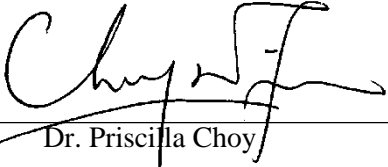


Civil Engineering and Development Department

**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 May 2022**

(Version 1.0)

Certified By	 Dr. Priscilla Choy (Environmental Team Leader)
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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. 31 (May 2022)

14 June 2022

BY EMAIL

Dear Sir,

We refer to email of 14 June 2022 attaching the Monthly Environmental Monitoring and Audit Report No. 31 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 31st monthly Environmental Monitoring and Audit (EM&A) Report under First Phase Development of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs), comprising the Advance Works and First Stage Works (the Project). This report was 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 Environmental Monitoring and Audit (EM&A) work conducted in May 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 th 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 th August 2020
	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	1 st June 2020
	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	23 rd 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 th 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 rd July 2020
	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6 th October 2020
Contract No. ND/2019/04 –	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23 rd February 2021

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Fanling North New Development Area, 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 th 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 st 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 th 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 st March 2021

Environmental Monitoring and Audit Progress

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

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

EM&A Activities	Monitoring Station (s)	Works Contracts							
		ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07	
1-hr Total Suspended Particulates (TSP) Monitoring	FLN-DMS1	N/A	N/A	5, 11, 17, 23 and 27 May 22	5, 11, 17, 23 and 27 May 22	N/A	N/A	N/A	
	FLN-DMS3			N/A	N/A	5, 11, 17, 23 and 27 May 22			
	FLN-DMS5			4, 10, 16, 20 and 26 May 22	4, 10, 16, 20 and 26 May 22	N/A			
	KTN-DMS4			4, 10, 16, 20 and 26 May 22	4, 10, 16, 20 and 26 May 22				N/A
24-hr TSP Monitoring	FLN-DMS1	N/A	N/A	4, 10, 16, 20 and 26 May 22	4, 10, 16, 20 and 26 May 22	N/A	N/A	N/A	
	FLN-DMS3			N/A	N/A	4, 10, 16, 20 and 26 May 22			
	FLN-DMS5A			4, 10, 16, 20 and 26 May 22	4, 10, 16, 20 and 26 May 22	N/A			
	KTN-DMS4			4, 10, 16, 20 and 26 May 22	4, 10, 16, 20 and 26 May 22				N/A
Noise Monitoring	CP-FLN-NMS1	N/A			5, 11, 17 and 27 May 22			N/A	
	CP-FLN-NMS2	N/A				5, 11, 17 and 27 May 22	N/A		
	CP-KTN-NMS2	4, 10, 20 and 26 May 22	N/A	N/A					
	CP-KTN-NMS3								
	CP-KTN-NMS5								
	CP-KTN-NMS6	N/A	4, 10, 20 and 26 May 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*	4, 11, 18 and 26 May 22	3, 12, 18 and 26 May 22	N/A*	N/A*	N/A*	
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	19 May 22	N/A*	19 May 22	19 May 22	N/A*	N/A*	N/A*	

	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	13 and 24 May 22	13 and 24 May 22	24 May 22	24 May 22	24 May 22	N/A*	N/A*
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		5, 11, 17, 23 and 27 May 22	N/A	5, 11, 17, 23 and 27 May 22	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	3, 5, 7, 10, 12, 14, 16, 18, 20, 23, 25, 27 and 30 May 22	N/A	3, 5, 7, 10, 12, 14, 16, 18, 20, 23, 25, 27 and 30 May 22	N/A	N/A	N/A
Landfill Gas Monitoring		30 May 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		3, 10, 18, 25 and 31 May 22	4, 11, 20 and 25 May 22	6, 13, 17 and 27 May 22	5, 11, 19 and 26 May 22	3, 10, 16, 23 and 31 May 22	5, 11, 19 and 26 May 22	6, 13, 20, and 27 May 22

Remark:

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

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

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

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

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

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

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

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

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

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

Breaches of Action and Limit Levels

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

Table III Summary Table for Events Recorded in the Reporting Month

Environmental Monitoring	Parameter	No. of non-project related Exceedances		Total No. of non-project related Exceedances	No. of Exceedance related to the Construction Works of the Contract		Total No. of Exceedance related to the Construction Works of the Contract
		Action Level	Limit Level		Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	0	0
	24-hr TSP	0	0	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0	0	0
Noise	Leq(30min)	0	0	0	0	0	0
Water Quality ^[1]	DO	0	0	0	0	0	0
	Turbidity	0	0	0	0	0	0
	SS	0	0	0	0	0	0
	Arsenic	0	0	0	0	0	0
Landfill Gas	O ₂	0	0	0	0	0	0
	CH ₄						
	CO ₂						
Cultural heritage	Built Heritage Monitoring	0	0	0	0	0	0

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. No Action/Limit Level exceedance was recorded. No construction of channel for alternation of natural streams was carried out in the reporting month. Therefore, no water quality monitoring according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA) was conducted. For the details, please refer to 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 gases 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 in the reporting month was carried out 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. Action and limit level will be compared after the issue of Final Baseline Ecological Report. The ecological monitoring result in the Reporting Month is shown in **Appendix L**.

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 Two Months

Contract No.	Site Activities (June 2022 and July 2022)
ND/2019/01	<ul style="list-style-type: none"> (a) Site Clearance, remove of existing structures, tree felling at Portion 1a (b) Site clearance, backfilling, ground investigation, sheet piling, excavation and drainage at Portion 1b (c) Site clearance, demolition of existing structures at Portion 1c (d) Site clearance, tree felling at Portion 1e (e) Site clearance, tree felling, temporary road construction, site formation work at Portion 2 (f) Site clearance, backfilling, excavation, tree felling at Portion 3 (g) Site Clearance, sheet piling and excavation, drainage works and temporary road constructure, watermain at Portion 5 (h) Site Clearance, sheet piling and excavation, pipes laying, backfilling, construction of KB01 retaining wall at Portion 6a (i) Operation of HAC treatment facility at Portion 6b (j) Site Clearance, sheet piling and excavation, pipes laying at Portion 7 (k) 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 at Portion 8a (l) Grouting for receiving pit , trenchless works, excavation, , ELS for jacking pit at LWSC's car park at Portion 8b (m) Sheet piling and excavation, drainage works , GI works at Portion 9b (n) Stockpile of soil, excavation at Portion 9c (o) Excavation, sheet piling for ELS, drainage works, road construction, utilities laying at Portion 10a (p) Sheet piling and excavation, drainage works at Portion 10b (q) Construction of MBR at Portion 11b (r) Construction of temporary sewage pumping station at Portion 14
ND/2019/02	<ul style="list-style-type: none"> (a) Pipe Jacking (b) Backfilling (c) Concreting (d) Bedding & Pipe Laying (e) ELS (f) Sheet Pile Installation, and (g) Cut and Fill of Slope
ND/2019/03	<ul style="list-style-type: none"> (a) Portion 1 & Portion 1A <ul style="list-style-type: none"> - Drainage works at Yin Kong Road - Construction of Pai Lau (b) Long Valley <ul style="list-style-type: none"> - 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 - Construction of Storage Sheds - Wetland Creation & Restoration works - Construction of Compacted Earth Path/ Walkway

	<ul style="list-style-type: none"> - Construction of Ditches - Construction of Wetland Boardwalk
ND/2019/04	<ul style="list-style-type: none"> (a) Tree felling (b) Predrill (c) Bored piling (d) Excavation (e) Sheet piling (f) ELS
ND/2019/05	<ul style="list-style-type: none"> (a) North Team Works <ul style="list-style-type: none"> - 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 C101b, C102b, C1-03, C1-04, C2-01, C3-03a, C3-04ab, C4-02, D1-02, D1-03, D1-04 & E1-04. (b) Viaduct Works <ul style="list-style-type: none"> - Segment fabrication for bridge C4 & C3 & D1 & E1. - 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. - 2nd set FT fabrication and delivery. Target to deliver in May-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. - Bridge rotation system fabrication completion and delivery to site (c) South Team Works <ul style="list-style-type: none"> - Venton Area – Telecom ducts laying. - 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) – RW06 construction and FS04 slope works. - HKY FB (East) – construction of P01 - Portion 11 – DN1200 and DN600 watermain laying work. - E2-03 – Pile cap 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 – predrilling.
ND/2019/06	The construction phase was completed and handed over to AFCD since 4 April 2022.
ND/2019/07	<ul style="list-style-type: none"> (a) Site clearance at Portion 4 (b) Erection of site hoarding at Portion 3 and 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 and 5 (i) Drainage works, Sewage works and Portion 1, 3, 4 and 5 (j) Mini piling works at Portion 4 and 5 (k) Construction of noise barrier at Portion 5 (l) Waterworks at Portion 1
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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 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 comply with the requirements specified in the Environmental Permits (EPs), Updated Environmental Monitoring & Audit (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 31st EM&A Report which summarises the key findings of the EM&A programme in May 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** - summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels and Event / Action Plans.
- Section 6: **Land Contamination (Ambient Arsenic Monitoring)** - summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
- Section 7: **Landfill Gas Monitoring** - summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation, and Event / Action Plans.
- Section 8: **Built Heritage Monitoring** – summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation.
- Section 9: **Ecological Monitoring** – summarises the details of monitoring of measures to minimise disturbance to waterbirds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley, monitoring of measures to minimise impacts on ecological sensitive habitats from disturbance and pollution during the reporting month.

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

2 PROJECT INFORMATION

Background

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

- 2.3 The Project which covers KTN and FLN NDAs is a designated project (DP) under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). In October 2013, the EIA Report (AEIAR-175/2013) for the Project was approved by the Director of Environmental Protection pursuant to the EIA Ordinance. The relevant EPs under the Project and the respective Work Contracts are summarized in **Table 2.1**.

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				✓			

Note: 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

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 egretty sites and enhance the existing egretty 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	Figure 21
EP-546/2017	C5A	Construct and operate a temporary sewage pumping station in Fanling North with installed capacity (average dry weather flow) of about 3,600m ³ /day	Figure 22

Remarks: The EP(s) not related to the Project of 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 Plan under concerned Environmental Permits are shown in **Figure 12 - 22**.

Project Organization

- 2.7 Different parties with different levels of involvement in the Project organization 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 key personnel contact names and numbers 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
<i>Supervisor / Supervisor's Representative (AECOM)</i>	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
<u>Contract No. ND/2019/01</u> Contractor (Build King – Richwell Engineering Joint Venture)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Edward Tam	9287 8270	
<u>Contract No. ND/2019/02</u> Contractor (Chun Wo – Kwan Lee Joint Venture.)	Site Agent	Mr. Andy Chan	3485 9780	--
	Environmental Officer	Ms. Suchi Law	6679 6800	
<u>Contract No. ND/2019/03</u> Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Jackey Tam	6742 5596	
<u>Contract No. ND/2019/04</u> 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	
<u>Contract No. ND/2019/05</u> Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Darwin Lo	9467 5891	--
	Environmental Manager	Mr. Pan Fong	9436 9435	
	Environmental Officer	Ms. Louise Poon	5272 5709	
<u>Contract No. ND/2019/06</u> 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	
<u>Contract No. ND/2019/07</u> 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 (May 2022)
ND/2019/01	<ul style="list-style-type: none"> (a) Site clearance, tree felling, demolition of existing structures and site formation works at Portion 1a (b) Sheet piling, excavation, tree felling, backfilling, drainage and demolition of existing structures at Portion 1b (c) Site clearance, demolition of existing structures at Portion 1c (d) Site clearance, demolition of existing structures at Portion 1e (e) Site clearance, tree felling, temporary road construction and site formation works at Portion 2 (f) Site clearance, excavation, backfilling at Portion 3 (g) Site clearance, sheet piling, excavation, drainage works, watermain, backfill and road work at Portion 5 (h) Site clearance, drainage works, backfilling, Retaining wall KB01 construction at Portion 6a (i) Operation of HAC soil treatment facility at Portion 6b (j) Site clearance, sheet piling and excavation, drainage works, site formation works at Portion 7 (k) Construction of retaining wall, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water service reservoir, GI works, backfilling works at Portion 8a (l) Site clearance, ELS for jacking pit at LWSC's car park and sheet piling for receiving pit at Portion 8b (m) Sheet piling and excavation, drainage works at Portion 9b (n) Stockpile of soil, excavation at Portion 9c (o) Excavation, sheet piling for ELS, drainage works and road work, utilities works at Portion 10a (p) Sheet piling and excavation at Portion 10b (q) Construction of MBR at Portion 11b (r) Construction of temporary sewage pumping station at Portion 14 (s) Construction of CLC at Portion 16
ND/2019/02	<ul style="list-style-type: none"> (a) Pipe Jacking (b) Backfilling (c) Concreting (d) ELS, and (e) Sheet Pile Installation
ND/2019/03	<ul style="list-style-type: none"> (a) Portion 1 & Portion 1A <ul style="list-style-type: none"> - Drainage works at Yin Kong Road - Construction of Pai Lau (b) Long Valley <ul style="list-style-type: none"> - 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

Contract No.	Site Activities (May 2022)
	<ul style="list-style-type: none"> - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works
ND/2019/04	<ul style="list-style-type: none"> (a) Tree felling (b) Predrill (c) Bored piling (d) Excavation (e) Sheet piling and ELS
ND/2019/05	<ul style="list-style-type: none"> (a) The pre-drilling was in-progress at the E3 bridge. (b) The rotary drilling rigs, one is located at C2-02 and C2-03. The second is located at C3-02. (c) The RCD rig is located at E2-01 and another RCD rig located at D2-03. (d) C4-01 Portal Beam, C4-03 cross head, E2-02 SOP cast in-situ are in progress, E3-03 SOP (e) cast in-situ will start on the end of May. (f) TWSR-East drainage and watermain from Ch100 to Ch250 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	<ul style="list-style-type: none"> (a) Site clearance at Portion 2 and 4 (b) Erection of site hoarding at Portion 2 and 4 (c) C&D waste disposal in Portion 1, 2, 4 and 5 (d) G.I. works at Portion 4 and 5 (e) Drainage works and Sewerage works at Portion 1, 3 and 4 (f) Construction of box culvert in Portion 2 (g) Filling works in Portion 1, 2 and 4 (h) Tree felling / Disposal of yard waste in Portion 4 (i) Construction of site haul road in Portion 4

Construction Programme

2.10 A copy of Contractors' construction programme is 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 Licenses, Notifications and Permits

Contract No.	Permit / License 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
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	Valid
ND/2019/05	GW-RN0096-22	14/02/2022	13/05/2022	Expired in the reporting month
	GW-RN0095-22	11/02/2022	10/05/2022	Expired in the reporting month
	GW-RN0222-22	30/03/2022	29/06/2022	Valid
	GW-RN0316-22	28/04/2022	27/07/2022	Valid
	GW-RN0362-22	18/05/2022	31/05/2022	Expired in the reporting month
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

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
ND/2019/04	5211-624-D2709-01	26/11/2020	N/A	Valid
ND/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid
ND/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid
ND/2019/07	5213-625-C4498-01	21/09/2020	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
ND/2019/01	WT00036071-2020	22/06/2020	30/06/2025	Valid
	WT00036073-2020	22/06/2020	30/06/2025	Valid
	WT00036067-2020	22/06/2020	30/06/2025	Valid
	WT00036075-2020	22/06/2020	30/06/2025	Valid
	WT00036076-2020	22/06/2020	30/06/2025	Valid
	WT00037191-2020	21/04/2022	28/02/2026	Valid
	WT00037204-2020	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	04/05/2021	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 were conducted to monitor the air quality for the Works Contracts. **Appendix B** shows the established Action/Limit Levels 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 one air quality monitoring station.

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 station.

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		

Remark:

[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 the 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 average TSP levels:-
- The proposal for alternative monitoring equipment (i.e. direct reading dust meter) for TSP monitoring was approved by EPD according to approved Baseline Air Quality Monitoring Report (KTN & FLN NDA); and
 - Adopt same measurement methodology (i.e. direct reading dust meter) as baseline monitoring for reliable comparison.

- 3.5 The proposed use of portable direct reading dust meters was submitted to IEC and obtained

agreement from the IEC as stated in Section 2.4.5 of the Updated EM&A Manual.

- 3.6 HVS for 24-hr 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** summarizes 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	8
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 ten meters in compliance with the general setting up requirement. Furthermore, this station also provides other meteorological information, such as the 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 day.

Monitoring Parameters, Frequency and Duration

- 3.10 **Table 3.3** summarizes 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-hr TSP	Three times/ 6 days
24-hr 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 meter are in accordance with the Manufacturer's Instruction Manual as follows:

(AEROCET-831)

- The 1-hour dust meter is placed 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 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 measuring 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 meter 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; and
- A secured supply of electricity was provided to operate the samplers.

Filters Preparation

- 3.16 Wellab Limited (HOKLAS Registration No.083) is the HOKLAS accredited laboratory and responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for 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 the dust sampling, the flow rate of the HVS was properly set (between 1.1 m³/min. and 1.4 m³/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. Then the filter holding frame was 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 be returned to the HOKLAS 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 not vary by more than $\pm 3^\circ\text{C}$; the RH should be $< 50\%$ and not vary by more than $\pm 5\%$. A convenient working RH is 40%. Weighing results were returned for further analysis of TSP concentrations collected by each filter.

Maintenance/Calibration

3.19 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 condition; and
- All HVS were calibrated (five point calibration) using Calibration Kit prior to the commencement of the 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 summarized in **Table 3.4** and **3.5**, respectively. Detailed monitoring results and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E**.

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

Monitoring Station	Concentration ($\mu\text{g}/\text{m}^3$)		Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
	Average	Range		
FLN-DMS1	78.6	50.3 – 120.3	303	500
FLN-DMS3	70.9	43.3 – 120.7	301	500
FLN-DMS5	54.1	28.4 – 102.2	279	500
KTN-DMS4	62.2	24.3 – 126.0	297	500

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

Monitoring Station	Concentration ($\mu\text{g}/\text{m}^3$)		Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
	Average	Range		
FLN-DMS1	58.0	27.0 – 89.1	150	260
FLN-DMS3	44.8	14.8 – 104.8	165	260
FLN-DMS5A	84.7	58.4 – 142.9	153	260
KTN-DMS4	68.4	36.7 – 127.3	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 source 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 Source
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 exceedance is recorded, action in accordance with the Action Plan in **Appendix N** shall be carried out.

4 NOISE MONITORING**Monitoring Requirements**

- 4.1 In accordance with Updated EM&A Manual, construction noise monitoring was 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 shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **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 **Figure 3** and **4** according to Table 1.1 of 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 the 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 Meter was used for impact noise monitoring. The meters are 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 also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 4.2** summarizes the noise monitoring equipment being 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	4
Acoustical Calibrator	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	Parameter	Duration	Frequency	Measurement
ND/2019/06	CP-FLN-NMS1 ^[3]	$L_{10}(30 \text{ min.}) \text{ dB(A)}$ $L_{90}(30 \text{ min.}) \text{ dB(A)}$ $L_{eq}(30 \text{ min.}) \text{ dB(A)}$ (as six consecutive $L_{eq, 5 \text{ min}}$ readings)	0700-1900 hrs 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				Façade
ND/2019/02	CP-KTN-NMS6				

Remarks:

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

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

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

L_{90} is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

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

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

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

Monitoring Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive I and lowered sufficiently so that the building's external wall acted as a reflecting surface;
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - time measurement : $L_{eq}(30 \text{ min.}) \text{ dB(A)}$
(as six consecutive $L_{eq, 5\text{min}}$ readings) during non-restricted hours (i.e. 0700-1900 hrs 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 L_{eq} , L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were 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 record 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 head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 4.6 The sound level meter and calibrator 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 summarized 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 summarized 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]	66.3 – 68.6	69.9	75
ND/2019/04				
ND/2019/05	CP-FLN-NMS2 ^[2]	62.3 – 65.5	59.6	
ND/2019/01	CP-KTN-NMS2 ^[3]	52.7 – 65.8	58.6	
	CP-KTN-NMS3 ^[4]	54.4 – 62.0	51.6	
ND/2019/01	CP-KTN-NMS5	51.4 – 59.4	57.2	
ND/2019/02	CP-KTN-NMS6	51.6 – 64.2	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 source 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 project related non-compliance of the criteria occur, action in accordance with the 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 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 shall be 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 pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA).

Monitoring Parameters, Frequency

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

Table 5.1 Water Quality Monitoring Parameters and Frequency

Parameters, unit	Depth	Frequency
<ul style="list-style-type: none"> • Temperature(°C) • pH(pH unit) • turbidity (NTU) • water depth (m) • salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) • Ammonia Nitrogen (NH₃-N) (mg NH₃-N/L) • Unionized Ammonia (UIA) (mg/L) • Nitrate-nitrogen (NO₃-N) (mg NO₃⁻-N/L) • Ortho-phosphate (PO₄) (mg PO₄³⁻-P/L) 	<ul style="list-style-type: none"> • 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 the Section 5.6.1.2 of 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 ecological importance 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 were recorded, including monitoring location / position, time, water depth, weather conditions and any special phenomena or work underway at the construction site.
- 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 are less than 3m in depth, only the mid depth sample was taken. Should the water depth is less than 6m, in which case the mid-depth station may be 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 is summarised in **Table 5.2**. The location of monitoring stations are shown in **Figure 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 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 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 EquipmentInstrumentation

- 5.12 A multi-parameter meters (Model YSI EXO) was 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 was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

Water Sampling for Laboratory Analysis

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

Sample Container and Storage

- 5.22 Following collection, water samples for laboratory analysis were stored in high density polyethylene bottles with appropriate preservatives added, packed in the ice (cooled to 4°C without being frozen). The sample were delivered to WELLAB Limited (HOKLAS Registration No.083) 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 the on-site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, “Guide to on-site test methods for analysis of waters” was observed.

Back-up Equipment

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

5.26 **Table 5.3** summarizes the equipment used in the water quality monitoring program. The copies of the calibration certificates of multi-parameter water quality system are shown in the **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** summarizes the monitoring parameters and frequencies of the additional water quality monitoring. The water quality monitoring schedule for the reporting month is shown in **Appendix D**.

Table 5.4 Additional Water Quality Monitoring Parameters and Frequency

Monitoring Station(s)	Parameters, unit	Depth	Frequency
River Beas	SYR-CS1 SYR-IS1 <ul style="list-style-type: none"> • Temperature (°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solids (SS) (mg/L) • Arsenic (As) (µg/L) 	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Temperature (°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solids (SS) (mg/L) 		

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

Monitoring MethodologyInstrumentation

- 5.29 A multi-parameter meters (Model YSI EXO) was 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 are required for all parameter. Analysis of suspended solids and arsenic were carried out by WELLAB Ltd. and comprehensive quality assurance and control procedures in place in order to ensure the quality and consistency in results. The reporting limit and detection limit 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 RequirementsDecontamination 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 the 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 programme 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 at the monitoring stations are shown in **Appendix G**.
- 5.37 No Action/Limit Level exceedance was recorded in the reporting month. The summary of exceedance record in the reporting month is shown in **Appendix O**.

Event and Action Plan

- 5.38 Should any exceedance is recorded, action in accordance with the 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 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) should be 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 should be drawn through PM₁₀ HVS fitted with a conditioned pre-weighting filter paper, at a controlled rate. After sampling for 24-hour (refer Section 9.5.5 for details on measurement period), the filter paper with retained PM₁₀ particulates shall be collected and returned to the laboratory for drying in a desiccators followed by accurate weighting. 24-hour average RSP levels shall be 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 shall be prepared for arsenic testing through a "Hot Acid Extraction Procedure". The extracted material shall be tested for arsenic by using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS). The extraction and testing will be referenced to the following methods:
- Compendium Method 10-3.1 Selection, Preparation and Extraction of Filter Material, Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999; and
 - Compendium Method 10-3.5 determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS), Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999.

Monitoring Location

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

6.6 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		

Remarks:

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

Monitoring Equipment

- 6.7 **Table 6.2** summarizes 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

- 6.8 **Table 6.3** summarizes 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

- 6.9 High volume samplers (HVS) (GMW PM10 (TE6070X)) complete with appropriate sampling inlets was employed for 24-hour RSP monitoring. The sampler is 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).
- 6.10 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 will be properly set (between 1.1 m³/min. and 1.4 m³/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 will be 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. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure were 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 not vary by more than $\pm 3^{\circ}\text{C}$; the relative humidity (RH) was $< 50\%$ and not vary by more than $\pm 5\%$. A convenient working RH was 40%. Weighing results were further analysis of RSP concentrations collected by each filter.

Maintenance/Calibration

6.11 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

- 6.12 Quartz filters of size 8" x 10" were labelled before sampling. A HOKLAS accredited laboratory, Wellab Ltd., is responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for the monitoring team. The balance for weighting filter paper was regularly calibrated against a traceable standard.
- 6.13 All filters, which were prepared by Wellab Ltd., were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than $\pm 3^{\circ}\text{C}$; the relative humidity (RH) was $< 50\%$ and not variable by more than $\pm 5\%$. A convenient working RH was 40%.
- 6.14 Wellab Ltd. (HOKLAS Registration No. 083), is responsible for the extraction and testing procedure for Arsenic and comprehensive quality assurance and quality control programmes were conducted.

Results and Observations

- 6.15 The ambient arsenic monitoring results are summarized 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)
05/05/2022	KTN-DMS4(A)	1.05	9.36	11.7
11/05/2022		0.19		
17/05/2022		0.69		
23/05/2022		0.74		
27/05/2022		0.98		

- 6.16 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 1139.72 tons of arsenic soil was transported to soil treatment plant and 4800.54 tons were treated. No Action/Limit Level exceedances were recorded.

Event and Action Plan

- 6.17 Should project-related non-compliance of the criteria occur, action in accordance with the 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 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 are conducted referring to the updated EM&A Manual - Monitoring of any LFG which may be migrated to the site should be undertaken during the construction of 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 offices, stores etc. set up on site.

Monitoring Locations

- 7.6 Monitoring of oxygen, methane and carbon dioxide was performed for construction of infrastructure and the development within the Consultation Zone and within MTLL when the works involve 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** summarizes 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 at the aforesaid locations on 1 occasion with 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 project related non-compliance of the criteria occur, action in accordance with the 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 with 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, 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 feature at FL02 and FL27 when pile driving operation was conducted within assessment area of 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	At the opposite of 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 were 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

Remarks:

[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 The copies of calibration certificate of the monitoring equipment employed by the Contractor for 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 feature at FL02 and FL27 on a daily basis when pile driving operation was conducted within 50m of 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 limit for construction vibration monitoring for surveyed cultural heritage.

Table 8.3 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	

Remarks:

* peak particle velocity

as cultural heritages are sensitive receivers, vibration monitoring should be classified as vibration-sensitive.

- 8.9 If any exceedance of limit have been found or damage to either structural or non-structural elements of the historic buildings have been identified, the construction works should stop immediately and seek structural engineer's advices 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 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 was 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 Methodology specified in Table 12.1 in Updated EM&A Manual.
- 9.3 Monitoring in Long Valley should follow the methodology adopted by the regular HKBWS bird monitoring programme in order to obtain comparable results and complete coverage of the area in the shortest time possible.

Monitoring Frequency

- 9.4 High tide and low tide avifauna monitoring is required to be carried out on weekly basis. Additional night-time avifauna monitoring in Long Valley is 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: 3rd, 4th, 11th, 12th, 17th, 18th, 26th, 27th May 2022

Monitoring Location

- 9.5 The avifauna monitoring was carried out at Ng Tung River, Sheung Yue River and Long Valley in reporting month according to construction works. 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

As the sensitive receivers (large waterbirds) are easily visible, the transect route will only need to follow one bank of the rivers.

- 9.6 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 would be marked as “heard”, while birds flying over the survey area would be marked as “flight”. Species of conservation significance would be specified.

9.8 Other information at the time of survey such as weather condition, tidal condition, tide level and noticeable natural or anthropogenic activities would be 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 Result

9.10 In total, 47 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 21 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix L1k and L1l** respectively.

9.11 Among the four transects, the 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 the transect T5 in Long Valley, species with conservation interest such as *Himantopus himantopus*, which is a passage migrant, and *Tringa nebularia* which is a passage migrant and winter visitor, were commonly observed in shallow water habitat.

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

9.14 Transect T3 was conducted along the 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 Transect 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 includes 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 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 is required to be carried out on monthly basis during wet season. Three replicates for invertebrates sampling and direct counting of fish fauna should be performed respectively.

Date of aquatic fauna monitoring: 19th May 2022

Monitoring Location

- 9.20 During wet season, the monitoring location required to be carried out in Ma Tso Lung Stream according to construction works 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 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 condition and noticeable natural or anthropogenic activities would be recorded.

Monitoring Status

- 9.24 According to the Updated EM&A Manual, quantitative aquatic fauna replicate surveys of stream fauna is required to be carried out on monthly basis during wet season. During the reporting Month, no aquatic fauna replicate surveys was carried out.
- 9.25 In the survey of aquatic fauna, a total of 22 aquatic invertebrate species were recorded in Ma Tso Lung Stream and Siu Hang San Tsuen Stream. There were 4 fish species recorded in the reporting month. No species of conservation importance was recorded.

-
- 9.26 For the monitoring on 19th May 2022, the two monitoring stations, MS_01 & MS_05, were found to be dried-up. No aquatic invertebrate nor fish species were recorded in those stations as a result.
- 9.27 Aquatic faunal monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix 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 Updated EM&A Manual, monitoring of measures to minimize impacts should be carried out during the construction phase.
- 9.29 The purpose of survey is to monitor the effectiveness of measures to minimize impacts on ecologically sensitive habitats from disturbance and pollution by standard faunal transect surveys.

Mammal survey

- 9.30 Mammal survey should be performed during both day and night times, in areas along the transect routes which may potentially be utilized by terrestrial mammals. Field signs such as droppings, footprints, diggings and burrows left by larger terrestrial mammals should be observed. Mammals directly observed should be recorded, and identification should be made as accurate as possible from the field signs observed.
- 9.31 Bat survey should be conducted along the transect routes shortly after sunset, with the use of a bat detector to record the echolocation calls. The relative abundance of the species encountered should be estimated with reference to the baseline monitoring results, i.e. using a scale from one (species recorded within transect routes) to three (dominant species within transect routes), for comparison between baseline results and the current monitoring results. Nomenclature of mammal should be based on Shek (2006).

Herpetofauna survey (Amphibians and Reptiles)

- 9.32 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 should be undertaken on a monthly bases.

Date of Monitoring surveys of ecological sensitive receivers: 13th, 24th May 2022

Monitoring Location

- 9.36 The transect routes in the Reporting Month according to 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 Result

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 T4. Domestic dog, *Canis lupus familiaris*, was found in all of the transects, 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 to the possible bat species suggested by the bat detector, the distribution of the 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 T1. *Pipistrellus abramus* was recorded in flight at nighttime at T1 and T5.

Herpetofauna (Amphibians and Reptiles)

- 9.45 Along the transects, a total of 8 herpetofauna species were observed. No species of conservation importance were recorded. Species including toads, frogs and geckos were recorded near wetland habitats and watercourse. Transect T5 had the highest species diversity among all transects.

Insects (Butterfly and Dragonfly)

- 9.46 During the insect survey, a total of 24 butterfly species and 13 odonata species were recorded from the transects. No species of conservational interest was recorded. Transects T4 had higher butterfly species diversity than other transects.
- 9.47 Odonata were recorded this month at all transect. No species recorded were of particular conservation importance.
- 9.48 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix L4 to L7**.
- 9.49 For the monitoring conducted on 24th May 2022 on Transect T5, a section of the transect route was found located within private property, and was not accessible. Another section on transect T5 was found blocked by 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 private property.



Photo 2. Inaccessible part of transect T5 blocked by the 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 habitat in Long Valley during the 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 record in the Reporting Month (Reference: <http://www.weather.gov.hk/wxinfo/pastwx/metob202205.htm>), weather condition might pose influence towards the monitoring result.

The detailed Ecological monitoring results are attached in **Appendix L**.

Reference

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 weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Contract site. The summaries of site audits are presented in **Table 10.1** and **Appendix P**.

Table 10.1 Summary of Site Audit

Environmental Site Inspection	Works Contracts						
	ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07
Weekly site audit with representative of the <i>Supervisor's</i> Representative and the Contractor	3, 10, 18, 25 and 31 May 22	4, 11, 20 and 25 May 22	6, 13, 17 and 27 May 22	5, 11, 19 and 26 May 22	3, 10, 16, 23 and 31 May 22	5, 11, 19 and 26 May 22	6, 13, 20, and 27 May 22
Joint Site Audit with representative of the <i>Supervisor's</i> Representative, the Contractor and IEC	18 May 22	20 May 22	17 May 22	11 May 22	16 May 22	N/A	20 May 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 majority of outstanding works have also been completed in April 2022 with defect rectification works remain. The outstanding installation works are the short-duration works which will 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 will email those inspection records to the Project Team of Contract ND/2019/06 for information weekly.

Table 10.2 Observations and Recommendations during Site Audits

	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/01			
--	--	--	--
Contract No.: ND/2019/02			
Water Quality	11/05/2022	Enhance water mitigation measure to prevent surface runoff.	Improvement/Rectification was observed during follow-up audit session on 20 May 2022.
Air Quality	27/04/2022	Dusty haul road shall be watered regularly.	Improvement/Rectification was observed during follow-up audit session on 4 May 2022.
	11/05/2022	Vehicles shall be switched off while not in use.	Improvement/Rectification was observed during follow-up audit session on 20 May 2022.
	20/05/2022	Faded NRMM label shall be replaced.	Improvement/Rectification was observed during follow-up audit session on 25 May 2022.
Waste / Chemical Management	04/05/2022	Drip tray shall be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 11 May 2022.
Ecology	11/05/2022	The silt curtain should be properly surrounded the works and ensure it is intact.	Item was remarked as 220520-R01.
	20/05/2022	The silt curtain should be properly surrounded the works and ensure it is intact.	Item was remarked as 220525-R01.
	25/05/2022	The silt curtain should be properly surrounded the works and ensure it is intact.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/03			
Ecology	17/05/2022	Green hoarding should be properly maintained.	Improvement/Rectification was observed during follow-up audit session on 27 May 2022.
Contract No.: ND/2019/04			
Water Quality	25/04/2022	To review and modify the implemented mitigation measures to avoid the muddy surface runoff discharging to the river.	Improvement/Rectification was observed during follow-up audit session on 5 May 2022.
	25/04/2022	To enhance the drainage system and increase the capacity of de-silting facilities. (Portion H)	Item was remarked as 220505-R01.
	05/05/2022	To enhance the drainage system and increase the capacity of de-silting facilities. (Portion H)	Item was remarked as 220511-R01.
	11/05/2022	To enhance the drainage system and increase the capacity of de-silting facilities. (Portion H)	Improvement/Rectification was observed during follow-up audit session on 19 May 2022.
	05/05/2022	To clear the U-channel regularly.	Item was remarked as 220511-R01.



	Date	Observations and Recommendations	Follow-up
	11/05/2022	To clear the U-channel regularly.	Improvement/Rectification was observed during follow-up audit session on 19 May 2022.
	11/05/2022	To clear the muddy debris on piling platform.	Improvement/Rectification was observed during follow-up audit session on 19 May 2022.
Ecology	25/04/2022	The silt curtain should be properly surrounding the works at near bridge F and ensure it is intact.	Improvement/Rectification was observed during follow-up audit session on 5 May 2022.
Contract No.: ND/2019/05			
Air Quality	25/04/2022	Dusty stockpile shall be covered properly by impervious sheeting.	Improvement/Rectification was observed during follow-up audit session on 3 May 2022.
	03/05/2022	Dusty stockpile should be covered by impervious sheeting.	Improvement/Rectification was observed during follow-up audit session on 10 May 2022.
	16/05/2022	Regulated machines should have NRMM label displayed properly.	Improvement/Rectification was observed during follow-up audit session on 23 May 2022.
Waste / Chemical Management	23/05/2022	Clear the oil stain on the ground.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/06			
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Contract No.: ND/2019/07			
Water Quality	13/05/2022	To enhance mitigation measures to prevent muddy water overflow after rainstorms.	Improvement/Rectification was observed during follow-up audit session on 20 May 2022.

