23	30-Oct-23	02-Dec-23	272
INTS2-1290	Piling Works for Underpass Bay C12 and C13 (8 nos.socket-H, 4d/pile,after abandon existi	32	02-Jan-24	07-Feb-24	09-Jan-24	17-Feb-24	6
INTS2-1300	Road and Drainage Works from On Kui Street to interchange	60	04-Jan-23	17-Mar-23	04-Dec-23	17-Feb-24	272
INTS2-1370	ELS and Excavation to Top slab for Bay C12 and C13	30	08-Feb-24	16-Mar-24	19-Feb-24	23-Mar-24	6
INTS2-1400	Construction of Base slab for Bay C12 and C13	20	18-Mar-24	13-Apr-24	17-May-24	08-Jun-24	46
INTS2-1420	Construction of top slab and wall for Bay C12 and C13	30	15-Apr-24	21-May-24	09-Aug-24	12-Sep-24	96
INTS2-1430	Backfill and road works	90	15-Apr-24	01-Aug-24	11-Jun-24	25-Sep-24	46
INTS2-1450	UU works on STK Rd north bound	90	02-Aug-24	18-Nov-24	19-Dec-24	10-Apr-25	116
Lift Tower and Footbridge F6 (Portion J)							
INTS2-1460	Apply external tendon stressing	60	06-Sep-24	18-Nov-24	02-Jan-25	17-Mar-25	95
INTS2-1470	Installation of post and canopy	90	19-Nov-24	10-Mar-25	17-Mar-25	09-Jul-25	95
Part A							
INTS2-1310	F6 piling above 132kV cable Fanling to Ping che (Part A)	30	02-Jan-24	05-Feb-24	25-Mar-24	03-May-24	68
INTS2-1320	F6 pier (Part A)	30	06-Feb-24	14-Mar-24	04-May-24	08-Jun-24	68
INTS2-1330	F6 Falsework Erection (Part A)	20	06-Feb-24	02-Mar-24	04-May-24	28-May-24	68
INTS2-1360	F6 elevated structure (Part A)	90	04-Mar-24	24-Jun-24	29-May-24	12-Sep-24	68
Part B							
INTS2-1060	Piling for Footbridge F6 (Part B2) and lift (constrainted by CLP 11kV cables)	60	31-Oct-22	11-Jan-23	30-Jun-23	08-Sep-23	195
INTS2-1100	Pile Caps and Abutment Construction	120	12-Jan-23	10-Jun-23	11-Apr-24	03-Sep-24	366
INTS2-1340	Falsework Erection for Footbridge F6 (Part B2) (constrainted by CLP 132kV cables)	30	02-Jan-24	05-Feb-24	03-Sep-24	10-Oct-24	199
INTS2-1350	2 nos. Lift structure construction and lift installation (Part B2) (during construction with RCP)	300	12-Jan-23	16-Jan-24	09-Sep-23	12-Sep-24	195
INTS2-1390	Construction of Footbridge F6 (Part B2)	120	06-Feb-24	06-Jul-24	10-Feb-25	09-Jul-25	297
INTS2-1410	Falsework for B1 after Underpass C12 to C13 ELS Works	30	18-Mar-24	25-Apr-24	25-Mar-24	03-May-24	6
INTS2-1440	F6 part elevated structure (B1)	110	26-Apr-24	05-Sep-24	04-May-24	12-Sep-24	6
Part C							
INTS2-1230	Construction of Footbridge F6 columns P03 on top of Underpass (Part C)	30	11-Jun-22	16-Jul-22	12-May-23	16-Jun-23	272
INTS2-1250	Construction of Footbridge F6 east part elevated structure (Part C)	110	18-Jul-22	25-Nov-22	17-Jun-23	28-Oct-23	272
INTS2-1490	Works not affect by CLP 11kV cables Part C(GI, Piling and structural works etc.)	120	15-Jan-21	15-Jun-21	22-Dec-22	23-May-23	574
Part D							



Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

Data Date: 30-Jul-20
Project Start: 30-Jul-20
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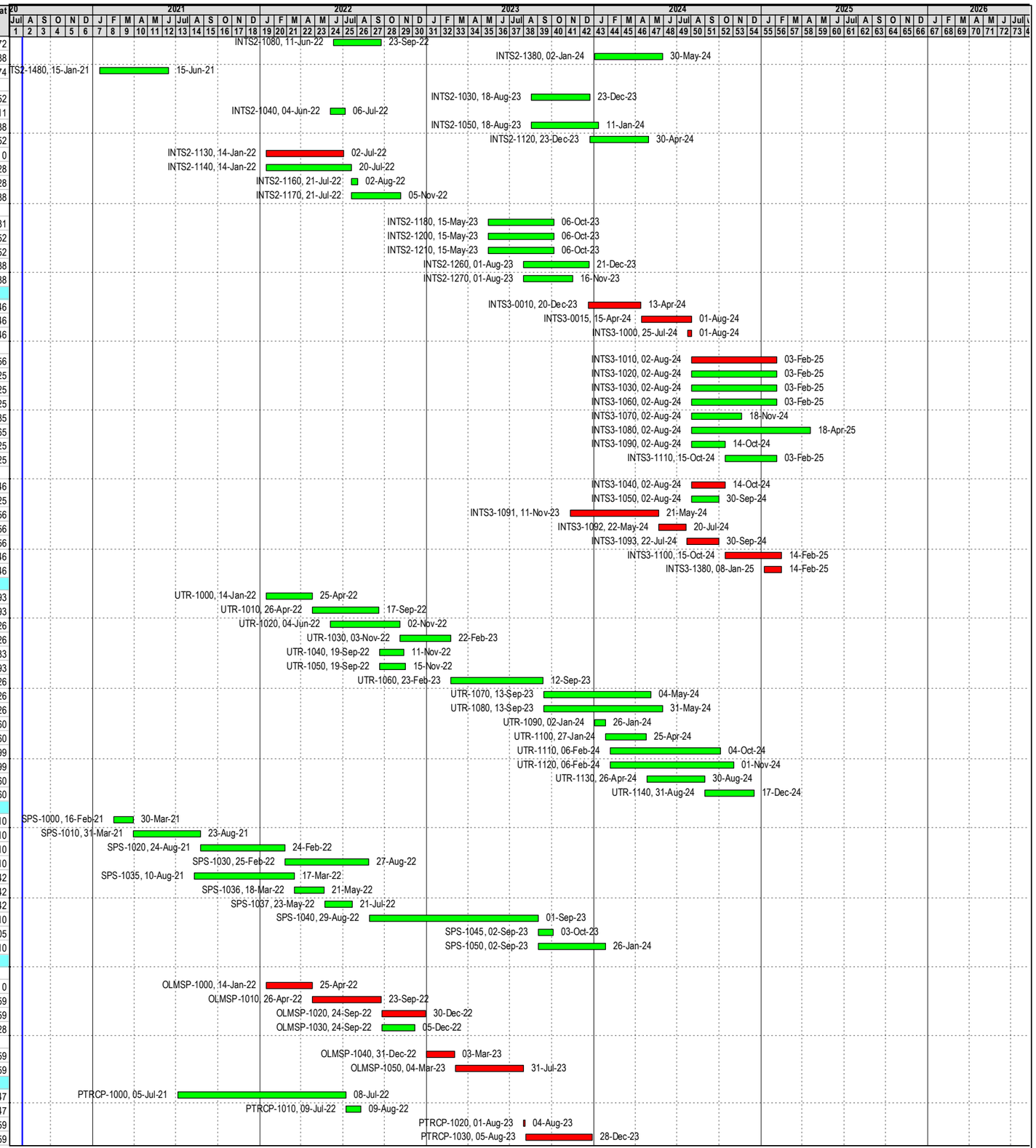
Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
INTS2-1080	Piling Works for Footbridge F6 (part D) (total 44no. socket H piles, 4d/pile, 2 no. workfronts)	88	11-Jun-22	23-Sep-22	12-May-23	25-Aug-23	272
INTS2-1380	Construction of Footbridge F6 at east side columns (9nos.) and superstructure (Part D)	120	02-Jan-24	30-May-24	22-Apr-24	12-Sep-24	88
INTS2-1480	Works not affect by CLP 11kV cables for Part D(GI, Piling and structural works etc.)	120	15-Jan-21	15-Jun-21	22-Dec-22	23-May-23	574
Noise Barrier and Retaining Wall (Portion J)							
INTS2-1030	Noise Barrier Footing and Retaining Wall Construction at Sha Tau Kok Road east (around	107	18-Aug-23	23-Dec-23	24-Oct-24	05-Mar-25	352
INTS2-1040	UU Works at west of Sha Tau Kok Road	27	04-Jun-22	06-Jul-22	24-Oct-24	25-Nov-24	711
INTS2-1050	UU Works at east of Sha Tau Kok Road	120	18-Aug-23	11-Jan-24	10-Feb-25	09-Jul-25	438
INTS2-1120	Installation of noise barrier steel post and panels	100	23-Dec-23	30-Apr-24	05-Mar-25	09-Jul-25	352
INTS2-1130	Retaining Wall FW9 (141m, 20 bays, 15d/bay,2 teams) near U-trough B	135	14-Jan-22	02-Jul-22	14-Jan-22	02-Jul-22	0
INTS2-1140	UU Works along FW9	150	14-Jan-22	20-Jul-22	29-Feb-24	30-Aug-24	628
INTS2-1160	Backfilling	11	21-Jul-22	02-Aug-22	31-Aug-24	12-Sep-24	628
INTS2-1170	Installation of Noise barrier, BS and E&M works	90	21-Jul-22	05-Nov-22	17-Mar-25	09-Jul-25	788
UU Works (Portion J)							
INTS2-1180	UU Works at Sha Tau Kok Road (around 200m, e.g. Sewage Rising Mains)	120	15-May-23	06-Oct-23	25-Apr-24	16-Sep-24	281
INTS2-1200	Telecom Signal Cable	120	15-May-23	06-Oct-23	15-Nov-23	15-Apr-24	152
INTS2-1210	Gas Mains (2nos.)	120	15-May-23	06-Oct-23	15-Nov-23	15-Apr-24	152
INTS2-1260	UU Works along FW10	120	01-Aug-23	21-Dec-23	15-Nov-23	15-Apr-24	88
INTS2-1270	Remaining FW10 (around 125m, 12 bays, 15d/bay, 2 teams)	90	01-Aug-23	16-Nov-23	15-Nov-23	06-Mar-24	88
Stage 3							
INTS3-0010	Design, submit, processing & approval for TTA no.3	90	20-Dec-23	13-Apr-24	19-Feb-24	08-Jun-24	46
INTS3-0015	Road realignment work on Sha Tau Kok Road for TTA no.03 (after completion of Underpas	90	15-Apr-24	01-Aug-24	11-Jun-24	25-Sep-24	46
INTS3-1000	Implementation of Major TTA No.3 (divert back Sha Tau Kok Rd)	7	25-Jul-24	01-Aug-24	17-Sep-24	25-Sep-24	46
Road, drainage and UU Works (Portion H)							
INTS3-1010	Remaining Works at Underpass/ Depressed Road	150	02-Aug-24	03-Feb-25	09-Oct-24	10-Apr-25	56
INTS3-1020	Installation of Traffic Detection System	150	02-Aug-24	03-Feb-25	02-Jan-25	09-Jul-25	125
INTS3-1030	Remaining works at Sha Tau Kok Road	150	02-Aug-24	03-Feb-25	02-Jan-25	09-Jul-25	125
INTS3-1060	Reappraising of San Uk Tsuen Sitting-out area	150	02-Aug-24	03-Feb-25	02-Jan-25	09-Jul-25	125
INTS3-1070	Remaining FW8 and FW7 inside TTA Road (around 40m, 6 bays, 15d/bay)	90	02-Aug-24	18-Nov-24	17-Mar-25	09-Jul-25	185
INTS3-1080	2 nos. Lift structure construction and lift installation (Part C) after TTA Stage 3 Diversion	210	02-Aug-24	18-Apr-25	21-Oct-24	09-Jul-25	65
INTS3-1090	Demolition of Temporary Bridge	60	02-Aug-24	14-Oct-24	02-Jan-25	17-Mar-25	125
INTS3-1110	Reappraising of sitting out area	90	15-Oct-24	03-Feb-25	17-Mar-25	09-Jul-25	125
Stormwater Pumping Station (after TTA Stage 3) (Portion H)							
INTS3-1040	Structure Construction	60	02-Aug-24	14-Oct-24	26-Sep-24	06-Dec-24	46
INTS3-1050	Installation of rising mains	50	02-Aug-24	30-Sep-24	09-May-25	09-Jul-25	225
INTS3-1091	E&M, BS and ABWF Procurement	153	11-Nov-23	21-May-24	19-Jan-24	27-Jul-24	56
INTS3-1092	E&M works Factory acceptance test	50	22-May-24	20-Jul-24	29-Jul-24	25-Sep-24	56
INTS3-1093	E&M works delivery	60	22-Jul-24	30-Sep-24	26-Sep-24	06-Dec-24	56
INTS3-1100	E&M, BS and ABWF Installation &T&C	100	15-Oct-24	14-Feb-25	07-Dec-24	10-Apr-25	46
INTS3-1380	E&M works Fire service inspection	30	08-Jan-25	14-Feb-25	06-Mar-25	10-Apr-25	46
Construction of Utrough (Portion H & F)							
UTR-1000	U trough B (19 nos. socket-H piles, 4 day/pile, 1 workfronts) for B1 to B3	80	14-Jan-22	25-Apr-22	14-Sep-23	20-Dec-23	493
UTR-1010	ELS for U-trough B (B1 - B3, 3 bays)	120	26-Apr-22	17-Sep-22	20-Dec-23	22-May-24	493
UTR-1020	U trough A (total: 63 nos. socket-H piles, 4 day/pile, 2 workfronts)	126	04-Jun-22	02-Nov-22	11-Jul-23	08-Dec-23	326
UTR-1030	ELS for U-trough A	90	03-Nov-22	22-Feb-23	08-Dec-23	02-Apr-24	326
UTR-1040	Construction of U-trough B (3 bays, 15m/bay, 30d/bay,2workfronts)	45	19-Sep-22	11-Nov-22	15-May-25	09-Jul-25	783
UTR-1050	U trough B (24 nos. socket-H piles before 132kV switch over, 4 day/pile, 2 teams)	48	19-Sep-22	15-Nov-22	22-May-24	19-Jul-24	493
UTR-1060	Construction of U-trough A (11 bays, 15m/bay, 30d/bay,2workfronts)	165	23-Feb-23	12-Sep-23	02-Apr-24	21-Oct-24	326
UTR-1070	Retaining Wall FW8 (around 200m, 25 bays, 15d/bay,2 teams) after U-trough A	188	13-Sep-23	04-May-24	21-Oct-24	12-Jun-25	326
UTR-1080	UU Works along FW8	210	13-Sep-23	31-May-24	21-Oct-24	09-Jul-25	326
UTR-1090	U trough B (11 nos. socket-H piles after 132kV switch over, 4 day/pile, 2 teams)	22	02-Jan-24	26-Jan-24	19-Jul-24	14-Aug-24	160
UTR-1100	ELS for U-trough B (B4 - B10, 7 bays, 2 workfronts)	70	27-Jan-24	25-Apr-24	14-Aug-24	07-Nov-24	160
UTR-1110	Retaining Wall FW7 (after Footbridge F6 east Part) (around 200m, 26 bays, 15d/bay,2 tear	195	06-Feb-24	04-Oct-24	10-Oct-24	11-Jun-25	199
UTR-1120	UU Works along FW7	218	06-Feb-24	01-Nov-24	10-Oct-24	09-Jul-25	199
UTR-1130	Construction of U-trough B (7 bays, 15m/bay, 30d/bay,2workfronts)	105	26-Apr-24	30-Aug-24	07-Nov-24	17-Mar-25	160
UTR-1140	Installation of steel frame and panels	90	31-Aug-24	17-Dec-24	17-Mar-25	09-Jul-25	160
Sewage Pumping Station in Portion N							
SPS-1000	Piling at Sewage pumping station (total 17 nos. socket-H, 4d/pile, 2no. workfronts)	34	16-Feb-21	30-Mar-21	03-Jul-21	11-Aug-21	110
SPS-1010	ELS Works	120	31-Mar-21	23-Aug-21	12-Aug-21	05-Jan-22	110
SPS-1020	Underground structure construction with ELS dismantling	150	24-Aug-21	24-Feb-22	06-Jan-22	12-Jul-22	110
SPS-1030	Structure Construction	150	25-Feb-22	27-Aug-22	13-Jul-22	10-Jan-23	110
SPS-1035	E&M, BS and ABWF Procurement	180	10-Aug-21	17-Mar-22	29-Jan-22	08-Sep-22	142
SPS-1036	E&M works Factory acceptance test	50	18-Mar-22	21-May-22	09-Sep-22	09-Nov-22	142
SPS-1037	E&M works delivery	50	23-May-22	21-Jul-22	10-Nov-22	10-Jan-23	142
SPS-1040	E&M, BS and ABWF Installation & T&C	300	29-Aug-22	01-Sep-23	11-Jan-23	15-Jan-24	110
SPS-1045	E&M works Fire service inspection	25	02-Sep-23	03-Oct-23	16-May-24	14-Jun-24	205
SPS-1050	Landscaping works	120	02-Sep-23	26-Jan-24	16-Jan-24	14-Jun-24	110
Reprovision of On Luk Mun Street Playground							
Works in Portion K1							
OLMSP-1000	Bulk earthworks and Construction of playground facilities	80	14-Jan-22	25-Apr-22	14-Jan-22	25-Apr-22	0
OLMSP-1010	Retaining Wall FW30, FW 31 and other facilities (165m, 25 bays, 15d/bay, 3 teams)	125	26-Apr-22	23-Sep-22	08-Jul-22	03-Dec-22	59
OLMSP-1020	Landscaping Softworks with acceptance by clients	80	24-Sep-22	30-Dec-22	05-Dec-22	14-Mar-23	59
OLMSP-1030	E&M, BS and ABWF Installation	60	24-Sep-22	05-Dec-22	06-Jul-23	13-Sep-23	228
Works in Portion P							
OLMSP-1040	Demolition of existing On Luk Mun Street Playground and site formation	50	31-Dec-22	03-Mar-23	15-Mar-23	17-May-23	59
OLMSP-1050	Retaining Wall FW10 (around 80m, 8 bays,15d/bay) and other facilities	120	04-Mar-23	31-Jul-23	18-May-23	10-Oct-23	59
Reprovision of Public Toilet and Refuse Collection Point (Portion K)							
PTRCP-1000	Prefabrication of Mic Unit	300	05-Jul-21	08-Jul-22	02-Sep-22	07-Sep-23	347
PTRCP-1010	Delivery of Mic Units	27	09-Jul-22	09-Aug-22	07-Sep-23	10-Oct-23	347
PTRCP-1020	Minor TTA after TTA Stage 2 and Portion P retaining wall	4	01-Aug-23	04-Aug-23	11-Oct-23	14-Oct-23	59
PTRCP-1030	On-site installation (Public toilet and RCP)	120	05-Aug-23	28-Dec-23	16-Oct-23	11-Mar-24	59



Actual Work ◆ ◆ Milestone

Remaining Work

Critical Remaining Work

Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26
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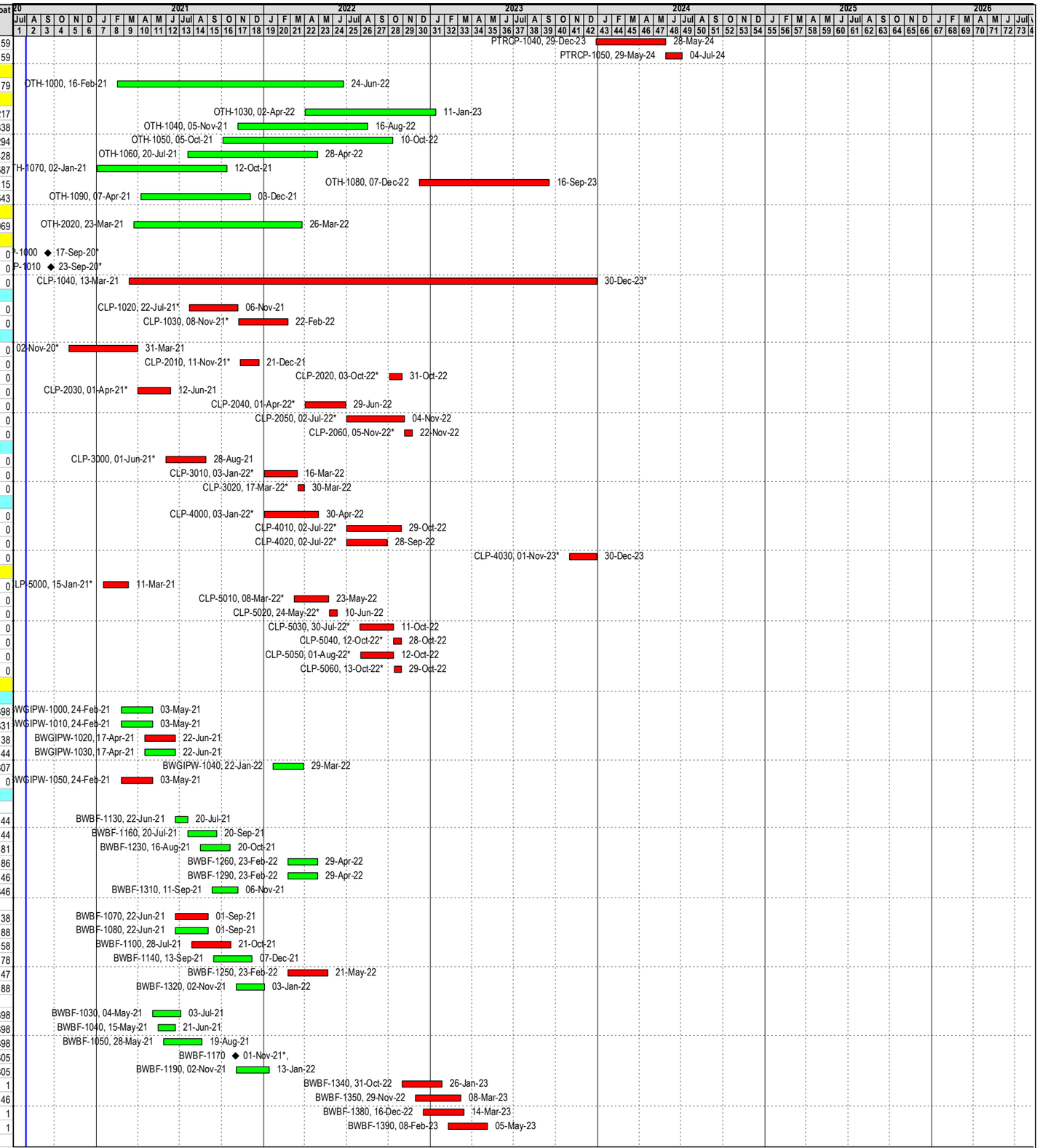
Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
PTRCP-1040	Waterproofing and other remaining works	120	29-Dec-23	28-May-24	12-Mar-24	07-Aug-24	59
PTRCP-1050	Testing and inspection	30	29-May-24	04-Jul-24	08-Aug-24	11-Sep-24	59
Works in Portion A and Portion B							
OTH-1000	Road and drainage works with UU laying	400	16-Feb-21	24-Jun-22	23-Sep-21	01-Feb-23	179
Works within Portions Q, R, S,T, U, V, X and Y							
OTH-1030	Portion Q	230	02-Apr-22	11-Jan-23	24-Dec-22	06-Oct-23	217
OTH-1040	Portion R	230	05-Nov-21	16-Aug-22	24-Dec-22	06-Oct-23	338
OTH-1050	Portion S	300	05-Oct-21	10-Oct-22	03-Oct-22	06-Oct-23	294
OTH-1060	Portion T	230	20-Jul-21	28-Apr-22	24-Dec-22	06-Oct-23	428
OTH-1070	Portion U	230	02-Jan-21	12-Oct-21	24-Dec-22	06-Oct-23	587
OTH-1080	Portion V,Y	230	07-Dec-22	16-Sep-23	24-Dec-22	06-Oct-23	15
OTH-1090	Portion X	200	07-Apr-21	03-Dec-21	04-Feb-23	06-Oct-23	543
Junction improvement works at Portion J							
OTH-2020	Relocaiton of Traffic System- Siu Wan Road Junctional works (Road realignment, bitumen	300	23-Mar-21	26-Mar-22	04-Jul-24	09-Jul-25	969
CLP 132kV and 11kV Cable Works at Bridge and interchange area							
CLP-1000	Early Liaison with CLP for 132kV cable laying	0	17-Sep-20*		17-Sep-20		0
CLP-1010	Meeting with CLP	0	23-Sep-20*		22-Sep-20		0
CLP-1040	ESS by CLP at portion I	830	13-Mar-21	30-Dec-23*	13-Mar-21	30-Dec-23	0
Cable A (Red) 11kV- by CLP (Bridge A1,A2) (tentative scheme)							
CLP-1020	Tentative excavation works for CLP laying duct and cabling (Around 400m, 50m/ wk)	90	22-Jul-21*	06-Nov-21	22-Jul-21	06-Nov-21	0
CLP-1030	Abandon of CLP cable A1,A2 (At portion C,G)	86	08-Nov-21*	22-Feb-22	08-Nov-21	22-Feb-22	0
Cable B (Green) Fanling to Louhu Circuit 132KV- by CLP (Bridge A2,A3 and interchange)							
CLP-2000	Diversion of CLP 320m cable B1 (Bridge A at portion C,G)	120	02-Nov-20*	31-Mar-21	02-Nov-20	31-Mar-21	0
CLP-2010	Diversion of CLP 130m cable B2 (Bridge A at portion C,G)	35	11-Nov-21*	21-Dec-21	11-Nov-21	21-Dec-21	0
CLP-2020	Diversion of CLP 100m cable B3 (Bridge F at portion B)	24	03-Oct-22*	31-Oct-22	03-Oct-22	31-Oct-22	0
CLP-2030	Diversion of CLP 200m cable B4 (At portion H,J)	60	01-Apr-21*	12-Jun-21	01-Apr-21	12-Jun-21	0
CLP-2040	Diversion of CLP 120m cable B5 (At portion C,H)	70	01-Apr-22*	29-Jun-22	01-Apr-22	29-Jun-22	0
CLP-2050	Diversion of CLP 360m cable B6 (At portion K,L)	105	02-Jul-22*	04-Nov-22	02-Jul-22	04-Nov-22	0
CLP-2060	Abandon of Cable B (At portion C,G,H,J,K,L)	15	05-Nov-22*	22-Nov-22	05-Nov-22	22-Nov-22	0
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)	75	01-Jun-21*	28-Aug-21	01-Jun-21	28-Aug-21	0
CLP-3010	Diversion of CLP 63m cable C2 (At portion K,K1,K2)	60	03-Jan-22*	16-Mar-22	03-Jan-22	16-Mar-22	0
CLP-3020	Abandon of C1(At portion H,J,K,K1,K2)	12	17-Mar-22*	30-Mar-22	17-Mar-22	30-Mar-22	0
Cable D (Blue) Fanling- Ping Che Circuit 132KV- by CLP (Bridge A3 and Interchange Area)							
CLP-4000	Diversion of CLP 163m cable D1 (At portion H)	95	03-Jan-22*	30-Apr-22	03-Jan-22	30-Apr-22	0
CLP-4010	Diversion of CLP 270m cable D2 (At portion I,J,N)	100	02-Jul-22*	29-Oct-22	02-Jul-22	29-Oct-22	0
CLP-4020	Diversion of CLP 180m cable D3 (At portion I)	75	02-Jul-22*	28-Sep-22	02-Jul-22	28-Sep-22	0
CLP-4030	Abandon of Cable D (At portion H,I,J,N)	50	01-Nov-23*	30-Dec-23	01-Nov-23	30-Dec-23	0
CLP 11kV Cables works at Interchange area (tentative scheme)							
CLP-5000	Temp. Shift 11kV cables in F6 & underpass area (portion H)	45	15-Jan-21*	11-Mar-21	15-Jan-21	11-Mar-21	0
CLP-5010	Laying new 11kV cables(255m) F6 & underpass area (Portion J/H)	60	08-Mar-22*	23-May-22	08-Mar-22	23-May-22	0
CLP-5020	Abandon 11kV cables in F6 & underpass area (portion K/H)	15	24-May-22*	10-Jun-22	24-May-22	10-Jun-22	0
CLP-5030	Laying new 11kV cables(520m) F6 & underpass & U-Through B area (portion K)	60	30-Jul-22*	11-Oct-22	30-Jul-22	11-Oct-22	0
CLP-5040	Abandon 11kV cables in Underpass and Uthrough B area (portion K)	15	12-Oct-22*	28-Oct-22	12-Oct-22	28-Oct-22	0
CLP-5050	Laying new 11kV cables(400m) at STK Rad and MS Road (portion J)	60	01-Aug-22*	12-Oct-22	01-Aug-22	12-Oct-22	0
CLP-5060	Abandon 11kV cables at STK Rad and MS Road (portion J)	15	13-Oct-22*	29-Oct-22	13-Oct-22	29-Oct-22	0
Bridge Works							
Site Clearance & Additional GI and Predrilling Works							
BWGIPW-1000	Site clearance & additional GI and Pre-drilling works: Bridge A3	53	24-Feb-21	03-May-21	04-Jul-22	03-Sep-22	398
BWGIPW-1010	Site clearance & additional GI and Pre-drilling works: Bridge F	53	24-Feb-21	03-May-21	07-Apr-22	15-Jun-22	331
BWGIPW-1020	Site clearance & additional GI and Pre-drilling works: Bridge A2	53	17-Apr-21	22-Jun-21	03-Jun-21	06-Aug-21	38
BWGIPW-1030	Site clearance & additional GI and Pre-drilling works: Bridge A1	53	17-Apr-21	22-Jun-21	09-Oct-21	11-Dec-21	144
BWGIPW-1040	Site clearance & additional GI and Pre-drilling works: Bridge G	53	22-Jan-22	29-Mar-22	09-Feb-23	17-Apr-23	307
BWGIPW-1050	Site clearance & additional GI and Pre-drilling works: Footbridge F4	53	24-Feb-21	03-May-21	24-Feb-21	03-May-21	0
Construction of Bridge Foundation							
Construction of Bridge A1 Foundation (Team 1)							
BWBF-1130	Abt 01-01M (3no. pile, 15d/pile, 2no. workfronts)	23	22-Jun-21	20-Jul-21	11-Dec-21	11-Jan-22	144
BWBF-1160	Pier A1-02a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	20-Jul-21	20-Sep-21	11-Jan-22	17-Mar-22	144
BWBF-1230	Pier A1-03a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	16-Aug-21	20-Oct-21	25-Mar-22	02-Jun-22	181
BWBF-1260	Pier A1-04a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	23-Feb-22	29-Apr-22	11-Jun-22	13-Aug-22	86
BWBF-1290	Pier A1-05a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	23-Feb-22	29-Apr-22	22-Aug-22	26-Oct-22	146
BWBF-1310	Pier A1-06a/b (2no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	45	11-Sep-21	06-Nov-21	12-Nov-22	07-Jan-23	346
Construction of Bridge A2 Foundation (Team 2)							
BWBF-1070	Pier A2-01a/b (3no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	60	22-Jun-21	01-Sep-21	06-Aug-21	19-Oct-21	38
BWBF-1080	Protection Works for Pier A2-03r/l in VEP Zone	60	22-Jun-21	01-Sep-21	06-Oct-21	16-Dec-21	88
BWBF-1100	Pier A2-02a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	28-Jul-21	21-Oct-21	06-Oct-21	30-Dec-21	58
BWBF-1140	Pier A2-03r/l (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	13-Sep-21	07-Dec-21	16-Dec-21	15-Mar-22	78
BWBF-1250	Pier A2-04M (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts for pile cap)	70	23-Feb-22	21-May-22	23-Apr-22	19-Jul-22	47
BWBF-1320	Pier A2-05M (2no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	50	02-Nov-21	03-Jan-22	24-Jun-22	23-Aug-22	188
Construction of Bridge A3 Foundation (Team 3 and Team 2)							
BWBF-1030	Pier A3-03r (2no. pile & 1 pile cap, before new 132kV cable laying at this location)	50	04-May-21	03-Jul-21	03-Sep-22	04-Nov-22	398
BWBF-1040	Abt A3-06M (3no. pile, 20d/pile, 2no. workfronts)	30	15-May-21	21-Jun-21	16-Sep-22	24-Oct-22	398
BWBF-1050	Pier A3-05a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	28-May-21	19-Aug-21	28-Sep-22	21-Dec-22	398
BWBF-1170	Start of Dry Season in 2021	0		01-Nov-21*		12-Nov-22	305
BWBF-1190	Platform Erection for predrill and piling during dry season	60	02-Nov-21	13-Jan-22	12-Nov-22	28-Jan-23	305
BWBF-1340	Pier A3-01r/l (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	31-Oct-22	26-Jan-23	01-Nov-22	28-Jan-23	1
BWBF-1350	Pier A3-02 in nullah (5no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts) (team 2)	80	29-Nov-22	08-Mar-23	28-Jan-23	08-May-23	46
BWBF-1380	Pier A3-03l (4no. bored piles & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	16-Dec-22	14-Mar-23	17-Dec-22	16-Mar-23	1
BWBF-1390	Pier A3-04a/b (4no. pile & 2no. pile cap,20d/pile & 30d/cap, 2no. workfronts)	70	08-Feb-23	05-May-23	09-Feb-23	08-May-23	1
Construction of Bridge F Foundation (Team 1)							



Actual Work ◆ ◆ Milestone

Remaining Work

Critical Remaining Work

Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26
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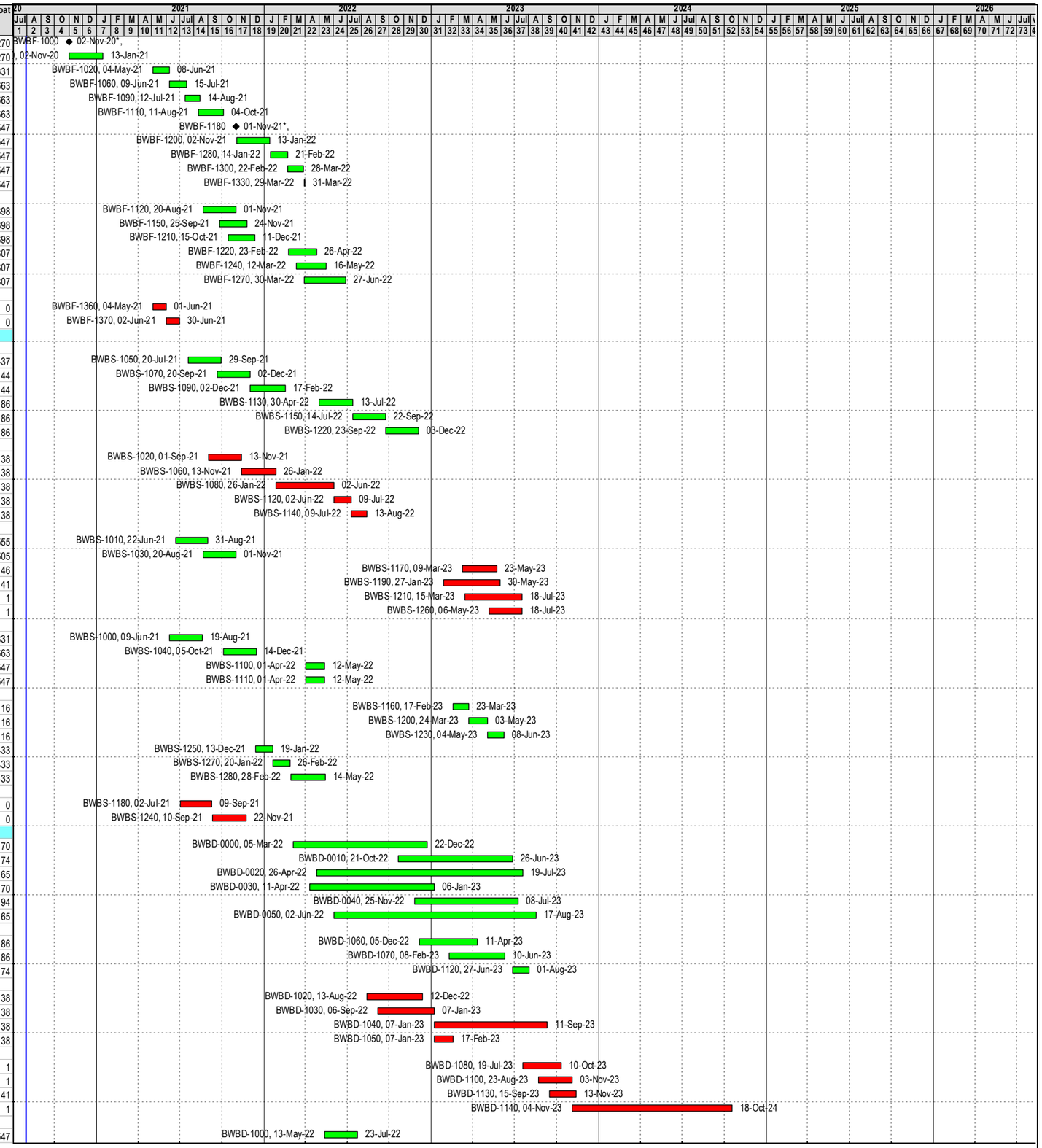
Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
BWBF-1000	Start of Dry Season in 2020	0		02-Nov-20*		30-Sep-21	270
BWBF-1010	Platform Erection with decking for predrill, piling and access (dry season)	60	02-Nov-20	13-Jan-21	30-Sep-21	11-Dec-21	270
BWBF-1020	Abt F-04 (4 no.bored piles, 15d/pile, 2no. workfronts) (team 1)	30	04-May-21	08-Jun-21	16-Jun-22	21-Jul-22	331
BWBF-1060	Pier F-02 (2no. bored piles, 15d/pile, 1no. workfronts) (team 1)	30	09-Jun-21	15-Jul-21	02-Sep-23	10-Oct-23	663
BWBF-1090	Pier F-03 (2no.bored piles, 15d/pile, 1no. workfronts) (team 1)	30	12-Jul-21	14-Aug-21	05-Oct-23	10-Nov-23	663
BWBF-1110	Abt F-04 (6 no.bored piles, 15d/pile, 2no. workfronts) (team 1)	45	11-Aug-21	04-Oct-21	06-Nov-23	30-Dec-23	663
BWBF-1180	Start of Dry Season in 2021	0		01-Nov-21*		07-Sep-23	547
BWBF-1200	Sheetpile cofferdam for pier F-02 and F-03	60	02-Nov-21	13-Jan-22	07-Sep-23	20-Nov-23	547
BWBF-1280	Pier F-02 (1no. pile cap, 30d/cap, 1no. workfronts) (team 1)	30	14-Jan-22	21-Feb-22	20-Nov-23	27-Dec-23	547
BWBF-1300	Pier F-03 (1no. pile cap, 30d/cap, 1no. workfronts) (team 1)	30	22-Feb-22	28-Mar-22	27-Dec-23	01-Feb-24	547
BWBF-1330	Removal of sheetpile cofferdam	3	29-Mar-22	31-Mar-22	01-Feb-24	05-Feb-24	547
Construction of Bridge G Foundation (Team 3)							
BWBF-1120	Abt G-06 (6no. pile, 20d/pile, 2 no. workfronts)	60	20-Aug-21	01-Nov-21	21-Dec-22	08-Mar-23	398
BWBF-1150	Pier G-05 (2no. pile & 1no. pile cap, 20d/pile & 30d/cap, 2 no. workfronts)	50	25-Sep-21	24-Nov-21	01-Feb-23	31-Mar-23	398
BWBF-1210	Pier G-04 (2no. pile & 1no. pile cap, 20d/pile & 30d/cap, 2 no. workfronts)	50	15-Oct-21	11-Dec-21	18-Feb-23	22-Apr-23	398
BWBF-1220	Pier G-03 (2no. pile & 1no. pile cap, 20d/pile & 30d/cap, 2 no. workfronts)	50	23-Feb-22	26-Apr-22	08-Mar-23	11-May-23	307
BWBF-1240	Pier G-02 (2no. pile & 1no. pile cap, 20d/pile & 30d/cap, 2 no. workfronts)	50	12-Mar-22	16-May-22	25-Mar-23	30-May-23	307
BWBF-1270	Pier G-01a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	30-Mar-22	27-Jun-22	17-Apr-23	12-Jul-23	307
Construction of Footbridge F4 Foundation							
BWBF-1360	Footbridge F4-01 (6no. socket-H, 4d/pile, 1no. workfronts)	24	04-May-21	01-Jun-21	04-May-21	01-Jun-21	0
BWBF-1370	Footbridge F4-02 (6no. socket-H, 4d/pile, 1no. workfronts)	24	02-Jun-21	30-Jun-21	02-Jun-21	30-Jun-21	0
Construction of Bridge Substructure							
Construction of Bridge A1 Substructure							
BWBS-1050	Abt 01-01M (1no. abutment, 60 d/abutment,1no. workfront)	60	20-Jul-21	29-Sep-21	07-Jan-23	22-Mar-23	437
BWBS-1070	Pier A1-02a/b (2no. twin column & 2 pier, 30d/column & pier, 1 no. workfronts)	60	20-Sep-21	02-Dec-21	17-Mar-22	02-Jun-22	144
BWBS-1090	Pier A1-03a/b (2no. twin column & 2 pier, 30d/column & pier, 1 no. workfronts)	60	02-Dec-21	17-Feb-22	02-Jun-22	13-Aug-22	144
BWBS-1130	Pier A1-04a/b (2no. twin column & 2 pier, 30d/column & pier, 1 no. workfronts)	60	30-Apr-22	13-Jul-22	13-Aug-22	26-Oct-22	86
BWBS-1150	Pier A1-05a/b (2no. twin column & 2 pier, 30d/column & pier, 1 no. workfronts)	60	14-Jul-22	22-Sep-22	26-Oct-22	07-Jan-23	86
BWBS-1220	Pier A1-06a/b (2no. twin column & 2 pier, 30d/column & pier, 1 no. workfronts)	60	23-Sep-22	03-Dec-22	07-Jan-23	22-Mar-23	86
Construction of Bridge A2 Substructure							
BWBS-1020	Pier A2-01a/b (2no. twin column & 2 pier, 30d/column & pier, 1no. workfronts)	60	01-Sep-21	13-Nov-21	19-Oct-21	30-Dec-21	38
BWBS-1060	Pier A2-02a/b (2no. twin column & 2 pier, 30d/column & pier, 1no. workfronts)	60	13-Nov-21	26-Jan-22	30-Dec-21	15-Mar-22	38
BWBS-1080	Pier A2-03r/l (1 portal, 100d/ portal, 1no. workfronts)	100	26-Jan-22	02-Jun-22	15-Mar-22	19-Jul-22	38
BWBS-1120	Pier A2-04M (1no. single column & 1 pier, 30d/column & pier,1no. workfront)	30	02-Jun-22	09-Jul-22	19-Jul-22	23-Aug-22	38
BWBS-1140	Pier A2-05M (1no. single column & 1 pier, 30d/column & pier,1no. workfront)	30	09-Jul-22	13-Aug-22	23-Aug-22	28-Sep-22	38
Construction of Bridge A3 Substructure							
BWBS-1010	Abt 03-06M (1no. abutment, 60d/abutment,1no. workfront)	60	22-Jun-21	31-Aug-21	08-May-23	20-Jul-23	555
BWBS-1030	Pier A3-05a/b (2no. twin column & 2 pier, 30d/column & pier, 1no. workfronts)	60	20-Aug-21	01-Nov-21	08-May-23	20-Jul-23	505
BWBS-1170	Pier A3-02 in nullah (1no. single column & 1 pier, 60d/column & pier,1no. workfront)	60	09-Mar-23	23-May-23	08-May-23	20-Jul-23	46
BWBS-1190	Pier A3-01r/l (1 portal, 100d/ portal, 1no. workfronts)	100	27-Jan-23	30-May-23	16-Mar-23	20-Jul-23	41
BWBS-1210	Pier A3-03r/l (1 portal, 100d/ portal, 1no. workfronts)	100	15-Mar-23	18-Jul-23	16-Mar-23	20-Jul-23	1
BWBS-1260	Pier A3-04a/b (2no. twin column & 2 pier, 30d/column & pier,1no. workfronts)	60	06-May-23	18-Jul-23	08-May-23	20-Jul-23	1
Construction of Bridge F Substructure							
BWBS-1000	Abt F-01 (1no. abutment, 60d/abutment,1no. workfront)	60	09-Jun-21	19-Aug-21	22-Jul-22	30-Sep-22	331
BWBS-1040	Abt F-04 (1no. abutment, 60d/abutment,1no. workfront)	60	05-Oct-21	14-Dec-21	30-Dec-23	14-Mar-24	663
BWBS-1100	Pier F-02 (1no. single column & 1 pier, 30d/column & pier, 1no. workfront)	30	01-Apr-22	12-May-22	05-Feb-24	14-Mar-24	547
BWBS-1110	Pier F-03 (1no. single column & 1 pier, 30d/column & pier, 1no. workfront)	30	01-Apr-22	12-May-22	05-Feb-24	14-Mar-24	547
Construction of Bridge G Substructure							
BWBS-1160	Pier G-01a/b (2no. twin column & 2 pier, 30d/column & pier, 2no. workfronts)	30	17-Feb-23	23-Mar-23	12-Jul-23	16-Aug-23	116
BWBS-1200	Pier G-02 (1no. single column & 1 pier, 30d/column & pier, 1no. workfront)	30	24-Mar-23	03-May-23	16-Aug-23	20-Sep-23	116
BWBS-1230	Pier G-03 (1no. single column & 1 pier, 30d/column & pier,1no. workfront)	30	04-May-23	08-Jun-23	20-Sep-23	28-Oct-23	116
BWBS-1250	Pier G-04 (1no. single column & 1 pier, 30d/column & pier,1no. workfront)	30	13-Dec-21	19-Jan-22	05-Jun-23	12-Jul-23	433
BWBS-1270	Pier G-05 (1no. single column & 1 pier, 30d/column & pier,1no. workfront)	30	20-Jan-22	26-Feb-22	12-Jul-23	16-Aug-23	433
BWBS-1280	Abt G-06 (1no. abutment, 60d/abutment,1no. workfront)	60	28-Feb-22	14-May-22	16-Aug-23	28-Oct-23	433
Construction of Footbridge F4 Substructure							
BWBS-1180	Footbridge F4-01 (1no. abutment, 60d/abutment,1no. workfront)	60	02-Jul-21	09-Sep-21	02-Jul-21	09-Sep-21	0
BWBS-1240	Footbridge F4-02 (1no. abutment, 60d/abutment,1no. workfront)	60	10-Sep-21	22-Nov-21	10-Sep-21	22-Nov-21	0
Construction of Bridge Deck							
BWBD-0000	Onsite/ Offsite Fabrication of precast segments (30 segments, 1nos/5 day, 1 items) for brid	240	05-Mar-22	22-Dec-22	02-Jun-22	22-Mar-23	70
BWBD-0010	Onsite/ Offsite Fabrication of precast segments (32 segments, 1nos/5 day, 1 items) for brid	200	21-Oct-22	26-Jun-23	19-Jan-23	22-Sep-23	74
BWBD-0020	Onsite/ Offsite Fabrication of precast segments (48 segments, 1nos/5 day, 1 items) for brid	365	26-Apr-22	19-Jul-23	15-Jul-22	06-Oct-23	65
BWBD-0030	Transportation of precast segments A2	220	11-Apr-22	06-Jan-23	09-Jul-22	03-Apr-23	70
BWBD-0040	Transportation of precast segments A1	180	25-Nov-22	08-Jul-23	22-Mar-23	31-Oct-23	94
BWBD-0050	Transportation of precast segments A3	360	02-Jun-22	17-Aug-23	19-Aug-22	06-Nov-23	65
Construction of Bridge A1 Deck							
BWBD-1060	Falsework Erection for A1 cast in-situ pier segments	100	05-Dec-22	11-Apr-23	22-Mar-23	26-Jul-23	86
BWBD-1070	Bridge A1 cast in-situ pier segments (10 nos. segment, 20 day/ 2 nos. segment, 1 teams)	100	08-Feb-23	10-Jun-23	25-May-23	22-Sep-23	86
BWBD-1120	Bridge A1 by mobile crane (45 nos. segment, 4 locations, 2no./day + 1d mobilization/locati	30	27-Jun-23	01-Aug-23	22-Sep-23	31-Oct-23	74
Construction of Bridge A2 Deck							
BWBD-1020	Falsework Erection for A2 cast in-situ pier segments	100	13-Aug-22	12-Dec-22	28-Sep-22	01-Feb-23	38
BWBD-1030	Bridge A2 cast pier segments (10 nos. segment, 20 day/ 2 nos. segment, 1 teams)	100	06-Sep-22	07-Jan-23	24-Oct-22	24-Feb-23	38
BWBD-1040	Bridge A2 by Form Traveler (180m,4.5m/10days, 2 workfronts)	200	07-Jan-23	11-Sep-23	24-Feb-23	28-Oct-23	38
BWBD-1050	Bridge A2 by mobile crane (56 nos. segment, 2 locations, 2no./day+ 1d mobilization/locatic	32	07-Jan-23	17-Feb-23	24-Feb-23	03-Apr-23	38
Construction of Bridge A3 Deck							
BWBD-1080	Falsework Erection for A3 cast in-situ pier segments	70	19-Jul-23	10-Oct-23	20-Jul-23	12-Oct-23	1
BWBD-1100	Bridge A3 cast in-situ pier segments (12 nos. segment, 10 day/ 2 nos. segment, 1 teams)	60	23-Aug-23	03-Nov-23	24-Aug-23	06-Nov-23	1
BWBD-1130	Bridge A3 by Mobile Crane (86 nos. segment, 2 locations, 2no./day+ 1d mobilization/locati	48	15-Sep-23	13-Nov-23	06-Nov-23	04-Jan-24	41
BWBD-1140	Bridge A3 by Form Traveler (254m,4.5m/10 days, 2 workfronts) start from A3-02	283	04-Nov-23	18-Oct-24	06-Nov-23	21-Oct-24	1
Construction of Bridge F Deck							
BWBD-1000	Erection of Falsework	60	13-May-22	23-Jul-22	14-Mar-24	30-May-24	547



Actual Work ◆ ◆ Milestone
Remaining Work
Critical Remaining Work

Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26
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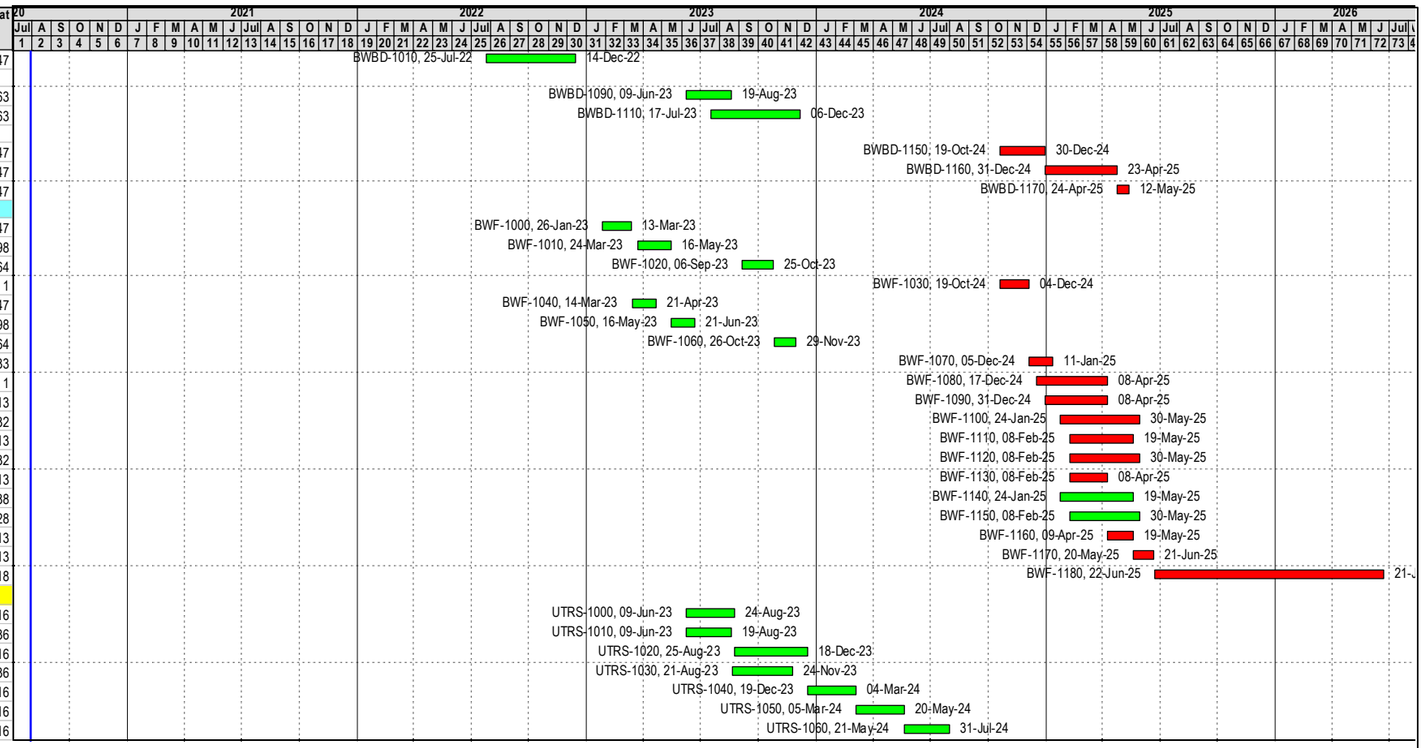
ND/2019/04

Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
BWBD-1010	Bridge F cast in-situ (4 nos. bays, 30day/bays, 1 team)	120	25-Jul-22	14-Dec-22	30-May-24	23-Oct-24	547
Construction of Bridge G Deck							
BWBD-1090	Falsework Erection for G cast in-situ	60	09-Jun-23	19-Aug-23	03-Jan-26	17-Mar-26	763
BWBD-1110	Bridge G cast in-situ (12 nos. bays, 10day/bay, 1 team)	120	17-Jul-23	06-Dec-23	07-Feb-26	09-Jul-26	763
Construction of Footbridge F4 Deck							
BWBD-1150	Footbridge F4 Deck (2 nos. bays, 30day/bays) after Bridge A3-02 segment installation	60	19-Oct-24	30-Dec-24	13-Dec-24	28-Feb-25	47
BWBD-1160	Installation of F4 Canopy	90	31-Dec-24	23-Apr-25	28-Feb-25	21-Jun-25	47
BWBD-1170	Demolition of platform with decking (during dry season)	14	24-Apr-25	12-May-25	21-Jun-25	09-Jul-25	47
Construction of Bridge Furniture							
BWF-1000	Apply external tendon stressing (Bridge F)	40	26-Jan-23	13-Mar-23	27-Nov-24	16-Jan-25	547
BWF-1010	Apply external tendon stressing (Bridge A2)	40	24-Mar-23	16-May-23	27-Nov-24	16-Jan-25	498
BWF-1020	Apply external tendon stressing (Bridge A1)	40	06-Sep-23	25-Oct-23	27-Nov-24	16-Jan-25	364
BWF-1030	Apply external tendon stressing (Bridge A3)	40	19-Oct-24	04-Dec-24	21-Oct-24	06-Dec-24	1
BWF-1040	Construction of parapet (Bridge F)	30	14-Mar-23	21-Apr-23	16-Jan-25	24-Feb-25	547
BWF-1050	Construction of parapet (Bridge A2)	30	16-May-23	21-Jun-23	16-Jan-25	24-Feb-25	498
BWF-1060	Construction of parapet (Bridge A1)	30	26-Oct-23	29-Nov-23	16-Jan-25	24-Feb-25	364
BWF-1070	Construction of parapet (Bridge A3)	30	05-Dec-24	11-Jan-25	16-Jan-25	24-Feb-25	33
BWF-1080	Installation of traffic detection system	90	17-Dec-24	08-Apr-25	18-Dec-24	10-Apr-25	1
BWF-1090	Install U-trough, lay utilities & civil provision for TCSS	80	31-Dec-24	08-Apr-25	16-Jan-25	28-Apr-25	13
BWF-1100	Preservation and Protection	100	24-Jan-25	30-May-25	06-Mar-25	09-Jul-25	32
BWF-1110	Install sign gantry & install road signage	80	08-Feb-25	19-May-25	24-Feb-25	05-Jun-25	13
BWF-1120	Landscape works	90	08-Feb-25	30-May-25	18-Mar-25	09-Jul-25	32
BWF-1130	Road works & Drainage works	50	08-Feb-25	08-Apr-25	24-Feb-25	28-Apr-25	13
BWF-1140	Lightings	90	24-Jan-25	19-May-25	18-Mar-26	09-Jul-26	338
BWF-1150	Noise barrier	90	08-Feb-25	30-May-25	18-Mar-26	09-Jul-26	328
BWF-1160	T&C and Statutory Inspection	30	09-Apr-25	19-May-25	28-Apr-25	05-Jun-25	13
BWF-1170	All remaining works	28	20-May-25	21-Jun-25	05-Jun-25	09-Jul-25	13
BWF-1180	Establishment Works for Landscape Softworks (in "calendar day")	365	22-Jun-25	21-Jun-26	10-Jul-25	09-Jul-26	18
Construction of Utrough and Retaining Structure (Portion G near Bridge G)							
UTRS-1000	RW-01 (16no. socket-H pile, 4d/pile , 1 no. workfronts) (Commencement with Bridge G Fou	64	09-Jun-23	24-Aug-23	28-Oct-23	15-Jan-24	116
UTRS-1010	ELS Works for U-trough	60	09-Jun-23	19-Aug-23	21-Nov-23	02-Feb-24	136
UTRS-1020	RW-02 (24no. socket-H pile, 4d/pile , 1 no. workfronts)	96	25-Aug-23	18-Dec-23	15-Jan-24	16-May-24	116
UTRS-1030	Construction of U-trough (40m, 20days/ 10m)	80	21-Aug-23	24-Nov-23	02-Feb-24	16-May-24	136
UTRS-1040	Construction of Retaining Wall RW-02	60	19-Dec-23	04-Mar-24	16-May-24	27-Jul-24	116
UTRS-1050	Construction of Retaining Wall RW-01	60	05-Mar-24	20-May-24	27-Jul-24	08-Oct-24	116
UTRS-1060	6 Nos. beams and decking	60	21-May-24	31-Jul-24	08-Oct-24	18-Dec-24	116



Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26
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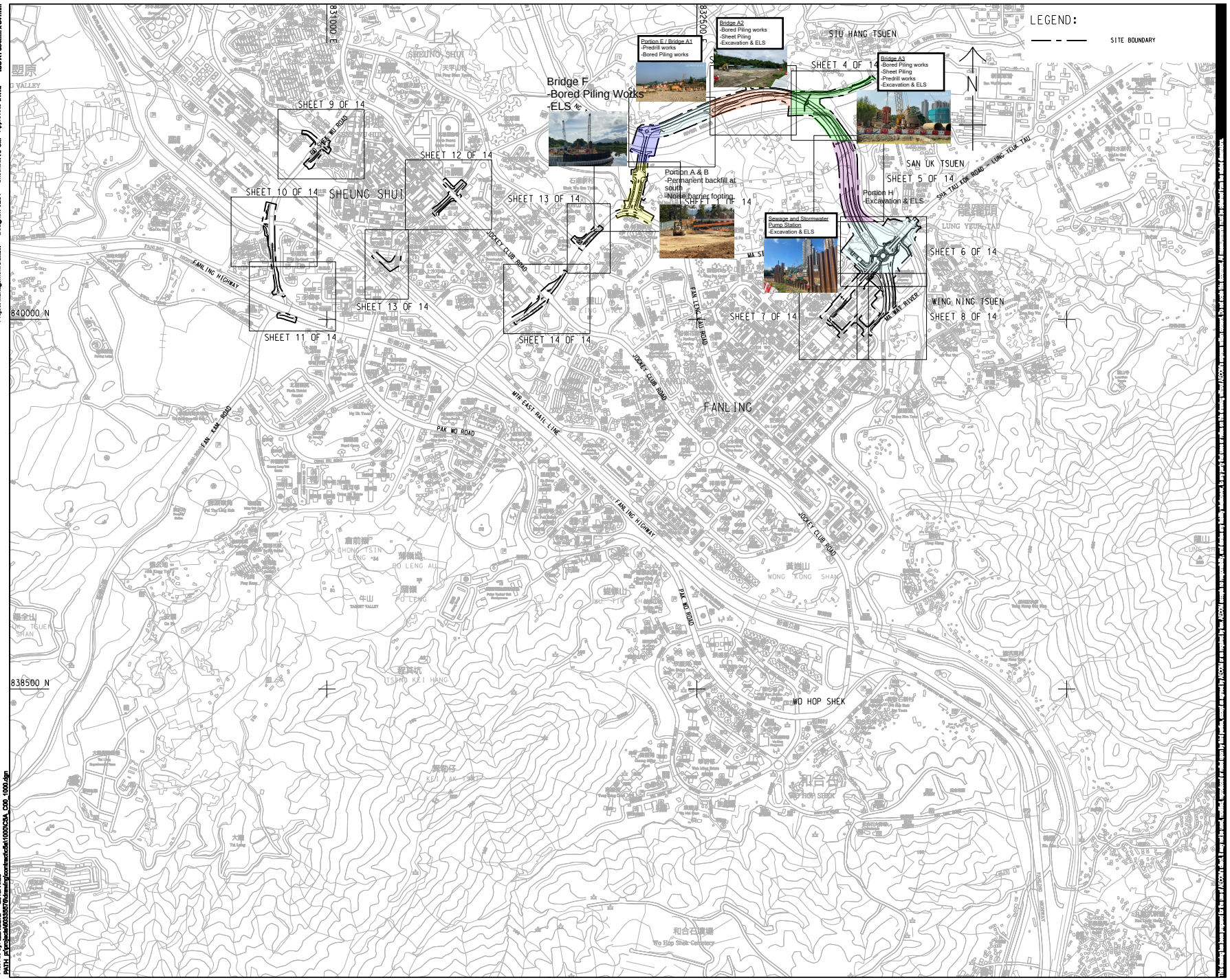
ND/2019/04

Preliminary Works Programme

Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL



Plot File by: ZENGXLY2 2019/11/23
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Project Management Initials: Designer: JLT Checked: RPCM Approved: HWL ISO A1 594mm x 841mm

AECOM

PROJECT

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

CONTRACT TITLE:

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

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

NR	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

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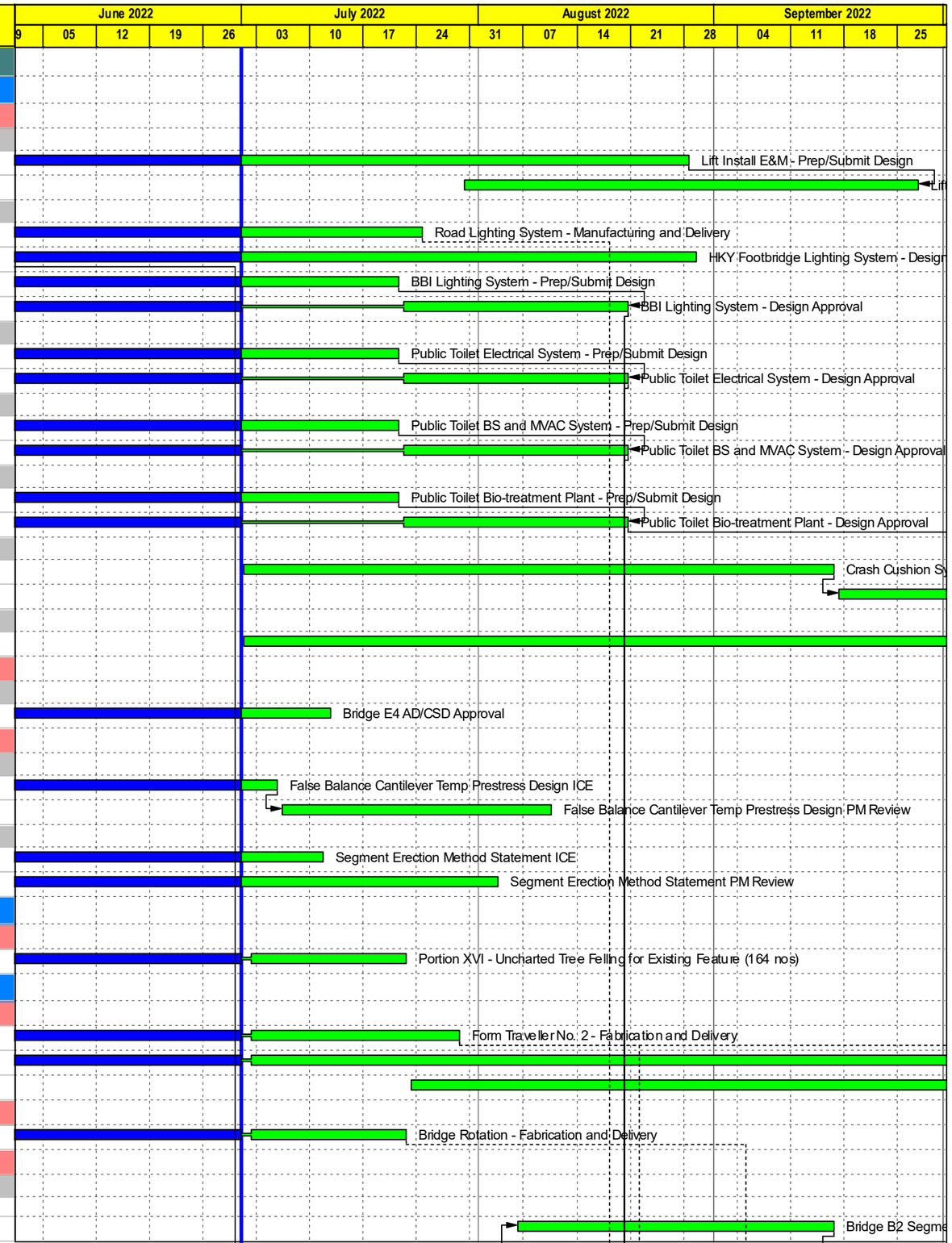
Construction Programme of ND/2019/05

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
Detail Programme Revision 12 Rev. A update to 30-Jun-2022				
2.0 - Preliminary Works				
2.3 - Contractor's Design (PS 1,109)				
2.3.3 - (c) Lift Installation E&M				
CDc-100	Lift Install E&M - Prep/Submit Design	59	01-Mar-22 A	28-Aug-22
CDc-120	Lift Install E&M - Design Approval	60	30-Jul-22	27-Sep-22
2.3.4 - (d) Lighting System				
CDd-135	Road Lighting System - Manufacturing and Delivery	24	07-May-22 A	24-Jul-22
CDd-160	HKY Footbridge Lighting System - Design Approval	60	02-Apr-22 A	29-Aug-22
CDd-170	BBI Lighting System - Prep/Submit Design	21	01-Mar-22 A	21-Jul-22
CDd-190	BBI Lighting System - Design Approval	30	28-Apr-22 A	20-Aug-22
2.3.5 - (e) BBI Public Toilet Electrical System				
CDe-110	Public Toilet Electrical System - Prep/Submit Design	21	01-Mar-22 A	21-Jul-22
CDe-130	Public Toilet Electrical System - Design Approval	30	28-Apr-22 A	20-Aug-22
2.3.6 - (f) BBI Public Toilet BS System				
CDf-110	Public Toilet BS and MVAC System - Prep/Submit Design	21	01-Mar-22 A	21-Jul-22
CDf-130	Public Toilet BS and MVAC System - Design Approval	30	28-Apr-22 A	20-Aug-22
2.3.7 - (g) BBI Public Toilet Bio-treatment Plant				
CDg-110	Public Toilet Bio-treatment Plant - Prep/Submit Design	21	01-Mar-22 A	21-Jul-22
CDg-130	Public Toilet Bio-treatment Plant - Design Approval	30	28-Apr-22 A	20-Aug-22
2.3.10 - (j) Crash Cushion System				
CDj-100	Crash Cushion System - Procurement	78	01-Jul-22	16-Sep-22
CDj-110	Crash Cushion System - Prep/Submit Design	78	17-Sep-22	03-Dec-22
2.3.11 - (k) Deck Girdder Access Facilities				
CDk-100	Access Facilities - Procurement	180	01-Jul-22	27-Dec-22
2.4 - Cost Saving Design				
2.4.10 - Bridge E4				
AD-123	Bridge E4 AD/CSD Approval	12	01-Mar-22 A	12-Jul-22
2.5 - Segment Erection Design and Calculation				
2.5.3 - Temporary Works				
AD-862	False Balance Cantilever Temp Prestress Design ICE	5	01-Jun-21 A	05-Jul-22
AD-872	False Balance Cantilever Temp Prestress Design PM Review	36	06-Jul-22	10-Aug-22
2.5.4 Method Statement				
AD-892	Segment Erection Method Statement ICE	11	06-Apr-22 A	11-Jul-22
AD-902	Segment Erection Method Statement PM Review	34	06-Apr-22 A	03-Aug-22
3.0 - Site Establishment Works				
3.17 - Portion XVI				
16-150	Portion XVI - Uncharted Tree Felling for Existing Feature (164 nos)	18	06-Apr-22 A	22-Jul-22
4.0 - Bridge Construction				
4.2 - Form Traveller				
E2-7405	Form Traveller No. 2 - Fabrication and Delivery	24	18-Mar-22 A	29-Jul-22
E2-7406	Form Traveller No. 3 - Fabrication and Delivery	78	18-May-22 A	03-Oct-22
E2-7407	Form Traveller No. 4 - Fabrication and Delivery	90	23-Jul-22	08-Nov-22
4.3 - Bridge Rotation System				
E2-1504	Bridge Rotation - Fabrication and Delivery	18	24-Feb-22 A	22-Jul-22
4.3 - Segment Fabrication				
4.3.1 - Shop Drawings				
- Bridge B2				
AD-500	Bridge B2 Segment Fabrication Shop Drawings Preparation	42	06-Aug-22	16-Sep-22



CRCC - Paul Y. Joint Venture

中国铁建

Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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

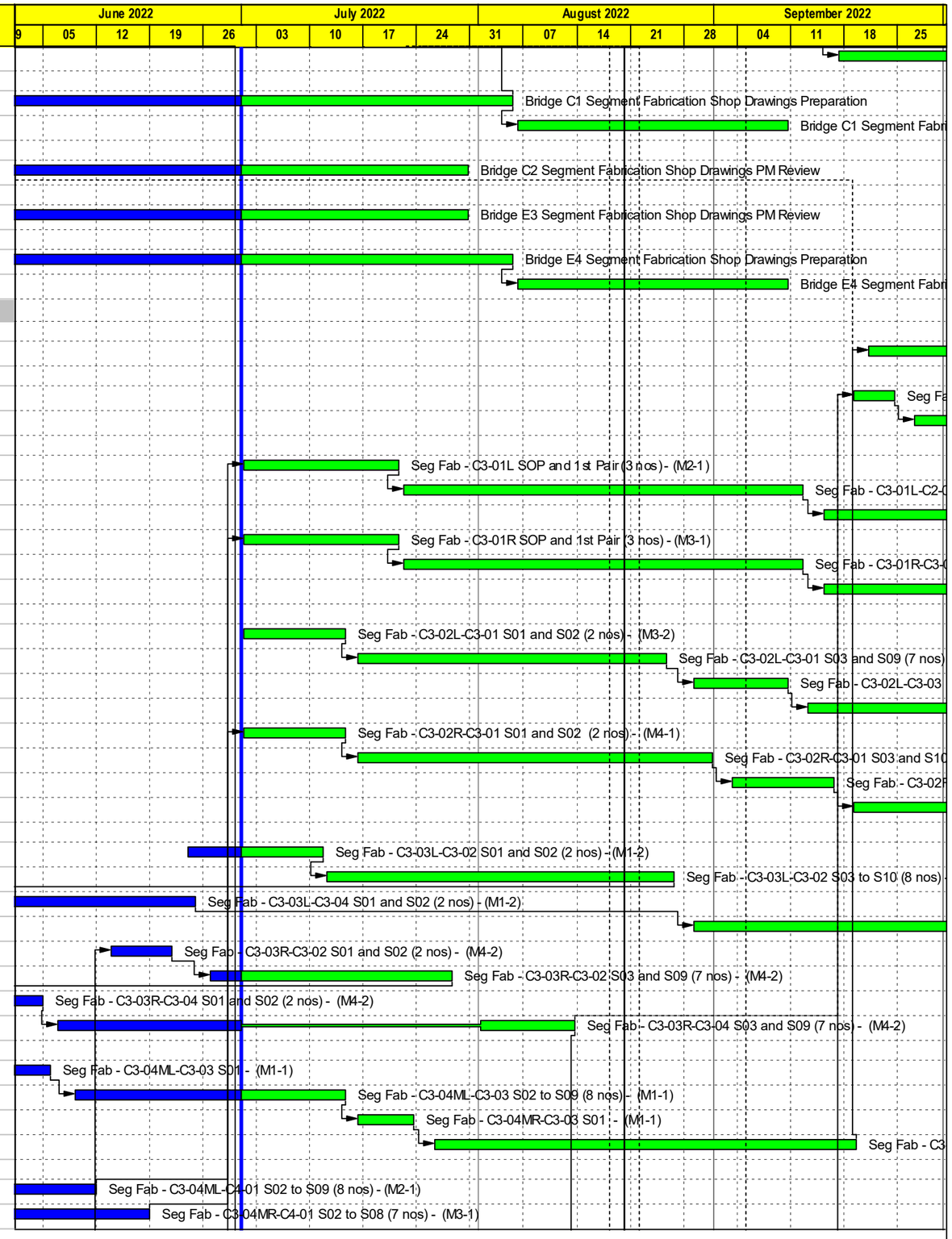
3-Month Rolling Programme - Jul 2022

Proj ID : ADP12U28
Layout : ND201905 3MRP
Date : Page 1 of 11

3-Month Rolling Programme

Date	Revision	Checked	Approved
01-Jul-22	Jul 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
AD-502	Bridge B2 Segment Fabrication Shop Drawings PM Review	36	17-Sep-22	22-Oct-22
- Bridge C1				
AD-510	Bridge C1 Segment Fabrication Shop Drawings Preparation	36	24-May-22 A	05-Aug-22
AD-512	Bridge C1 Segment Fabrication Shop Drawings PM Review	36	06-Aug-22	10-Sep-22
- Bridge C2				
AD-522	Bridge C2 Segment Fabrication Shop Drawings PM Review	30	24-May-22 A	30-Jul-22
- Bridge E3				
AD-582	Bridge E3 Segment Fabrication Shop Drawings PM Review	30	24-May-22 A	30-Jul-22
- Bridge E4				
AD-590	Bridge E4 Segment Fabrication Shop Drawings Preparation	36	24-May-22 A	05-Aug-22
AD-592	Bridge E4 Segment Fabrication Shop Drawings PM Review	36	06-Aug-22	10-Sep-22
4.3.2 - Off-Site Fabrication				
- C2-03 T-span				
OSF-0540	Seg Fab - C2-03L SOP and 1st Pair (3 nos) - (M1-1)	18	21-Sep-22	11-Oct-22
- C3/C2 End-span				
OSF-0580	Seg Fab - C2-04ML-C3-01 S01 (1 nos) - (M4-2)	6	19-Sep-22	24-Sep-22
OSF-0583	Seg Fab - C2-04ML-C3-01 S02 to S10 (9 nos) - (M4-2)	45	27-Sep-22	17-Nov-22
- C3-01 T-span				
OSF-0620	Seg Fab - C3-01L SOP and 1st Pair (3 nos) - (M2-1)	18	01-Jul-22	21-Jul-22
OSF-0640	Seg Fab - C3-01L-C2-04 S02 to S10 (9 nos) - (M2-1)	45	22-Jul-22	12-Sep-22
OSF-0645	Seg Fab - C3-01L-C2-04 S02 to S09 (8 nos) - (M2-1)	40	15-Sep-22	31-Oct-22
OSF-0648	Seg Fab - C3-01R SOP and 1st Pair (3 nos) - (M3-1)	18	01-Jul-22	21-Jul-22
OSF-0650	Seg Fab - C3-01R-C3-02 S02 to S10 (9 nos) - (M3-1)	45	22-Jul-22	12-Sep-22
OSF-0655	Seg Fab - C3-01R-C3-02 S02 to S09 (8 nos) - (M3-1)	40	15-Sep-22	31-Oct-22
- C3-02 T-span				
OSF-0660	Seg Fab - C3-02L-C3-01 S01 and S02 (2 nos) - (M3-2)	12	01-Jul-22	14-Jul-22
OSF-0663	Seg Fab - C3-02L-C3-01 S03 and S09 (7 nos) - (M3-2)	35	16-Jul-22	25-Aug-22
OSF-0665	Seg Fab - C3-02L-C3-03 S01 and S02 (2 nos) - (M3-2)	12	29-Aug-22	10-Sep-22
OSF-0667	Seg Fab - C3-02L-C3-03 S03 and S09 (7 nos) - (M3-2)	35	13-Sep-22	22-Oct-22
OSF-0670	Seg Fab - C3-02R-C3-01 S01 and S02 (2 nos) - (M4-1)	12	01-Jul-22	14-Jul-22
OSF-0673	Seg Fab - C3-02R-C3-01 S03 and S10 (8 nos) - (M4-1)	40	16-Jul-22	31-Aug-22
OSF-0675	Seg Fab - C3-02R-C3-03 S01 and S02 (2 nos) - (M4-1)	12	03-Sep-22	16-Sep-22
OSF-0695	Seg Fab - C3-02R-C3-03 S03 and S10 (8 nos) - (M4-1)	40	19-Sep-22	03-Nov-22
- C3-03 T-span				
OSF-0720	Seg Fab - C3-03L-C3-02 S01 and S02 (2 nos) - (M1-2)	9	24-Jun-22 A	11-Jul-22
OSF-0723	Seg Fab - C3-03L-C3-02 S03 to S10 (8 nos) - (M1-2)	40	12-Jul-22	26-Aug-22
OSF-0725	Seg Fab - C3-03L-C3-04 S01 and S02 (2 nos) - (M1-2)	0	26-May-22 A	25-Jun-22 A
OSF-0727	Seg Fab - C3-03L-C3-04 S03 to S10 (8 nos) - (M1-2)	40	29-Aug-22	13-Oct-22
OSF-0730	Seg Fab - C3-03R-C3-02 S01 and S02 (2 nos) - (M4-2)	0	14-Jun-22 A	22-Jun-22 A
OSF-0733	Seg Fab - C3-03R-C3-02 S03 and S09 (7 nos) - (M4-2)	24	27-Jun-22 A	28-Jul-22
OSF-0735	Seg Fab - C3-03R-C3-04 S01 and S02 (2 nos) - (M4-2)	0	29-May-22 A	05-Jun-22 A
OSF-0750	Seg Fab - C3-03R-C3-04 S03 and S09 (7 nos) - (M4-2)	12	07-Jun-22 A	13-Aug-22
- C3/C4 End-span				
OSF-0700	Seg Fab - C3-04ML-C3-03 S01 - (M1-1)	0	01-Jun-22 A	06-Jun-22 A
OSF-0705	Seg Fab - C3-04ML-C3-03 S02 to S09 (8 nos) - (M1-1)	12	09-Jun-22 A	14-Jul-22
OSF-0710	Seg Fab - C3-04MR-C3-03 S01 - (M1-1)	7	16-Jul-22	23-Jul-22
OSF-1490	Seg Fab - C3-04MR-C3-03 S02 to S10 (9 nos) - (M1-1)	48	26-Jul-22	19-Sep-22
- C4/C3 End-span				
OSF-0765	Seg Fab - C3-04ML-C4-01 S02 to S09 (8 nos) - (M2-1)	0	02-May-22 A	12-Jun-22 A
OSF-0775	Seg Fab - C3-04MR-C4-01 S02 to S08 (7 nos) - (M3-1)	0	03-May-22 A	19-Jun-22 A



CRCC - Paul Y. Joint Venture

- Remaining Level of Ef...
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

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

3-Month Rolling Programme - Jul 2022

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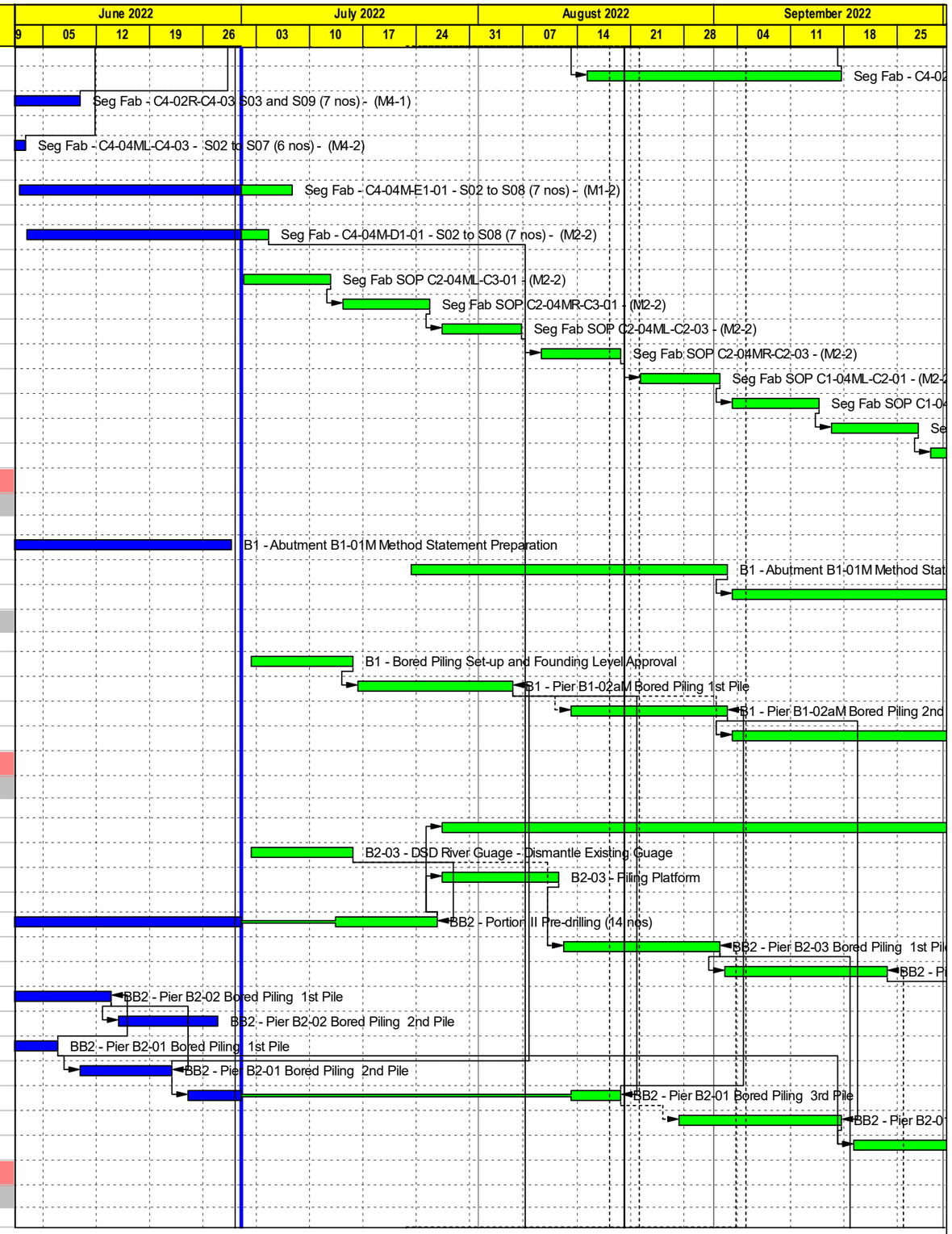
3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Jul-22	Jul 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
- C4-02 T-span				
OSF-0834	Seg Fab - C4-02R-C4-01 - S05 and S09 (5 nos) - (M4-2)	30	15-Aug-22	17-Sep-22
OSF-0855	Seg Fab - C4-02R-C4-03 S03 and S09 (7 nos) - (M4-1)	0	27-Apr-22 A	10-Jun-22 A
- C4/D1-E1 End-span				
OSF-0890	Seg Fab - C4-04ML-C4-03 - S02 to S07 (6 nos) - (M4-2)	0	19-Apr-22 A	02-Jun-22 A
- E1/C4 End-span				
OSF-0950	Seg Fab - C4-04M-E1-01 - S02 to S08 (7 nos) - (M1-2)	6	02-Jun-22 A	07-Jul-22
- D1/C4 End-span				
OSF-1170	Seg Fab - C4-04M-D1-01 - S02 to S08 (7 nos) - (M2-2)	3	03-Jun-22 A	04-Jul-22
- Segment on Pier (SOP)				
OSF-1340	Seg Fab SOP C2-04ML-C3-01 - (M2-2)	10	01-Jul-22	12-Jul-22
OSF-1350	Seg Fab SOP C2-04MR-C3-01 - (M2-2)	10	14-Jul-22	25-Jul-22
OSF-1360	Seg Fab SOP C2-04ML-C2-03 - (M2-2)	10	27-Jul-22	06-Aug-22
OSF-1370	Seg Fab SOP C2-04MR-C2-03 - (M2-2)	10	09-Aug-22	19-Aug-22
OSF-1380	Seg Fab SOP C1-04ML-C2-01 - (M2-2)	10	22-Aug-22	01-Sep-22
OSF-1390	Seg Fab SOP C1-04MR-C2-01 - (M2-2)	10	03-Sep-22	14-Sep-22
OSF-1400	Seg Fab SOP C1-04ML-C1-03 - (M2-2)	10	16-Sep-22	27-Sep-22
OSF-1410	Seg Fab SOP C1-04MR-C1-03 - (M2-2)	10	29-Sep-22	10-Oct-22
4.4 - Bridge B1				
4.4.1 - Substructure Portion I and 1A				
- Pier				
B1-0009	B1 - Abutment B1-01M Method Statement Preparation	0	01-Mar-22 A	29-Jun-22 A
B1-0011	B1 - Abutment B1-01M Method Statement PM Review	36	23-Jul-22	02-Sep-22
B1-0012	B1 - Abutment B1-01M ELS	90	03-Sep-22	20-Dec-22
4.4.3 - Substructure Portion II				
- Piling				
B1-0041	B1 - Bored Piling Set-up and Founding Level Approval	12	02-Jul-22	15-Jul-22
B1-0047	B1 - Pier B1-02aM Bored Piling 1st Pile	18	16-Jul-22	05-Aug-22
B1-0048	B1 - Pier B1-02aM Bored Piling 2nd Pile	18	13-Aug-22	02-Sep-22
B1-0049	B1 - Pier B1-02aM Bored Pile Testing	24	03-Sep-22	03-Oct-22
4.5 - Bridge B2				
4.5.1 - Substructure				
- Preparation Works				
B2-0010	B2 Temporary Work - Design & ICE	60	27-Jul-22	07-Oct-22
B2-0070	B2-03 - DSD River Guage - Dismantle Existing Guage	12	02-Jul-22	15-Jul-22
B2-0080	B2-03 - Piling Platform	14	27-Jul-22	11-Aug-22
- Piling				
B2-0100	BB2 - Portion II Pre-drilling (14 nos)	12	21-Oct-21 A	26-Jul-22
B2-0120	BB2 - Pier B2-03 Bored Piling 1st Pile	18	12-Aug-22	01-Sep-22
B2-0121	BB2 - Pier B2-03 Bored Piling 2nd Pile	18	02-Sep-22	23-Sep-22
B2-0130	BB2 - Pier B2-02 Bored Piling 1st Pile	0	30-May-22 A	14-Jun-22 A
B2-0131	BB2 - Pier B2-02 Bored Piling 2nd Pile	0	15-Jun-22 A	28-Jun-22 A
B2-0140	BB2 - Pier B2-01 Bored Piling 1st Pile	0	19-May-22 A	07-Jun-22 A
B2-0141	BB2 - Pier B2-01 Bored Piling 2nd Pile	0	10-Jun-22 A	22-Jun-22 A
B2-0142	BB2 - Pier B2-01 Bored Piling 3rd Pile	6	24-Jun-22 A	19-Aug-22
B2-0143	BB2 - Pier B2-01 Bored Piling 4th Pile	18	27-Aug-22	17-Sep-22
B2-0144	BB2 - Pier B2-01 Bored Pile Testing	24	19-Sep-22	18-Oct-22
4.6 - Bridge C1				
4.6.1 - Foundation				
4.6.4 - Portion II				



CRCC - Paul Y. Joint Venture

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

3-Month Rolling Programme - Jul 2022

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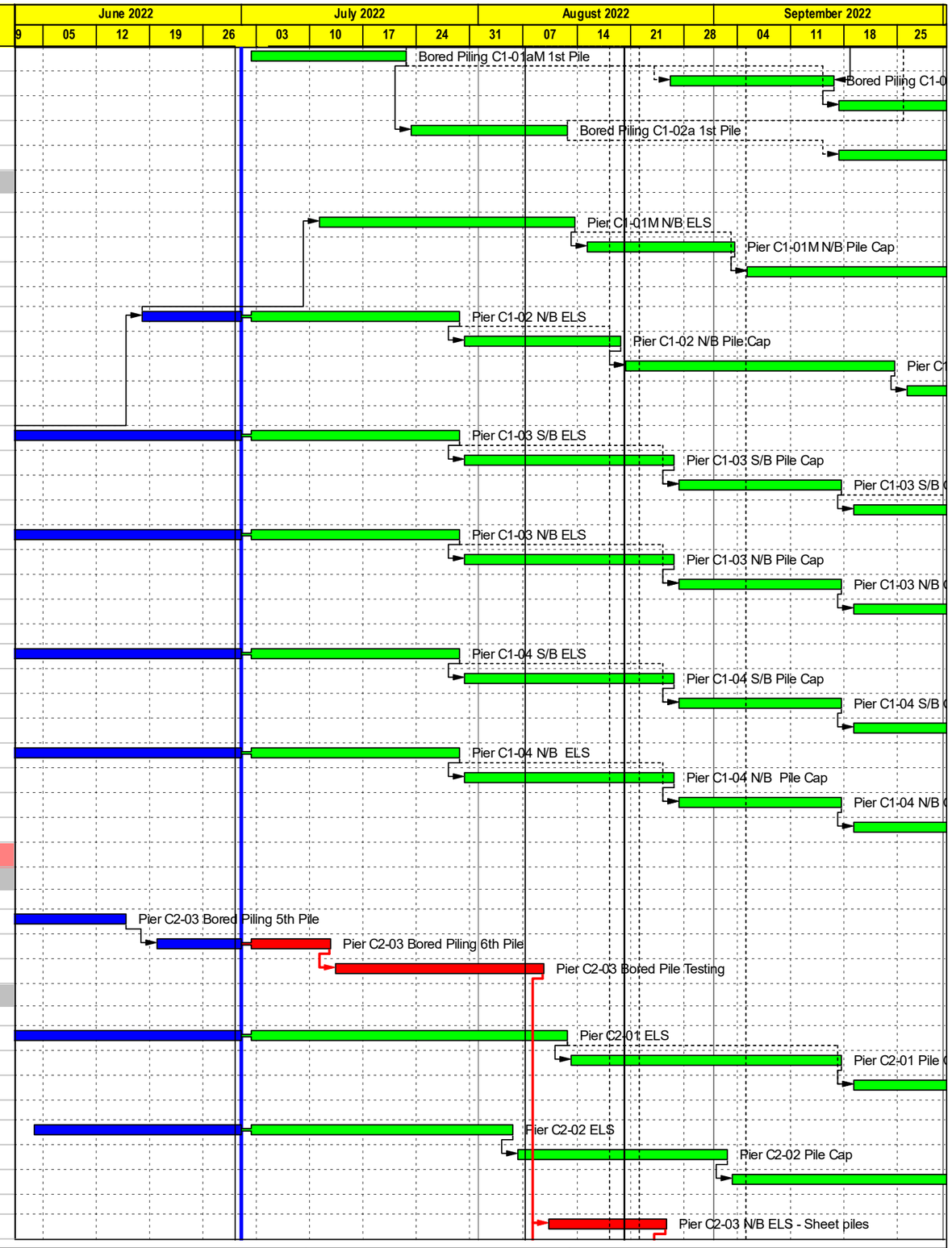
3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Jul-22	Jul 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
C1-1205	Bored Piling C1-01aM 1st Pile	18	02-Jul-22	22-Jul-22
C1-1206	Bored Piling C1-01aM 2nd Pile	18	26-Aug-22	16-Sep-22
C1-1208	Bored Pile Testing C1-01aM	24	17-Sep-22	17-Oct-22
C1-1220	Bored Piling C1-02a 1st Pile	18	23-Jul-22	12-Aug-22
C1-1221	Bored Piling C1-02a 2nd Pile	18	17-Sep-22	10-Oct-22
4.6.2 - Pier				
- C1-01M				
C1-1160	Pier C1-01M N/B ELS	30	11-Jul-22	13-Aug-22
C1-1165	Pier C1-01M N/B Pile Cap	18	15-Aug-22	03-Sep-22
C1-1170	Pier C1-01M N/B Column	30	05-Sep-22	12-Oct-22
- C1-02				
C1-1140	Pier C1-02 N/B ELS	24	18-Jun-22 A	29-Jul-22
C1-1145	Pier C1-02 N/B Pile Cap	18	30-Jul-22	19-Aug-22
C1-1150	Pier C1-02 N/B Column	30	20-Aug-22	24-Sep-22
C1-1155	Pier C1-02 N/B Backfilling	12	26-Sep-22	11-Oct-22
- C1-03				
C1-1440	Pier C1-03 S/B ELS	24	11-May-22 A	29-Jul-22
C1-1445	Pier C1-03 S/B Pile Cap	24	30-Jul-22	26-Aug-22
C1-1450	Pier C1-03 S/B Column	18	27-Aug-22	17-Sep-22
C1-1452	Pier C1-03 S/B Pierhead	30	19-Sep-22	25-Oct-22
C1-1460	Pier C1-03 N/B ELS	24	11-May-22 A	29-Jul-22
C1-1465	Pier C1-03 N/B Pile Cap	24	30-Jul-22	26-Aug-22
C1-1470	Pier C1-03 N/B Column	18	27-Aug-22	17-Sep-22
C1-1472	Pier C1-03 N/B Pier Head	30	19-Sep-22	25-Oct-22
- C1-04				
C1-1480	Pier C1-04 S/B ELS	24	31-Mar-22 A	29-Jul-22
C1-1485	Pier C1-04 S/B Pile Cap	24	30-Jul-22	26-Aug-22
C1-1490	Pier C1-04 S/B Column	18	27-Aug-22	17-Sep-22
C1-1492	Pier C1-04 S/B Pierhead	30	19-Sep-22	25-Oct-22
C1-1500	Pier C1-04 N/B ELS	24	31-Mar-22 A	29-Jul-22
C1-1505	Pier C1-04 N/B Pile Cap	24	30-Jul-22	26-Aug-22
C1-1510	Pier C1-04 N/B Column	18	27-Aug-22	17-Sep-22
C1-1512	Pier C1-04 N/B Pier Head	30	19-Sep-22	25-Oct-22
4.7 - Bridge C2				
4.7.1 - Foundation				
- Portion V				
C2-1204	Pier C2-03 Bored Piling 5th Pile	0	04-May-22 A	16-Jun-22 A
C2-1206	Pier C2-03 Bored Piling 6th Pile	9	20-Jun-22 A	12-Jul-22
C2-1208	Pier C2-03 Bored Pile Testing	24	13-Jul-22	09-Aug-22
4.7.2 - Pier				
- C2-01				
C2-1160	Pier C2-01 ELS	36	02-May-22 A	12-Aug-22
C2-1165	Pier C2-01 Pile Cap	30	13-Aug-22	17-Sep-22
C2-1170	Pier C2-01 Column	24	19-Sep-22	18-Oct-22
- C2-02				
C2-1140	Pier C2-02 ELS	30	04-Jun-22 A	05-Aug-22
C2-1145	Pier C2-02 Pile Cap	24	06-Aug-22	02-Sep-22
C2-1150	Pier C2-02 Column	24	03-Sep-22	03-Oct-22
- C2-03				
C2-1460	Pier C2-03 N/B ELS - Sheet piles	14	10-Aug-22	25-Aug-22



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

3-Month Rolling Programme - Jul 2022

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3-Month Rolling Programme			
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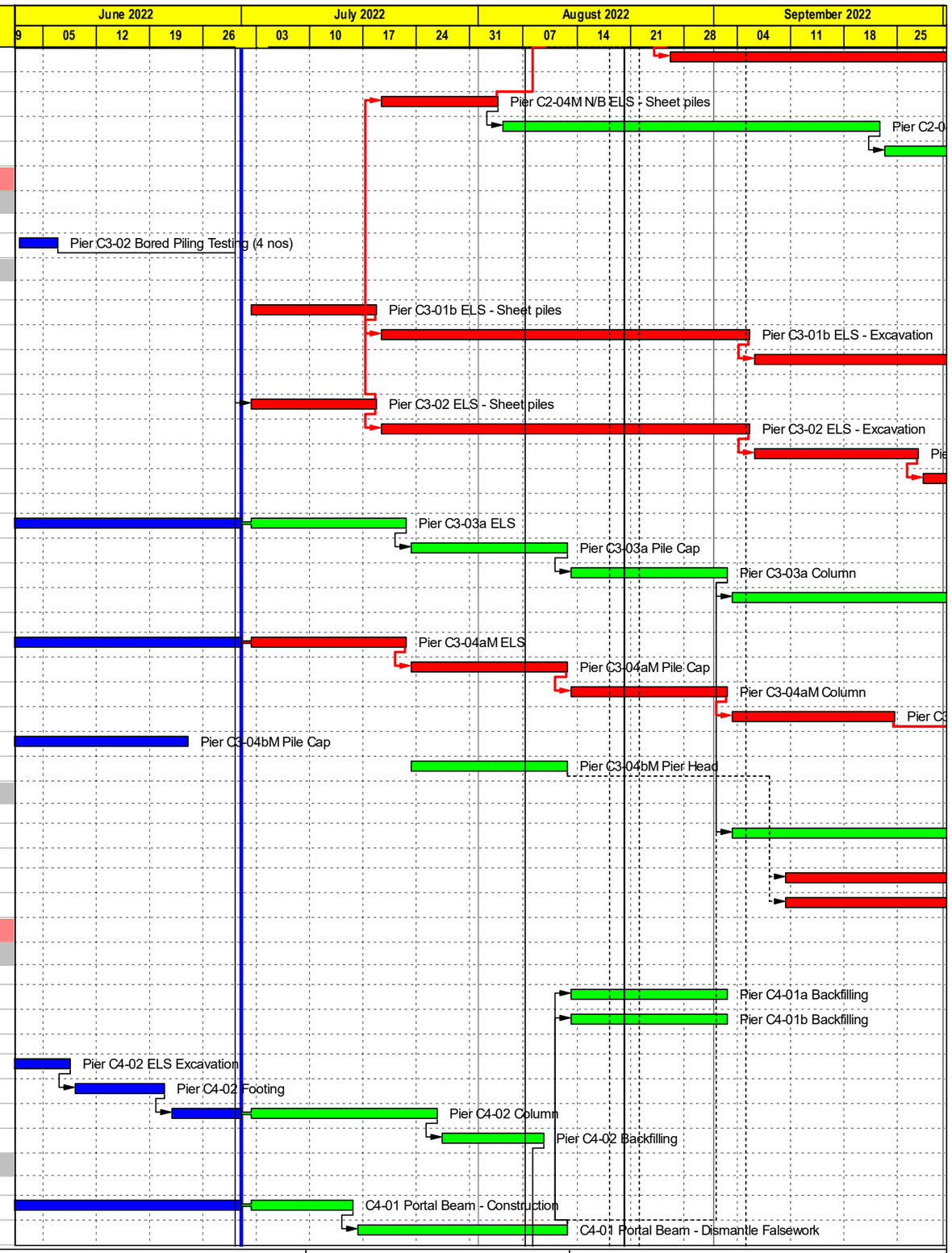
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
C2-1462	Pier C2-03 N/B ELS - Excavation	42	26-Aug-22	17-Oct-22
- C2-04				
C2-1500	Pier C2-04M N/B ELS - Sheet piles	14	19-Jul-22	03-Aug-22
C2-1502	Pier C2-04M N/B ELS - Excavation	42	04-Aug-22	22-Sep-22
C2-1505	Pier C2-04M N/B Pile Cap	24	23-Sep-22	22-Oct-22
4.8 - Bridge C3				
4.8.2 - Foundation				
- C3-02				
C3-1080	Pier C3-02 Bored Piling Testing (4 nos)	0	02-Jun-22 A	07-Jun-22 A
4.8.3 - Pier				
- C3-01				
C3-1230	Pier C3-01b ELS - Sheet piles	14	02-Jul-22	18-Jul-22
C3-1232	Pier C3-01b ELS - Excavation	42	19-Jul-22	05-Sep-22
C3-1235	Pier C3-01b Pile Cap	24	06-Sep-22	06-Oct-22
- C3-02				
C3-1345	Pier C3-02 ELS - Sheet piles	14	02-Jul-22	18-Jul-22
C3-1350	Pier C3-02 ELS - Excavation	42	19-Jul-22	05-Sep-22
C3-1355	Pier C3-02 Pile Cap	18	06-Sep-22	27-Sep-22
C3-1370	Pier C3-02 Column	18	28-Sep-22	20-Oct-22
- C3-03				
C3-1400	Pier C3-03a ELS	18	06-May-22 A	22-Jul-22
C3-1405	Pier C3-03a Pile Cap	18	23-Jul-22	12-Aug-22
C3-1420	Pier C3-03a Column	18	13-Aug-22	02-Sep-22
C3-1425	Pier C3-03a Backfilling	24	03-Sep-22	03-Oct-22
- C3-04M				
C3-1500	Pier C3-04aM ELS	18	06-May-22 A	22-Jul-22
C3-1505	Pier C3-04aM Pile Cap	18	23-Jul-22	12-Aug-22
C3-1520	Pier C3-04aM Column	18	13-Aug-22	02-Sep-22
C3-1522	Pier C3-04aM Pier Head	18	03-Sep-22	24-Sep-22
C3-1555	Pier C3-04bM Pile Cap	0	01-Jun-22 A	24-Jun-22 A
C3-1572	Pier C3-04bM Pier Head	18	23-Jul-22	12-Aug-22
4.8.4 - Portal Beam and Cross Head				
- C3-03				
C3-1830	C3-03 Portal Beam - Falsework PERI Truss System	36	03-Sep-22	18-Oct-22
- C3-04M				
C3-1850	C3-04M Portal Beam - Falsework RMD Scaffold System	36	10-Sep-22	25-Oct-22
C3-1860	C3-04M Install Bearing	30	10-Sep-22	18-Oct-22
4.9 - Bridge C4				
4.9.3 - Pier				
- C4-01				
C4-1225	Pier C4-01a Backfilling	18	13-Aug-22	02-Sep-22
C4-1265	Pier C4-01b Backfilling	18	13-Aug-22	02-Sep-22
- C4-02				
C4-1352	Pier C4-02 ELS Excavation	0	15-Mar-22 A	08-Jun-22 A
C4-1355	Pier C4-02 Footing	0	09-Jun-22 A	21-Jun-22 A
C4-1370	Pier C4-02 Column	21	22-Jun-22 A	26-Jul-22
C4-1375	Pier C4-02 Backfilling	12	27-Jul-22	09-Aug-22
4.9.4 - Portal and T Beams				
- C4-01				
C4-5590	C4-01 Portal Beam - Construction	12	24-Feb-22 A	15-Jul-22
C4-5595	C4-01 Portal Beam - Dismantle Falsework	24	16-Jul-22	12-Aug-22



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

3-Month Rolling Programme - Jul 2022

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3-Month Rolling Programme			
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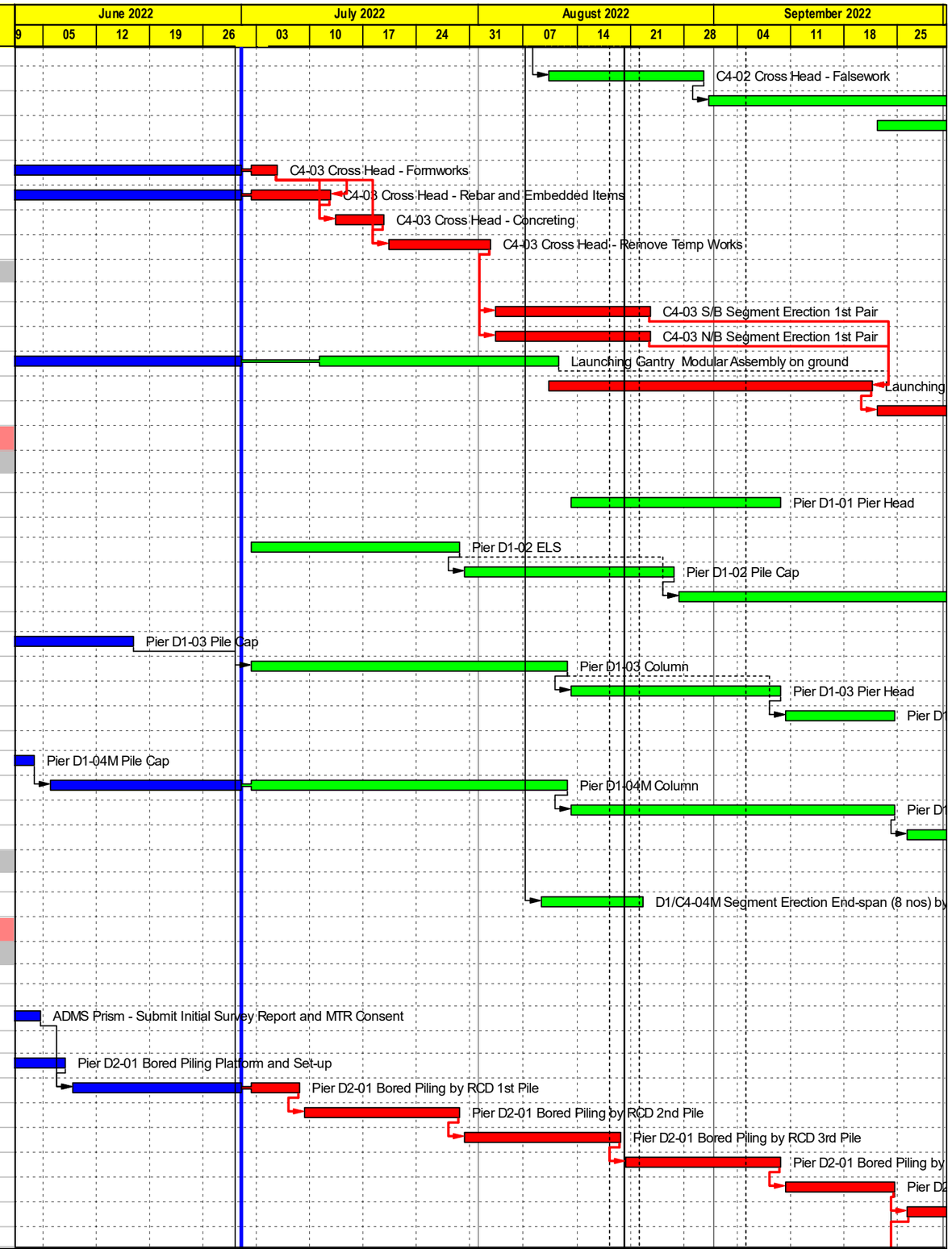
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
- C4-02				
C4-5600	C4-02 Cross Head - Falsework	18	10-Aug-22	30-Aug-22
C4-5601	C4-02 Cross Head - Formwork	42	31-Aug-22	21-Oct-22
C4-5602	C4-02 Cross Head - Rebar and Embedded Item	24	22-Sep-22	21-Oct-22
- C4-03				
C4-5606	C4-03 Cross Head - Formworks	3	03-May-22 A	05-Jul-22
C4-5606a	C4-03 Cross Head - Rebar and Embedded Items	9	25-May-22 A	12-Jul-22
C4-5606b	C4-03 Cross Head - Concreting	6	13-Jul-22	19-Jul-22
C4-5607	C4-03 Cross Head - Remove Temp Works	12	20-Jul-22	02-Aug-22
4.9.5 - Bridge Deck				
- T-span C4-03				
C4-2300	C4-03 S/B Segment Erection 1st Pair	18	03-Aug-22	23-Aug-22
C4-2350	C4-03 N/B Segment Erection 1st Pair	18	03-Aug-22	23-Aug-22
C4-2355	Launching Gantry Modular Assembly on ground	28	03-May-22 A	11-Aug-22
C4-2360	Launching Gantry Erection	36	10-Aug-22	21-Sep-22
C4-2362	Launching Gantry T&C	12	22-Sep-22	07-Oct-22
4.10 - Bridge D1				
4.10.2 - Pier				
- D1-01				
D1-1262	Pier D1-01 Pier Head	24	13-Aug-22	09-Sep-22
- D1-02				
D1-1350	Pier D1-02 ELS	24	02-Jul-22	29-Jul-22
D1-1355	Pier D1-02 Pile Cap	24	30-Jul-22	26-Aug-22
D1-1370	Pier D1-02 Column	36	27-Aug-22	11-Oct-22
- D1-03				
D1-5535	Pier D1-03 Pile Cap	0	25-May-22 A	17-Jun-22 A
D1-5540	Pier D1-03 Column	36	02-Jul-22	12-Aug-22
D1-5542	Pier D1-03 Pier Head	24	13-Aug-22	09-Sep-22
D1-5545	Pier D1-03 Backfilling	12	10-Sep-22	24-Sep-22
- D1-04M				
D1-5575	Pier D1-04M Pile Cap	0	11-May-22 A	04-Jun-22 A
D1-5580	Pier D1-04M Column	36	06-Jun-22 A	12-Aug-22
D1-5582	Pier D1-04M Pier Head	36	13-Aug-22	24-Sep-22
D1-5585	Pier D1-04M Backfilling	12	26-Sep-22	11-Oct-22
4.10.4 - Bridge Deck				
- End-span D1/C4-04M				
D1-2060	D1/C4-04M Segment Erection End-span (8 nos) by Crane	12	09-Aug-22	22-Aug-22
4.11 - Bridge D2				
4.11.1 - Foundation				
- Portion VIII				
- ADMS				
ADMS-16	ADMS Prism - Submit Initial Survey Report and MTR Consent	0	16-May-22 A	04-Jun-22 A
- Bored Piling				
D2-1120	Pier D2-01 Bored Piling Platform and Set-up	0	16-Mar-22 A	08-Jun-22 A
D2-1130	Pier D2-01 Bored Piling by RCD 1st Pile	6	09-Jun-22 A	08-Jul-22
D2-1131	Pier D2-01 Bored Piling by RCD 2nd Pile	18	09-Jul-22	29-Jul-22
D2-1132	Pier D2-01 Bored Piling by RCD 3rd Pile	18	30-Jul-22	19-Aug-22
D2-1133	Pier D2-01 Bored Piling by RCD 4th Pile	18	20-Aug-22	09-Sep-22
D2-1135	Pier D2-01 TIME RISK ALLOWANCE for Bored Piling	12	10-Sep-22	24-Sep-22
D2-1140	Pier D2-01 Bored Pile Testing (4 nos)	24	26-Sep-22	25-Oct-22
- Portion XI				



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3-Month Rolling Programme			
Date	Revision	Checked	Approved
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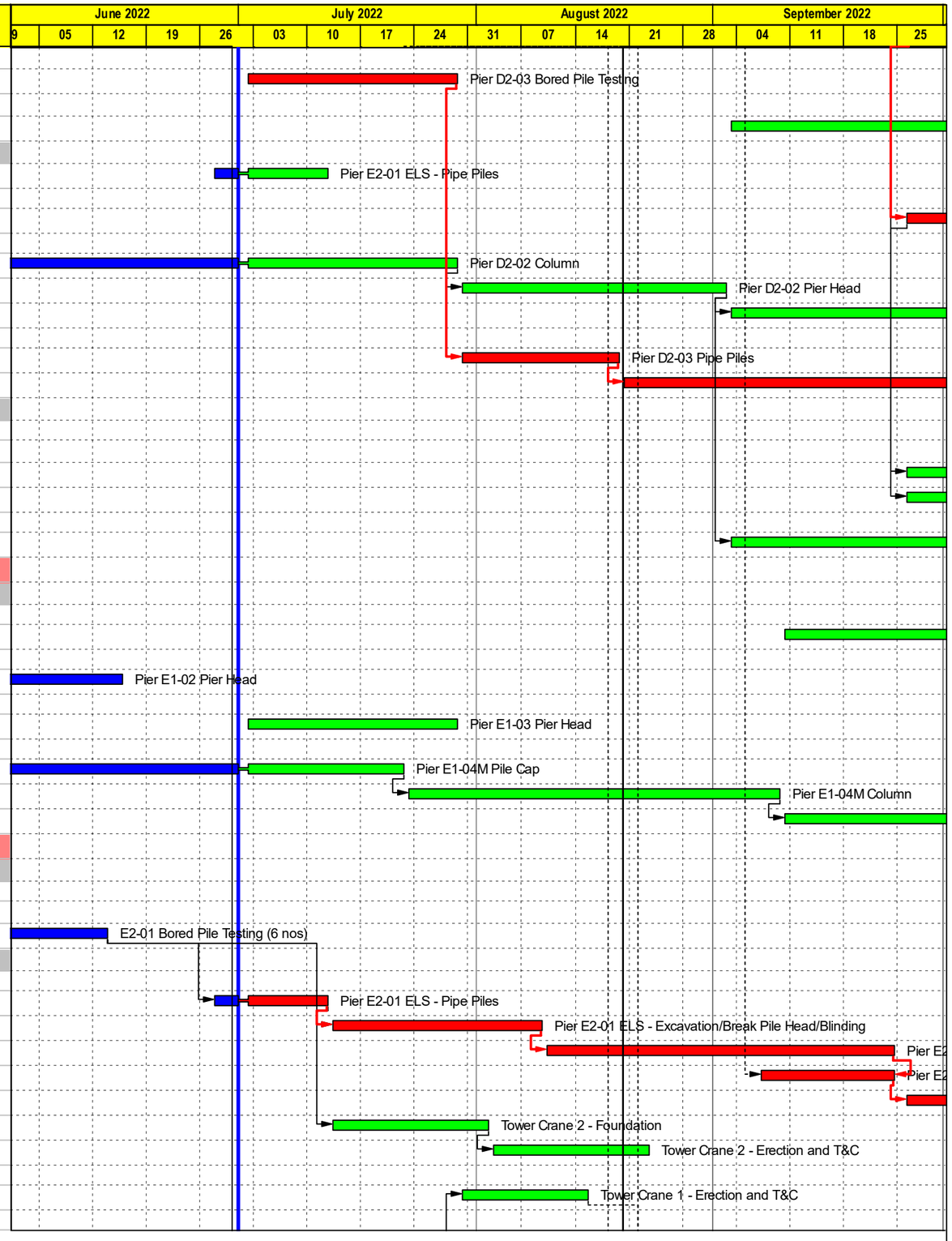
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
- Pier D2-03				
D2-1240	Pier D2-03 Bored Pile Testing	24	02-Jul-22	29-Jul-22
- Pier D2-04M				
D2-1245	Abutment D2-04M TTA - Submission and Approval	60	03-Sep-22	15-Nov-22
4.11.2 - Pier				
E2-7500	Pier E2-01 ELS - Pipe Piles	9	28-Jun-22 A	12-Jul-22
- D2-01				
D2-1505	Pier D2-01 Pipe Piles + Grouting	33	26-Sep-22	04-Nov-22
- D2-02				
D2-1575	Pier D2-02 Column	24	30-May-22 A	29-Jul-22
D2-1580	Pier D2-02 Pier Head	30	30-Jul-22	02-Sep-22
D2-1583	Tower Crane 3 - Foundation	42	03-Sep-22	25-Oct-22
- D2-03				
D2-1610	Pier D2-03 Pipe Piles	18	30-Jul-22	19-Aug-22
D2-1615	Pier D2-03 Excavation	42	20-Aug-22	11-Oct-22
4.11.3 - Bridge Deck				
- D2-01				
- Prep Work				
D2-2151	Existing Lift - Submit/Approve Pedestrian Diversion/Lift Suspension	120	26-Sep-22	21-Feb-23
D2-2159	D2-01 Obtain MTRC Consent for Deck Construction	72	26-Sep-22	20-Dec-22
- D2-02				
D2-7550	D2-02 Cast-in-situ Segment on Pier / Table Top	90	03-Sep-22	20-Dec-22
4.12 - Bridge E1				
4.12.2 - Pier				
- E1-01				
E1-1262	Pier E1-01 Pier Head	24	10-Sep-22	11-Oct-22
- E2-02				
E1-1372	Pier E1-02 Pier Head	0	14-Apr-22 A	16-Jun-22 A
- E1-03				
E1-5542	Pier E1-03 Pier Head	24	02-Jul-22	29-Jul-22
- E1-04				
E1-5575	Pier E1-04M Pile Cap	18	18-May-22 A	22-Jul-22
E1-5580	Pier E1-04M Column	42	23-Jul-22	09-Sep-22
E1-5582	Pier E1-04M Pier Head	36	10-Sep-22	25-Oct-22
4.13 - Bridge E2				
4.13.1 - Foundation				
- Portion VIII				
- Bored Piling				
E2-1140	E2-01 Bored Pile Testing (6 nos)	0	26-May-22 A	14-Jun-22 A
4.13.2 - Pier				
- E2-01				
E2-1510	Pier E2-01 ELS - Pipe Piles	9	28-Jun-22 A	12-Jul-22
E2-1511	Pier E2-01 ELS - Excavation/Break Pile Head/Blinding	24	13-Jul-22	09-Aug-22
E2-1512	Pier E2-01 Bridge Rotation - Lower Pile Cap 1st Stage Construction	39	10-Aug-22	24-Sep-22
E2-1513	Pier E2-01 Bridge Rotation - Install Steel Frame/Plate for Stanchion Sliding	15	07-Sep-22	24-Sep-22
E2-1515	Pier E2-01 Bridge Rotation - Lower Pile Cap 2nd Stage Construction	30	26-Sep-22	01-Nov-22
E2-1535	Tower Crane 2 - Foundation	18	13-Jul-22	02-Aug-22
E2-1538	Tower Crane 2 - Erection and T&C	18	03-Aug-22	23-Aug-22
- E2-02				
E2-1578	Tower Crane 1 - Erection and T&C	14	30-Jul-22	15-Aug-22
- E2-03				



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Critical Remaining Work
Milestone