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 EP 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	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	Λ _[1]
EP- 467/2013/ A	2.9	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	Λ _[1]
EP- 468/2013/ A	2.11	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	Λ _[1]
EP- 469/2013	2.7	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	Λ _[1]









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

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

Implementation Status of Water Quality Mitigation Measures

10.5 According to the EIA Report and the Updated EM&A Manual, the water quality mitigation measures detailed in the documents 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 No. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05 and ND/2019/07 include 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 No. 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 minimize 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 From the findings of 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 approved Habitat Creation and Management Plan (HCMP) submitted under EP-468/2013/A. The HCMP provides a framework and specifications for development and management of the LVNP and guides the development to maintain and enhance the 37ha of low-lying wetland habitats.
- 10.11 Regarding to the design, the zoning of land use in the 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. The LVNP will divide 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 the LVNP started in late 2019 and is expected to be completed in 2023. During construction period, the progress of construction and wetland enhancement works are under observation by different stakeholders including AFCD and green groups. Close communication between AFCD and CEDD are conducted to exchange views on conservation, restoration and management of habitats as well as on the planning and design of the park. Also, advices from green groups, Hong Kong Bird Watching Society (HKBWS) and The Conservancy Association (CA), are taken on habitat management of Long Valley and potential effects on habitat and wildlife of each individual work conducted in Long Valley. Regular meeting are held monthly on 13th May 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 are submitted by the Contractor to achieve the objectives stated in HCMP and accepted by the Engineer with consent from AFCD before implementation. The Contractor will consult with the stakeholders for recommendations and suggestions on mitigation measures to minimise the environmental impacts arising from construction works. The progress of works will 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

		
<p>Agricultural practice are continued in existing farmland to maintain habitats in Long Valley</p>		
		
<p><i>Open water Habitat</i></p>	<p><i>Open water Habitat</i></p>	<p><i>Chinese arrowhead pond</i></p>
<p>Creation of wetland with designated habitat for biodiversity conservation</p>		
		
<p>Planting of paddy rice to provide foraging ground for Yellow-breasted Bunting</p>		
		
<p>Retention of washing bay for amphibians breeding</p>	<p>Enhancement of irrigation channel to provide reliable water source for farmland in Long Valley</p>	

 <p>Provision of bird island (hidden area)</p>	 <p>Restoring of water flea pond to provide food source to water birds</p>
 <p>Construction of storage sheds for farmers</p>	 <p>A <i>Chlidonias leucopterus</i> was recorded</p>
 <p>Wet agricultural land</p>	 <p>Provision of noise barrier for noisy works in Long Valley</p>

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 11.1 No Action/Limit Level exceedance for air quality, water quality, construction noise, ambient arsenic and landfill gas monitoring was recorded in the reporting month. The summary of exceedance record in the reporting month is shown in Appendix O.
- 11.2 Ecological monitoring was carried out in the reporting month. The Action and Limit Level will be compared after the issue of Final Baseline Ecological Report.
- 11.3 Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that the Action / Limit Levels are exceeded, the actions in accordance with the Event and Action Plans in **Appendix 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 Two 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 (June to July 2022)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance	Portion 1a, 1b, 1e, 2, 3, 5, 6a, 7	- 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 - Install sprinklers system for dust suppression. - 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
	(b) GI works	Portion 1b, 9b		
	(c) Excavation	Portion 1b, 3, 5, 6a, 7, 8a, 8b, 9b, 9c, 10a, 10b		
	(d) Construction of retaining wall	Portion 6a, 8a		
	(e) Site Formation	Portion 2		
	(f) Demolition of existing structure	Portion 1a		
	(g) Construction of temporary site haul road	Portion 2, 5, 10a		
	(h) Operation of HAC treatment facility	Portion 6b		

	(i) Tree felling	Portion 1a, 1e, 2		<ul style="list-style-type: none"> - Regular inspect of construction plants in good 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. <p>Water</p> <ul style="list-style-type: none"> - 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. <p>Waste / Chemical Management</p> <ul style="list-style-type: none"> - Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions - Provide recycling bin on site, encourage reuse and recycle as much as possible. - Provide drip tray 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.
	(j) Drainage Works	Portion 1b, 5, 6a, 7, 8a, 9b, 10a, 10b		
	(k) Grouting	Portion 8b		
	(l) Construction of reservoir	Portion 8a		
	(m) Sheet piling / ELS	Portion 1b, 5, 6a, 7, 8b, 9b, 10a, 10b		

				- Delivery of yard waste to tree shredding facility for upcycling.
ND/2019/02	(a) Pipe Jacking	Portions 1 & 3	Air, Noise, Waste	<ul style="list-style-type: none"> - 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 and 5A	<ul style="list-style-type: none"> - Waste - Air pollution - Noise pollution 	<ul style="list-style-type: none"> - 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.
	(b) Site Clearance	Section 7, 8 and 9	<ul style="list-style-type: none"> - Waste - Air pollution - Noise pollution 	
	(c) Tree Felling	Section 6, 7, 8 and 9	<ul style="list-style-type: none"> - Waste - Air pollution Noise pollution 	

				<ul style="list-style-type: none"> - 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.
ND/2019/04	(a) Sheet piling	Bridge A2, A3, Portion K	- Air, Noise, Waste	<ul style="list-style-type: none"> - 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 and ELS	Portion H, 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	<ul style="list-style-type: none"> - Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) 	<ul style="list-style-type: none"> - 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, C103, C2-02, C2-03a, C2-		

		03b, C3-02, C3-03a, C3-04a, D2-01, E2-01.	<ul style="list-style-type: none"> - Waste Management (Construction Waste) - Landscape and Visual - Cultural Heritage 	<ul style="list-style-type: none"> - Mobile plant to be sited as far away from NSRs as possible practicable. - All open stockpiles of construction materials of more than 50m³ to be covered with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system. - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal. - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions. - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling. - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage. - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate
	(c) Pipe 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 11, 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		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.
	(l) Slope works	RW06, FS04		- Conducting Construction Vibration Monitoring
	(m) Demolition	HD Warehouse		- 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.
ND/2019/06	N/A	N/A	N/A	N/A
ND/2019/07	(a) Site clearance	Portion 4, 5	<ul style="list-style-type: none"> - Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual 	<ul style="list-style-type: none"> - Regular watering on exposed worksites and haul road. - Stockpiling area should be provided with covers and water spraying system. - Only well-maintained plant to be operated on-site. - Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs. - Mobile plant to be sited as far away from NSRs as possible practicable.
	(b) Erection of site hoarding	Portion 3, 4		
	(c) C&D waste disposal	Portion 1, 2, 4, 5		
	(d) Ground investigation works	Portion 4		
	(e) Construction of box culvert	Portion 2		
	(f) Filing works	Portion 1, 2, 4		
	(g) Tree felling/ disposal of yard waste	Portion 4, 5		

	(h) Construction of site haul road	Portion 4, 5		<ul style="list-style-type: none"> - All open stockpiles of construction materials of more than 50m³ to be covered with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system. - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal. - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions. - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling. - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage. - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the
	(i) Drainage works	Portion 1, 3, 4, 5		
	(j) Sewage works	Portion 1, 3, 4, 5		
	(k) Construction of Noise Barrier	Portion 5		
	(l) Watermains	Portion 1		

				<p>Waste Disposal (Chemical Waste) (General) Regulation.</p> <ul style="list-style-type: none"> - Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - 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.
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12.2 The major site activities in coming two months is shown in **Table IV**.

Monitoring Schedule for the Next Month

12.3 The tentative environmental monitoring schedule for 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 May 2022 in accordance with Updated EM&A Manual.

13.2 No Action/Limit Level exceedance were recorded for air quality, water quality, construction noise, ambient arsenic and landfill gas monitoring in the reporting month.

Contract No. ND/2019/01

13.3 Environmental site inspection were conducted on 3, 10, 18, 25 and 31 May 22 by ET in the reporting month.

Contract No. ND/2019/02

13.4 Environmental site inspection were conducted on 4, 11, 20 and 25 May 22 by ET in the reporting month.

Contract No. ND/2019/03

13.5 Environmental site inspection were conducted on 6, 13, 17 and 27 May 22 by ET in the reporting month.

Contract No. ND/2019/04

13.6 Environmental site inspection were conducted on 5, 11, 19 and 26 May 22 by ET in the reporting month.

Contract No. ND/2019/05

13.7 Environmental site inspections were conducted on 3, 10, 16, 23 and 31 May 22 by ET in the reporting month.

Contract No. ND/2019/06

13.8 Environmental site inspections were conducted on 5, 11, 19 and 26 May 22 by ET in the reporting month.

Contract No. ND/2019/07

13.9 Environmental site inspections were conducted on 6, 13, 20, and 27 May 22 by ET in the reporting month.

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

13.11 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

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

Air Quality Impact

- To regular watering haul road;
- 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 was operating 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 site;
- 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 ensuring proper function;
- To regularly maintain and ensure water treatment facilities proper operation and functioning;
- To divert all the water generated from construction site to de-silting facilities with sufficient handling capacity before discharge; and
- To avoid or regularly clear the stagnant water in drip tray;

Waste/Chemical Management

- To dispose of general refuse properly;
- To clear and avoid the oil stain at site area;
- To provide proper storage area for chemical storage; and
- To maintain drip tray 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 minimize runoff.

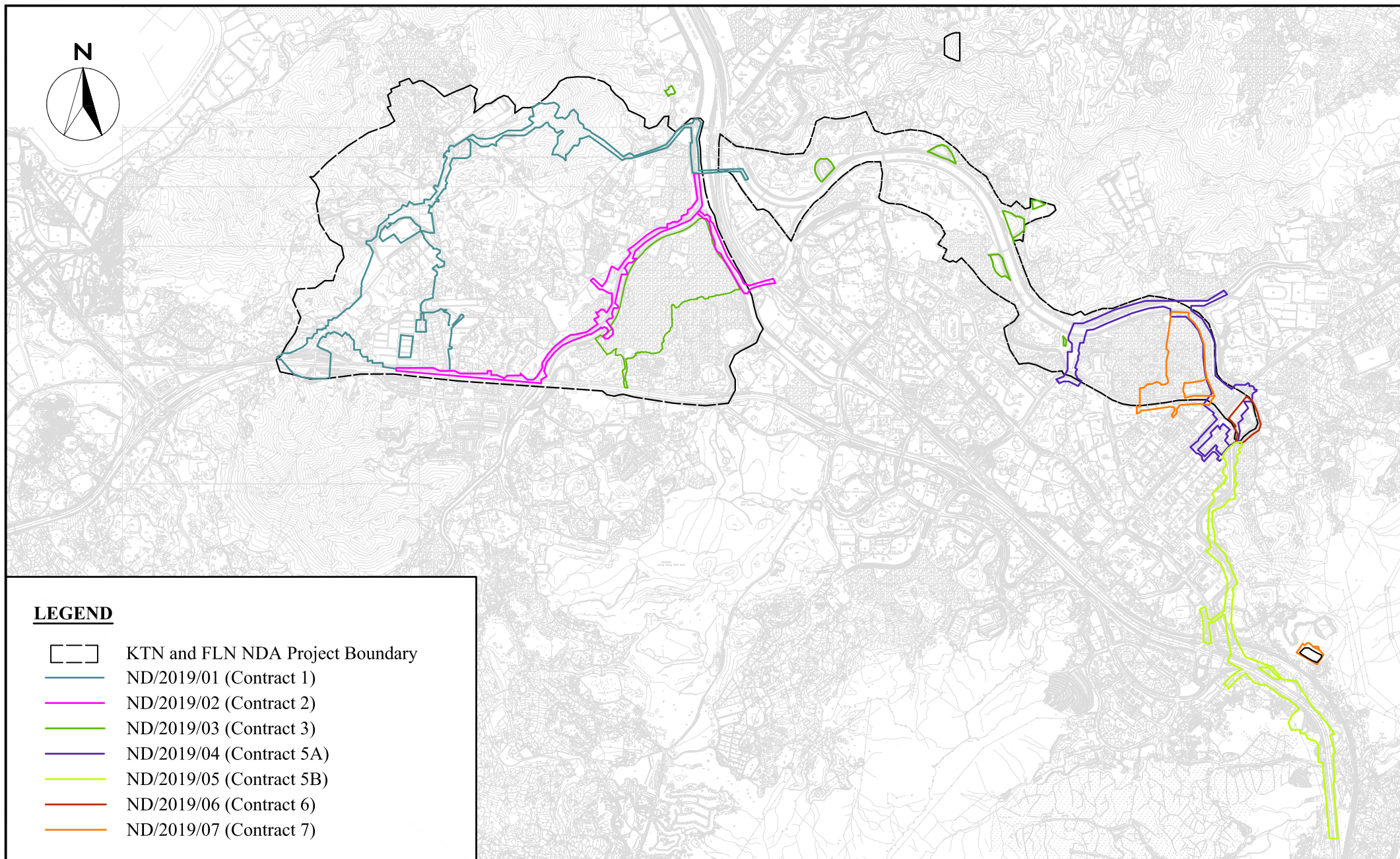
Ecology

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

Permit/ Licences

- To display valid Permit or Licences on site entrance.

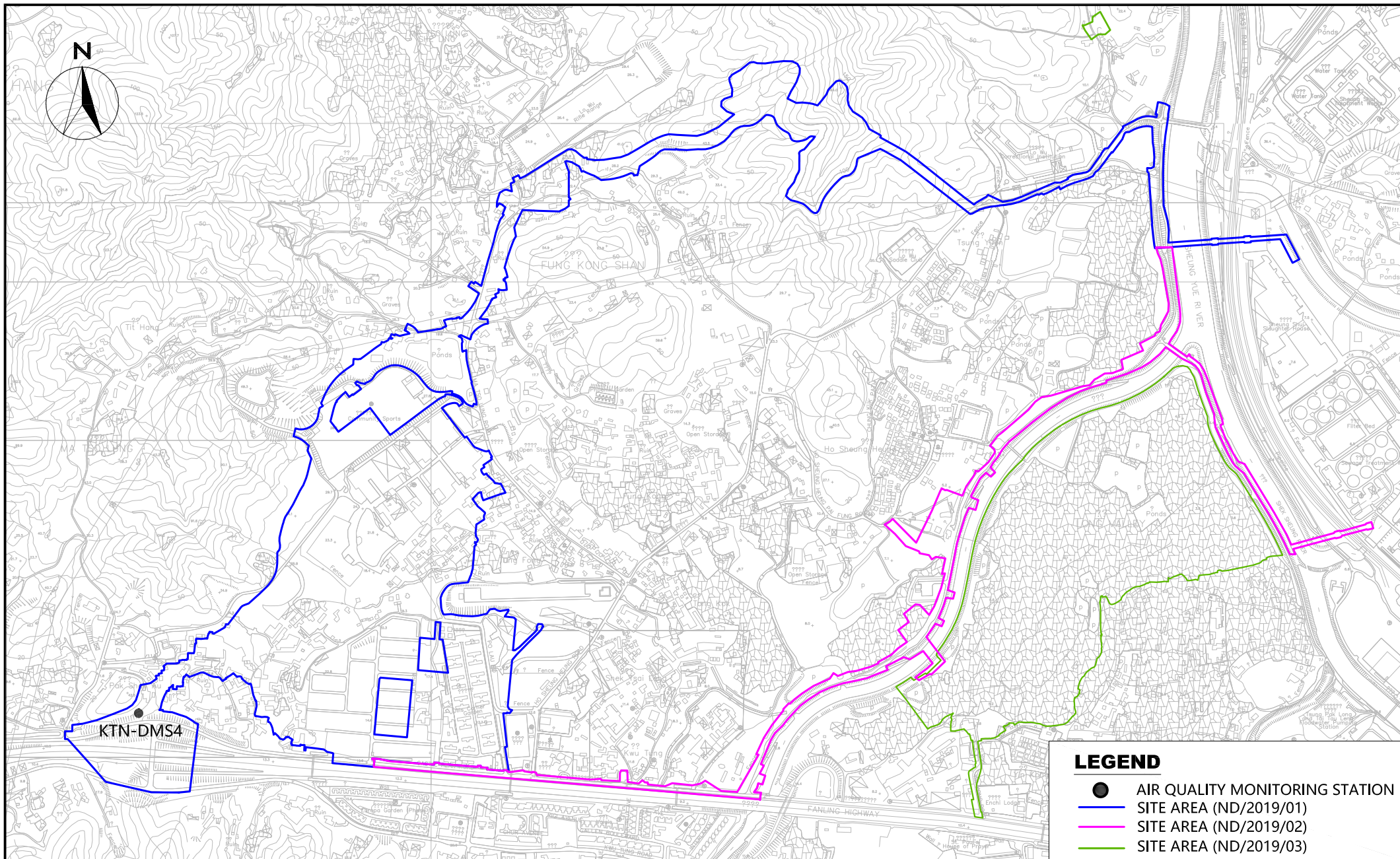
DRAWING(S)



LEGEND

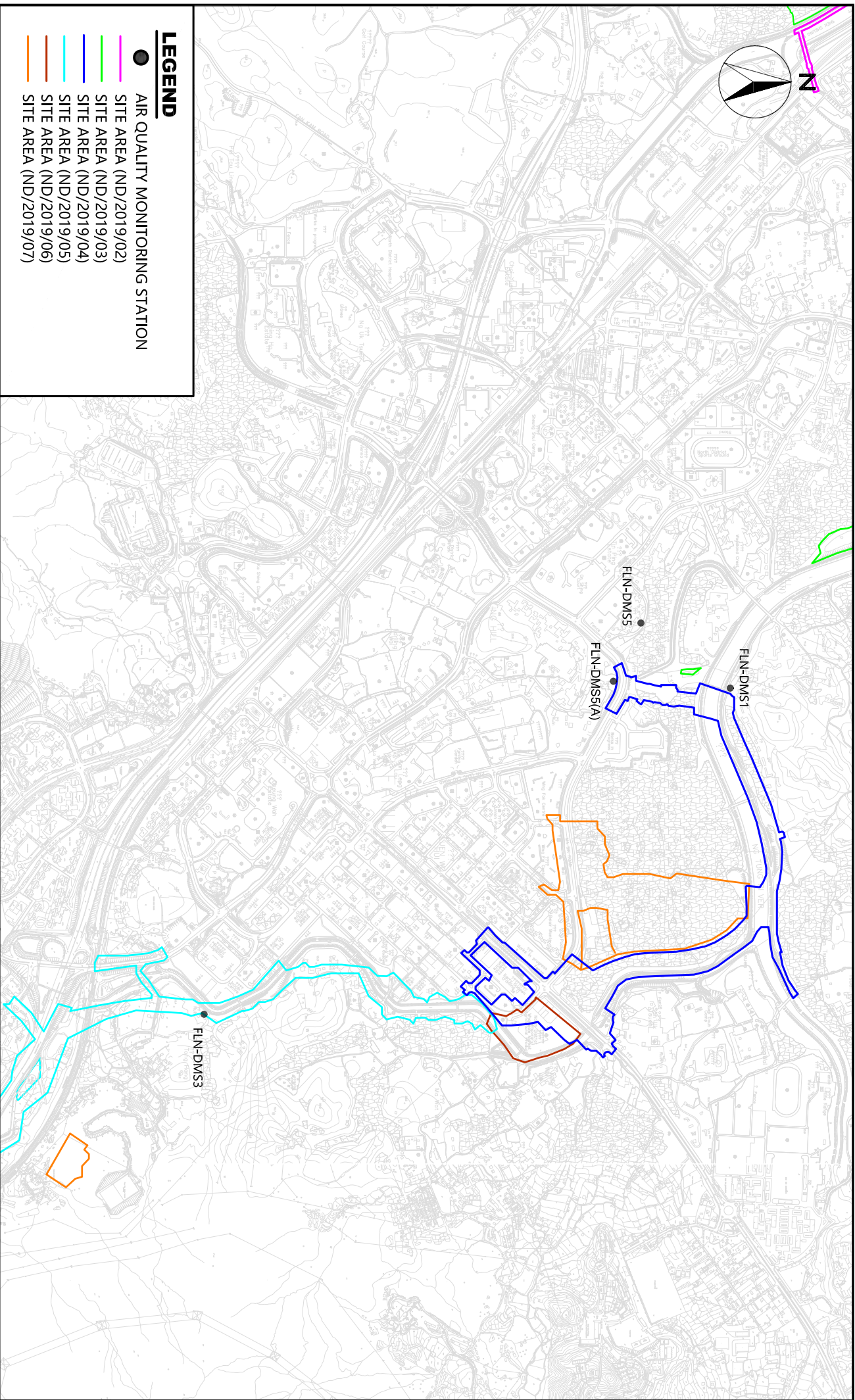
- KTN and FLN NDA Project Boundary
- ND/2019/01 (Contract 1)
- ND/2019/02 (Contract 2)
- ND/2019/03 (Contract 3)
- ND/2019/04 (Contract 5A)
- ND/2019/05 (Contract 5B)
- ND/2019/06 (Contract 6)
- ND/2019/07 (Contract 7)

FIGURE(S)

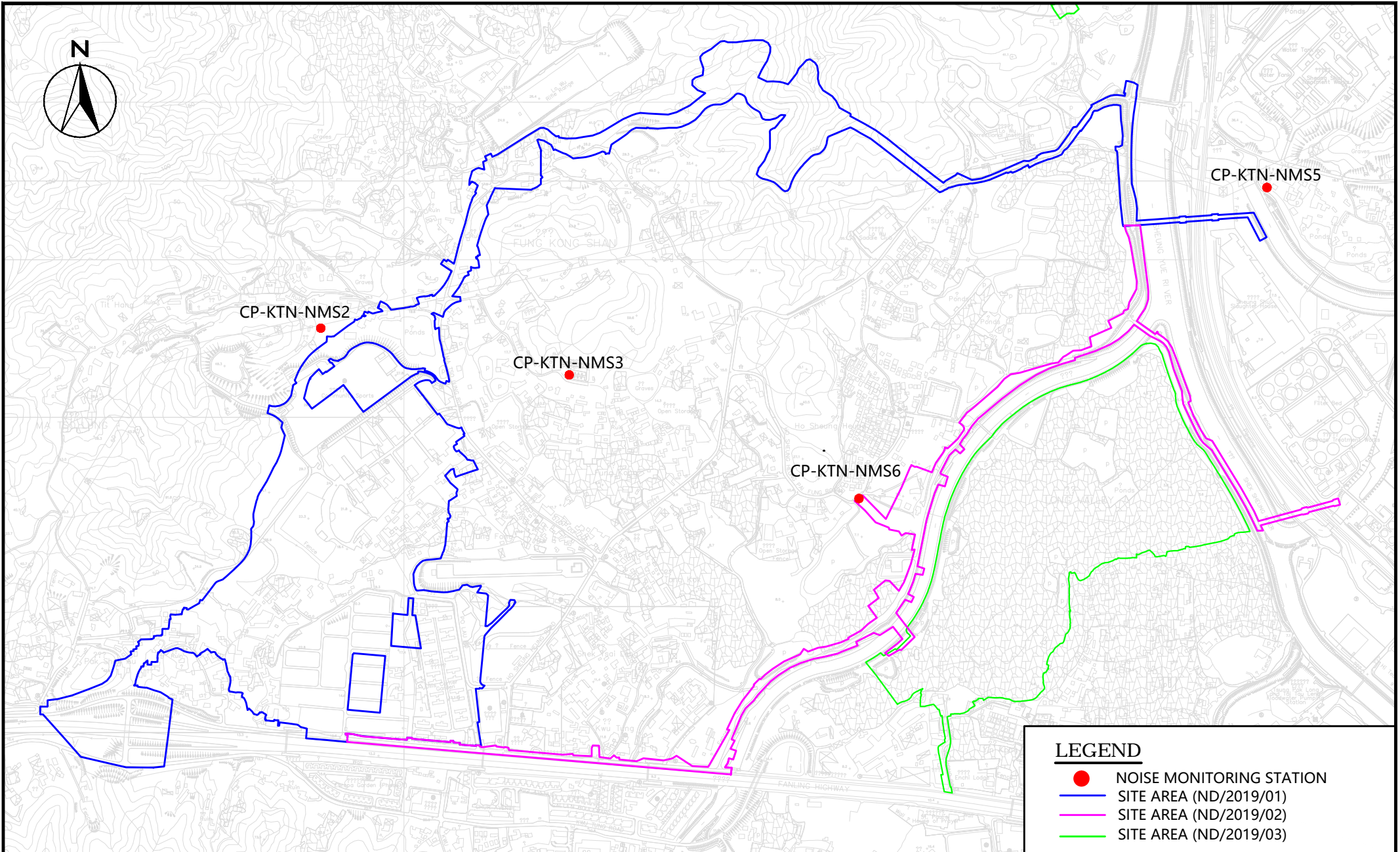


LEGEND

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

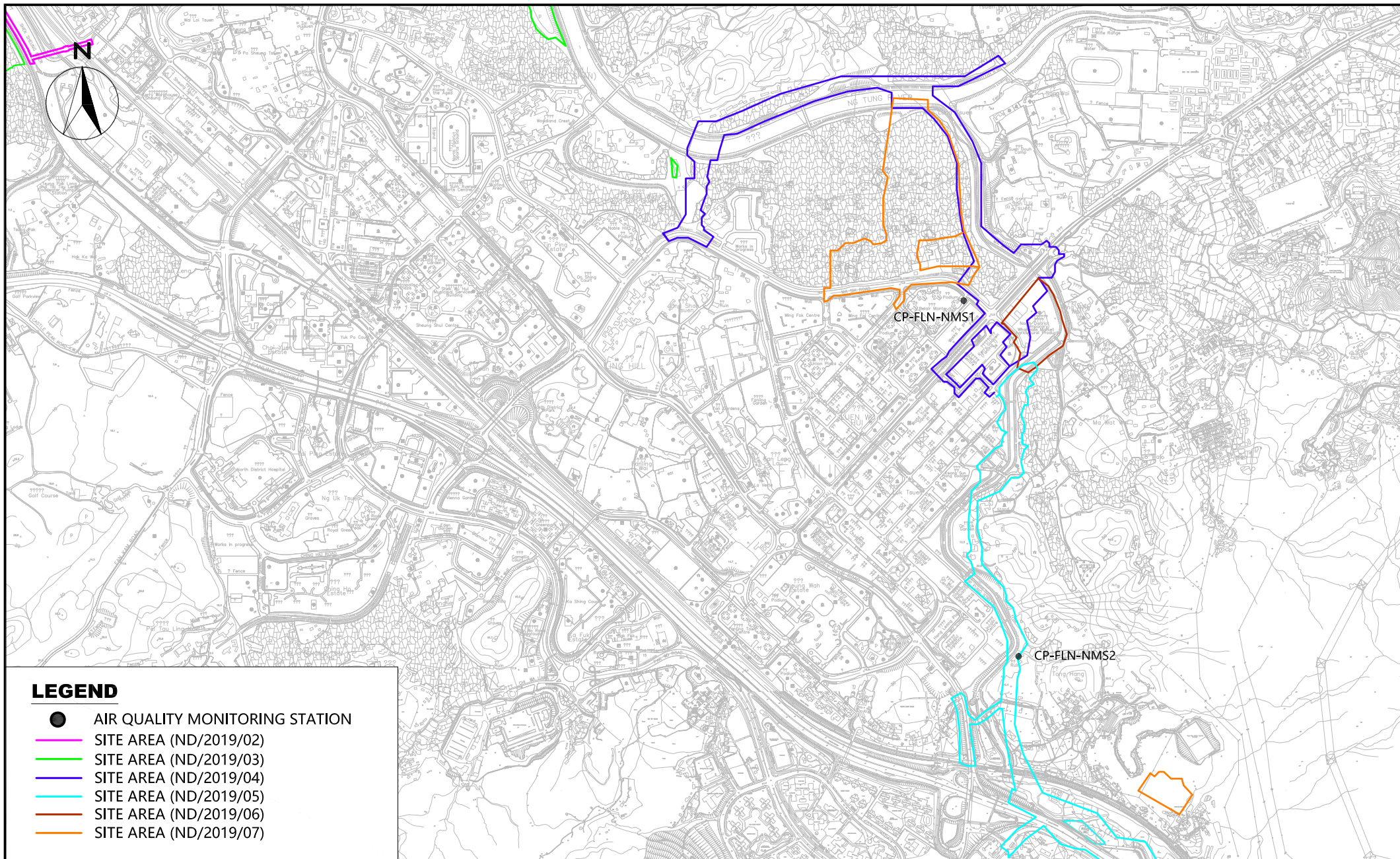


<div><div>WELLAB</div><div>consulting . testing . research</div></div>			Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction		
Phase for the First Phase Development of KTN and FLN NDAs			Location of Air Quality Monitoring Station (FLN)		
SCALE	A4 @ 1:40000	DATE	DEC 2021		
CHECK	IT	DRAWN	ML		
PROJECT No.	WMA20002	FIGURE NO.	2	REV	—



LEGEND

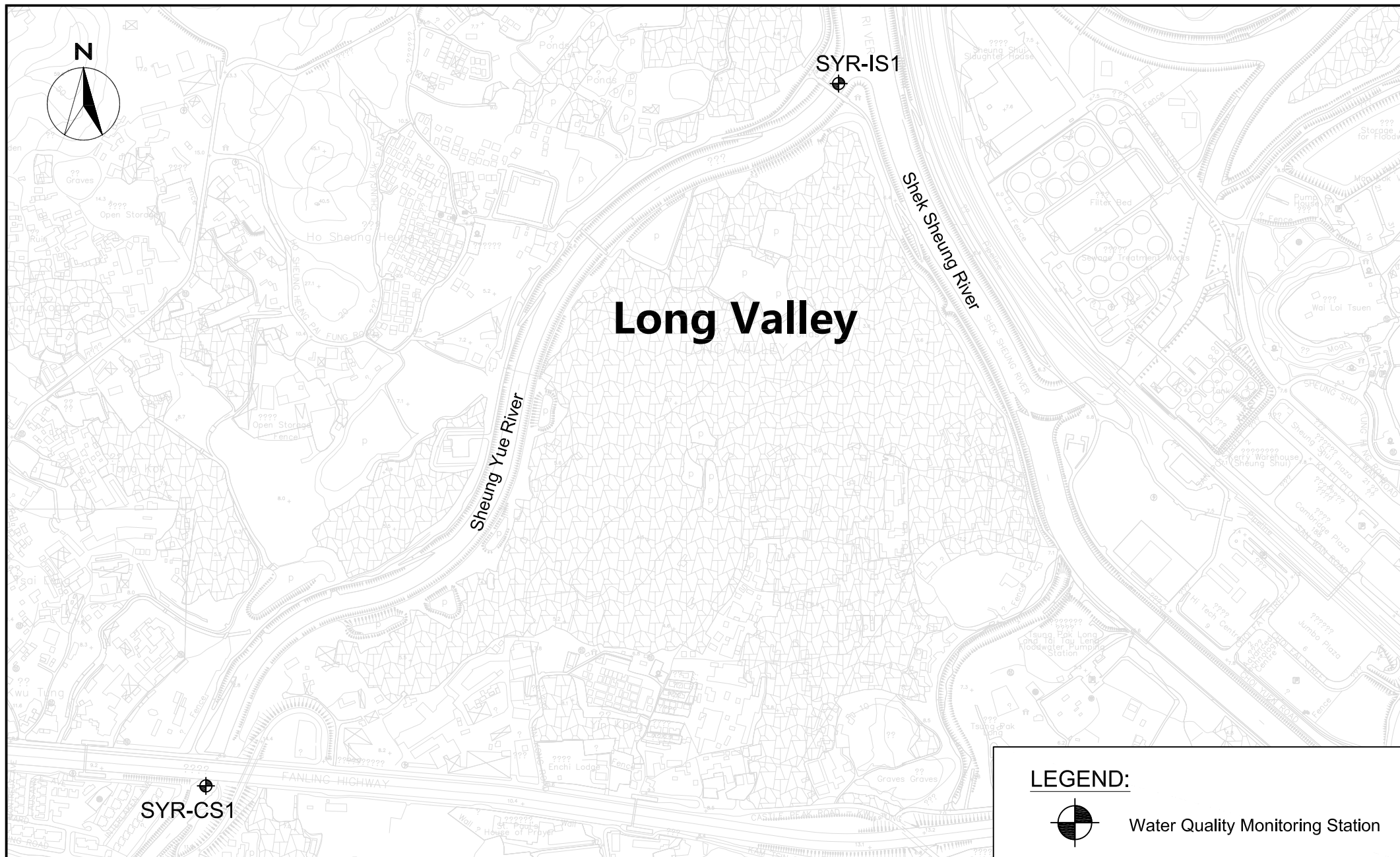
- NOISE MONITORING STATION
- SITE AREA (ND/2019/01)
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)



LEGEND

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

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



LEGEND:



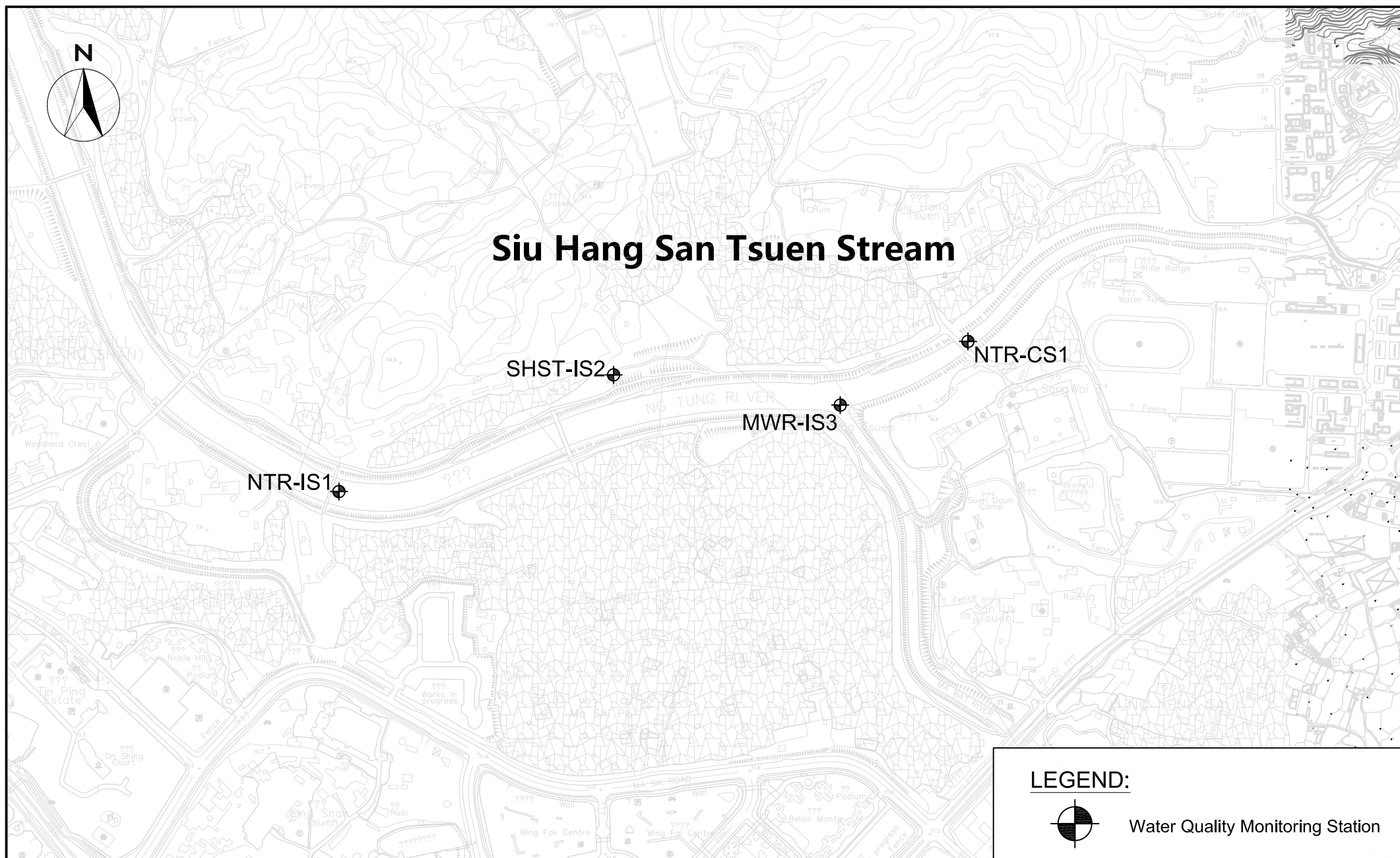
Water Quality Monitoring Station

WELLAB 匯力
consulting . testing . research

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

Location of Additional Water Quality Monitoring Stations at River Beas

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

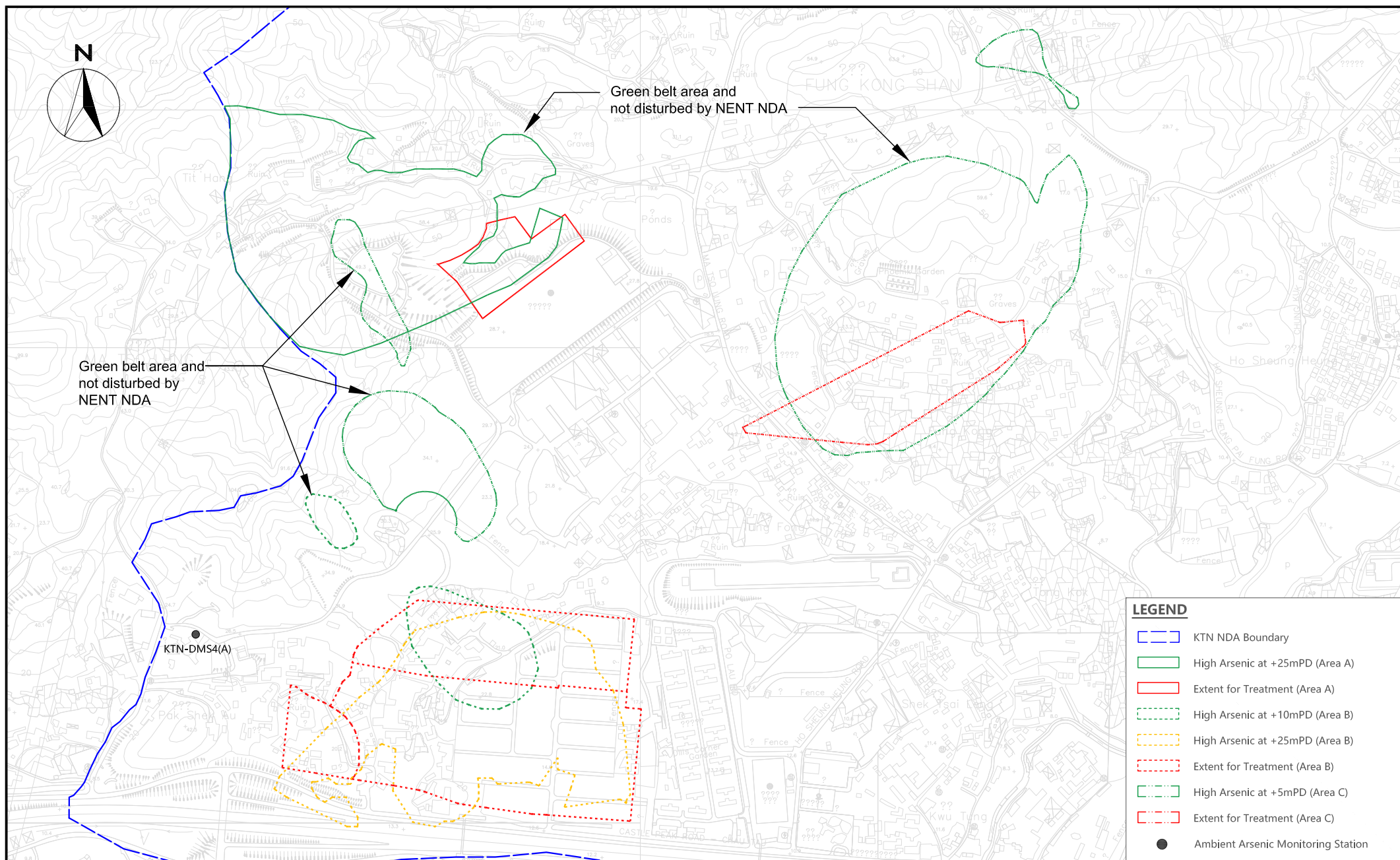


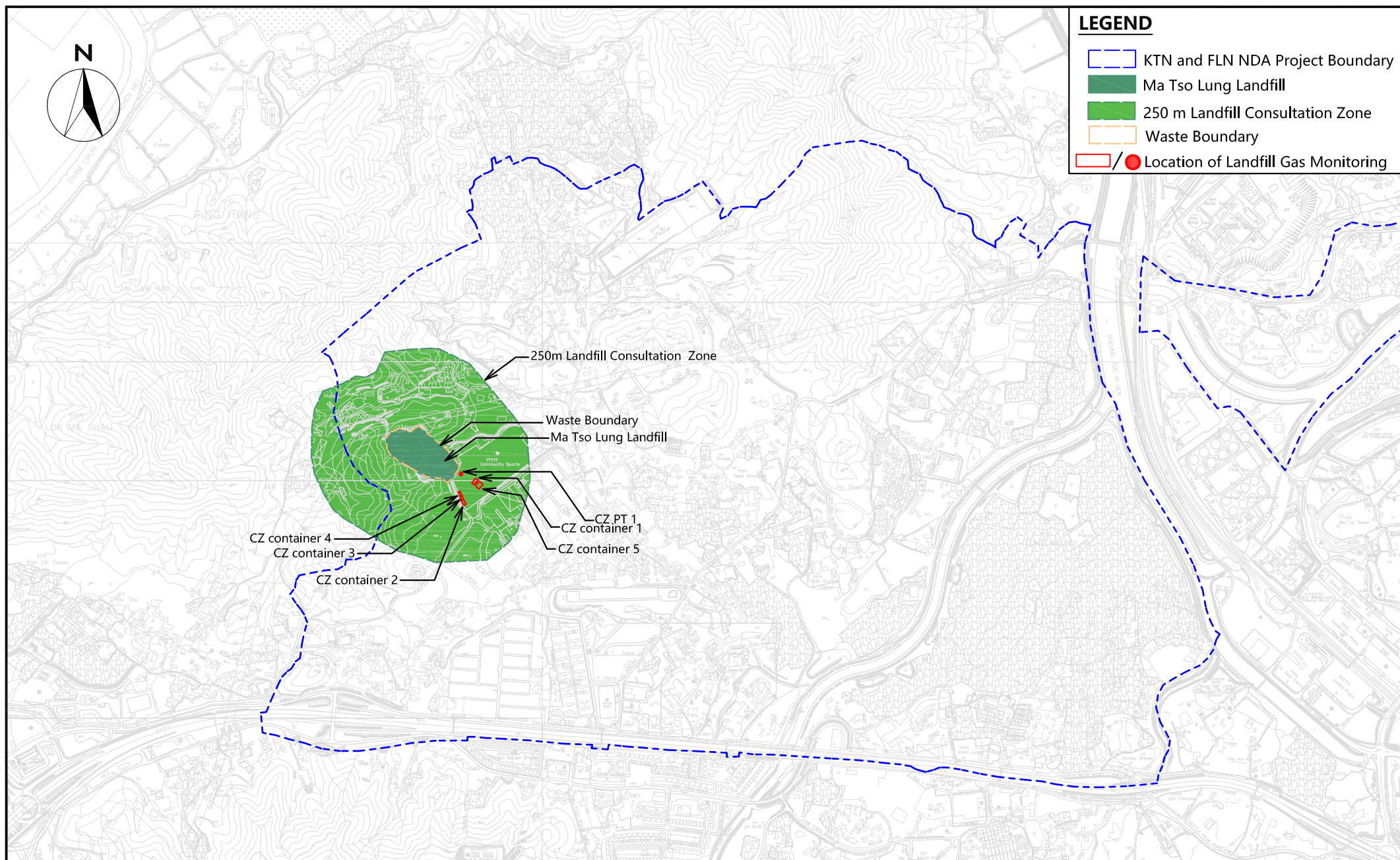
LEGEND:

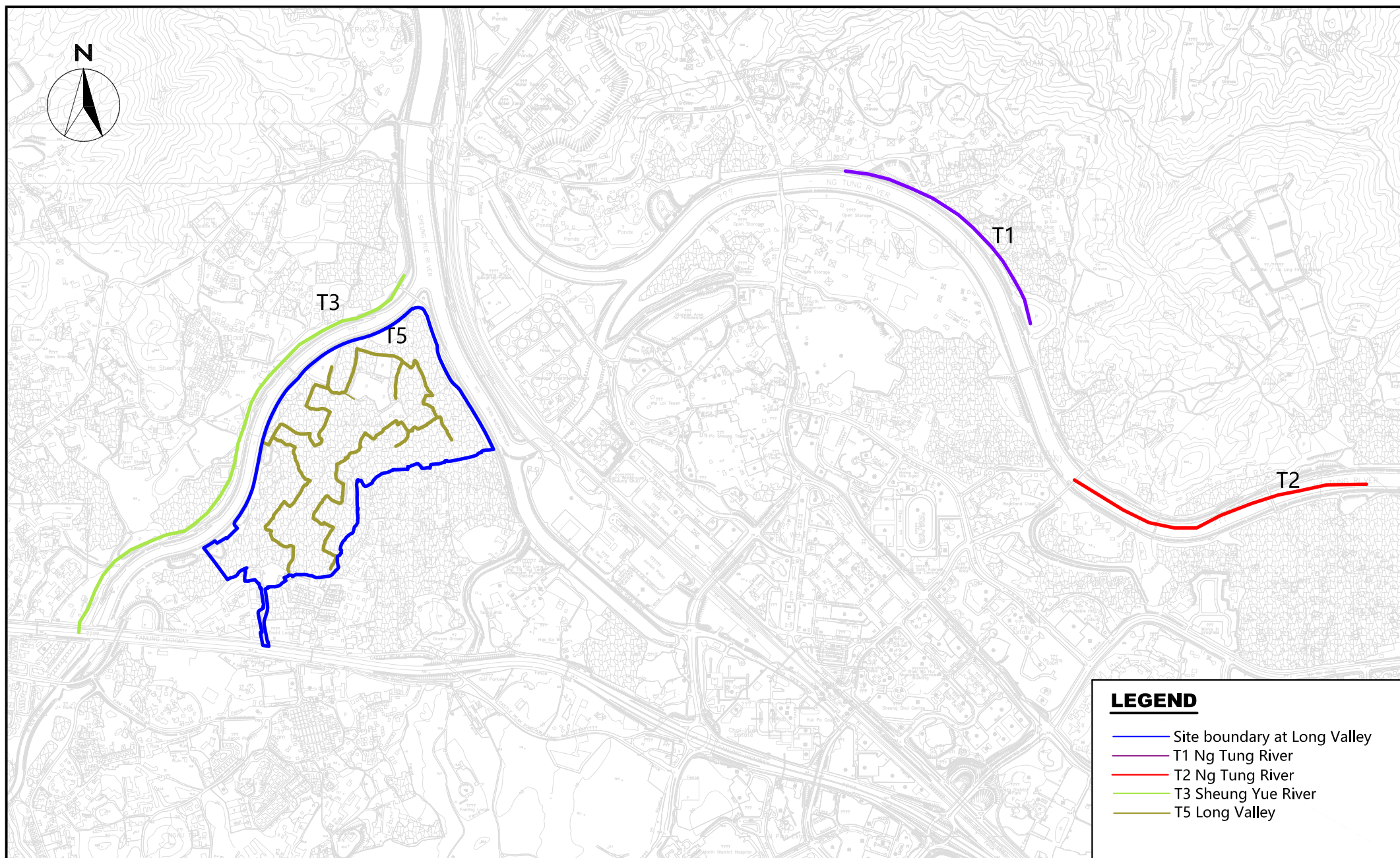


Water Quality Monitoring Station

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











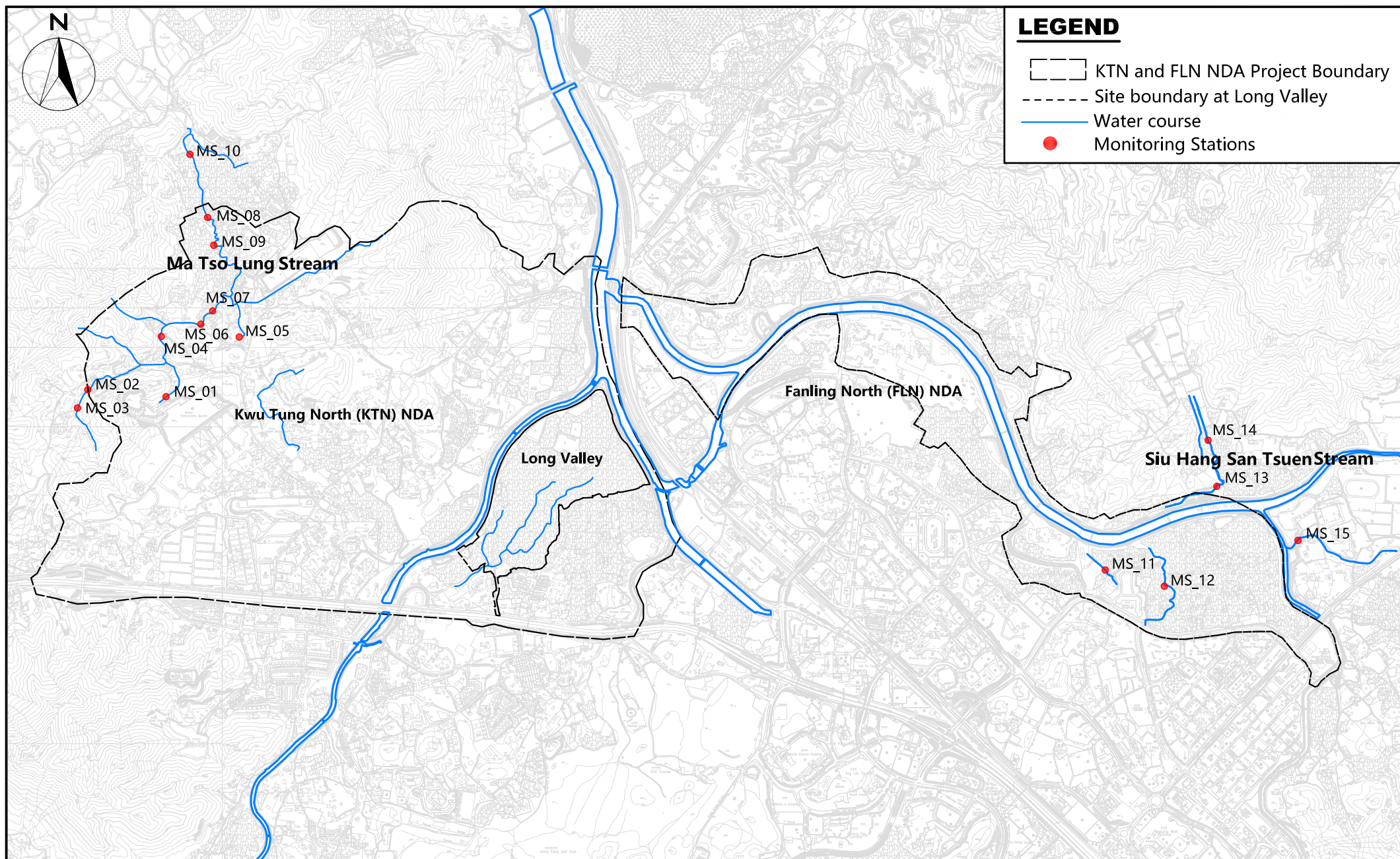
LEGEND

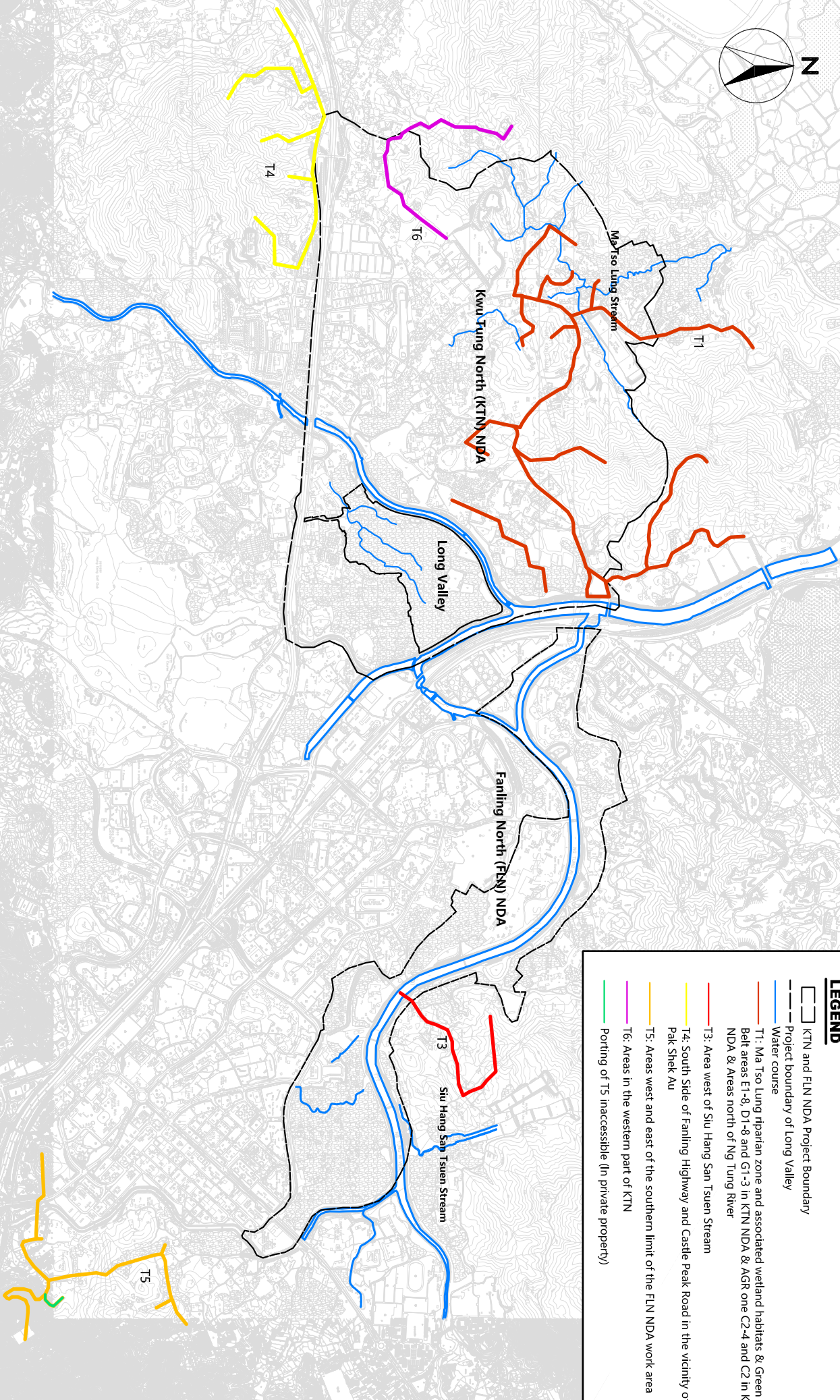
- Site boundary at Long Valley
- T1 Ng Tung River
- T2 Ng Tung River
- T3 Sheung Yue River
- T5 Long Valley



LEGEND

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





LEGEND

- KTN and FLN NDA Project Boundary
- Project boundary of Long Valley
- Water course
- T1: Ma Tso Lung riparian zone and associated wetland habitats & Green Belt areas EI-8, D1-8 and G1-3 in KTN NDA & AGR one C2-4 and C2 in KTN NDA & 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: Areas west and east of the southern limit of the FLN NDA work area
- T6: Areas in the western part of KTN
- Porting of T5 inaccessible (in private property)

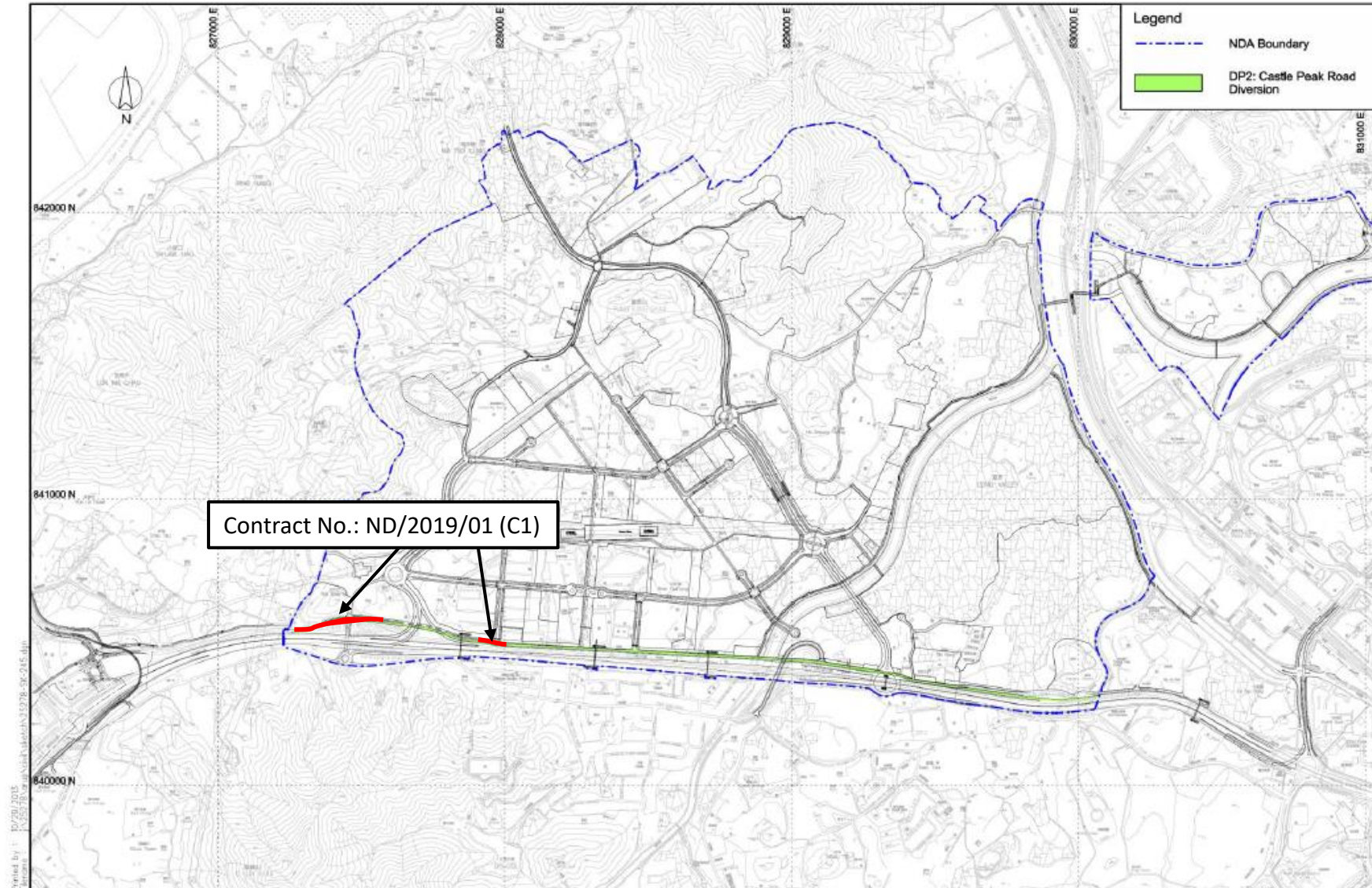
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction
Phase for the First Phase Development of KTN and FLN NDAs
Location of Transect Route of Ecological Sensitive Habitats
(Non-Aquatic Fauna) Transects (T1, T3-T6)

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)

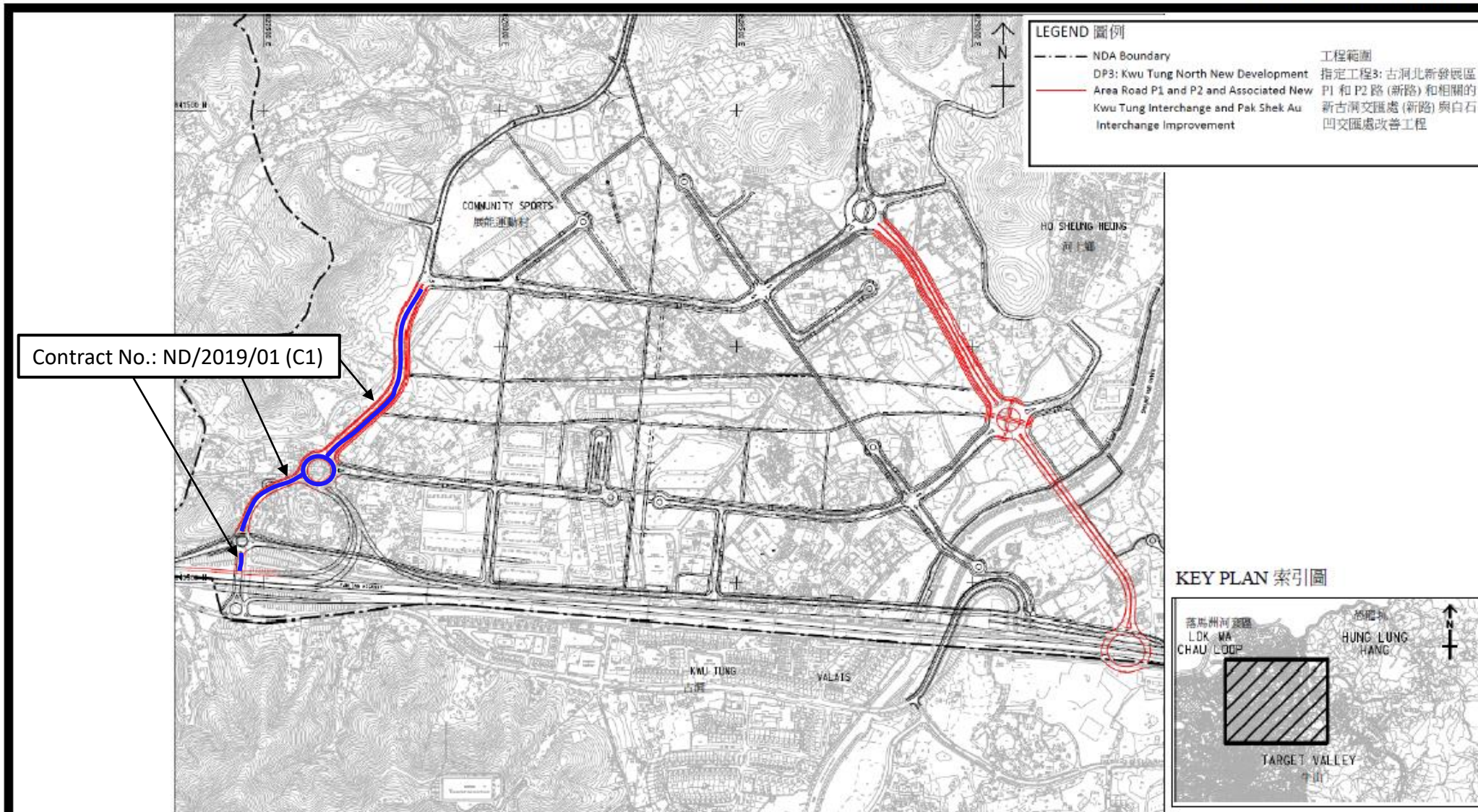
**Environmental Permit No:
EP-466/2013**



Figure 13

Site Layout Plan of Contract ND/2019/01

under EP-467-2013-A



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

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



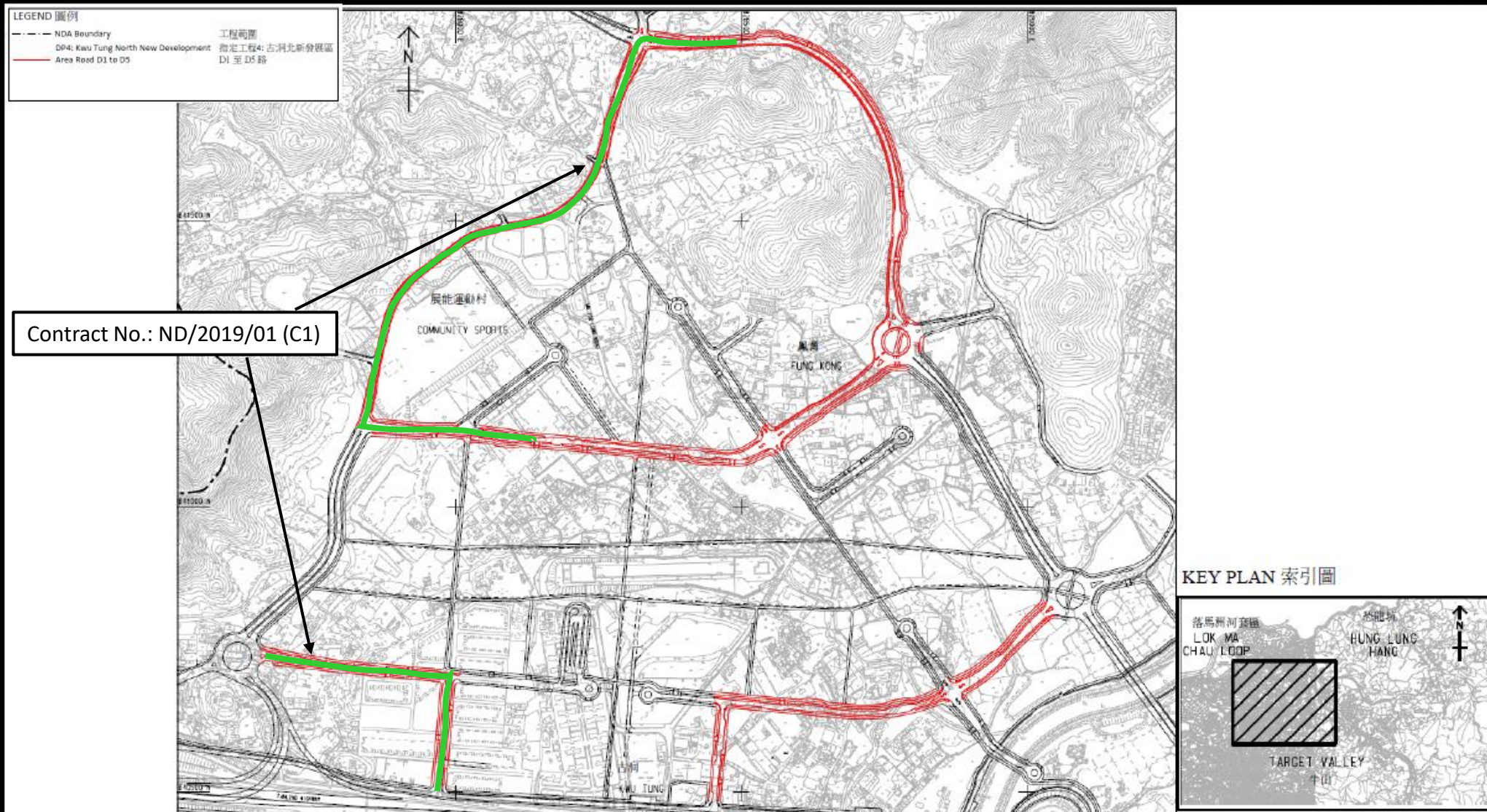
Figure 1: Location Plan for Interchange Improvement (Indicative)
 (This figure was prepared based on Figure 1.2 of VEP application (No.: VEP-523/2016))

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

Figure 14

Site Layout Plan of Contract ND/2019/01

under EP-468-2013-A



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

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



Figure 1: Location Plan for The Project (Indicative)

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

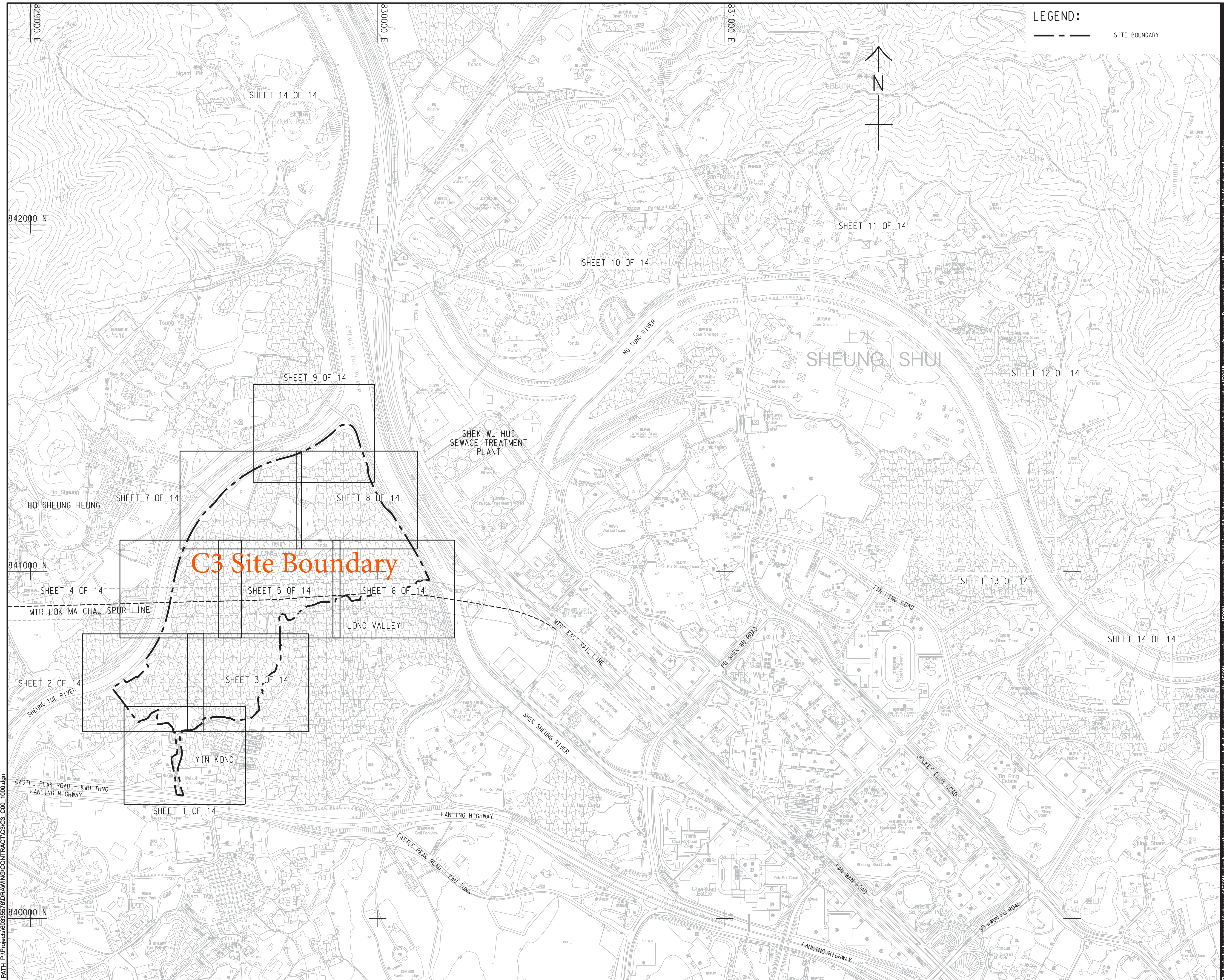
圖1：工程項目位置 (示意圖)

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

Figure 15

Site Layout Plan of Contract ND/2019/03

under EP-468-2013-A




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



土木工程拓展署
Civil Engineering and
Development Department

AECOM Asia Company Ltd.
www.aecom.com

ISSUE/REVISION			
修訂			
-	JUN-19	TENDER DRAWING	 CYCH
IR 修訂	DATE 日期	DESCRIPTION 次要描述	CHK. 檢查

SCALE 比例	DIMENSION UNIT 尺寸單位
A1 1 : 5000	METRES

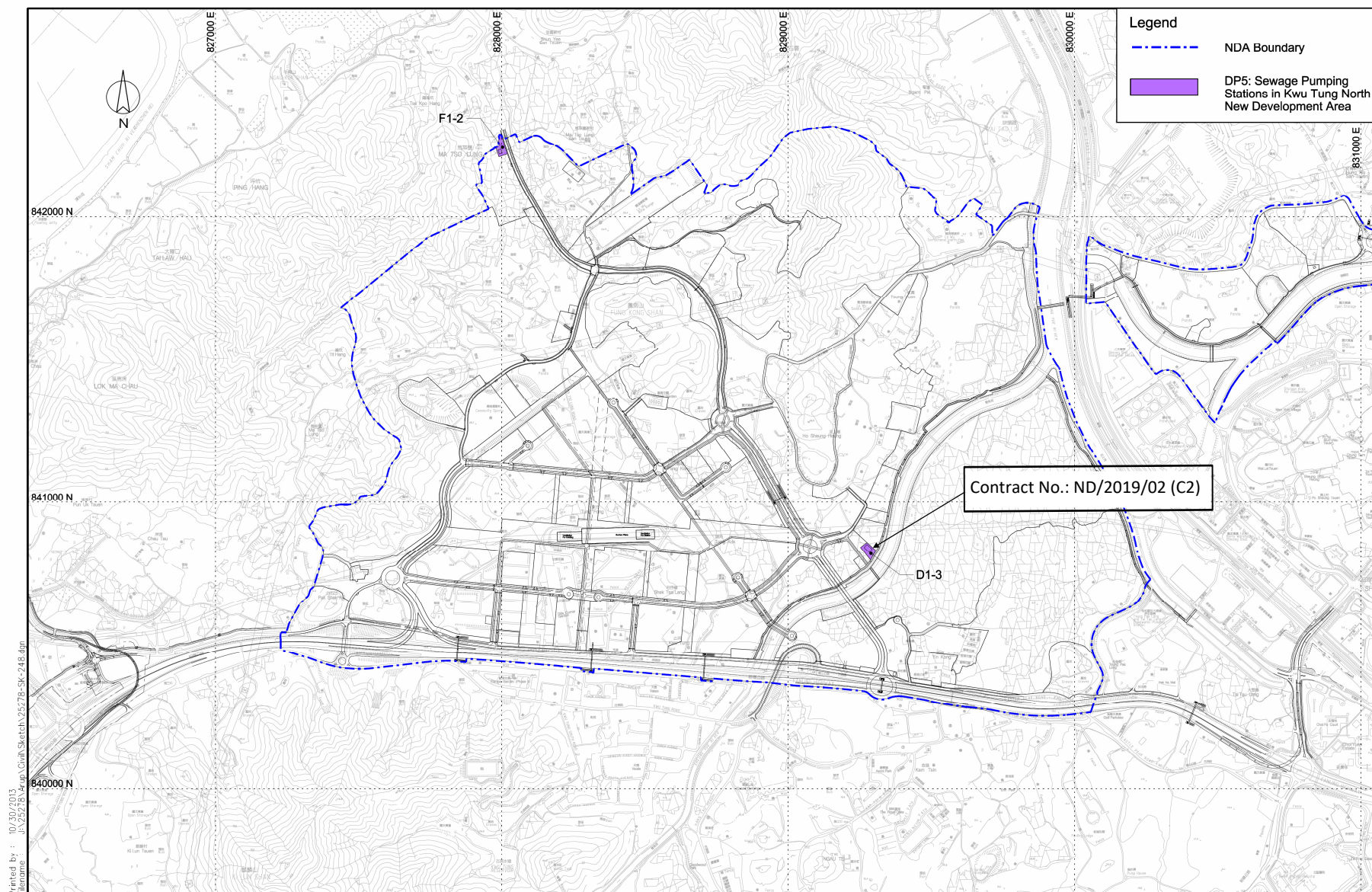
KEY PLAN OF GENERAL LAYOUT

60335576/C3/C00/1000

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)