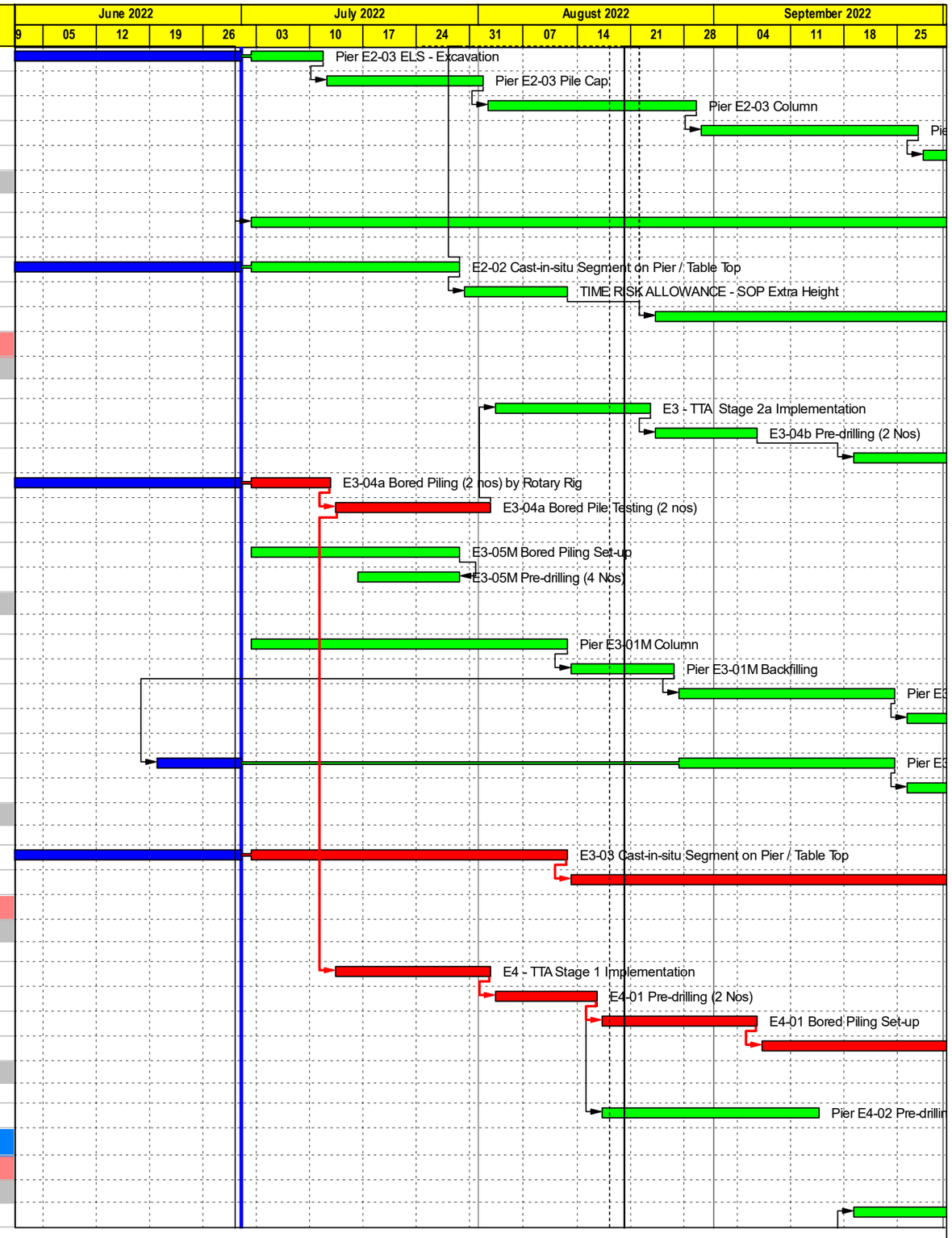
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Jul 2022

Proj ID : ADP12U28
Layout : ND201905 3MRP
Date : Page 7 of 11

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Jul-22	Jul 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
E2-6023	Pier E2-03 ELS - Excavation	8	21-Feb-22 A	11-Jul-22
E2-6025	Pier E2-03 Pile Cap	18	12-Jul-22	01-Aug-22
E2-6030	Pier E2-03 Column	24	02-Aug-22	29-Aug-22
E2-6032	Pier E2-03 Pier Head	24	30-Aug-22	27-Sep-22
E2-6035	Pier E2-03 Backfilling	18	28-Sep-22	20-Oct-22
4.13.3 - Bridge Deck				
- T-span E2-01				
E2-2161	E2-01 Obtain MTRC Consent for Deck Construction	120	02-Jul-22	22-Nov-22
- T-span E2-02				
E2-7415	E2-02 Cast-in-situ Segment on Pier / Table Top	24	25-Apr-22 A	29-Jul-22
E2-7418	TIME RISK ALLOWANCE - SOP Extra Height	12	30-Jul-22	12-Aug-22
E2-7420	E2-02 Form Traveler Installation - FT2	48	24-Aug-22	21-Oct-22
4.14 - Bridge E3				
4.14.1 - Foundation				
- Pier E3-04 (Portion XI)				
E3-1100	E3 - TTA Stage 2a Implementation	18	03-Aug-22	23-Aug-22
E3-1110	E3-04b Pre-drilling (2 Nos)	12	24-Aug-22	06-Sep-22
E3-1130	E3-04b Bored Piling (2 nos) by Rotary Rig	30	19-Sep-22	25-Oct-22
E3-1170	E3-04a Bored Piling (2 nos) by Rotary Rig	9	23-May-22 A	12-Jul-22
E3-1180	E3-04a Bored Pile Testing (2 nos)	18	13-Jul-22	02-Aug-22
- Pier E3-05M (Portion XI)				
E3-1195	E3-05M Bored Piling Set-up	24	02-Jul-22	29-Jul-22
E3-1200	E3-05M Pre-drilling (4 Nos)	12	16-Jul-22	29-Jul-22
4.14.2 - Pier				
- E3-01M				
E3-1320	Pier E3-01M Column	36	02-Jul-22	12-Aug-22
E3-1321	Pier E3-01M Backfilling	12	13-Aug-22	26-Aug-22
E3-1322	Pier E3-01M Pier Head	24	27-Aug-22	24-Sep-22
E3-1330	Pier E3-01M Install Bearing	18	26-Sep-22	18-Oct-22
- E3-02				
E3-1350	Pier E3-02 ELS	24	20-Jun-22 A	24-Sep-22
E3-1355	Pier E3-02 Pile Cap	18	26-Sep-22	18-Oct-22
4.14.4 - Bridge Deck				
- T-span E3-03				
E3-2350	E3-03 Cast-in-situ Segment on Pier / Table Top	36	25-Apr-22 A	12-Aug-22
E3-2351	E3-03 Form Traveler Installation - FT1	48	13-Aug-22	11-Oct-22
4.15 - Bridge E4				
4.15.1 - Foundation				
- Portion XI				
E4-1005	E4 - TTA Stage 1 Implementation	18	13-Jul-22	02-Aug-22
E4-1050	E4-01 Pre-drilling (2 Nos)	12	03-Aug-22	16-Aug-22
E4-1055	E4-01 Bored Piling Set-up	18	17-Aug-22	06-Sep-22
E4-1070	E4-01 Bored Piling (2 nos)	30	07-Sep-22	14-Oct-22
4.15.2 - Pier				
- E4-02				
E4-1345	Pier E4-02 Pre-drilling	24	17-Aug-22	14-Sep-22
5.0 - Fanling Highway Associated Works				
5.2 - Fanling Highway Noise Barrier				
5.2.2 - Noise Barrier NB70				
FHY-1391	Fanling Highway TTA Stage 3 - Preparation / 1st Submission	48	19-Sep-22	15-Nov-22



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

3-Month Rolling Programme - Jul 2022

Proj ID : ADP12U28
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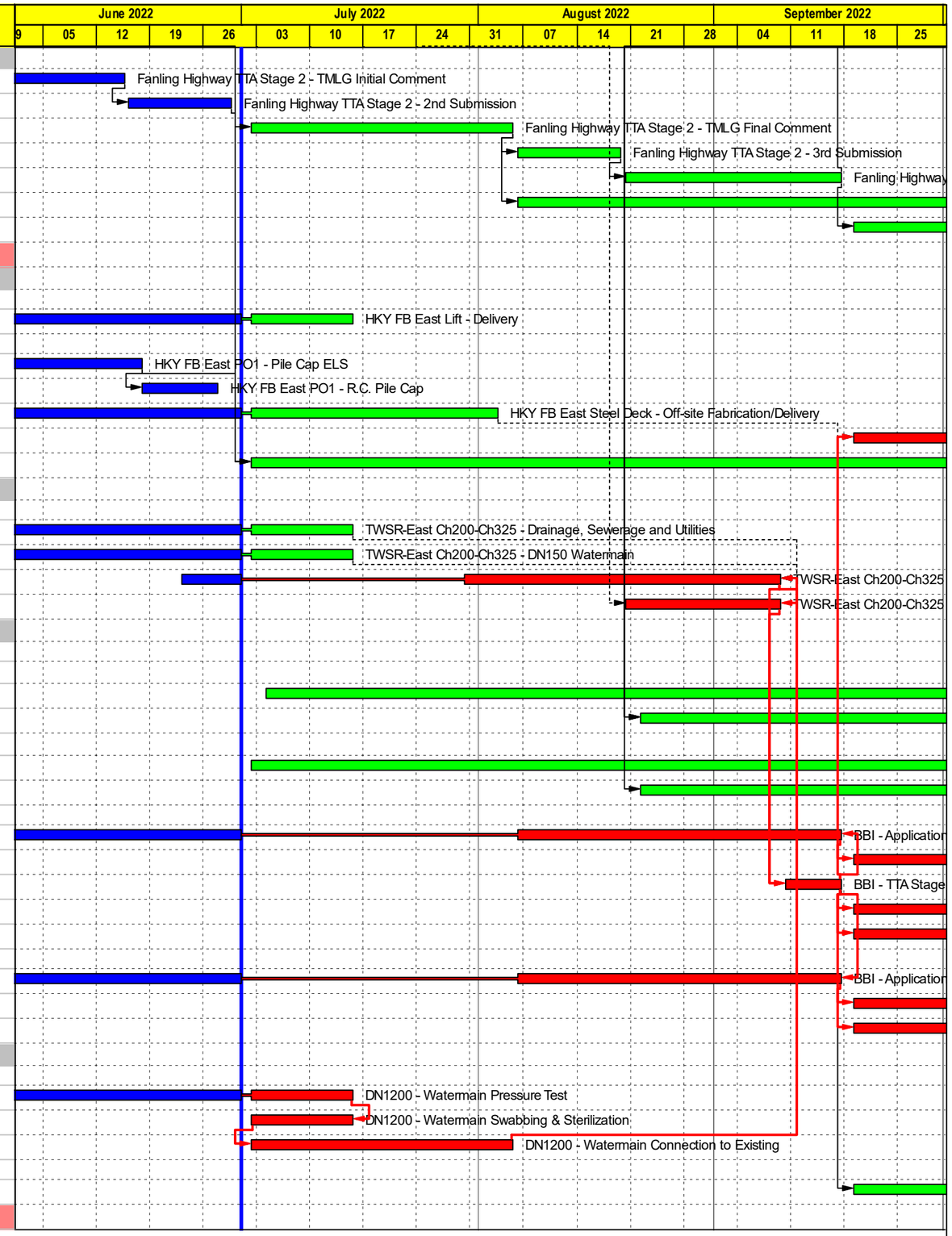
3-Month Rolling Programme

Date	Revision	Checked	Approved
01-Jul-22	Jul 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
5.2.3 - Noise Barrier NB109				
FHY-1492	Fanling Highway TTA Stage 2 - TMLG Initial Comment	0	03-May-22 A	15-Jun-22 A
FHY-1493	Fanling Highway TTA Stage 2 - 2nd Submission	0	16-Jun-22 A	29-Jun-22 A
FHY-1494	Fanling Highway TTA Stage 2 - TMLG Final Comment	30	02-Jul-22	05-Aug-22
FHY-1495	Fanling Highway TTA Stage 2 - 3rd Submission	12	06-Aug-22	19-Aug-22
FHY-1496	Fanling Highway TTA Stage 2 - TMLG Approval and Trial Run	24	20-Aug-22	17-Sep-22
FHY-1497	Noise Barrier NB109 - Application for Lighting Removal	60	06-Aug-22	18-Oct-22
FHY-1499	Fanling Highway TTA Stage 2 - Implementation	24	19-Sep-22	18-Oct-22
5.3 - Tai Wo Service Road East (TWSR-East)				
5.3.1 - TWSR-East HKY FB Extension				
- Lift Installation				
FBE-1280	HKY FB East Lift - Delivery	12	13-Apr-22 A	15-Jul-22
- HKY FB Extension Deck				
FBE-1330	HKY FB East PO1 - Pile Cap ELS	0	11-Apr-22 A	18-Jun-22 A
FBE-1333	HKY FB East PO1 - R.C. Pile Cap	0	18-Jun-22 A	28-Jun-22 A
FBE-1340	HKY FB East Steel Deck - Off-site Fabrication/Delivery	28	18-Mar-22 A	03-Aug-22
FBE-1345	HKY FB East Steel Deck - Site Assembly	24	19-Sep-22	18-Oct-22
FBE-1352	HKY FB East - Lighting System Procurement and Delivery	90	02-Jul-22	18-Oct-22
5.3.2 - TWSR East (1) Adjacent to Cycle Track				
- Ch200 to Ch325				
TSE-2060	TWSR-East Ch200-Ch325 - Drainage, Sewerage and Utilities	12	15-Jan-22 A	15-Jul-22
TSE-2070	TWSR-East Ch200-Ch325 - DN150 Watermain	12	29-Mar-22 A	15-Jul-22
TSE-2080	TWSR-East Ch200-Ch325 - Road Works	36	23-Jun-22 A	09-Sep-22
TSE-2085	TWSR-East Ch200-Ch325 - Road Lighting including Cabling	18	20-Aug-22	09-Sep-22
5.3.3 - TWSR-East Bus-Bus Interchange				
- Bus-Bus Interchange Shelter				
- Public Toilet				
BBI-1015	BBI Public Toilet - Bio-treatment Plant Procurement/Delivery	120	04-Jul-22	23-Nov-22
BBI-1018	BBI Public Toilet - Lighting+Elec+BS+Fit-out Procurement/Delivery	120	22-Aug-22	14-Jan-23
- Covered Walkway				
BBI-1205	BBI Covered Walkway - Fabrication and Delivery	120	02-Jul-22	22-Nov-22
BBI-1208	BBI Covered Walkway - Lighting Procurement and Delivery	120	22-Aug-22	14-Jan-23
- Bus-Bus Interchange Road Works				
BBI-1305	BBI - Application for Lighting Removal	36	25-Apr-22 A	17-Sep-22
BBI-1308	BBI - Lighting Removal/Install Temporary Lighting	42	19-Sep-22	08-Nov-22
BBI-1309	BBI - TTA Stage 2 Implementation	6	10-Sep-22	17-Sep-22
BBI-1310	BBI - Road Formation	42	19-Sep-22	08-Nov-22
BBI-1315	BBI - New Feature FW02 (L-Shape Ret Wall)	42	19-Sep-22	08-Nov-22
- TWSR East (2) Entry to BBI from Fanling Highway				
BBI-1415	BBI - Application for Lighting Removal	36	25-Mar-22 A	17-Sep-22
BBI-1418	BBI - Lighting Removal/Install Temporary Lighting	30	19-Sep-22	25-Oct-22
BBI-1420	BBI Entry from FH - Site Formation	30	19-Sep-22	25-Oct-22
5.3.6 - PMI 027 - DN1200 and DN600 Watermain Diversion				
- DN1200 Watermain				
PMI027-180	DN1200 - Watermain Pressure Test	12	17-May-22 A	15-Jul-22
PMI027-185	DN1200 - Watermain Swabbing & Sterilization	12	02-Jul-22	15-Jul-22
PMI027-190	DN1200 - Watermain Connection to Existing	30	02-Jul-22	05-Aug-22
- DN600 Watermain				
PMI027-200	DN600 - Watermain within BBI area	36	19-Sep-22	01-Nov-22
5.4 - Tai Wo Service Road West (TWSR-West)				



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3-Month Rolling Programme			
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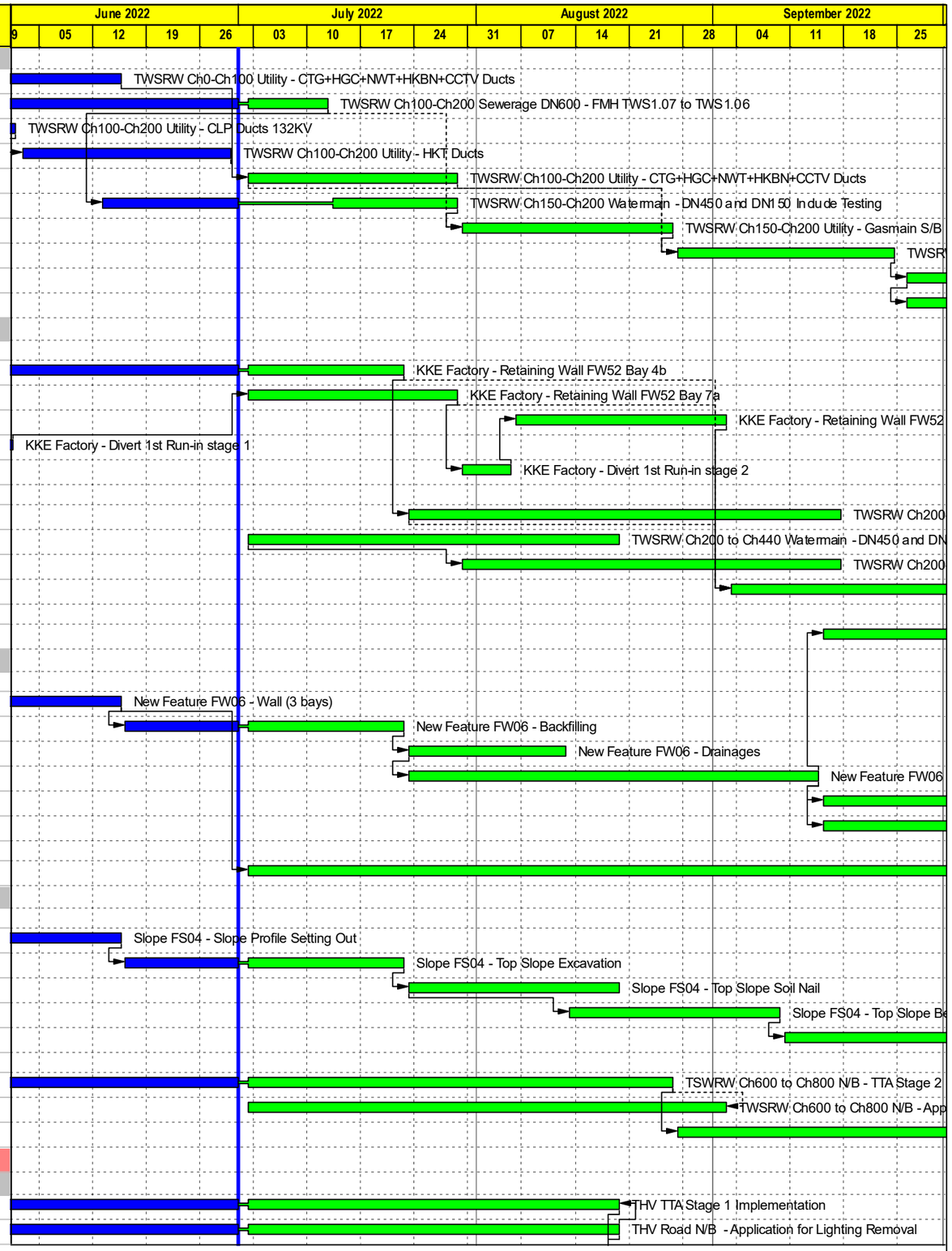
5.4.2 - TWSR-West Ch000 to Ch200				
TSW-4105	TWSRW Ch0-Ch100 Utility - CTG+HGC+NWT+HKBN+CCTV Ducts	0	01-Jun-22 A	15-Jun-22 A
TSW-4315	TWSRW Ch100-Ch200 Sewerage DN600 - FMH TWS1.07 to TWS1.06	9	29-Mar-22 A	12-Jul-22
TSW-4325	TWSRW Ch100-Ch200 Utility - CLP Ducts 132KV	0	14-May-22 A	02-Jun-22 A
TSW-4330	TWSRW Ch100-Ch200 Utility - HKT Ducts	0	03-Jun-22 A	30-Jun-22 A
TSW-4335	TWSRW Ch100-Ch200 Utility - CTG+HGC+NWT+HKBN+CCTV Ducts	24	02-Jul-22	29-Jul-22
TSW-4340	TWSRW Ch150-Ch200 Watermain - DN450 and DN150 Include Testing	15	13-Jun-22 A	29-Jul-22
TSW-4342	TWSRW Ch150-Ch200 Utility - Gasmain S/B Lane	24	30-Jul-22	26-Aug-22
TSW-4345	TWSRW Ch150-Ch200 - Storm Drain SMH FL4.31 to FL4.32	24	27-Aug-22	24-Sep-22
TSW-4350	TWSRW Ch150-Ch200 S/B - Roadworks+Footpath+Cycletrack	42	26-Sep-22	15-Nov-22
TSW-4355	TWSRW Ch150-Ch200 S/B - Road Lighting including Cabling	18	26-Sep-22	18-Oct-22
5.4.3 - TWSR-West Ch200 to Ch450				
- KKE Factory Compound				
TSW-4475	KKE Factory - Retaining Wall FW52 Bay 4b	18	25-May-22 A	22-Jul-22
TSW-4478	KKE Factory - Retaining Wall FW52 Bay 7a	24	02-Jul-22	29-Jul-22
TSW-4479	KKE Factory - Retaining Wall FW52 Bay 7b	24	06-Aug-22	02-Sep-22
TSW-4498	KKE Factory - Divert 1st Run-in stage 1	0	26-May-22 A	01-Jun-22 A
TSW-9130	KKE Factory - Divert 1st Run-in stage 2	6	30-Jul-22	05-Aug-22
- Ch200 to Ch400				
TSW-4436	TWSRW Ch200-Ch400 Sewerage DN450 - FMH TWS2.01 to TWS2.04	48	23-Jul-22	17-Sep-22
TSW-4437	TWSRW Ch200 to Ch440 Watermain - DN450 and DN150 Include Testing	42	02-Jul-22	19-Aug-22
TSW-4438	TWSRW Ch200-Ch400 Utility - Gasmain S/B Lane	42	30-Jul-22	17-Sep-22
TSW-4440	TWSRW Ch200-Ch400 Utility - Gasmain N/B Lane	30	03-Sep-22	11-Oct-22
- Ch400 to Ch450				
TSW-4451	TWSRW Ch400-Ch450 Access Road Formation	18	15-Sep-22	07-Oct-22
5.4.4 - TWSR-West Ch450 to Ch600				
- New Feature FW06 + FW05 + FW04				
TSW-3013	New Feature FW06 - Wall (3 bays)	0	03-May-22 A	15-Jun-22 A
TSW-3014	New Feature FW06 - Backfilling	18	16-Jun-22 A	22-Jul-22
TSW-3015	New Feature FW06 - Drainages	18	23-Jul-22	12-Aug-22
TSW-3016	New Feature FW06 - Village Access Road	45	23-Jul-22	14-Sep-22
TSW-3021	New Feature FW05 - Cut Slope	24	15-Sep-22	14-Oct-22
TSW-3030	New Feature FW04 - Cut Slope	24	15-Sep-22	14-Oct-22
- Lift				
TSW-4535	HKY Footbridge West Ext. - TTA Stage 2 Submission and Approval	90	02-Jul-22	18-Oct-22
5.4.5 - TWSR-West Ch600 to Ch800				
- Ch600 to Ch800 Slope Works				
TSW-1132	Slope FS04 - Slope Profile Setting Out	0	25-May-22 A	15-Jun-22 A
TSW-1135	Slope FS04 - Top Slope Excavation	18	16-Jun-22 A	22-Jul-22
TSW-1138	Slope FS04 - Top Slope Soil Nail	24	23-Jul-22	19-Aug-22
TSW-1140	Slope FS04 - Top Slope Berm Drainage	24	13-Aug-22	09-Sep-22
TSW-1145	Slope FS04 - Bottom Slope Excavation	24	10-Sep-22	11-Oct-22
- Ch600 to Ch800 Road Works				
TSW-1164	TSWRW Ch600 to Ch800 N/B - TTA Stage 2 Submission and Approval	48	25-May-22 A	26-Aug-22
TSW-1166	TWSRW Ch600 to Ch800 N/B - Application for Lighting Removal	54	02-Jul-22	02-Sep-22
TSW-1280	TWSRW Ch600 to Ch800 S/B - TTA Stage 3 Submission and Approval	78	27-Aug-22	29-Nov-22
5.5 - Jockey Club Road				
5.5.2 - Tong Hang Village Road (THV Road)				
JCR-2180	THV TTA Stage 1 Implementation	42	24-May-22 A	19-Aug-22
JCR-2181	THV Road N/B - Application for Lighting Removal	42	24-May-22 A	19-Aug-22



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

3-Month Rolling Programme - Jul 2022

Proj ID : ADP12U28
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3-Month Rolling Programme			
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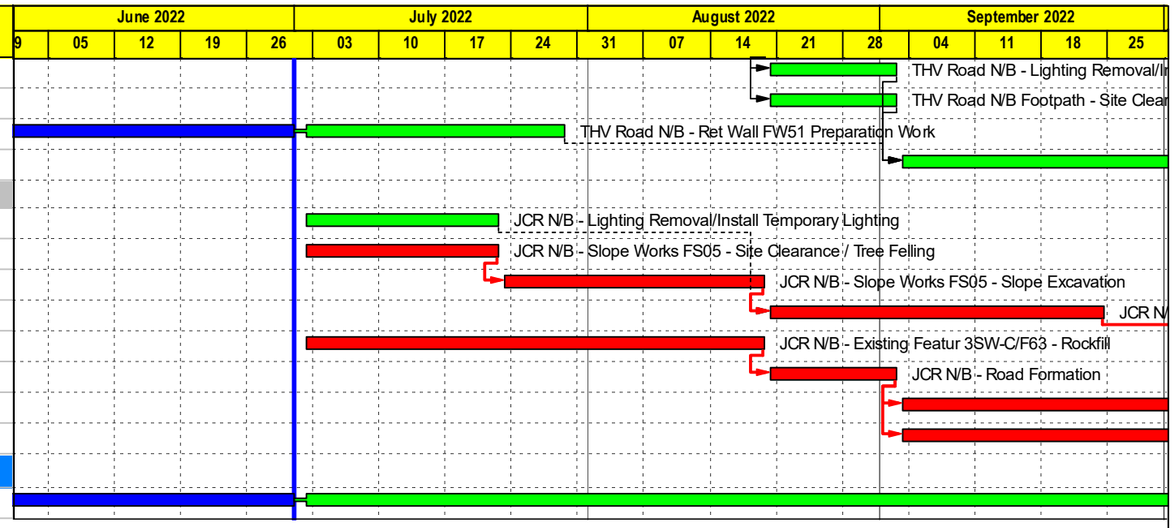
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
JCR-2182	THV Road N/B - Lighting Removal/Install Temporary Lighting	12	20-Aug-22	02-Sep-22
JCR-2185	THV Road N/B Footpath - Site Clearance	12	20-Aug-22	02-Sep-22
JCR-2193	THV Road N/B - Ret Wall FW51 Preparation Work	24	24-May-22 A	29-Jul-22
JCR-2195	THV Road N/B - Ret Wall FW51 Construction	90	03-Sep-22	20-Dec-22
5.5.3 - North Bound				
JCR-2360	JCR N/B - Lighting Removal/Install Temporary Lighting	18	02-Jul-22	22-Jul-22
JCR-2370	JCR N/B - Slope Works FS05 - Site Clearance / Tree Felling	18	02-Jul-22	22-Jul-22
JCR-2375	JCR N/B - Slope Works FS05 - Slope Excavation	24	23-Jul-22	19-Aug-22
JCR-2380	JCR N/B - Slope Works FS05 - Existing Soil Nail Removal	30	20-Aug-22	24-Sep-22
JCR-2410	JCR N/B - Existing Featur 3SW-C/F63 - Rockfill	42	02-Jul-22	19-Aug-22
JCR-2420	JCR N/B - Road Formation	12	20-Aug-22	02-Sep-22
JCR-2430	JCR N/B - Drainage Works	36	03-Sep-22	18-Oct-22
JCR-2440	JCR N/B - Utility Install/Traffic Light Civil Provision	36	03-Sep-22	18-Oct-22
7.0 - Miscellaneous Works				
MIS-100	Preservation and Protection of Trees	123	28-Oct-20 A	25-Nov-22



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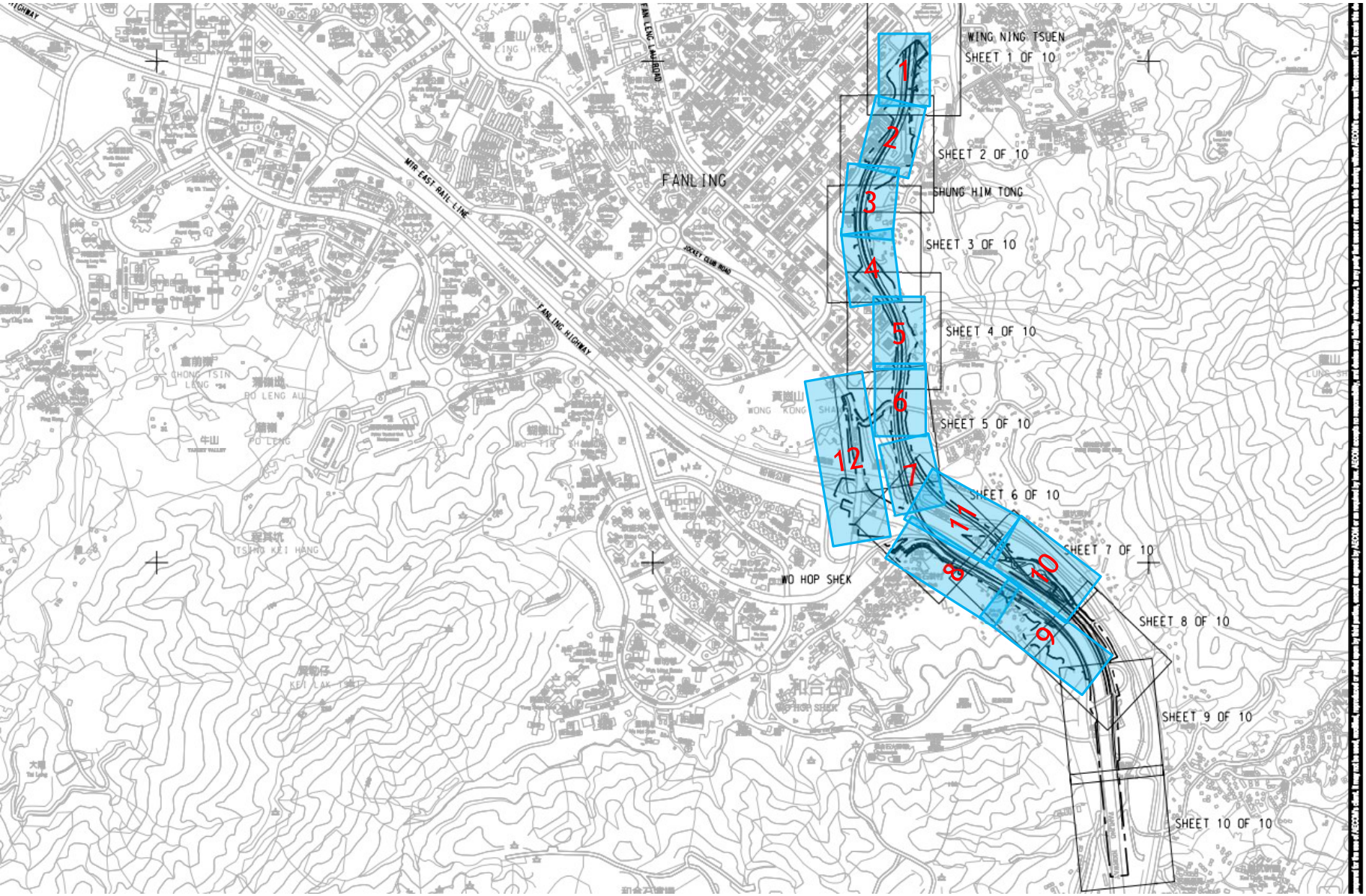

CONSULTANT

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SUB-CONSULTANTS

ISSUE/REVISION

-	JUN-19	TENDER DRAWING	RPCM
REV.	DATE	DESCRIPTION	CHK.

STATUS

SCALE
A1 1 : 7000

DIMENSION UNIT
METRES

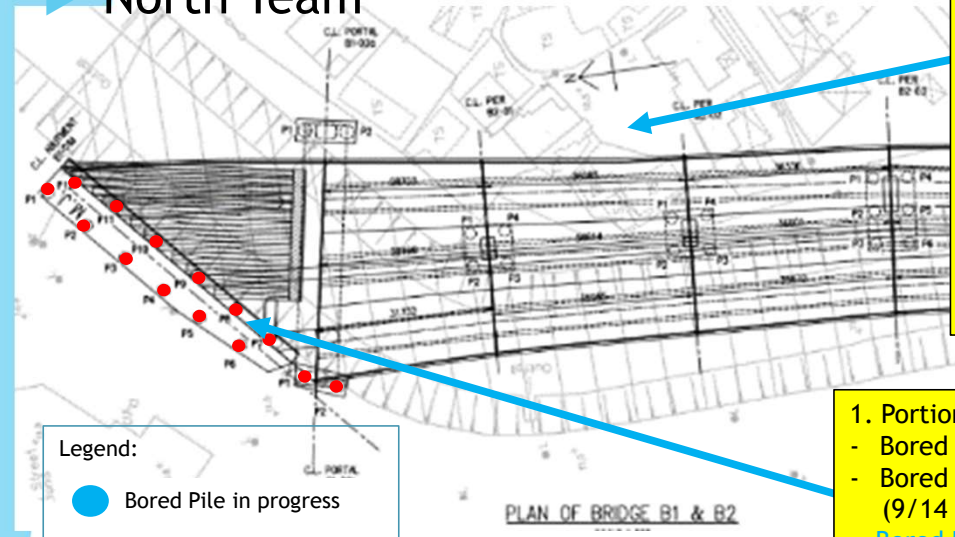
KEY PLAN

PROJECT NO.
60335576

CONTRACT NO.
ND/2019/05

SHEET TITLE
KEY PLAN AND LOCATION PLAN

1 North Team



Legend:

- Bored Pile in progress
- Bored Pile Completed

2. Portion 2 (Shum Him Tong)
- Hard Paving for site temporary drainage system & Hoarding Works in progress
- Mobilization & setup of rotary bored pile rig and crawler crane in progress
- Miss Yau Brick Wall Construction in Progress
- Bored Piling – ES:12/6/22 EF:2/11/22
- **Target Bored Piling Works commencement 26/5/22.**
- **On track against R9**

1. Portion 1 (On Kui St)
- Bored pile testing completed
- Bored Pile reservation tube grouting (9/14 nos. pile completed)
- Bored Piling – ES:16/9/21 EF:10/6/22
- **On Track against R9**

Ms. Yau fence wall re-provision in progress

Portion 1 - Bored pile Testing at B1-01M

Mobilization of rotary bored pile rig and crawler crane

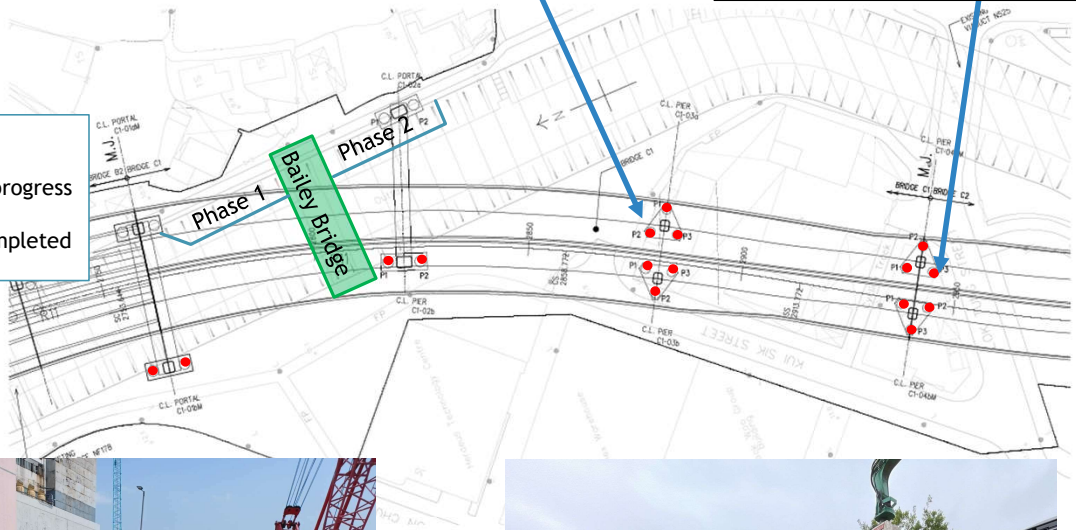
Portion II Hard Paving for site temporary drainage system & Hoarding Works in progress

2 North Team

5. Portion 3 (C1-03)
- Bored pile completed.
- Bored Piling testing completed - ES:14/05/22 EF:11/06/22
- ELS sheet piling in progress
- **Ahead against R9**

6. Portion 3 (C1-04)
- ELS sheet pile works completed
- Excavation in progress
- C1-04 ELS - ES: 21/03/22 EF:14/05/22
- **Target completion 30/5/22.**
- **Slippage against R9**

Legend:
- Bored Pile in progress
- Bored Pile Completed



ELS Sheet Pile works completed in C1-04

Bored Piles Testing works in C1-03

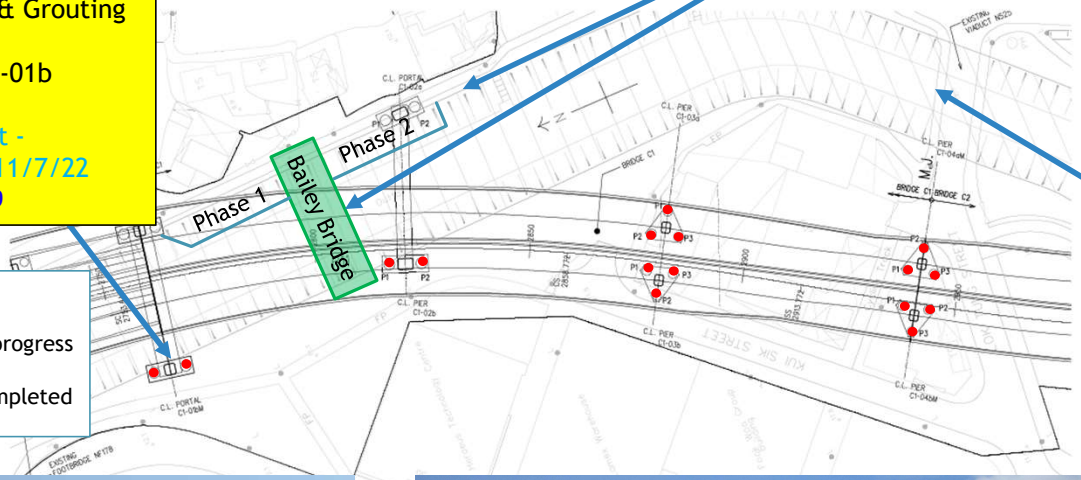
ELS Sheet Pile works in C1-03

ELS excavation works in progress in C1-04

2 North Team

3. C1-01b
- Bored Pile Test & Grouting Completed
- Pile piling at C1-01b completed
- Bored Piling test - ES:13/6/22 EF:11/7/22
- **Ahead against R9**

4. Bailey Bridge & Haul Road
- **Bailey Bridge construction completed**
- **Haul Road Phase 1 Completed**
- **Haul Road Phase 2 in progress (35% Completed)**
- **Bailey Bridge & Haul Road Connection in Progress**



Legend:
- Bored Pile in progress
- Bored Pile Completed

New DSD river gauge installed

Bailey Bridge Construction completed

Haul Road (Phase 1) near Bailey Bridge construction completed

Haul Road (Phase 2) near Bailey Bridge construction in progress

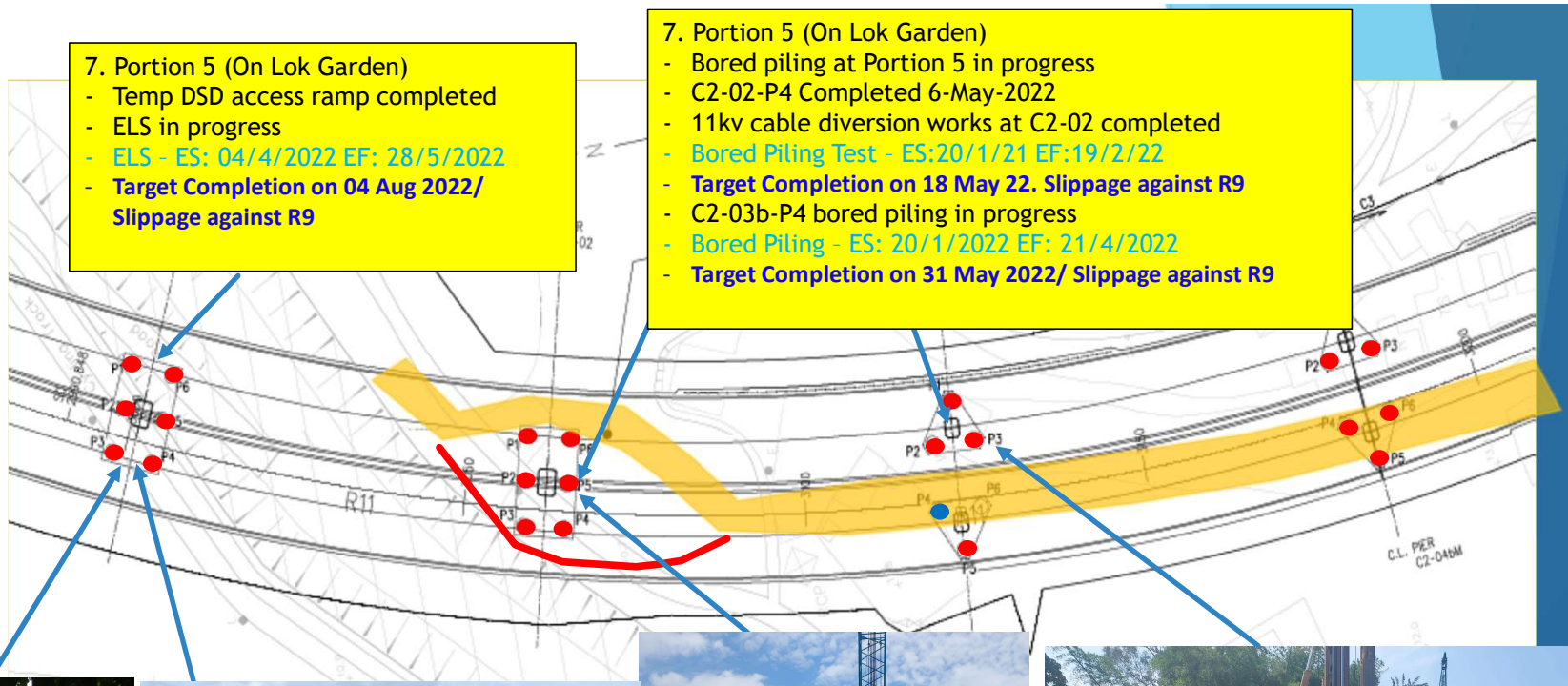
3 North Team

Legend:

- Bored Pile in progress
- Bored Pile Completed

7. Portion 5 (On Lok Garden)
- Temp DSD access ramp completed
- ELS in progress
- ELS – ES: 04/4/2022 EF: 28/5/2022
- **Target Completion on 04 Aug 2022/ Slippage against R9**

7. Portion 5 (On Lok Garden)
- Bored piling at Portion 5 in progress
- C2-02-P4 Completed 6-May-2022
- 11kv cable diversion works at C2-02 completed
- Bored Piling Test – ES:20/1/21 EF:19/2/22
- **Target Completion on 18 May 22. Slippage against R9**
- C2-03b-P4 bored piling in progress
- Bored Piling – ES: 20/1/2022 EF: 21/4/2022
- **Target Completion on 31 May 2022/ Slippage against R9**



Portion 4 (C2-01)
-Temp DSD ramp completed

Portion 4 (C2-01)
-ELS in progress

C2-02 Bored pile completed

C2-03-P4 Bored pile in progress

4

- North Team

Area Highlighted

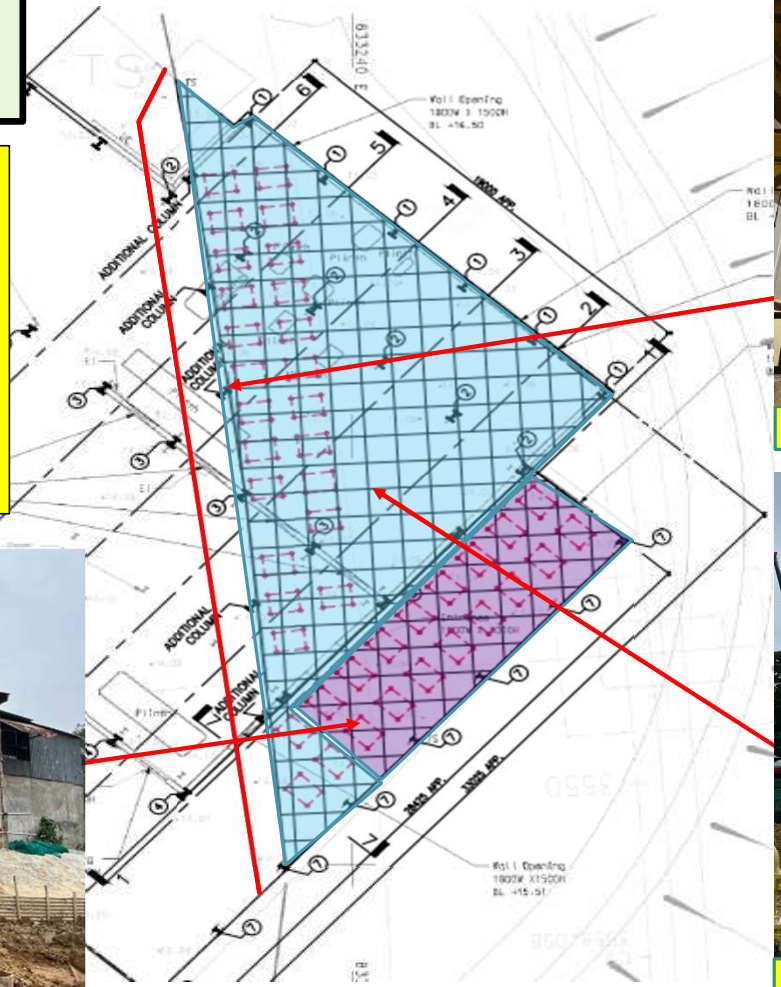
- HD Warehouse

11. Portion 6 HD Factory
Stage 1 Demolition Works for HD Warehouse completed on 7/1/22

Stage 2 Modification Works for HD Warehouse completed on 31/3/22

Stage 3 Demolition Works for HD Warehouse
- Demolition works is in progress
- Target completion date 20/4/22

Stage 1 Demolition works Completed



Stage 2 Modification works Completed

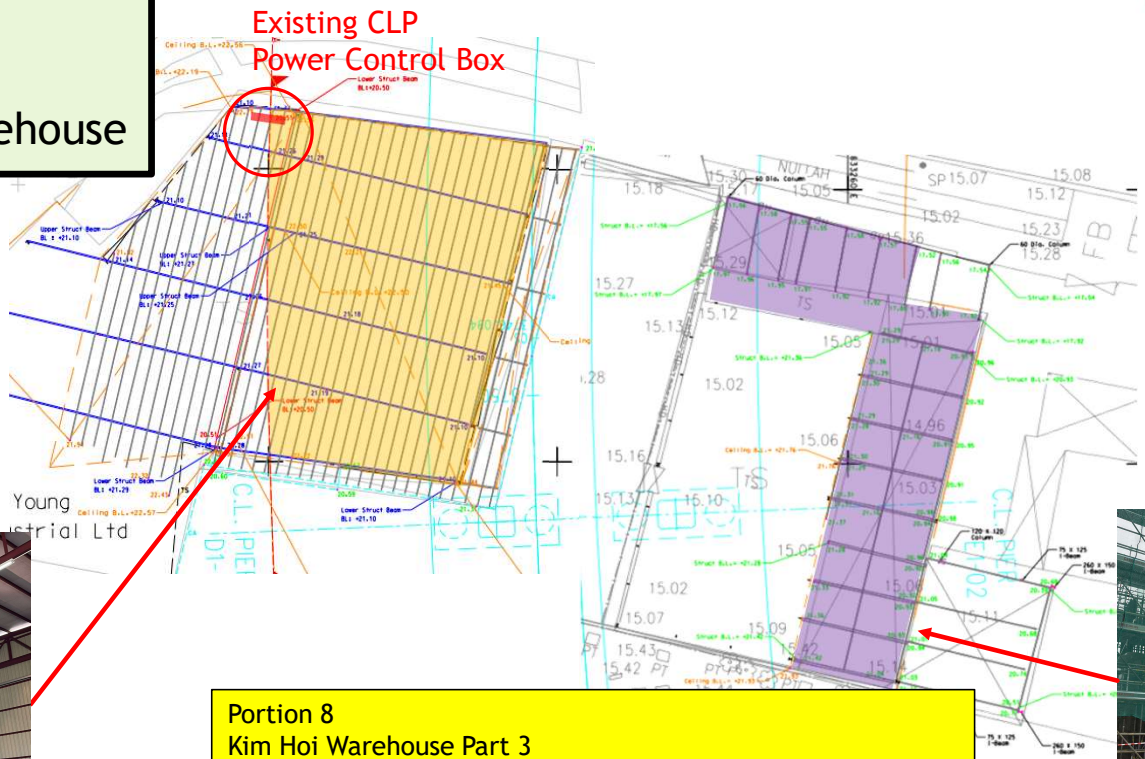
Stage 3 Demolish completed

4

- North Team

  Area Highlighted

  - Man Young Warehouse



Portion 8
Kim Hoi Warehouse near D1-02 (Part 3)
- The modification works were completed on 28/4/2022
- Demolition works will be commenced on 17/5/2022

Portion 8
Kim Hoi Warehouse Part 3
- Modification Works were completed on 28/4/2022
- Target Commencement Date for Demolition Works: 17/5/2022
- Target Completion Date for Demolition Works: 24/5/2022

Kim Hoi Warehouse Part 4
- Target Completion Date for Demolition Works: 16/5/2022

Target Complete Demolition of Kim Hoi Part 3 & 4 by End May

Portion 8
Kim Hoi Warehouse near E1-02 (Part 4)
Demolition Works in Progress

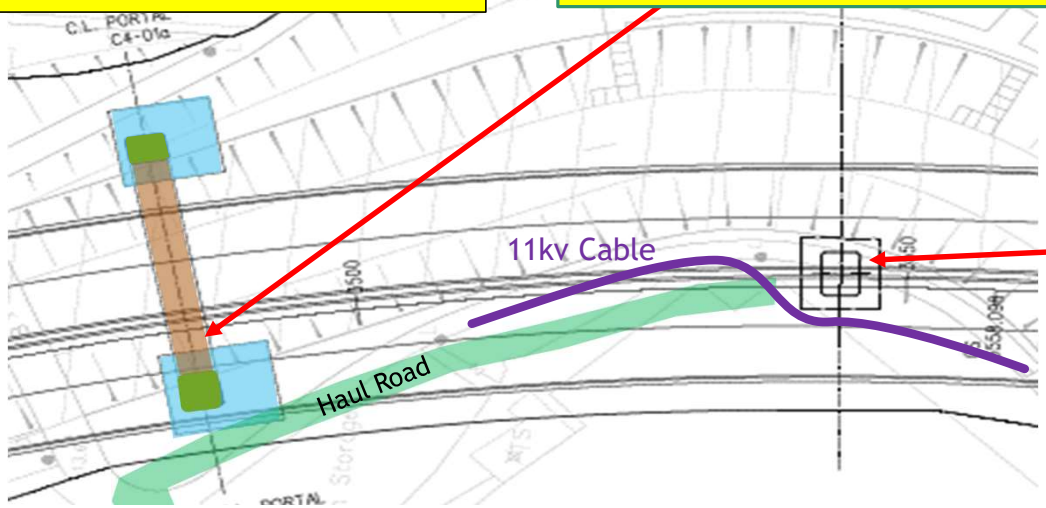
5

- North Team Area Highlighted – HD (C4-01 & C4-02)

10. Portion 6
C4-01 portal beam
- 1st pour concreting completed, dismantling of formwork in progress
- C4-01 portal beam – ES:9/12/21 EF:16/3/22
- **Target completion 7/6/2022. Slippage against R9**

C4-02
- Pipe pile installation completed
- 3rd layer of waling & strut for C4-02 ELS completed on 7 May 22
- C4-02 ELS pipe pile – ES:18/2/22 EF:24/3/22
- **Target completion 21/5/2022. Slippage against R9**

Concreting at C4-01 Portal Beam Construction (1st pour) completed on 4-May-2022



3rd layer of waling & strut for C4-02 ELS is completed on 7/5/22

5 North Team

Legend:

- Bored Pile in progress
- Bored Pile Completed

8. Portion 6 (Village side)
- C3-04a ELS in progress
- ELS - ES:28/2/22 EF:21/4/22
- **Target completion 20/5/22. Slippage against R9**

8. Portion 6 (Village side)
- C3-02-P1,P2, & P4 completed
- C3-02-P3 bored pile in progress.
- Bored Piling - ES:28/2/22 EF:26/3/22
- **Target completion 14/5/22. Slippage against R9**
- C3-03a ELS in progress
- ELS - ES:28/3/22 EF:21/5/22
- **Target completion 21/5/22. On Track against R9**

9. Portion 6 (Yip Fung St.)
- C3-03b colomn construction is completed
- Column - ES:12/04/22 EF:14/5/22. Ahead against R9
- Excavation works for C3-04B pile cap in progress
- Pile Cap - ES:27/01/22 EF:19/2/22.
- **Target ELS completion 31/5/21. Slippage against R9**

C3-02-P2 Bored Pile completed
C3-02-P3 in progress

C3-03a pipe pile construction in progress

C3-03b pier column construction completed.

C3-04b ELS in progress

C3-04a ELS in progress

6

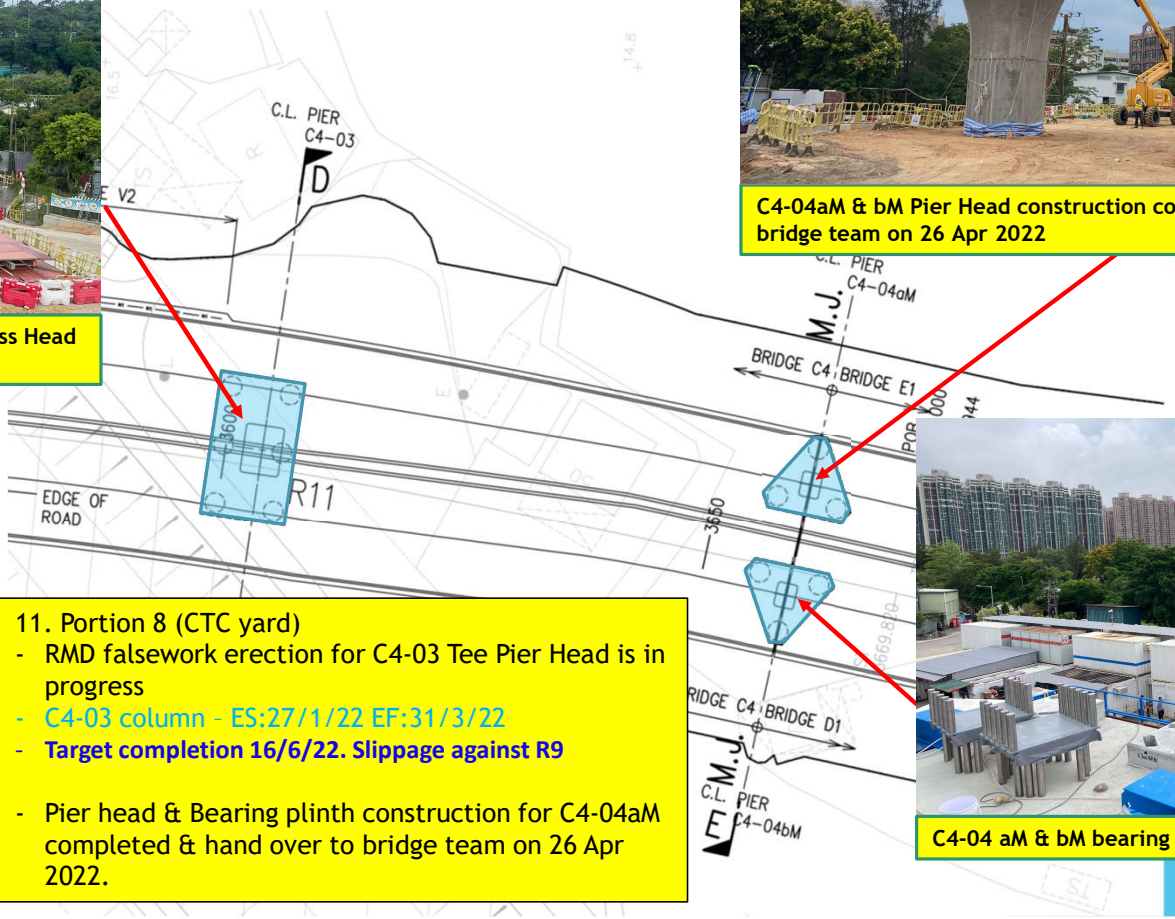
- North Team

Area Highlighted – C4-03 & C4-04

Falsework erection in progress for C4-03 Cross Head Construction.

C4-04aM & bM Pier Head construction completed & hand over to bridge team on 26 Apr 2022

Deliver RMD Steel Beam by shipping on 9 Apr 2022.



11. Portion 8 (CTC yard)
- RMD falsework erection for C4-03 Tee Pier Head is in progress
- C4-03 column – ES:27/1/22 EF:31/3/22
- **Target completion 16/6/22. Slippage against R9**

- Pier head & Bearing plinth construction for C4-04aM completed & hand over to bridge team on 26 Apr 2022.

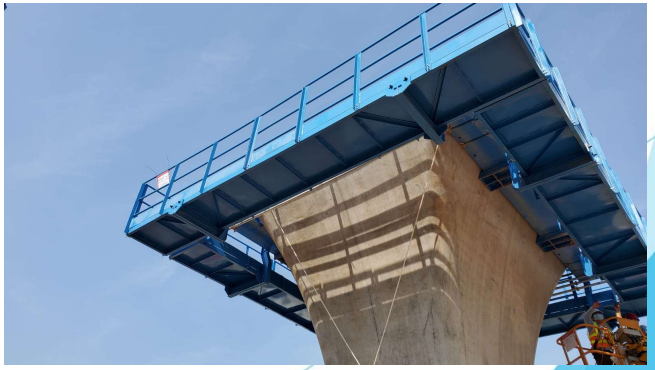
C4-04 aM & bM bearing plinths completed

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

MJSOP Erection

- Assembly and erection of pier bracket for MJSOP at Pier C4-04 a/bM was completed
- Installation of permanent bearings on Pier C4-04a/bM weas in progress



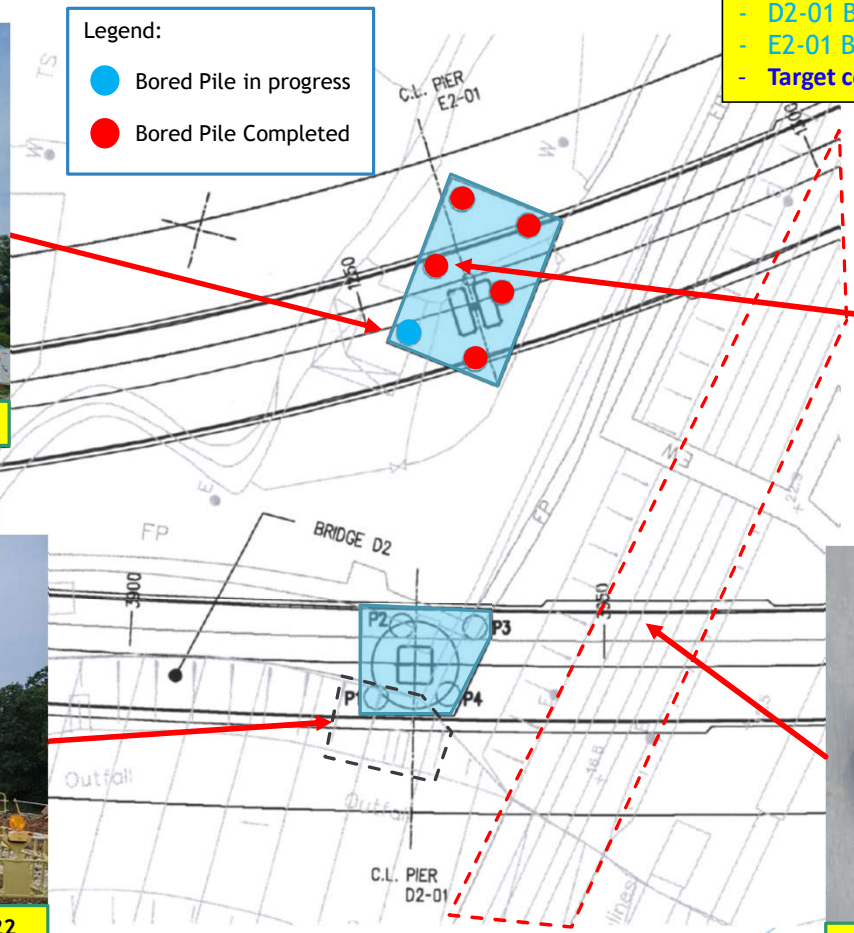
7

- North Team

Area Highlighted – E2-01 and Preparation Works for D2-01

14. Portion 8 (MTR trackside)
- ADMS installation completed on 6 May 22.
- Joint manual survey carried out bi-weekly.
- Bored piling at E2-01 commenced on 20/12/21
- E2-01-P5 completed in March, P6 in progress
- D2-01 Bored Piling – ES:10/2/22 EF:7/4/22
- E2-01 Bored Piling – ES:6/12/21 EF:5/3/22
- **Target completion of E2-01 on 19 /5/22. Slippage against R9**

E2-01-P1: RCD Drilling

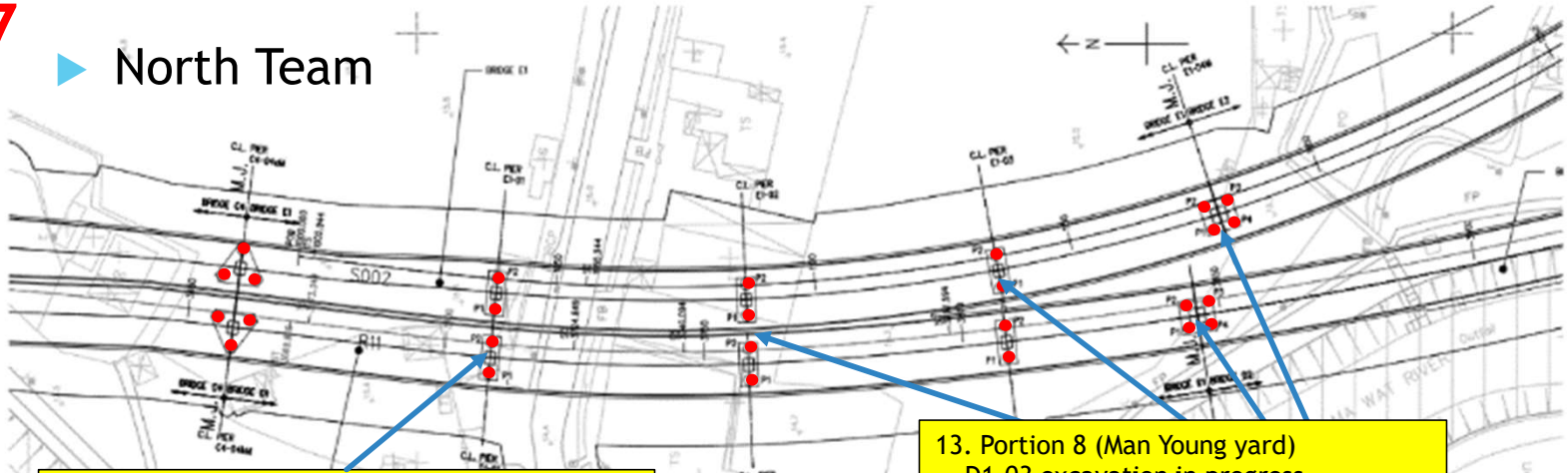


E2-01-P6 completed on 21 Apr 22

Concrete block piling platform completed on 7 May 22

ADMS prisms installation completed on 6 May 22.