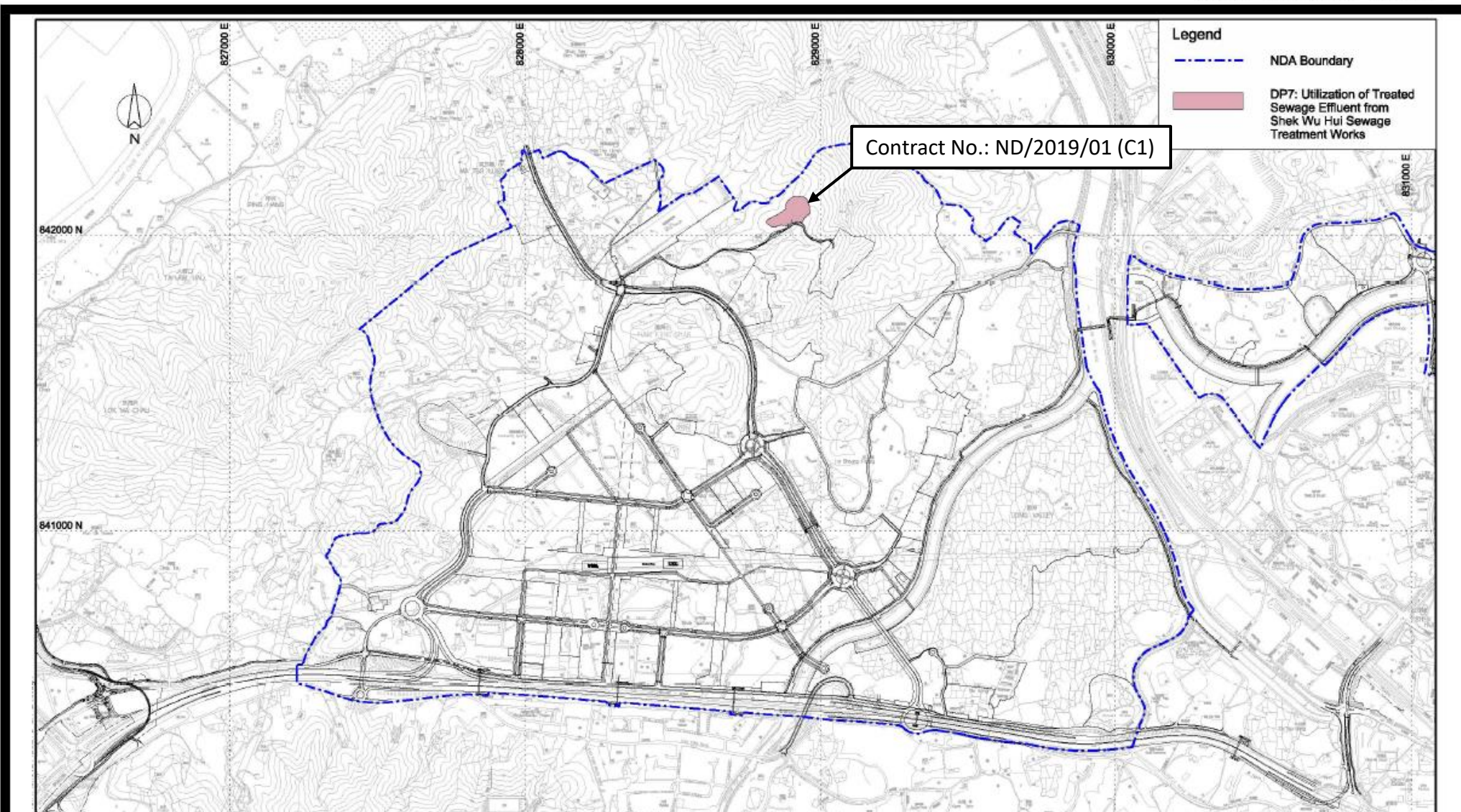
**Environmental Permit No:
EP-469/2013**



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)

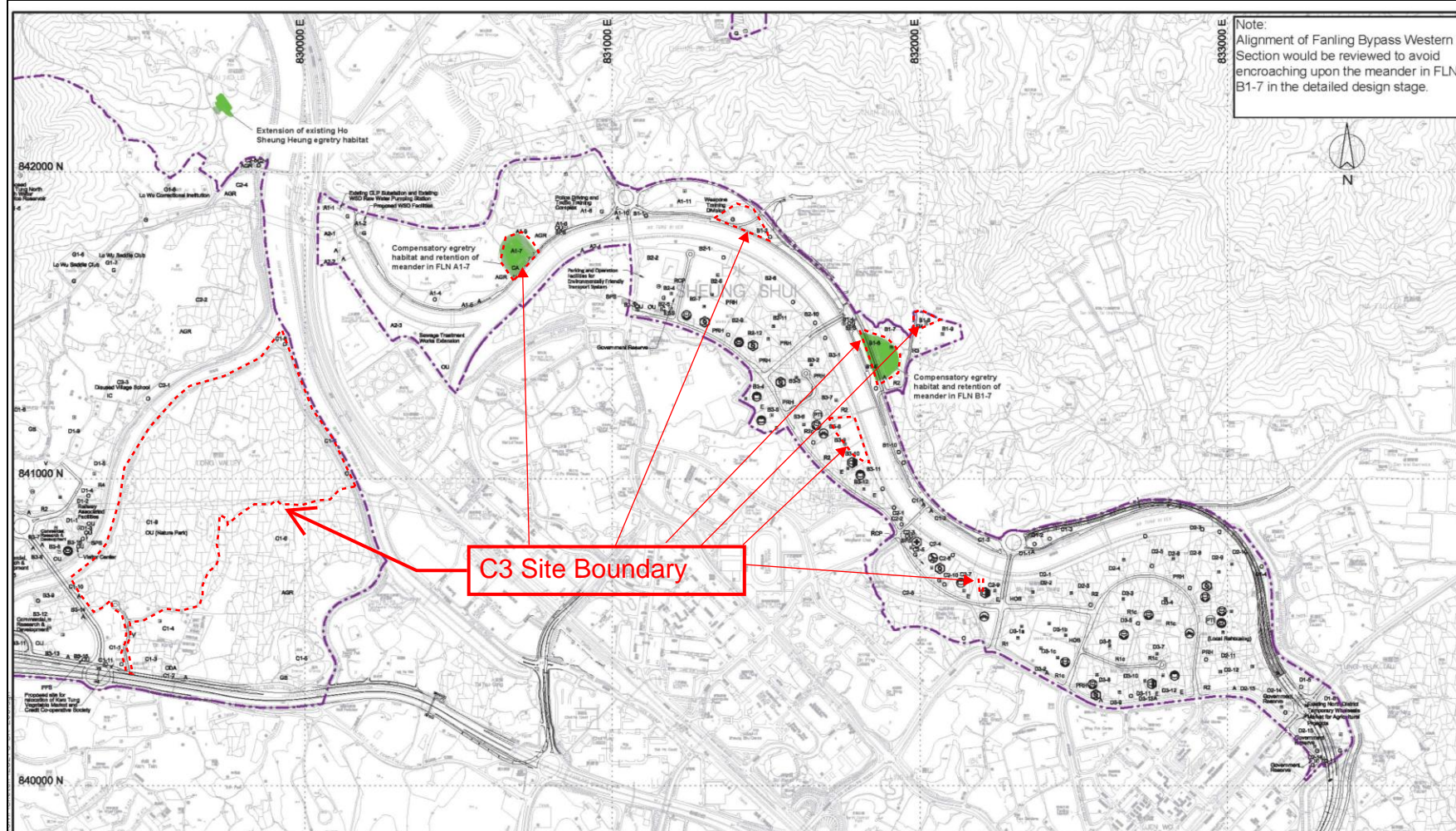
**Environmental Permit No:
EP-470/2013**



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 Egretty Sites and Retained Meanders

圖 2: 替代鷺鳥林選址和保留河曲的位置

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

(摘錄自新界東北新發展區規劃及工程研究 圖: SK/254)

Environmental Permit No:

EP-473/2013/A

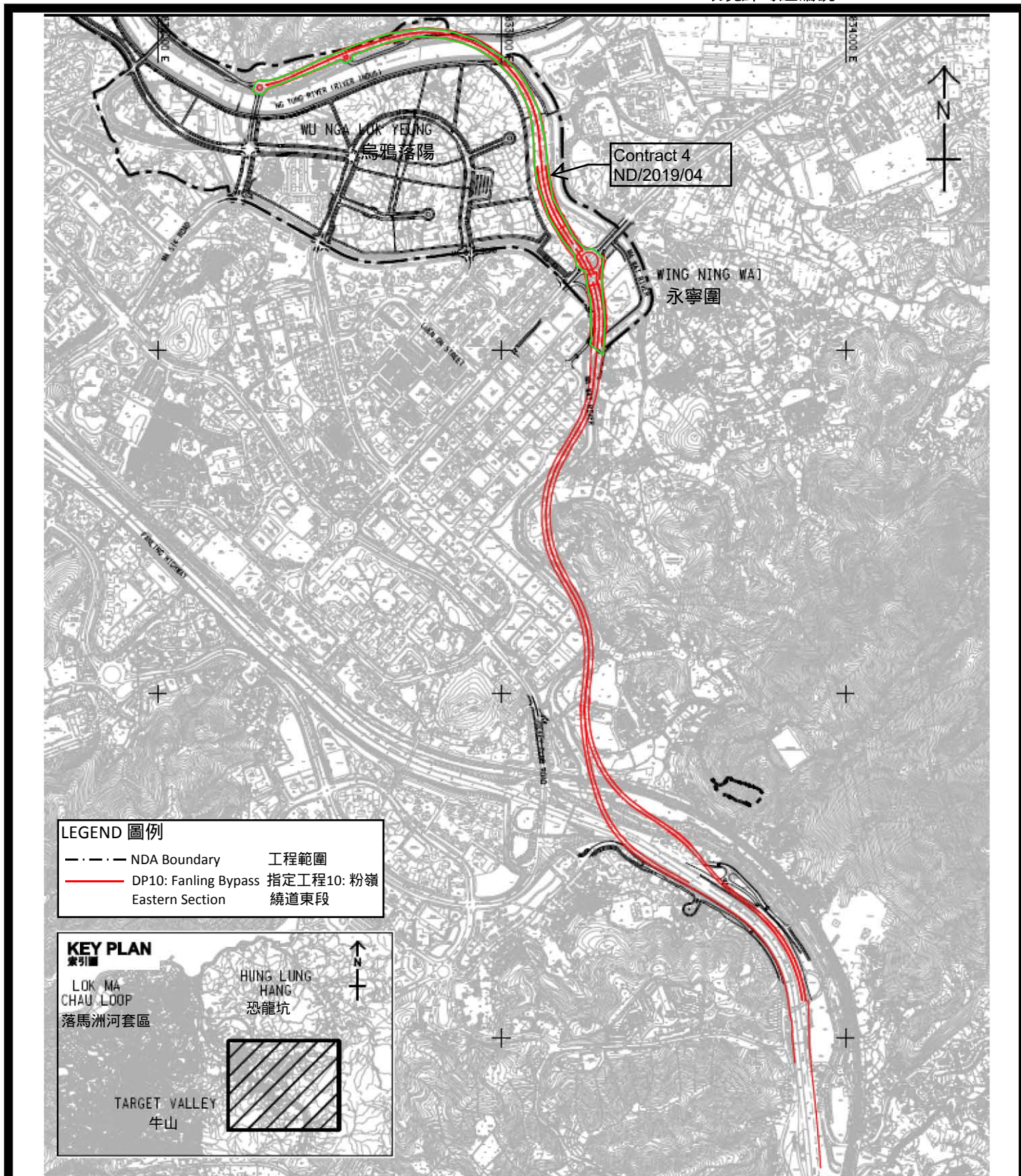
環境許可證編號: EP-473/2013/A



Figure 19

Site Layout Plan of Contract ND/2019/04

under EP-473-2013-A



Project Title: Fanling Bypass Eastern Section

工程名稱: 粉嶺繞道東段

Figure 1: Location Plan for the Project (Indicative)

圖 1: 工程項目位置 (示意圖)

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

Environmental Permit No:

EP-473/2013/A

環境許可證編號:

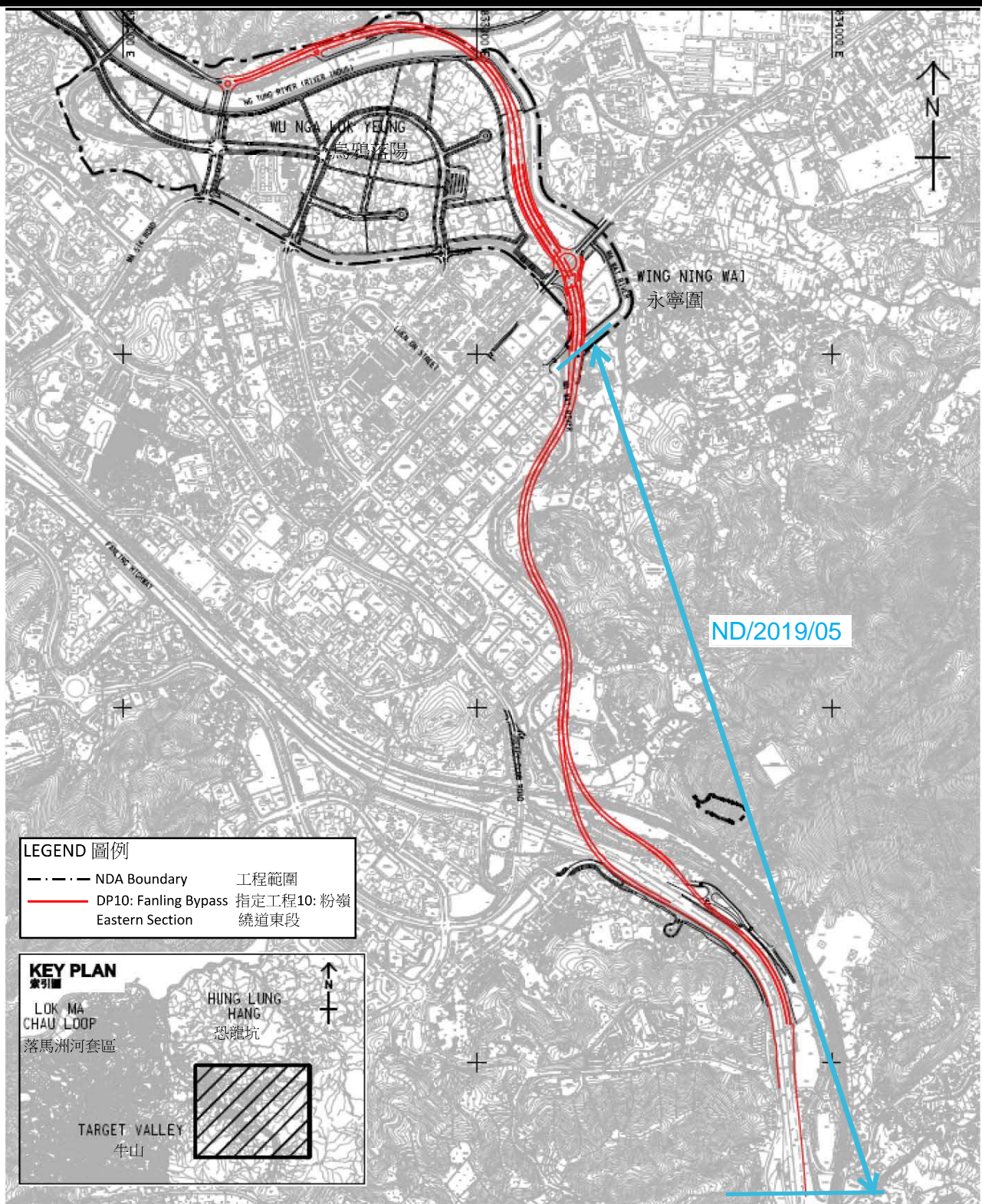
EP-473/2013/A



Figure 20

Site Layout Plan of Contract ND/2019/05

under EP-473-2013-A



Project Title: Fanling Bypass Eastern Section

工程名稱： 粉嶺繞道東段

Figure 1: Location Plan for the Project (Indicative)

圖 1： 工程項目位置 (示意圖)

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

Environmental Permit No:

EP-473/2013/A

環境許可證編號:

EP-473/2013/A

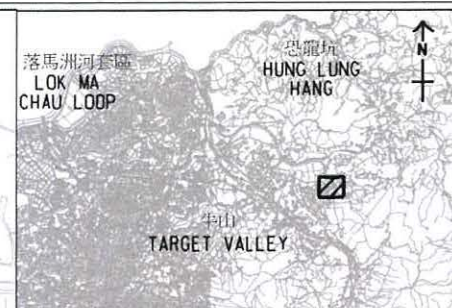
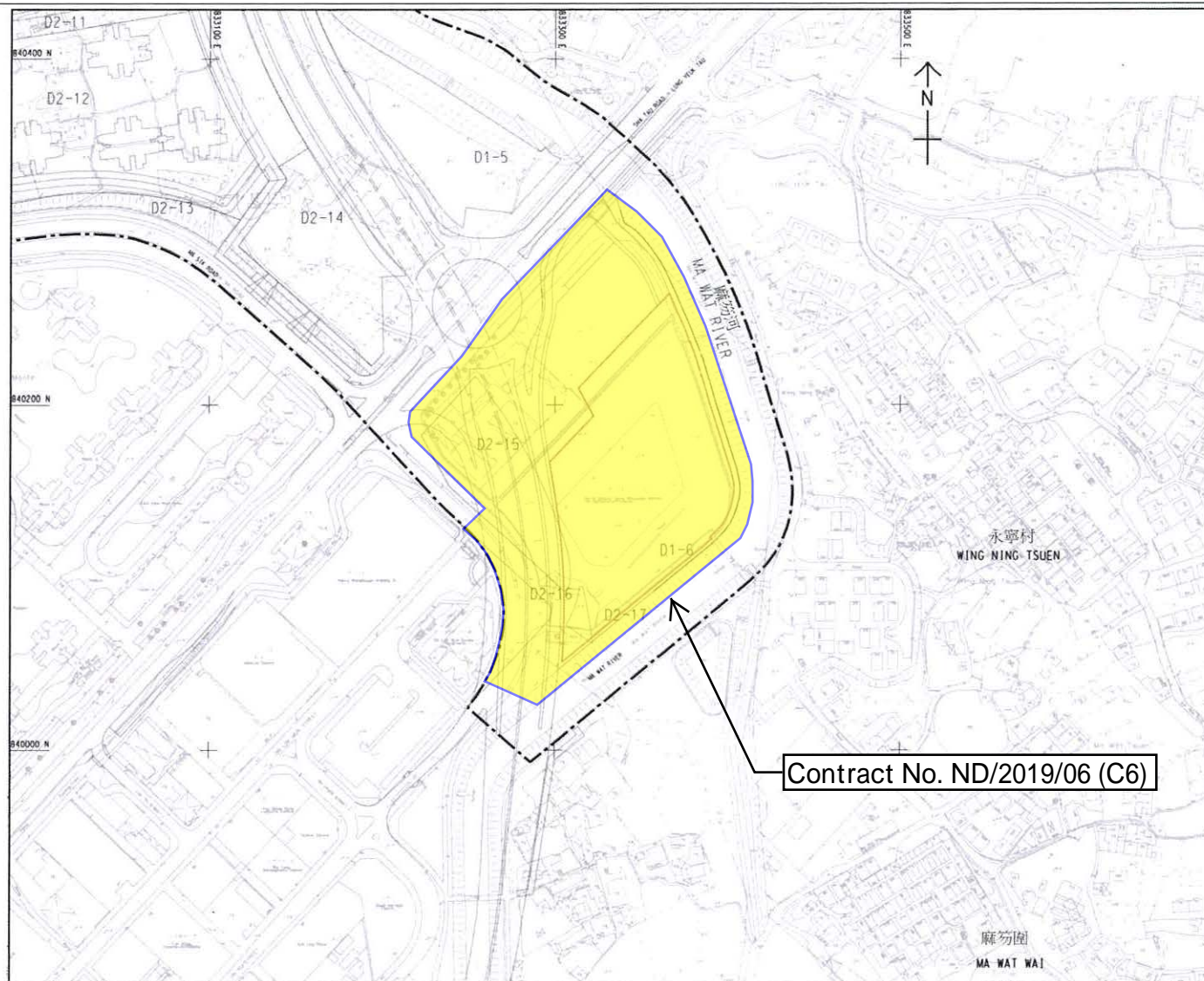
EP-473/2013/A



Figure 21

Site Layout Plan of Contract ND/2019/06

under EP-475-2013-A



圖例:

LEGEND:

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



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

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

Figure 1: Project Location Plan (Indicative)

圖 1：工程項目位置圖（示意圖）

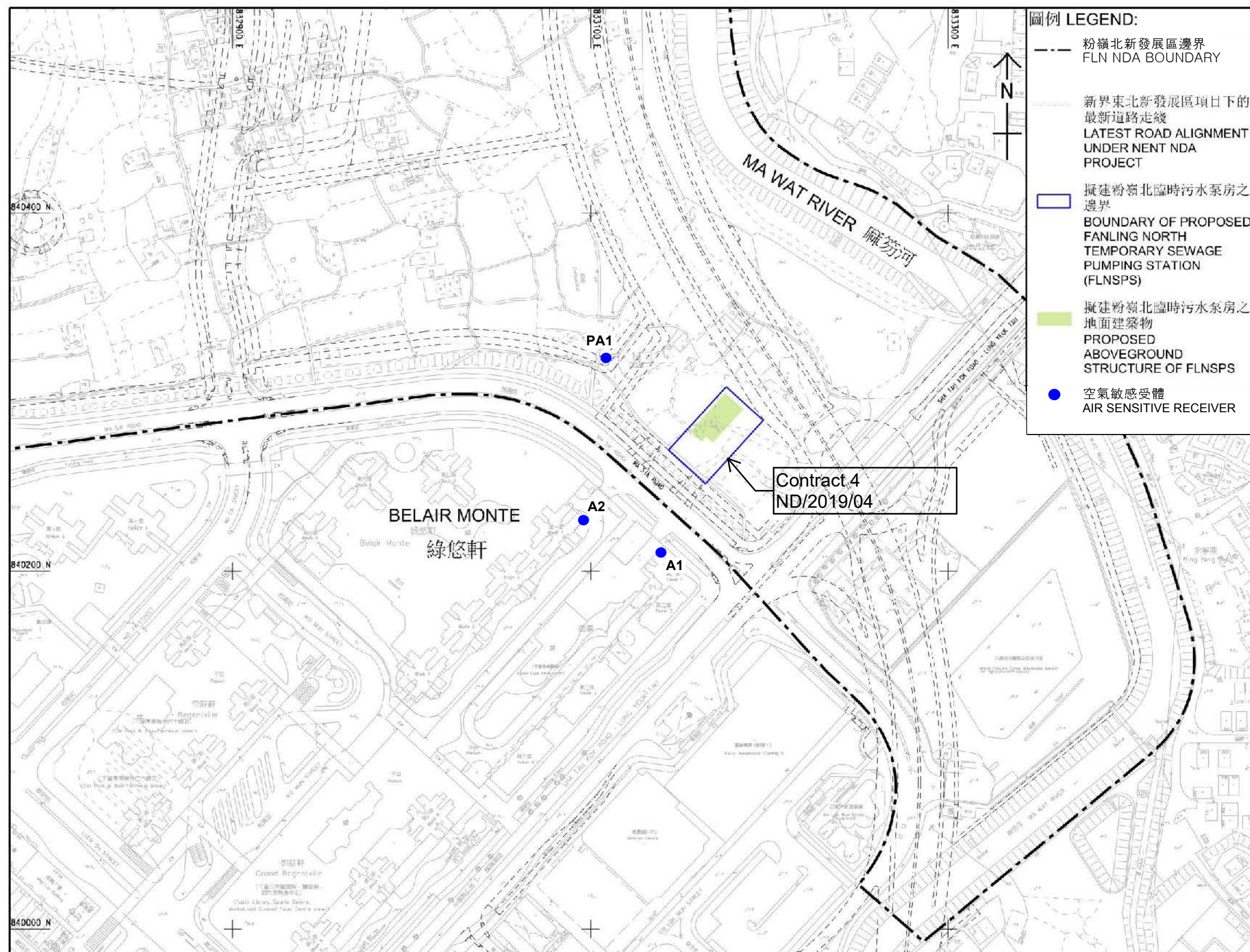
(This figure was prepared based on Figure 1.1 of VEP application (No.: VEP-516/2016))
 (本圖是根據申請更改環境許可證(編號 VEP-516/2016) 圖 1.1 編制)



Figure 22

Site Layout Plan of Contract ND/2019/04

under EP-546-2017



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

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

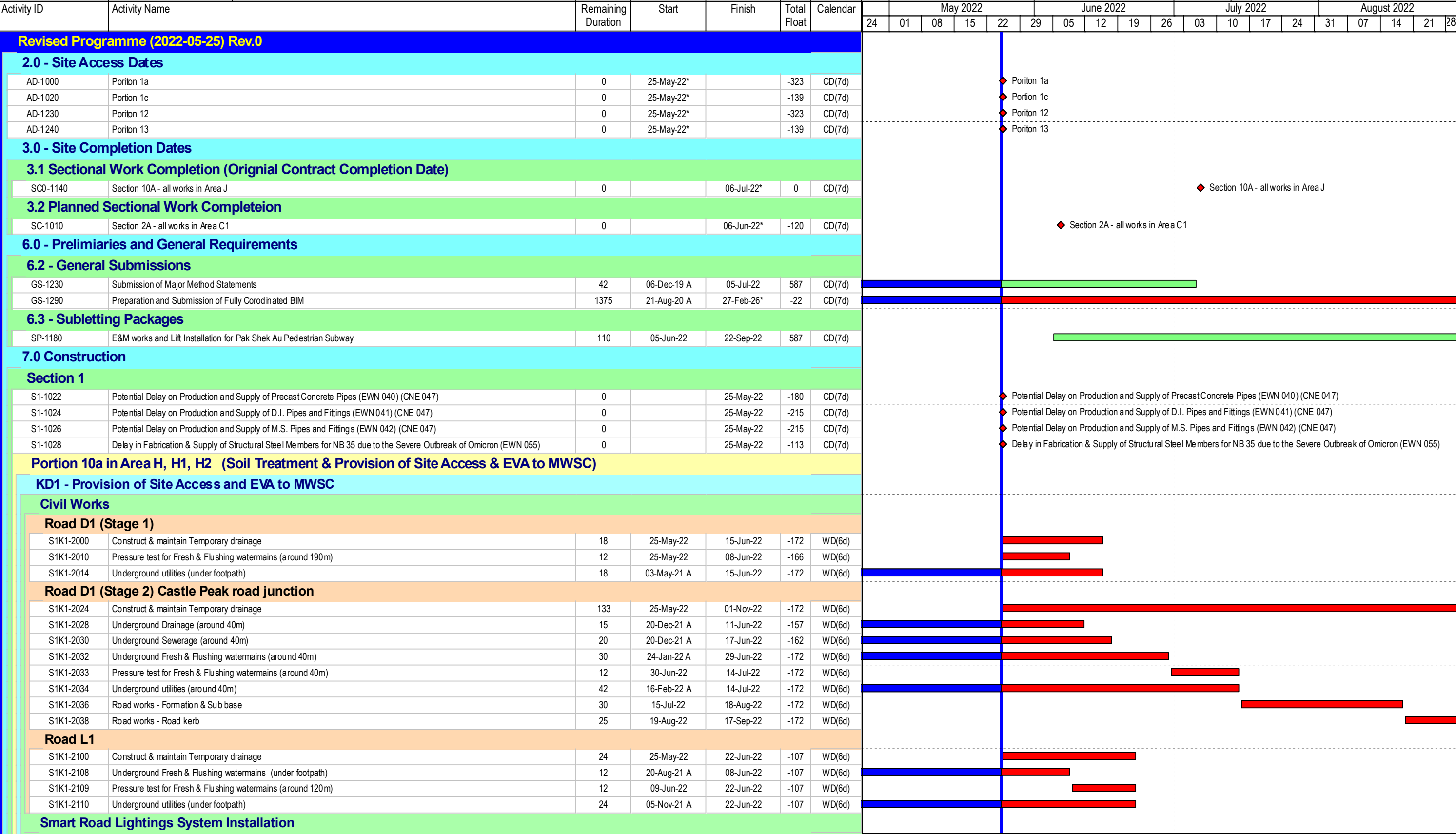
Figure 1: Project Location Plan (Indicative)
圖 1：工程項目位置圖（示意圖）

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



APPENDIX A
CONSTRUCTION PROGRAMME

Construction Programme of ND/2019/01



Build King – Richwell Engineering
Joint Venture

- Planned Work
- Critical Work
- Actual Work
- ◆

◆ Milestone
- ◆

◆ Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-05)

Data Date: 25-May-22 Run Date: 28-May-22

Project ID: ND201901-RP-27.0
Lauyout: ND201901-3MRP with
logo
Page 1 of 12

THE 3-MONTH ROLLING PROGRAMME			
Date	Revision	Checked	Approved
28-May-22	Rev.0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	May 2022					June 2022					July 2022					August 2022				
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28	
S1K1-3020	Procurement and delivery of smart road lighting system	80	01-Nov-21 A	12-Aug-22	-175	CD(7d)																				
	Installation of smart road lighting system	46	13-Aug-22	08-Oct-22	-142	WD(6d)																				
Section 2A																										
S2A-1000	Planned Completion Date of Section 2A	0		06-Jun-22	-120	CD(7d)	◆ Planned Completion Date of Section 2A																			
S2A-1006	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0		25-May-22	-123	CD(7d)	◆ Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)																			
S2A-1008	Temporary Stockpile in Area C1 (EWN 027)	0		25-May-22	-123	CD(7d)	◆ Temporary Stockpile in Area C1 (EWN 027)																			
S2A-1010	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0		25-May-22	-123	CD(7d)	◆ The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)																			
S2A-1012	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-May-22	-123	CD(7d)	◆ Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)																			
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)																										
Soil Treatment																										
S2AP5-2000	Construct & maintain Temporary drainage	10	25-May-22	06-Jun-22	-96	WD(6d)																				
S2AP5-2020	Remaining works (Site formation, proofrolling, chain Link fence, open channel)	10	11-Apr-22 A	06-Jun-22	-96	WD(6d)																				
S2AP5-2022	Remove Temporary Stockpiling of excavated material (100,000 m3)	0	17-Jul-21 A	24-May-22 A		WD(6d)																				
Section 2B																										
Portion 9a in Area C2 (Soil Treatment & Interface with HD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S2BP9a-1020	Site clearance	14	15-Mar-22 A	10-Jun-22	197	WD(6d)																				
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-May-22	15-Jun-22	733	WD(6d)																				
S3P1a-1050	Arsenic Treatment Plan	18	16-Jun-22	07-Jul-22	733	WD(6d)																				
Soil Treatment																										
S3P1a-2000	Construct & maintain Temporary drainage	84	08-Jul-22	17-Oct-22	955	WD(6d)																				
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed, interim soil to be excavated / treated : 1260m3 / 400m3)	36	08-Jul-22	18-Aug-22	733	WD(6d)																				
S3P1a-2020	Backfilling to the formation levels	48	19-Aug-22	17-Oct-22	955	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	51	24-Mar-22 A	25-Jul-22	39	WD(6d)																				
S4AP1b-1040	Prepare Arsenic Assessment Report	36	26-Jul-22	05-Sep-22	88	WD(6d)																				
S8P9b-3146	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	0	26-Mar-22 A	10-May-22 A		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)	90	26-Jul-22	23-Oct-22	45	CD(7d)																				
Section 4B																										
S4B-1002	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-May-22	443	CD(7d)	◆ Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)																			
Portion 1c in Area D2 (Soil Treatment & Interface with HD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S4BP1c-1020	Site Clearance & Tree Felling	0	26-Mar-22 A	29-Apr-22 A		WD(6d)																				
S4BP1c-1040	Prepare Arsenic Assessment Report	30	25-May-22	29-Jun-22	362	WD(6d)																				
S4BP1c-1050	Arsenic Treatment Plan	30	30-Jun-22	04-Aug-22	362	WD(6d)																				
Soil Treatment																										
S4BP1c-2000	Construct & maintain Temporary drainage	72	25-May-22	18-Aug-22	350	WD(6d)																				
S4BP1c-2010	Remove soil (original assumed 2868m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	25-May-22*	22-Jun-22	350	WD(6d)																				
S4BP1c-2020	Backfilling to the formation levels	48	23-Jun-22	18-Aug-22	350	WD(6d)																				
Section 4C																										
Portion 1b in Area D3 (Soil Treatment & Interface with ArchSD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-05)

Data Date: 25-May-22

Run Date: 28-May-22

Project ID: ND201901-RP-27.0

Layout: ND201901-3MRP with logo

Page 2 of 12

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	May 2022					June 2022					July 2022					August 2022					
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28		
	S4CP1b-1020	Site Clearance & Tree Felling	41	14-Mar-22 A	13-Jul-22	8	WD(6d)																				
	S4CP1b-1025	Ground investigation (0 / 1 GI completed)	18	14-Jul-22	03-Aug-22	8	WD(6d)																				
	S4CP1b-1040	Prepare Arsenic Assessment Report	36	04-Aug-22	15-Sep-22	8	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	22-Jun-22	187	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	28	11-Nov-21 A	21-Jun-22	-86	CD(7d)																				
	S6AP1e-1020	Site Clearance & Tree Felling	60	22-Jun-22	31-Aug-22	-67	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	26	11-Nov-21 A	19-Jun-22	772	CD(7d)																				
	S6BP1e-1020	Site Clearance & Tree Felling	60	20-Jun-22	29-Aug-22	628	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-May-22	15-Jun-22	200	WD(6d)																				
	S7P11b-1060	Construction of MBR	18	08-Apr-21 A	15-Jun-22	200	WD(6d)																				
	S7P11b-1080	Testing & Commissioning (T&C) of E&M equipment for MBR	30	07-Jun-22	06-Jul-22	243	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-May-22	28-Oct-22	105	WD(6d)																				
Section 8																											
	S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-May-22	-587	CD(7d)																				
	S8-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0		25-May-22	-587	CD(7d)																				
	S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-May-22	-587	CD(7d)																				
	S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-May-22	-587	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	08-Jun-22	-473	WD(6d)																				
	S8P2-0018	Construction of temporary road	28	24-Nov-21 A	27-Jun-22	-489	WD(6d)																				
	S8P2-0020	Traffic diversion to temp road	12	28-Jun-22	12-Jul-22	-489	WD(6d)																				
	S8P2-1016	Remaining Ground investigation (0 / 1 GI completed)	12	13-Jul-22	26-Jul-22	-232	WD(6d)																				
	S8P2-1018	Site clearance after Road Diversion	36	13-Jul-22	23-Aug-22	-256	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	13-Jul-22*	11-Aug-22	-489	WD(6d)																				
	S8P2-2020	Backfilling to the formation levels	48	12-Aug-22	10-Oct-22	-294	WD(6d)																				
Civil Work																											
Construction of Pak Shek Au Junction																											
	S8P2-4100	Cut slope with soil nail construction at existing slope KS34	180	13-Jul-22	16-Feb-23	-320	WD(6d)																				
	S8P2-4110	Expose existing UU & ELS for Drainage & Water Main	100	13-Jul-22	09-Nov-22	-320	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-May-22	-373	CD(7d)																				
	S8P1a-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-May-22	73	CD(7d)																				
	S8P1a-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-May-22	73	CD(7d)																				
	S8P1a-1002	Tree survey and prepare tree felling and transplant report	33	26-Jul-21 A	04-Jul-22	-302	WD(6d)																				