North Team



12. Portion 8 (CTC yard)
- D1-01 & E1-01 pier completed on 27/4/22
- Pier head construction in progress.
- Pier & Pier head - ES: 9/7/22 EF:17/9/22
- **Ahead against R9**

13. Portion 8 (Man Young yard)
- D1-03 excavation in progress
- D1-04 Blinding completed
- E1-02 pier head in progress
- E1-03 pier in progress
- E1-04 Temporary Stockpiling
- ELS - ES:10/6/22 EF:5/8/22
- **On track against R9**

D1-04 Pile cap construction in Progress

D1-03 ELS excavation in Progress

D1-01/ E1-01 pier completed.
Pier head construction in Progress.

E1-02 pier construction completed.
Pier head construction in progress

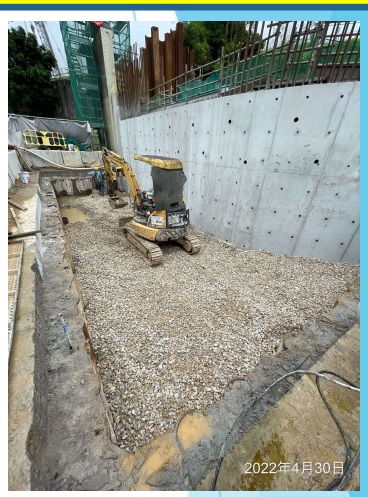
E1-03 pier construction in progress

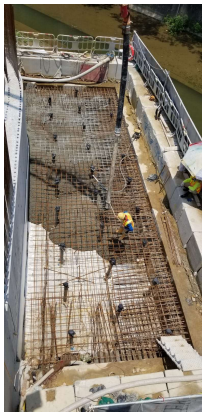
E1-04 Temporary Stockpiling

7

- South Team - Area Highlighted

D2-02 Partially reinstatement of retaining wall and river slab completed on 03/05/22





7

South Team - Area Highlighted

D2-03 Pile P1 cast on 13 May 2022

7 & 11

South Team

1. E2-03 ELS:
E2-6020 (R9) ES: 29/11/21 EF: 12/01/22
LS: 21/03/22 LF: 06/05/22

- Pipepile work completed 15/2/22
- Excavation in progress
- **Slow progress due to shortage of acetylene gas supply from mainland.**

2. E3-01 Pier
E3-1320 (R9) ES:11/03/22 EF:04/05/22
LS: 20/04/22 LF: 10/06/22

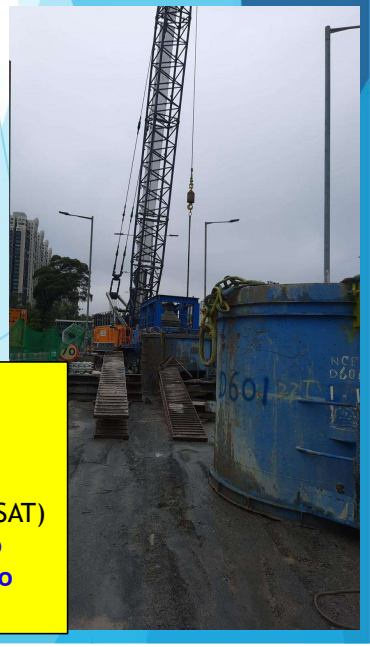
- Target cast cap on 20/04/22
- **Due to no concrete supply on 14/04/22, concreting postponed to 20/04/22.**

3. D2-02 Pier
D2-1579 (R9) ES: 01/04/22 EF: 26/04/22
LS: 23/04/22 LF: 16/05/22

- River slab and retaining wall (partly) reinstated on 03/05/22

4. D2-03 ELS for Cap
D2-1610 (R9) ES: 24/03/22 EF: 25/05/22
LS: 31/05/22 LF: 27/07/22

- Piling P2 cast on 26/03/22
- Piling P1 target cast on 30/04/22 approx. 230m3 (SAT)
- **Restricted Hr for Fanling Hightway (i.e. 10:00 to 16:00 for loading and unloding daily, and relax to commence 09:00 on Sat)**



7 & 11

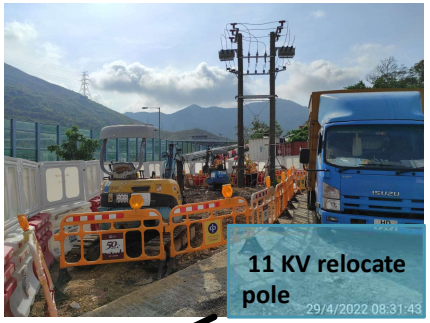
Viaduct

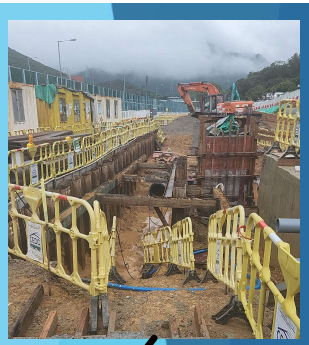
Others

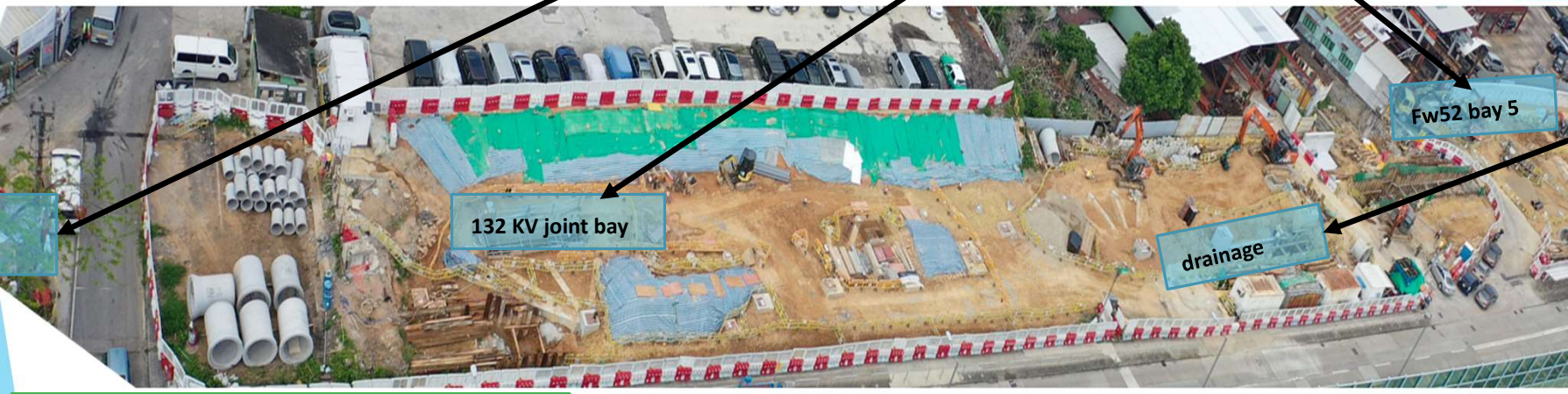
- Mono-strand external PT design of Bridge C1, C2, D2 and E4 was in progress
- Movement joint design drawings preparation was in progress
- Bridge rotation detail design for T-Span E2-01 and D2-01 by YWL was endorsed by ICE and fabrication of rotation system was in progress
- Loading test for 125t gantry crane was completed

8

South Team



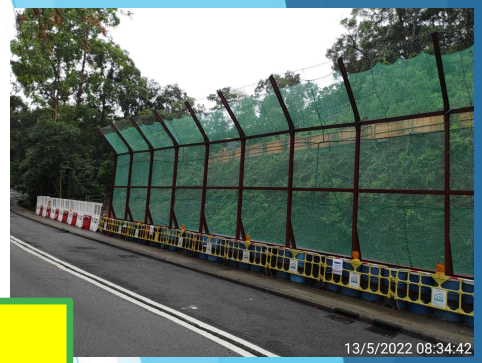




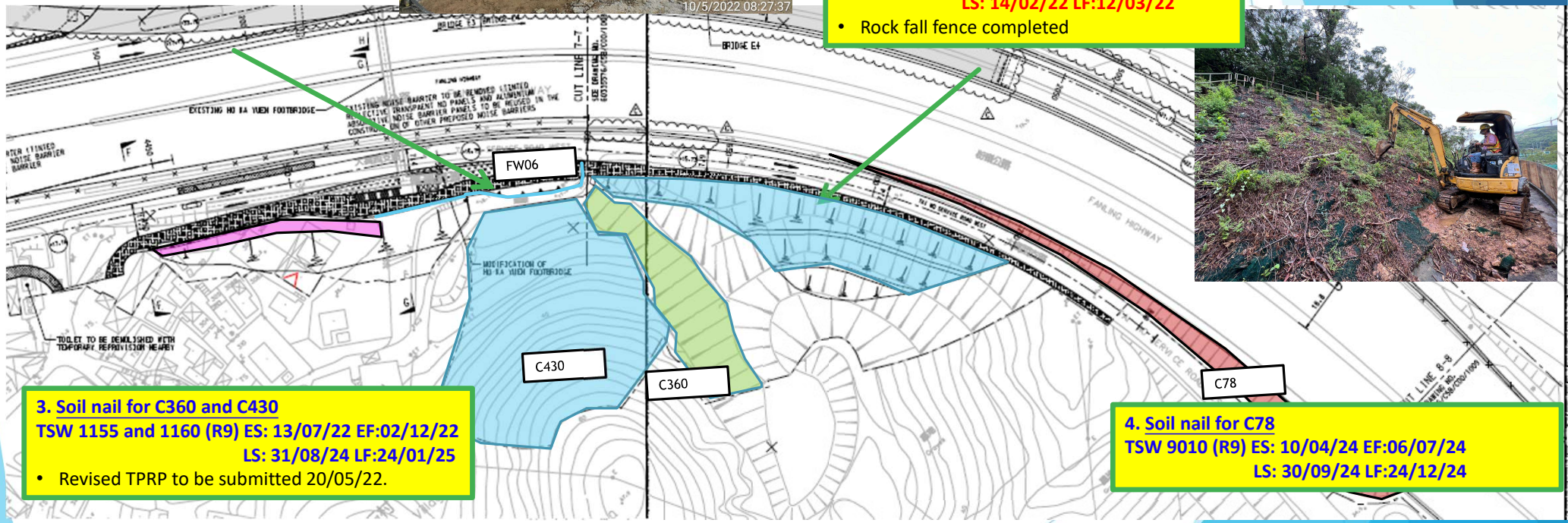
- Drainage and Sewage (Ch 150 to 450)
- Total: 1,233m
- As of 10 Apr 22 completion: 185 m
- Overall Completion: 763m (62%)

South Team

1. FW06 – Wall (3 bays)
TSW 3013 (R9) ES: 29/12/21 EF:12/01/22
LS: 06/01/22 LF:19/01/22
- Target completed on 06/06/22



2. FS 04 – Top Slope Excavation
TSW 1135 (R9) ES: 20/01/22 EF: 19/02/22
LS: 14/02/22 LF:12/03/22
- Rock fall fence completed



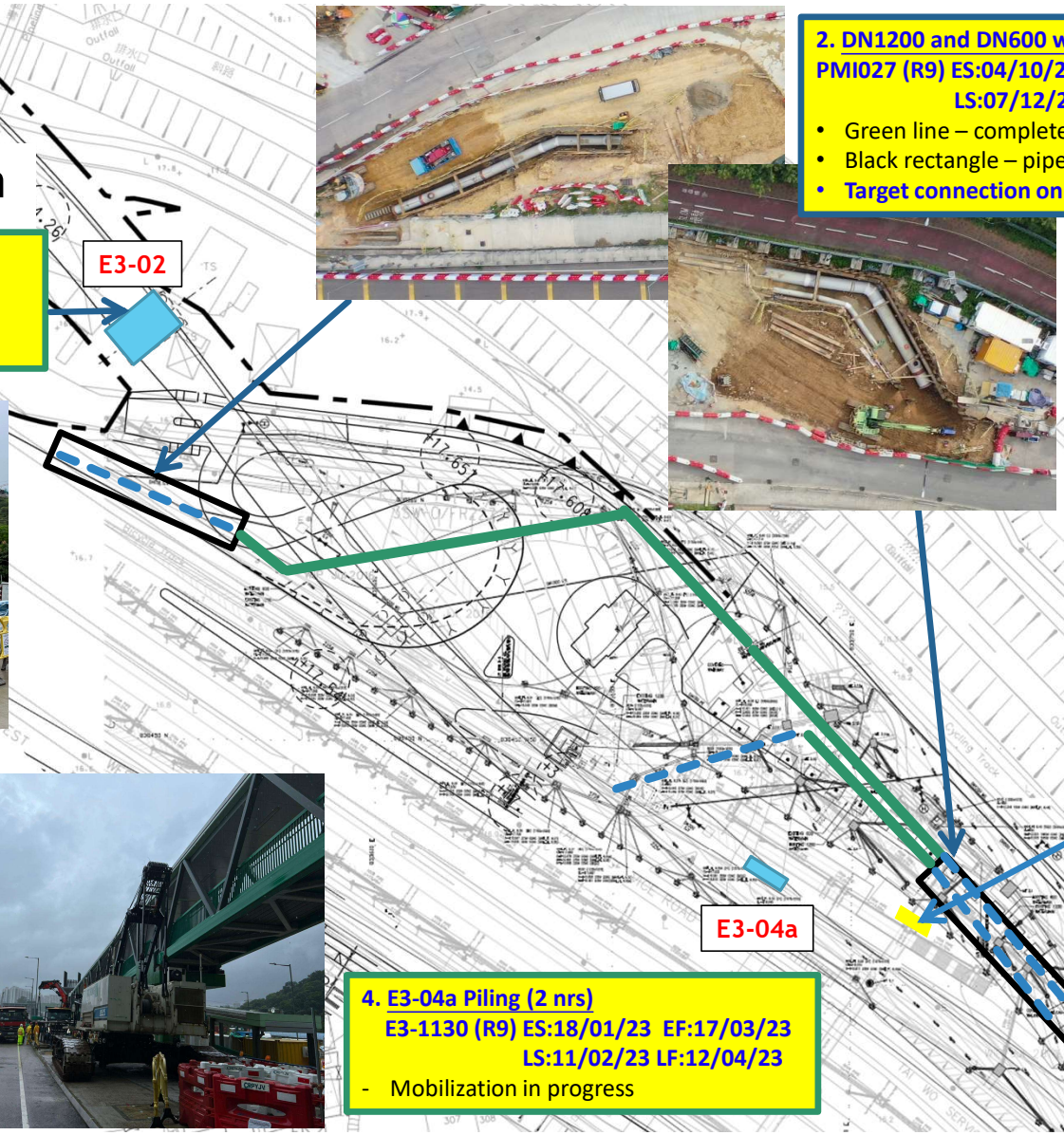
3. Soil nail for C360 and C430
TSW 1155 and 1160 (R9) ES: 13/07/22 EF:02/12/22
LS: 31/08/24 LF:24/01/25
- Revised TPRP to be submitted 20/05/22.

4. Soil nail for C78
TSW 9010 (R9) ES: 10/04/24 EF:06/07/24
LS: 30/09/24 LF:24/12/24

中国铁建 Paul Y

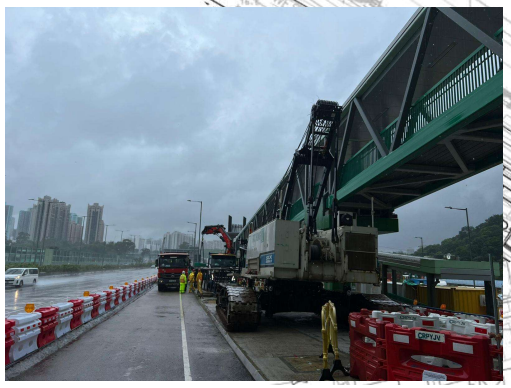
South Team

1. E3-02 ELS
E3-1350 (R9) ES:24/5/22 EF:28/6/22
LS:23/7/22 LF:26/8/22
- Sheetpile in progress



2. DN1200 and DN600 water main laying
PMI027 (R9) ES:04/10/21 EF:25/05/22
LS:07/12/21 LF:27/10/22
- Green line – completed
- Black rectangle – pipe laying in progress
- **Target connection on 27 May 22 for Dn1200.**

3. HKY FB P01
FBE-1333 (R9) ES:04/05/22 EF:18/05/22
LS:29/06/22 LF:13/07/22



4. E3-04a Piling (2 nrs)
E3-1130 (R9) ES:18/01/23 EF:17/03/23
LS:11/02/23 LF:12/04/23
- Mobilization in progress

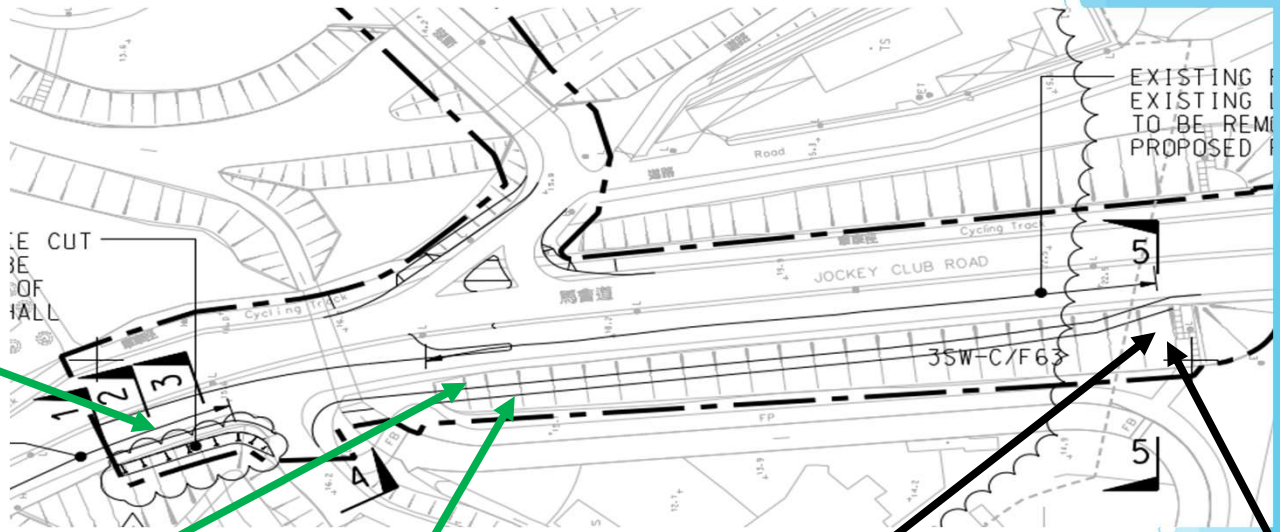
Viaduct

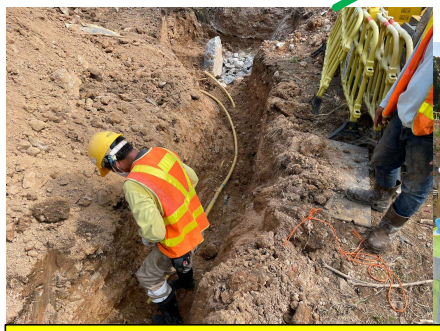
Cast In-situ SOP Construction

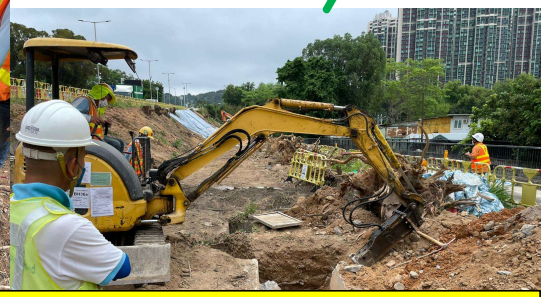
- Falsework and formwork design for cast in-situ SOP was under ICE endorsement. Method statements were submitted to AECOM for acceptance
- Pier E3-03 were handed over to Viaduct Team and commenced SOP construction preparation works
- Pier E2-02 were handed over to Viaduct Team and commenced falsework erection for SOP construction

12 ▶ North Team – Jockey Club Road

HKGC works affected slope works of FS05 (3SW-A/C 149)
Slope works – ES:14/3/22- EF:13/6/22
- **Slippage against R9**







Utilities: Removal of abandoned towngas manhole & telecom draw pit & ducts

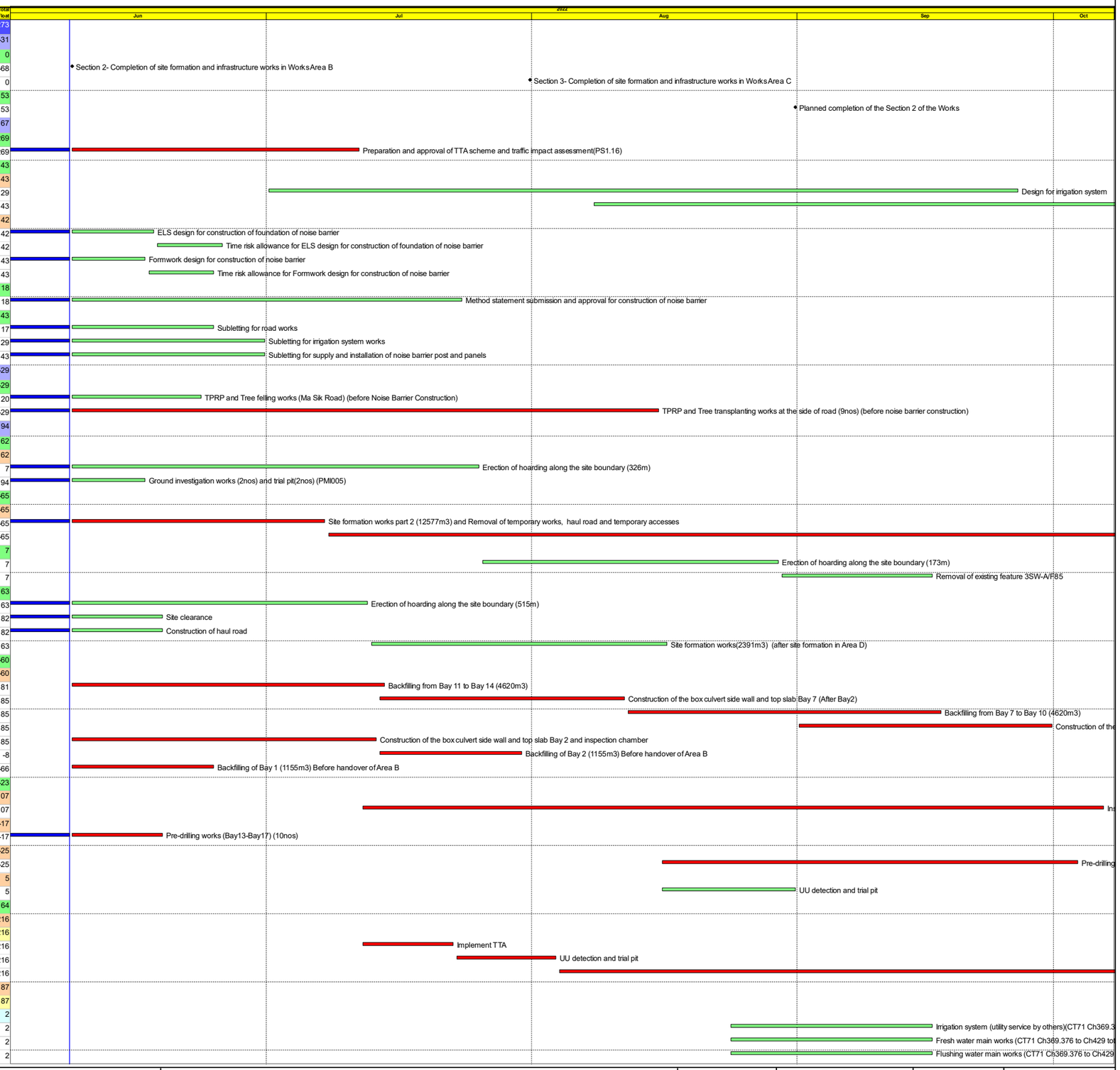
Breaking of existing step channel to facilitate the installation of sheet pile

Sheet pile installation
Slope works – ES:20/1/22- EF:6/5/22
- **Slippage against R9**

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	31-Aug-20 A	28-Sep-24	-273
Key Dates and Sectional Completion of the Works		85	08-Jun-22	31-Aug-22	-31
Contractual Sectional Completion of the Works		54	08-Jun-22	31-Jul-22	0
KDS1020	Section 2- Completion of site formation and infrastructure works in Works Area B	0		08-Jun-22*	-68
KDS1030	Section 3- Completion of site formation and infrastructure works in Works Area C	0		31-Jul-22*	0
Planned Sectional Completion of the Works		0	31-Aug-22	31-Aug-22	-153
KDS1110	Planned completion of the Section 2 of the Works	0		31-Aug-22	-153
Preliminaries, Contractor's Design, Method Statement Submission and Approval		690	30-Dec-20 A	19-Nov-22	167
General Submission		290	30-Dec-20 A	11-Jul-22	-269
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	290	30-Dec-20 A	11-Jul-22	-269
Contractor's Design Submission and Approval		194	08-Feb-22 A	19-Nov-22	143
Permanent Works Design		122	01-Jul-22	19-Nov-22	143
PWD1030	Design for irrigation system	75	01-Jul-22	26-Sep-22	129
PWD1040	Design for noise barrier panel	90	08-Aug-22	19-Nov-22	143
Major Temporary Works Design		68	08-Feb-22 A	25-Jun-22	42
TWD1050	ELS design for construction of foundation of noise barrier	60	08-Feb-22 A	17-Jun-22	42
TWD1055	Time risk allowance for ELS design for construction of foundation of noise barrier	7	18-Jun-22	25-Jun-22	42
TWD1060	Formwork design for construction of noise barrier	45	24-Feb-22 A	16-Jun-22	43
TWD1065	Time risk allowance for Formwork design for construction of noise barrier	7	17-Jun-22	24-Jun-22	43
Major Construction Works Method Statement		60	29-Dec-21 A	23-Jul-22	18
MS1580	Method statement submission and approval for construction of noise barrier	60	29-Dec-21 A	23-Jul-22	18
Tendering and Procurement for Major Subcontractor		250	26-Mar-21 A	30-Jun-22	143
TDS1070	Subletting for road works	120	26-Mar-21 A	24-Jun-22	17
TDS1110	Subletting for irrigation system works	100	05-May-21 A	30-Jun-22	129
TDS1140	Subletting for supply and installation of noise barrier post and panels	30	01-Dec-21 A	30-Jun-22	143
Tree Works and Submission of the tree survey report and tree preservation and removal pr		102	02-Mar-22 A	15-Aug-22	-29
Tree Works on Ma Sik Road		102	02-Mar-22 A	15-Aug-22	-29
TWS1200	TPRP and Tree felling works (Ma Sik Road) (before Noise Barrier Construction)	80	02-Mar-22 A	23-Jun-22	20
TWS1210	TPRP and Tree transplanting works at the side of road (9nos) (before noise barrier construction)	80	28-Mar-22 A	15-Aug-22	-29
Section 1- Site Formation and Infrastructure Works in Area A		316	09-Aug-21 A	15-Oct-22	94
Site Formation (Portion I- Area A 11042m2)		100	09-Aug-21 A	25-Jul-22	162
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2		100	09-Aug-21 A	25-Jul-22	162
S1-SF1011	Erection of hoarding along the site boundary (326m)	100	09-Aug-21 A	25-Jul-22	7
S1-SF1051	Ground investigation works (2nos) and trial pit(2nos) (PMI005)	80	30-Oct-21 A	16-Jun-22	194
Site Formation (Portion II- Area A 21900m2)		226	03-Jan-22 A	10-Oct-22	-65
Site Formation Works in South Part of Portion II		226	03-Jan-22 A	10-Oct-22	-65
S1-SF1415	Site formation works part 2 (12577m3) and Removal of temporary works, haul road and temporary accesses	75	03-Jan-22 A	07-Jul-22	-65
S1-SF1417	Site formation works part 3 (12577m3) and Removal of temporary works, haul road and temporary accesses	78	08-Jul-22	10-Oct-22	-65
Site Formation (Portion III- Area A 4900m2)		45	26-Jul-22	16-Sep-22	7
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	26-Jul-22	29-Aug-22	7
S1-SF1546	Removal of existing feature 3SW-A/F85	15	30-Aug-22	16-Sep-22	7
Site Formation (Portion IV- Area A 3800m2)		178	23-Dec-21 A	16-Aug-22	63
S1-SF1765	Erection of hoarding along the site boundary (515m)	40	27-Jan-22 A	12-Jul-22	63
S1-SF1780	Site clearance	20	30-Dec-21 A	18-Jun-22	82
S1-SF1800	Construction of haul road	21	23-Dec-21 A	18-Jun-22	82
S1-SF1870	Site formation works(2391m3) (after site formation in Area D)	30	13-Jul-22	16-Aug-22	63
Box Culvert BC3 and Outfall 10		97	08-Jun-22	30-Sep-22	-60
Box Culvert BC3 (CH0 to CH168)		97	08-Jun-22	30-Sep-22	-60
S1-BC0940	Backfilling from Bay 11 to Bay 14 (4620m3)	31	08-Jun-22	14-Jul-22	-181
S1-BC0980	Construction of the box culvert side wall and top slab Bay 7 (After Bay2)	25	14-Jul-22	11-Aug-22	-185
S1-BC0990	Backfilling from Bay 7 to Bay 10 (4620m3)	31	12-Aug-22	17-Sep-22	-185
S1-BC1000	Construction of the box culvert side wall and top slab Bay 6	25	01-Sep-22	30-Sep-22	-185
S1-BC1050	Construction of the box culvert side wall and top slab Bay 2 and inspection chamber	30	08-Jun-22	13-Jul-22	-185
S1-BC1052	Backfilling of Bay 2 (1155m3) Before handover of Area B	15	14-Jul-22	30-Jul-22	-8
S1-BC1070	Backfilling of Bay 1 (1155m3) Before handover of Area B	15	08-Jun-22	24-Jun-22	-66
Noise Barrier NB63		124	11-Apr-22 A	06-Oct-22	-23
Noise Barrier NB63(Bay 18 to Bay 21)		72	12-Jul-22	06-Oct-22	-107
S1-NB1265	Installation of Mini Piles(Bay18-Bay21 18 nos) (CSD) (Original:24nos H-pile,36days)	72	12-Jul-22	06-Oct-22	-107
Noise Barrier NB63(Bay 13 to Bay 17)		50	11-Apr-22 A	18-Jun-22	-17
S1-NB1160	Pre-drilling works (Bay13-Bay17) (10nos)	50	11-Apr-22 A	18-Jun-22	-17
Noise Barrier NB63(Bay 7 to Bay 12)		40	16-Aug-22	03-Oct-22	-25
S1-NB1170	Pre-drilling works (Bay7-Bay12) (8nos) (after diversion of existing footpath and tree felling & transplanting)	40	16-Aug-22	03-Oct-22	-25
Noise Barrier NB63(Bay 1 to Bay 6)		14	16-Aug-22	31-Aug-22	5
S1-NB1020	UU detection and trial pit	14	16-Aug-22	31-Aug-22	5
Drainage,Sewerage, Waterworks and Road Works		154	01-Mar-22 A	15-Oct-22	64
Along Ma Sik Road		80	12-Jul-22	15-Oct-22	-216
TTA -Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary		80	12-Jul-22	15-Oct-22	-216
S1-CS1240	Implement TTA	10	12-Jul-22	22-Jul-22	-216
S1-CS1260	UU detection and trial pit	10	23-Jul-22	03-Aug-22	-216
S1-CS1265	Sheetpile works and excavation	60	04-Aug-22	15-Oct-22	-216
Along Proposed Cycletrack and Footpath		131	01-Mar-22 A	16-Sep-22	87
Works in Portion I		131	01-Mar-22 A	16-Sep-22	87
Works in Portion I CT71		20	24-Aug-22	16-Sep-22	2
S1-CS1460	Irrigation system (utility service by others)(CT71 Ch369.376 to Ch429 total 59m) (Delayed due to CE102)	20	24-Aug-22*	16-Sep-22	2
S1-CS1465	Fresh water main works (CT71 Ch369.376 to Ch429 total 59m)	20	24-Aug-22	16-Sep-22	2
S1-CS1468	Flushing water main works (CT71 Ch369.376 to Ch429 total 59m)	20	24-Aug-22	16-Sep-22	2



Actual Work
Remaining Work
Critical Remaining Work
Milestone

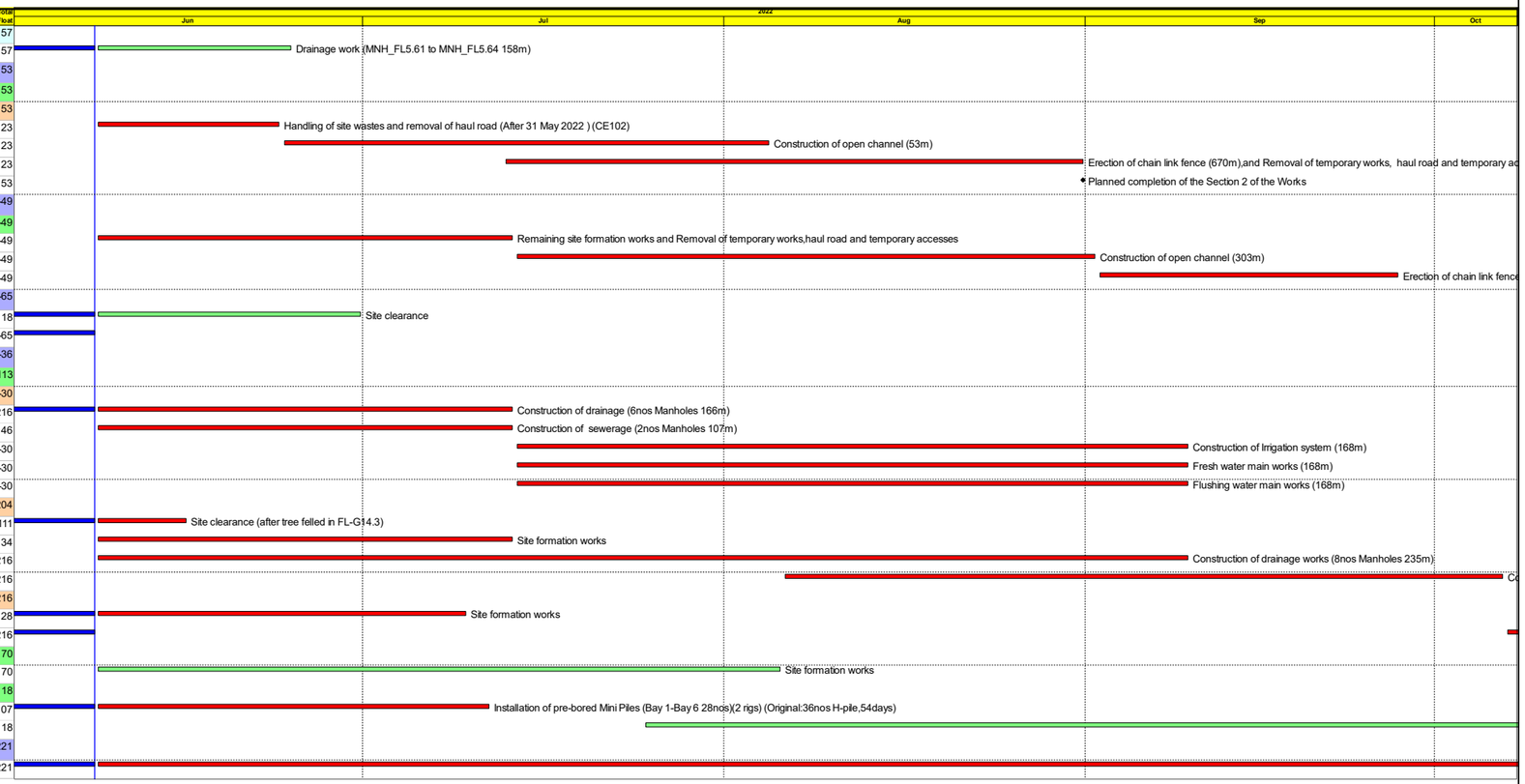
中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

Three Month Rolling Programme (Data Date : 08-Jun-22)

Date	Revision	Checked	Approved
14-Jun-22	A	HY	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
Works in Portion I CT74		50	01-Mar-22 A	24-Jun-22	157
S1-CS1487	Drainage work (MNH_FL5.61 to MNH_FL5.64 158m)	50	01-Mar-22 A	24-Jun-22	157
Section 2- Site Formation and Infrastructure Works in Area B		85	08-Jun-22	31-Aug-22	-153
Site Formation and Infrastructure Works in Area B1 & B2		85	08-Jun-22	31-Aug-22	-153
Site Formation Works after trees felled in FL-G14.9		85	08-Jun-22	31-Aug-22	-153
S2-SF2378	Handling of site wastes and removal of haul road (After 31 May 2022) (CE102)	14	08-Jun-22*	23-Jun-22	-123
S2-SF2380	Construction of open channel (53m)	35	24-Jun-22	04-Aug-22	-123
S2-SF2390	Erection of chain link fence (670m),and Removal of temporary works, haul road and temporary accesses (CE102)	43	13-Jul-22	31-Aug-22	-123
S2-SF2400	Planned completion of the Section 2 of the Works	0		31-Aug-22	-153
Section 3- Site Formation and Infrastructure Works in Area C		94	08-Jun-22	27-Sep-22	-49
Site Formation and Infrastructure Works in Portion IV Area C (10730m2)		94	08-Jun-22	27-Sep-22	-49
S3-SF1250	Remaining site formation works and Removal of temporary works,haul road and temporary accesses	30	08-Jun-22	13-Jul-22	-49
S3-SF1260	Construction of open channel (303m)	43	14-Jul-22	01-Sep-22	-49
S3-SF1270	Erection of chain link fence (762m)	21	02-Sep-22	27-Sep-22	-49
Section 4- Site Formation and Infrastructure Works in Area D		183	04-Feb-22 A	19-Dec-22	-65
S4-SF1050	Site clearance	40	11-Feb-22 A	30-Jun-22	18
S4-SF1120	Site formation works(10276m3)	80	04-Feb-22 A	19-Dec-22	-65
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		342	09-Nov-21 A	19-Dec-22	-36
Road L1		342	09-Nov-21 A	19-Dec-22	-113
Road L1 in Portion I (P700 CH 175 to CH245)		199	05-Jan-22 A	09-Sep-22	-30
S5-RD1040	Construction of drainage (6nos Manholes 166m)	70	05-Jan-22 A	13-Jul-22	-216
S5-RD1042	Construction of sewerage (2nos Manholes 107m)	30	08-Jun-22	13-Jul-22	-146
S5-RD1045	Construction of Irrigation system (168m)	50	14-Jul-22	09-Sep-22	-30
S5-RD1060	Fresh water main works (168m)	50	14-Jul-22	09-Sep-22	-30
S5-RD1070	Flushing water main works (168m)	50	14-Jul-22	09-Sep-22	-30
Road L1 in Portion V (P600 CH 100 to CH194)		196	11-Jan-22 A	06-Oct-22	-204
S5-RD1275	Site clearance (after tree felled in FL-G14.3)	14	11-Jan-22 A	15-Jun-22	-111
S5-RD1315	Site formation works	30	08-Jun-22	13-Jul-22	-134
S5-RD1345	Construction of drainage works (8nos Manholes 235m)	80	08-Jun-22	09-Sep-22	-216
S5-RD1350	Construction of sewerage works (4nos Manholes)	50	06-Aug-22	06-Oct-22	-216
Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175)		342	09-Nov-21 A	19-Dec-22	-216
S5-RD1177	Site formation works	30	09-Nov-21 A	09-Jul-22	-128
S5-RD1180	Construction of drainage (17nos Manholes 630m)	85	09-Mar-22 A	19-Dec-22	-216
Road L2		50	08-Jun-22	05-Aug-22	70
S5-RD1495	Site formation works	50	08-Jun-22	05-Aug-22	70
Noise Barrier NB62		134	10-Feb-22 A	17-Oct-22	18
S5-NB1040	Installation of pre-bored Mini Piles (Bay 1-Bay 6 28nos)(2 rigs) (Original:36nos H-pile,54days)	56	10-Feb-22 A	11-Jul-22	-107
S5-NB1060	Excavation and construction of base slabs and wall stems(Bay 1-bay6)	70	25-Jul-22	17-Oct-22	18
Section 6-Completion of Preservation And Protection Of Existing Trees		1146	31-Aug-20 A	28-Sep-24	-221
S6-CS1000	Preservation and protection of trees	1146	31-Aug-20 A	28-Sep-24	-221



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-Jun-22)

Date	Revision	Checked	Approved
14-Jun-22	A	HY	CLX

Portion	Legend
I	
II	
III	
IV	
V	

PORTION I

1. C&D waste disposal
2. Drainage works
3. Sewerage works
4. Filling works
5. Waterworks

PORTION II

1. C&D waste disposal
2. Construction of box culvert
3. Filling works

PORTION III

1. Drainage works
2. Sewerage works
3. Erection of site hoarding

PORTION IV

1. Site Clearance
2. Drainage works
3. Sewerage works
4. C&D waste disposal
5. Filling works
6. Tree felling / Disposal of yard waste
7. Erection of site hoarding
8. G.I. works
9. Mini piling works
10. Construction of site haul road
11. Construction of noise barrier

PORTION V

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

ND/2019/07

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

Working Activities (Jun 2022 – Sep 2022)

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 and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

Action Level	Response	Limit Level	Response
Construction Phase			
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management

	disturbance.		measures to improve conditions for affected species.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management measures to improve conditions for affected species.
Operational Phase			
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs review and adjust LVNP management measures to improve conditions for affected species in LVNP.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if cause identified as related to NDAs consider and implement additional mitigation measures (e.g. additional screening and screen planting, adjustments to infrastructure design).
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs review and adjust LVNP management measures to improve conditions for affected species.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if cause identified as related to NDAs consider and implement additional mitigation measures (e.g. additional screen planting, adjustments to infrastructure design).

* Whether numbers are significant will depend on species and season and should be determined following collection and evaluation of Baseline survey data.

Table B-8.2 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

Action Level	Response	Limit Level	Response
Construction Phase			
Reduction in species diversity such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project instigate remedial action to remove or reduce source of disturbance.	Reduction in taxa diversity such that Limit Level response is triggered.	Investigate cause and if caused identified as related to Project instigate remedial action.

* Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

Table B-8.3 Action and Limit Levels and Responses to Evidence of Declines in non-aquatic Fauna

Action Level	Response	Limit Level	Response
Construction Phase			
Reduction in species diversity such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project instigate remedial action to remove or reduce source of disturbance.	Reduction in taxa diversity such that Limit Level response is triggered.	Investigate cause and if caused identified as related to Project instigate remedial action.

* Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

APPENDIX C
COPIES OF CALIBRATION CERTIFCATES

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

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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.:	36645
Date of Issue:	2022-05-10
Date Received:	2022-05-06
Date Tested:	2022-05-06
Date Completed:	2022-05-10
Next Due Date:	2022-07-09

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)	1.065

****

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

Patrick Tse
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:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	44	50
2	59	66
3	75	79
4	80	84
5	96	98
Average	**70.8**	**75.4**

By Linear Regression of Y on X

Slope , mw = **0.8908** **Intercept, bw =** **12.3366**

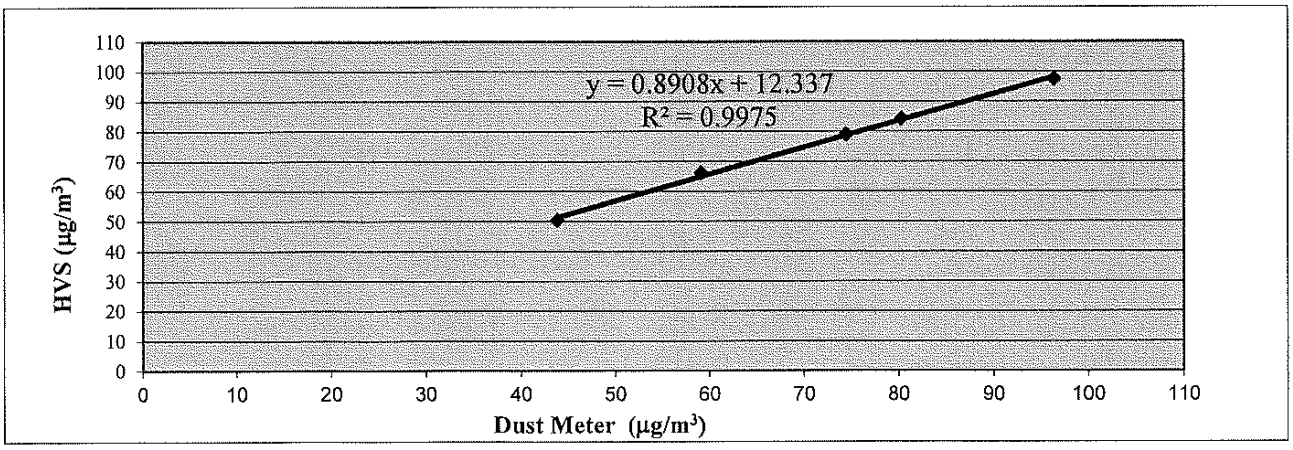
Correlation coefficient* = **0.9987**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	75.4
Particaulate Concentration by Dust Meter (μg/m³)	70.8
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.065**



QC Reviewer: LEE MAN HEI Signature: hei Date: 6-5-2022

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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.:	36645A
Date of Issue:	2022-05-10
Date Received:	2022-05-06
Date Tested:	2022-05-06
Date Completed:	2022-05-10
Next Due Date:	2022-07-09

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)	1.096

****

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-01-02	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23808	2203
Calibration Date:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	42	50
2	61	66
3	71	79
4	79	84
5	90	98
Average	**68.8**	**75.4**

By Linear Regression of Y on X

Slope , mw = **0.9766** **Intercept, bw =** **8.2291**

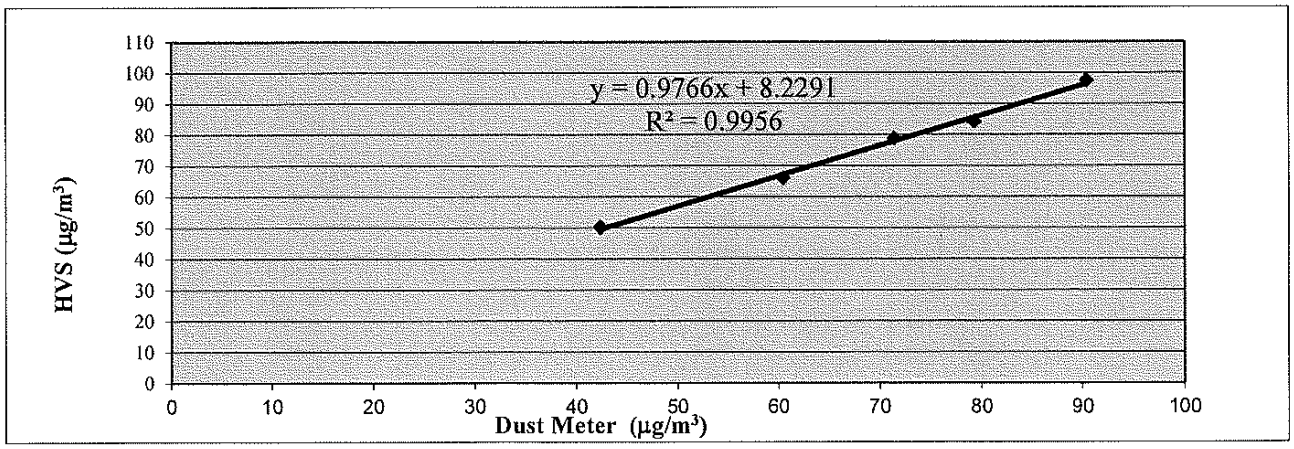
Correlation coefficient* = **0.9978**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	75.4
Particaulate Concentration by Dust Meter (μg/m³)	68.8
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.096**



QC Reviewer: Liz Mun Hez Signature: Hei Date: 6-5-2022

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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.:	36644
Date of Issue:	2022-04-25
Date Received:	2022-04-23
Date Tested:	2022-04-23
Date Completed:	2022-04-25
Next Due Date:	2022-06-24

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)	1.165

****

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-01-05	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24476	2203
Calibration Date:	23-Apr-22	23-Apr-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	33	40
2	42	47
3	58	69
4	70	81
5	83	96
Average	**57.1**	**66.5**

By Linear Regression of Y on X

Slope , mw = **1.1232** **Intercept, bw =** **2.3585**

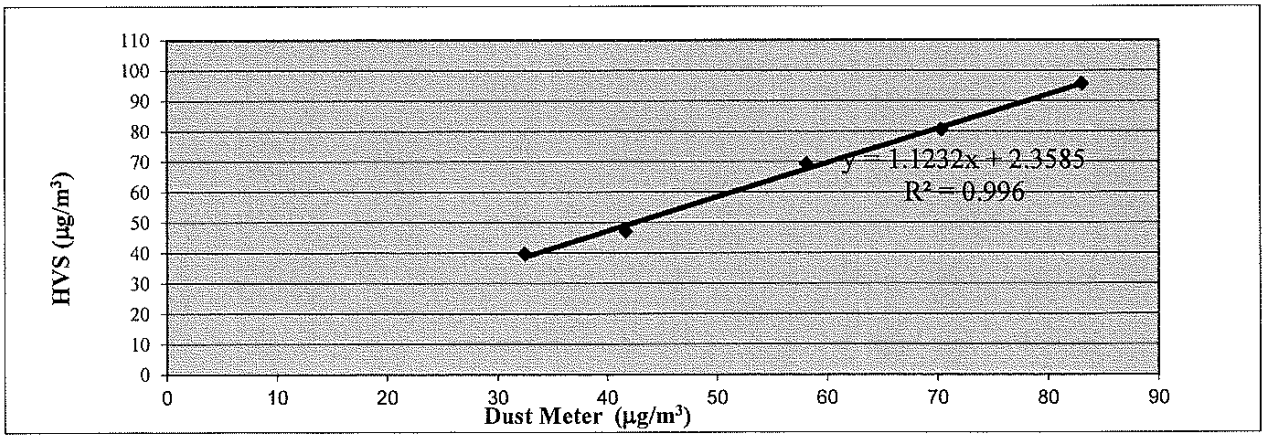
Correlation coefficient* = **0.9980**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	66.5
Particaulate Concentration by Dust Meter (μg/m³)	57.1
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.165**



QC Reviewer: LEE MAN HEU Signature: Lei Date: 23/4/2022

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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.:	36841
Date of Issue:	2022-06-27
Date Received:	2022-06-24
Date Tested:	2022-06-25
Date Completed:	2022-06-27
Next Due Date:	2022-08-26
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: 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)	1.078

****

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

Patrick Tse

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:	25-Jun-22	25-Jun-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	31	33
2	44	48
3	55	61
4	75	78
5	86	92
Average	**58.0**	**62.5**

By Linear Regression of Y on X

Slope , mw = **1.0539** **Intercept, bw =** **1.3741**

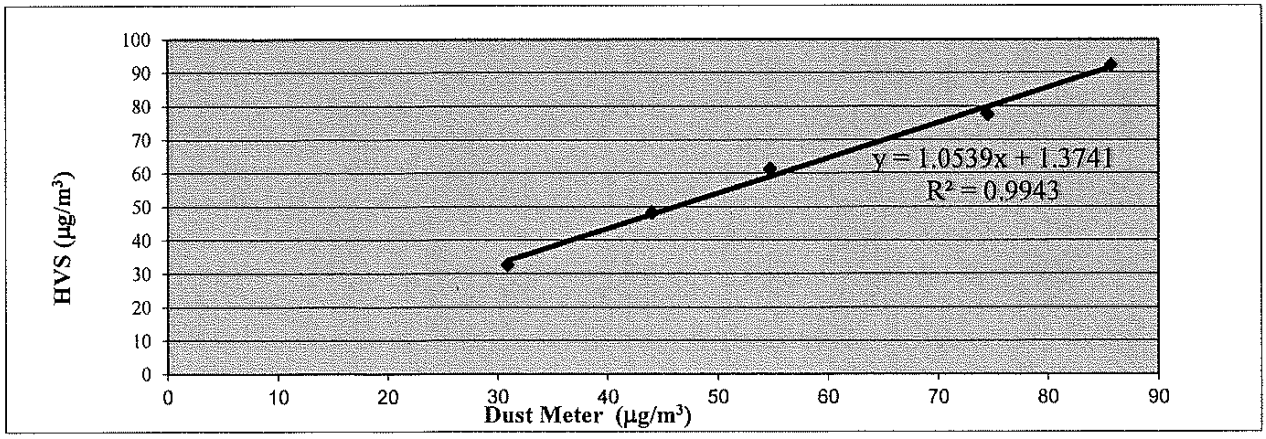
Correlation coefficient* = **0.9972**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	62.5
Particaulate Concentration by Dust Meter (μg/m³)	58.0
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.078**



QC Reviewer: [illegible] Signature: [illegible] Date: 26/6/2022

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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.:	36645D
Date of Issue:	2022-05-10
Date Received:	2022-05-06
Date Tested:	2022-05-06
Date Completed:	2022-05-10
Next Due Date:	2022-07-09

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)	1.119

****

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:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	43	50
2	57	66
3	71	79
4	78	84
5	89	98
Average	**67.4**	**75.4**

By Linear Regression of Y on X

Slope , mw = **0.9856** **Intercept, bw =** **8.9874**

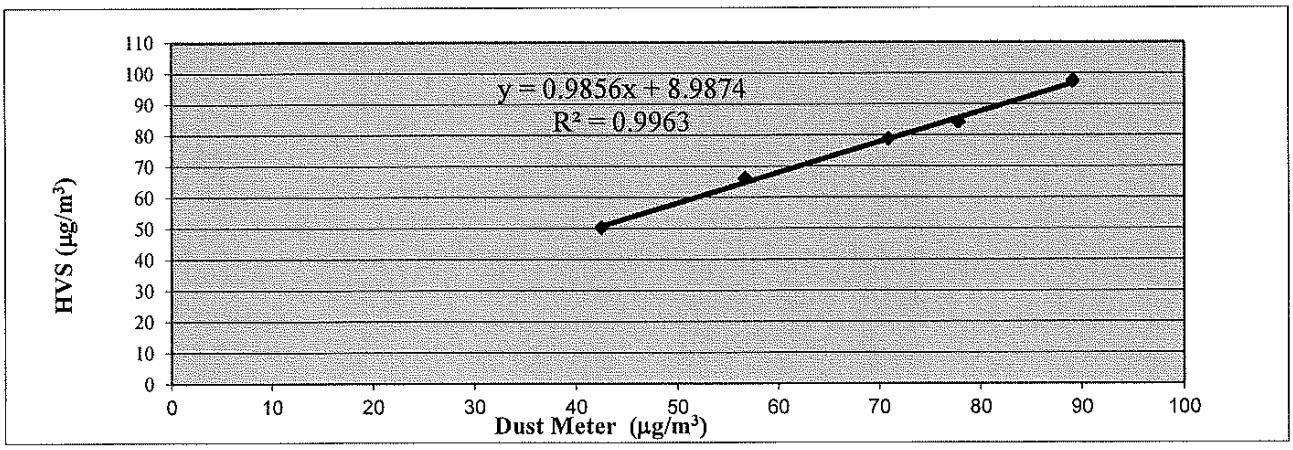
Correlation coefficient* = **0.9982**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	75.4
Particaulate Concentration by Dust Meter (μg/m³)	67.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.119**



QC Reviewer: LKL MAW HBZ Signature: hu Date: 6-5-2022

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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.:	36644B
Date of Issue:	2022-04-25
Date Received:	2022-04-23
Date Tested:	2022-04-23
Date Completed:	2022-04-25
Next Due Date:	2022-06-24

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)	1.098

****

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-Apr-22	23-Apr-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	35	40
2	42	47
3	61	69
4	76	81
5	89	96
Average	**60.6**	**66.5**

By Linear Regression of Y on X

Slope , mw = **1.0254** **Intercept, bw =** **4.3774**

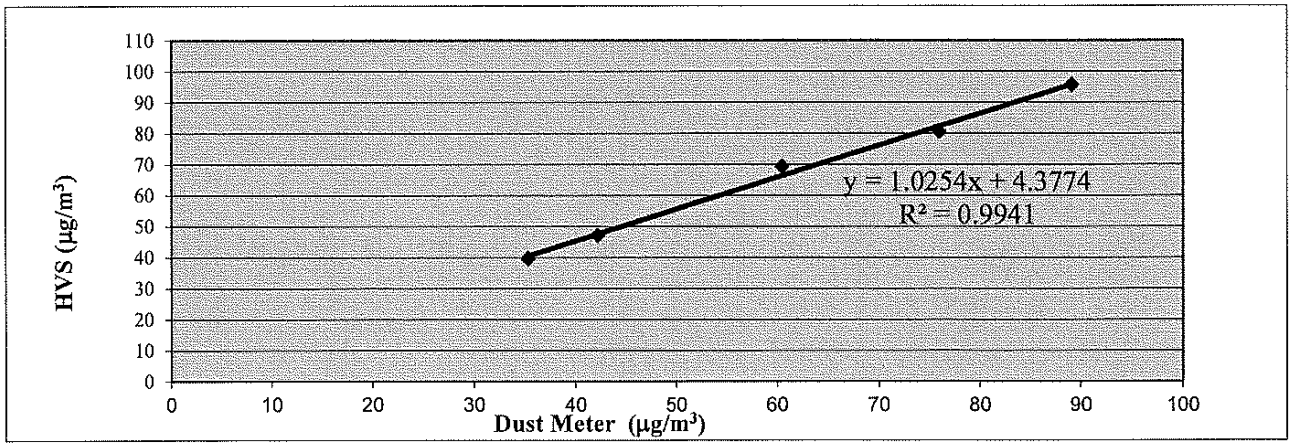
Correlation coefficient* = **0.9971**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	66.5
Particaulate Concentration by Dust Meter (μg/m³)	60.6
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.098**



QC Reviewer: LFF MWN HFZ Signature: hci Date: 23/4/2022

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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.:	36841B
Date of Issue:	2022-06-27
Date Received:	2022-06-24
Date Tested:	2022-06-25
Date Completed:	2022-06-27
Next Due Date:	2022-08-26

Page: 1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: 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)	1.087

****

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:	25-Jun-22	25-Jun-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration (μg/m^3) **X-axis**	Mass concentration (μg/m^3) **Y-axis**
1	28	33
2	43	48
3	57	61
4	71	78
5	88	92
Average	**57.4**	**62.5**

By Linear Regression of Y on X

Slope , mw = **0.9973** **Intercept, bw =** **5.1727**

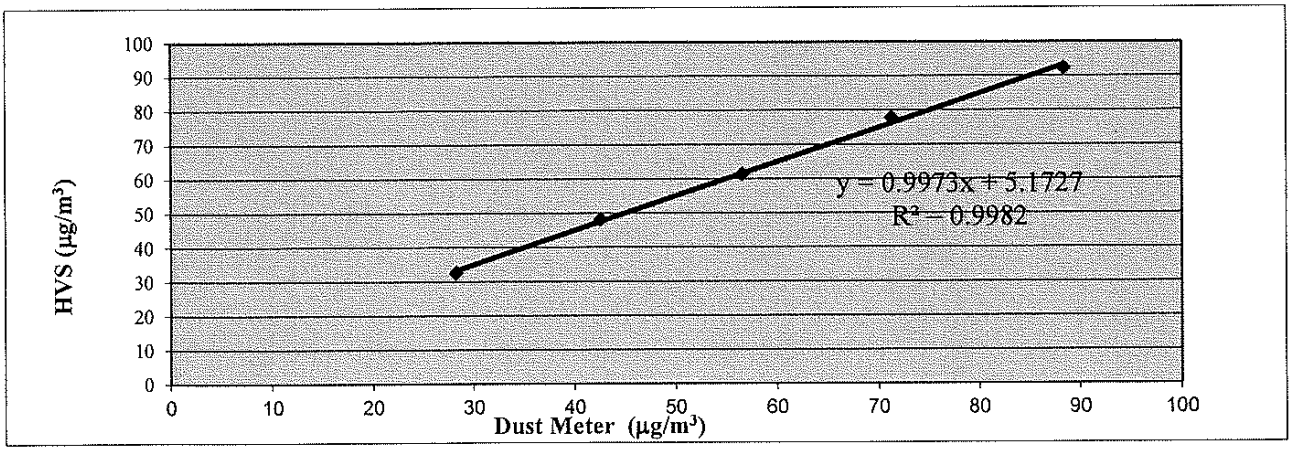
Correlation coefficient* = **0.9991**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m^3)	62.5
Particaulate Concentration by Dust Meter (μg/m^3)	57.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m^3)] **1.087**



QC Reviewer: [illegible] Signature: [illegible] Date: 26/6/2022

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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.:	36644C
Date of Issue:	2022-04-25
Date Received:	2022-04-23
Date Tested:	2022-04-23
Date Completed:	2022-04-25
Next Due Date:	2022-06-24

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)	1.173

****

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-Apr-22	23-Apr-22
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	40
2	40	47
3	58	69
4	71	81
5	83	96
Average	**56.7**	**66.5**

By Linear Regression of Y on X

Slope , mw = **1.0955** **Intercept, bw =** **4.4024**

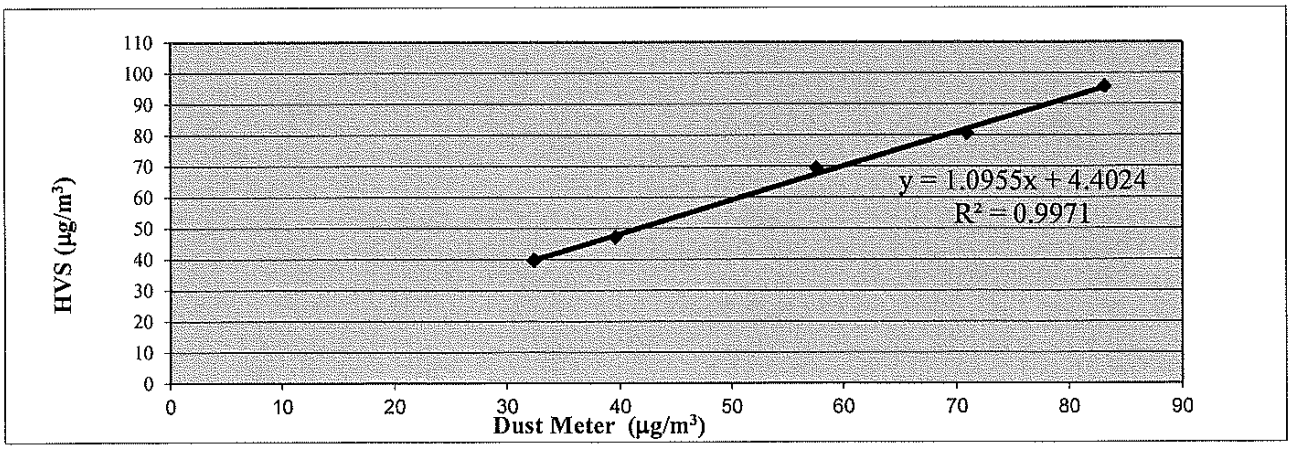
Correlation coefficient* = **0.9986**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	66.5
Particaulate Concentration by Dust Meter (μg/m³)	56.7
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.173**



QC Reviewer: LEE MAN HEE Signature: Lei Date: 23/4/2022

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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.:	36841C
Date of Issue:	2022-06-27
Date Received:	2022-06-24
Date Tested:	2022-06-25
Date Completed:	2022-06-27
Next Due Date:	2022-08-26

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)	1.107

****

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:	25-Jun-22	25-Jun-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	30	33
2	40	48
3	57	61
4	71	78
5	83	92
Average	**56.4**	**62.5**

By Linear Regression of Y on X

Slope , mw = **1.0742** **Intercept, bw =** **1.8510**

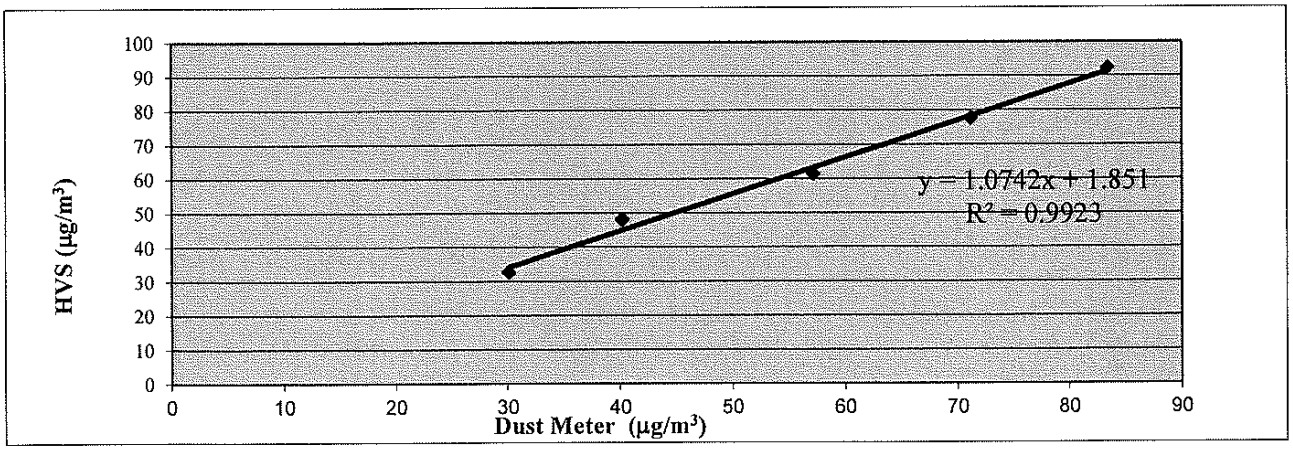
Correlation coefficient* = **0.9962**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	62.5
Particaulate Concentration by Dust Meter (μg/m³)	56.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.107**



QC Reviewer: Ub Mun Hez Signature: Date: 26/6/22

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. Cal./220423

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

Model No. TE-5170 Cal. Date: 23-Apr-22

Operator: HL

Ambient Condition			
Temperature, Ta (K)	294.2	Pressure, Pa (mmHg)	761.8

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	20-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	13.3	3.67	62.72	8.6	2.95
2	10.8	3.31	56.54	7.1	2.68
3	8.6	2.95	50.47	5.7	2.41
4	5.7	2.41	41.12	3.6	1.91
5	3.6	1.91	32.72	2.4	1.56

By Linear Regression of Y on X

Slope , mw = **0.0473** **Intercept, bw =** **0.0007**

Correlation coefficient* = **0.9993**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.07**

Remarks:

Conducted by: LEE MAN HOU Signature: Date: 23/4/2022

Checked by: Signature: Date: 23/4/2022

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. Cal./220506

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

Model No. TE-5170 Cal. Date: 6-May-22

Operator: HL

Ambient Condition			
Temperature, Ta (K)	294.8	Pressure, Pa (mmHg)	762.4

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	**mc x Qstd + bc = $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$**			
Next Calibration Date:	20-Jan-23	**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	13.5	3.70	63.15	8.6	2.95
2	11.3	3.39	57.79	7.1	2.68
3	8.6	2.95	50.44	5.4	2.34
4	5.8	2.43	41.45	3.7	1.94
5	3.6	1.91	32.70	2.5	1.59

By Linear Regression of Y on X

Slope , mw = 0.0447 **Intercept, bw = 0.1042**

Correlation coefficient* = 0.9991

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.06**

Remarks:

Conducted by: Ho Man Hei Signature: Date: 6/5/2022

Checked by: Ho Ka Chu Signature: Date: 6/5/2022

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. Cal./220625

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

Model No. TE-5170 Cal. Date: 25-Jun-22

Operator: HL

Ambient Condition			
Temperature, Ta (K)	294.3	Pressure, Pa (mmHg)	758.9

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	**mc x Qstd + bc = $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$**			
Next Calibration Date:	20-Jan-23	**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	12.1	3.50	59.71	8.2	2.88
2	10.3	3.23	55.10	7.0	2.66
3	8.4	2.91	49.78	5.4	2.34
4	5.6	2.38	40.68	3.8	1.96
5	3.7	1.93	33.10	2.6	1.62

By Linear Regression of Y on X

Slope , mw = 0.0472 **Intercept, bw :** 0.0408

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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.24**

Remarks:

Conducted by: LEE MAN HEI Signature: Date: 25-6-2022

Checked by: Ho Ka Chu Signature: Date: 25/6/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/20/0012

Station: FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark
Operator: HL
Date: 11-May-22
Next Due Date: 10-Jul-22
Equipment No.: WA-12-20
Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	297.4	Pressure, Pa (mmHg)	758.9

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	11.0	3.32	56.64	7.0	2.65
2	9.2	3.03	51.82	5.8	2.41
3	6.8	2.61	44.57	4.5	2.12
4	5.0	2.24	38.25	3.1	1.76
5	3.7	1.92	32.92	2.5	1.58

By Linear Regression of Y on X

Slope , mw = 0.0455 **Intercept, bw :** 0.0618

Correlation coefficient* = 0.9979

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.08**

Remarks:

Conducted by: MW HZ Signature: Date: 11/5/2022
Checked by: Signature: Date: 11/5/22

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High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. WMA20002/17/0012

Station: FLN-DMS3 - House near Tong Hang

Operator: HL

Date: 17-May-22

Next Due Date: 16-Jul-22

Equipment No.: WA-12-17

Serial No. 3218

Ambient Condition			
Temperature, Ta (K)	297.8	Pressure, Pa (mmHg)	763.2

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	14.4	3.80	64.92	9.3	3.06
2	10.8	3.29	56.25	7.0	2.65
3	9.8	3.14	53.59	6.0	2.46
4	6.1	2.48	42.32	3.8	1.95
5	3.4	1.85	31.64	2.3	1.52

By Linear Regression of Y on X

Slope , mw = 0.0463 **Intercept, bw =** 0.0231

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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.04**

Remarks:

Conducted by: [illegible] Signature: [illegible] Date: 17/5/2022

Checked by: [illegible] Signature: [illegible] Date: 17/5/2022

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

File No. WMA20002/03/0012

Station: KTN-DMS4A - Temporary Structure at Pak Shek Au
Operator: HL
Date: 18-May-22
Next Due Date: 17-Jul-22
Equipment No.: WA-11-03
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	302	Pressure, Pa (mmHg)	762.9

Orifice Transfer Standard Information					
Serial No.:	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	Next Calibration Date:		20-Jan-23	

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	8.4	8.32	49.27	49.74	1.41	8.6	1.93
2	6.9	6.83	44.67	45.10	1.28	7.1	1.76
3	5.1	5.05	38.43	38.80	1.10	5.5	1.55
4	3.6	3.57	32.32	32.63	0.92	4.1	1.34
5	2.9	2.87	29.02	29.30	0.83	3.1	1.16

By Linear Regression of Y on X

Slope , mw = 0.0367 **Intercept, bw = 0.1131**

Correlation coefficient* = 0.9980

(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) = 40.31

Sampler Well - Type Manometer Set Point, SSP

SSP = $[(mw \times SFR + bw)^2 \times Pa] / (Ta + 30)$ = 5.82

Remarks:

Conducted by: HL WWW HEI Signature: Date: 18/5/2022

Checked by: Signature: Date: 18/5/2022

TISCH Environmental

RECALIBRATION DUE DATE:
January 20, 2023

Certificate of Calibration

Calibration Certification Information					
Cal. Date:	January 20, 2022	**Rootsmeter S/N:** 438320	**Ta:** 293	°K	
Operator:	Jim Tisch		**Pa:** 759.7	mm Hg	
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2896**			

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4610	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9190	7.9	5.00
4	7	8	1	0.8780	8.8	5.50
5	9	10	1	0.7250	12.7	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)
1.0124	0.6929	1.4260	0.9958	0.6816	0.8783
1.0081	0.9731	2.0166	0.9916	0.9571	1.2420
1.0061	1.0948	2.2546	0.9896	1.0768	1.3887
1.0049	1.1445	2.3647	0.9884	1.1258	1.4564
0.9997	1.3789	2.8519	0.9833	1.3563	1.7565
QSTD	**m=**	**2.07510**	**QA**	**m=**	**1.29939**
	b=	**-0.01030**		**b=**	**-0.00634**
	r=	**0.99995**		**r=**	**0.99995**

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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TEST REPORT

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

Test Report No.:	36405
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2023-03-06

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 570271
Equipment No.	: WN-01-01

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.:	36405A
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2023-03-06

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580004
Equipment No.	: WN-01-02

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
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.:	36405B
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2023-03-06

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.:	36405C
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2023-03-06

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

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.:	36405E
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2023-03-06

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580008
Equipment No.	: WN-01-06

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

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

Patrick Tse
PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	36481
Date of Issue:	2022-03-14
Date Received:	2022-03-11
Date Tested:	2022-03-11
Date Completed:	2022-03-14
Next Due Date:	2023-03-13

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

PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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Room 1808, Technology Park,
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Shatin, NT, Hong Kong

Test Report No.:	35658
Date of Issue:	2021-08-23
Date Received:	2021-08-20
Date Tested:	2021-08-20
Date Completed:	2021-08-23
Next Due Date:	2022-08-22

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.

****

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 1701, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	35909
Date of Issue:	2021-10-04
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-04
Next Due Date:	2022-10-03

Page: 1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24803
Equipment No.	: N-09-03

Test conditions:

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

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

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

PATRICK TSE
General Manager

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WELLAB LIMITED
Room 1701, Technology Park,
18 On Lai Street, Shatin,
N.T., 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.:	35658A
Date of Issue:	2021-08-23
Date Received:	2021-08-20
Date Tested:	2021-08-20
Date Completed:	2021-08-23
Next Due Date:	2022-08-22

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

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

Patrick Tse
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

Test Report No.:	36607A
Date of Issue:	2022-03-25
Date Received:	2022-03-24
Date Tested:	2022-03-24 to 2022-03-25
Date Completed:	2022-03-25

ATTN: **Miss Mei Ling Tang**

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-31
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J100892
- EXO Optical DO Sensor, Ti	599100-01	16J100950
- EXO conductivity/Temperature Sensor, Ti	599870	16H100185
- EXO Turbidity Sensor, Ti	599101-01	18C102865
- EXO pH Sensor Assembly, Guarded, Ti	599701	16J100708

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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PATRICK TSE
General Manager

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TEST REPORT

Test Report No.:	36607A
Date of Issue:	2022-03-25
Date Received:	2022-03-24
Date Tested:	2022-03-24 to 2022-03-25
Date Completed:	2022-03-25

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 µS/cm)	13000	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	4.01	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.89	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.16	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.07	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
8.02	8.10	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	10.06	9.0-11.0	Pass
50 NTU	50.13	45.0-55.0	Pass
100 NTU	99.7	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

Test Report No.:	36607B
Date of Issue:	2022-03-25
Date Received:	2022-03-24
Date Tested:	2022-03-24 to 2022-03-25
Date Completed:	2022-03-25

ATTN: **Miss Mei Ling Tang**

Page: 1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-41
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J102313
- EXO Optical DO Sensor, Ti	599100-01	16J100945
- EXO conductivity/Temperature Sensor, Ti	599870	16G102305
- EXO Turbidity Sensor, Ti	599101-01	17A104090
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103619

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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TEST REPORT

Test Report No.:	36607B
Date of Issue:	2022-03-25
Date Received:	2022-03-24
Date Tested:	2022-03-24 to 2022-03-25
Date Completed:	2022-03-25

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (μS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 μS/cm)	12900	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	20.000	0.000	N/A

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.00	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.86	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.16	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.05	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
8.02	7.93	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	10.01	9.0-11.0	Pass
50 NTU	50.33	45.0-55.0	Pass
100 NTU	101.2	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

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TEST REPORT

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

Test Report No.:	36871
Date of Issue:	2022-06-25
Date Received:	2022-06-23
Date Tested:	2022-06-23 to 2022-06-25
Date Completed:	2022-06-25

ATTN: **Miss Mei Ling Tang**

Page: 1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-75
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J102347
- EXO Optical DO Sensor, Ti	599100-01	16J100964
- EXO conductivity/Temperature Sensor, Ti	599870	16H100201
- EXO Turbidity Sensor, Ti	599101-01	16J101156
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B100259

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

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General Manager

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TEST REPORT

Test Report No.:	36871
Date of Issue:	2022-06-25
Date Received:	2022-06-23
Date Tested:	2022-06-23 to 2022-06-25
Date Completed:	2022-06-25

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 µS/cm)	13400	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	4.06	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.86	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
8.10	7.93	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	50.16	45.0-55.0	Pass
100 NTU	103.1	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

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Eurotron Instruments (UK) Ltd
Unit 18 Austin Way,
Daventry, Northants, NN11 8QY
T: 01327 871044
F: 01327 301255

CALIBRATION CERTIFICATE N. **EE13257**

Job Reference 35844

Customer Cadmus Distribution Group LT T/A Kesion
Unit 34 . Waterhouse Business Centre
2 Cromer Way
Chelmsford

CM1 2QE

Instrument Type:	EIUK
Instrument Model:	RASI 700 BIO
Instrument S/N:	330055
Calibration date:	06 Apr 2022
Due Date:	06 Apr 2023

Traceability: All measuring equipment used for calibration purposes is traceable to National or Internationally recognised standards.

Test Method: Under controlled conditions and procedures, known physical, electrical and gas mixture were applied to the instruments under test and the results are reported in the table below

Due Date: This is a recommendation only and does not imply any guaranteed performance of the instrument over this period.

Standards:	S/N/ID N.	Certificate:N
O2 certified gas mixture	373466	040008266460
H2S/CO2/CH4 certified gas mixture	384603□	040008461025
Pressure Calibrator	2803358	89402
Temperature Calibrator	2702DE150201A	84089

CALIBRATION RESULTS

Parameter	Unit	Applied	As received	Error	Pass/Fail	As left	Error	Pass/Fail
O2	% Vol	20.90	20.90	0.0	**Pass**	20.90	0.0	**Pass**
O2	% Vol	9.918	10.00	0.1	**Pass**	10.00	0.1	**Pass**
O2	% Vol	0.0	0.00	0.0	**Pass**	0.00	0.0	**Pass**
CO2IR	%Vol	39.987	40.48	0.5	**Pass**	40.18	0.2	**Pass**
CH4	%Vol	59.980	60.25	0.3	**Pass**	60.25	0.3	**Pass**
Pressure	mbar	0.00	n/a	N/A	N/A	0.00	0.00	**Pass**
	mbar	50.00	n/a	N/A	N/A	49.97	-0.03	**Pass**
	mbar	75.00	n/a	N/A	N/A	74.99	-0.01	**Pass**
	mbar	90.00	n/a	N/A	N/A	90.04	0.04	**Pass**
	mbar	100.00	n/a	N/A	N/A	100.19	0.19	**Pass**
Temperature	°C	0.00	n/a	N/A	N/A	0.2	0.2	**Pass**
(T2)	°C	200.00	n/a	N/A	N/A	200.1	0.1	**Pass**
	°C	400.00	n/a	N/A	N/A	400.2	0.2	**Pass**
	°C	600.00	n/a	N/A	N/A	600.1	0.1	**Pass**
	°C	1,190.00	n/a	N/A	N/A	1190.4	0.4	**Pass**
Temperature	°C	0.00	n/a	N/A	N/A	0.2	0.2	**Pass**
(Air,T1)	°C	50.00	n/a	N/A	N/A	50.2	0.2	**Pass**

Date: 06/04/22
Printed Name: Anthony Kinninmonth / John Dorgan

Signature .....

CALIBRATION CERTIFICATE

Calibration Item:	Micromate System ISEE (Calibration with Geophone UM17121)
Model No.:	721A2501
Serial No.:	UM17121
Calibration Date:	21 February 2022
Next Calibration Date:	21 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
15MHz Function Generator*	33120A	US34003309
Stanford Spectrum Analyzer	SR760	41550
Keysight Multimeter*	34470A	MY57700765
HP Distortion Meter*	339A	2025A04515
Bruel & Kjaer Accelerometer*	4370	31474
Bruel & Kjaer Charge Amplifier*	2647	2731339
Bruel & Kjaer Conditional Amplifier*	2690	2437929
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

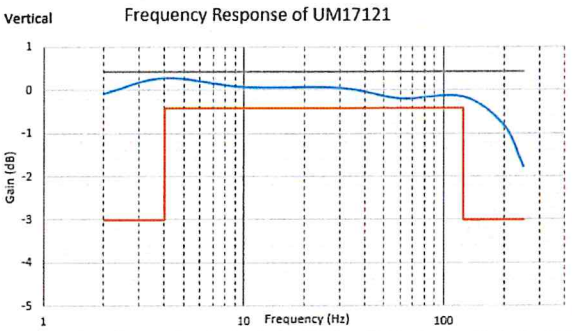
Authorized by: _____

(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17121

Vertical



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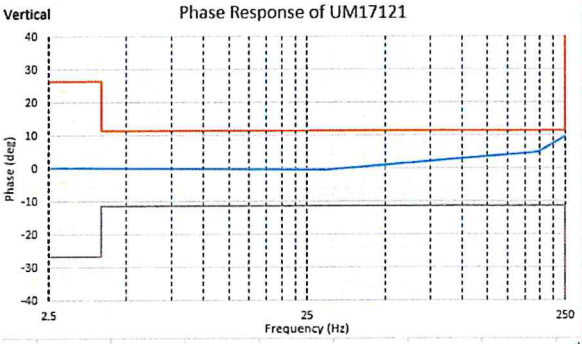

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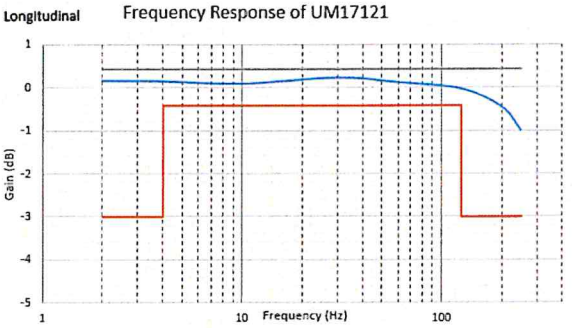

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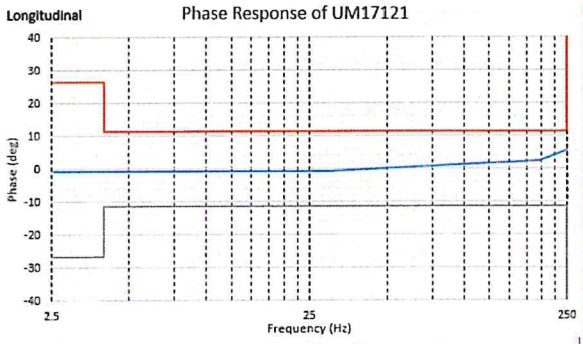

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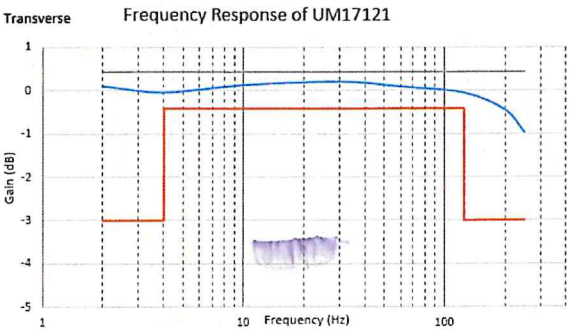

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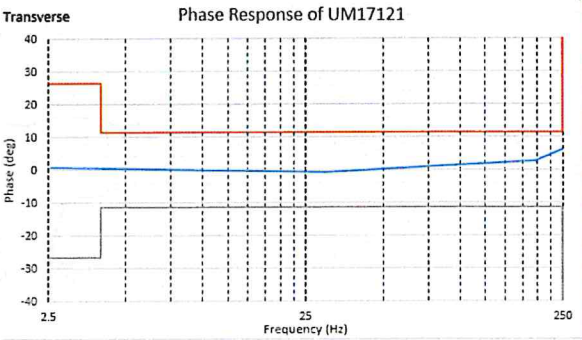


CALIBRATION CERTIFICATE

Calibration Item:	TRIAXIAL GEOPHONE (Calibration with main unit UM17121)
Part Number:	721A2901
Serial No.:	UM17121
Calibration Date:	21 February 2022
Next Calibration Date:	21 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
15MHz Function Generator*	33120A	US34003309
Stanford Spectrum Analyzer	SR760	41550
Keysight Multimeter*	34470A	MY57700765
HP Distortion Meter*	339A	2025A04515
Bruel & Kjaer Accelerometer*	4370	31474
Bruel & Kjaer Charge Amplifier*	2647	2731339
Bruel & Kjaer Conditional Amplifier*	2690	2437929
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by: _____

(Anson Kan)

Date: 21 February 2022

CALIBRATION CERTIFICATE

Calibration Item:	Micromate System ISEE (Calibration with Geophone UM17124)
Model No.:	721A2501
Serial No.:	UM17124
Calibration Date:	21 February 2022
Next Calibration Date:	21 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
15MHz Function Generator*	33120A	US34003309
Stanford Spectrum Analyzer	SR760	41550
Keysight Multimeter*	34470A	MY57700765
HP Distortion Meter*	339A	2025A04515
Bruel & Kjaer Accelerometer*	4370	31474
Bruel & Kjaer Charge Amplifier*	2647	2731339
Bruel & Kjaer Conditional Amplifier*	2690	2437929
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

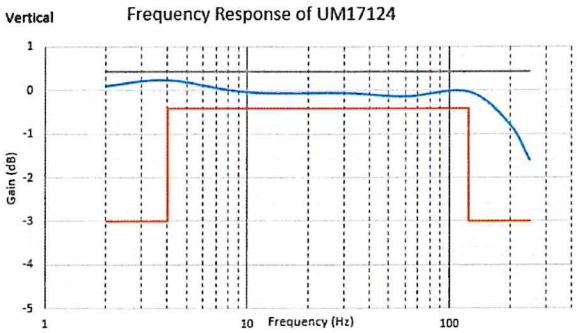
Authorized by: _____

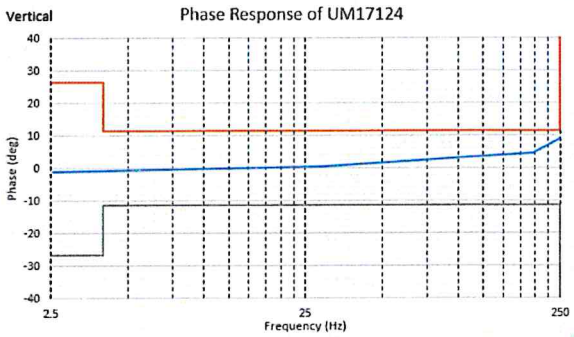
(Anson Kan)

Date: 21 February 2022

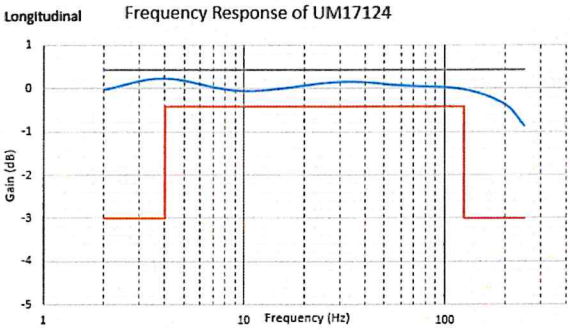
Frequency Responses UM17124

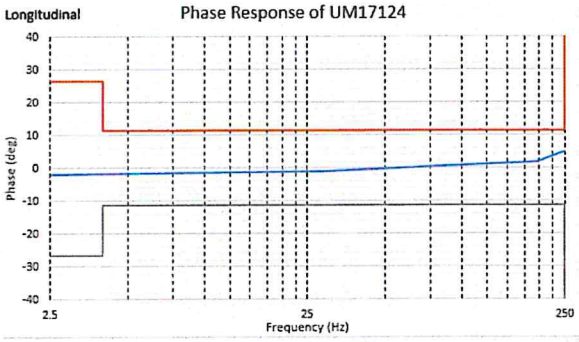
Vertical



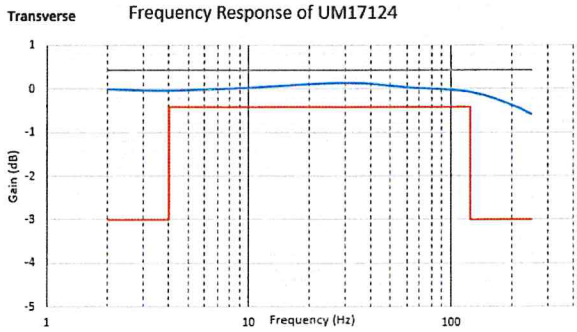


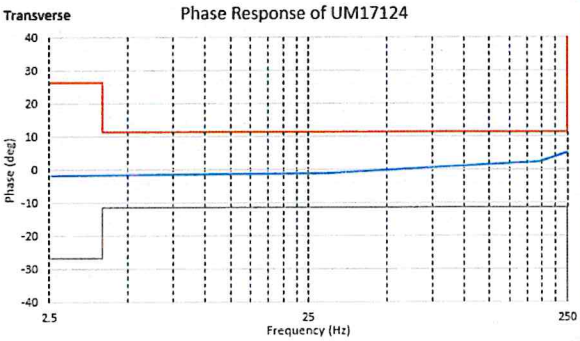
Longitudinal





Transverse





CALIBRATION CERTIFICATE

Calibration Item:	TRIAXIAL GEOPHONE (Calibration with main unit UM17124)
Part Number:	721A2901
Serial No.:	UM17124
Calibration Date:	21 February 2022
Next Calibration Date:	21 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
15MHz Function Generator*	33120A	US34003309
Stanford Spectrum Analyzer	SR760	41550
Keysight Multimeter*	34470A	MY57700765
HP Distortion Meter*	339A	2025A04515
Bruel & Kjaer Accelerometer*	4370	31474
Bruel & Kjaer Charge Amplifier*	2647	2731339
Bruel & Kjaer Conditional Amplifier*	2690	2437929
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by: _____

(Anson Kan)

Date: 21 February 2022

CALIBRATION CERTIFICATE

Calibration Item:	Micromate System ISEE (Calibration with Geophone UM17126)
Model No.:	721A2501
Serial No.:	UM17126
Calibration Date:	28 February 2022
Next Calibration Date:	28 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
15MHz Function Generator*	33120A	US34003309
Stanford Spectrum Analyzer	SR760	41550
Keysight Multimeter*	34470A	MY57700765
HP Distortion Meter*	339A	2025A04515
Bruel & Kjaer Accelerometer*	4370	31474
Bruel & Kjaer Charge Amplifier*	2647	2731339
Bruel & Kjaer Conditional Amplifier*	2690	2437929
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

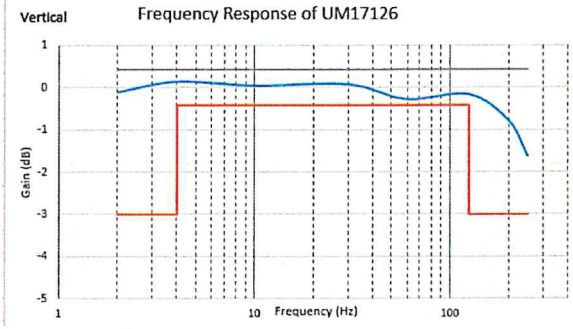
Authorized by: _____

(Anson Kan)

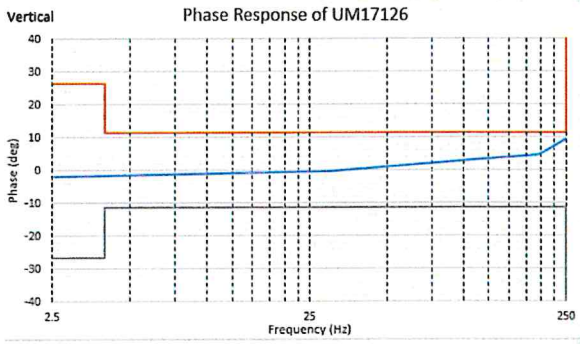
Date: 28 February 2022

Frequency Responses UM17126

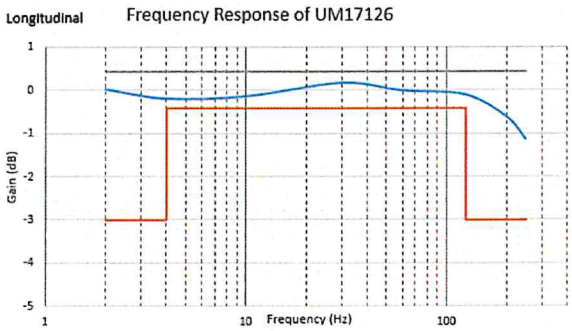
Vertical



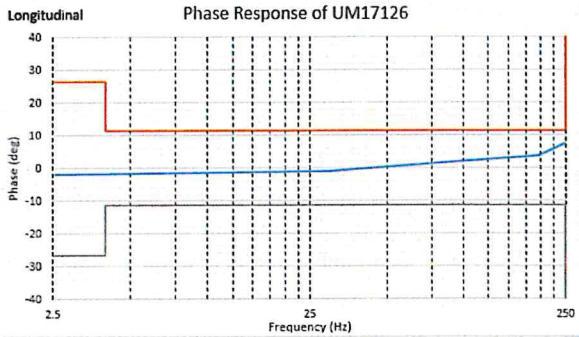
Vertical



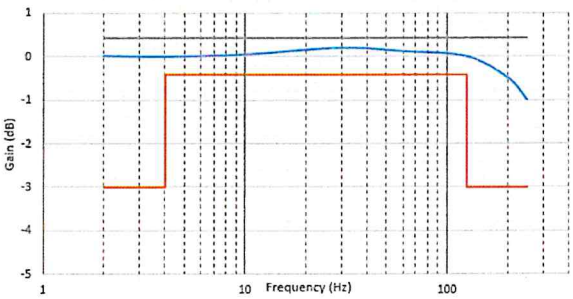
Longitudinal



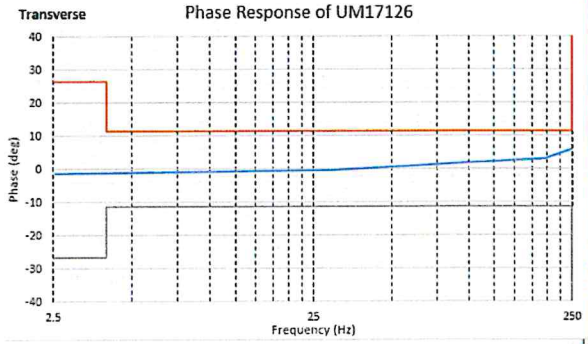
Longitudinal



Transverse



Transverse



CALIBRATION CERTIFICATE

Calibration Item:	TRIAXIAL GEOPHONE (Calibration with main unit UM17126)
Part Number:	721A2901
Serial No.:	UM17126
Calibration Date:	28 February 2022
Next Calibration Date:	28 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
15MHz Function Generator*	33120A	US34003309
Stanford Spectrum Analyzer	SR760	41550
Keysight Multimeter*	34470A	MY57700765
HP Distortion Meter*	339A	2025A04515
Bruel & Kjaer Accelerometer*	4370	31474
Bruel & Kjaer Charge Amplifier*	2647	2731339
Bruel & Kjaer Conditional Amplifier*	2690	2437929
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by: _____

(Anson Kan)

Date: 28 February 2022

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 (June 2022)

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**<u>1hr TSP and 24hr TSP</u>** KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**<u>24hr RSP (Arsenic)</u>** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A(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	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A(4)	ND/2019/03	**<u>1hr TSP and 24hr TSP</u>** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A(5)	ND/2019/05	**<u>1hr TSP and 24hr TSP</u>** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A(6)	ND/2019/03	**<u>1hr TSP</u>** FLN-DMS5 - Noble Hill **<u>24hr TSP</u>** 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 (June 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Jun	2-Jun	**3-Jun**	4-Jun
			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
5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun	11-Jun
	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	
12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun	18-Jun
	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	
19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun	25-Jun
	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	
26-Jun	27-Jun	28-Jun	29-Jun	30-Jun		
	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 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 (June 2022)

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

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 June 2022

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

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 (July 2022)

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
		1hr TSP* X3 KTN-DMS4, FLN-DMS5 **24hr TSP*** KTN-DMS4, 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			
10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul
	1hr TSP* X3 KTN-DMS4, FLN-DMS5 **24hr TSP*** KTN-DMS4, 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, FLN-DMS5 **24hr TSP*** KTN-DMS4, FLN-DMS5A **24hr TSP** FLN-DMS1, FLN-DMS3	
17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-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, FLN-DMS5 **24hr TSP*** KTN-DMS4, 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 **24hr RSP (Arsenic)** KTN-DMS4A	
24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul
			1hr TSP* X3 KTN-DMS4, FLN-DMS5 **24hr TSP*** KTN-DMS4, 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		
31-Jul						

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 EP-467/2013/A EP-468/2013/A	ND/2019/01	**<u>1hr TSP and 24hr TSP</u>** KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**<u>24hr RSP (Arsenic)</u>** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A(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	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A(4)	ND/2019/03	**<u>1hr TSP and 24hr TSP</u>** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A(5)	ND/2019/05	**<u>1hr TSP and 24hr TSP</u>** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A(6)	ND/2019/03	**<u>1hr TSP</u>** FLN-DMS5 - Noble Hill **<u>24hr TSP</u>** 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 (July 2022)

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

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

* Water quality monitoring scheduled on 2 July 2022 was cancelled due to Typhoon Signal no. 8

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 (July 2022)

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

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

#Night-time avifauna monitoring in Long Valley

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts to Aquatic Fauna in Ma Tso Lung Stream and Siu Hang San Tsuen Stream	MS_01, MS_02, MS_03, MS_04, MS_05, MS_06, MS_07, MS_08, MS_09, MS_10, MS_11, MS_12, MS_13, MS_14, MS_15
3	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	T1. Ma Tso Lung riparian zone and associated wetland habitats
		T1. Green belt areas E1-8,D1-8 and G1-3 in KTN NDA
		T1. AGR one C2-4 and C2-2 in KTN NDA
		T1. Areas north of Ng Tung River
		T3. Area west of Siu Hang San Tsuen Stream
		T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au
		T5. Area west and east of the southern limit of the FLN NDA work area
		T6. Areas in the western part of KTN

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Weekly Site Inspection Schedule for July 2022

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
	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)	
10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-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)	
17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-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)	
24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-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)	
31-Jul						

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 (μg/m^3)
2-Jun-22	13:00	Sunny	61.2
2-Jun-22	14:00	Sunny	69.4
2-Jun-22	15:00	Sunny	66.3
8-Jun-22	13:00	Rainy	95.9
8-Jun-22	14:00	Rainy	99.7
8-Jun-22	15:00	Rainy	94.0
14-Jun-22	8:30	Rainy	71.5
14-Jun-22	9:30	Rainy	74.2
14-Jun-22	10:30	Rainy	73.7
20-Jun-22	13:00	Cloudy	46.2
20-Jun-22	14:00	Cloudy	50.6
20-Jun-22	15:00	Cloudy	44.1
24-Jun-22	13:00	Fine	77.0
24-Jun-22	14:00	Fine	72.0
24-Jun-22	15:00	Fine	61.6
30-Jun-22	9:00	Rainy	32.5
30-Jun-22	10:00	Rainy	40.8
30-Jun-22	11:00	Rainy	34.0
		Minimum	32.5
		Maximum	99.7
		Average	64.7

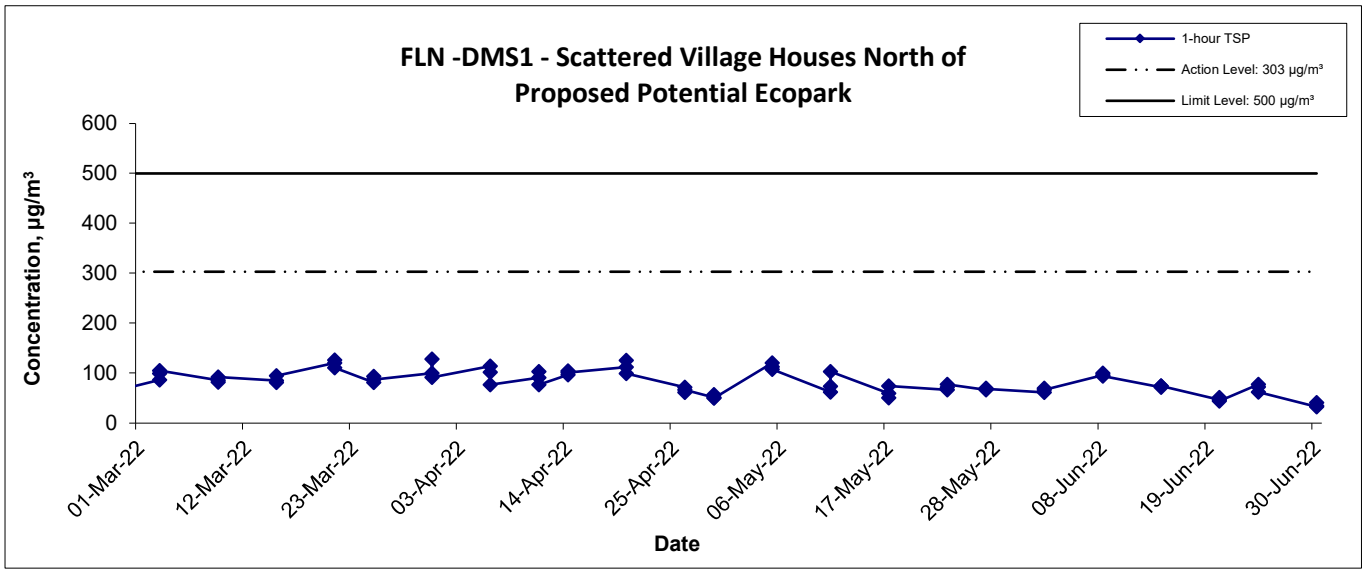
Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration (μg/m^3)
2-Jun-22	13:00	Sunny	72.7
2-Jun-22	14:00	Sunny	66.5
2-Jun-22	15:00	Sunny	70.0
8-Jun-22	13:00	Rainy	95.3
8-Jun-22	14:00	Rainy	100.3
8-Jun-22	15:00	Rainy	89.7
14-Jun-22	13:00	Rainy	40.6
14-Jun-22	14:00	Rainy	55.5
14-Jun-22	15:00	Rainy	44.6
20-Jun-22	13:00	Cloudy	78.6
20-Jun-22	14:00	Cloudy	73.6
20-Jun-22	15:00	Cloudy	70.6
24-Jun-22	13:00	Fine	79.4
24-Jun-22	14:00	Fine	72.8
24-Jun-22	15:00	Fine	78.5
30-Jun-22	13:00	Cloudy	29.1
30-Jun-22	14:00	Cloudy	33.0
30-Jun-22	15:00	Cloudy	41.1
		Minimum	29.1
		Maximum	100.3
		Average	66.2

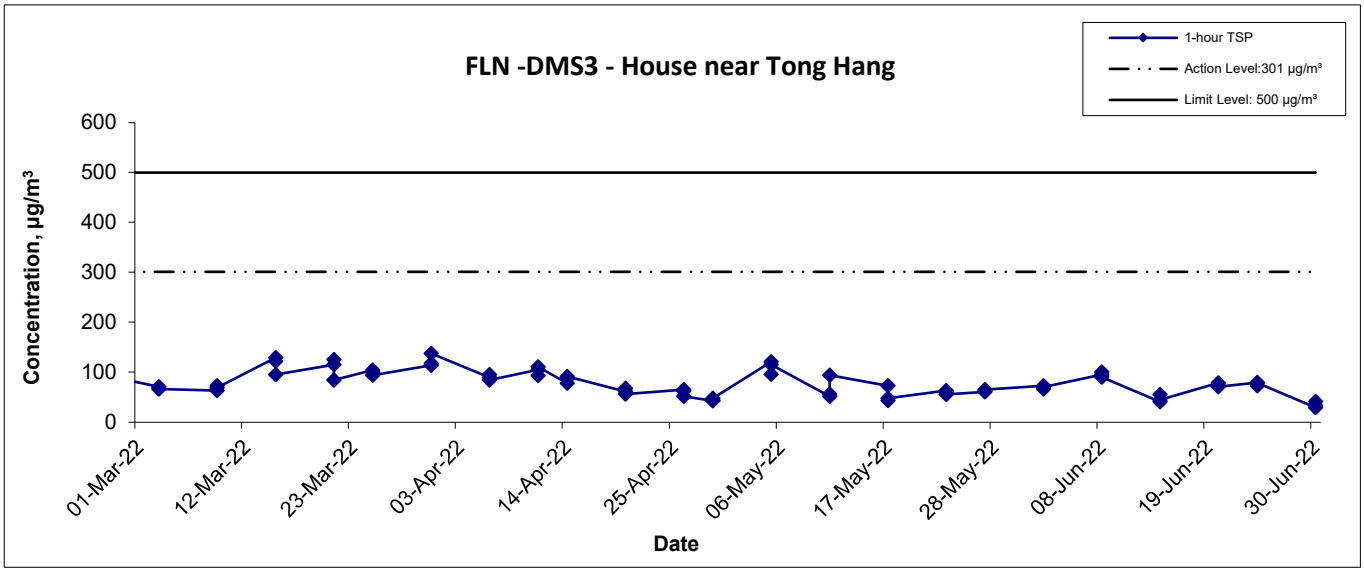
Appendix E - 1-hour TSP Monitoring Results

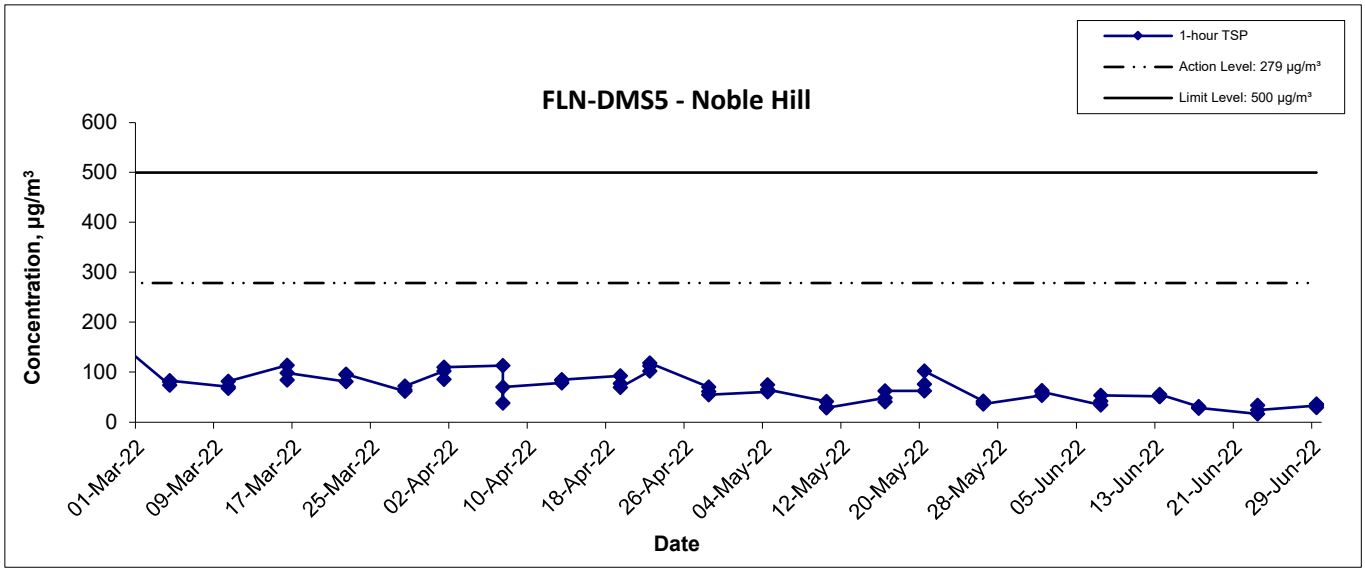
Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration (μg/m^3)
1-Jun-22	13:00	Cloudy	53.7
1-Jun-22	14:00	Cloudy	63.2
1-Jun-22	15:00	Cloudy	60.6
7-Jun-22	13:00	Cloudy	34.0
7-Jun-22	14:00	Cloudy	41.9
7-Jun-22	15:00	Cloudy	53.3
13-Jun-22	13:00	Cloudy	51.8
13-Jun-22	14:00	Cloudy	50.7
13-Jun-22	15:00	Cloudy	55.2
17-Jun-22	9:00	Cloudy	31.1
17-Jun-22	10:00	Cloudy	27.6
17-Jun-22	11:00	Cloudy	28.3
23-Jun-22	9:00	Sunny	16.5
23-Jun-22	10:00	Sunny	33.9
23-Jun-22	11:00	Sunny	24.3
29-Jun-22	9:00	Sunny	32.9
29-Jun-22	10:00	Sunny	29.2
29-Jun-22	11:00	Sunny	36.2
		Minimum	16.5
		Maximum	63.2
		Average	40.2

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration (μg/m^3)
1-Jun-22	13:00	Cloudy	72.6
1-Jun-22	14:00	Cloudy	39.7
1-Jun-22	15:00	Cloudy	44.3
7-Jun-22	13:00	Cloudy	21.8
7-Jun-22	14:00	Cloudy	36.2
7-Jun-22	15:00	Cloudy	54.9
13-Jun-22	9:00	Cloudy	35.5
13-Jun-22	10:00	Cloudy	39.0
13-Jun-22	11:00	Cloudy	39.3
17-Jun-22	13:00	Cloudy	34.8
17-Jun-22	14:00	Cloudy	30.5
17-Jun-22	15:00	Cloudy	24.7
23-Jun-22	9:00	Sunny	19.9
23-Jun-22	10:00	Sunny	32.6
23-Jun-22	11:00	Sunny	38.1
29-Jun-22	9:00	Sunny	34.3
29-Jun-22	10:00	Sunny	33.2
29-Jun-22	11:00	Sunny	21.1
		Minimum	19.9
		Maximum	72.6
		Average	36.3

1-hr TSP Concentration Levels

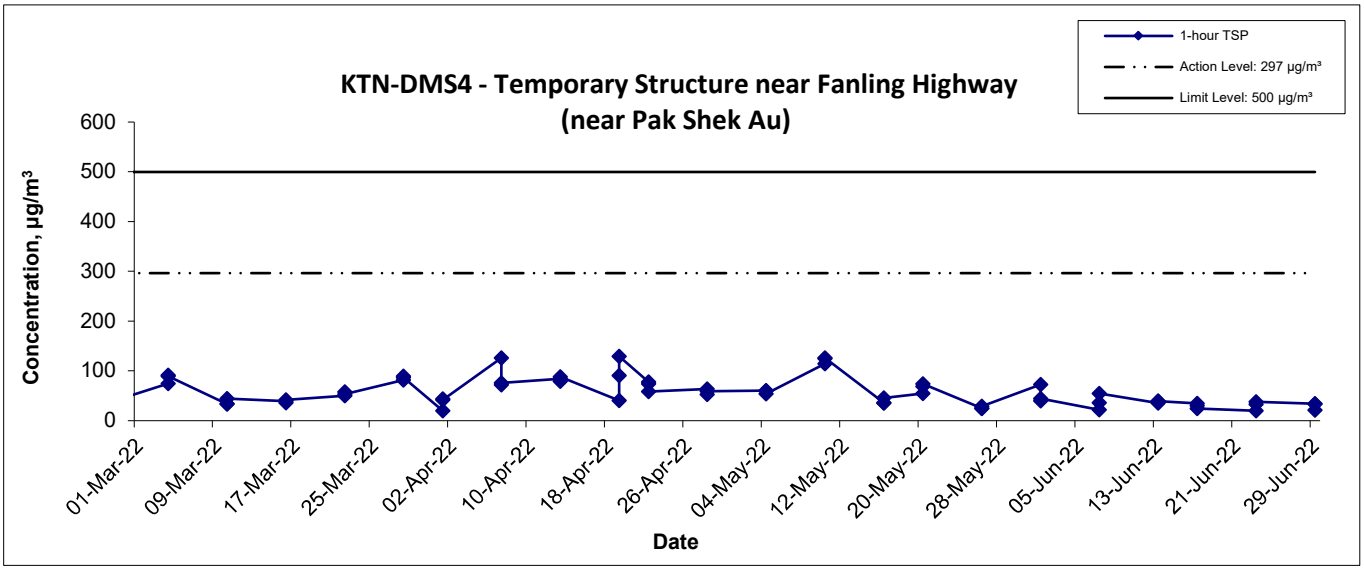






Title	Scale	Project No.	
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix E	

1-hr TSP Concentration Levels



Title	Scale	Project No.	
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	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix E	

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			
1-Jun-22	Cloudy	300.4	3.2512	3.3610	0.1098	6343.4	6367.4	24.0	1.22	1.21	1.21	1748.2	62.8
7-Jun-22	Rainy	298.9	3.4497	3.5311	0.0814	6367.4	6391.4	24.0	1.21	1.22	1.22	1750.9	46.5
13-Jun-22	Rainy	301.3	3.4306	3.5717	0.1411	6391.4	6415.4	24.0	1.21	1.21	1.21	1745.2	80.9
17-Jun-22	Cloudy	301.0	3.3648	3.4260	0.0612	6415.4	6439.4	24.0	1.21	1.21	1.21	1747.0	35.0
23-Jun-22	Sunny	300.2	3.4523	3.5410	0.0887	6439.5	6463.5	24.0	1.22	1.22	1.22	1752.1	50.6
29-Jun-22	Rainy	301.6	3.4173	3.5071	0.0898	6463.5	6487.5	24.0	1.21	1.21	1.21	1741.6	51.6
												Min	35.0
												Max	80.9
												Average	54.6

Location FLN-DMS3 - House near Tong Hang

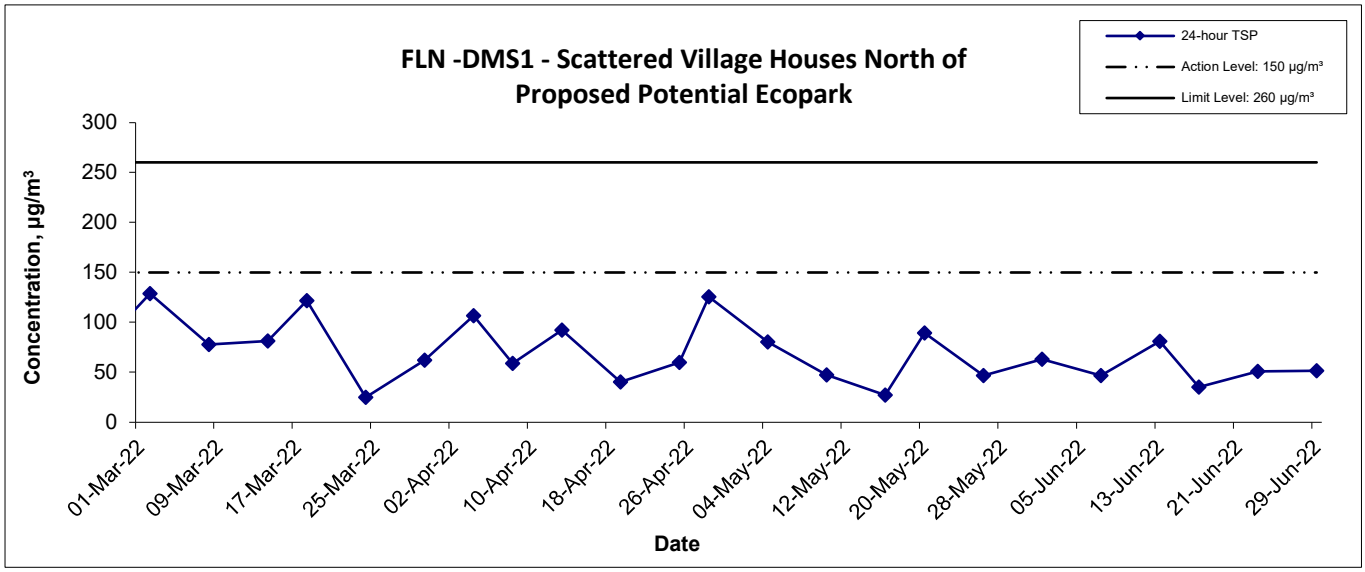
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
1-Jun-22	Cloudy	300.4	3.3146	3.3643	0.0497	7386.8	7410.8	24.0	1.20	1.20	1.20	1730.3	28.7
7-Jun-22	Rainy	298.9	3.5246	3.5743	0.0497	7402.0	7426.0	24.0	1.20	1.21	1.20	1732.9	28.7
13-Jun-22	Rainy	301.3	3.3349	3.3869	0.0520	7426.0	7450.0	24.0	1.20	1.20	1.20	1727.4	30.1
17-Jun-22	Cloudy	301.0	3.5172	3.5616	0.0444	7450.0	7474.0	24.0	1.20	1.20	1.20	1729.1	25.7
23-Jun-22	Sunny	300.2	3.4855	3.5398	0.0543	7474.0	7498.0	24.0	1.20	1.20	1.20	1734.1	31.3
29-Jun-22	Rainy	301.6	3.4434	3.5238	0.0804	7498.0	7522.0	24.0	1.20	1.20	1.20	1723.9	46.6
												Min	25.7
												Max	46.6
												Average	31.9