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Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	May 2022					June 2022					July 2022				August 2022				
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28
	S8P1a-1004	Approval & Acceptance of Tree Felling Application	30	05-Jul-22	03-Aug-22	-374	CD(7d)																		
	S8P1a-1010	Site clearance	48	04-Aug-22	29-Sep-22	-304	WD(6d)																		
	S8P1a-1050	Archaeological Survey	72	07-Jun-22	30-Aug-22	-242	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-May-22	304	CD(7d)																		
	S8P3-0103	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-May-22	304	CD(7d)																		
	S8P3-0104	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-May-22	304	CD(7d)																		
	S8P3-1040	Site clearance	38	14-Mar-22 A	09-Jul-22	41	WD(6d)																		
Soil Treatment																									
	S8P3-2010	Remove soil (original assumed 1597m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	11-Jul-22*	06-Aug-22	41	WD(6d)																		
	S8P3-2020	Backfilling to the formation levels	48	08-Aug-22	05-Oct-22	41	WD(6d)																		
Civil Work																									
	S8P3-3000	Construct & maintain Temporary drainage	465	11-Jul-22	29-Jan-24	41	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-May-22	-61	CD(7d)																		
	S8P5-0104	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-May-22	-61	CD(7d)																		
	S8P5-0106	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-May-22	-61	CD(7d)																		
	S8P5-0108	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-May-22	-61	CD(7d)																		
Construction according to CSD for Alternative on Bored Pile Wall																									
	S8P5-2005	Construct & maintain Temporary drainage	578	25-May-22	04-May-24	-46	WD(6d)																		
Civil Work																									
	S8P5-4002	Divert Local Road	315	19-Apr-22 A	14-Jun-23	-24	WD(6d)																		
	S8P5-4014	Drainage works across DJ watermain (SMH1006a and pipe laying to 1006) (CNE 060, EC-1086)	145	25-May-22	15-Nov-22	-46	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-May-22	-297	CD(7d)																		
	S8P6a-0003	Entrustment of Works for Installation of District Cooling System (DCS) pipelines along Road D4-1 (EWN 033)	0		25-May-22	98	CD(7d)																		
Preparation work/Tree Survey/Site Clearance/GI																									
	S8P6a-1010	Site Clearance & Tree Felling	18	15-Feb-20 A	15-Jun-22	92	WD(6d)																		
Construction according to CSD for Alternative on Bored Pile Wall																									
	S8P6a-2004	Construct & maintain Temporary drainage	571	25-May-22	25-Apr-24	802	WD(6d)																		
Civil Work																									
	S8P6a-4002	Road D4 - Underground Sewerage work (MH KT1.02 to Plug end)	74	05-Aug-22	02-Nov-22	-24	WD(6d)																		
	S8P6a-4004	Break Existing road	12	25-Apr-22 A	08-Jun-22	-24	WD(6d)																		
	S8P6a-4010.06	Road D4 (between SMH1002A and KT1001) - Underground Drainage work	60	09-Jun-22	18-Aug-22	-24	WD(6d)																		
	S8P6a-4010.08	Road D4 (SMHKT1001A and pipe laying to KT1001) - Underground Drainage work	70	08-Jul-22	28-Sep-22	-24	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	13-Aug-22	0	WD(6d)																		
	S8P6a-4054	Confirmation of Details for DCS pipes at D4-1 Road (EWN 030)	0		25-May-22*	-297	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-May-22	-297	CD(7d)																		
	S8P9b-0004	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-May-22	-196	CD(7d)																		
	S8P9b-3112	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0		25-May-22	-196	CD(7d)																		
	S8P9b-3114	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0		25-May-22	-196	CD(7d)																		
	S8P9b-3116	Level Different between Road A3 and Road D4-1 (CNE 055)	0		25-May-22	-196	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-May-22	-134	CD(7d)																		
	S8P9b-3122	Requesting for Additional Concrete Vehicular Access by the Local Villager adjacent 9b of the Site (EWN 064)	0		25-May-22	-134	CD(7d)																		
	S8P9b-3124	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0		25-May-22	-258	CD(7d)																		
	S8P9b-3126	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-May-22	-123	CD(7d)																		
Preparation work/Tree Survey/Site Clearance/GI																									



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Critical Work

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Milestone

Milestone Critical

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							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28	
	S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-May-22	-258	CD(7d)																			
	S8P9b-1002	Submission & Acceptance of Tree Felling Application	24	05-May-21 A	17-Jun-22	-258	CD(7d)																			
	S8P9b-1010	Site clearance & Tree Felling	48	18-Jun-22	13-Aug-22	-204	WD(6d)																			
	S8P9b-1015	Ground investigation (10 / 13 GI completed)	25	22-Feb-21 A	23-Jun-22	-190	WD(6d)																			
	S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	24-Jun-22	22-Aug-22	-237	CD(7d)																			
	S8P9b-1040	Arsenic Treatment Plan (Stage 2)	36	25-May-22	07-Jul-22	-242	WD(6d)																			
Soil Treatment																										
	S8P9b-2010	Remove soil (original assumed 15758m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	40	15-Aug-22*	30-Sep-22	-204	WD(6d)																			
Civil Work																										
	S8P9b-3010	Slopeworks for new feature KS19 (with about 200 nos. of soil nails)	80	15-Aug-22	18-Nov-22	-164	WD(6d)																			
	S8P9b-3015	Construct & maintain Temporary drainage	768	25-May-22	19-Dec-24	605	WD(6d)																			
	S8P9b-3030	Excavation for retaining wall (4701m3)	90	08-Jul-22	24-Oct-22	-242	WD(6d)																			
	S8P9b-3040.02	Construction of retaining wall KW04 (3 / 3 footing completed & 2 / 3 stem wall completed)	24	24-Dec-21 A	22-Jun-22	-230	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	17-Jun-22	-126	WD(6d)																			
	S8P9b-3040.06	Construction of retaining wall KW02 (0 / 2 footing completed & 0 / 2 stem wall completed)	60	18-Jun-22	27-Aug-22	-126	WD(6d)																			
	S8P9b-3057.04	Construction of Underground Drainage Manhole SMH KT5001A to M3.20	0	26-Jan-22 A	25-Apr-22 A		WD(6d)																			
	S8P9b-3058.02	Road D5 - Construction of Underground Drainage Manhole SMH KT7104 to SMH KT7105 (Works Recommended)	0	23-Dec-21 A	24-May-22 A		WD(6d)																			
	S8P9b-3058.04	Road D5 - Construction of Underground Drainage Manhole SMH KT7102 to SMH KT7103	33	17-Jan-22 A	04-Jul-22	-239	WD(6d)																			
	S8P9b-3100	Confirmation of Details for DCS pipes at D4-1 & D5 Road (EWN 030)	0		25-May-22*	-297	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	01-Aug-22	30-Mar-23	-218	WD(6d)																			
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)																										
	S8P8a-1106	Design Change on Road W1 (EWN 025)	0		25-May-22	-210	CD(7d)																			
	S8P8a-3090	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0		25-May-22	-210	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-May-22	-79	WD(6d)																			
	S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	31-May-22	29-Jul-22	-99	CD(7d)																			
Forming Site Access and Site Fomation																										
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)																										
	S8P8a-1105	Construct & maintain Temporary drainage	40	25-May-22	12-Jul-22	1333	WD(6d)																			
	S8P8a-1160	General excavation for remaining of Road W1	40	11-Jun-20 A	12-Jul-22	-169	WD(6d)																			
Stage 2 General Excavation near Fresh Water Servie Reservior (Excavation Volume 299396 m3)																										
	S8P8a-1208	Construct & maintain Temporary drainage	13	25-May-22	09-Jun-22	-142	WD(6d)																			
	S8P8a-1220	General excavation for New Feature KS47 and adjacent road	13	01-Dec-20 A	09-Jun-22	-142	WD(6d)																			
	S8P8a-1230	General excavation for New Feature KS49 and adjacent road	13	11-Jan-21 A	09-Jun-22	-142	WD(6d)																			
	S8P8a-1250	General excavation for remaining of Road W2	13	14-Dec-20 A	09-Jun-22	-142	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-May-22	-211	CD(7d)																			
	S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-May-22	-165	CD(7d)																			
	S8K8-6006	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-May-22	57	CD(7d)																			
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)																										
Civil Works																										
	S8K8-1005	Construct & maintain Temporary drainage	178	25-May-22	23-Dec-22	1195	WD(6d)																			
	S8K8-1030.054	Waiting for supply of DI pipes (EWN 041, CNE 047 EC-1054)	16	02-Dec-21 A	13-Jun-22	47	WD(6d)																			
	S8K8-1030.056	Construction of Outlet Chamber (after DI pipe supply recommenced)	30	14-Jun-22	19-Jul-22	47	WD(6d)																			
	S8K8-1030.46	Construction of Roof Slab bay 5 (GL 12 - 15 & GL D - G)	35	30-May-22	11-Jul-22	54	WD(6d)																			
	S8K8-1030.47	Construction of Roof Slab bay 5a (GL 12 - 15 & GL A - D)	6	13-May-22 A	31-May-22	54	WD(6d)																			
	S8K8-1030.48	Construction of Landing Platforms	0	24-Mar-22 A	12-May-22 A		WD(6d)																			
	S8K8-1040	Backfilling (6559m3)	108	20-Jul-22	25-Nov-22	47	WD(6d)																			
E&M Works																										
	S8K8-2010	Design and Approval for E&M works for KTN FLWSR	24	01-Feb-21 A	17-Jun-22	87	CD(7d)																			



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S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	54	01-Feb-21 A	17-Jul-22	57	CD(7d)																			
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	03-Jul-22	31-Aug-22	57	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-May-22	-8	CD(7d)																			
S8K8-6044	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)	0		25-May-22	3	CD(7d)																			
Civil Works																									
S8K8-1000.06	Base Slab - bay 5b	7	25-Apr-22 A	01-Jun-22	-28	WD(6d)																			
S8K8-1000.08	Base Slab - bay 7	18	02-Jun-22	23-Jun-22	-28	WD(6d)																			
S8K8-1000.10	Base Slab - bay 8	18	24-Jun-22	15-Jul-22	-28	WD(6d)																			
S8K8-1000.12	Base Slab - bay 9	18	16-Jul-22	05-Aug-22	-14	WD(6d)																			
S8K8-1000.14	Base Slab - bay 6	18	06-Aug-22	26-Aug-22	-14	WD(6d)																			
S8K8-1000.20	Pad Footing - GL 3-5 / C-G	0	03-Mar-22 A	27-Apr-22 A		WD(6d)																			
S8K8-1000.22	Pad Footing - GL 6 & 7 / C-G	0	06-Apr-22 A	16-May-22 A		WD(6d)																			
S8K8-1000.24	Pad Footing - GL 8 & 10 / C-G	11	25-Apr-22 A	07-Jun-22	-88	WD(6d)																			
S8K8-1000.26	Pad Footing - GL 11 / C-G	11	20-May-22 A	07-Jun-22	-88	WD(6d)																			
S8K8-1000.28	Pad Footing - GL 3-5 / L-Q	14	08-Jun-22	23-Jun-22	-88	WD(6d)																			
S8K8-1000.30	Pad Footing - GL 6 & 7 / L-Q	14	24-Jun-22	11-Jul-22	-88	WD(6d)																			
S8K8-1000.32	Pad Footing - GL 8 & 10 / L-Q	14	12-Jul-22	27-Jul-22	-88	WD(6d)																			
S8K8-1000.34	Pad Footing - GL 11 / L-Q	14	28-Jul-22	12-Aug-22	-88	WD(6d)																			
S8K8-1000.40	Cover Slab - No. 19	12	25-May-22	08-Jun-22	-93	WD(6d)																			
S8K8-1000.42	Cover Slab - No. 18	12	09-Jun-22	22-Jun-22	-93	WD(6d)																			
S8K8-1000.44	Cover Slab - No. 17 Stage 1	12	23-Jun-22	07-Jul-22	-93	WD(6d)																			
S8K8-1000.48	Cover Slab - No. 16	12	08-Jul-22	21-Jul-22	-93	WD(6d)																			
S8K8-1000.50	Cover Slab - No. 23	12	22-Jul-22	04-Aug-22	-93	WD(6d)																			
S8K8-1000.52	Cover Slab - No. 22	12	05-Aug-22	18-Aug-22	-93	WD(6d)																			
S8K8-1000.54	Cover Slab - No. 21	12	19-Aug-22	01-Sep-22	-93	WD(6d)																			
S8K8-1000.60	Columns (152 nos)	208	08-Jul-22	16-Mar-23	-29	WD(6d)																			
S8K8-1002.00	Wall - No. 1	0	10-May-22 A	24-May-22 A		WD(6d)																			
S8K8-1002.02	Wall - No. 3	11	20-May-22 A	07-Jun-22	-18	WD(6d)																			
S8K8-1002.04	Wall - No. 2	18	08-Jun-22	28-Jun-22	-18	WD(6d)																			
S8K8-1002.06	Wall - No. 5	18	29-Jun-22	20-Jul-22	-18	WD(6d)																			
S8K8-1002.08	Wall - No. 6	18	21-Jul-22	10-Aug-22	-18	WD(6d)																			
S8K8-1002.10	Wall - No. 7	18	11-Aug-22	31-Aug-22	-18	WD(6d)																			
S8K8-3000	Construct & maintain Temporary drainage	501	25-May-22	26-Jan-24	872	WD(6d)																			
S8K8-3026	Construction of Sub soil drainage (Stage 2)	48	25-May-22	21-Jul-22	-1	WD(6d)																			
S8K8-3043	Up Hill Recieving Pit - GI works (7/7 completed)	5	25-Apr-22 A	30-May-22	-241	WD(6d)																			
S8K8-3046	Up Hill Recieving Pit - Pipe Pile along Access Road (194 nos.)	50	31-May-22	29-Jul-22	-241	WD(6d)																			
S8K8-3048	Up Hill Recieving Pit - Excavation and wate installation to raod profile	52	30-Jul-22	29-Sep-22	-241	WD(6d)																			
E&M Works																									
S8K8-4010	Design and Approval for E&M works for KTN FWSR	39	20-Dec-21 A	02-Jul-22	-120	CD(7d)																			
S8K8-4020	Submission and Approval of E&M plants & materials for KTN FWSR	153	03-Jul-22	02-Dec-22	-120	CD(7d)																			
Remaining Civil Work in Portion 8a Area A																									
S8P8a-2558	Construct & maintain Temporary drainage	163	08-Jul-22	19-Jan-23	-75	WD(6d)																			
S8P8a-2560	Excavation for retaining wall KW06 bay 1 - bay 7 (bays 0/7 completed)	100	08-Jul-22	04-Nov-22	-75	WD(6d)																			
S8P8a-2562	Construction of retaining wall KW06 bay 1 - bay 7 (bays 0/7 completed)	140	04-Aug-22	19-Jan-23	-75	WD(6d)																			
S8P8a-2598	Construct & maintain Temporary drainage	232	08-Jul-22	18-Apr-23	-169	WD(6d)																			
S8P8a-2600	Excavation for retaining wall KW05 bay 8 - bay 16 (bays 0/9 completed)	120	08-Jul-22	28-Nov-22	-169	WD(6d)																			
S8P8a-2628	Construct & maintain Temporary drainage	110	25-May-22	05-Oct-22	-169	WD(6d)																			
S8P8a-2630	Excavation for retaining wall KW05 bay 1 - bay 7 (bays 0/7 completed)	36	31-Mar-22 A	07-Jul-22	-169	WD(6d)																			
S8P8a-2632	Construction of retaining wall KW05 bay 1 - bay 7 (bays 0/7 completed)	110	25-May-22	05-Oct-22	-169	WD(6d)																			
S8P8a-2658	Construct & maintain Temporary drainage	220	25-May-22	16-Feb-23	-168	WD(6d)																			
S8P8a-2660	Excavation for retaining wall KW11 bay 1 - bay 11 (bays 0/11 completed)	79	31-Mar-22 A	26-Aug-22	-168	WD(6d)																			
S8P8a-2662	Construction of retaining wall KW11 bay 1 - bay 11 (bays 0/11 completed)	220	25-May-22	16-Feb-23	-168	WD(6d)																			



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Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

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Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	May 2022					June 2022					July 2022					August 2022				
								24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28	
	S8P8a-3046	Construct & maintain Temporary drainage	670	30-Jun-22	28-Sep-24	-169	WD(6d)																				
	S8P8a-3048	Backfill to level of utilities laying	263	30-Jun-22	18-May-23	-169	WD(6d)																				
	S8P8a-3050	Underground utilities & Drairage work (605m drain and 23 M/H, 2 gang)	400	13-Jul-22	13-Nov-23	-169	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-May-22	-298	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-May-22	-485	CD(7d)																				
	S8P8b-1004	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0		25-May-22	-298	CD(7d)																				
	S8P8b-1005	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0		25-May-22	-126	CD(7d)																				
	S8P8b-1006	Disruption of Precast Concrete Pipe (Jacking Pipe) Supply due to the Severe Outbreak of Omicron (EWN 054)	0		25-May-22	-126	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-May-22	-485	CD(7d)																				
Preparation work																											
	S8P8b-1010	Site clearance & Tree Felling	66	24-Jun-22	09-Sep-22	-265	WD(6d)																				
	S8P8b-1070	Approval & Acceptance of Tree Felling Application	30	22-Jan-22 A	23-Jun-22	-328	CD(7d)																				
Construction of Watermains																											
Construction of watermains by trenchless method																											
	S8P8b-4000	Construct & maintain Temporary drainage	875	25-May-22	08-May-25	-258	WD(6d)																				
	S8P8b-4010.00	Construction of receiving pit at Portion 8b near Sheung Yue River (Review Temp Design)	0	13-Apr-22 A	16-May-22 A		WD(6d)																				
	S8P8b-4010.01	Construction of receiving pit at Portion 8b near Sheung Yue River (Resume construction)	30	17-May-22 A	29-Jun-22	-96	WD(6d)																				
	S8P8b-4010.07	Resubmit & Approval of CIA Report & Pipe Jacking Method Statement	23	13-Apr-22 A	21-Jun-22	-89	WD(6d)																				
	S8P8b-4012.04	Sheung Yue River - Procurement & Testing of DN1200 Jacking pipes	33	04-May-22 A	04-Jul-22	-99	WD(6d)																				
	S8P8b-4012.06	Sheung Yue River - Gantry Construction at Jacking Pit	4	11-May-22 A	28-May-22	-82	WD(6d)																				
	S8P8b-4012.07	Sheung Yue River - Set up for Pipe Jacking works	12	20-Jun-22	04-Jul-22	-99	WD(6d)																				
	S8P8b-4012.08	Sheung Yue River - DN1200 Pipe Jacking (Length 180m approx.) outside MTR Zone	60	05-Jul-22	13-Sep-22	-99	WD(6d)																				
	S8P8b-4064	Up Hill Pipe Jacking Pit - Procurement for ELS	0	25-Jan-22 A	16-May-22 A		WD(6d)																				
	S8P8b-4066	Up Hill Pipe Jacking Pit - Pipe Pile Construction (140 nos.)	20	11-Apr-22 A	17-Jun-22	-118	WD(6d)																				
	S8P8b-4068	Up Hill Pipe Jacking Pit - ELS, Excavation & Toe Grouting	60	18-Jun-22	27-Aug-22	-118	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	05-Jul-22	-32	WD(6d)																				
	S8P8b-5002	DSD Maintenance Road - Stage 1 Laying flushing water main (100m Approx) (5 working day per week)	100	06-Jul-22*	02-Nov-22	-12	WD(6d)																				
Section 9																											
	S9-1002	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-May-22	-323	CD(7d)																				
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S9P12-1012	Approval & Acceptance of Tree Felling Application	24	29-Mar-22 A	17-Jun-22	-198	CD(7d)																				
	S9P12-1020	Site Clearance & Tree Felling	60	23-Jun-22	01-Sep-22	-157	WD(6d)																				
	S9P12-1030	Environmental Ground investigation and laboratory test (2 / 3 EGI completed)	6	21-Feb-22 A	31-May-22	-79	WD(6d)																				
Section 10A																											
	S10A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-May-22	-31	CD(7d)																				
Portion 1e in Area J (Soil Treatment)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S10AP1e-1012	Approval & Acceptance of Tree Felling Application	18	11-Nov-21 A	11-Jun-22	-208	CD(7d)																				
	S10AP1e-1020	Site Clearance & Tree Felling	48	18-Jun-22	13-Aug-22	-166	WD(6d)																				
	S10AP1e-1040	Prepare Arsenic Assessment Report	30	15-Aug-22	19-Sep-22	-166	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-May-22	330	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-May-22	849	CD(7d)																				
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																											
	S11P6b-2005	Construct & maintain Temporary drainage	975	25-May-22	04-Sep-25	100	WD(6d)																				



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Milestone

Milestone Critical

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	May 2022					June 2022				July 2022				August 2022					
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28
Operation and Dismantling of the Soil Treatment Plant																									
S11P6b-3010	Provide treatment to high arsenic-containing soil	829	03-Dec-20 A	08-Mar-25*	-24	WD(6d)																			
Section 12A																									
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)																									
Preparation work/Tree Survey/Site Clearance/GI																									
S12P10b-1020	Site Clearance & Tree Felling	0	04-Oct-21 A	25-Apr-22 A		WD(6d)																			
S12P10b-1040	Prepare Arsenic Assessment Report	36	25-May-22	07-Jul-22	454	WD(6d)																			
S12P10b-1050	Arsenic Treatment Plan	36	08-Jul-22	18-Aug-22	454	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	19-Aug-22	16-Sep-22	454	WD(6d)																			
Civil Work																									
S12P10b-3000	Construct & maintain Temporary drainage	446	25-May-22	20-Nov-23	236	WD(6d)																			
S12P10b-3010	Underground utilities & Drainage work (158m drain and 5 M/H)	368	13-Oct-21 A	17-Aug-23	230	WD(6d)																			
Section 13																									
S13-1012	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0		25-May-22	-1	CD(7d)																			
S13-1025	Clarification of Road Profile for the South Roundabout at Portion 2 in Pak Shek Au (EWN 061)	0		25-May-22	37	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	20-Jun-22	-1	WD(6d)																			
Soil Treatment																									
S13P2-2010	Remove soil (original assumed 10854m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	32	21-Jun-22	28-Jul-22	-1	WD(6d)																			
S13P2-2020	Backfilling to the formation levels	80	29-Jul-22	02-Nov-22	-1	WD(6d)																			
Civil Works																									
S13P2- 3150	Revised Slope KS38 - Approval & Acceptance of Initial Tree Survey report	24	15-Jan-21 A	17-Jun-22	688	CD(7d)																			
S13P2- 3170	Revised Slope KS38 - Approval & Acceptance of tree felling and transplant report	28	16-Apr-21 A	15-Jul-22	688	CD(7d)																			
S13P2- 4010	West Quadrant- Site formation of south roundabout	55	03-Jan-22 A	29-Jul-22	-24	WD(6d)																			
S13P2- 4020	West Quadrant- Construction of fill slope, draft wall & reconstruction of existing slope	102	30-Jul-22	29-Nov-22	-24	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-May-22	-323	CD(7d)																			
S13P1a-1000	Tree survey and prepare tree felling and transplant report	54	04-Aug-21 A	28-Jul-22	251	WD(6d)																			
S13P1a-1002	Approval & Acceptance of Tree Felling Application	30	29-Jul-22	27-Aug-22	309	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	31-May-22	628	WD(6d)																			
S13P7-1040	Arsenic Treatment Plan	6	09-Nov-20 A	31-May-22	628	WD(6d)																			
Civil Work																									
Underground Utilities																									
S13P7-3000	Construct & maintain Temporary drainage	462	25-May-22	08-Dec-23	590	WD(6d)																			
S13P7-3011	Underground drainage (309m drain and 8 M/H)	192	18-Jun-21 A	18-Jan-23	628	WD(6d)																			
S13P7-3012	Underground sewage (about 150m and 3 M/H)	328	25-May-22	30-Jun-23	578	WD(6d)																			
S13P7-3013	Underground watermains	298	25-May-22	24-May-23	588	WD(6d)																			
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)																									
Preparation work/Tree Survey/Site Clearance/GI																									
S13P1b-1010	Site clearance	62	25-May-22	06-Aug-22	553	WD(6d)																			
S13P1b-1015	Ground investigation (0 / 1 GI completed)	6	08-Aug-22	13-Aug-22	562	WD(6d)																			
S13P1b-1020	Environmental ground investigation and laboratory test(1 EGI in other portion represent this portion)	15	08-Aug-22	24-Aug-22	553	WD(6d)																			
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																									
Preparation work/Tree Survey/Site Clearance/GI																									

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar		May 2022					June 2022					July 2022					August 2022				
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28		
	S13P6a-1003	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-May-22	539	CD(7d)																				
	S13P6a-1004	Increased Risk for Damages to Existing Donjiang Raw Water Mains (DJRWMs) (CNE 060)	0		25-May-22	539	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-May-22*	29-Jun-22	511	WD(6d)																				
	S13P6a-2020	Backfilling to the formation levels	60	30-Jun-22	08-Sep-22	511	WD(6d)																				
Civil Work																											
	S13P6a-3000	Construct & maintain Temporary drainage	575	25-May-22	30-Apr-24	798	WD(6d)																				
	S13P6a-3012	Drainage works across DJ watermain (CNE 060, EC-1086)	160	25-May-22	02-Dec-22	441	WD(6d)																				
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S13P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058)	0		25-May-22	520	CD(7d)																				
	S13P1c-1010	Site clearance	45	15-Mar-22 A	18-Jul-22	425	WD(6d)																				
	S13P1c-1015	Ground investigation (0 / 2 GI completed)	12	19-Jul-22	01-Aug-22	425	WD(6d)																				
	S13P1c-1020	Environmental ground investigation and laboratory test(1 / 2 EGI completed)	8	19-Mar-22 A	02-Jun-22	468	WD(6d)																				
	S13P1c-1025	Site investigation for Noise Barriers	30	02-Aug-22	05-Sep-22	425	WD(6d)																				
	S13P1c-1030	Prepare Arsenic Assessment Report	36	26-Jul-22	05-Sep-22	425	WD(6d)																				
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S13P9a-1010	Site clearance	51	15-Mar-22 A	25-Jul-22	559	WD(6d)																				
	S13P9a-1025	Site investigation for Noise Barriers	30	26-Jul-22	29-Aug-22	601	WD(6d)																				
	S13P9a-1030	Prepare Arsenic Assessment Report	36	26-Jul-22	05-Sep-22	559	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	28-May-22	-24	WD(6d)																				
Operation and Dismantling of the Soil Treatment Plant																											
	S14P7S3-3010	Stock Pile of Treated Soil	712	20-Nov-20 A	19-Oct-24	-24	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		25-May-22	941	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-May-22	260	CD(7d)																				
	S14P7T-1010	Tree survey and prepare tree felling and transplant report (Area T1)	30	25-May-22	29-Jun-22	183	WD(6d)																				
	S14P7T-1012	Ground investigation (0 / 1 GI completed) (Area T1)	30	30-Jun-22	04-Aug-22	209	WD(6d)																				
	S14P7T-1020	Site clearance (Area T1)	30	30-Jun-22	04-Aug-22	209	WD(6d)																				
	S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	30-Jun-22	29-Jul-22	224	CD(7d)																				
	S14P7T-1024	Tree felling works (Area T1)	30	30-Jul-22	02-Sep-22	184	WD(6d)																				
Land Contamination Assessment																											
	S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	14	04-Dec-20 A	10-Jun-22	65	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	22-Jun-22	75	WD(6d)																				
Portion 1b in Area S2 (Soil Treatment)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S14P1b-1020	Site Clearance & Tree Felling	40	28-Mar-22 A	12-Jul-22	633	WD(6d)																				
	S14P1b-1030	Environmental ground investigation and laboratory test(0 / 1 EGI completed)	36	13-Jul-22	23-Aug-22	633	WD(6d)																				
	S14P1b-1040	Prepare Arsenic Assessment Report	36	24-Aug-22	07-Oct-22	633	WD(6d)																				
Portion 1c & 9a in Area S2 (Soil Treatment)																											
Preparation work/Tree Survey/Site Clearance/GI																											



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Critical Work

Actual Work

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◆ Milestone

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◆ Milestone Critical

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar		May 2022					June 2022					July 2022					August 2022					
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28			
S14P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-May-22	777	CD(7d)		Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)																				
	S14P1c-1001	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 52)	0		25-May-22	777		CD(7d)	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 52)																			
	S14P1c-1010	Tree survey and prepare tree felling and transplant report	18	25-May-22	15-Jun-22	631		WD(6d)																				
	S14P1c-1012	Approval & Acceptance of Tree felling Application	30	16-Jun-22	15-Jul-22	776		CD(7d)																				
	S14P1c-1020	Site Clearance & Tree Felling	14	15-Mar-22 A	10-Jun-22	661		WD(6d)																				
	S14P1c-1040	Prepare Arsenic Assessment Report	36	16-Jul-22	26-Aug-22	632		WD(6d)																				
Portion 6a in Area S2 (Soil Treatment)																												
Preparation work/Tree Survey/Site Clearance/GI																												
S14P6a-1040	Prepare Arsenic Assessment Report	36	25-May-22	07-Jul-22	709	WD(6d)																						
S14P6a-1050	Arsenic Treatment Plan	36	08-Jul-22	18-Aug-22	709	WD(6d)																						
Portion 6b in Area S2 (Soil Treatment)																												
Preparation work/Tree Survey/Site Clearance/GI																												
S14P6b-1017	Tree felling	30	25-May-22	29-Jun-22	673	WD(6d)																						
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	30-Jun-22	07-Jul-22	673	WD(6d)																						
S14P6b-1040	Prepare Arsenic Assessment Report	36	08-Jul-22	18-Aug-22	673	WD(6d)																						
S14P6b-1050	Arsenic Treatment Plan	36	19-Aug-22	30-Sep-22	673	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-May-22	07-Jul-22	769	WD(6d)																						
S14P1f-1050	Arsenic Treatment Plan	36	08-Jul-22	18-Aug-22	769	WD(6d)																						
Interim Community Liaison Centre (CLC)																												
S14P1f-2030	Occupation of interim CLC	6	18-May-20 A	30-May-22	935	CD(7d)																						
S14P1f-2040	Dismantling of interim CLC	12	31-May-22	14-Jun-22	764	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	11-Jun-22	790	WD(6d)																						
Soil Treatment																												
S14P9c-2000	Construct & maintain Temporary drainage	26	25-May-22	24-Jun-22	1049	WD(6d)																						
S14P9c-2020	Backfilling to the formation levels	26	18-Oct-21 A	24-Jun-22	1049	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-May-22	1688	CD(7d)	Potential Late Access to and Use of the Site (Portions 13) (EWN 50)																					
S14P13-1010	Tree survey and prepare tree felling and transplant report	60	25-May-22	04-Aug-22	67	WD(6d)																						
S14P13-1012	Approval & Acceptance of Tree felling Application	30	05-Aug-22	08-Sep-22	67	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-May-22	828	CD(7d)	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)																					
Underground Utilities underneath Cycle Track																												
S14CT-1000	Construct & maintain Temporary drainage	452	25-May-22	27-Nov-23	623	WD(6d)																						
S14CT-1020	Underground Utilities in Portion 1a	90	27-Jul-22	11-Nov-22	653	WD(6d)																						
S14CT-1030	Underground Utilities in Portion 5 (Stage 2)	240	27-Jul-22	17-May-23	623	WD(6d)																						
S14CT-1036	Underground Utilities in Portion 5 (Stage 1) (SMHKT 3002 to 3005)	52	01-Dec-21 A	26-Jul-22	623	WD(6d)																						
Portion 1b (Soil Treatment & Civil Works)																												
Preparation work/Tree Survey/Site Clearance/GI																												
S14P1b-1104	Site clearance & Tree felling	60	12-Mar-22 A	04-Aug-22	211	WD(6d)																						
S14P1b-1108	Environmental ground investigation and laboratory test(0 / 2 EGI) MTRC Zone	30	05-Aug-22	08-Sep-22	211	WD(6d)																						
Civil Works																												
S14P1b-1300	Underground Drainage (around 120m, 4 nos MH)	72	25-Jan-22 A	18-Aug-22	877	WD(6d)																						
Portion 3 (Soil Treatment & Civil Works)																												
Soil Treatment																												

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	May 2022					June 2022					July 2022					August 2022					
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28		
	S14P3-1200	Construct & maintain Temporary drainage	71	25-May-22	17-Aug-22	806	WD(6d)																				
	S14P3-1202	Remove soil (original assumed 4061 m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 16200m3 / 7200m3)	0	03-Jun-21 A	26-Apr-22 A		WD(6d)																				
	S14P3-1204	Backfilling to the formation levels	71	15-Nov-21 A	17-Aug-22	806	WD(6d)																				
Portion 5 (Soil Treatment & Civil Works)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S14P5-1108	Prepare Arsenic Assessment Report	30	25-May-22	29-Jun-22	699	WD(6d)																				
	S14P5-1110	Arsenic Treatment Plan	30	25-May-22	29-Jun-22	699	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	21-Jun-22	807	CD(7d)																				
	S14P1e-2020	Site clearance & Tree felling	60	22-Jun-22	31-Aug-22	658	WD(6d)																				
Section 15																											
	S15-1000	Presevation and protection of tree	1326	06-Dec-19 A	09-Jan-26	-3	CD(7d)																				
Section 18 (Subject to excision)																											
	S18-1040	Watermain laying work in Portion 5	315	20-Sep-21 A	14-Jun-23	-24	WD(6d)																				
	S18-1050	Watermain laying work in Portion 6a & 6b	380	25-May-22	31-Aug-23	-15	WD(6d)																				
	S18-1075	Watermain laying work in Portion 8a	350	30-Jun-22	31-Aug-23	-109	WD(6d)																				
Section 20 (Subject to excision)																											
	S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0		25-May-22	-340	CD(7d)						◆ Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)														
	S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-May-22	-340	CD(7d)						◆ Opening Cycle Track at Portion 2 (EWN No. 017)														
	S20-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-May-22	-340	CD(7d)						◆ Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)														
	S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-May-22	-340	CD(7d)						◆ Suspension of Works at Part of Portion 2 (EWN No. 019)														
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	180	20-Jul-22	23-Feb-23	-321	WD(6d)																				
	S20S2-7330	Access ramp and tunnel in Portion 1a	310	12-Aug-22	26-Aug-23	-321	WD(6d)																				
	S20S2-7350	Access ramp and tunnel in Portion 2	310	12-Aug-22	26-Aug-23	-321	WD(6d)																				
	S20S2-7370	Raft Foundation Construction CSD	170	12-Aug-22	07-Mar-23	-316	WD(6d)																				
Section 21 (Subject to excision)																											
	S21-1013	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0		25-May-22	706	CD(7d)						◆ Late Possession of Site of Portions 1d & 11a (CNE No. 009)														
Portion 1b in Area M (Soil Treatment)																											
Preparation work																											
	S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	25-May-22	29-Jun-22	574	WD(6d)																				
	S21P1b-1012	Approval & Acceptance of Tree felling Application	30	30-Jun-22	04-Aug-22	574	WD(6d)																				
	S21P1b-1020	Site Clearance & Tree Felling	60	05-Aug-22	17-Oct-22	574	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-May-22	29-Jun-22	574	WD(6d)																				
	S21P1d-1012	Approval & Acceptance of Tree felling Application	30	30-Jun-22	04-Aug-22	574	WD(6d)																				
	S21P1d-1020	Site Clearance & Tree Felling	60	05-Aug-22	17-Oct-22	574	WD(6d)																				
Portion 11a in Area M (Soil Treatment)																											
Preparation work																											
	S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	25-May-22	29-Jun-22	569	WD(6d)																				
	S21P11a-1012	Approval & Acceptance of Tree felling Application	30	30-Jun-22	04-Aug-22	569	WD(6d)																				
	S21P11a-1020	Site Clearance & Tree Felling	60	05-Aug-22	17-Oct-22	569	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-May-22	574	WD(6d)																				
9.0 - Major EWN / CNE																											
	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-May-22	-298	CD(7d)																				



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-05)