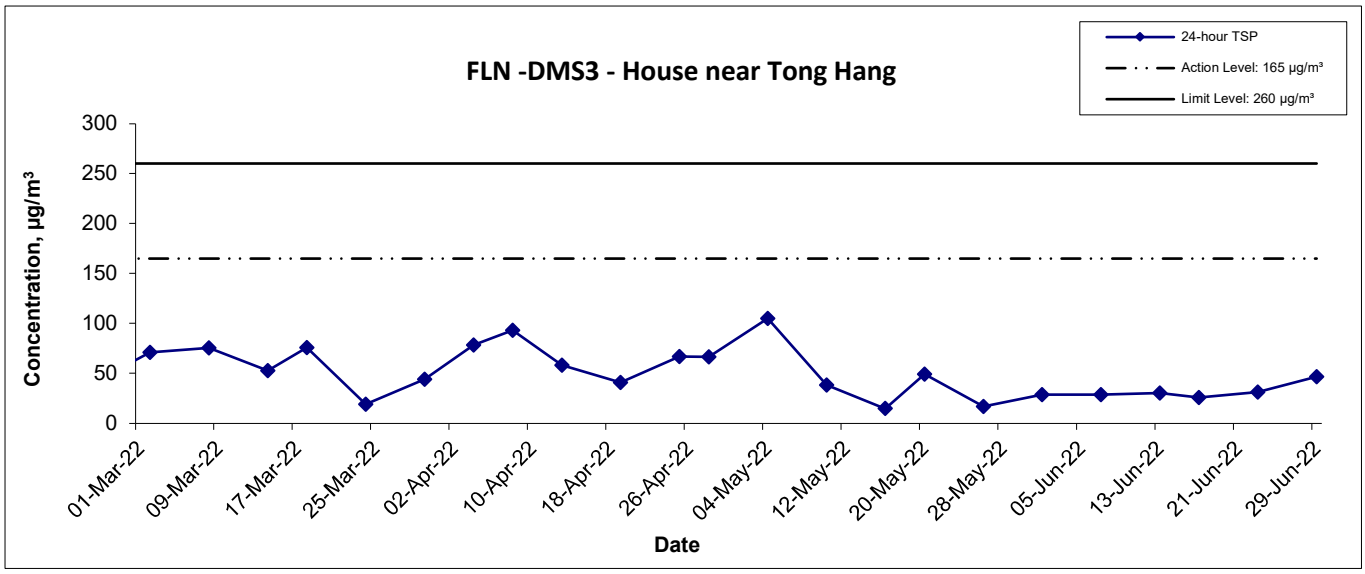
Appendix E - 24-hour TSP Monitoring Results

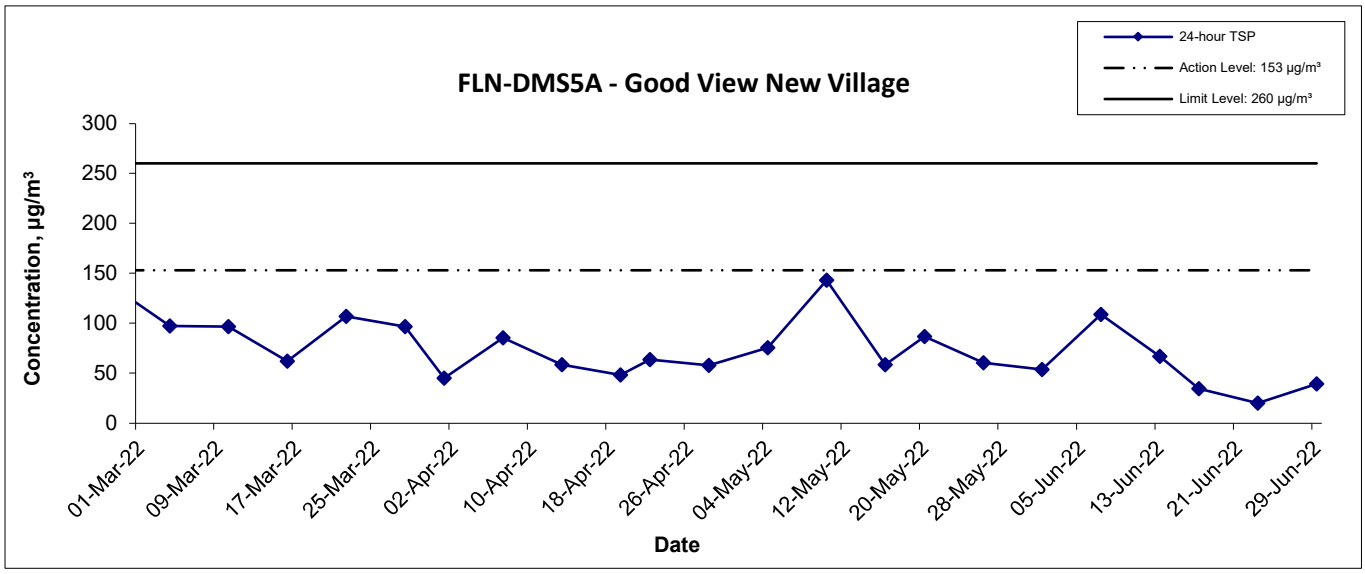
Location FLN-DMS5A - Good View New Village			
Date	Time	Weather	Particulate Concentration (μg/m^3)
1-Jun-22	11:30	Cloudy	53.5
7-Jun-22	12:00	Rainy	108.7
13-Jun-22	10:10	Rainy	66.8
17-Jun-22	9:30	Cloudy	34.5
23-Jun-22	11:00	Sunny	20.1
29-Jun-22	9:20	Sunny	39.3
		Minimum	20.1
		Maximum	108.7
		Average	53.8

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration (μg/m^3)
1-Jun-22	9:30	Cloudy	48.4
7-Jun-22	12:00	Rainy	101.9
13-Jun-22	9:40	Rainy	53.7
17-Jun-22	9:00	Cloudy	30.2
23-Jun-22	9:00	Sunny	31.8
29-Jun-22	9:00	Sunny	37.5
		Minimum	30.2
		Maximum	101.9
		Average	50.6

24-hr TSP Concentration Levels

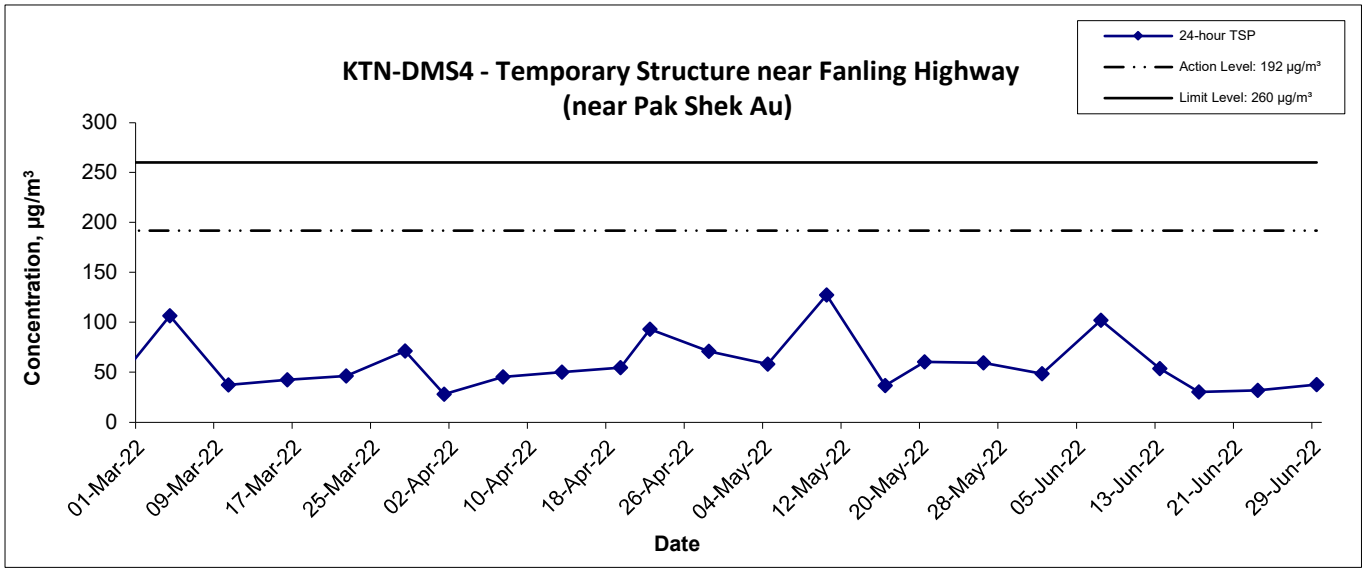






Title	Scale	Project No.	
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix E	

24-hr TSP Concentration Levels

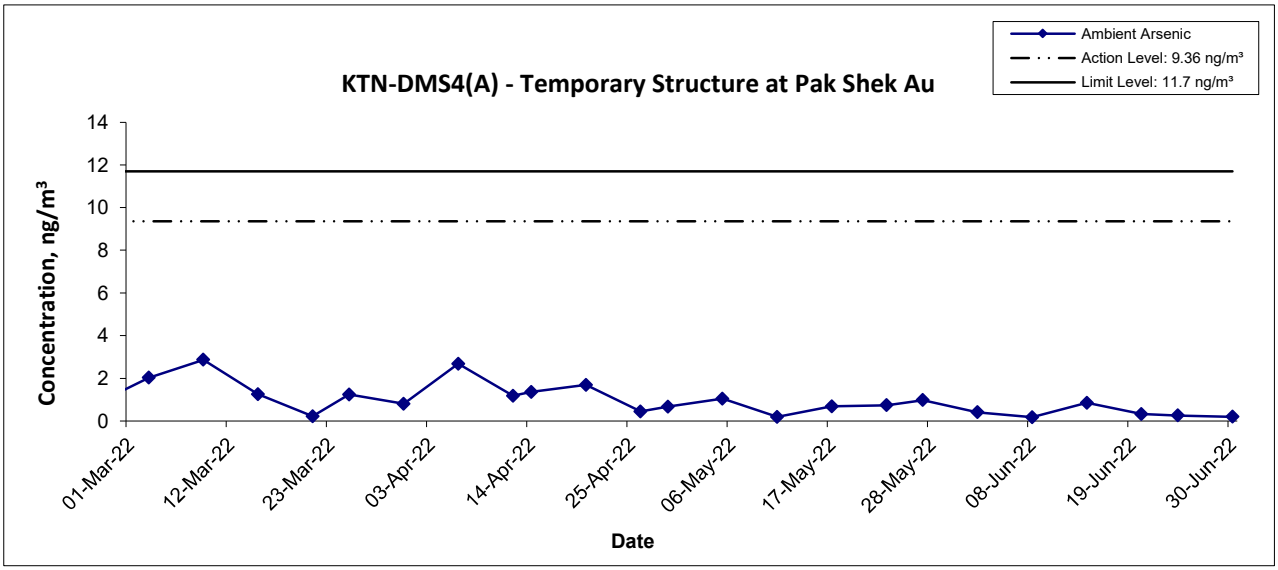


Title	Scale	Project No.	
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix E	

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)
2-Jun-22	0.68	1642.5	0.41
8-Jun-22	0.30	1632.6	0.18
14-Jun-22	1.40	1640.0	0.85
20-Jun-22	0.54	1645.0	0.33
24-Jun-22	0.43	1637.7	0.26
30-Jun-22	0.33	1644.0	0.20

Ambient Arsenic



Title	Scale	Project No.	
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	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix E	

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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.:	36773
Date of Issue:	2022-06-09
Date Received:	2022-06-04
Date Tested:	2022-06-04
Date Completed:	2022-06-09
Page:	1 of 1

ATTN: **Ms Ivy Tam**

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36773
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	210906/043
Sample No.	36773-1
Arsenic (μg)	0.68

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.:	QC 36773
Date of Issue:	2022-06-09
Date Received:	2022-06-04
Date Tested:	2022-06-04
Date Completed:	2022-06-09
Page:	1 of 2

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	97	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 (%)	104	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36773

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TEST REPORT

Report No.:	QC 36773
Date of Issue:	2022-06-09
Date Received:	2022-06-04
Date Tested:	2022-06-04
Date Completed:	2022-06-09

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	101	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	3	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	96	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36773

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
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ATTN: **Ms Ivy Tam**

Report No.:	36793
Date of Issue:	2022-06-14
Date Received:	2022-06-08
Date Tested:	2022-06-08
Date Completed:	2022-06-14
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36793
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	210906/044
Sample No.	36793-1
Arsenic (μg)	0.30

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,
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Shatin, N.T., Hong Kong

Report No.:	QC 36793
Date of Issue:	2022-06-14
Date Received:	2022-06-08
Date Tested:	2022-06-08
Date Completed:	2022-06-14

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)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	96	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	102	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 (%)	92	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36793

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TEST REPORT

Report No.:	QC 36793
Date of Issue:	2022-06-14
Date Received:	2022-06-08
Date Tested:	2022-06-08
Date Completed:	2022-06-14

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	99	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	7	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	96	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36793

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
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ATTN: **Ms Ivy Tam**

Report No.:	36812
Date of Issue:	2022-06-21
Date Received:	2022-06-15
Date Tested:	2022-06-15
Date Completed:	2022-06-21
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36812
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	210906/045
Sample No.	36812-1
Arsenic (μg)	1.4

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

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APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
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Report No.:	QC 36812
Date of Issue:	2022-06-21
Date Received:	2022-06-15
Date Tested:	2022-06-15
Date Completed:	2022-06-21

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)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	87	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	98	90-110

Interference check solution A

Parameter	ICS A	Acceptance
Arsenic (μg)	<0.036	<0.036

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	109	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36812

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TEST REPORT

Report No.:	QC 36812
Date of Issue:	2022-06-21
Date Received:	2022-06-15
Date Tested:	2022-06-15
Date Completed:	2022-06-21

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	88	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	11	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	92	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36812

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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.:	36829
Date of Issue:	2022-06-27
Date Received:	2022-06-21
Date Tested:	2022-06-21
Date Completed:	2022-06-27
Page:	1 of 1

ATTN: **Ms Ivy Tam**

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36829
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	210906/046
Sample No.	36829-1
Arsenic (μg)	0.54

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,
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Report No.:	QC 36829
Date of Issue:	2022-06-27
Date Received:	2022-06-21
Date Tested:	2022-06-21
Date Completed:	2022-06-27

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)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	107	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	108	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 (%)	109	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36829

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TEST REPORT

Report No.:	QC 36829
Date of Issue:	2022-06-27
Date Received:	2022-06-21
Date Tested:	2022-06-21
Date Completed:	2022-06-27

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	92	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	91	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36829

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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.:	36856
Date of Issue:	2022-07-04
Date Received:	2022-06-27
Date Tested:	2022-06-27
Date Completed:	2022-07-04
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36856
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	210906/047
Sample No.	36856-1
Arsenic (μg)	0.43

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.:	QC 36856
Date of Issue:	2022-07-04
Date Received:	2022-06-27
Date Tested:	2022-06-27
Date Completed:	2022-07-04

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)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	105	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	97	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 (%)	100	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36856

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TEST REPORT

Report No.:	QC 36856
Date of Issue:	2022-07-04
Date Received:	2022-06-27
Date Tested:	2022-06-27
Date Completed:	2022-07-04

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	96	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	104	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36856

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
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Report No.:	36857
Date of Issue:	2022-07-06
Date Received:	2022-07-04
Date Tested:	2022-07-04
Date Completed:	2022-07-06
Page:	1 of 1

ATTN: **Ms Ivy Tam**

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36857
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	210906/048
Sample No.	36857-1
Arsenic (μg)	0.33

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.:	QC 36857
Date of Issue:	2022-07-06
Date Received:	2022-07-04
Date Tested:	2022-07-04
Date Completed:	2022-07-06
Page:	1 of 2

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	89	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 (%)	92	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36857

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TEST REPORT

Report No.:	QC 36857
Date of Issue:	2022-07-06
Date Received:	2022-07-04
Date Tested:	2022-07-04
Date Completed:	2022-07-06

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	103	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	3	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	98	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36857

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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}
2-Jun-22	Sunny	13:45	67.5	71.4	62.0	68.3	69.9
		13:50	68.8	71.9	62.9		
		13:55	68.2	72.1	61.4		
		14:00	67.8	71.2	62.2		
		14:05	68.9	71.6	63.4		
		14:10	68.7	72.3	60.5		
8-Jun-22	Cloudy	17:30	70.7	74.5	62.7	69.0	
		17:35	68.8	71.7	63.5		
		17:40	70.0	73.8	62.7		
		17:45	69.2	72.1	64.4		
		17:50	66.5	70.2	61.2		
		17:55	67.1	70.6	62.8		
14-Jun-22	Cloudy	11:30	66.7	70.1	58.1	68.0	
		11:35	68.7	71.3	62.7		
		11:40	68.7	71.4	61.9		
		11:45	67.1	70.6	61.6		
		11:50	69.3	72.5	61.9		
		11:55	66.8	70.1	62.4		
24-Jun-22	Cloudy	15:40	68.5	70.8	62.2	67.3	
		15:45	66.5	69.9	59.7		
		15:50	65.9	69.3	58.8		
		15:55	67.1	71.6	59.3		
		16:00	67.9	71.5	60.5		
		16:05	67.5	71.3	60.5		
30-Jun-22	Cloudy	09:20	68.9	70.4	56.3	68.0	
		09:25	69.1	71.3	56.9		
		09:30	66.7	68.5	55.9		
		09:35	66.9	69.2	56.7		
		09:40	67.3	69.4	56.5		
		09:45	68.3	71.4	60.6		

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}
2-Jun-22	Sunny	14:30	68.2	69.7	64.0	67.2	59.6
		14:35	66.0	68.6	60.7		
		14:40	65.5	67.7	59.9		
		14:45	67.3	69.3	63.4		
		14:50	67.4	69.6	63.4		
		14:55	68.3	70.9	63.6		
8-Jun-22	Cloudy	16:45	55.6	58.8	50.2	56.6	
		16:50	56.1	59.0	50.6		
		16:55	57.4	59.1	50.6		
		17:00	58.5	59.3	50.8		
		17:05	56.0	59.0	50.4		
		17:10	55.3	59.1	50.2		
14-Jun-22	Cloudy	13:00	59.4	60.3	58.7	64.7	
		13:05	59.1	59.8	58.5		
		13:10	66.1	71.5	58.9		
		13:15	68.2	72.0	59.5		
		13:20	66.5	69.0	56.8		
		13:25	59.5	62.8	52.5		
24-Jun-22	Sunny	16:25	67.3	69.3	64.4	67.8	
		16:30	68.0	69.4	64.7		
		16:35	68.5	70.0	65.8		
		16:40	69.1	69.5	64.9		
		16:45	66.3	67.6	64.8		
		16:50	66.7	68.2	64.7		
30-Jun-22	Cloudy	13:00	60.1	63.1	56.0	59.4	
		13:05	60.4	63.2	55.7		
		13:10	60.1	62.6	55.5		
		13:15	59.5	62.3	56.3		
		13:20	58.2	60.8	55.8		
		13:25	57.7	60.1	55.3		

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}
1-Jun-22	Cloudy	09:00	55.4	57.5	52.7	56.6	58.6
		09:05	59.0	60.3	53.6		
		09:10	57.6	60.9	52.8		
		09:15	56.8	58.4	53.4		
		09:20	53.9	55.5	52.0		
		09:25	54.6	57.0	51.6		
7-Jun-22	Cloudy	13:15	57.5	61.4	51.4	56.0	
		13:20	56.6	58.5	51.0		
		13:25	53.9	56.4	51.0		
		13:30	55.7	58.2	50.9		
		13:35	56.1	58.2	51.1		
		13:40	55.4	58.0	50.7		
13-Jun-22	Cloudy	13:25	56.1	58.0	53.5	57.6	
		13:30	55.8	57.5	53.3		
		13:35	55.4	57.3	53.2		
		13:40	56.5	59.5	52.4		
		13:45	56.9	58.8	54.8		
		13:50	61.4	64.1	54.7		
23-Jun-22	Sunny	09:00	55.2	57.9	51.6	61.6	
		09:05	68.4	72.7	50.8		
		09:10	55.1	57.3	51.9		
		09:15	53.1	55.7	51.2		
		09:20	53.7	56.5	51.1		
		09:25	58.7	62.0	50.7		
29-Jun-22	Sunny	09:00	58.3	62.7	48.7	56.0	
		09:05	56.8	58.8	48.4		
		09:10	57.4	61.1	52.1		
		09:15	53.6	56.0	51.7		
		09:20	53.7	56.5	50.9		
		09:25	53.4	55.8	50.7		

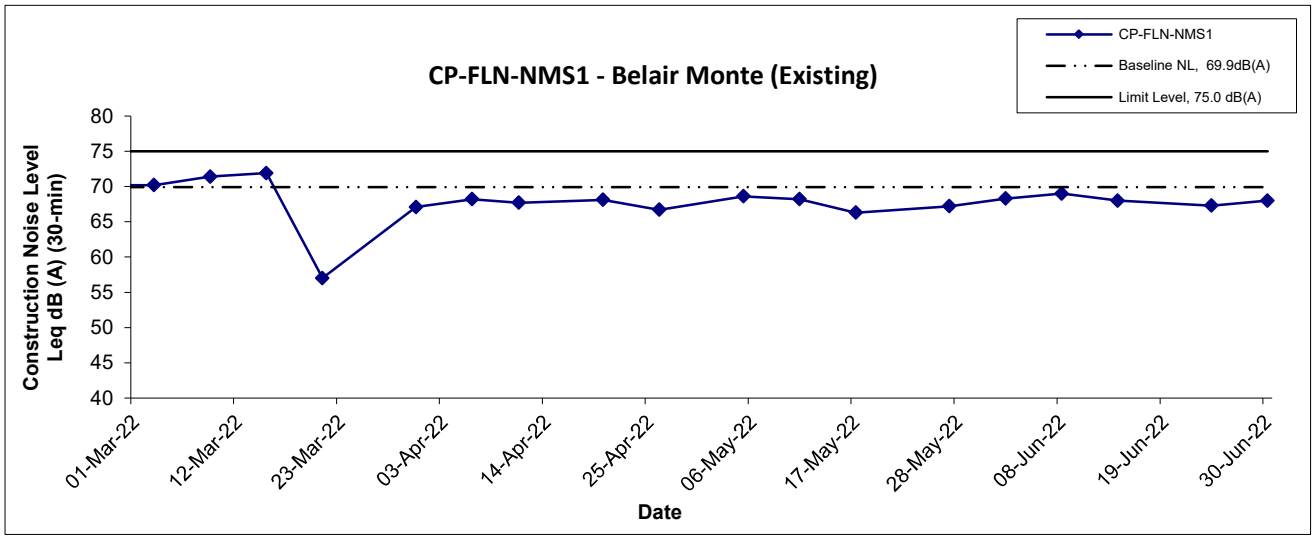
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
1-Jun-22	Ccloudy	09:10	57.3	57.5	56.8	58.1	51.6
		09:15	60.3	62.4	57.4		
		09:20	58.7	59.3	57.0		
		09:25	58.1	59.6	56.6		
		09:30	56.8	57.3	56.5		
		09:35	56.1	57.1	56.3		
7-Jun-22	Cloudy	13:25	65.7	70.7	57.5	60.6	
		13:30	58.3	58.4	57.2		
		13:35	57.5	58.0	57.1		
		13:40	58.1	59.0	57.2		
		13:45	58.0	58.2	57.3		
		13:50	58.5	58.9	57.2		
13-Jun-22	Cloudy	13:35	59.9	61.8	58.2	61.4	
		13:40	60.0	61.9	58.1		
		13:45	58.8	59.8	57.9		
		13:50	58.8	59.6	57.7		
		13:55	60.3	63.1	58.3		
		14:00	65.7	72.6	57.7		
23-Jun-22	Sunny	09:45	58.7	59.3	58.0	58.5	
		09:50	58.1	58.5	57.7		
		09:55	57.8	58.1	57.5		
		10:00	58.9	60.8	57.5		
		10:05	59.1	61.1	57.6		
		10:10	58.4	59.1	57.9		
29-Jun-22	Sunny	09:45	57.3	58.8	56.0	59.5	
		09:50	56.1	56.3	55.7		
		09:55	60.6	65.1	56.0		
		10:00	56.5	57.4	55.7		
		10:05	56.1	56.7	55.4		
		10:10	63.9	69.8	55.9		

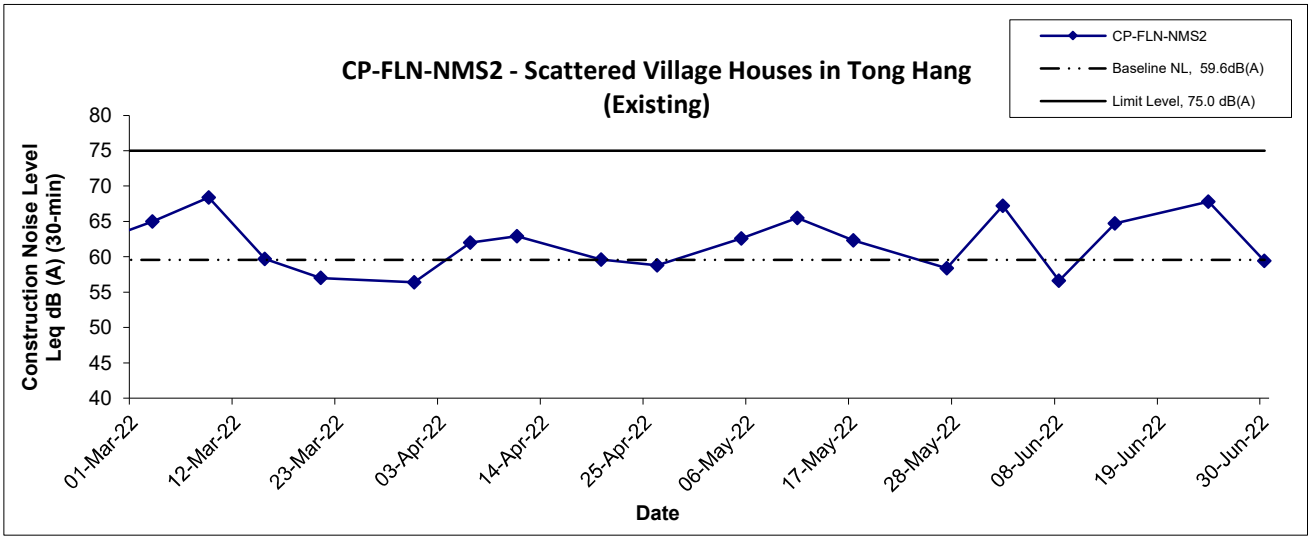
Appendix F - Noise Monitoring Results

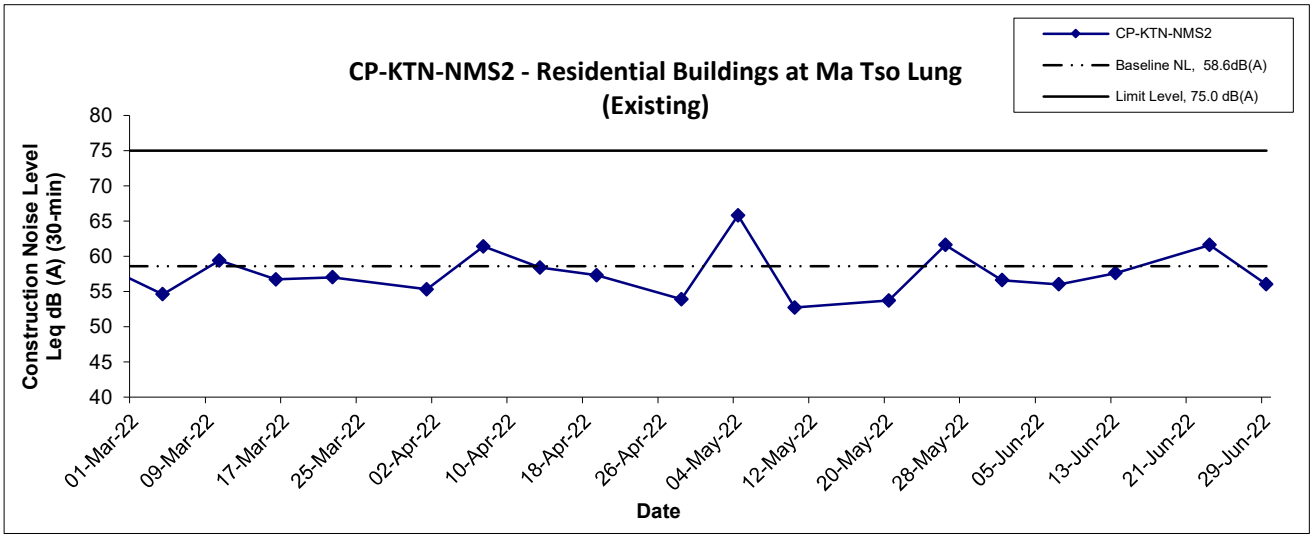
Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
1-Jun-22	Cloudy	10:45	59.0	59.5	58.6	60.1	57.2
		10:50	58.9	59.4	58.5		
		10:55	59.2	60.4	58.4		
		11:00	58.3	59.1	56.1		
		11:05	63.1	66.7	56.5		
		11:10	60.1	62.6	55.6		
7-Jun-22	Cloudy	15:30	61.8	65.7	54.6	59.5	
		15:35	57.1	58.5	54.2		
		15:40	61.9	66.1	54.7		
		15:45	59.0	60.8	54.7		
		15:50	57.0	58.1	54.4		
		15:55	56.3	57.6	54.7		
13-Jun-22	Cloudy	15:10	60.6	60.9	59.0	60.2	
		15:15	61.2	64.2	57.6		
		15:20	59.1	60.2	57.2		
		15:25	58.9	59.7	57.8		
		15:30	59.7	60.6	58.1		
		15:35	61.0	62.9	59.0		
23-Jun-22	Sunny	10:45	54.7	56.2	52.6	55.6	
		10:50	57.8	59.6	55.0		
		10:55	55.4	57.5	53.4		
		11:00	54.7	56.4	53.4		
		11:05	55.3	57.1	53.2		
		11:10	54.7	56.2	52.6		
29-Jun-22	Sunny	11:25	55.1	56.7	52.1	55.3	
		11:30	54.6	56.9	51.6		
		11:35	53.0	55.0	51.4		
		11:40	52.9	54.4	51.5		
		11:45	55.7	53.7	50.9		
		11:50	58.3	62.8	52.0		

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}
1-Jun-22	Cloudy	09:55	51.5	52.7	49.9	58.2	55.1
		10:00	59.2	61.9	54.1		
		10:05	58.5	60.9	53.5		
		10:10	57.4	59.6	53.9		
		10:15	59.2	61.0	53.6		
		10:20	59.7	61.8	55.2		
7-Jun-22	Cloudy	14:10	57.8	60.5	55.8	58.3	
		14:15	56.7	58.1	55.5		
		14:20	57.6	58.9	55.5		
		14:25	60.2	64.5	54.4		
		14:30	58.7	61.0	56.0		
		14:35	58.0	59.1	55.7		
13-Jun-22	Cloudy	14:25	55.6	58.3	51.4	56.3	
		14:30	58.8	61.6	52.6		
		14:35	53.2	54.7	52.0		
		14:40	56.6	58.4	51.9		
		14:45	55.9	57.6	52.9		
		14:50	55.5	57.5	53.7		
23-Jun-22	Sunny	10:30	58.5	61.5	55.6	61.4	
		10:35	59.8	60.8	56.2		
		10:40	65.2	65.9	55.6		
		10:45	55.4	55.9	54.8		
		10:50	64.1	62.1	55.3		
		10:55	56.8	58.2	55.2		
29-Jun-22	Sunny	10:50	60.5	62.3	52.9	58.7	
		10:55	56.5	58.3	51.6		
		11:00	61.9	66.8	52.2		
		11:05	55.5	58.0	53.2		
		11:10	55.3	57.1	53.5		
		11:15	58.2	60.3	54.7		

Noise Levels

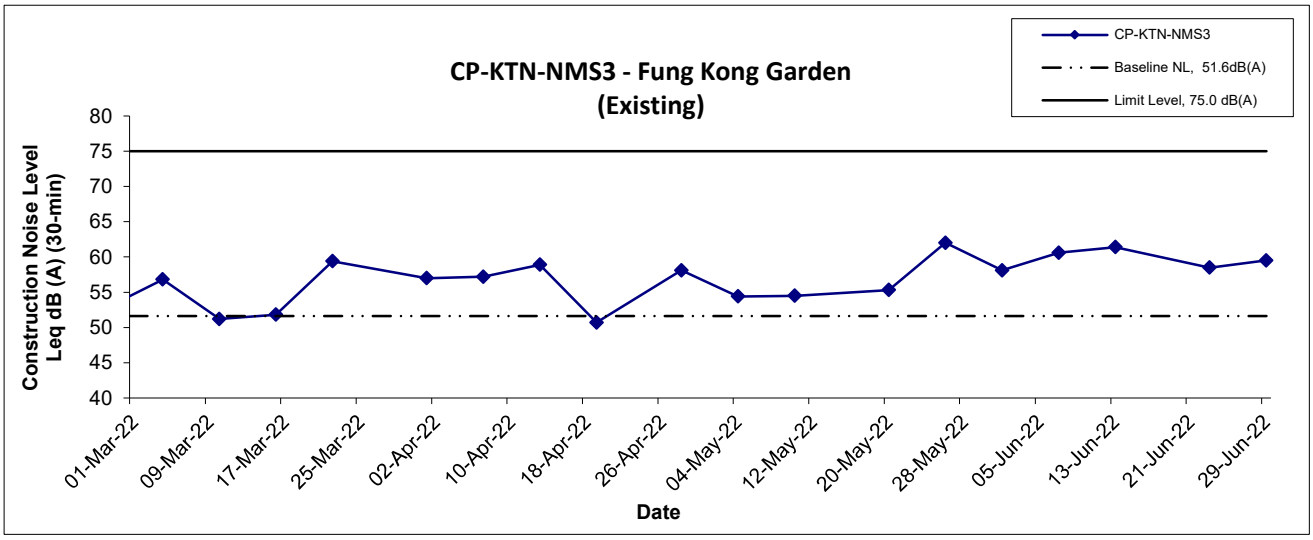


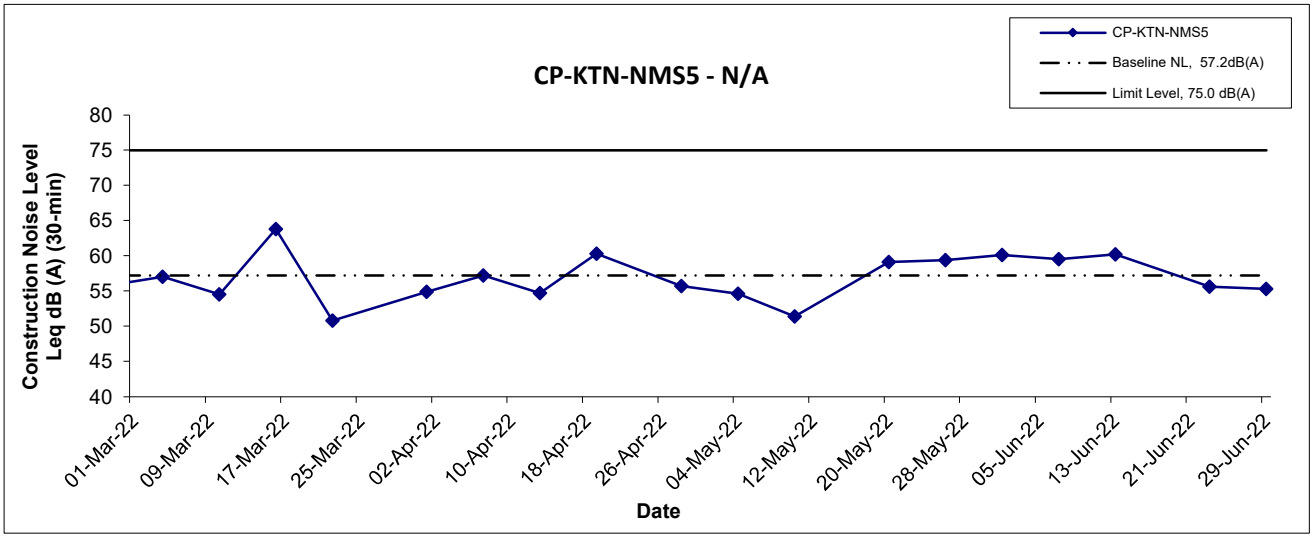


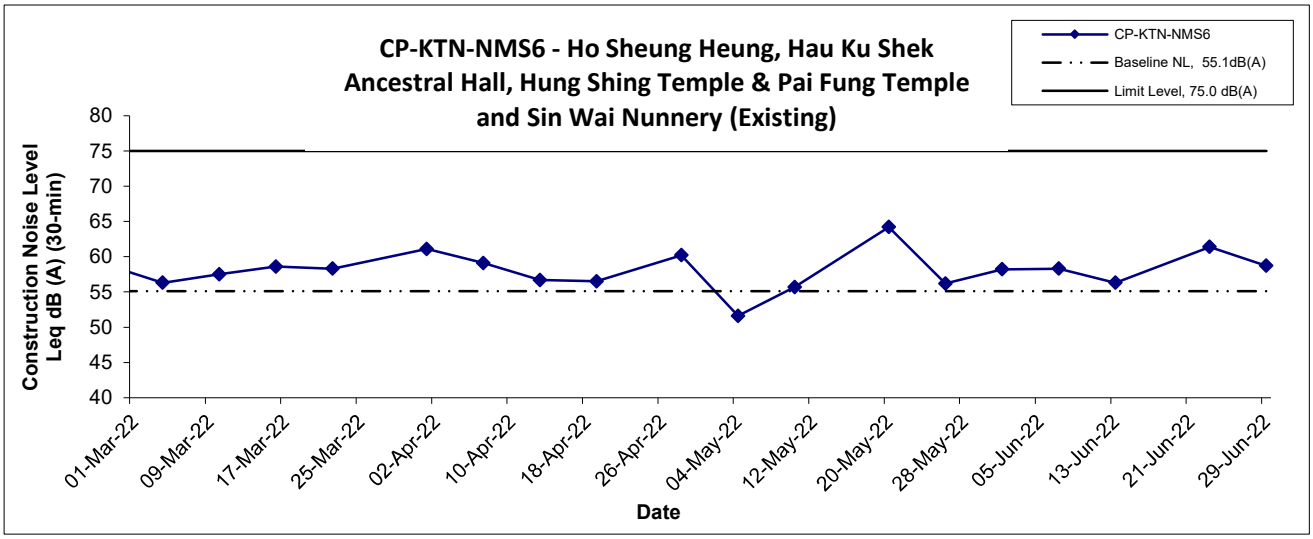


Title	Scale	Project No.	
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix F	

Noise Levels







Title	Scale	Project No.	
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	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix F	

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
1-Jun-22	Cloudy	11:03	Middle	0.1	29.3 29.3	29.3	8.6 8.6	8.6	0.1 0.1	0.1	88.1 88.1	88.1	6.7 6.7	6.7	20.8 20.7	20.8	13 13	13.0	6 6	6.0
4-Jun-22	Cloudy	09:48	Middle	0.2	28.3 28.3	28.3	7.6 7.6	7.6	0.1 0.1	0.1	54.7 54.6	54.7	4.3 4.3	4.3	8.7 8.6	8.7	20 17	18.5	10 10	10.0
6-Jun-22	Sunny	11:07	Middle	0.2	28.3 28.3	28.3	8.0 8.0	8.0	0.1 0.1	0.1	76.7 76.7	76.7	6.0 6.0	6.0	3.9 3.9	3.9	5 5	5.0	9 9	9.0
8-Jun-22	Rainy	15:33	Middle	0.3	25.3 25.3	25.3	8.1 8.1	8.1	0.1 0.1	0.1	89.0 89.0	89.0	7.3 7.3	7.3	84.2 84.2	84.2	51 52	51.5	8 8	8.0
10-Jun-22	Rainy	11:24	Middle	0.2	26.4 26.4	26.4	7.7 7.7	7.7	0.1 0.1	0.1	70.5 69.9	70.2	5.7 5.6	5.7	37.9 37.6	37.8	24 30	27.0	16 15	15.5
13-Jun-22	Cloudy	13:00	Middle	0.2	28.3 28.3	28.3	8.0 8.0	8.0	0.1 0.1	0.1	93.3 93.3	93.3	7.3 7.3	7.3	6.8 6.8	6.8	11 13	12.0	10 9	9.5
15-Jun-22	Sunny	11:17	Middle	0.2	24.4 24.3	24.4	8.0 8.0	8.0	0.1 0.1	0.1	82.4 82.3	82.4	6.9 6.9	6.9	5.1 5.0	5.1	5 5	5.0	7 7	7.0
17-Jun-22	Cloudy	09:45	Middle	0.2	25.1 25.1	25.1	7.3 7.3	7.3	0.1 0.1	0.1	69.5 69.4	69.5	5.7 5.7	5.7	5.4 5.3	5.4	8 7	7.5	9 8	8.5
20-Jun-22	Cloudy	11:40	Middle	0.2	26.1 26.1	26.1	7.5 7.5	7.5	0.1 0.1	0.1	76.4 76.4	76.4	6.2 6.2	6.2	5.1 5.1	5.1	7 6	6.5	7 8	7.5
22-Jun-22	Sunny	13:36	Middle	0.2	29.4 29.4	29.4	6.0 6.0	6.0	0.1 0.1	0.1	78.0 78.0	78.0	6.0 6.0	6.0	5.7 5.5	5.6	8 8	8.0	9 10	9.5
24-Jun-22	Fine	13:22	Middle	0.2	30.3 30.3	30.3	6.9 6.9	6.9	0.1 0.1	0.1	86.5 86.5	86.5	6.5 6.5	6.5	3.0 3.0	3.0	5 4	4.5	9 9	9.0
27-Jun-22	Sunny	13:22	Middle	0.2	30.3 30.3	30.3	7.5 7.5	7.5	0.1 0.1	0.1	88.8 88.7	88.8	6.7 6.7	6.7	5.8 5.7	5.8	9 9	9.0	8 9	8.5
29-Jun-22	Sunny	11:27	Middle	0.2	28.6 28.6	28.6	6.0 6.0	6.0	0.1 0.1	0.1	83.2 83.3	83.3	6.4 6.5	6.5	5.7 5.4	5.6	8 8	8.0	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: SYR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (μg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Jun-22	Cloudy	11:21	Middle	0.5	29.9 29.9	29.9	7.7 7.7	7.7	0.1 0.1	0.1	83.0 82.6	82.8	6.3 6.3	6.3	24.0 24.7	24.4	12 11	11.5	4 4	4.0
4-Jun-22	Cloudy	10:08	Middle	0.6	28.2 28.2	28.2	7.6 7.6	7.6	0.1 0.1	0.1	80.3 81.4	80.9	6.3 6.4	6.4	25.0 24.9	25.0	30 37	33.5	6 6	6.0
6-Jun-22	Sunny	11:17	Middle	0.5	28.7 28.7	28.7	7.9 7.9	7.9	0.1 0.1	0.1	80.6 80.0	80.3	6.2 6.2	6.2	13.0 13.1	13.1	16 17	16.5	8 9	8.5
8-Jun-22	Rainy	15:47	Middle	0.4	25.2 25.2	25.2	8.1 8.1	8.1	0.1 0.1	0.1	90.6 90.6	90.6	7.5 7.5	7.5	95.2 94.5	94.9	72 72	72.0	8 8	8.0
10-Jun-22	Rainy	11:41	Middle	0.4	26.1 26.1	26.1	7.7 7.7	7.7	0.1 0.1	0.1	108.8 108.8	108.8	8.8 8.8	8.8	25.6 25.5	25.6	14 16	15.0	8 8	8.0
13-Jun-22	Cloudy	14:46	Middle	0.3	29.5 29.5	29.5	8.0 8.0	8.0	0.1 0.1	0.1	123.5 123.5	123.5	9.4 9.4	9.4	22.8 22.2	22.5	28 23	25.5	7 7	7.0
15-Jun-22	Sunny	11:29	Middle	0.5	26.3 26.3	26.3	8.1 8.1	8.1	0.1 0.1	0.1	79.1 78.2	78.7	6.4 6.3	6.4	15.9 16.1	16.0	15 15	15.0	4 4	4.0
17-Jun-22	Cloudy	09:57	Middle	0.5	26.8 26.8	26.8	7.7 7.7	7.7	0.1 0.1	0.1	79.0 78.5	78.8	6.3 6.3	6.3	17.4 17.7	17.6	18 20	19.0	6 6	6.0
20-Jun-22	Cloudy	11:52	Middle	0.4	27.7 27.7	27.7	7.2 7.2	7.2	0.1 0.1	0.1	79.2 79.9	79.6	6.2 6.3	6.3	21.4 21.2	21.3	22 18	20.0	6 5	5.5
22-Jun-22	Sunny	13:52	Middle	0.3	32.4 32.5	32.5	6.1 6.1	6.1	0.1 0.1	0.1	122.1 123.0	122.6	8.9 8.9	8.9	11.6 11.5	11.6	17 15	16.0	10 10	10.0
24-Jun-22	Fine	13:33	Middle	0.2	34.5 34.5	34.5	8.0 8.0	8.0	0.1 0.1	0.1	150.6 150.7	150.7	10.6 10.6	10.6	8.5 8.7	8.6	13 15	14.0	10 10	10.0
27-Jun-22	Sunny	13:33	Middle	0.4	31.7 31.7	31.7	7.7 7.6	7.7	0.1 0.1	0.1	118.7 118.7	118.7	8.7 8.7	8.7	13.2 13.2	13.2	20 20	20.0	10 10	10.0
29-Jun-22	Sunny	11:10	Middle	0.3	30.5 30.6	30.6	7.4 7.4	7.4	0.2 0.2	0.2	82.6 82.5	82.6	6.2 6.2	6.2	10.4 10.2	10.3	10 9	9.5	10 10	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-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Jun-22	Cloudy	13:36	Middle	0.2	29.9 29.9	29.9	8.0 8.0	8.0	0.1 0.1	0.1	105.5 105.5	105.5	8.0 8.0	8.0	23.4 22.8	23.1	15 18	16.5
4-Jun-22	Cloudy	11:33	Middle	0.2	28.8 28.8	28.8	7.6 7.7	7.7	0.1 0.1	0.1	102.8 103.0	102.9	7.9 8.0	8.0	17.6 17.8	17.7	20 18	19.0
6-Jun-22	Rainy	14:33	Middle	0.4	27.1 27.1	27.1	7.7 7.7	7.7	0.1 0.1	0.1	90.2 90.2	90.2	7.2 7.2	7.2	243.8 251.4	247.6	419 495	457.0
8-Jun-22	Rainy	14:51	Middle	0.4	25.1 25.1	25.1	8.1 8.0	8.1	0.1 0.1	0.1	92.3 92.2	92.3	7.6 7.6	7.6	103.1 102.9	103.0	122 120	121.0
10-Jun-22	Rainy	10:20	Middle	0.2	25.4 25.4	25.4	7.6 7.6	7.6	0.1 0.1	0.1	100.9 100.9	100.9	8.3 8.3	8.3	12.6 12.8	12.7	17 18	17.5
13-Jun-22	Cloudy	16:51	Middle	0.3	26.0 26.1	26.1	8.1 8.1	8.1	0.1 0.1	0.1	93.6 93.6	93.6	7.6 7.6	7.6	7.4 7.4	7.4	16 15	15.5
15-Jun-22	Sunny	13:59	Middle	0.3	25.8 25.8	25.8	8.2 8.2	8.2	0.1 0.1	0.1	94.4 94.4	94.4	7.7 7.7	7.7	11.7 11.7	11.7	22 21	21.5
17-Jun-22	Cloudy	11:30	Middle	0.3	26.0 26.0	26.0	8.0 8.0	8.0	0.1 0.1	0.1	103.9 104.0	104.0	8.4 8.4	8.4	10.5 10.9	10.7	10 11	10.5
20-Jun-22	Cloudy	13:33	Middle	0.3	26.9 26.9	26.9	8.1 8.1	8.1	0.1 0.1	0.1	105.4 105.4	105.4	8.4 8.4	8.4	17.4 17.8	17.6	16 15	15.5
22-Jun-22	Sunny	15:20	Middle	0.3	31.4 31.4	31.4	5.4 5.4	5.4	0.1 0.1	0.1	124.9 124.9	124.9	9.2 9.2	9.2	10.7 10.8	10.8	16 14	15.0
24-Jun-22	Fine	15:31	Middle	0.4	28.6 28.7	28.7	6.9 6.8	6.9	0.1 0.1	0.1	87.2 87.2	87.2	6.8 6.8	6.8	73.3 76.8	75.1	70 78	74.0
27-Jun-22	Sunny	14:51	Middle	0.3	31.7 31.7	31.7	7.6 7.4	7.5	0.1 0.1	0.1	135.1 135.6	135.4	9.9 10.0	10.0	12.7 12.4	12.6	15 14	14.5
29-Jun-22	Sunny	13:56	Middle	0.3	31.1 31.1	31.1	5.9 5.9	5.9	0.1 0.1	0.1	129.3 129.4	129.4	9.6 9.6	9.6	13.3 13.5	13.4	16 18	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-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Jun-22	Cloudy	11:49	Middle	0.5	29.8 29.9	29.9	8.2 8.2	8.2	0.1 0.1	0.1	86.6 86.6	86.6	6.6 6.6	6.6	26.7 26.7	26.7	12 10	11.0
4-Jun-22	Cloudy	10:30	Middle	0.7	28.3 28.3	28.3	8.0 8.0	8.0	0.1 0.1	0.1	84.5 84.4	84.5	6.6 6.6	6.6	9.9 10.1	10.0	5 5	5.0
6-Jun-22	Rainy	12:59	Middle	0.8	27.4 27.4	27.4	7.6 7.6	7.6	0.1 0.1	0.1	81.7 81.6	81.7	6.5 6.5	6.5	12.2 12.3	12.3	16 17	16.5
8-Jun-22	Rainy	13:46	Middle	0.7	25.4 25.4	25.4	8.1 8.1	8.1	0.1 0.1	0.1	97.2 97.3	97.3	8.0 8.0	8.0	108.3 105.6	107.0	104 104	104.0
10-Jun-22	Rainy	09:12	Middle	0.2	24.8 24.8	24.8	7.8 7.8	7.8	0.1 0.1	0.1	92.7 92.7	92.7	7.7 7.7	7.7	14.3 14.3	14.3	17 20	18.5
13-Jun-22	Cloudy	16:20	Middle	0.5	26.9 26.9	26.9	7.6 7.6	7.6	0.1 0.1	0.1	104.3 104.3	104.3	8.3 8.3	8.3	16.6 16.5	16.6	17 14	15.5
15-Jun-22	Sunny	13:02	Middle	0.8	25.2 25.2	25.2	8.1 8.1	8.1	0.1 0.1	0.1	95.1 95.2	95.2	7.8 7.8	7.8	13.6 13.7	13.7	25 25	25.0
17-Jun-22	Cloudy	10:23	Middle	0.8	25.7 25.7	25.7	8.2 8.2	8.2	0.1 0.1	0.1	85.1 84.9	85.0	6.9 6.9	6.9	6.2 6.2	6.2	6 5	5.5
20-Jun-22	Cloudy	12:30	Middle	0.7	26.4 26.4	26.4	7.8 7.8	7.8	0.1 0.1	0.1	88.0 88.0	88.0	7.1 7.1	7.1	6.6 6.6	6.6	6 7	6.5
22-Jun-22	Sunny	14:31	Middle	0.5	29.7 29.7	29.7	5.5 5.5	5.5	0.1 0.1	0.1	107.7 107.8	107.8	8.2 8.2	8.2	7.2 7.3	7.3	6 7	6.5
24-Jun-22	Fine	14:28	Middle	0.7	30.0 30.0	30.0	7.4 7.4	7.4	0.1 0.1	0.1	112.3 112.3	112.3	8.5 8.5	8.5	7.0 6.9	7.0	5 5	5.0
27-Jun-22	Sunny	13:59	Middle	0.7	30.4 30.4	30.4	7.4 7.3	7.4	0.1 0.1	0.1	92.5 92.5	92.5	6.9 6.9	6.9	8.9 8.9	8.9	11 11	11.0
29-Jun-22	Sunny	13:04	Middle	0.5	28.8 28.8	28.8	6.9 6.9	6.9	0.1 0.1	0.1	87.5 87.5	87.5	6.8 6.8	6.8	13.4 13.1	13.3	13 14	13.5

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Water Quality Monitoring Results

Location: SHST-IS2

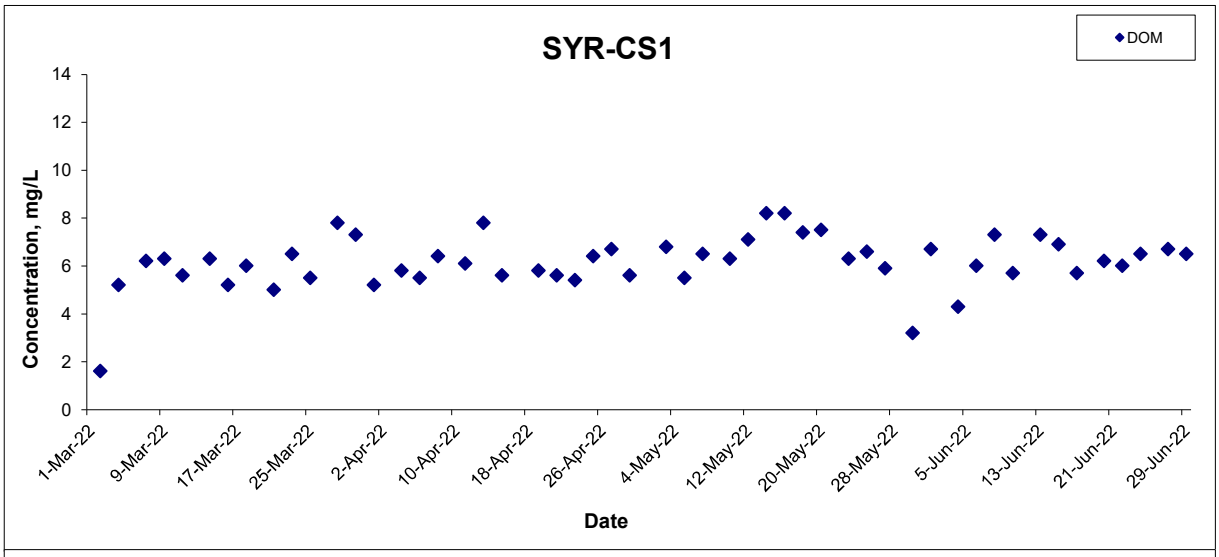
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Jun-22	Cloudy	12:04	Middle	0.1	28.1 28.1	28.1	8.1 8.1	8.1	0.03 0.03	0.03	91.0 91.2	91.1	7.1 7.1	7.1	26.7 26.7	26.7	14 15	14.5
4-Jun-22	Cloudy	10:43	Middle	0.2	27.6 27.6	27.6	8.1 8.1	8.1	0.04 0.04	0.04	93.3 93.3	93.3	7.4 7.4	7.4	20.2 20.3	20.3	14 14	14.0
6-Jun-22	Rainy	13:42	Middle	0.3	26.6 26.6	26.6	7.7 7.7	7.7	0.1 0.1	0.1	90.0 89.9	90.0	7.2 7.2	7.2	263.9 257.5	260.7	372 380	376.0
8-Jun-22	Rainy	13:57	Middle	0.2	25.3 25.3	25.3	8.2 8.2	8.2	0.1 0.1	0.1	95.4 95.4	95.4	7.8 7.8	7.8	116.8 117.0	116.9	115 113	114.0
10-Jun-22	Rainy	09:30	Middle	0.5	24.9 24.9	24.9	7.8 7.8	7.8	0.1 0.1	0.1	94.6 94.5	94.6	7.8 7.8	7.8	14.7 14.7	14.7	11 14	12.5
13-Jun-22	Cloudy	15:58	Middle	0.1	26.8 26.8	26.8	7.9 8.0	8.0	0.1 0.1	0.1	95.3 95.3	95.3	7.6 7.6	7.6	18.2 18.0	18.1	17 16	16.5
15-Jun-22	Sunny	13:11	Middle	0.2	24.8 24.8	24.8	8.2 8.2	8.2	0.1 0.1	0.1	92.4 92.4	92.4	7.7 7.7	7.7	12.9 13.0	13.0	14 16	15.0
17-Jun-22	Cloudy	10:46	Middle	0.2	26.5 26.5	26.5	7.8 7.8	7.8	0.1 0.1	0.1	97.2 97.2	97.2	7.8 7.8	7.8	10.8 11.0	10.9	12 13	12.5
20-Jun-22	Cloudy	12:44	Middle	0.2	25.5 25.5	25.5	8.2 8.2	8.2	0.1 0.1	0.1	94.2 94.2	94.2	7.7 7.7	7.7	18.4 18.6	18.5	14 15	14.5
22-Jun-22	Sunny	14:18	Middle	0.1	28.3 28.3	28.3	6.2 6.2	6.2	0.1 0.1	0.1	98.5 98.5	98.5	7.7 7.7	7.7	12.2 12.3	12.3	17 14	15.5
24-Jun-22	Fine	14:38	Middle	0.2	27.6 27.5	27.6	7.3 7.2	7.3	0.1 0.1	0.1	97.7 97.6	97.7	7.7 7.7	7.7	20.4 20.8	20.6	16 17	16.5
27-Jun-22	Sunny	14:07	Middle	0.2	28.2 28.2	28.2	7.4 7.3	7.4	0.1 0.1	0.1	99.8 100.0	99.9	7.8 7.8	7.8	13.8 13.7	13.8	8 8	8.0
29-Jun-22	Sunny	13:15	Middle	0.1	27.0 27.0	27.0	6.0 6.0	6.0	0.1 0.1	0.1	94.0 94.1	94.1	7.5 7.5	7.5	7.1 7.4	7.3	12 11	11.5

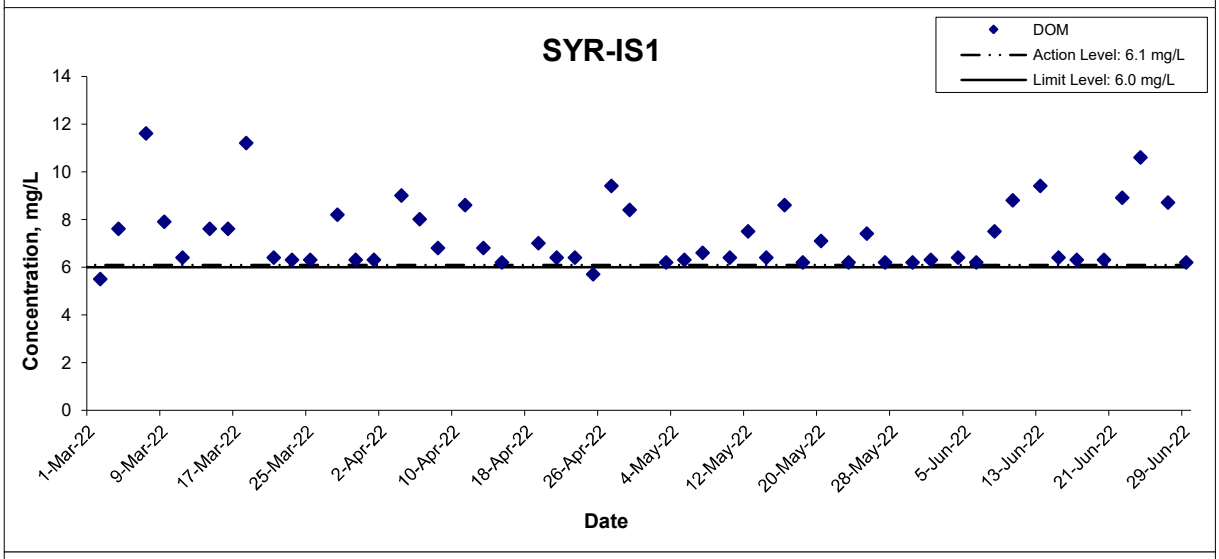
Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Water Quality Monitoring Results