Data Date: 25-May-22

Run Date: 28-May-22

Project ID: ND201901-RP-27.0


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THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar		May 2022					June 2022					July 2022				August 2022				
							24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07	14	21	28	
EC-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0	23-Dec-19 A	25-May-22	-587	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-May-22	-587	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-May-22	-258	CD(7d)																				
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-May-22	1688	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-May-22	1688	CD(7d)																				
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-May-22	-587	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-May-22	-211	CD(7d)																				
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0	19-Oct-20 A	25-May-22	-587	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-May-22	-298	CD(7d)																				
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-May-22	-210	CD(7d)																				
EC-1040	Temporary Stockpile in Area C1 (EWN 027)	0	31-May-21 A	25-May-22	-123	CD(7d)																				
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-May-22	-297	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-May-22	-165	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-May-22	-373	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-May-22	98	CD(7d)																				
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-May-22	-196	CD(7d)																				
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038) (CNE 049)	0	27-Sep-21 A	25-May-22	849	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-May-22	1688	CD(7d)																				
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0	06-Oct-21 A	25-May-22	-180	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-May-22	-215	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-May-22	-215	CD(7d)																				
EC-1056	Indement Weather on 8th October 2021 (CNE 036)	0	08-Oct-21 A	25-May-22	1688	CD(7d)																				
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039)	0	09-Oct-21 A	25-May-22	1688	CD(7d)																				
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040)	0	13-Oct-21 A	25-May-22	1688	CD(7d)																				
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-May-22	-123	CD(7d)																				
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-May-22	1688	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-May-22	-123	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-May-22	1688	CD(7d)																				
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-May-22	-175	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-May-22	777	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-May-22	1688	CD(7d)																				
EC-1067	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0	29-Nov-21 A	25-May-22	-196	CD(7d)																				
EC-1068	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0	02-Dec-21 A	25-May-22	-196	CD(7d)																				
EC-1069	Level Different between Road A3 and Road D4-1 (CNE 055)	0	08-Dec-21 A	25-May-22	-196	CD(7d)																				
EC-1070	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0	04-Jan-22 A	25-May-22	-210	CD(7d)																				
EC-1071	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0	14-Dec-21 A	25-May-22	-8	CD(7d)																				
EC-1072	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0	29-Dec-21 A	25-May-22	-126	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-May-22	-485	CD(7d)																				
EC-1075	Works affected by the Sever Outbreak of Omicron (CNE 073) (EWN 058)	0	25-Feb-22 A	25-May-22	1688	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-May-22	3	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-May-22	-126	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-May-22	-113	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-May-22	1688	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-May-22	1688	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-May-22	-258	CD(7d)																				
EC-1082	Clarification of Road Profile for the South Roundabout at Portion 2 in Pak Shek Au (EWN 061)	0	25-Mar-22 A	25-May-22	37	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-May-22	-134	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-May-22	-134	CD(7d)																				
EC-1086	Increased Risk for Damages to Existing Dongjiang Raw Water Mains (DJRWs) (CNE 060)	0	31-Mar-22 A	25-May-22	-123	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-May-22	-485	CD(7d)																				
EC-1088	Design Changes to the Permanent Street Lighting Works (CNE 074)	0	04-Mar-22 A	25-May-22	1688	CD(7d)																				



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-05)

Data Date: 25-May-22

Run Date: 28-May-22

Project ID: ND201901-RP-27.0

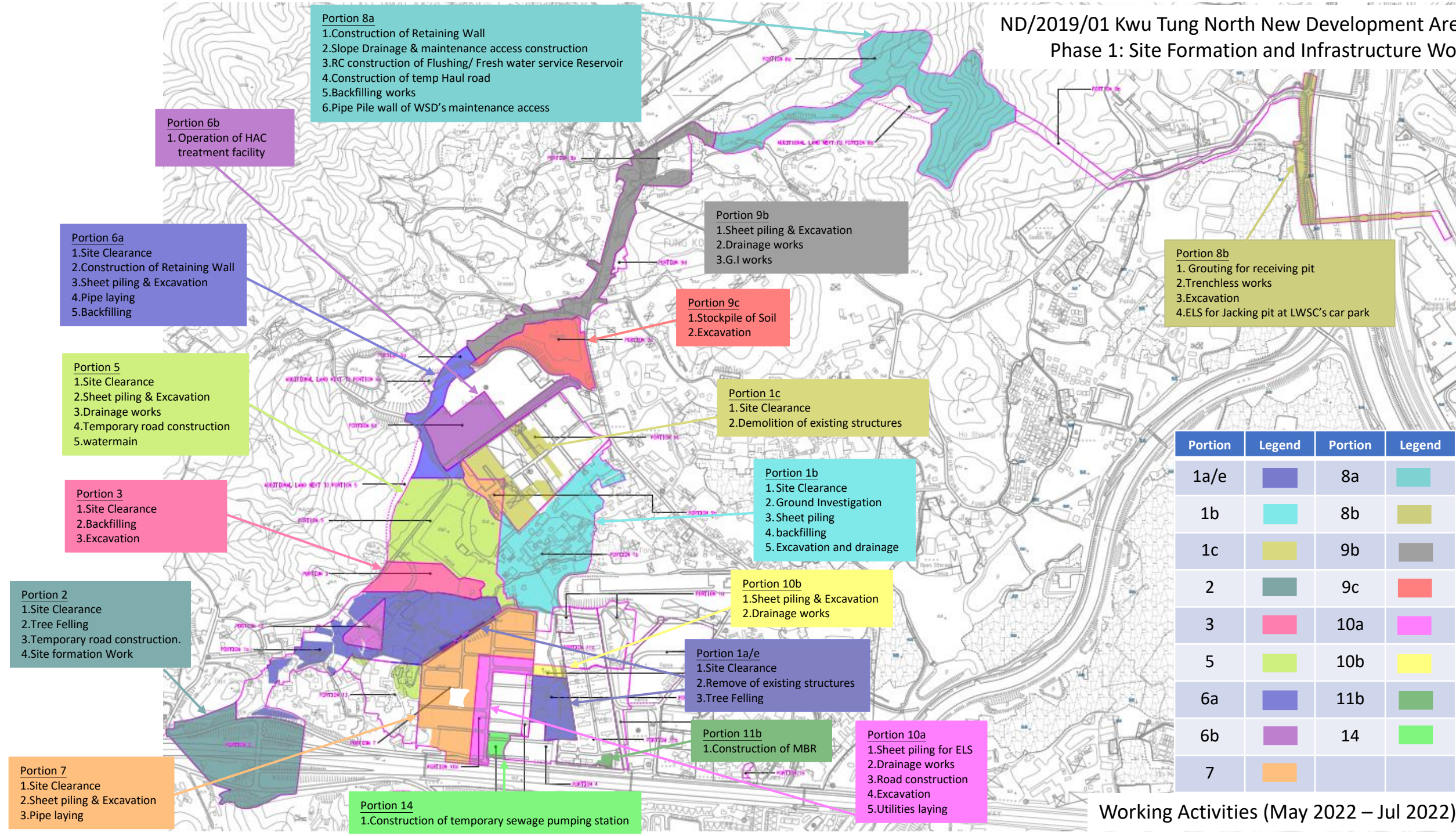
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Date	Revision	Checked	Approved
28-May-22	Rev.0	SC	BY

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



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

Working Activities (May 2022 – Jul 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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
ND-2019-02 KTNDA Phase 1:Roads and Drains between Kwu Tung		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25						
Programme Data		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25						
Preliminaries		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25						
Subletting		31	31			06-Jun-22	13-Jul-22						
Specialist Subcontractors		31	31			06-Jun-22	13-Jul-22						
SC-1195-1	Award of subcontract - ABWF works (Package 1 - Wet Trade: Finishes, Ceiling, Raised Floor etc..)	0	0				24-Jun-22*						
SC-1195-2	Award of subcontract - ABWF works (Package 2 - Timber Door, Windows, Louvre and Steel Door)	0	0				04-Jul-22*						
SC-1195-3	Award of subcontract - ABWF works (Package 3 - Skylight, Roller Shutter, Fall Arrest, Fence, Handrail, Guard-rail etc)	0	0				13-Jul-22*						
SC-1195-4	Award of subcontract - ABWF works (Package 4 - Sundry Metal Works, Toilet Cubicle, PV Panel, HR, Bicycle Parking Space)	0	0				13-Jul-22*						
SC-1205	Award of subcontract - Construction of Temporary Sewerage System	0	0				30-Jun-22*						
SC-1210	Award of subcontract - Grout Curtain of SPS	0	0				06-Jun-22*						
Statutory Submission		609	72	30-Sep-20	08-Dec-20	07-Dec-21 A	11-Aug-22						
HyD		133	72	30-Sep-20	08-Dec-20	31-Mar-22 A	11-Aug-22						
XP-1010	Excavation permit (XP) application for Portion 4	90	29	30-Sep-20	08-Dec-20	31-Mar-22 A	29-Jun-22	0					
XP-1020	Excavation permit (XP) application for Portion 5	70	70			03-Jun-22*	11-Aug-22	0					
MTRC		21	18			29-Apr-22 A	22-Jun-22						
Method Statement Submission and Approval		21	18			29-Apr-22 A	22-Jun-22						
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	0					
TPRP		195	50			07-Dec-21 A	30-Jul-22						
TPRP-1040	Tree Felling Proposal Submission and Approval for FMH1.30A (CSF-477)	80	25			07-Dec-21 A	30-Jun-22	0					
TPRP-1050	Tree Felling (26 nos)	24	24			04-Jul-22	30-Jul-22	0					
Site Offices & Preliminaries		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25						
Site Offices & Preliminaries		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25						
Temporary office for RE		1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25						
SP-1000b	Maintenance of container office	1739	1130	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	0					
Contractor's Design		198	133	27-Feb-21	21-Jun-22	28-Mar-22 A	11-Oct-22						
Temporary Works Design		121	56			28-Mar-22 A	26-Jul-22						
Footbridge FK2		63	9			28-Mar-22 A	11-Jun-22						
Formwork Design (Bridge Pier) - CSF576		10	2			28-Mar-22 A	02-Jun-22						
TWD-1330	Formwork and Falsework Design (Bridge Pier) - 2nd submission to PM & Approval	10	2			28-Mar-22 A	02-Jun-22						
Falsework Design (Bridge Deck) - CSF584		14	9			26-May-22 A	11-Jun-22						
TWD-1360	Falsework Design (Bridge Deck) - 2nd submission to PM & Approval	14	9			26-May-22 A	11-Jun-22						
Sewage Pumping Station		56	56			01-Jun-22	26-Jul-22						
Formwork Design		56	56			01-Jun-22	26-Jul-22						
TWD-1030	Formwork and Falsework Design - 1st submission to PM & review	21	21			01-Jun-22*	21-Jun-22						
TWD-1040	Formwork and Falsework Design - Review and Resubmission	14	14			22-Jun-22	05-Jul-22						

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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
TWD-1050	Formwork and Falsework Design - 2nd submission to PM & Approval	21	21			06-Jul-22	26-Jul-22						
Visitor Centre		14	7			23-Apr-22 A	07-Jun-22						
Formwork Design for Superstructure - CSF598		14	7			23-Apr-22 A	07-Jun-22						
TWD-1390	Formwork and Falsework Design - 2nd submission to PM & Approval	14	7			23-Apr-22 A	07-Jun-22						
E&M and BS		123	102	07-Feb-22	13-Jun-22	07-May-22 A	30-Sep-22						
Sewage Pumping Station		46	25	07-Feb-22	31-Mar-22	07-May-22 A	30-Jun-22						
ConD-1180	Sewage Pumping Station - 1st submission to relevant Government Dep.	28	7	07-Feb-22	11-Mar-22	07-May-22 A	09-Jun-22	0					
ConD-1210	Sewage Pumping Station - Re-submission and approval	18	18	11-Mar-22	31-Mar-22	10-Jun-22	30-Jun-22	0					
FootBridge		60	60	01-Apr-22	13-Jun-22	22-Jul-22	30-Sep-22						
ConD-1100	Preparation of E&M and BS works for Link Bridge (PS section 13,29,30,31,32,33,37 and 41)	60	60	01-Apr-22	13-Jun-22	22-Jul-22	30-Sep-22	0					
Footbridge FK2 Road lighting		74	74	27-Feb-21	15-Jun-21	23-Jun-22	17-Sep-22						
RD-1000	Preparation of Road Lighting system (PS section 30)	74	74	27-Feb-21	15-Jun-21	23-Jun-22	17-Sep-22	0					
Irrigation System		76	76	04-Mar-22	21-Jun-22	12-Jul-22	11-Oct-22						
IS-1000	Preparation of Irrigation System (PS section 3)	76	76	04-Mar-22	21-Jun-22	12-Jul-22	11-Oct-22	0					
Works in Section 2		210	133	27-Feb-21	02-May-23	01-Mar-22 A	08-Nov-22						
Portion 2 - Road & Drains		99	88	13-Jul-21	26-Aug-21	19-May-22 A	13-Sep-22						
Sewer Installation from KT1.29A to KT1.30A by pipejacking		63	63	13-Jul-21	26-Aug-21	02-Jul-22	13-Sep-22						
ELS of Launching shaft at FMH_KT1.30A		63	63	13-Jul-21	26-Aug-21	02-Jul-22	13-Sep-22						
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	0					
P2-3150	ELS for launching shaft at FMH_KT1.30A	38	38	16-Jul-21	26-Aug-21	01-Aug-22	13-Sep-22	6					
Pipe Jacking		86	75			19-May-22 A	29-Aug-22						
(KT6003A to KT2003) (IL: 6.0-6.4mPD) 2100mm dia		86	75			19-May-22 A	29-Aug-22						
P2-8190	Set Up Pipe Jacking TBM	6	1			19-May-22 A	01-Jun-22	0					
P2-8195	Pipe Jacking from KT6003A to KT2003 (2.1 dia) (115m ~3m/day)	36	36			02-Jun-22	15-Jul-22	5					
P2-8200	Pre-treatment grouting at receiving pit, set up exit ring and form opening	6	6			16-Jul-22	22-Jul-22	0					
P2-8375	Lift Out TBM at receiving pit	1	1			23-Jul-22	23-Jul-22	0					
P2-8385	Pushing the remaining pipeline to designated location at receiving pit	1	1			25-Jul-22	25-Jul-22	0					
P2-8395	Demolish and remove slurry pipe, power cable, lubrication pipe	7	7			26-Jul-22	02-Aug-22	0					
P2-8405	Lining Welding works	13	13			03-Aug-22	17-Aug-22	0					
P2-8415	Air Test	2	2			18-Aug-22	19-Aug-22	0					
P2-8425	Demolish and removal of Guide Rail and Working Platform, breaking thrust wall	5	5			20-Aug-22	25-Aug-22	0					
P2-8435	Cleaning of Launching pit	3	3			26-Aug-22	29-Aug-22	0					
Manhole Construction		56	45			19-May-22 A	25-Jul-22						
FMH_KT1.23		56	45			19-May-22 A	25-Jul-22						

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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
P2-8290	Manhole FMH_KT1.23 construction	21	10			19-May-22 A	13-Jun-22	1					
P2-8293	Handover cofferdam to C1	0	0				25-Jul-22*	1					
Portion 3 - Road & Drains		185	108	16-May-22	02-May-23	01-Mar-22 A	10-Oct-22						
Drainage Outfall_6013 constuction by Open Cut (By CE-067)		74	74			01-Jun-22	27-Aug-22						
Manhole SMH_KT6013A & FMH_KT1.36A		74	74			01-Jun-22	27-Aug-22						
SMH_KT6013A		36	36			01-Jun-22	14-Jul-22						
P3-5335	Dismantle of scaffolding of manhole KT1.36A	3	3			01-Jun-22	04-Jun-22	2					
P3-5340	Mass Concrete and side backfill for formwork erection of lower portion of manhole KT6013A	6	6			06-Jun-22	11-Jun-22	2					
P3-5345	Dismantle 3rd Layer Strut	2	2			13-Jun-22	14-Jun-22	2					
P3-5610	Formwork erection of manhole KT6013A (lower portion)	4	4			15-Jun-22	18-Jun-22	2					
P3-5620	Rebar fixing of manhole KT6013A (lower portion)	5	5			20-Jun-22	24-Jun-22	2					
P3-5630	Concreting of manhole KT6013A (lower portion)	1	1			25-Jun-22	25-Jun-22	2					
P3-5640	Dismantle of formwork (lower portion)	1	1			27-Jun-22	27-Jun-22	2					
P3-5730	Formwork erection of manhole KT6013A:(Middle portion)	4	4			28-Jun-22	02-Jul-22	2					
P3-5740	Rebar fixing of manhole KT6013A:(Middle portion)	9	9			04-Jul-22	13-Jul-22	2					
P3-5750	Concreting of manhole KT6013A:(Middle portion)	1	1			14-Jul-22	14-Jul-22	2					
Drainage Installation		38	38			15-Jul-22	27-Aug-22						
P3-5645	Dismantle of formwork (Middle portion)	2	2			15-Jul-22	16-Jul-22	2					
P3-5647	Backfill to Middle Part of Manhole	4	4			18-Jul-22	21-Jul-22	2					
P3-5650	Dismantle 2nd Layer Strut	3	3			22-Jul-22	25-Jul-22	2					
P3-5670	ELS between Manhole KT6013A to Outfall	9	9			26-Jul-22	04-Aug-22	2					
P3-5680	Laying of 3m dia. Mild Steel drain	4	4			05-Aug-22	09-Aug-22	2					
P3-5690	Backfill drain trench to Existing Ground Level	6	6			10-Aug-22	16-Aug-22	2					
P3-5700	Dismantle the 1st layer strut	5	5			17-Aug-22	22-Aug-22	2					
P3-5720	Backfill to original ground level and remove Sheet Pile	5	5			23-Aug-22	27-Aug-22	2					
Sewer Pipeline Installation (KT1.33A to KT1.41A)		185	108	16-May-22	02-May-23	01-Mar-22 A	10-Oct-22						
KT1.39A - KT1.38A (99m) (Pipe Jacking by CE-074)		129	108	10-Sep-22	02-May-23	07-May-22 A	10-Oct-22						
P3-2556	Pipe Jacking of 800 Concrete Pipe (1.39A to 1.38A) (99m ~3m/d)	37	16			07-May-22 A	20-Jun-22	2					
P3-3000	TBM reach the sheet pile at receiving pit	1	1	10-Sep-22	06-Jan-23	21-Jun-22	21-Jun-22	0					
P3-3002	Pre- treatment grouting, setup the exit ring, cutting sheet pile	5	5			22-Jun-22	27-Jun-22	0					

Primary Baseline

Actual Work

Remaining Work

Critical Remaining Work

Baseline Milestone

Critical ...

Non-Crit...

Data Date: 31-May-22

Project Start: 03-Feb-20

Project End: 30-Dec-26

Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)

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Three Months Rolling Programme

(May to Aug 2022)

Date

31-May-22

Revision

Rev 0 (Three Months Rolling Progr...

Checked

TW








Approved

ZL

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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
P3-3004	TBM break through, setup guide rail, lifting out the TBM, jacking the remaining pipe to designated location, air test	2	2			28-Jun-22	29-Jun-22	0					
P3-3006	Demolish & removal of the slurry pipe, power cable inside the jacking pipe,	10	10			30-Jun-22	12-Jul-22	0					
P3-3008	Demolish the guide rail, Breaking the thrust wall at Jacking Pit	7	7			13-Jul-22	20-Jul-22	0					
P3-3010	Set up Pipe Jacking Equipment (2nd pipe)	30	30	10-Mar-23	10-Mar-23	21-Jul-22	24-Aug-22	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-Aug-22	10-Oct-22	2					
KT1.38A - KT1.37A (99m) (Open Cut by CE-075)		71	69	03-Sep-22	05-Oct-22	30-May-22 A	22-Aug-22						
P3-2265	Backfilling of drain to at grade level KT1.37A	40	28			30-May-22 A	05-Jul-22	2					
P3-2270	Construction of Manhole KT1.37A	21	21	03-Sep-22	05-Oct-22	06-Jul-22	29-Jul-22	2					
P3-2275	Backfilling of manhole to at grade level KT1.37A	20	20			30-Jul-22	22-Aug-22	2					
KT1.37A - KT1.36A (90m) (Open Cut by CE-068)		171	94	16-May-22	02-Jul-22	01-Mar-22 A	20-Sep-22						
Tree Removal		91	14			01-Mar-22 A	17-Jun-22						
P3-2009.4	Application and Approval for tree felling of T0937	78	12			01-Mar-22 A	15-Jun-22	2					
P3-2009.5	Tree felling works of T0937 to release working space for sheet piling	2	2			16-Jun-22	17-Jun-22	2					
After Tree Removal		168	80	16-May-22	02-Jul-22	04-Mar-22 A	20-Sep-22						
P3-2009.6	Sheet Pile Installation for open trench at KT1.37A - KT1.36A (River side After tree removal)	21	21			18-Jun-22	13-Jul-22	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	21-Jul-22	2					
P3-2010	Soft Excavation to 1st strut level	30	30	16-May-22	07-Jun-22	25-Jun-22	30-Jul-22	2					
P3-2010.1	Installation of strut S1	32	32			14-Jul-22	19-Aug-22	2					
P3-2020	Soft Excavation to 2nd strut level	20	20	23-May-22	16-Jun-22	01-Aug-22	23-Aug-22	2					
P3-2020.1	Installation of strut S2	32	32			12-Aug-22	17-Sep-22	2					
P3-2070	Soft Excavation to F.L ; (approx. 8.5m depth)	24	24	02-Jun-22	02-Jul-22	24-Aug-22	20-Sep-22	2					
Portion 4 - Road & Drains		158	133	27-Feb-21	16-Feb-23	03-May-22 A	08-Nov-22						
Pre-construction works		54	29	27-Feb-21	10-May-21	03-May-22 A	06-Jul-22						
P4-1050	Trial Pit (3nos.), Submission & Approval of GI Report	54	29	27-Feb-21	10-May-21	03-May-22 A	06-Jul-22	3					
Sewer & Rising Main Installation by Open Cut		140	133	28-Jan-23	16-Feb-23	24-May-22 A	08-Nov-22						
Sewer Pipeline & Rising Main CHB255 to CHB370 (120M)		103	96	28-Jan-23	16-Feb-23	24-May-22 A	23-Sep-22						
P4-3210	Sheet Pile Installation for open trench (600 pcs)	49	42	28-Jan-23	11-Feb-23	24-May-22 A	21-Jul-22						
P4-3212	Soft Excavation to 1st strut level	57	57			23-Jun-22	29-Aug-22						
P4-3214	Installation of strut S1	58	58			27-Jun-22	02-Sep-22						
P4-3216	Soft Excavation to 2nd strut level	42	42			19-Jul-22	05-Sep-22						

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Time Risk Allowance	2022							
									May	Jun	Jul	Aug	Sep			
<div></div>	P4-3218	Installation of strut S2	44	44			30-Jul-22	19-Sep-22								
	P4-3220	Soft Excavation to F.L.	39	39	02-Feb-23	16-Feb-23	09-Aug-22	23-Sep-22								
	Sewer Pipeline FMH_KT6.03A to FMH_KT6.02A & Rising Main CHB50 to CHB150 (105M)		100	100			22-Jun-22	20-Oct-22								
	P4-6080	Sheet Pile Installation for open trench	49	49			22-Jun-22	18-Aug-22								
	P4-6090	Soft Excavation to 1st strut level	57	57			22-Jul-22	27-Sep-22								
	P4-6100	Installation of strut S1	58	58			26-Jul-22	03-Oct-22								
	P4-6110	Soft Excavation to 2nd strut level	42	42			16-Aug-22	06-Oct-22								
	P4-6120	Installation of strut S2	44	44			27-Aug-22	20-Oct-22								
	Sewer FMH_KT6.02A to FMH_KT6.01 & Rising Main CHB150 to CHB255 (105M)		88	88			29-Jun-22	13-Oct-22								
	P4-6000	Sheet Pile Installation for open trench	49	49			29-Jun-22	25-Aug-22								
	P4-6010	Soft Excavation to 1st strut level	57	57			29-Jul-22	06-Oct-22								
	P4-6020	Installation of strut S1	58	58			02-Aug-22	11-Oct-22								
	P4-6030	Soft Excavation to 2nd strut level	42	42			23-Aug-22	13-Oct-22								
	Rising Main CHB370 to CHB493 (123M)		88	88			07-Jul-22	20-Oct-22								
	P4-5520	Sheet Pile Installation for open trench	49	49			07-Jul-22	01-Sep-22								
	P4-5530	Soft Excavation to 1st strut level	57	57			05-Aug-22	13-Oct-22								
	P4-5540	Installation of strut S1	58	58			09-Aug-22	18-Oct-22								
	P4-5550	Soft Excavation to 2nd strut level	42	42			30-Aug-22	20-Oct-22								
	Rising Main CHB515 to CHB615 (100M)		86	86			21-Jul-22	01-Nov-22								
	P4-5600	Sheet Pile Installation for open trench	49	49			21-Jul-22	15-Sep-22								
	P4-5610	Soft Excavation to 1st strut level	57	57			19-Aug-22	27-Oct-22								
	P4-5620	Installation of strut S1	58	58			23-Aug-22	01-Nov-22								
	Rising Main CHB615 to CHB715 (100M)		86	86			28-Jul-22	08-Nov-22								
	P4-5680	Sheet Pile Installation for open trench	49	49			28-Jul-22	23-Sep-22								
	P4-5690	Soft Excavation to 1st strut level	57	57			26-Aug-22	03-Nov-22								
	P4-5700	Installation of strut S1	58	58			30-Aug-22	08-Nov-22								
	Rising Main CHB715 to CHB815 (100M)		49	49			04-Aug-22	30-Sep-22								
	P4-5760	Sheet Pile Installation for open trench	49	49			04-Aug-22	30-Sep-22								
	Rising Main CHB815 to CHB915 (100M)		49	49			11-Aug-22	10-Oct-22								
	P4-5840	Sheet Pile Installation for open trench	49	49			11-Aug-22	10-Oct-22								

 Primary Baseline  Actual Work  Remaining Work  Critical Remaining Work  Baseline Milestone	 Critical ...  Non-Crit...	Data Date: 31-May-22 Project Start: 03-Feb-20 Project End: 30-Dec-26 Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021) Page : 5 of 12	<h2 style="text-align: center;">Three Months Rolling Programme (May to Aug 2022)</h2>	<table border="1"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>31-May-22</td> <td>Rev 0 (Three Months Rolling Progr...</td> <td>TW</td> <td>ZL</td> </tr> </tbody> </table>	Date	Revision	Checked	Approved	31-May-22	Rev 0 (Three Months Rolling Progr...	TW	ZL
Date	Revision	Checked	Approved									
31-May-22	Rev 0 (Three Months Rolling Progr...	TW	ZL									











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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
	Rising Main CHB915 to CHB943.445 (28.445M)	25	25			18-Aug-22	15-Sep-22						
P4-5920	Sheet Pile Installation for open trench	25	25			18-Aug-22	15-Sep-22						
	Sewage Rising Main Installation by Pipe Jacking CHB493 to CHB514 (21M)	72	72			30-Jun-22	24-Sep-22						
P4-5405	Tentative Completion Date of Ho Sheung Heung Pai Lau	0	0				30-Jun-22*	6					
P4-5407	Haul Road Modification	14	14			02-Jul-22	18-Jul-22	6					
P4-5410	Site Setup, Set up TTA & Plant Mobilization	14	14			19-Jul-22	03-Aug-22	6					
P4-5420	Instrumentation Installation and Monitoring Works	6	6			04-Aug-22	10-Aug-22	3					
P4-5430	ELS for Launching Pit (3 layers of strut)	38	38			11-Aug-22	24-Sep-22	4					
P4-5440	ELS for Receiving Pit (3 layers of strut)	38	38			11-Aug-22	24-Sep-22	3					
	Portion 7 - Kwu Tung North Sewage Pumping station	98	81			26-Apr-22 A	05-Sep-22						
	Sewage Pumping Station	98	81			26-Apr-22 A	05-Sep-22						
	Excavation	98	81			26-Apr-22 A	05-Sep-22						
	1st Stage	18	1			26-Apr-22 A	01-Jun-22						
P7-3125.6	Soft Excavation to FEL (-0.3mPD for Portion 1 & 2, ~600cu.m)	7	0			26-Apr-22 A	19-May-22 A	5					
P7-3125.8	Blinding Casting of Portion 1 & 2	1	1			01-Jun-22	01-Jun-22	5					
	2nd Stage	31	12			20-May-22 A	25-Jun-22						
P7-3127	Soft Excavation and extend the slope to Portion 4 (600cu m)	14	1			20-May-22 A	13-Jun-22	1					
P7-3130	Installation of strut S1 (+4.5mPD) at Portion 4	18	6			20-May-22 A	18-Jun-22	1					
P7-3250	Soft Excavation and extend the slope to Portion 6 (200cu m)	5	5			14-Jun-22	18-Jun-22	1					
P7-3260	Installation of strut S1 (+4.5mPD) at Portion 6	6	6			20-Jun-22	25-Jun-22	1					
	3rd Stage	46	46			13-Jun-22	05-Aug-22						
P7-3130.1	Soft Excavation to 2nd level of strut at Portion 3 (+1.47mPD)	6	6			27-Jun-22	04-Jul-22	1					
P7-3131	Installation of 2nd level of strut at Portion 3 (+2.2mPD)	6	6			05-Jul-22	11-Jul-22	1					
P7-3132	Soft Excavation to 2nd strut level (+1.47mPD) at Portion 4 to 6 (~980cu.m)	10	10			12-Jul-22	22-Jul-22	1					
P7-3132.1	Installation of 2nd level of strut at Portion 4-6 (+2.2mPD)	12	12			23-Jul-22	05-Aug-22	1					
P7-3133	Plant mobilization of Grout Curtain Installation	0	0			13-Jun-22		1					
P7-3134	Grout Curtain Installation at Portion 3 (23nos)	20	20			12-Jul-22	03-Aug-22	1					
P7-3270	Grout Curtain Installation at Portion 4 (11nos)	10	10			23-Jul-22	03-Aug-22	1					
	4th Stage	28	28			04-Aug-22	05-Sep-22						
P7-3160	Soft Excavation from +1.47mPD to -1.23mPD (~1730 cu.m)	16	16			04-Aug-22	22-Aug-22	5					
P7-3170	Installation of strut S3 (-0.8mPD) at Portion 4 , 5 and 6	12	12			23-Aug-22	05-Sep-22	5					

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New Development Area and Shek Wu Hui








Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Time Risk Allowance	2022					
									May	Jun	Jul	Aug	Sep	
Substructure and Retaining Wall		76	76			02-Jun-22	31-Aug-22							
Basement to G/F Wall & G/F Slab		76	76			02-Jun-22	31-Aug-22							
+1.55mPD		46	46			02-Jun-22	27-Jul-22							
P7-BF1280	Low Level Pile Head treatment and Capping Plate Installation	7	7			02-Jun-22	10-Jun-22	2						
P7-BF1290	Backfill with Grade 200 Rockfill	5	5			11-Jun-22	16-Jun-22	1						
P7-BF1300	Erection of formwork for Vertical Blinding	8	8			17-Jun-22	25-Jun-22	1						
P7-BF1310	Concreting of Vertical Blinding	1	1			27-Jun-22	27-Jun-22	1						
P7-BF1320	Laying of Waterproofing Membrane and testing	8	8			28-Jun-22	07-Jul-22	1						
P7-BF1330	Rebar fixing of basement Slab	10	10			08-Jul-22	19-Jul-22	1						
P7-BF1340	Base Slab Shutters	6	6			20-Jul-22	26-Jul-22	1						
P7-BF1350	Base Slab (+1.55mPD) & Wall Kickers Concreting (+2.7mPD)	1	1			27-Jul-22	27-Jul-22	1						
+7.50mPD (G/F Slab)		30	30			28-Jul-22	31-Aug-22							
Bay 1		30	30			28-Jul-22	31-Aug-22							
P7-BF1360	Dismantling base slab formwork and soil backfill to 1.7mPD with testing	7	7			28-Jul-22	04-Aug-22	1						
P7-BF1370	Dismantle of strut S2 at +2.2mPD	5	5			05-Aug-22	10-Aug-22	2						
P7-BF1380	Wall Extend to +5.35mPD	6	6			11-Aug-22	17-Aug-22	2						
P7-BF1390	Soil backfill to +4.0mPD with testing	7	7			18-Aug-22	25-Aug-22	2						
P7-BF1400	Dismantle of strut S1 at +4.5mPD	5	5			26-Aug-22	31-Aug-22	2						
Works in Section 3		276	133	01-Nov-21	06-Dec-22	09-Dec-21 A	08-Nov-22							
Portion 8 - Roads & Drains		276	133	01-Nov-21	06-Dec-22	09-Dec-21 A	08-Nov-22							
Pre-construction works		190	47			09-Dec-21 A	27-Jul-22							
CLP Cable Relocation		173	30			09-Dec-21 A	07-Jul-22							
P8-1060	KT1.40 - KT1.41 Application & Approval for the relocation of existing power cables by CLP	90	0			09-Dec-21 A	01-Jun-22	2						
P8-1070	KT1.40 - KT1.41 Relocation of existing power cables by CLP	30	30			01-Jun-22	07-Jul-22	2						
HyD Pillar Box / Lighting Relocation		69	47			06-May-22 A	27-Jul-22							
P8-9050	Approval of proposal for temp traffic / pedestrian route lighting KT1.40 - KT1.41	48	26			06-May-22 A	02-Jul-22	2						
P8-9060	Relocation works of existing streetlight and pillar boxes	21	21			04-Jul-22	27-Jul-22	2						
Sewer Pipeline Installation		86	86	01-Nov-21	09-Nov-22	28-Jul-22	08-Nov-22							
KT1.40A - KT1.41A (99m) (Open Cut by CE-071)		86	86			28-Jul-22	08-Nov-22							
P8-5140	Sheet Pile Installation for open trench (Open Trench from 1.40A to 1.41A)	49	49			28-Jul-22	23-Sep-22							
P8-5150	Soft Excavation to 1st strut level	57	57			26-Aug-22	03-Nov-22							
P8-5160	Installation of strut S1	58	58			30-Aug-22	08-Nov-22							
KT1.41A - KT1.47A (99m) (Open Cut by CE-076)		49	49	01-Nov-21	01-Nov-21	04-Aug-22	30-Sep-22							

<div><div><div></div><div></div><div></div><div></div><div></div></div><div><div>Primary Baseline</div><div>Actual Work</div><div>Remaining Work</div><div>Critical Remaining Work</div><div>Baseline Milestone</div></div></div> <div><div><div></div><div></div></div><div><div>Critical ...</div><div>Non-Crit...</div></div></div> <div><div>Data Date: 31-May-22</div><div>Project Start: 03-Feb-20</div><div>Project End: 30-Dec-26</div><div>Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)</div><div>Page : 8 of 12</div></div>	<div>Three Months Rolling Programme</div> <div>(May to Aug 2022)</div>	<div>Date</div> <div>Revision</div> <div>Checked</div> <div>Approved</div>
<div>31-May-22</div> <div>Rev 0 (Three Months Rolling Progr...</div> <div>TW</div> <div>ZL</div>		

 Primary Baseline  Actual Work  Remaining Work  Critical Remaining Work   Baseline Milestone	  Critical ...   Non-Crit...	Data Date: 31-May-22 Project Start: 03-Feb-20 Project End: 30-Dec-26 Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021) Page : 9 of 12	<h2 style="text-align: center;">Three Months Rolling Programme (May to Aug 2022)</h2>	Date	Revision	Checked	Approved
				31-May-22	Rev 0 (Three Months Rolling Progr...	TW	ZL

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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
P10-2120.216	Dismantling of wall formwork and soil backfill to +7.6mPD with testing	10	10			02-Aug-22	12-Aug-22	2					
Basement Wall Bay 3		62	61			31-May-22 A	12-Aug-22						
P10-2120.236	Basement wall Formwork to +4.5mPD	6	5			31-May-22 A	07-Jun-22	2					
P10-2120.246	Concreting of Basement wall to +4.5mPD	1	1			08-Jun-22	08-Jun-22	2					
P10-2120.256	Acheive Early Strength of concrete to retain earth pressure (up to +3.5mPD)	7	7			09-Jun-22	16-Jun-22	2					
P10-2120.266	Dismantling of wall formwork and soil backfill to +3.5mPD with testing	7	7			17-Jun-22	24-Jun-22	2					
P10-2120.276	Extend working Platform to +7.6mPD	7	7			25-Jun-22	04-Jul-22	2					
P10-2120.286	Basement wall Rebar Fixing to +7.6mPD	9	9			05-Jul-22	14-Jul-22	2					
P10-2120.296	Basement wall Formwork to +7.6mPD	7	7			15-Jul-22	22-Jul-22	2					
P10-2120.306	Concreting of Basement wall to +7.6mPD	1	1			23-Jul-22	23-Jul-22	2					
P10-2120.316	Acheive Early Strength of concrete to retain earth pressure (up to +7.6mPD)	7	7			25-Jul-22	01-Aug-22	2					
P10-2120.326	Dismantling of wall formwork and soil backfill to +7.6mPD with testing	10	10			02-Aug-22	12-Aug-22	2					
Superstructure		68	68			16-Jun-22	05-Sep-22						
Ground Floor to Roof Floor		68	68			16-Jun-22	05-Sep-22						
B/F to G/F Wall and G/F Slab		68	68			16-Jun-22	05-Sep-22						
Bay 1		27	27			18-Jun-22	21-Jul-22						
P10-2350	Erection of falsework and working platform for B/F to G/F wall	3	3			18-Jun-22	22-Jun-22	1					
P10-2360	Erection of One Side Formwork for B/F to G/F Wall	2	2			22-Jun-22	24-Jun-22	1					
P10-2370	Rebar Fixing for B/F to G/F Wall	3	3			24-Jun-22	28-Jun-22	1					
P10-2380	Erection of remaining side formwork for B/F to G/F Wall	2	2			28-Jun-22	30-Jun-22	1					
P10-2390	Erection of falsework and working platform for G/F Slab	4	4			30-Jun-22	06-Jul-22	1					
P10-2400	Erection of Formwork for G/F Slab	5	5			06-Jul-22	12-Jul-22	1					
P10-2410	Rebar Fixing for G/F Slab	5	5			12-Jul-22	18-Jul-22	1					
P10-2420	G/F Slab Shutters	2	2			18-Jul-22	20-Jul-22	1					
P10-2430	G/F Slab & B/F to G/F wall Concreting	1	1			20-Jul-22	21-Jul-22	1					
Bay 2		18	18			13-Aug-22	02-Sep-22						
P10-2440	Erection of falsework and working platform for B/F to G/F wall	3	3			13-Aug-22	16-Aug-22	1					
P10-2450	Erection of One Side Formwork for B/F to G/F Wall	4	4			17-Aug-22	20-Aug-22	1					
P10-2460	Rebar Fixing for B/F to G/F Wall	4	4			22-Aug-22	25-Aug-22	1					

 Primary Baseline  Actual Work  Remaining Work  Critical Remaining Work  Baseline Milestone	 Critical ...  Non-Crit...	Data Date: 31-May-22 Project Start: 03-Feb-20 Project End: 30-Dec-26 Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021) Page : 11 of 12	<div style="text-align: center;"> <h2>Three Months Rolling Programme (May to Aug 2022)</h2> </div>				Date	Revision	Checked	Approved
							31-May-22	Rev 0 (Three Months Rolling Progr..	TW	ZL

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	Time Risk Allowance	2022				
									May	Jun	Jul	Aug	Sep
P10-2640	Rebar Fixing for G/F to 1/F Wall	3	3			28-Jul-22	01-Aug-22	1					
P10-2650	Erection of remaining side formwork for G/F to 1/F Wall	4	4			01-Aug-22	05-Aug-22	1					
P10-2660	Erection of falsework and working platform for 1/F Slab	3	3			05-Aug-22	09-Aug-22	1					
P10-2670	Erection of Formwork for 1/F Slab	4	4			09-Aug-22	13-Aug-22	1					
P10-2680	Rebar Fixing for 1/F Slab	4	4			13-Aug-22	18-Aug-22	1					
P10-2690	1/F Slab Shutters	2	2			18-Aug-22	20-Aug-22	1					
P10-2700	1/F Slab & G/F to 1/F wall Concreting	1	1			20-Aug-22	22-Aug-22	1					
Bay 4		22	22			10-Aug-22	05-Sep-22						
P10-2890	Erection of falsework and working platform for G/F to 1/F wall	3	3			10-Aug-22	13-Aug-22	1					
P10-2900	Erection of One Side Formwork for G/F to 1/F Wall	2	2			13-Aug-22	16-Aug-22	1					
P10-2910	Rebar Fixing for G/F to 1/F Wall	4	4			16-Aug-22	20-Aug-22	1					
P10-2920	Erection of remaining side formwork for G/F to 1/F Wall	3	3			20-Aug-22	24-Aug-22	1					
P10-2930	Erection of falsework and working platform for 1/F Slab	5	5			24-Aug-22	30-Aug-22	1					
P10-2940	Erection of Formwork for 1/F Slab	5	5			30-Aug-22	05-Sep-22	1					
ABWF / E&M Works		60	60			22-Aug-22	03-Nov-22						
Ground Floor		60	60			22-Aug-22	03-Nov-22						
BOH		60	60			22-Aug-22	03-Nov-22						
Security Control Room		60	60			22-Aug-22	03-Nov-22						
P10-GFS2160	Access Date of G/F security control Room Fitting Out	0	0			22-Aug-22							
P10-GFS2170	Internal Finishes and Builders works for G/F security control room	60	60			22-Aug-22	03-Nov-22	0					
Works in Section 5		595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22						
Portion 11 - Village Resite Area		595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22						
Preliminary Works		595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22						
P11-1005	Temporary Storage Area	595	1	30-Dec-20	10-Oct-22	30-Dec-20 A	21-Dec-22	0					

Construction Programme of ND/2019/03

Project Programme of the Works

Revised Programme: May 2022

Data Date : 2022-5-3

Task

Critical Task

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

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Project Programme of the Works

Revised Programme: May 2022

Data Date : 2022-5-3

Task

Critical Task

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Milestone

Progress

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary















Group By Summary

Progress

Deadline

Page 2

Project Programme of the Works

Revised Programme: May 2022	Task		Milestone		Rolled Up Task		Rolled Up Milestone		Split		Project Summary		Progress	
Data Date : 2022-5-3	Critical Task		Summary		Rolled Up Critical Task		Rolled Up Progress		External Tasks		Group By Summary		Deadline	

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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	H2	2020	H1	H2	2021	H1	H2	2022	H1	H2	2023	H1	H2	2024	H1
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 Asbestos 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 Aluminium Window/Louvre 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	39,243,244,247,235,242,249,24		-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 Asbestos 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 Aluminium Window/Louvre 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	80%																
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	50,264,265,268,269,256,271,26		-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 Asbestos 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%																

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	H2	2020	H1	H2	2021	H1	H2	2022	H1	H2	2023	H1	H2	2024	H1
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	87%																
305	✓ Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 18/1/20	Sat 18/1/20	6	311,30955	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 Asbestos 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	95%																
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	80%																
314	Construction of storage sheds	432 days	Tue 16/3/21	Sat 21/5/22			622 days	88%																
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 Aluminium 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	909 days	90%																
317	Installation of GMS roofing structure with recycle timber	30 days	Sun 12/9/21	Mon 11/10/21	316SS+21 days,315	331	26 days	90%	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	45 days	90%																
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 5530	20 days	Mon 3/1/22	Sat 22/1/22	320	322	0 days	100%																
322	✓ Construction of Storage Shed 5530	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	50%																
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	45 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	-69 days	90%																
331	Completion of Section 9 of the works	0 days	Sat 6/11/21	Sat 6/11/21	313,317,324,327,309,330,326,		-196 days	0%																
332																								
333	13. Section 10 of the works (Portion 21)	988 days	Mon 18/1/21	Tue 3/10/23			-460 days	0%																
334	Site Access in Portion 21	0 days	Mon 18/1/21	Mon 18/1/21	17	335	-371 days	0%																
335	Local Objection for commencement of Works	470 days	Tue 19/1/21	Tue 3/5/22	334	336	-460 days	0%																
336	General site clearance / demolition work / Removal of Asbestos Containing Material	14 days	Wed 4/5/22	Tue 17/5/22	335	337	-460 days	0%																
337	Erect site hoarding	14 days	Wed 18/5/22	Tue 31/5/22	336	339	-460 days	0%																
338	Archaeological Impacts Mitigation Measures	180 days	Wed 1/6/22	Sun 27/11/22			-460 days	0%																
339	Archaeological survey	120 days	Wed 1/6/22	Wed 28/9/22	337	340	-460 days	0%																

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

Project Programme of the Works

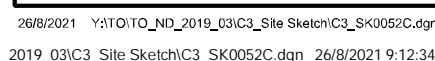
ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	H2	2020	H1	H2	2021	H1	H2	2022	H1	H2	2023	H1	H2	2024	H1
374	✓	Site Access in Portions 25, 26, 27	0 days	Wed 18/3/20	Wed 18/3/20	3FS+90 days	375FS+60 days	0 days	100%				◆												
375	✓	Boundary Site Area	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	✓	Collection 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%																





Figure 3c. Designated wetland habitats in Appendix 35.2





CONTRACTOR SHALL DESIGN THE CONNECTION
TO WATER TREATMENT WETLAND

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

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

Construction Programme of ND/2019/04

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Gantt Chart																																																																							
20201021 Revised 1st program submission																																																																															
Project Contractual Dates																																																																															
Contractual Dates																																																																															
CD-1000	Contract Date	0	30-Jul-20*		30-Jul-20		0	◆ 30-Jul-20*																																																																							
CD-1010	Starting Date	0	14-Aug-20*		14-Aug-20		0	◆ 14-Aug-20*																																																																							
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	◆ 14-Aug-20*																																																																							
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	◆ 14-Aug-20*																																																																							
CD-1040	Contract Access date of Portion I (63 days)	0	16-Oct-20*		15-Oct-20		0	◆ 16-Oct-20*																																																																							
CD-1050	Contract Access date of Portion D (93 days)	0	15-Nov-20*		15-Nov-20		0	◆ 15-Nov-20*																																																																							
CD-1060	Contract Access date of Portion F, H and N (154 days)	0	15-Jan-21*		15-Jan-21		0	◆ 15-Jan-21*																																																																							
CD-1070	Contract Access date of Portion B (184 days)	0	14-Feb-21*		14-Feb-21		0	◆ 14-Feb-21*																																																																							
CD-1100	Contract Access date of Portion E (246 days)	0	17-Apr-21*		17-Apr-21		0	◆ 17-Apr-21*																																																																							
CD-1120	Contract Access date of Portion L (487 days)	0	14-Dec-21*		14-Dec-21		0	◆ 14-Dec-21*																																																																							
CD-1130	Contract Access date of Portion K, K1 and K2 (518 days)	0	14-Jan-22*		14-Jan-22		0	◆ 14-Jan-22*																																																																							
CD-1140	Contract Access date of Portion M (600 days)	0	06-Apr-22*		06-Apr-22		0	◆ 06-Apr-22*																																																																							
CD-1150	Planned Access date of Portion P (60 days after Completion of Section 3)	0	01-Oct-22*		01-Oct-22		0	◆ 01-Oct-22*																																																																							
CD-1160	Contract Access date of Portion Y (900 days)	0	31-Jan-23*		31-Jan-23		0	◆ 31-Jan-23*																																																																							
CD-1190	Contract Access date of Portion P (60 days after Completion of Section 3)	0	13-Nov-23*		13-Nov-23		0	◆ 13-Nov-23*																																																																							
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	◆ 12-Mar-21*																																																																							
CD-1200	Contract KD2: Completion of sewage pumping station and associated rising mains and sew	0		14-Jun-24*	14-Jun-24		0	◆ 14-Jun-24*																																																																							
CD-1240	Contract KD3: Completion of all works for the opening between Lung Yeuk Tau Interchange	0		12-Sep-24*	12-Sep-24		0	◆ 12-Sep-24*																																																																							
CD-1250	Contract KD4: Completion of all works necessary for underpass and associated Stormwater	0		10-Apr-25*	10-Apr-25		0	◆ 10-Apr-25*																																																																							
CD-1260	Contract KD5: Completion of all works necessary for the traffic detection system (1700 day	0		10-Apr-25*	10-Apr-25		0	◆ 10-Apr-25*																																																																							
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	◆ 12-Mar-21*																																																																							
CD-1110	S2 All works within Portion W excluding landscape softworks (365 days)	0		13-Aug-21*	13-Aug-21		0	◆ 13-Aug-21*																																																																							
CD-1170	S3 All works within Portion K1 including landscape softworks (1125 days)	0		13-Sep-23*	13-Sep-23		0	◆ 13-Sep-23*																																																																							
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	◆ 07-Oct-23*																																																																							
CD-1210	S5 All works within Portion N including landscape softworks (1490 days)	0		11-Sep-24*	11-Sep-24		0	◆ 11-Sep-24*																																																																							
CD-1220	S6 Reprovisioned public toilet and refuse collection point facility within Portion J (1490 day	0		11-Sep-24*	11-Sep-24		0	◆ 11-Sep-24*																																																																							
CD-1230	S10A Establishment works for landscape softworks in Portion K1 (1490 days)	0		11-Sep-24*	11-Sep-24		0	◆ 11-Sep-24*																																																																							
CD-1270	S8 Preservation and Protection of existing trees (1790 days)	0		09-Jul-25*	09-Jul-25		0	◆ 09-Jul-25*																																																																							
CD-1280	S7 All works necessary for the commissioning of traffic detection system along Fanling Byr	0		09-Jul-25*	09-Jul-25		0	◆ 09-Jul-25*																																																																							
CD-1290	S9 All landscape softworks not covered by other sections of the works (1790 days)	0		09-Jul-25*	09-Jul-25		0	◆ 09-Jul-25*																																																																							
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	◆ 09-Jul-25*																																																																							
CD-1310	S10B Establishment works for landscape softworks in Portion N (1855 days)	0		12-Sep-25*	12-Sep-25		0	◆ 12-Sep-25*																																																																							
CD-1320	S10C Establishment works for landscape softworks in Section 9(2155 days)	0		09-Jul-26*	09-Jul-26		0	◆ 09-Jul-26*																																																																							
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	◆ 09-Mar-21*																																																																							
PD-1050	Planned KD2: Completion of sewage pumping station and associated rising mains (1400 da	0		26-Jan-24*	14-Jun-24		140	◆ 26-Jan-24*																																																																							
PD-1090	Planned KD3: Completion of all works necessary for opening between Interchange and Far	0		05-Sep-24*	12-Sep-24		7	◆ 05-Sep-24*																																																																							
PD-1100	Planned KD4: Completion of all works necessary for underpass and associated Stormwater	0		14-Feb-25*	10-Apr-25		55	◆ 14-Feb-25*																																																																							
PD-1110	Planned KD5: Completion of all works necessary for the traffic detection system (1700 days)	0		08-Apr-25*	10-Apr-25		1	◆ 08-Apr-25*																																																																							
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	◆ 11-Mar-21*																																																																							
PD-1020	S2 All works within Portion W excluding landscape softworks (365 days)	0		13-Aug-21*	13-Aug-21		0	◆ 13-Aug-21*																																																																							
PD-1030	S3 All works within Portion K1 including landscape softworks (1125 days)	0		30-Dec-22*	13-Sep-23		257	◆ 30-Dec-22*																																																																							
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	◆ 16-Sep-23*																																																																							
PD-1060	S5 All works within Portion N including landscape softworks (1490 days)	0		26-Jan-24*	11-Sep-24		229	◆ 26-Jan-24*																																																																							
PD-1070	S10A Establishment works for landscape softworks in Portion K1 (1490 days)	0		25-Mar-24*	11-Sep-24		170	◆ 25-Mar-24*																																																																							
PD-1080	S6 Reprovisioned public toilet and refuse collection point facility within Portion J (1490 day	0		04-Jul-24*	11-Sep-24		69	◆ 04-Jul-24*																																																																							
PD-1120	S7 All works necessary for the commissioning of traffic detection system along Fanling Byr	0		08-Apr-25*	09-Jul-25		92	◆ 08-Apr-25*																																																																							
PD-1130	S9 All landscape softworks not covered by other sections of the works (1790 days)	0		30-May-25*	09-Jul-25		40	◆ 30-May-25*																																																																							
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	◆ 21-Jun-25*																																																																							
PD-1150	S8 Preservation and Protection of existing trees (1790 days)	0		30-May-25*	09-Jul-25		40	◆ 30-May-25*																																																																							
PD-1160	S10B Establishment works for landscape softworks in Portion N (1855 days)	0		11-Sep-25*	12-Sep-25		1	◆ 11-Sep-25*																																																																							
PD-1170	S10C Establishment works for landscape softworks in Section 9(2155 days)	0		21-Jun-26*	09-Jul-26		18	◆ 21-Jun-26*																																																																							
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	18-Sep-20																																																																							
SU-1010	Subletting for Bored Pile Foundation Works	150	14-Aug-20	11-Feb-21	24-Dec-20	02-Jul-21	110	11-Feb-21																																																																							
SU-1020	Subletting for Socket-H Pile Foundation Works	150	14-Aug-20	11-Feb-21	24-Dec-20	02-Jul-21	110	11-Feb-21																																																																							
SU-1030	Subletting for TTA consultant	60	19-Sep-20	01-Dec-20	19-Sep-20	01-Dec-20	0	01-Dec-20																																																																							
SU-1040	Subletting for ELS & Excavation Works	150	19-Sep-20	23-Mar-21	16-Dec-20	23-Jun-21	72	23-Mar-21																																																																							
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	23-Mar-21																																																																							
SU-1060	Subletting for water mains Works	150	19-Sep-20	23-Mar-21	07-Dec-20	12-Jun-21	64	23-Mar-21																																																																							
SU-1070	Subletting for Tree Specialists	30	19-Sep-20	27-Oct-20	22-Sep-20	29-Oct-20	2	27-Oct-20																																																																							
SU-1080	Subletting for Design consultant	30	19-Sep-20	27-Oct-20	19-Sep-20	27-Oct-20	0	27-Oct-20																																																																							
SU-1090	Subletting for Noise Barrier Works	150	28-Oct-20*	03-May-21	04-Jan-22	11-Jul-22	352	03-May-21																																																																							
SU-1100	Subletting for Bridge Segment	150	28-Oct-20*	03-May-21	23-Nov-23	30-May-24	910	03-May-21																																																																							
SU-1110	Subletting for Predrilling	60	14-Aug-20	24-Oct-20	28-Dec-20	11-Mar-21	111	24-Oct-20																																																																							
SU-1120	Subletting for GI works	60	14-Aug-20	24-Oct-20	28-Dec-20	11-Mar-21	111	24-Oct-20																																																																							
SU-1130	Subletting for drainage works	60	01-Dec-20	11-Feb-21	14-Jul-21	23-Sep-21	179	11-Feb-21																																																																							
SU-1140	Subletting for pre-stressing works	60	18-Aug-21	29-Oct-21	26-Jun-23	05-Sep-23	547	29-Oct-21																																																																							
SU-1150	Subletting for road lighting works	60	10-Nov-21	21-Jan-22	31-Dec-22	15-Mar-23	338	21-Jan-22																																																																							

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

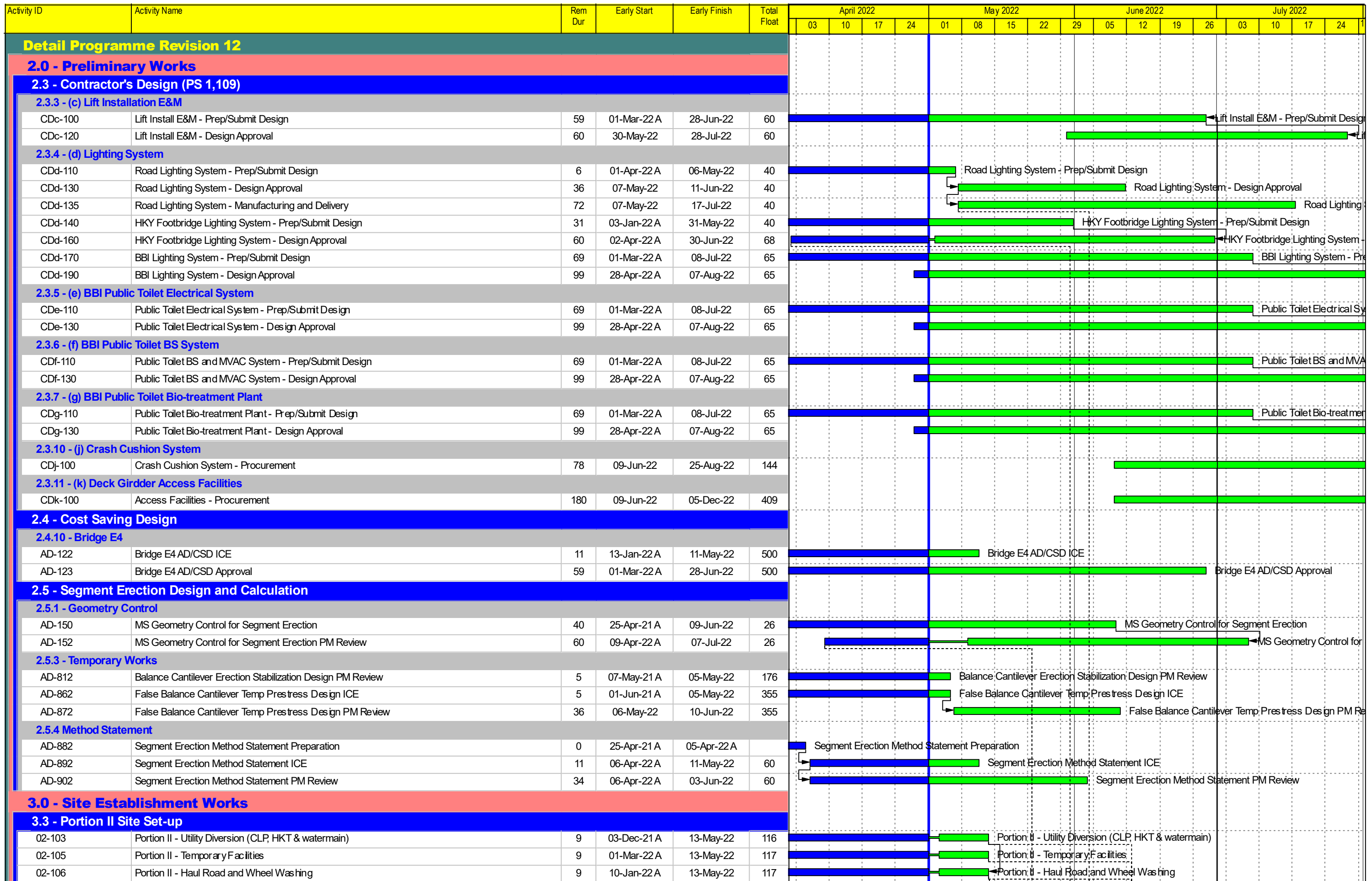
Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	202120222023202420252026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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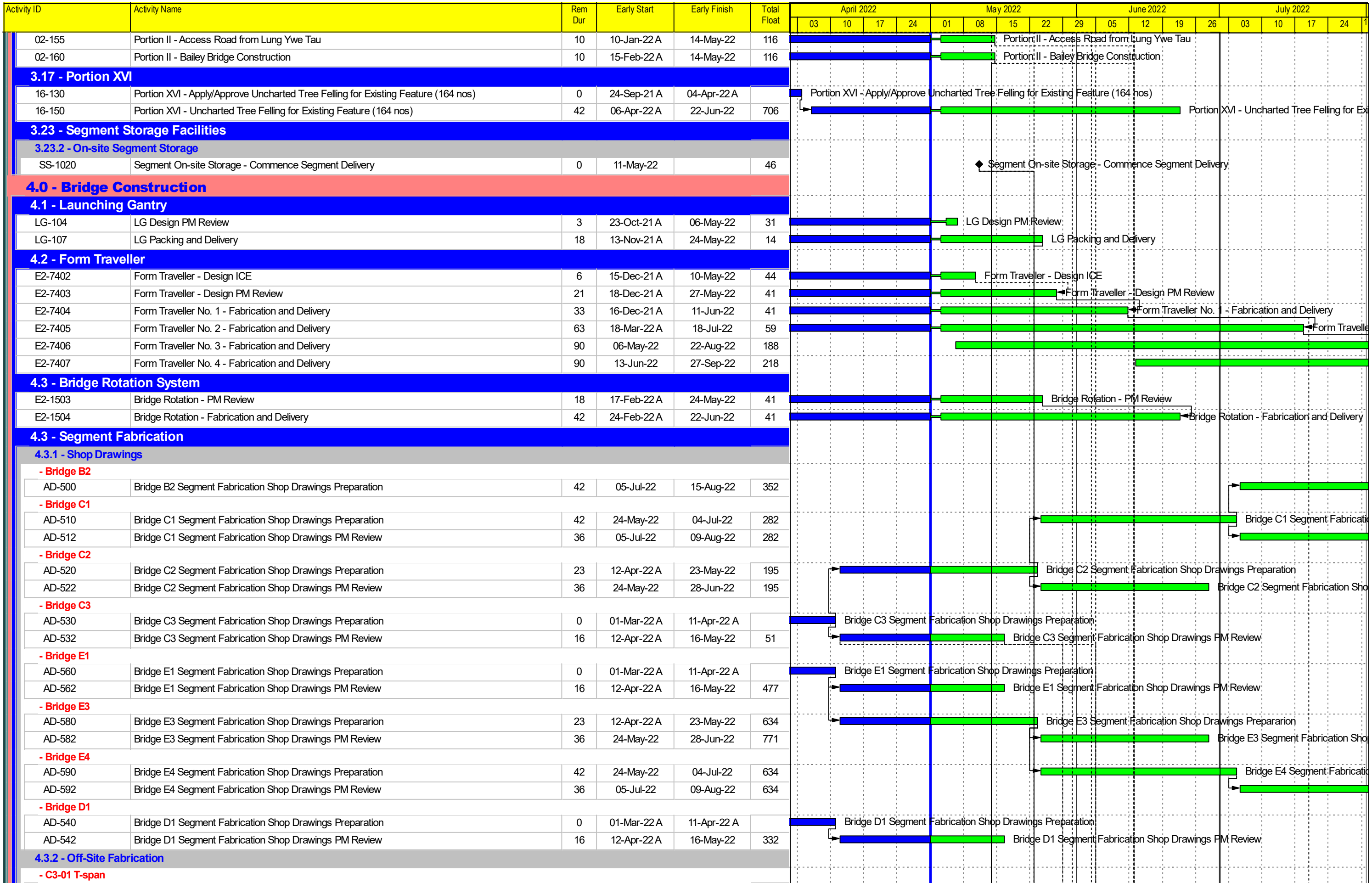
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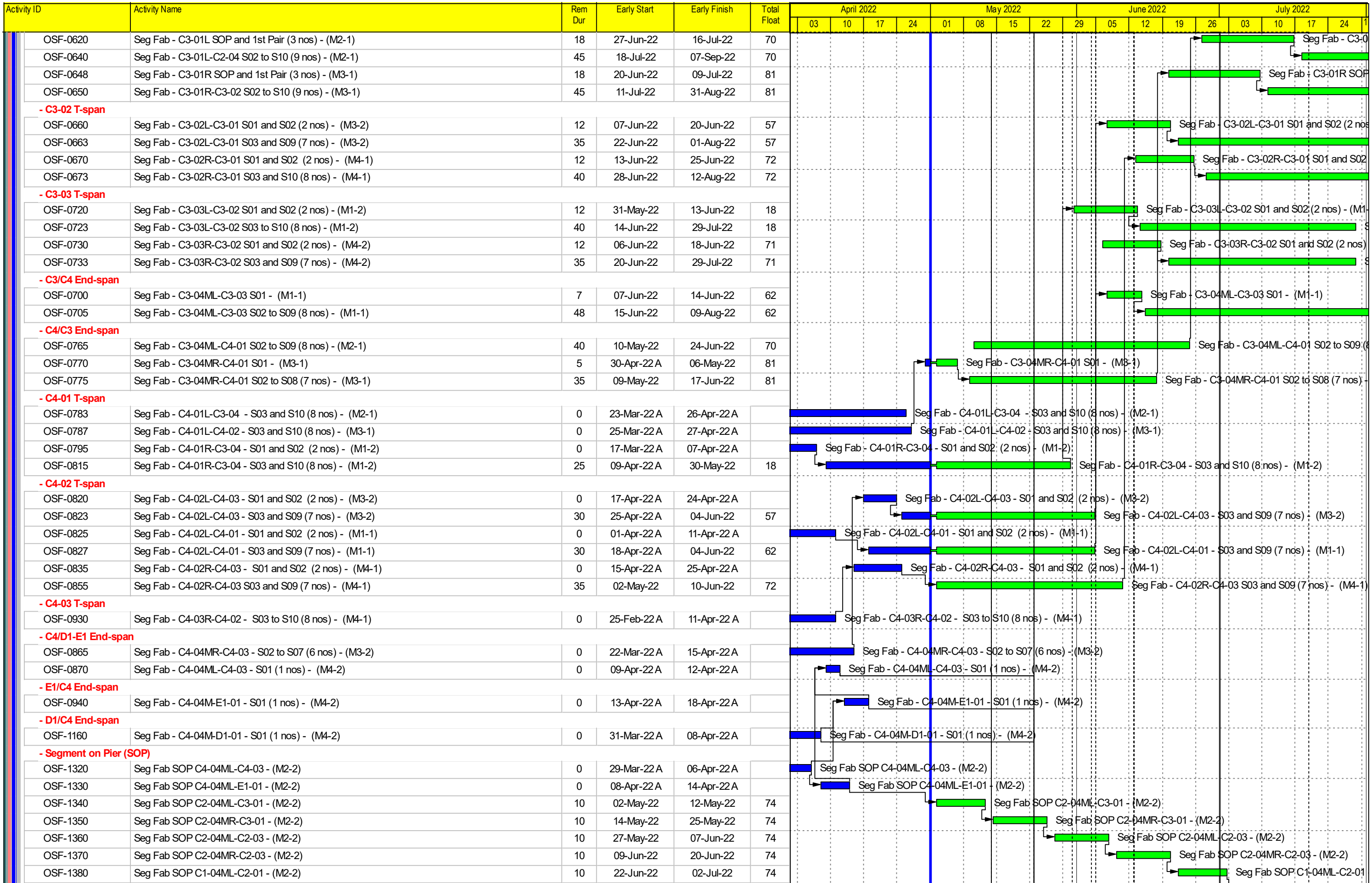
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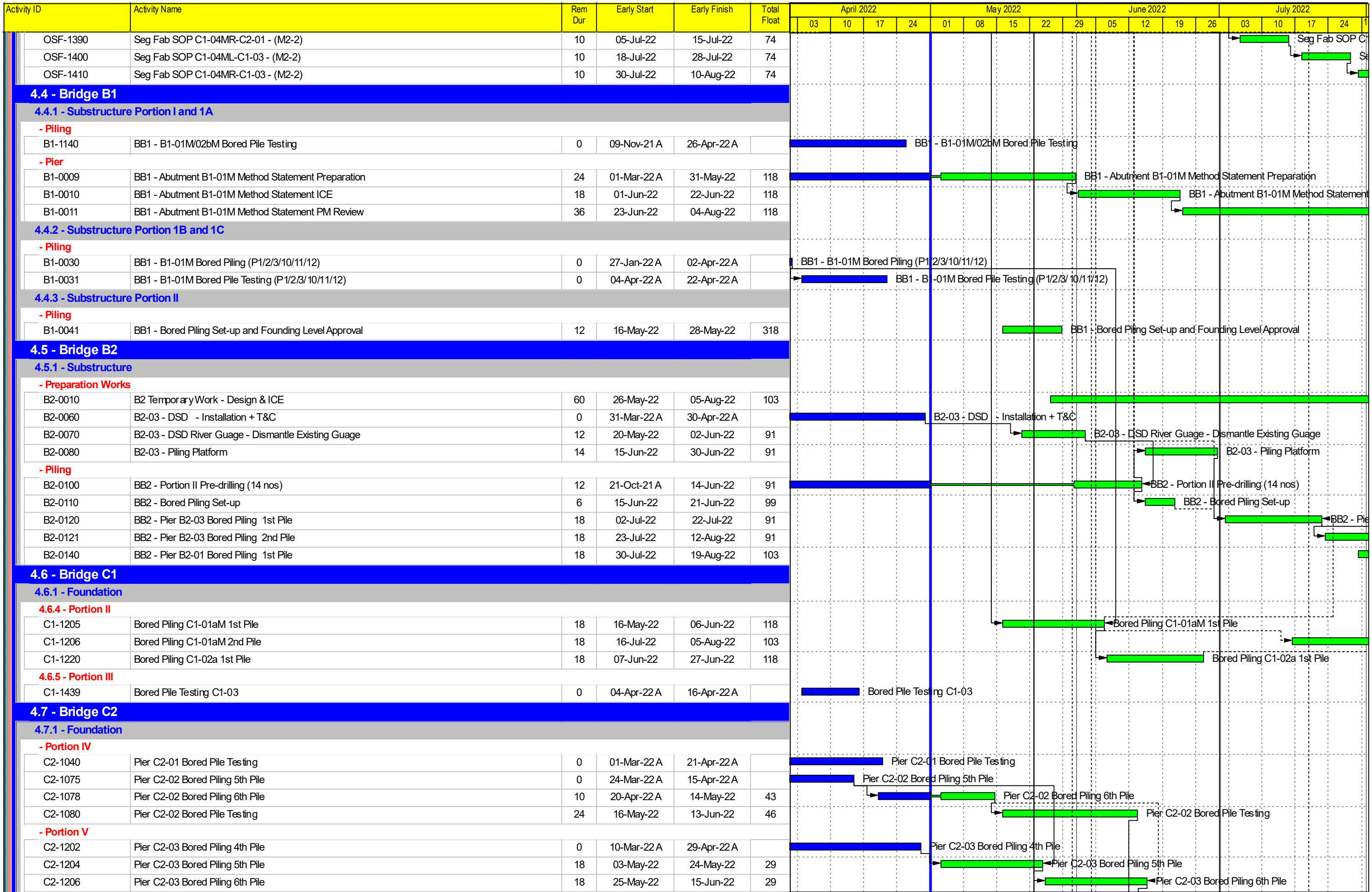
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Construction Programme of ND/2019/05









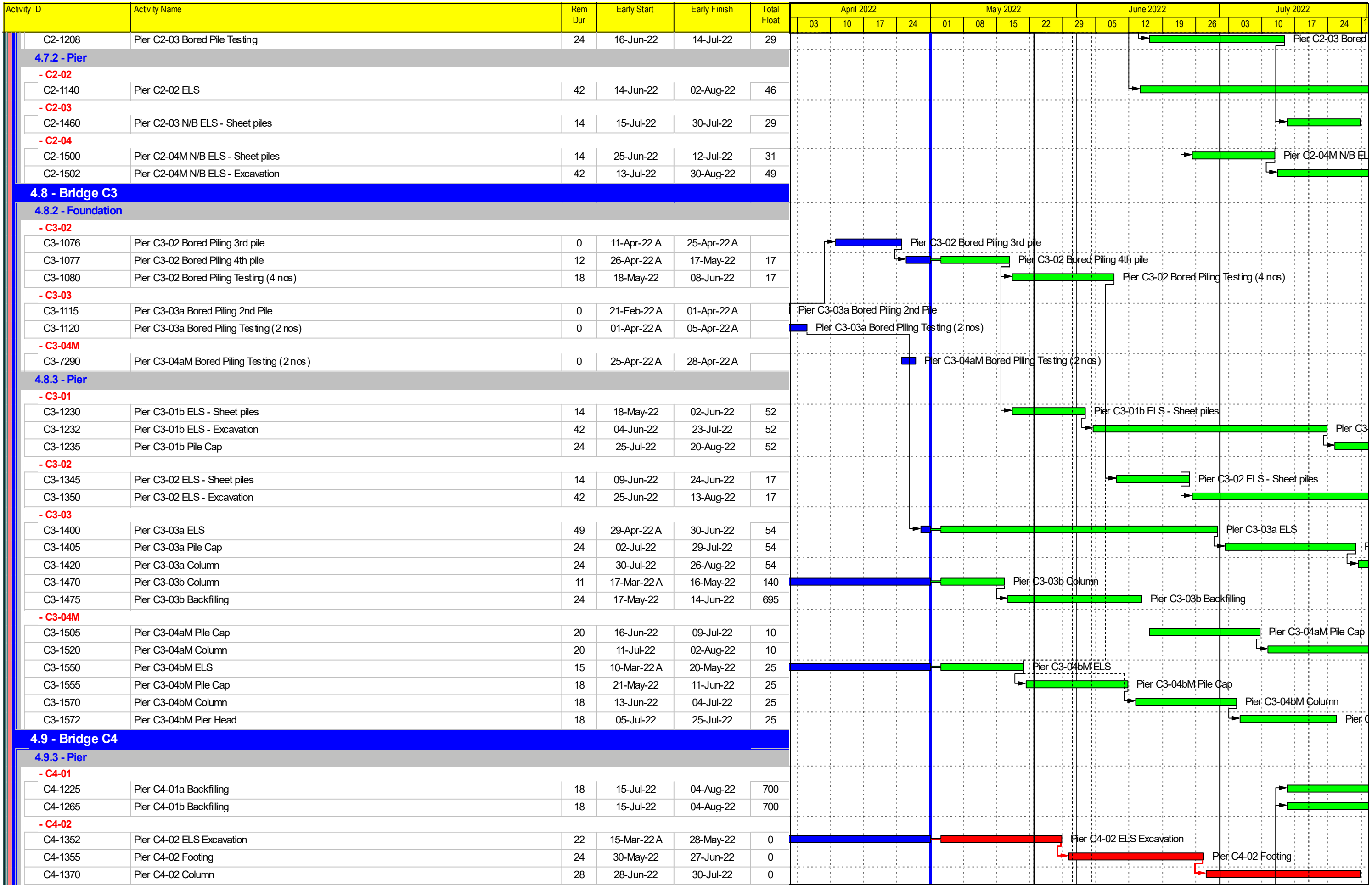
CRCC - Paul Y.
Joint Venture

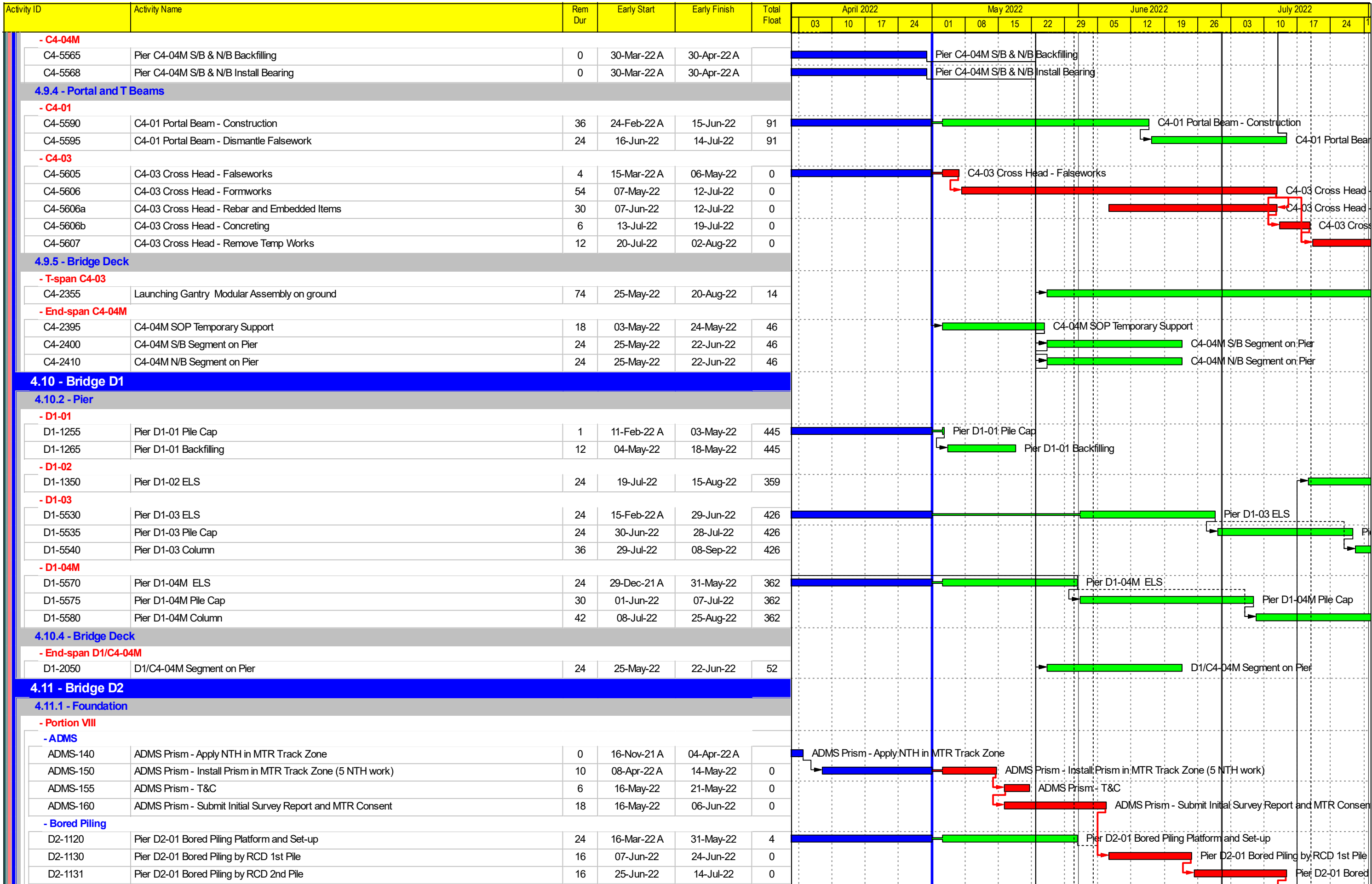
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