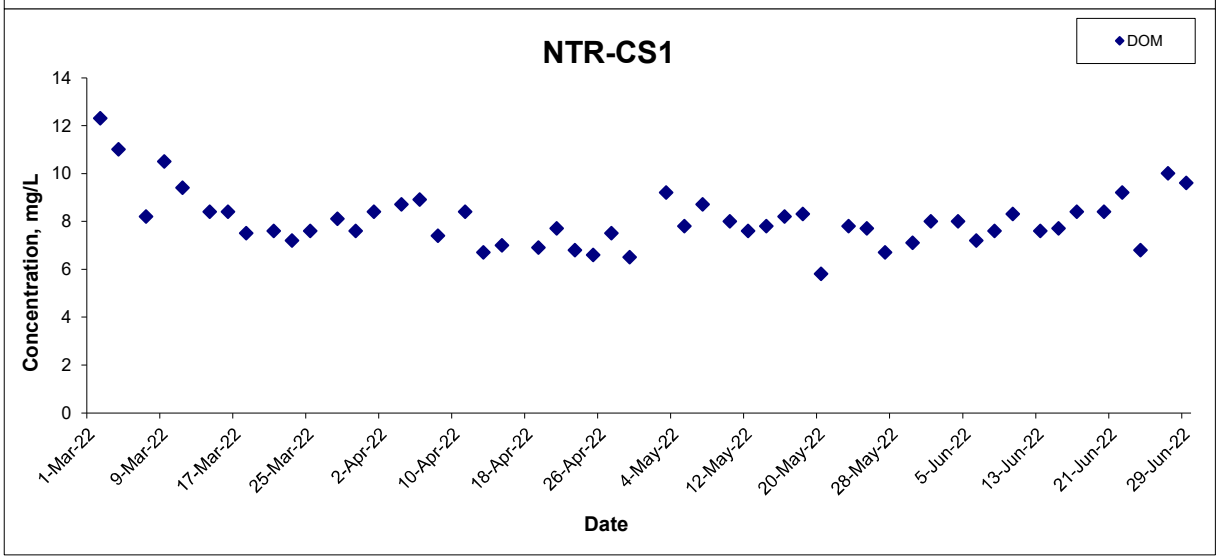
Location: MWR-IS3

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
1-Jun-22	Cloudy	13:23	Middle	0.2	31.2 31.2	31.2	8.2 8.2	8.2	0.1 0.1	0.1	117.5 117.5	117.5	8.7 8.7	8.7	17.0 17.2	17.1	16 19	17.5
4-Jun-22	Cloudy	11:14	Middle	0.2	28.6 28.6	28.6	8.2 8.1	8.2	0.1 0.1	0.1	112.5 113.1	112.8	8.7 8.8	8.8	14.4 14.7	14.6	11 11	11.0
6-Jun-22	Rainy	14:14	Middle	0.4	27.5 27.5	27.5	7.5 7.5	7.5	0.1 0.1	0.1	113.9 113.7	113.8	9.0 9.0	9.0	55.4 53.5	54.5	50 52	51.0
8-Jun-22	Rainy	14:38	Middle	0.4	25.3 25.3	25.3	8.1 8.1	8.1	0.1 0.1	0.1	107.1 107.1	107.1	8.8 8.8	8.8	79.2 81.7	80.5	94 96	95.0
10-Jun-22	Rainy	10:08	Middle	0.2	26.8 26.8	26.8	8.0 8.0	8.0	0.1 0.1	0.1	110.4 110.4	110.4	8.8 8.8	8.8	7.4 7.2	7.3	8 9	8.5
13-Jun-22	Cloudy	16:45	Middle	0.3	26.2 26.2	26.2	7.4 7.4	7.4	0.1 0.1	0.1	94.8 94.8	94.8	7.7 7.7	7.7	7.1 7.1	7.1	16 16	16.0
15-Jun-22	Sunny	13:47	Middle	0.3	26.2 26.2	26.2	8.0 8.0	8.0	0.1 0.1	0.1	107.9 108.5	108.2	8.7 8.8	8.8	9.7 9.5	9.6	11 9	10.0
17-Jun-22	Cloudy	11:16	Middle	0.3	26.1 26.1	26.1	7.7 7.7	7.7	0.1 0.1	0.1	108.6 108.6	108.6	8.8 8.8	8.8	9.7 9.6	9.7	12 11	11.5
20-Jun-22	Cloudy	13:17	Middle	0.3	26.8 26.8	26.8	7.9 7.9	7.9	0.1 0.1	0.1	109.9 110.1	110.0	8.8 8.8	8.8	15.4 15.3	15.4	16 19	17.5
22-Jun-22	Sunny	15:14	Middle	0.3	31.2 31.2	31.2	6.5 6.4	6.5	0.1 0.1	0.1	128.7 128.8	128.8	9.5 9.5	9.5	11.0 11.0	11.0	16 14	15.0
24-Jun-22	Fine	15:18	Middle	0.4	29.3 29.3	29.3	7.6 7.5	7.6	0.1 0.1	0.1	114.5 115.3	114.9	8.8 8.8	8.8	77.5 74.9	76.2	70 65	67.5
27-Jun-22	Sunny	14:33	Middle	0.3	31.2 31.2	31.2	8.5 8.5	8.5	0.1 0.1	0.1	137.8 138.0	137.9	10.2 10.2	10.2	12.4 12.5	12.5	15 16	15.5
29-Jun-22	Sunny	13:47	Middle	0.3	31.4 31.4	31.4	7.2 7.0	7.1	0.1 0.1	0.1	143.7 143.7	143.7	10.6 10.6	10.6	9.9 9.9	9.9	16 17	16.5

Dissolved Oxygen (Middle)







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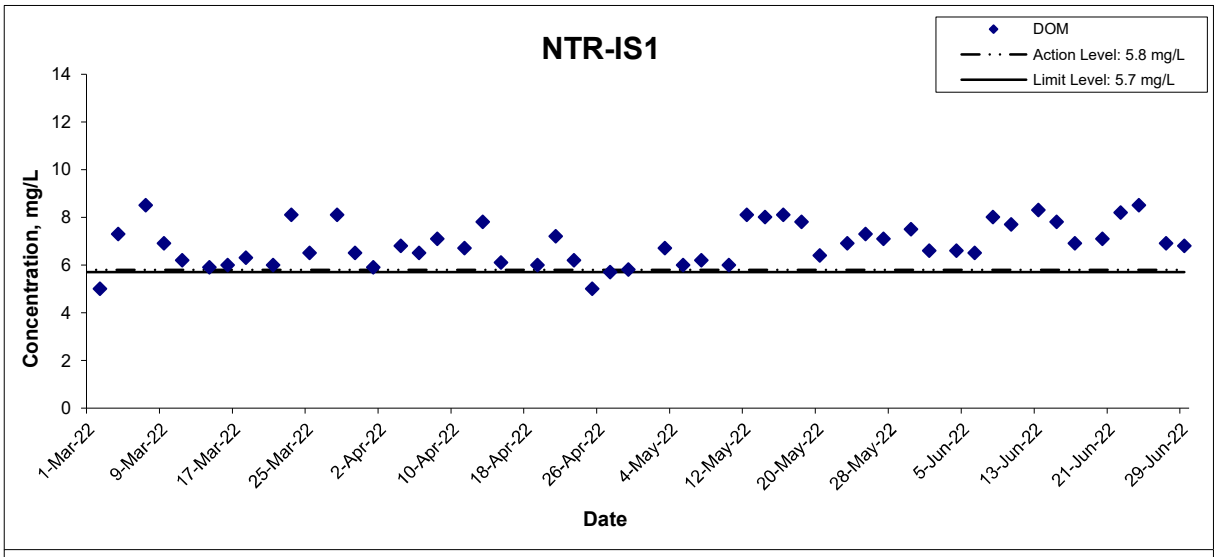
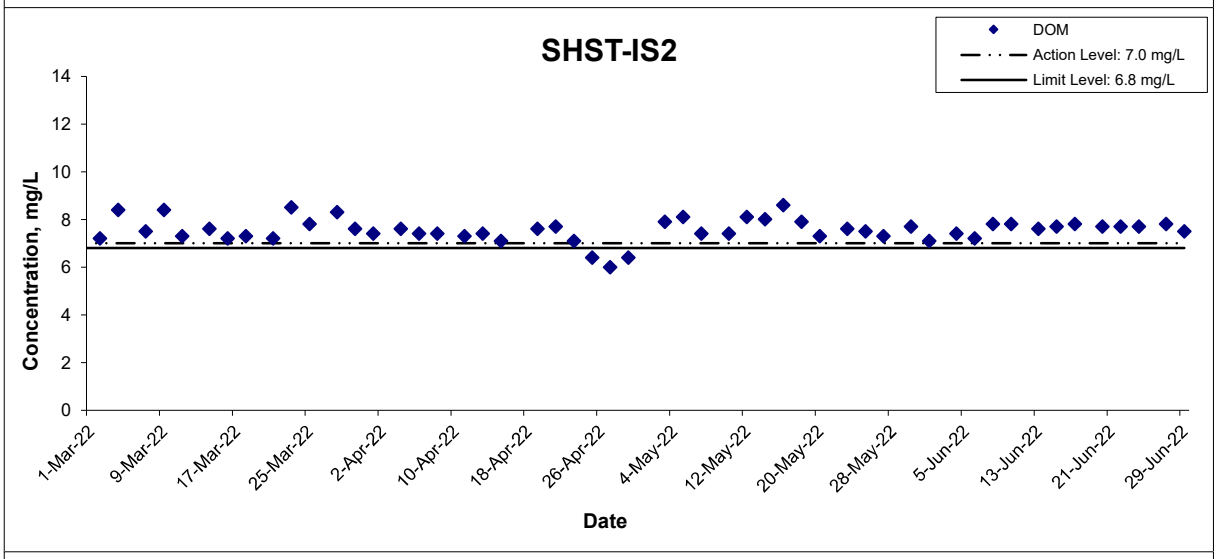
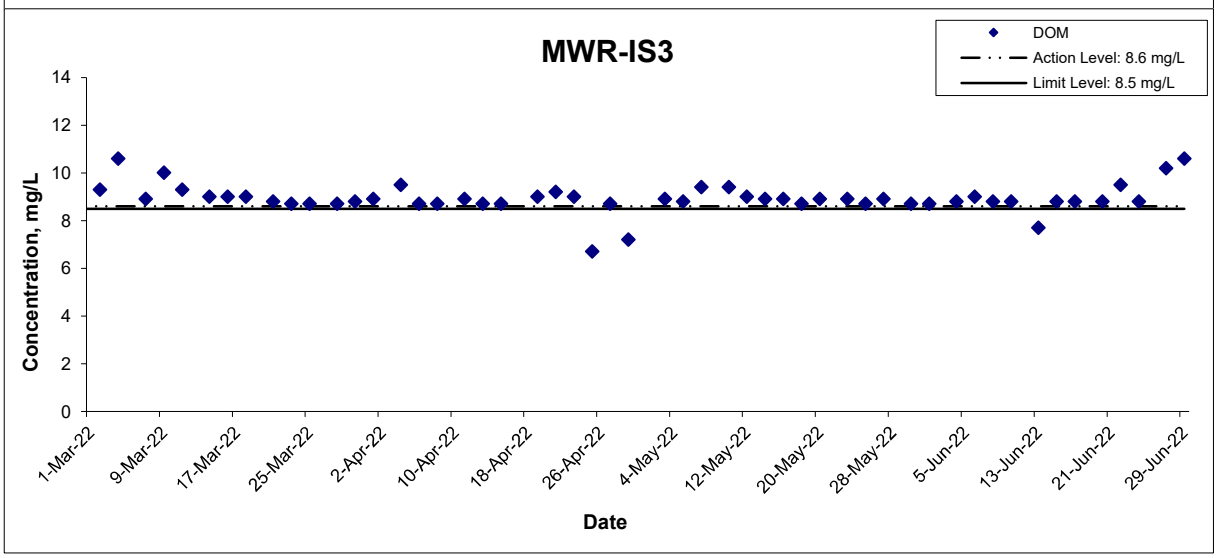
		Date Jun 22	Appendix G	

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	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
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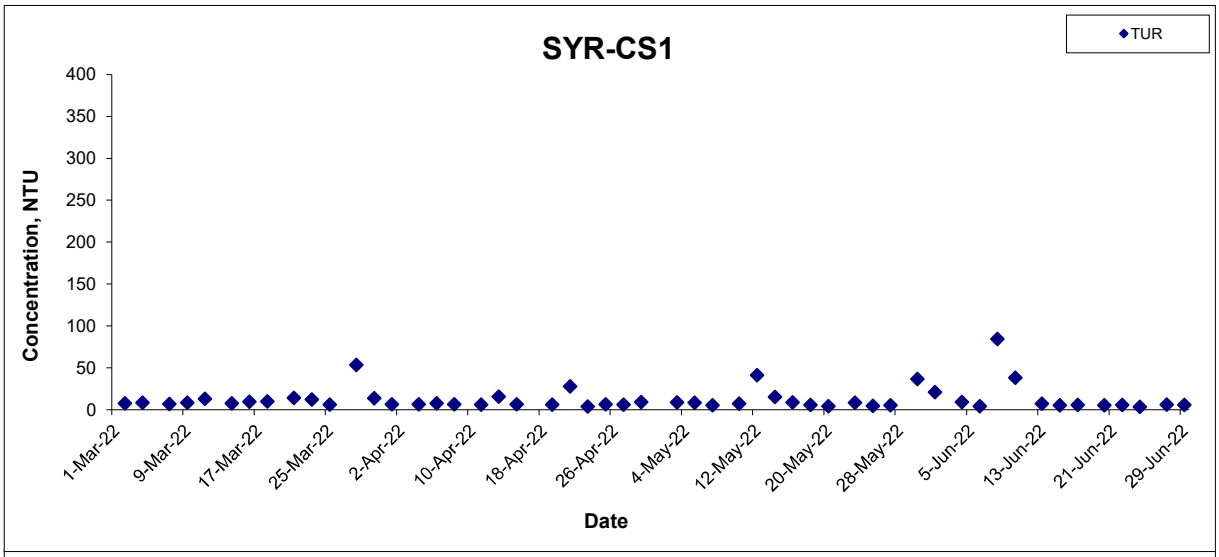
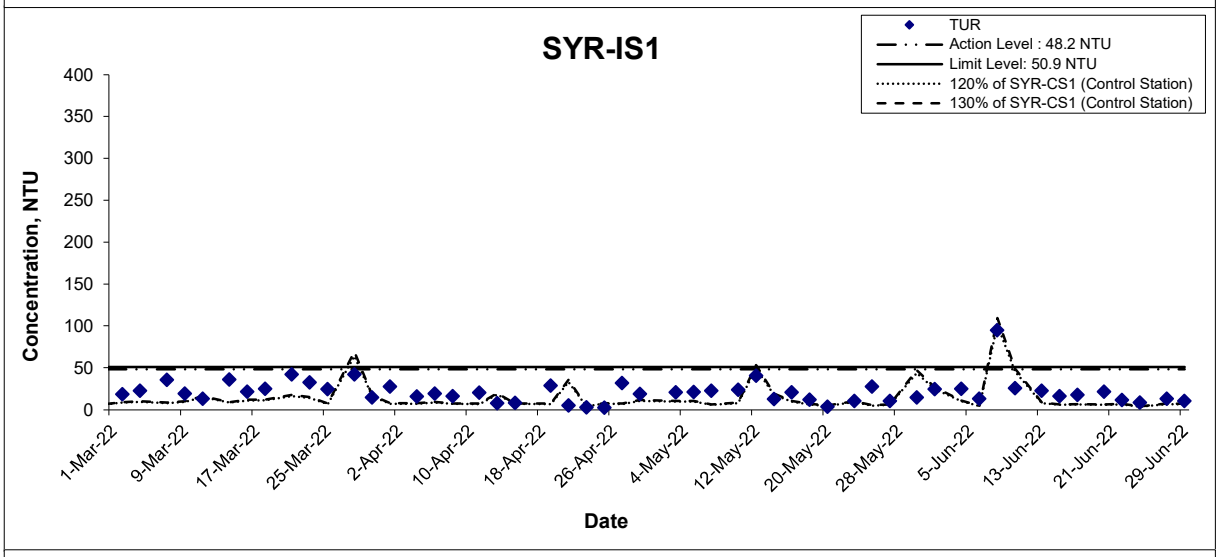
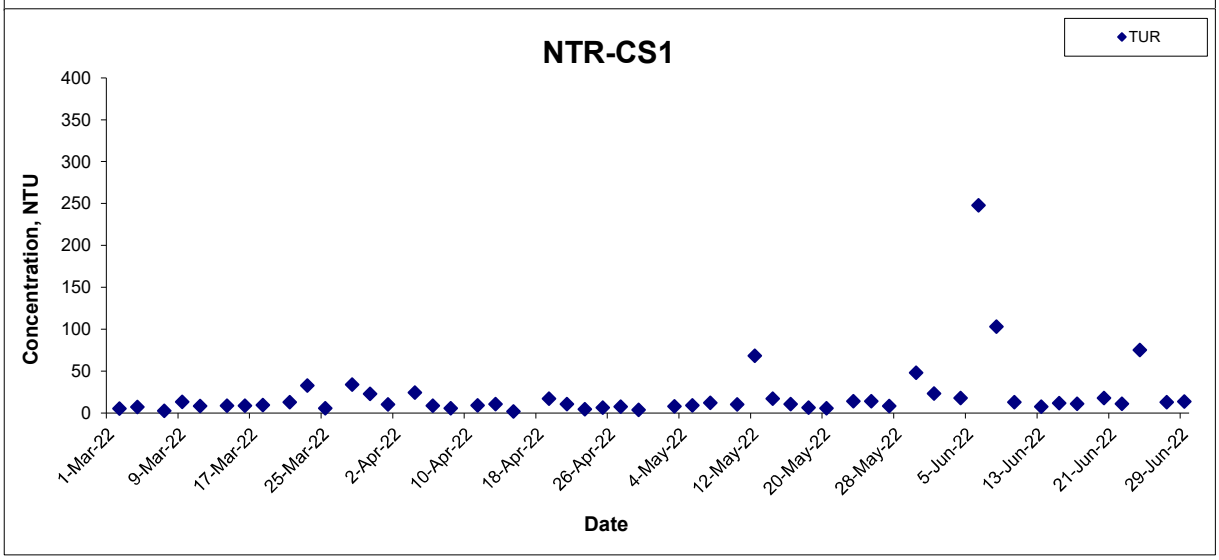
Turbidity (Depth-averaged)

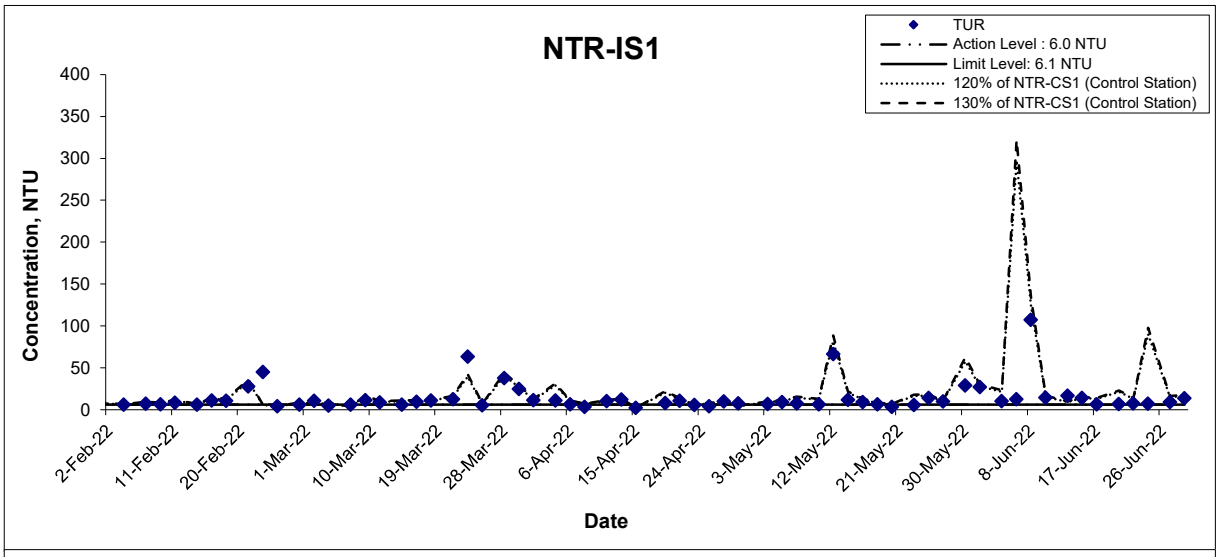


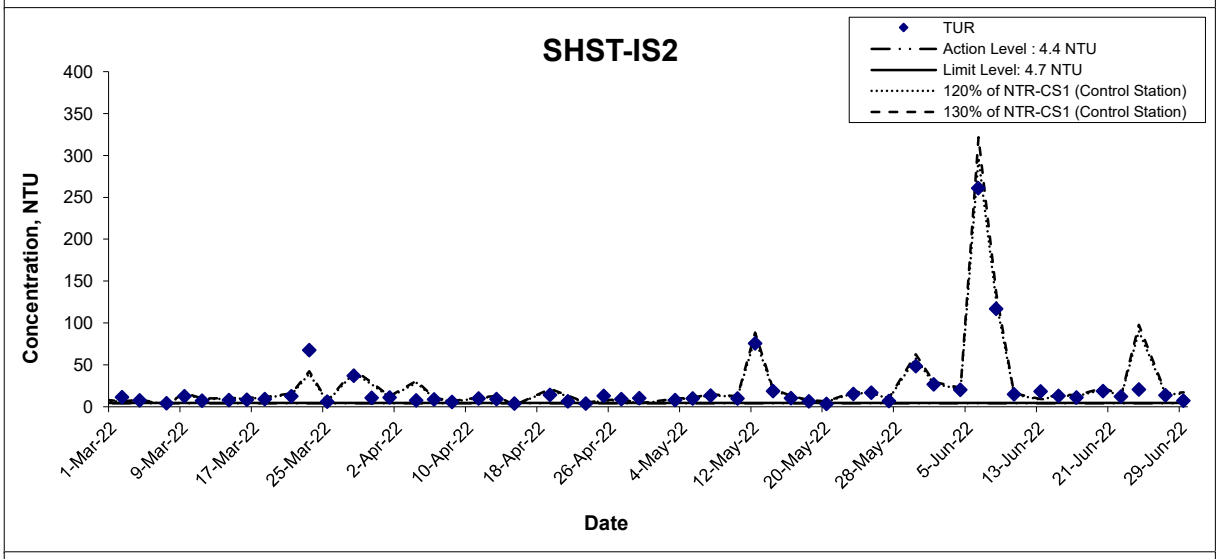


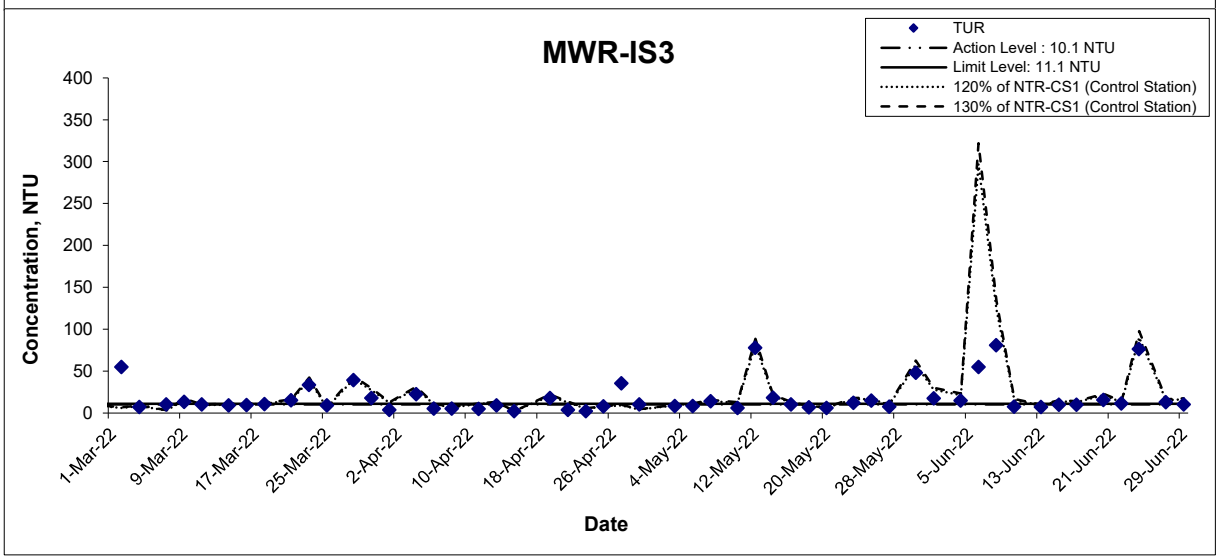


Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
		Date Jun 22	Appendix G	

Turbidity (Depth-averaged)

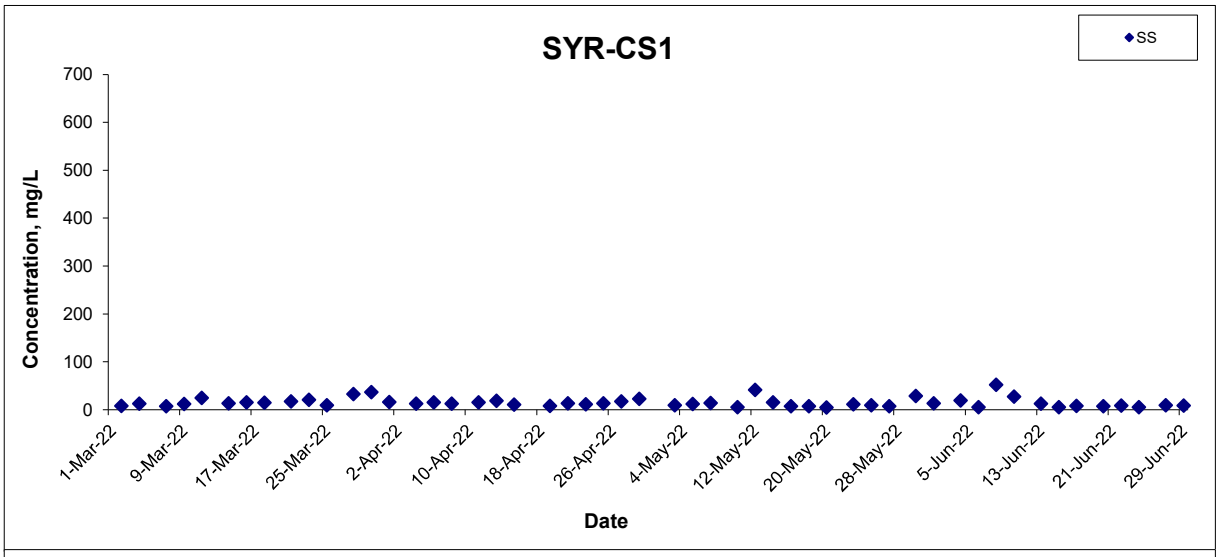


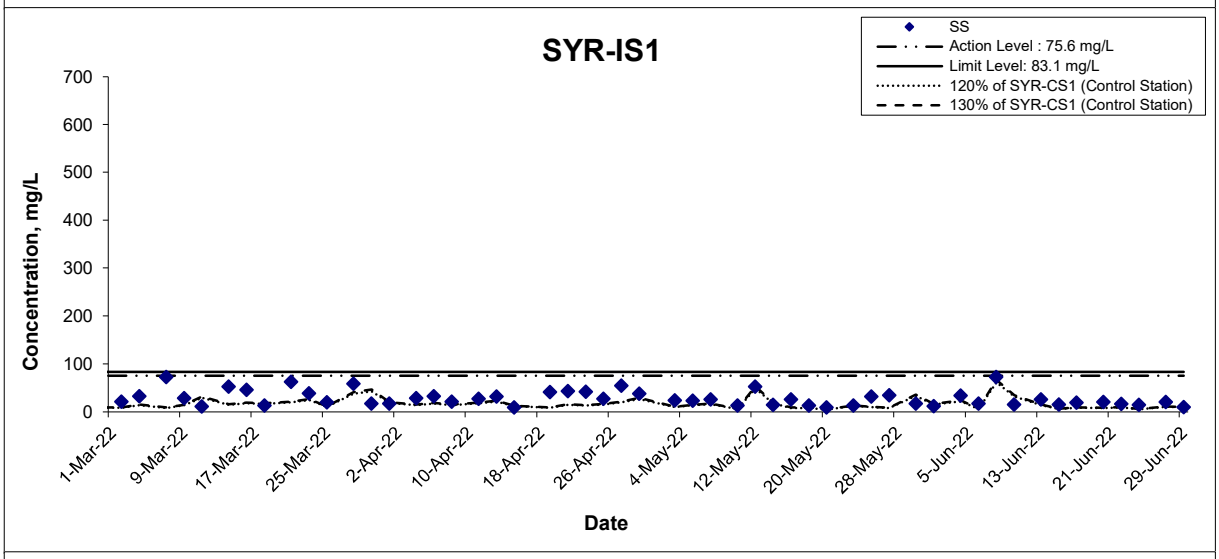


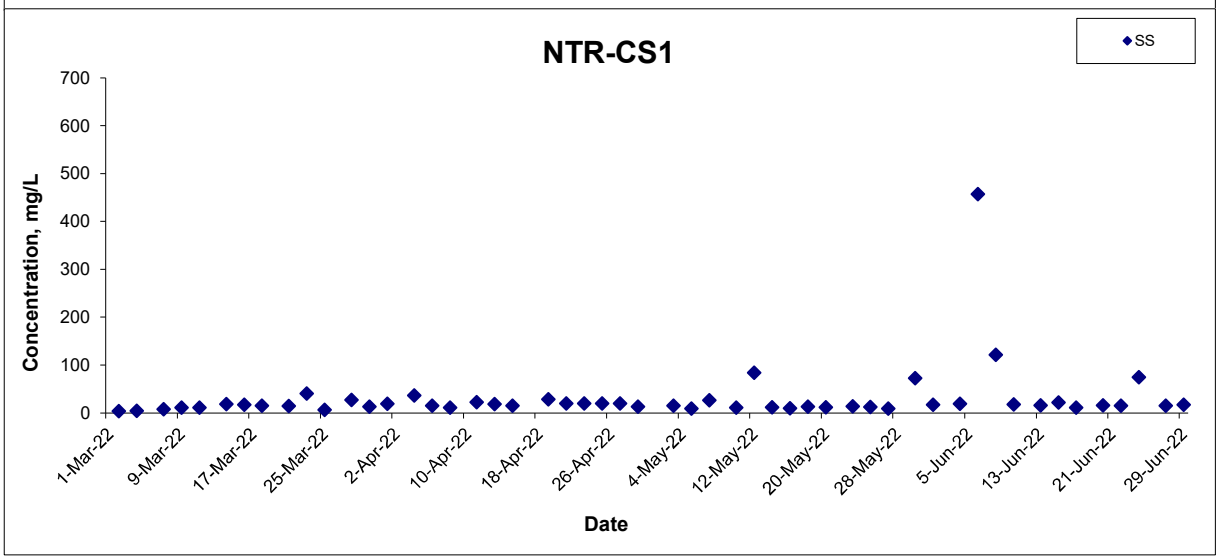


Title	Scale	Project No.	
Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix G	

Suspended Solids (Depth-averaged)







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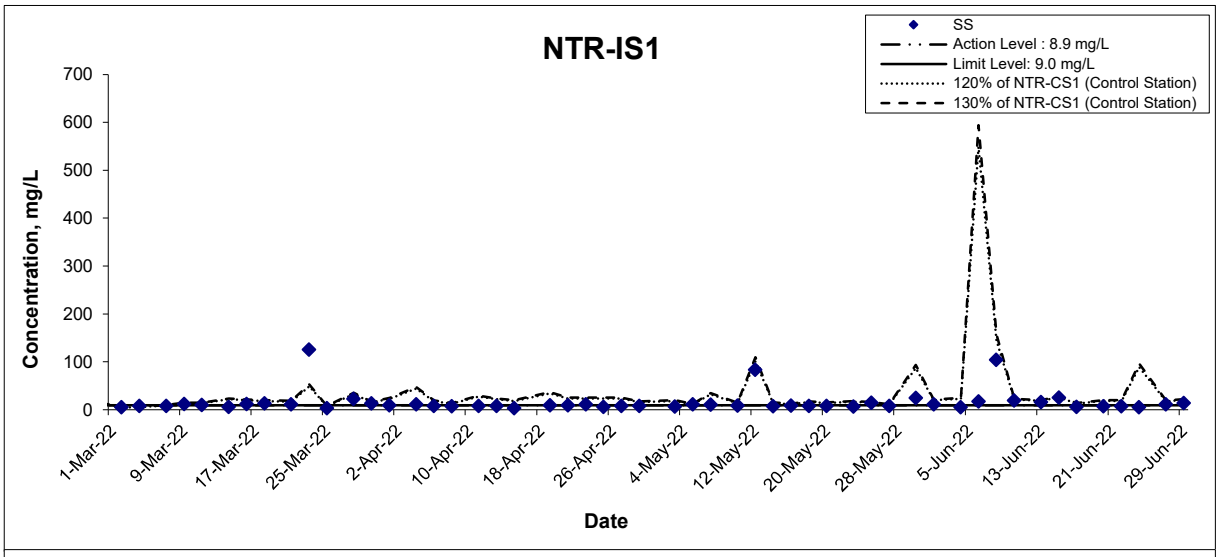
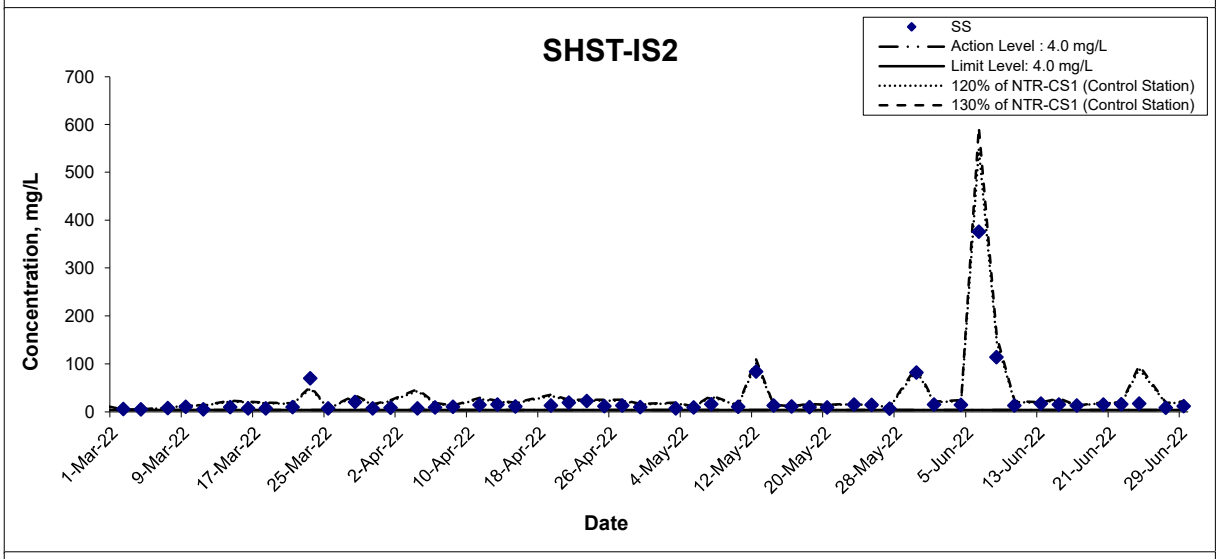
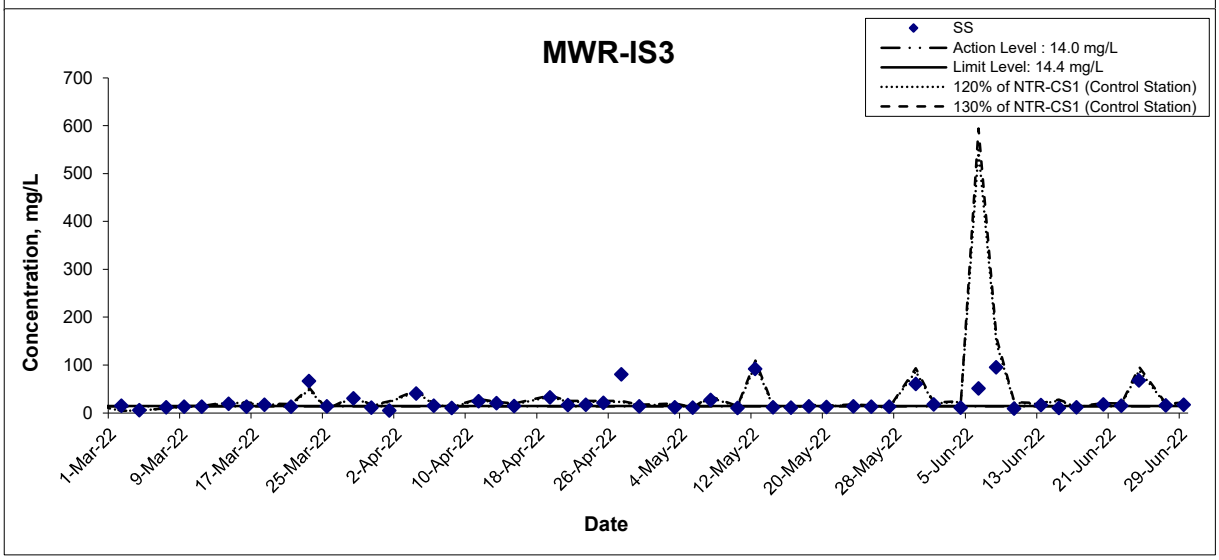
		Date Jun 22	Appendix G	

Suspended Solids (Depth-averaged)

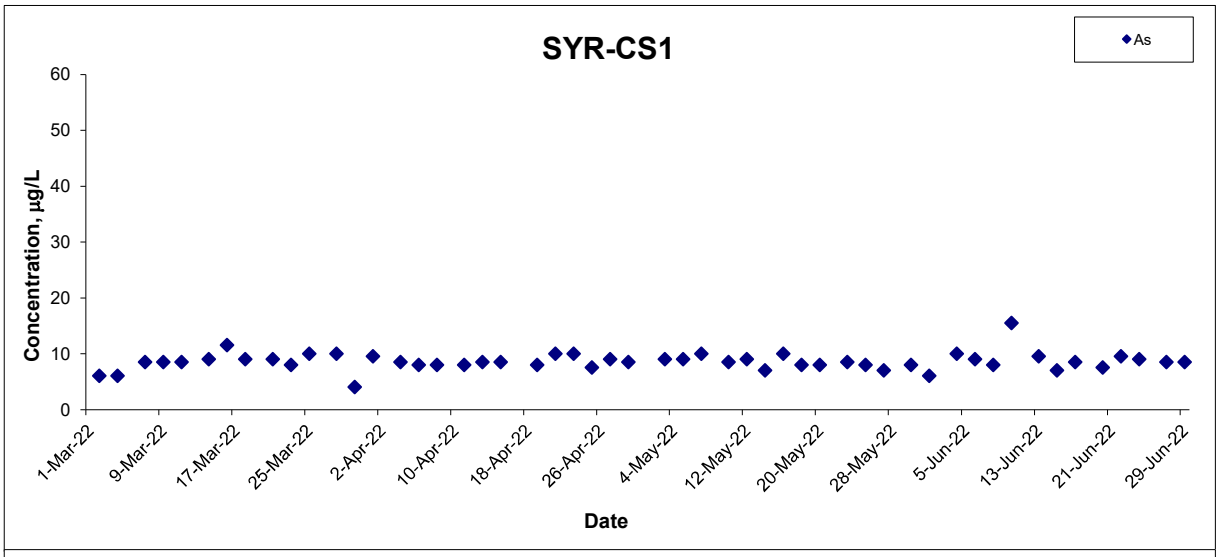


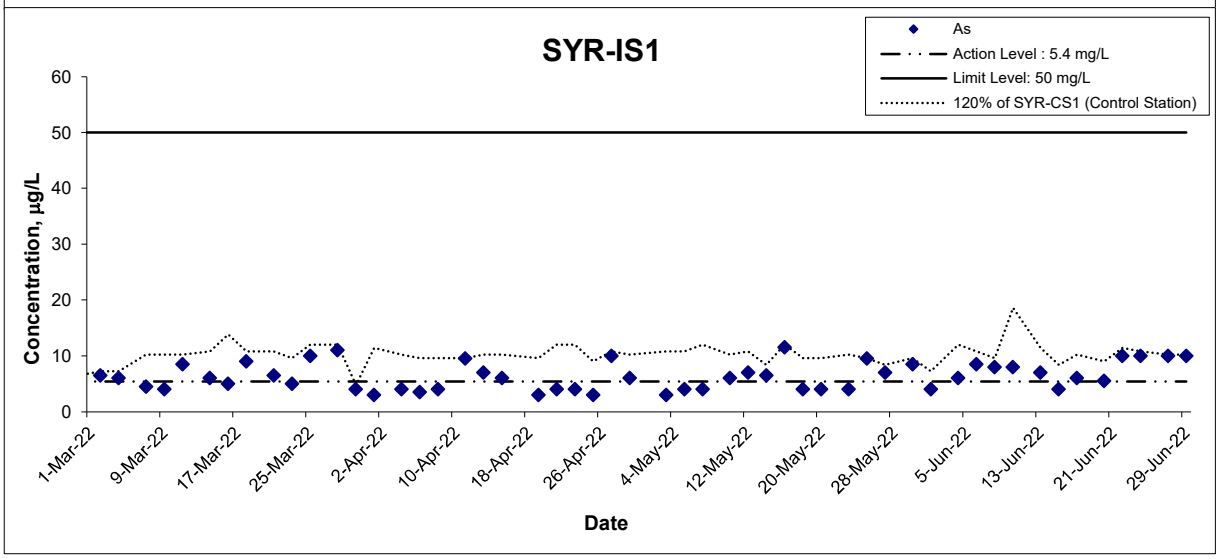




Title	Scale	Project No.	
Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Jun 22	Appendix G	

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	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
		Date Jun 22	Appendix G	

APPENDIX H
LABORATORY TESTING REPORTS FOR LABORATORY ANALYSIS

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WELLAB LIMITED
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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. Antony Leung**

Report No.:	36734
Date of Issue:	2022-06-08
Date Received:	2022-06-01
Date Tested:	2022-06-01
Date Completed:	2022-06-08
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36734
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. : WMA20002/220601
Sampling Date : 2022-06-01

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36734-2	36734-3	36734-5	36734-6
Total Suspended Solids dried at 103-105°C (mg/L)	13	13	12	11
Arsenic (μg/L)	6	6	4	4

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,
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Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36734A
Date of Issue:	2022-06-08
Date Received:	2022-06-01
Date Tested:	2022-06-01
Date Completed:	2022-06-08
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36734A
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. : WMA20002/220601
Sampling Date : 2022-06-01

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36734-8	36734-9	36734-11	36734-12
Total Suspended Solids dried at 103-105°C (mg/L)	15	18	12	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36734-14	36734-15	36734-17	36734-18
Total Suspended Solids dried at 103-105°C (mg/L)	14	15	16	19

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. Antony Leung**

Report No.:	36739
Date of Issue:	2022-06-09
Date Received:	2022-06-04
Date Tested:	2022-06-04
Date Completed:	2022-06-09
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36739
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. : WMA20002/220604
Sampling Date : 2022-06-04

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36739-2	36739-3	36739-5	36739-6
Total Suspended Solids dried at 103-105°C (mg/L)	20	17	30	37
Arsenic (μg/L)	10	10	6	6

Remarks: 1) < = less than

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

ATTN: **Mr. Antony Leung**

Report No.:	36739A
Date of Issue:	2022-06-09
Date Received:	2022-06-04
Date Tested:	2022-06-04
Date Completed:	2022-06-09
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36739A
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. : WMA20002/220604
Sampling Date : 2022-06-04

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36739-8	36739-9	36739-11	36739-12
Total Suspended Solids dried at 103-105°C (mg/L)	20	18	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36739-14	36739-15	36739-17	36739-18
Total Suspended Solids dried at 103-105°C (mg/L)	14	14	11	11

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Antony Leung**

Report No.:	36752
Date of Issue:	2022-06-10
Date Received:	2022-06-06
Date Tested:	2022-06-06
Date Completed:	2022-06-10
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36752
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. : WMA20002/220606
Sampling Date : 2022-06-06

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36752-2	36752-3	36752-5	36752-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	16	17
Arsenic (μg/L)	9	9	8	9

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36752A
Date of Issue:	2022-06-10
Date Received:	2022-06-06
Date Tested:	2022-06-06
Date Completed:	2022-06-10
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36752A
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. : WMA20002/220606
Sampling Date : 2022-06-06

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36752-8	36752-9	36752-11	36752-12
Total Suspended Solids dried at 103-105°C (mg/L)	419	495	16	17

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36752-14	36752-15	36752-17	36752-18
Total Suspended Solids dried at 103-105°C (mg/L)	372	380	50	52

Remarks: 1) < = less than

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

ATTN: **Mr. Antony Leung**

Report No.:	36757
Date of Issue:	2022-06-14
Date Received:	2022-06-08
Date Tested:	2022-06-08
Date Completed:	2022-06-14
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36757
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. : WMA20002/220608
Sampling Date : 2022-06-08

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36757-2	36757-3	36757-5	36757-6
Total Suspended Solids dried at 103-105°C (mg/L)	51	52	72	72
Arsenic (μg/L)	8	8	8	8

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. Antony Leung**

Report No.:	36757A
Date of Issue:	2022-06-14
Date Received:	2022-06-08
Date Tested:	2022-06-08
Date Completed:	2022-06-14
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36757A
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. : WMA20002/220608
Sampling Date : 2022-06-08

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36757-8	36757-9	36757-11	36757-12
Total Suspended Solids dried at 103-105°C (mg/L)	122	120	104	104

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36757-14	36757-15	36757-17	36757-18
Total Suspended Solids dried at 103-105°C (mg/L)	115	113	94	96

Remarks: 1) < = less than

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

ATTN: **Mr. Antony Leung**

Report No.:	36762
Date of Issue:	2022-06-16
Date Received:	2022-06-10
Date Tested:	2022-06-10
Date Completed:	2022-06-16
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36762
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. : WMA20002/220610
Sampling Date : 2022-06-10

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.	36762-2	36762-3	36762-5	36762-6
Total Suspended Solids dried at 103-105°C (mg/L)	24	30	14	16
Arsenic (μg/L)	16	15	8	8

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. Antony Leung**

Report No.:	36762A
Date of Issue:	2022-06-16
Date Received:	2022-06-10
Date Tested:	2022-06-10
Date Completed:	2022-06-16
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36762A
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. : WMA20002/220610
Sampling Date : 2022-06-10

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.	36762-8	36762-9	36762-11	36762-12
Total Suspended Solids dried at 103-105°C (mg/L)	17	18	17	20

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36762-14	36762-15	36762-17	36762-18
Total Suspended Solids dried at 103-105°C (mg/L)	11	14	8	9

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. Antony Leung**

Report No.:	36779
Date of Issue:	2022-06-17
Date Received:	2022-06-13
Date Tested:	2022-06-13
Date Completed:	2022-06-17
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36779
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. : WMA20002/220613
Sampling Date : 2022-06-13

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36779-2	36779-3	36779-5	36779-6
Total Suspended Solids dried at 103-105°C (mg/L)	11	13	28	23
Arsenic (μg/L)	10	9	7	7

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. Antony Leung**

Report No.:	36779A
Date of Issue:	2022-06-17
Date Received:	2022-06-13
Date Tested:	2022-06-13
Date Completed:	2022-06-17
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36779A
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. : WMA20002/220613
Sampling Date : 2022-06-13

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36779-8	36779-9	36779-11	36779-12
Total Suspended Solids dried at 103-105°C (mg/L)	16	15	17	14

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36779-14	36779-15	36779-17	36779-18
Total Suspended Solids dried at 103-105°C (mg/L)	17	16	16	16

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. Antony Leung**

Report No.:	36783
Date of Issue:	2022-06-21
Date Received:	2022-06-15
Date Tested:	2022-06-15
Date Completed:	2022-06-21
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36783
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. : WMA20002/220615
Sampling Date : 2022-06-15

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36783-2	36783-3	36783-5	36783-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	15	15
Arsenic (μg/L)	7	7	4	4

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. Antony Leung**

Report No.:	36783A
Date of Issue:	2022-06-21
Date Received:	2022-06-15
Date Tested:	2022-06-15
Date Completed:	2022-06-21
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36783A
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. : WMA20002/220615
Sampling Date : 2022-06-15

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36783-8	36783-9	36783-11	36783-12
Total Suspended Solids dried at 103-105°C (mg/L)	22	21	25	25

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36783-14	36783-15	36783-17	36783-18
Total Suspended Solids dried at 103-105°C (mg/L)	14	16	11	9

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Antony Leung**

Report No.:	36787
Date of Issue:	2022-06-23
Date Received:	2022-06-17
Date Tested:	2022-06-17
Date Completed:	2022-06-23
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36787
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. : WMA20002/220617
Sampling Date : 2022-06-17

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.	36787-2	36787-3	36787-5	36787-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	7	18	20
Arsenic (μg/L)	9	8	6	6

Remarks: 1) < = less than

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Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36787A
Date of Issue:	2022-06-23
Date Received:	2022-06-17
Date Tested:	2022-06-17
Date Completed:	2022-06-23
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36787A
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. : WMA20002/220617
Sampling Date : 2022-06-17

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.	36787-8	36787-9	36787-11	36787-12
Total Suspended Solids dried at 103-105°C (mg/L)	10	11	6	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36787-14	36787-15	36787-17	36787-18
Total Suspended Solids dried at 103-105°C (mg/L)	12	13	12	11

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	36798
Date of Issue:	2022-06-24
Date Received:	2022-06-20
Date Tested:	2022-06-20
Date Completed:	2022-06-24
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36798
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. : WMA20002/220620
Sampling Date : 2022-06-20

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36798-2	36798-3	36798-5	36798-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	6	22	18
Arsenic (μg/L)	7	8	6	5

Remarks: 1) < = less than

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Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36798A
Date of Issue:	2022-06-24
Date Received:	2022-06-20
Date Tested:	2022-06-20
Date Completed:	2022-06-24
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36798A
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. : WMA20002/220620
Sampling Date : 2022-06-20

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36798-8	36798-9	36798-11	36798-12
Total Suspended Solids dried at 103-105°C (mg/L)	16	15	6	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36798-14	36798-15	36798-17	36798-18
Total Suspended Solids dried at 103-105°C (mg/L)	14	15	16	19

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	36802
Date of Issue:	2022-06-24
Date Received:	2022-06-22
Date Tested:	2022-06-22
Date Completed:	2022-06-24
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36802
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. : WMA20002/220622
Sampling Date : 2022-06-22

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36802-2	36802-3	36802-5	36802-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	17	15
Arsenic (μg/L)	9	10	10	10

Remarks: 1) < = less than

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

ATTN: **Mr. Antony Leung**

Report No.:	36802A
Date of Issue:	2022-06-24
Date Received:	2022-06-22
Date Tested:	2022-06-22
Date Completed:	2022-06-24
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36802A
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. : WMA20002/220622
Sampling Date : 2022-06-22

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36802-8	36802-9	36802-11	36802-12
Total Suspended Solids dried at 103-105°C (mg/L)	16	14	6	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36802-14	36802-15	36802-17	36802-18
Total Suspended Solids dried at 103-105°C (mg/L)	17	14	16	14

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. Antony Leung**

Report No.:	36807
Date of Issue:	2022-06-29
Date Received:	2022-06-24
Date Tested:	2022-06-24
Date Completed:	2022-06-29
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36807
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. : WMA20002/220624
Sampling Date : 2022-06-24

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.	36807-2	36807-3	36807-5	36807-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	4	13	15
Arsenic (µg/L)	9	9	10	10

Remarks: 1) < = less than

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

ATTN: **Mr. Antony Leung**

Report No.:	36807A
Date of Issue:	2022-06-29
Date Received:	2022-06-24
Date Tested:	2022-06-24
Date Completed:	2022-06-29
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36807A
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. : WMA20002/220624
Sampling Date : 2022-06-24

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.	36807-8	36807-9	36807-11	36807-12
Total Suspended Solids dried at 103-105°C (mg/L)	70	78	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36807-14	36807-15	36807-17	36807-18
Total Suspended Solids dried at 103-105°C (mg/L)	16	17	70	65

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	36819
Date of Issue:	2022-07-04
Date Received:	2022-06-27
Date Tested:	2022-06-27
Date Completed:	2022-07-04
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36819
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. : WMA20002/220627
Sampling Date : 2022-06-27

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36819-2	36819-3	36819-5	36819-6
Total Suspended Solids dried at 103-105°C (mg/L)	9	9	20	20
Arsenic (μg/L)	8	9	10	10

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36819A
Date of Issue:	2022-07-04
Date Received:	2022-06-27
Date Tested:	2022-06-27
Date Completed:	2022-07-04
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36819A
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. : WMA20002/220627
Sampling Date : 2022-06-27

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36819-8	36819-9	36819-11	36819-12
Total Suspended Solids dried at 103-105°C (mg/L)	15	14	11	11

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36819-14	36819-15	36819-17	36819-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	15	16

Remarks: 1) < = less than

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

ATTN: **Mr. Antony Leung**

Report No.:	36823
Date of Issue:	2022-07-05
Date Received:	2022-06-29
Date Tested:	2022-06-29
Date Completed:	2022-07-05
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36823
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. : WMA20002/220629
Sampling Date : 2022-06-29

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36823-2	36823-3	36823-5	36823-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	10	9
Arsenic (μg/L)	8	9	10	10

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:
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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. Antony Leung**

Report No.:	36823A
Date of Issue:	2022-07-05
Date Received:	2022-06-29
Date Tested:	2022-06-29
Date Completed:	2022-07-05
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36823A
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. : WMA20002/220629
Sampling Date : 2022-06-29

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36823-8	36823-9	36823-11	36823-12
Total Suspended Solids dried at 103-105°C (mg/L)	16	18	13	14

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36823-14	36823-15	36823-17	36823-18
Total Suspended Solids dried at 103-105°C (mg/L)	12	11	16	17

Remarks: 1) < = less than

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

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General Manager

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APPENDIX I
QUALITY CONTROL REPORTS FOR SS AND ARSENIC LABORATORY ANALYSIS

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TEST REPORT

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

Report No.:	QC36734
Date of Issue:	2022-06-08
Date Received:	2022-06-01
Date Tested:	2022-06-01
Date Completed:	2022-06-08

ATTN: **Mr. Antony Leung**

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 (%)	99	103	80-120
Arsenic (%)	111	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 (%)	2	4	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 36734.

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

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TEST REPORT

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

Report No.:	QC36739
Date of Issue:	2022-06-09
Date Received:	2022-06-04
Date Tested:	2022-06-04
Date Completed:	2022-06-09
Page:	1 of 1

ATTN: **Mr. Antony Leung**

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	99	80-120
Arsenic (%)	110	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	84	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	4	RPD≤5%
Arsenic (%)	15	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 36739.

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

Report No.:	QC36752
Date of Issue:	2022-06-10
Date Received:	2022-06-06
Date Tested:	2022-06-06
Date Completed:	2022-06-10
Page:	1 of 1

ATTN: **Mr. Antony Leung**

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	97	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 (%)	94	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	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 36752.

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

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

Report No.:	QC36757
Date of Issue:	2022-06-14
Date Received:	2022-06-08
Date Tested:	2022-06-08
Date Completed:	2022-06-14

ATTN: **Mr. Antony Leung**

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 (%)	93	101	80-120
Arsenic (%)	97	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	88	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	3	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 36757.

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

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
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Report No.:	QC36762
Date of Issue:	2022-06-16
Date Received:	2022-06-10
Date Tested:	2022-06-10
Date Completed:	2022-06-16

ATTN: **Mr. Antony Leung**

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 (%)	105	93	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	82	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 36762.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
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ATTN: **Mr. Antony Leung**

Report No.:	QC36779
Date of Issue:	2022-06-17
Date Received:	2022-06-13
Date Tested:	2022-06-13
Date Completed:	2022-06-17
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 (%)	103	101	80-120
Arsenic (%)	96	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	88	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	4	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 36779.

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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.

Report No.:	QC36783
Date of Issue:	2022-06-21
Date Received:	2022-06-15
Date Tested:	2022-06-15
Date Completed:	2022-06-21

ATTN: **Mr. Antony Leung**

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 (%)	98	94	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 (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	0	1	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36783.

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General Manager

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APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Report No.:	QC36787
Date of Issue:	2022-06-23
Date Received:	2022-06-17
Date Tested:	2022-06-17
Date Completed:	2022-06-23
Page:	1 of 1

ATTN: **Mr. Antony Leung**

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 (%)	101	101	80-120
Arsenic (%)	112	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	90	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	0	4	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 36787.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Report No.:	QC36798
Date of Issue:	2022-06-24
Date Received:	2022-06-20
Date Tested:	2022-06-20
Date Completed:	2022-06-24
Page:	1 of 1

ATTN: **Mr. Antony Leung**

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 (%)	98	101	80-120
Arsenic (%)	112	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	95	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	1	RPD≤5%
Arsenic (%)	15	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 36798.

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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.

Report No.:	QC36802
Date of Issue:	2022-06-24
Date Received:	2022-06-22
Date Tested:	2022-06-22
Date Completed:	2022-06-24

ATTN: **Mr. Antony Leung**

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 (%)	119	106	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 (%)	89	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	0	RPD≤5%
Arsenic (%)	16	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 36802.

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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.

Report No.:	QC36807
Date of Issue:	2022-06-29
Date Received:	2022-06-24
Date Tested:	2022-06-24
Date Completed:	2022-06-29
Page:	1 of 1

ATTN: **Mr. Antony Leung**

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 (%)	105	102	80-120
Arsenic (%)	96	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	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 36807.

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TEST REPORT

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

Report No.:	QC36819
Date of Issue:	2022-07-04
Date Received:	2022-06-27
Date Tested:	2022-06-27
Date Completed:	2022-07-04

ATTN: **Mr. Antony Leung**

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	102	80-120
Arsenic (%)	96	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	94	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	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 36819.

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TEST REPORT

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

Report No.:	QC36823
Date of Issue:	2022-07-05
Date Received:	2022-06-29
Date Tested:	2022-06-29
Date Completed:	2022-07-05
Page:	1 of 1

ATTN: **Mr. Antony Leung**

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 (%)	100	102	80-120
Arsenic (%)	96	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	93	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	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 36823.

**********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

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%
29-06-2022 10:56	CZ PT 1		20.01	0.00	0.00
29-06-2022 11:06	CZ container 1		19.61	0.00	0.00
29-06-2022 10:58	CZ container 2		19.87	0.00	0.00
29-06-2022 11:00	CZ container 3		19.82	0.00	0.00
29-06-2022 11:02	CZ container 4		19.74	0.01	0.00
29-06-2022 11:04	CZ container 5		19.61	0.00	0.00

Prepared by : Y L Chan (Safety Officer) Date : 29-06-2022

APPENDIX K
BUILT HERITAGE MONITORING RESULTS

Summary of vibration readings at FL02
(C2-SEISM-01)

CRCC – Paul Y. Joint Venture

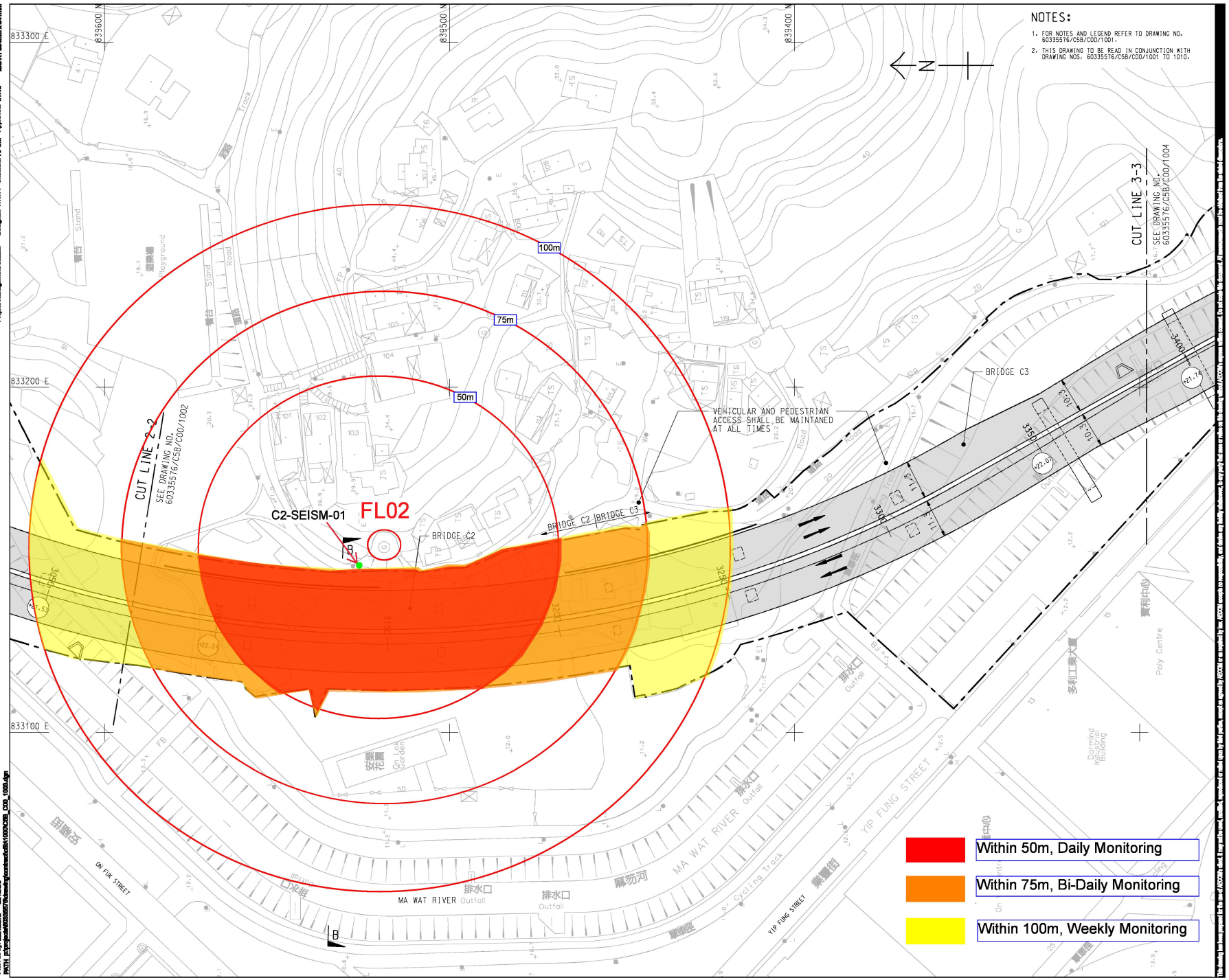
Table 2.3: Vibration Limit from PNAP APP-137 & PS 34.01(2)

TYPE OF BUILDING	GUIDE VALUES OF MAXIMUM PPV* (MM/SEC)	
	TRANSIENT VIBRATION	CONTINUOUS VIBRATION
Vibration-sensitive / dilapidated buildings#	7.5	3.0

Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
01 Jun 2022	0.091	UM17121
02 Jun 2022	0.823	UM17124
04 Jun 2022	0.155	UM17121
06 Jun 2022	1.574	UM17124
07 Jun 2022	0.290	UM17121
08 Jun 2022	0.389	UM17124
09 Jun 2022	0.504	UM17121
10 Jun 2022	0.350	UM17121
11 Jun 2022	0.817	UM17124
13 Jun 2022	0.700	UM17121
14 Jun 2022	1.099	UM17124
15 Jun 2022	0.127	UM17121
16 Jun 2022	0.137	UM17121
17 Jun 2022	0.166	UM17124
18 Jun 2022	0.152	UM17121
20 Jun 2022	0.097	UM17124
21 Jun 2022	0.088	UM17121
22 Jun 2022	0.183	UM17124
23 Jun 2022	0.097	UM17121
24 Jun 2022	0.091	UM17121
25 Jun 2022	0.088	UM17124
27 Jun 2022	0.129	UM17124
28 Jun 2022	0.147	UM17121
29 Jun 2022	0.136	UM17121
30 Jun 2022	0.344	UM17124

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1001.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1001 TO 1010.



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 (SHUNG HIM TONG TO KAU LUNG HANG)

CLIENT

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

CONSULTANT

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SUB-CONSULTANTS

ISSUE/REVISION

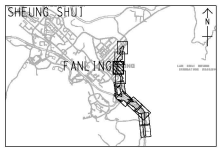
REV	DATE	DESCRIPTION	CHK
-	JUN-19	TENDER DRAWING	RPCM

STATUS

SCALE: A1 1 : 500

DIMENSION UNIT: METRES

KEY PLAN A1 1 : 70000



PROJECT NO.: 60335576

CONTRACT NO.: ND/2019/05

SHEET TITLE: GENERAL LAYOUT

SHEET 3 OF 10

SHEET NUMBER: 60335576/C5B/C00/1003

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

Plot File by: ZENKAI2 2019/06/06
PATH: jobs\60335576\Working\cad\ndfls\1000\C5B_C00_1003.dgn

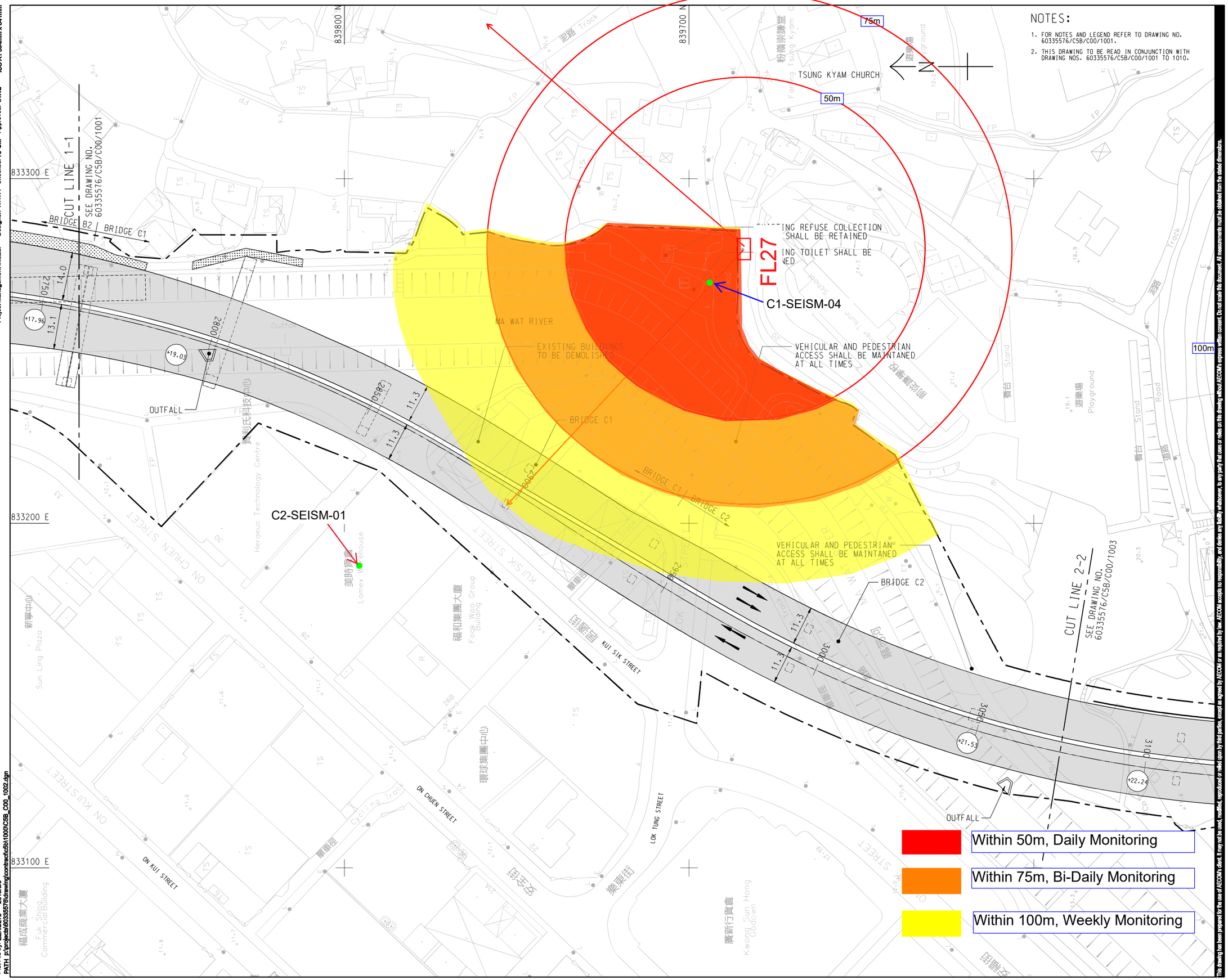
Summary of vibration readings at FL27
(C1-SEISM-04)

CRCC – Paul Y. Joint Venture

Table 2.3: Vibration Limit from PNAP APP-137 & PS 34.01(2)

TYPE OF BUILDING	GUIDE VALUES OF MAXIMUM PPV* (MM/SEC)	
	TRANSIENT VIBRATION	CONTINUOUS VIBRATION
Vibration-sensitive / dilapidated buildings#	7.5	3.0

Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
01 Jun 2022	0.298	UM17121
02 Jun 2022	0.181	UM17124
04 Jun 2022	0.3	UM17124
06 Jun 2022	0.309	UM17121
07 Jun 2022	1.203	UM17121
08 Jun 2022	1.139	UM17124
09 Jun 2022	0.093	UM17124
10 Jun 2022	0.106	UM17121
11 Jun 2022	0.407	UM17124
13 Jun 2022	0.461	UM17121
14 Jun 2022	0.21	UM17124
15 Jun 2022	0.195	UM17121
16 Jun 2022	0.094	UM17121
17 Jun 2022	0.084	UM17124
18 Jun 2022	0.663	UM17121
20 Jun 2022	0.483	UM17124
21 Jun 2022	0.317	UM17121
22 Jun 2022	0.123	UM17124
23 Jun 2022	0.121	UM17121
24 Jun 2022	0.096	UM17124
25 Jun 2022	0.106	UM17121
27 Jun 2022	0.091	UM17121
28 Jun 2022	0.116	UM17124
29 Jun 2022	0.071	UM17124
30 Jun 2022	0.078	UM17121



AECOM

PROJECT 項目

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 (SHUNG HIM TONG TO KAU LUNG HANG)

CLIENT 業主

土木工程拓展署 Civil Engineering and Development Department

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SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

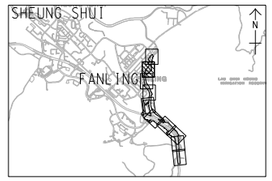
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 審核
-	JUN-19	TENDER DRAWING	RPCM

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/05

SHEET TITLE 圖紙名稱

GENERAL LAYOUT

SHEET 2 OF 10

SHEET NUMBER 圖紙編號

60335576/C5B/C00/1002

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Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL

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APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 1 & 2 June 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								1/6/2022 (T1 & T2), 2/6/2022 (T3 & T5)
					Weather Condition								Rain, Overcast
					Tidal Condition								High
					Tide Level (m)								2.39, 2.6
					Start Time								1200, 1000
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R				2					1	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										20
Black Kite	*Milvus migrans*	黑鳶	R, WV				1						
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		4	1	4		2			2	5
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				20		3			5
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	3	4	3	3	10			4
Common Moorhen	*Gallinula chloropus*	黑水雞	R					1					
Common Myna	*Acridotheres tristis*	家八哥	UR						1				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1								
Crested Myna	*Acridotheres cristatellus*	八哥	R					6					1
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			1		6	4			
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		4				3				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1	2						2
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	3	1	9	2	6	25			7
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				4						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								1/6/2022 (T1 & T2), 2/6/2022 (T3 & T5)
					Weather Condition								Rain, Overcast
					Tidal Condition								High
					Tide Level (m)								2.39, 2.6
					Start Time								1200, 1000
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						1				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						1			1	1
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		4				3			2	2
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5	2			2				2
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		2				8				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1			1					1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					1				1	
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									2	1
Total No. of Species					9	5	8	7	11	4	0	6	12
Total No. of Conservation Interest Species					2	3	4	3	3	4	0	1	4
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								1/6/2022 (T1 & T2), 2/6/2022 (T3 & T5)
					Weather Condition								Rain, Overcast
					Tidal Condition								High
					Tide Level (m)								2.39, 2.6
					Start Time								1200, 1000
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage 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
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, 1 & 2 June 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								1/6/2022 (T1 & T2), 2/6/2022 (T3 & T5)
					Weather Condition								Rain, Overcast
					Tidal Condition								Low
					Tide Level (m)								1.1, 1.3
					Start Time								1600, 1600
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R									2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										15
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1	1	3						2
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				10					
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)		1	5	6		4			1
Crested Myna	*Acridotheres cristatellus*	八哥	R		2		4		11				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)				4		8			
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						4				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	2		1			4			
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	1	5	15	2	18			2
Plain Prinia	*Prinia inornata*	純色鷦鶯	R									3	
Rock Dove	*Columba livia*	原鴿	R			5							
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		3				1				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		3								
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R									2	
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									1	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			1/6/2022 (T1 & T2), 2/6/2022 (T3 & T5)					
					Weather Condition			Rain, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			1.1, 1.3					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					6	4	5	4	4	4	0	4	4
Total No. of Conservation Interest Species					2	2	3	4	1	4	0	0	2
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			1/6/2022 (T1 & T2), 2/6/2022 (T3 & T5)					
					Weather Condition			Rain, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			1.1, 1.3					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage 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
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, 8 & 10 June 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								8/6/2022 (T1 & T2), 10/6/2022 (T3 & T5)
					Weather Condition								Storm, Overcast
					Tidal Condition								High
					Tide Level (m)								1.77, 1.74
					Start Time								1400, 0800
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										6
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R				4		2				4
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				9		5			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)		1	4	4	3	3			3
Crested Myna	*Acridotheres cristatellus*	八哥	R						10				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					11				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)					2				2
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R	LC									2
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										35
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	1	8	3	4	16			5
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R						2				4
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1								4
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV										2
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R						1			3	1
Total No. of Species					2	2	3	3	8	3	0	1	11

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								8/6/2022 (T1 & T2), 10/6/2022 (T3 & T5)
					Weather Condition								Storm, Overcast
					Tidal Condition								High
					Tide Level (m)								1.77, 1.74
					Start Time								1400, 0800
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Conservation Interest Species					1	2	2	3	4	3	0	0	4

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; 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
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, 8 & 10 June 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								8/6/2022 (T1 & T2), 10/6/2022 (T3 & T5)
					Weather Condition								Storm, Rain
					Tidal Condition								Low
					Tide Level (m)								1.47, 1
					Start Time								0900, 1300
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R				2						
Black Kite	*Milvus migrans*	黑鳶	R, WV										1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R			1	5						
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC			1						
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						8			2
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				2						
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)			4						1
Crested Myna	*Acridotheres cristatellus*	八哥	R				2						
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1							
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)			1						
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		1	23	2		10			3
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				2						
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		2								
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2		1						
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV										1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								8/6/2022 (T1 & T2), 10/6/2022 (T3 & T5)
					Weather Condition								Storm, Rain
					Tidal Condition								Low
					Tide Level (m)								1.47, 1
					Start Time								0900, 1300
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									1	
Total No. of Species					2	3	10	1	0	2	0	1	5
Total No. of Conservation Interest Species					0	2	4	1	0	2	0	0	3
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/6/2022 (T1 & T2), 10/6/2022 (T3 & T5)					
					Weather Condition			Storm, Rain					
					Tidal Condition			Low					
					Tide Level (m)			1.47, 1					
					Start Time			0900, 1300					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; 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
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, 14 & 16 June 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								16/6/2022 (T1 & T2), 14/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								High
					Tide Level (m)								3.04, 2.87
					Start Time								1000, 1000
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R				1						
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				8		6				24
Black Kite	*Milvus migrans*	黑鳶	R, WV				1						
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3								
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				11	2	3			4
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				2						
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	2	3	4	8				4
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1								
Common Myna	*Acridotheres tristis*	家八哥	UR				2						
Crested Myna	*Acridotheres cristatellus*	八哥	R				8		26				18
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					6				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				5						
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			1	4	8				
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										41
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	2	1	23	8				4

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								16/6/2022 (T1 & T2), 14/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								High
					Tide Level (m)								3.04, 2.87
					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				4		4				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						2				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R									2	
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				4		3				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	1	9		7				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1	1	1						
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					4				2	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					1				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1							3	1
Total No. of Species					4	7	14	5	12	1	0	3	7
Total No. of Conservation Interest Species					2	2	3	4	6	1	0	0	3
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			16/6/2022 (T1 & T2), 14/6/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			3.04, 2.87					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; 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
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, 14 & 16 June 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								16/6/2022 (T1 & T2), 14/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								Low
					Tide Level (m)								1.22, 1.30
					Start Time								1600, 1400
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				4						13
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		2		4		3				5
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				16					
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R		2		2		5				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2		1	8	11				
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			2						
Common Moorhen	*Gallinula chloropus*	黑水雞	R					2					
Common Myna	*Acridotheres tristis*	家八哥	UR										11
Crested Myna	*Acridotheres cristatellus*	八哥	R		4	2			11				21
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		8								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			4	2	3				4
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC			1		1				1
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										16
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	3	1	1	6	19				3
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		3		7		4				3

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			16/6/2022 (T1 & T2), 14/6/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.30					
					Start Time			1600, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						1				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R									2	
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		3	2							
Rock Dove	*Columba livia*	原鴿	R		3				5				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		3	2	6		8				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1								1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R									2	
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									3	
Total No. of Species					11	4	10	5	11	0	0	3	10
Total No. of Conservation Interest Species					2	1	5	4	4	0	0	0	3
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			16/6/2022 (T1 & T2), 14/6/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.30					
					Start Time			1600, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident;
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1g. Avifauna Species Recorded for Water Birds Monitoring, 23 & 24 June 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								23/6/2022 (T1 & T2), 24/6/2022 (T3 & T5)
					Weather Condition								Rain, Sunny
					Tidal Condition								High
					Tide Level (m)								1.91, 1.96
					Start Time								0800, 0900
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		8	3	1						
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		7	3	6		1				18
Black Kite	*Milvus migrans*	黑鳶	R, WV			1	1						
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		2								
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				7		11		2	2
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)			6	1	6	7			5
Common Myna	*Acridotheres tristis*	家八哥	UR										3
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R									3	
Crested Myna	*Acridotheres cristatellus*	八哥	R				5						4
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			1						
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			3						2
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC		1							
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		14	7	6						5
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	3	8		15	7			4
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC									2

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								23/6/2022 (T1 & T2), 24/6/2022 (T3 & T5)
					Weather Condition								Rain, Sunny
					Tidal Condition								High
					Tide Level (m)								1.91, 1.96
					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				4						
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						1			1	1
Rock Dove	*Columba livia*	原鴿	R				3						
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5		8		1				2
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1	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)	1								
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									1	
Total No. of Species					7	7	13	2	5	3	0	5	12
Total No. of Conservation Interest Species					2	2	4	2	2	3	0	1	5
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			23/6/2022 (T1 & T2), 24/6/2022 (T3 & T5)					
					Weather Condition			Rain, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.91, 1.96					
					Start Time			0800, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident;
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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SWH: Shallow Water Habitat
P: Pond

Appendix L1h. Avifauna Species Recorded for Water Birds Monitoring, 23 & 24 June 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								23/6/2022 (T1 & T2), 24/6/2022 (T3 & T5)
					Weather Condition								Rain, Sunny
					Tidal Condition								Low
					Tide Level (m)								1.23, 0.75
					Start Time								1100, 1400
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		9	3	1		1				1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R				4		5			5	3
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				36	2			2	
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				1		1				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	5	1		2	7			1	3
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1						
Common Moorhen	*Gallinula chloropus*	黑水雞	R						2				
Common Myna	*Acridotheres tristis*	家八哥	UR						6				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R						3				
Crested Myna	*Acridotheres cristatellus*	八哥	R		2								
Domestic Pigeon	*Columba livia*	原鴿	R						3				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					2				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				2		40				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			1	1	2				4
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		15								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								23/6/2022 (T1 & T2), 24/6/2022 (T3 & T5)
					Weather Condition								Rain, Sunny
					Tidal Condition								Low
					Tide Level (m)								1.23, 0.75
					Start Time								1100, 1400
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC			1						1
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	3		3	10	33				3
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC									1
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				3						
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R				1						
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)	1								
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2		11						
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					1	1				
Total No. of Species					7	2	11	5	14	0	0	3	7
Total No. of Conservation Interest Species					3	1	3	4	5	0	0	2	5
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			23/6/2022 (T1 & T2), 24/6/2022 (T3 & T5)					
					Weather Condition			Rain, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.23, 0.75					
					Start Time			1100, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1i. Avifauna Species Recorded for Water Birds Monitoring, 28 & 30 June 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								30/6/2022 (T1 & T2), 28/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								High
					Tide Level (m)								2.7, 2.48
					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		2		2						11
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R				2		2			2	3
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586			1						
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				14	1				24
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R		2								
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	2		12	3				2
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R						1				
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU					2				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				1						
Crested Myna	*Acridotheres cristatellus*	八哥	R		3	32	7	1				3	1
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			1			27				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			1	12	13				
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R	LC				1					
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC		1							
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC			1	1	1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								30/6/2022 (T1 & T2), 28/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								High
					Tide Level (m)								2.7, 2.48
					Start Time								1000, 1000
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	2		14	7				2
Magpie Robin	*Copsychus saularis*	鵲鴝	R		1	1			1				2
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						3				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R									2	
Rock Dove	*Columba livia*	原鴿	R				1	1	9			4	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		3	4	1		2			2	
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	1	1	1				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		1		1	2				1	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R		1								
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									2	
Total No. of Species					8	8	10	10	14	0	0	7	6
Total No. of Conservation Interest Species					2	2	3	6	6	0	0	0	3
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								30/6/2022 (T1 & T2), 28/6/2022 (T3 & T5)					
					Weather Condition								Fine, Sunny					
					Tidal Condition								High					
					Tide Level (m)								2.7, 2.48					
					Start Time								1000, 1000					
					Abundance													
					Transect Walk													
					T1	T2	T3	T5										
								WAL	DAL	SWH	P	Heard	Flight					

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident;
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 L1j. Avifauna Species Recorded for Water Birds Monitoring, 28 & 30 June 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								30/6/2022 (T1 & T2), 28/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								Low
					Tide Level (m)								1.02, 1.28
					Start Time								1600, 1400
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		2		6		4				1
Black Kite	*Milvus migrans*	黑鳶	R, WV		1								
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R				2		5				2
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				27	1			1	2
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R						1				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	2	1	6	4				1
Common Myna	*Acridotheres tristis*	家八哥	UR				2		1				2
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R						1			2	
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R			1	2						1
Crested Myna	*Acridotheres cristatellus*	八哥	R		10	12	6		22				6
Domestic Pigeon	*Columba livia*	原鴿	R						3				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				5		5				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			1	7	11				8
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC									1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								30/6/2022 (T1 & T2), 28/6/2022 (T3 & T5)
					Weather Condition								Fine, Sunny
					Tidal Condition								Low
					Tide Level (m)								1.02, 1.28
					Start Time								1600, 1400
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		2	2							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)			5	5	23				5
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R		4				1				
Rock Dove	*Columba livia*	原鴿	R			23							
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5	3	10		10				4
Spotted Munia	*Lonchura punctulata*	斑文鳥	R						6				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2		1	11				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R				1						
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R						2				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1							5	
Total No. of Species					9	8	11	5	17	0	0	3	11
Total No. of Conservation Interest Species					2	2	3	4	4	0	0	1	5
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date								30/6/2022 (T1 & T2), 28/6/2022 (T3 & T5)		
					Weather Condition								Fine, Sunny		
					Tidal Condition								Low		
					Tide Level (m)								1.02, 1.28		
					Start Time								1600, 1400		
					Abundance										
					Transect Walk										
					T1	T2	T3	T5							
								WAL	DAL	SWH	P	Heard	Flight		

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; 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
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 L1k. Waterbirds Recorded in June 2022

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	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 bed 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, Pond, In flight	Common resident. Widely distributed in Hong Kong.
Common Kingfisher	*Alcedo atthis*	普通翠鳥		T1: River bank, In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Sandpiper	*Actitis hypoleucos*	磯鷸		T1: 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)	T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Resident and common passage migrant. Widely distributed in Hong Kong.
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	LC	T5: Wet Agricultural Land, In flight	Locally common resident. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.
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: Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Grey Heron	*Ardea cinerea*	蒼鷺	PRC	T3: River bank, River bed, In flight T5: Shallow Water Habitat, 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	T3: River bank, In flight T5: Wet Agricultural Land, Dry Agricultural Land,, In flight	Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape 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 Ringed Plover	*Charadrius dubius*	金眶鴴	(LC)	T5: In flight	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Pied Kingfisher	*Ceryle rudis*	斑魚狗	(LC)	T1: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥		T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	(LC)	T1: River bank T5: Dry Agricultural Land, In flight	Common resident. Widely distributed in coastal areas throughout Hong Kong.

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident;
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

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
P: Pond *Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)					

Appendix L1l. Birds Recorded in June 2022

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	
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*	白頭鵯	R	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU
Common Myna	*Acridotheres tristis*	家八哥	UR	
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM	
Crested Myna	*Acridotheres cristatellus*	八哥	R	
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R	
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R	LC
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
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R	
Oriental Magpie Robin	*Copsychus saularis*	鵲鴝	R	
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)
Plain Prinia	*Prinia inornata*	純色鷦鶯	R	
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	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R	
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R	

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident;
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: PondRC=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

Common Name	Scientific Name	Conservation Status	Occurrence Status	Date: 16 June 2022									
				Weather: Fine									
				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				+		+				
Black-banded Gossamerwing	*Eupjaea decorata*	-	Native				+						
Bladder Snail	*Physella acuta*	-	-			+					+		
Blood Worm	*Chironomidae*	-	-										
Chinese River Snail	*Sinotaia guangdungensis*	-	Native						+	+			+
Common Blue Skimmer	*Orthetrum glaucum*	-	Native									+	
Common Red Skimmer	*Orthetrum pruinosum*	-	Native			+				+		+	
Freshwater Snail	*Tricula sp.*	-	-								+		
Mayfly	*Baetis* sp.	-	-								+		
Orange-tailed Sprite	*Ceiagrion auranticum*	-	Native				+						
Ram's Horn Snail	*Gyraulus convexiusculus*	-	Introduced		++								
Red-rimmed Melania	*Melanoides tuberculata*	-	Introduced		+								+
River Snail	*Sinotaia quadrata*	-	-								+		
Saddlebag Glider	*Tramea virginia*	-	Native										++
Wandering Glider	*Pantala flavescens*	-	Native									++	

Water Strider	*Ptilomera tigrina*	-	-								+++		
Yellow Featherlegs	*Copera marginipes*	-	Native			+	+++		+	++			
Total No. of species				0	2	3	4	0	3	3	5	4	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)

Appendix L2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Occurece Status	Date: 16 June 2022				
				Weather: Fine				
				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			+	++	
Black-banded Gossamerwing	*Euphaea decorata*	-	Native					
Bladder Snail	*Physella acuta*	-	-					
Blood Worm	*Chironomidae*	-	-	+++				
Chinese River Snail	*Sinotaia guangdungensis*	-	Native					
Common Blue Skimmer	*Orthetrum glaucum*	-	Native					
Common Red Skimmer	*Orthetrum pruinosum*	-	Native			+	++	
Freshwater Snail	*Tricula* sp.	-	-					
Mayfly	*Baetis* sp.	-	-					
Orange-tailed Sprite	*Ceiagrion auranticum*	-	Native					
Ram's Horn Snail	*Gyraulus convexiusculus*	-	Introduced					
Red-rimmed Melania	*Melanoides tuberculata*	-	Introduced				+++	++
River Snail	*Sinotaia quadrata*	-	-					
Saddlebag Glider	*Tramea virginia*	-	Native					
Wandering Glider	*Pantala flavescens*	-	Native					

Water Strider	*Ptilomera tigrina*							
Yellow Featherlegs	*Copera marginipes*	-	Native			+		
Total No. of species				2	1	5	4	2
Total No. of Conservation Interest Species				0	0	0	0	0

Appendix L3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Occurrence Status	Date: 16 June 2022									
				Weather: Fine									
				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
Common Carp	*Cyprinus carpio*	VU	Introduced										
Mosquito Fish	*Gambusia affinis*	-	Introduced						++	++			
Mozambique Tilapia	*Oreochromis mossambicus*	VU	Introduced						++				
Nile Tilapia	*Oreochromis niloticus*	-	Introduced						+	++			
Total No. of species				0	0	0	0	0	3	2	0	0	0
Total No. of Conservation Interest Species				0	0	0	0	0	1	0	0	0	0

Note:
VU: Vulnerable on IUCN Red List of Threatened 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: 16 June 2022				
				Weather: Fine				
				Methods: Kick-netting, sweep netting and direct observation				
				Abundance				
				MS_11	MS_12	MS_13	MS_14	MS_15
Common Carp	*Cyprinus carpio*	VU	Introduced					+
Mosquito Fish	*Gambusia affinis*	-	Introduced			+++		
Mozambique Tilapia	*Oreochromis mossambicus*	VU	Introduced				++	
Nile Tilapia	*Oreochromis niloticus*	-	Introduced				+	
Total No. of species				0	0	1	2	1
Total No. of Conservation Interest Species				0	0	0	1	0

Note:
VU: Vulnerable on IUCN Red List of Threatened 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, 9 & 15 June 2022

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 9/6 /2022, 15/6/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	*Felis catus*	野貓	-	Introduced	+				
Domestic Dog	*Canis lupus familiaris*	野狗	-	Introduced				++	
Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Cap. 170	Native	++	++	+	+	
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Cap. 170, I, NT	Native				++	
Total No. of species					2	1	1	3	0
Total No. of Conservation Interest Species					1	1	1	2	0

Note:

Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)

NT: Near Threatened in the Red List of China's Vertebrates

I: Indeterminate in China Red Data Book Status

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, 9 & 15 June 2022

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 9/6 /2022, 15/6/2022				
					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	++				
Butler's Pigmy Frog	*Microhyla butleri*	粗皮姬蛙	-	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	++	+		+	
Changeable Lizard	*Calotes versicolor*	變色樹蜥	-	Native	+				
Chinese gecko	*Gekko chinensis*	中國壁虎	-	Native	+				
Total No. of species					9	1	0	4	0
Total No. of Conservation Interest Species					0	0	0	0	0

Note://
Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix L6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 9 & 15 June 2022

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts*	Date: 9/6 /2022, 15/6/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Angled Castor	*Ariadne ariadne*	波蛺蝶	-	-	+				
Black Prince	*Rohana parisatis*	羅蛺蝶	-	-					+
Blue-spotted Crow	*Euploea midamus*	藍點紫斑蝶	-	-	+		+		+
Chinese Peacock	*Papilio bianor*	碧鳳蝶	-	-	+++			+	
Common Archduke	*Lexias pardalis*	小豹律蛺蝶	-	-				+	
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 Indian Crow	*Euploea core*	幻紫斑蝶	-	-	++		+	++	
Common Jay	*Graphium doson axion*	木蘭青鳳蝶	-	-	+		++		
Common Mime	*Chilasa clytia*	斑鳳蝶	-	-			+		
Common Mormon	*Papilio polytes*	玉帶鳳蝶	-	-	+++	++	+++	+++	
Common Sailer	*Neptis hylas*	中環蛺蝶	-	-	+			+	

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts*	Date: 9/6 /2022, 15/6/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Dark Brand Bush Brown	*Mycalesis mineus*	小眉眼蝶	-	-	+++	+		++	+
Five-dot Sergeant	*Parathyma sulpitia*	殘鍔線蛺蝶	-	-					+
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	-	-	+		+++	+++	
Pale Grass Blue	*Pseudozizeeria maha*	酢漿灰碟	-	-	++		+++		
Paris Peacock	*Papilio paris*	巴黎翠鳳蝶	-	-	+			+	+
Red Helen	*Papilio Helenus*	玉斑鳳蝶	-	-	+		+		
Red Ring Skirt	*Hestina assimilis*	黑脈蛺蝶	-	-	++				
Spangle	*Papilio protenor*	藍鳳蝶	-	-	++		+++	+++	
Tawny Rajah	*Charaxes bernardus*	白帶螯蛺蝶	-	-	+		+		

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts*	Date: 9/6 /2022, 15/6/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Three-spot Grass Yellow	*Eurema blanda*	黐黃粉蝶	-	-					+
Yellow Rajah	*Charaxes marmax*	螯蛺蝶	LC	-					+
Total No. of species					19	3	14	14	9
Total No. of Conservation Interest Species					0	0	0	0	1

Note:
LC: Local Concern (Fellowes et al., 2002)

Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)

*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

Local Restrictedness Column has been removed as said information is no longer available.

Appendix L7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 9 & 15 June 2022

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts	Date: 9/6 /2022, 15/6/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Asian Amberwing	*Brachythemis contaminata*	黃翅蜻	-	Native	++				
Blue Chaser	*Potamarcha congener*	濕地狹翅蜻	LC	Native	+				
Blue Percher	*Diplacodes trivialis*	紋藍小蜻	-	Native	+				
Common Blue Skimmer	*Orthetrum glaucum*	黑尾灰蜻	-	Native		+		+	
Common Red Skimmer	*Orthetrum pruinosum*	赤褐灰蜻	-	Native	+++			+++	+
Crimson Darter	*Crocothemis servilia*	紅蜻	-	Native				+	
Green Skimmer	*Orthetrum sabina*	狹腹灰蜻	-	Native	++				
Marsh Skimmer	*Orthetrum luzonicum*	呂宋灰蜻	-	Native					+
Orange-tailed Sprite	*Ceriagrion auranticum*	翠胸黃蟌	-	Native	+				
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				+	

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Stauts	Date: 9/6 /2022, 15/6/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
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					10	2	1	6	3
Total No. of Conservation Interest Species					1	0	0	0	0

Note:
LC: Local Concern (Fellowes et al., 2002)
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 M
WEATHER CONDITION

APPENDIX M –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 June 2022	28.7	81	1.2
2 June 2022	28.8	80	11.9
3 June 2022	29.2	81	1.6
4 June 2022	29.6	78	Trace
5 June 2022	29.6	78	Trace
6 June 2022	28.9	83	2.5
7 June 2022	27.4	86	33.8
8 June 2022	25.8	93	66
9 June 2022	26.3	90	28.7
10 June 2022	26.1	92	25.8
11 June 2022	26.8	89	47.5
12 June 2022	28.4	84	2.6
13 June 2022	28.9	80	0
14 June 2022	27.4	87	42.8
15 June 2022	26.7	88	11

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 June 2022	27.6	84	2.6
17 June 2022	29	79	1
18 June 2022	28.8	81	1.3
19 June 2022	29.3	81	0.1
20 June 2022	29.2	80	2.8
21 June 2022	29.4	80	Trace
22 June 2022	29.5	78	0
23 June 2022	30	74	0
24 June 2022	30	73	0
25 June 2022	29.6	74	0
26 June 2022	30	74	0.3
27 June 2022	30.1	73	0.1
28 June 2022	30.6	71	0
29 June 2022	30.2	78	0.7
30 June 2022	27.5	89	64.9

* The above information was extracted from the daily weather summary by Hong Kong Observatory.

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/audit s 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	1	0	0
	Turbidity	0	2	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

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	220607
Date	7 June 2022 (Tuesday)
Time	10:00-11:00

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. 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.:220531), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		7 June 2022
Checked by	Dr. Priscilla Choy		7 June 2022

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	220615
Date	15 June 2022 (Wednesday)
Time	9:30-11:00

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.:220607), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Camus Yeung		16 June 2022
Checked by	Dr. Priscilla Choy		16 June 2022

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	220621
Date	21 June 2022 (Tuesday)
Time	9:30-10:30

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. 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.:220615), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		23 June 2022
Checked by	Dr. Priscilla Choy		23 June 2022

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	220628
Date	28 June 2022 (Tuesday)
Time	9:30-10:30

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. 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.:220621), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		28 June 2022
Checked by	Dr. Priscilla Choy		28 June 2022

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	220601
Date	1 June 2022 (Wednesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220601-R01	• Faded NRMM label shall be replaced.	B24
	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.:220525), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		6 June 2022
Checked by	Dr. Priscilla Choy		6 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220608
Date	8 June 2022 (Wednesday)
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. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220608-O01	• Muddy surface runoff were observed entering water bodies such as drainage, spilling pass pre-existing sandbags and earthbunds. Contractor was urged to enhance water mitigation measures immediately, to ensure no further muddy runoff will enter water bodies, especially throughout rainy season.	D (2i, 3, 4, 13i)
	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.:220601), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		8 June 2022
Checked by	Dr. Priscilla Choy		8 June 2022

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	220617
Date	17 June 2022 (Friday)
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. 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	
220617-R01	• Drip tray should be provided for chemical storage.	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	
220617-R02	• Silt curtain should be properly maintained.	H 4
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220608), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		21 June 2022
Checked by	Dr. Priscilla Choy		21 June 2022

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	220623
Date	23 June 2022 (Friday)
Time	15:30 – 17:30

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.:220617), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		24 June 2022
Checked by	Dr. Priscilla Choy		24 June 2022

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	220629
Date	29 June 2022 (Wednesday)
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. 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.:220623), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		30 June 2022
Checked by	Dr. Priscilla Choy		30 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220602
Date	2 June 2022 (Thursday)
Time	10:00-10:30

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 & 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.:220527), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		6 June 2022
Checked by	Dr. Priscilla Choy		6 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220610
Date	10 June 2022 (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	
	• 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 & 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.:220602), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		21 June 2022
Checked by	Dr. Priscilla Choy		21 June 2022

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	220617
Date	17 June 2022 (Friday)
Time	10:00-10:30

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 & 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.:220610), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		21 June 2022
Checked by	Dr. Priscilla Choy		21 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220621
Date	21 June 2022 (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	
	• 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 & 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.:220617), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		22 June 2022
Checked by	Dr. Priscilla Choy		22 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220628
Date	28 June 2022 (Tuesday)
Time	10:00-10:30

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 & 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.:220621), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		30 June 2022
Checked by	Dr. Priscilla Choy		30 June 2022

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Weekly Site Inspection Record Summary

Checklist Reference Number	220602
Date	2 June 2022 (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	
220602-R01	• The stockpiles of dusty materials should be covered properly at the site area next to wholesale market.	B2
	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.: 220526), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Ivy Tam	Ivy	2 June 2022
Checked by	Dr. Priscilla Choy		2 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220608
Date	8 June 2022 (Wednesday)
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. 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.: 220602), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		10 June 2022
Checked by	Dr. Priscilla Choy		10 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220616
Date	16 June 2022 (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	
220616-R01	• General refuse should be disposed of regularly and properly.	E 1 iii
	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.: 220608), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		10 June 2022
Checked by	Dr. Priscilla Choy		10 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220623
Date	23 June 2022 (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	
220623-R01	• To replace faded NRMM labels.	B24
	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.: 220616), all environmental deficiency was rectified/ improved by the contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		27 June 2022
Checked by	Dr. Priscilla Choy		27 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220630
Date	30 June 2022 (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	
220630-R01	• To replace faded NRMM labels.	B24
	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	
220630-R02	• General refuse should be disposed of properly.	E1 iii
220630-R03	To provide drip tray to prevent leakage.	E14
	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.:220623), item 220623-R01 was remarked as 220630-R01. Follow-up action is needed to be reviewed	

	Name	Signature	Date
Recorded by	Adrian Lam		30 June 2022
Checked by	Dr. Priscilla Choy		30 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220606
Date	6 June 2022 (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.: 220531), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		7 Jun 2022
Checked by	Dr. Priscilla Choy		7 Jun 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220616
Date	16 June 2022 (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.: 220606), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		20 Jun 2022
Checked by	Dr. Priscilla Choy		20 Jun 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220620
Date	20 June 2022 (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	
220620-R02	• Dusty stockpile should be covered by impervious sheets properly.	A 2
	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	
220620-R01	• Drip tray should be provided properly.	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.: 220616), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		21 Jun 2022
Checked by	Dr. Priscilla Choy		21 Jun 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220627
Date	27 June 2022 (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	
220627-R01	• Dusty stockpile should be covered by impervious sheeting properly.	A 2
	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.: 220620), 220620-R01 and 220620-R02 were observed improved/rectified by the contractor during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		28 Jun 2022
Checked by	Dr. Priscilla Choy		28 Jun 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220602
Date	2 June 2022 (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.: 220526), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Ivy Tam	Ivy	2 June 2022
Checked by	Dr. Priscilla Choy		2 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220608
Date	8 June 2022 (Wednesday)
Time	09:30-10:00

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.: 220602), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		10 June 2022
Checked by	Dr. Priscilla Choy		10 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220616
Date	16 June 2022 (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.: 220608), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		20 June 2022
Checked by	Dr. Priscilla Choy		20 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220623
Date	23 June 2022 (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.: 220616), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		27 June 2022
Checked by	Dr. Priscilla Choy		27 June 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220630
Date	30 June 2022 (Thursday)
Time	13:15-13:45

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.: 220623), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Tim Lui		4 July 2022
Checked by	Dr. Priscilla Choy		4 July 2022

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	220602
Date	2 June 2022 (Friday)
Time	11:00 – 12:00

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.: 220527), all environmental deficiencies were observed improved/rectified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		7 June 2022
Checked by	Dr. Priscilla Choy		7 June 2022

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	220610
Date	10 June 2022 (Friday)
Time	13:30 – 14:30

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.: 220602), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		13 June 2022
Checked by	Dr. Priscilla Choy		13 June 2022

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	220617
Date	17 June 2022 (Friday)
Time	11:00 – 12:00

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.: 220610), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		20 June 2022
Checked by	Dr. Priscilla Choy		20 June 2022

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	220624
Date	24 June 2022 (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.: 220617), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		27 June 2022
Checked by	Dr. Priscilla Choy		27 June 2022

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	220629
Date	29 June 2022 (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. 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.: 220624), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		30 June 2022
Checked by	Dr. Priscilla Choy		30 June 2022

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;	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	# ^ ^ ^ ^

		• When there are open excavation and reinstatement works, 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;					N/A
		• 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
		• 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 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.	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
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	Construction phase	^

					practicable		
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 representative locations	Contractor	Selected representative noise monitoring stations	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1	<u>Construction Runoff and Site Drainage</u> 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	Control construction runoff	Contractor	All construction sites	Construction phase	# *

		disposal. The system capacity shall be flexible and able to handle multiple 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 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 50m3 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 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.					N/A
		• 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.					^ ^
S5.7	W2	*Stream Diversion* • 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	*
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	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A N/A

		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.					N/A N/A
S5.7	W4	*Sewage from Workforce* Portable chemical toilets and sewage holding tanks should be provided for 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.	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
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 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.	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^ ^ ^ 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	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^

		management procedures and concepts of waste reduction, reuse and recycling; • 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 impacts: • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^

		transportation; • Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.					^ ^
S7.6	WM6	*Excavated and C&D Material* 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, 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.	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^ ^ N/A N/A N/A ^ N/A

		Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					^
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 mitigation 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 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.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
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	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^ * ^

		general refuse on a daily basis.					
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
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	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	N/A

			the assessment if remediation is required			and 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 contaminated or could not be accessed for visual inspection during the site survey as	After the land is resumed and handed over to the Project Proponent.	N/A

					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 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	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 ^

		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 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.	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	N/A ^ ^ ^ ^ ^

S 8.7.2 and Appendix 8.4	LC9	Safety Measures • 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 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.	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A
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	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

		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 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	^ ^

		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. • 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. • During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use. • Ongoing gas monitoring should be considered for offices, stores etc set up on site.					^ N/A ^ ^
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	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

		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 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, 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 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
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	To define the precise archaeological deposits extent and to preserve the archaeological resources as far	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	N/A

		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.	as possible			the zone	
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 Authority under the AM Ordinance.	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
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	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

		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.					
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 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.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A
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 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	G303 and G308	Preconstruction stage before commencement of construction works during Schedule 3 study	N/A
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	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

		graded historic building should be submitted to AMO for information.					
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 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.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Ancillary structures of G303, HKT01, HKT02, Entrance 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	Prior to Removal / Relocation of features before commenceme nt of construction works during Schedule 3 study	N/A
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 construction works	N/A

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
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,		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for	N/A

		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.				all planting, this should be installed as the areas become available, to achieve early establishment	
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	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

		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.					
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 final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.	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	^

		Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.					
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. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.9 MM5	LV7	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be	Transplant Trees where suitable for transplantation	Government / Detailed Design	Onsite where possible.	Prior to Construction,	N/A

		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.		Consultant/ Contractor	Otherwise consider offsite locations	Construction Phase & Maintenance in Operation Phase	
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	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

		No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.					
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 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.12.9 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.					N/A

		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.12.9 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

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

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. 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.	Protect natural streams	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

		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)					
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. 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.	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

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	^
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
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 Long Valley from	Project Proponent/ Detailed Design Consultant (Long	Long Valley KTN area C1-9 and any suitable areas to be	Detailed design phase	N/A

		Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	adverse ecological impacts including provision of additional/alternative habitat for large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Valley Nature Park Habitat Creation & Management Plan)	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 of severance of these linkages, especially for waterbirds	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
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.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A

			Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Authority			
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 northern and northeastern boundaries.	Detailed design phase	N/A
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;	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

		• 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; • 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.	^

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.	^

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
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.	^
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	Construction phase.	^

					Fanling Bypass and north of the Ng Tung River west of the western terminus 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 avoid, minimize and/or compensate for impacts;	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		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.	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 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. Consider and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		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	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)							
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	N/A

						achieve early establishment	
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. 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	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

		include details of tree protection measures for those trees to be retained.					
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. 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.	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-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	Reprovide areas of woodland to compensate for	Project Proponent/	*In areas identified in*	Prior to Construction,	N/A

		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 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.	those areas of quality woodland lost.	Detailed Design Consultant/ Contractor/ Maintenance Authority	*the EIA Landscape Mitigation Plans and as agreed with AFCD*	Construction Phase & Maintenance in Operation Phase	

S.12.A9 MM9	LV10-DP2	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-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 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	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

		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 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.	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
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	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/	*E1-7 and C1-9 (LVNP) in KNT NDA and generally*	Prior to Construction, Construction Phase	N/A

		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Contractor/ Maintenance Authority	*throughout NDA*	Maintenance in Operation Phase	
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	^
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	Contractor.	Interface between areas/habitats of	Construction phase.	^

			ecological impacts on habitats, flora and fauna.		ecological importance (KTN area B1-3) and works areas.		
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN NDA areas E1-8 and G1-3.	Construction phase.	N/A
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		Detailed Design Consultant/ Contractor	*Throughout NDAs,*	Prior to Construction, Construction & for all planting, this should be installed as	^

		strips, and open space sites.				soon as the areas become available, to achieve early establishment	
S.12.A9 MM14.4	LV4-DP3	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	^
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	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	N/A

		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.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 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-	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	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Technical Guidelines on Landscape Treatment for Slopes.	possible.				
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 MM8	LV9-DP3	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,*	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

		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 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	Government Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around*	Prior to Construction, Construction Phase & Maintenance	N/A

			and create a pleasant pedestrian environment		*VSRs to contain their view out to the NDA structures.*	in Operation Phase	
S.12.A9 MM12	LV12-DP3	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	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	Minimize the necessity of watercourse modification, protect watercourses where	Government / Detailed Design	*Channelized watercourse, particularly the Ma*	Prior to Construction, Construction	N/A

		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. 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.	possible and enhance channelized watercourses	Consultant/ Contractor	*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 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	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A

		impact assessment (Chapter 13 of the EIA report).					
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 (LVNP Detailed Habitat Creation & Management Plan).	Long Valley	Construction phase.	N/A
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.	Contractor.	Interface between areas/habitats of ecological importance (KTN	Construction phase.	N/A

			Measures to minimize flightline impacts to birds,		areas B1-3, H1-1) and works areas.		
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 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 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	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

		continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.					
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 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.	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

S.12.A9 MM4	LV4-DP4	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 tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction 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 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	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

		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 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	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

		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, 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	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

		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 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	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.	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

		(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	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 along the embankments and beds of modified/ re-provisioned 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 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 Construction phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

		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 and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, E1-8, G1-3 and H1-1) and works areas	Construction phase.	N/A
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	Maintenance	KTN areas E1-8 and	Operation	N/A

			plantation of ecological significance.	Authority.	G1-3.	phase	
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1-DP4	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 1	After land resumption but before Construction commencement of the zones	N/A
S11.6.1	CH2-DP4	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 with 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	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 within the work extent of DP4	After land resumption but before construction	N/A

		would be designed and implemented before the commencement of construction works to mitigate the adverse impact.					
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 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	Spot E	Before the commencement of the excavation works and before site staff are deployed on site	N/A
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,	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A

		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 phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	built heritage features				
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		Detailed Design	Throughout NDAs,	Prior to Construction,	N/A

		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.		Consultant/ Contractor/		Construction & for all planting, 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, 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	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Throughout NDAs	N/A

		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.					
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 (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	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^

		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.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. 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 location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A
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	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

			are as visually amenable as possible.				
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 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.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	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

		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 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

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 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	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

		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 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 and works areas (all sides of KTN area F1-2).*	Construction phase.	N/A
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	Protect and Preserve Trees	Government / Detailed	*Onsite*	Prior to Construction and	N/A

		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		Construction Phase	
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 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.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	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	^

		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.					
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 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	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 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.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	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/	*In areas identified in the EIA Landscape Mitigation Plans*	Prior to Construction, Construction Phase	N/A

		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 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.*		Contractor/ Maintenance Authority	*and as agreed with AFCD*	& Maintenance in Operation Phase	

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.D9MM12	LV10-DP10	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.D9 MM14.3	LV11-DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department	Minimize the necessity of watercourse modification,	Government/ Detailed Design	*Channelized watercourse,*	Prior to Construction,	N/A

		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. 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	*particularly the Ma Wat River Channel Diversion*	Construction Phase & Maintenance in Operation Phase	
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.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation phases	^

		Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.					
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/ Contractor Maintenance Authority.	*Throughout NDAs*	Detailed design, construction and 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.	N/A
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.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the	To minimize the potential impacts during Construction phase on any identified potential vibration impacted	Contractor.	*Identified potential vibration impacted built heritage features*	Construction phase, with details specified in baseline condition survey and	N/A

		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.	built heritage features			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 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 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 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.	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

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 trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
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	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

		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.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 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	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.	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

		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.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
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

Waste Flow Table of ND/2019/01

Name of Department: Civil Engineering and Development Department

Monthly Summary Waste Flow Table for 2022

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	17.001	0.000	9.565	4.775	2.661	1.060	0.004	0.278	0.004	47.200	1.918
February	6.211	0.000	5.760	0.000	0.451	0.496	0.000	0.178	0.000	129.600	2.085
March	8.648	0.000	7.500	0.832	0.316	0.273	0.000	0.225	0.000	70.800	2.408
April	15.315	0.000	13.017	0.875	1.423	0.000	0.000	0.000	0.000	185.558	2.248
May	11.397	0.000	9.052	0.126	2.219	3.002	0.000	0.262	0.000	90.900	1.775
June	3.683	0.000	1.718	0.949	1.016	0.184	0.000	0.000	0.000	0.000	0.581
Sub-total	62.255	0.000	46.612	7.557	8.086	5.015	0.004	0.943	0.004	524.058	11.015
July	0.000										
August	0.000										
September	0.000										
October	0.000										
November	0.000										
December	0.000										
Total	62.255	0.000	46.612	7.557	8.086	5.015	0.004	0.943	0.004	524.058	11.015

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

Waste Flow Table of ND/2019/02

俊和－群利聯營體
CW－KL JV

Name of Department: CEDD

Appendix F

Contract No.: ND/2019/02
Year **2022**

Waste Flow Table

Month	Total Quantity Generated (a) = (c)+(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	252.48	0.00	0.00	0.00	252.48	576.91	0.00	0.00	0.00	0.00	8.24
Feb	8.76	0.00	0.00	0.00	8.76	0.00	0.00	0.00	0.00	0.00	9.34
Mar	2,193.94	0.00	0.00	102.40	2,091.54	0.00	0.00	0.00	0.00	0.00	47.52
Apr	9,471.29	0.00	0.00	9,327.00	144.29	0.00	0.00	0.00	0.00	0.00	18.03
May	2,431.62	0.00	0.00	2,431.62	0.00	0.00	0.00	0.00	0.00	0.00	18.09
June	47.93	0.00	0.00	0.00	47.93	0.00	0.00	0.00	0.00	0.00	18.86
Sub-total	14,406.02	0.00	0.00	11,861.02	2,545.00	576.91	0.00	0.00	0.00	0.00	120.08
July											
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	0.00
Total	14,406.02	0.00	0.00	11,861.02	2,545.00	576.91	0.00	0.00	0.00	0.00	120.08

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/2009/02											
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

Waste Flow Table of ND/2019/03

Name of Department: CEDD Contract No.: ND/2019/03

Monthly Summary Waste Flow Table for 2019 (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 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)
Jan	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	-	-	-	-	-	-	-	-	-	-	-

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Name of Department: CEDD Contract No.: ND/2019/03

Monthly Summary Waste Flow Table for ____2020__ (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 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)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0.01
Mar	0	0	0	0	0	0	0	0	0	0	0.004
Apr	0	0	0	0	0	0	0	0	0	0	0.038
May	0	0	0	0	0	0	0	0	0	0	0.004
June	0	0	0	0	0	0	0	0	0	0	0.015
Sub-total	0	0	0	0	0	0	0	0	0	0	0.071
July	0	0	0	0	0.1	0	0	0	0	0	0.03
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0.08	0	0	0	0	0	Oct
Nov	0.18	0	0	0	0.08	0	0	0	0	0	0.1
Dec	0.578	0	0	0	0.54	0	0	0	0	0	0.038
Total	1.077	0	0	0	0.8	0	0	0	0	0	0.277

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Contract No.: ND/2019/03

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2021 (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 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)
Jan	0.83	0	0	0.22	0.61	0	0	0	0	0	0.075
Feb	0	0	0	0	0	0.096	0	0	0	0	0.022
Mar	0.56	0	0	0	0.56	0.26	0	0	0	0	0.15
Apr	0.68	0	0	0	0.68	0.30	0	0	0	0	0.31
May	0.66	0	0	0	0.66	0.15	0	0	0	0	0.21
Jun	0.11	0	0	0	0.11	0.30	0	0	0	0	0.19
Sub-Total	2.84	0	0	0.22	2.62	1.106	0	0	0	0	0.957
Jul	0.26	0	0	0	0.26	0.14	0	0	0	0	0.178
Aug	0	0	0	0	0	0.39	0	0	0	0	0.15
Sep	0	0	0	0	0	0.074	11.9	0	0	0	0.132
Oct	0	0	0	0	0	0	0	0	0	0	0.297
Nov	0	0	0	0	0	0	0	0	0	0	1.05
Dec	0.195	0	0	0.015	0.18	0	0	0	0	0	0.098
Total	3.295	-	-	0.235	3.06	1.71	11.9	0	0	0	2.858

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Contract No.: ND/2019/03

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2022 (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 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)
Jan	1.82	0	0	0.38	1.44	0	0	0	0	0	0.09
Feb	0.36	0	0	0.10	0.25	0	0	0	0	0	0
Mar	1.28	0	0	0.25	1.03	0	0	0	0	0	0
Apr	0.36	0	0	0.07	0.29	0	0	0	0	0	0
May	1.46	0	0	0.31	1.15	0	0	0	0	0	0
Jun	0.92	0	0	0	0.92	0	0	0	0	0	0.18
Sub-Total	6.20	0	0	1.11	5.08	0	0	0	0	0	0.27
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	6.20	0	0	1.11	5.08	0	0	0	0	0	0.27

*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	2	1	1	6	10	3	3	1	1	3

*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].

Waste Flow Table of ND/2019/04

DCK JV

Appendix F
Contract No.: ND/2019/04

Monthly Summary Waste Flow Table for __2022__ (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)	Chemical Waste (i)	Others, e.g. general refuse (j)
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	4,848.68	0.00	0.00	0.00	4,804.00	0.00	0.00	0.04	0.00	0.00	44.64
Feb	3,655.87	0.00	0.00	0.00	3,649.51	0.00	0.00	0.04	0.00	0.00	6.32
Mar	7,450.34	0.00	0.00	0.00	7,437.69	0.00	0.00	0.00	0.00	0.00	12.65
Apr	11,735.85	0.00	0.00	0.00	11,710.90	0.00	0.00	0.00	0.00	0.00	24.95
May	6,180.22	0.00	0.00	0.00	6,142.44	0.00	0.00	0.00	0.00	0.00	37.78
June	10,481.93	0.00	0.00	0.00	10,448.31	0.00	0.00	0.00	0.00	0.00	33.62
Sub-total	44,352.89	0.00	0.00	0.00	44,192.85	0.00	0.00	0.04	0.00	0.00	159.96
July	0.00										
Aug	0.00										
Sept	0.00										
Oct	0.00										
Nov	0.00										
Dec	0.00										
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	44,352.89	0.00	0.00	0.00	44,192.85	0.00	0.00	0.04	0.00	0.00	159.96

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

Waste Flow Table of ND/2019/05

Monthly Summary Waste Flow Table for _2022___ (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 (c)	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-22	4.715	0.000	0.432	0.000	4.283	0.100	95.790	0.818	0.183	36.710	0.000	121.720
Feb-22	5.110	0.000	0.072	0.000	5.038	0.000	0.005	0.033	0.006	39.770	0.000	53.150
Mar-22	3.639	0.000	0.144	0.000	3.495	0.343	0.020	0.385	0.334	91.890	0.000	34.140
Apr-22	2.481	0.000	0.510	0.000	1.971	0.000	2.230	0.000	0.000	0.260	0.000	54.880
May-22	2.588	0.000	0.324	0.000	2.264	0.582	0.048	0.685	0.399	3.090	0.000	70.230
Jun-22	2.611	0.000	0.612	0.270	1.729	0.000	0.057	0.635	0.041	11.540	0.000	55.700
Sub-total	21.144	0.000	2.094	0.270	18.780	1.025	98.150	2.556	0.963	183.260	0.000	389.820
Jul-22												
Aug-22												
Sep-22												
Oct-22												
Nov-22												
Dec-22												
Total in 2022	21.144	0.000	2.094	0.270	18.780	1.025	98.150	2.556	0.963	183.260	0.000	389.820
Total of the Project since 2020	51.556	0.000	6.099	0.270	45.187	5.110	115.448	5.766	2.804	684.413	24.882	2468.650

*Approx. estimation for each dump truck is 6m3/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 51.556 (in '000m3) (a) = (b)+ (c)+(d)+(e)

Waste Flow Table of ND/2019/07

Monthly Summary Waste Flow Table for _2022__ (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	0.949	0	0	0	0.949	8.930	0.0002	0	0.008	0	0.446
Feb	0.383	0	0	0	0.383	0	0	0	0	0	0.116
Mar	0.575	0	0	0	0.575	0.824	0	0	0	0	0.212
Apr	0.000	0	0	0	0.000	9.905	0	0.251	0	0	0.045
May	0.000	0	0	0	0.000	0.758	0	0	0.001	0	0.016
Jun	0.031	0	0	0	0.031	1.054	0	0	0	0	0.016
Sub-total	1.938	0.000	0.000	0.000	1.938	21.471	0.000	0.251	0.009	0.000	0.851
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	4.996	0.000	1.514	0.000	3.482	142.490	0.017	1.697	0.023	212.240	5.512

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			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.	

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

DP2	EP-466/2013	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.	*	Comments from ET in June 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 Approval -** 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.	To be deposited in July 2022	
2.10	Traffic Noise Mitigation Measure (implement)	Before operation	**Implement--** all noise mitigation measures as shown in Figure 4 of this Permit**.**	before commencement of operation.	*	To be submitted before implementation of operation of the Project.
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 22 April 2020	Cover 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

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	
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	To be deposited in July 2022	
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 22 April 2020	cover 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	Pending approval
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	*	Comments from ET in June 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 Approval -** 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	Submitted 6 July 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 22 April 2020	cover 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 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	To be deposited in July 2022.	The relevant works will not be commenced until early Year 2024.
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 22 April 2020	cover 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	Pending approval
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 22 April 2020	cover 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	**23 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 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	N/A	
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 Note: 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 2020 and 5 May 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	
		Others	**For Approval -** 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 22 April 2020	cover 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 22 April 2020	cover 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	