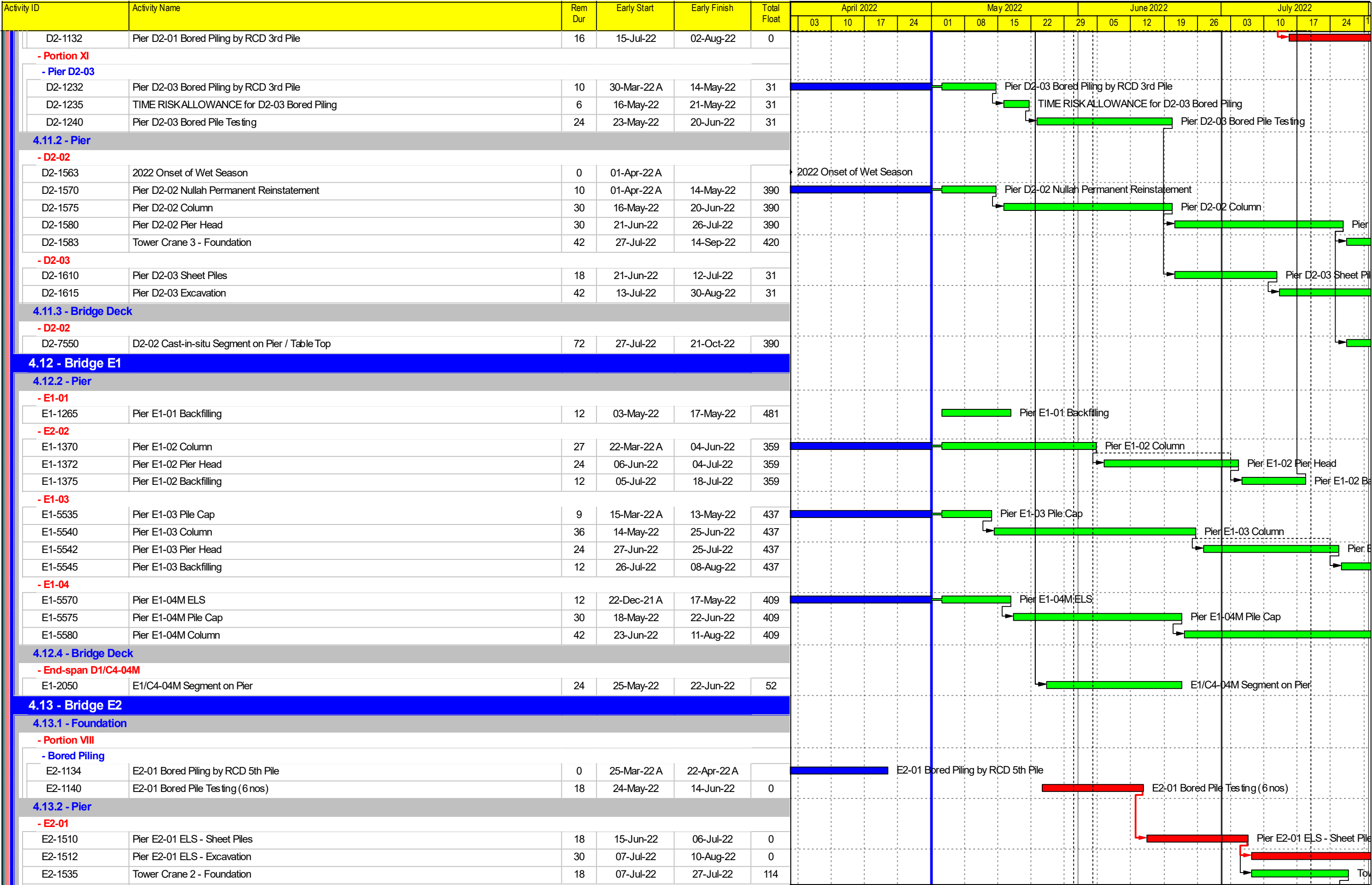
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme

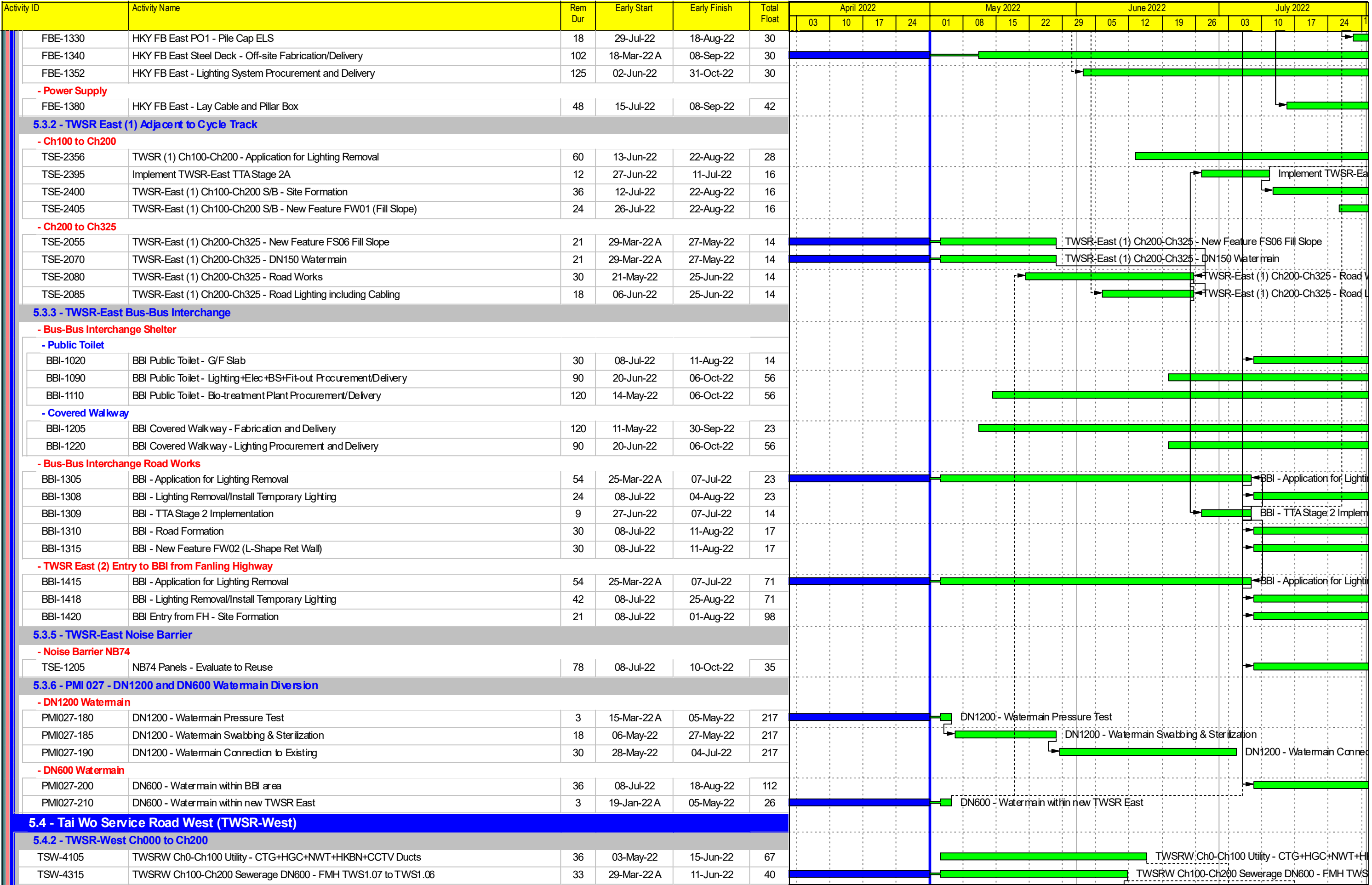
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Layout : DP 3MRP
TASK filter: 3MRP.
Date : 13-May-22 / Page 4 of 11

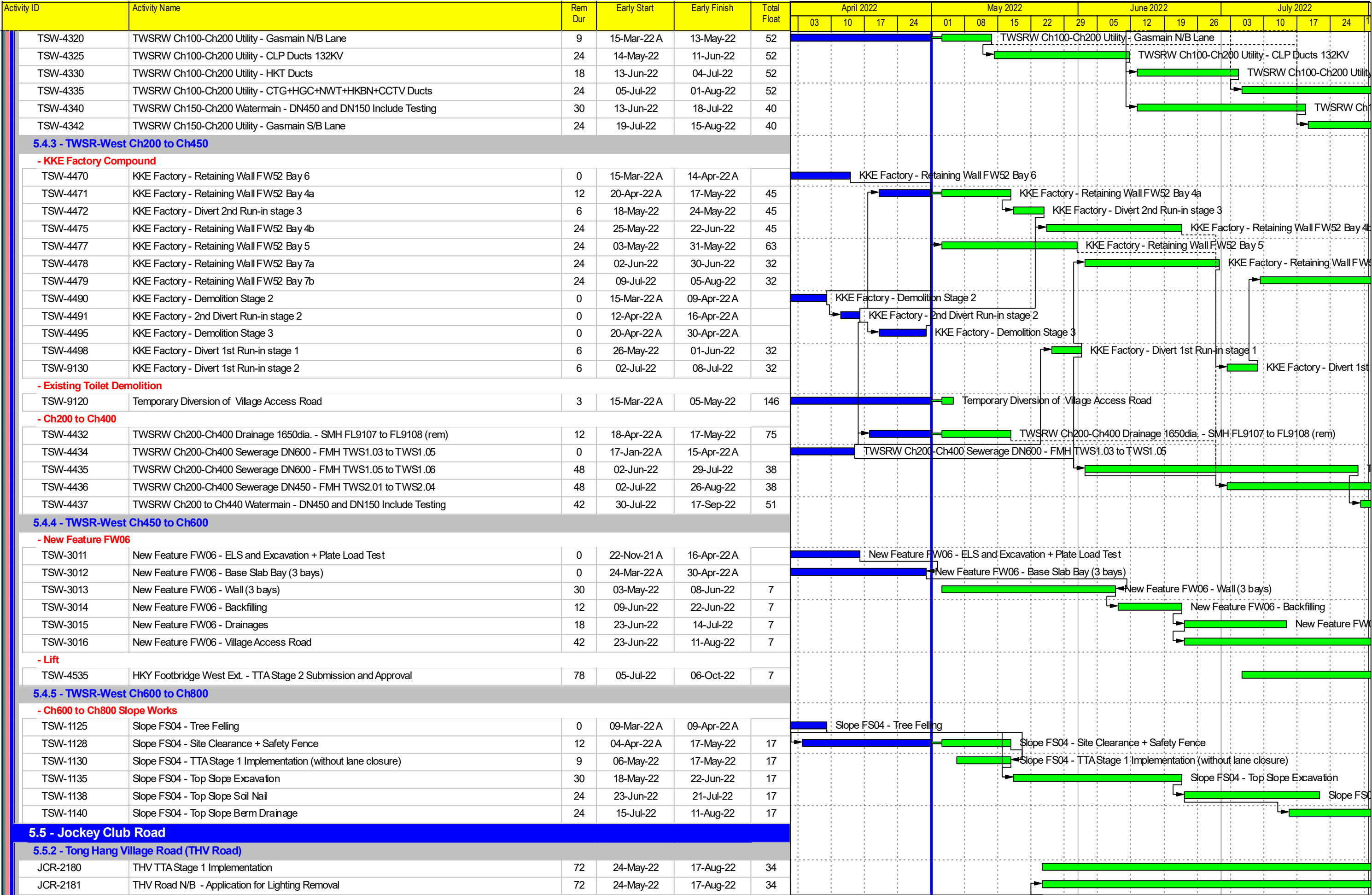
3MRP			
Date	Revision	Checked	Approved
01-May-22	Draft		



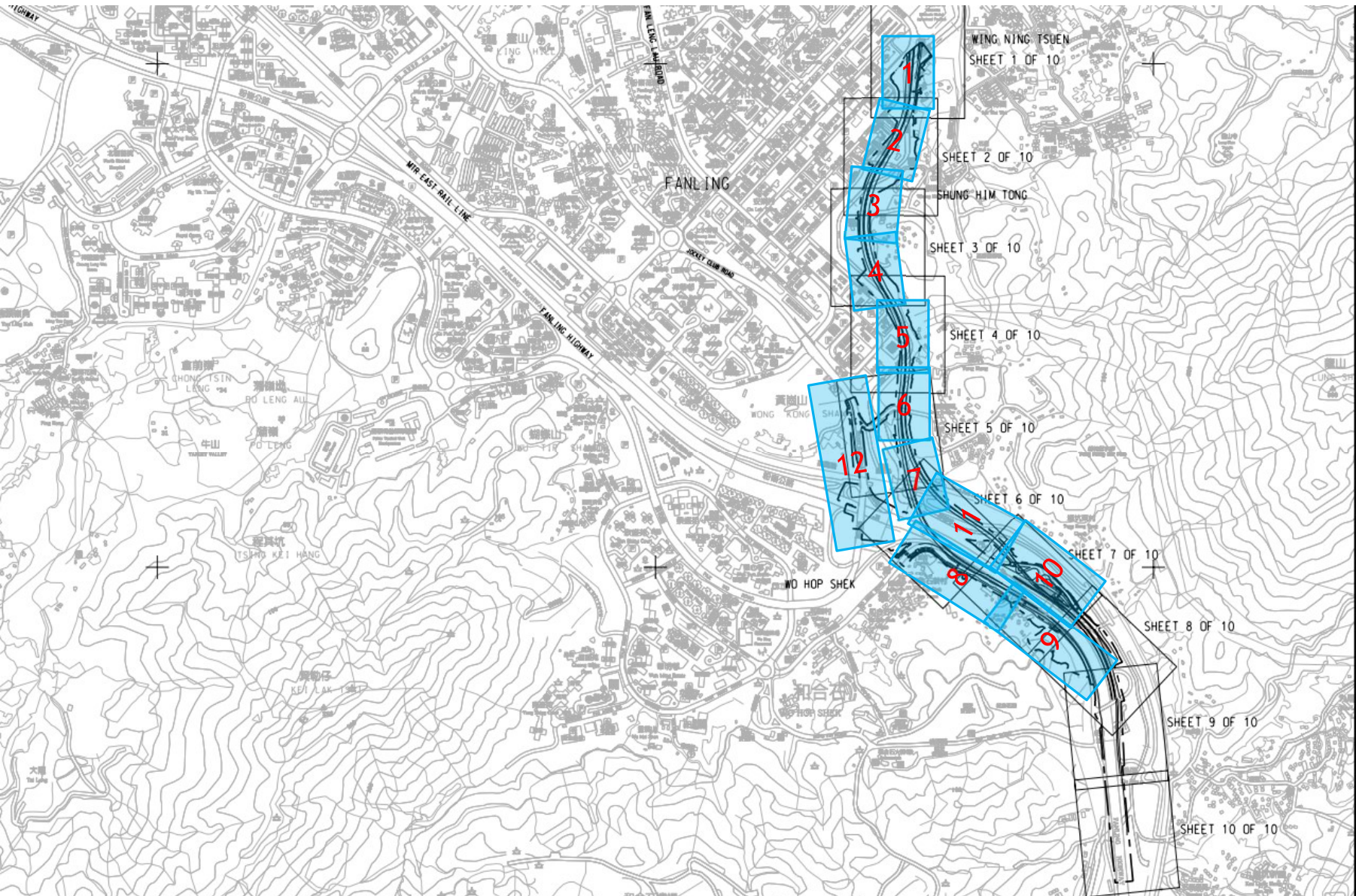








Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float	April 2022				May 2022				June 2022				July 2022				1	
						03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17		24
JCR-2190	THV Road N/B - Issue PMI for Ret Wall FW51	0	24-May-22		34																		
JCR-2193	THV Road N/B - Ret Wall FW51 Preparation Work	42	24-May-22	13-Jul-22	76																		
5.5.3 - North Bound																							
JCR-2340	JCR TTA Stage 1 Implementation	3	15-Mar-22 A	05-May-22	6																		
JCR-2350	JCR N/B - Application for Lighting Removal	24	01-Mar-22 A	31-May-22	9																		
JCR-2360	JCR N/B - Lighting Removal/Install Temporary Lighting	18	01-Jun-22	22-Jun-22	9																		
JCR-2370	JCR N/B - Slope Works FS05 - Site Clearance / Tree Felling	18	10-May-22	30-May-22	4																		
JCR-2375	JCR N/B - Slope Works FS05 - Slope Excavation	24	31-May-22	28-Jun-22	4																		
JCR-2380	JCR N/B - Slope Works FS05 - Existing Soil Nail Removal	30	29-Jun-22	03-Aug-22	4																		
JCR-2400	JCR N/B - Existing Featur 3SW-C/F63 - Excavate Loose Fill	5	19-Jan-22 A	07-May-22	4																		
JCR-2410	JCR N/B - Existing Featur 3SW-C/F63 - Rockfill	42	10-May-22	28-Jun-22	4																		
JCR-2420	JCR N/B - Road Formation	18	29-Jun-22	20-Jul-22	4																		
JCR-2430	JCR N/B - Drainage Works	36	21-Jul-22	31-Aug-22	4																		
JCR-2440	JCR N/B - Utility Install/Traffic Light Civil Provision	36	21-Jul-22	31-Aug-22	4																		
7.0 - Miscellaneous Works																							
MIS-100	Preservation and Protection of Trees	123	28-Oct-20 A	27-Sep-22	504																		



CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	JUN-19	TENDER DRAWING	RPCM
2			
3			
4			
5			
6			
7			
8			
9			
10			

STATUS

SCALE

A1 : 7000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

80335576

CONTRACT NO.

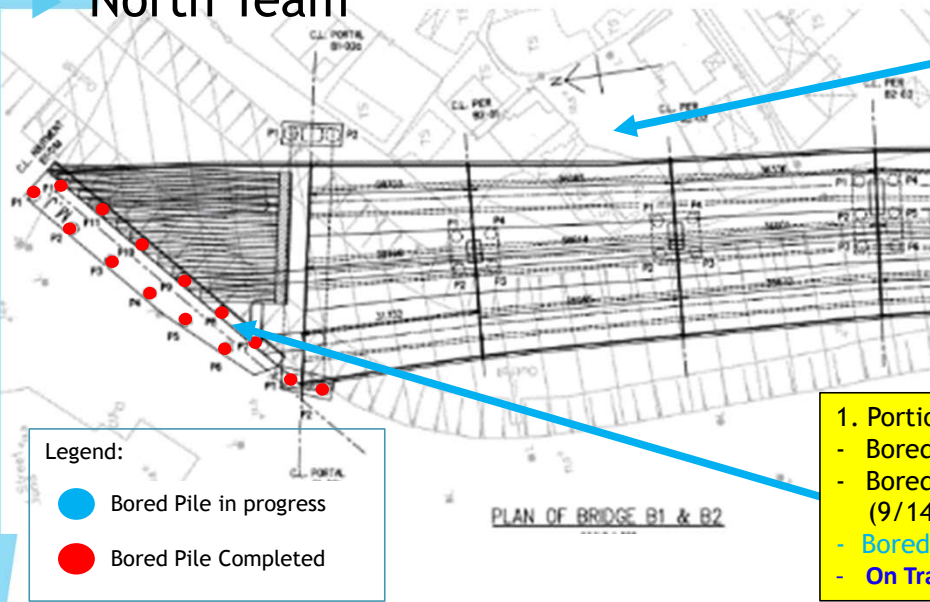
ND/2019/05

SHEET TITLE

KEY PLAN AND LOCATION PLAN

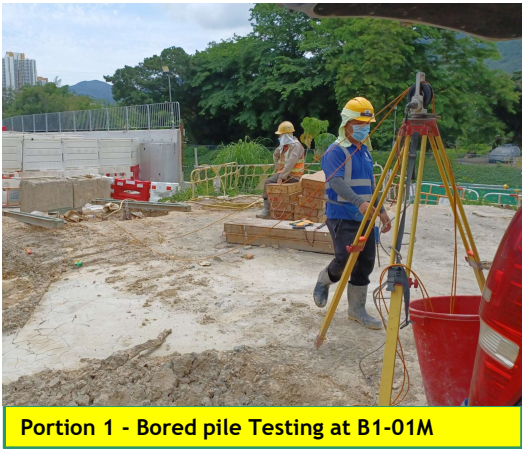
1

North Team



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



2 North Team

5. Portion 3 (C1-03)

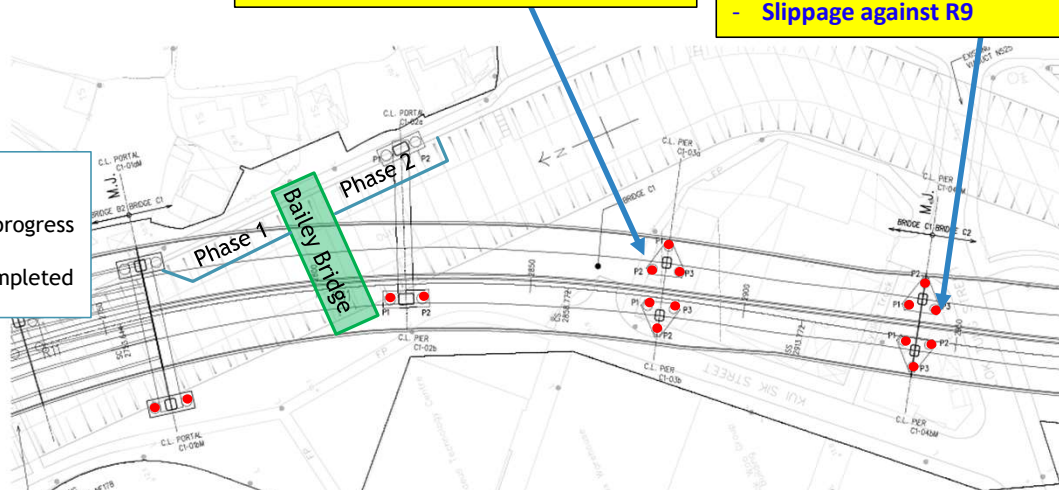
- Bored pile completed.
- Bored Piling testing completed - ES:14/05/22 EF:11/06/22
- ELS sheet piling in progress
- Ahead against R9

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



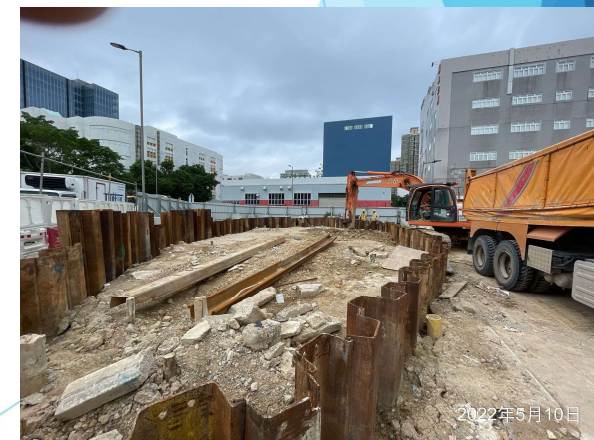
Bored Piles Testing works in C1-03



ELS Sheet Pile works in C1-03



ELS Sheet Pile works completed in C1-04



ELS excavation works in progress in C1-04

2022年5月10日

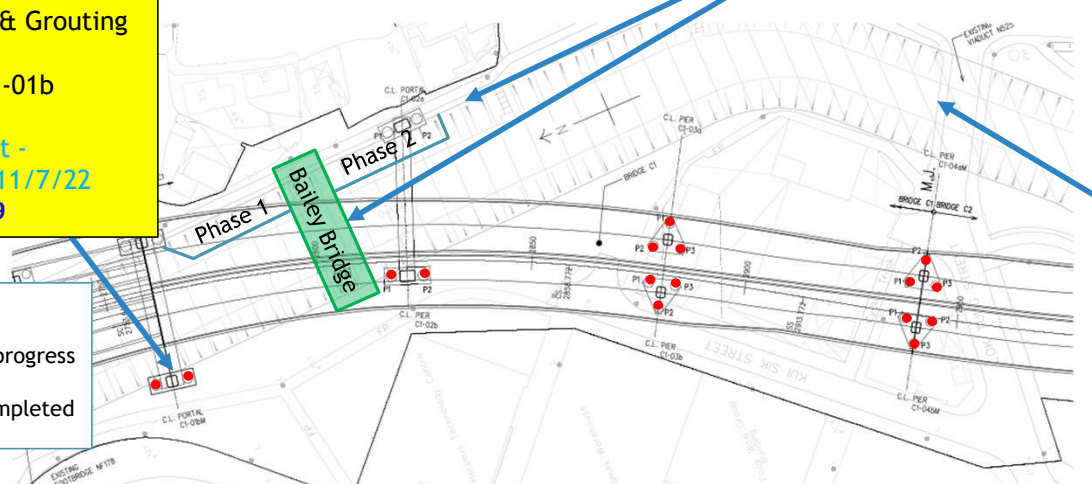
2 North Team

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

Legend:

- Bored Pile in progress
- Bored Pile Completed



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



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

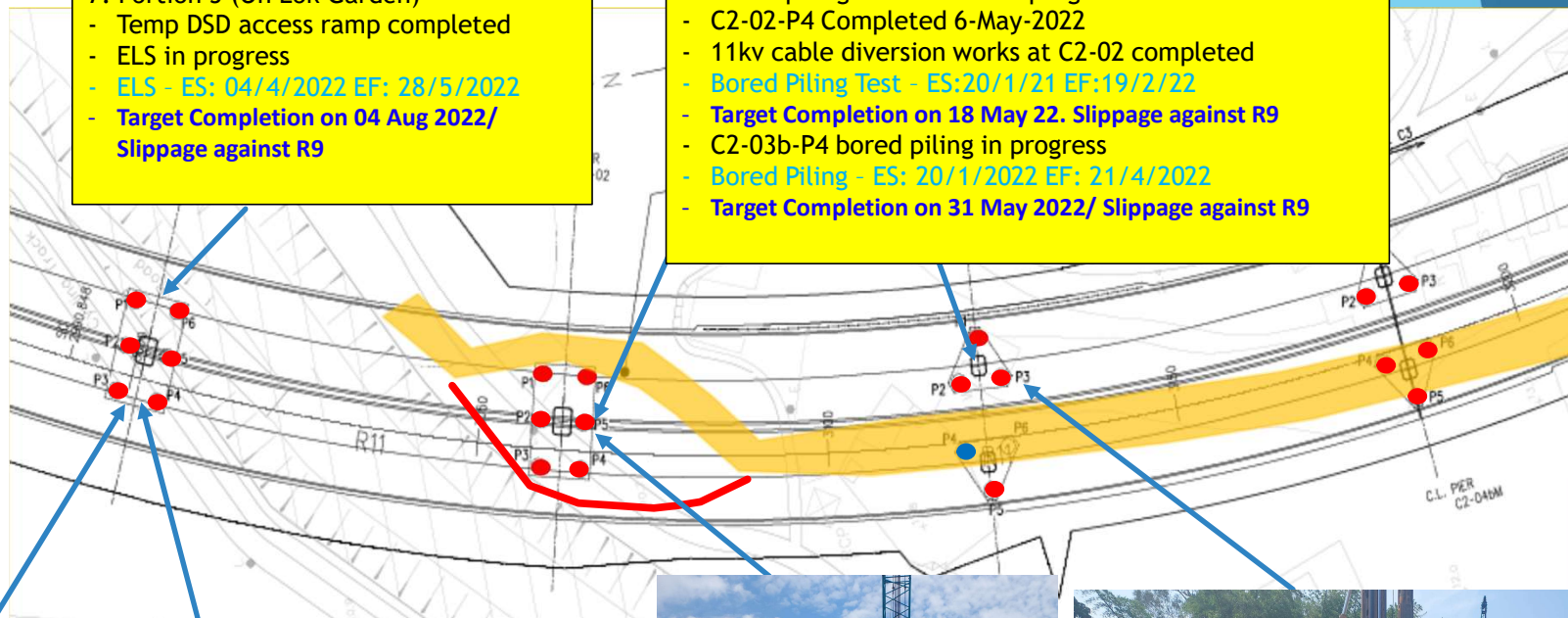
3 North Team

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



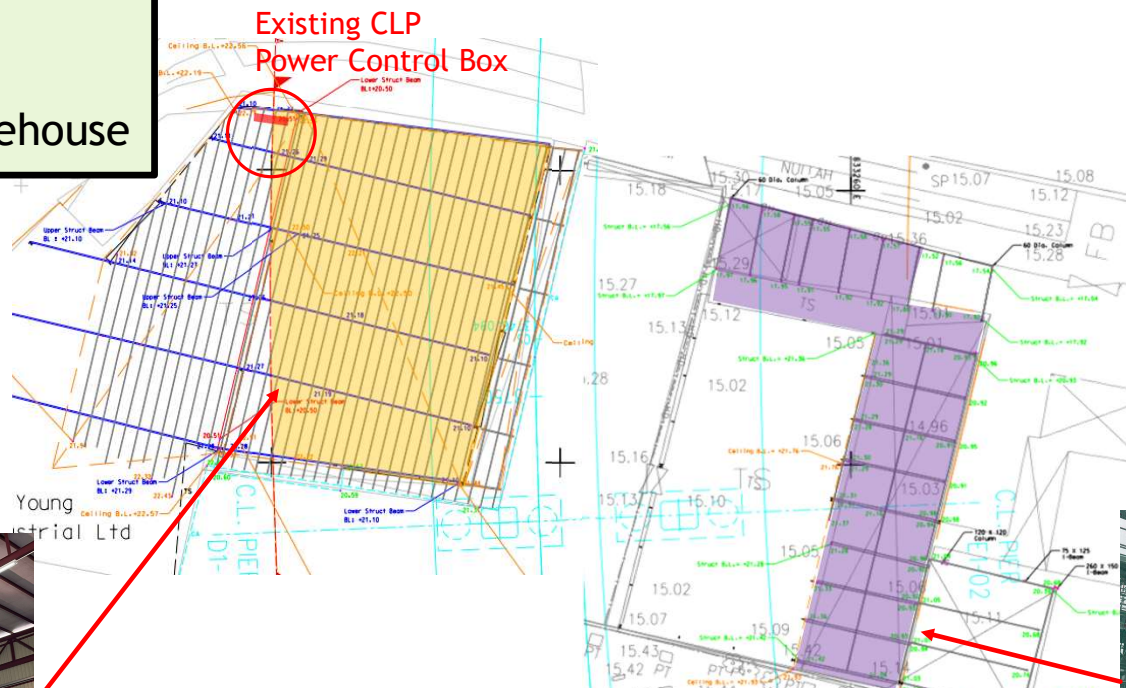
Stage 2 Modification works Completed



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

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

10. Portion 6

C4-01 portal beam

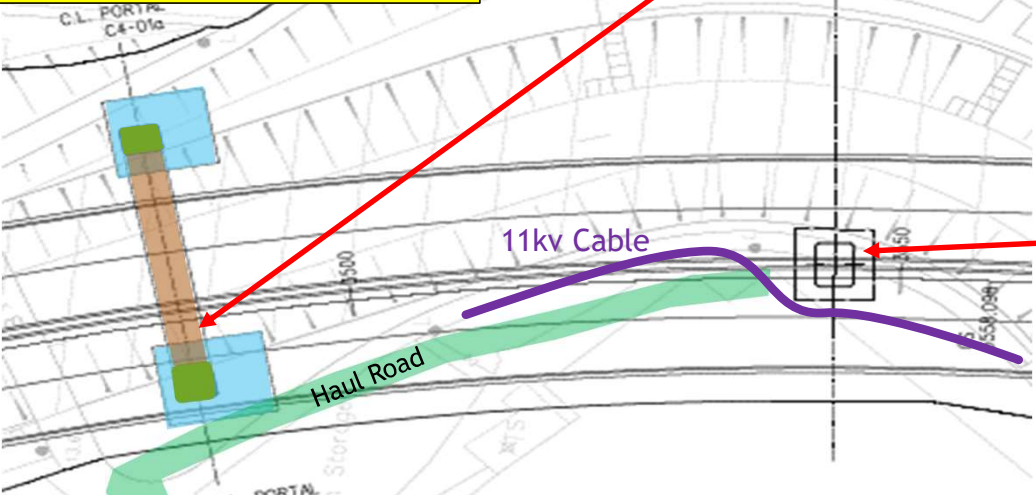
- 1st pour concreting completed, dismantling of formwork in progress
- C4-01 portal beam - ES:9/12/21 EF:16/3/22
- Target completion 7/6/2022. Slippage against R9

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

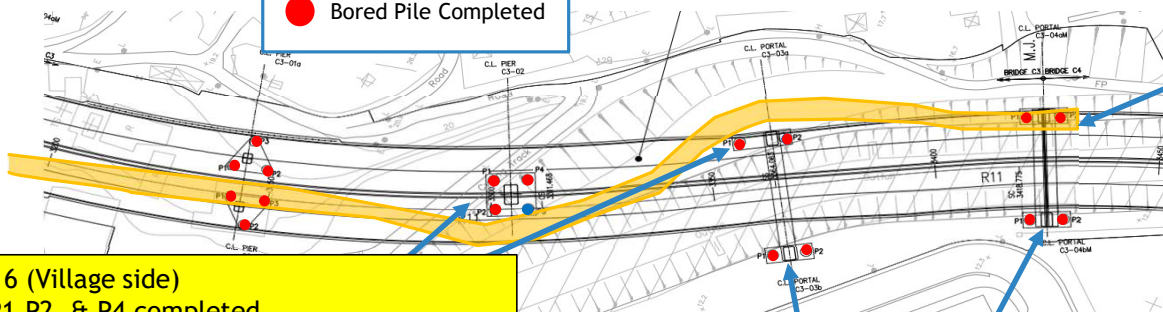


3rd layer of waling & strut for C4-02 ELS is completed on 7/5/22

5 North Team

Legend:

- Bored Pile in progress
- Bored Pile Completed



8. Portion 6 (Village side)

- C3-02-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 column 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

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



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

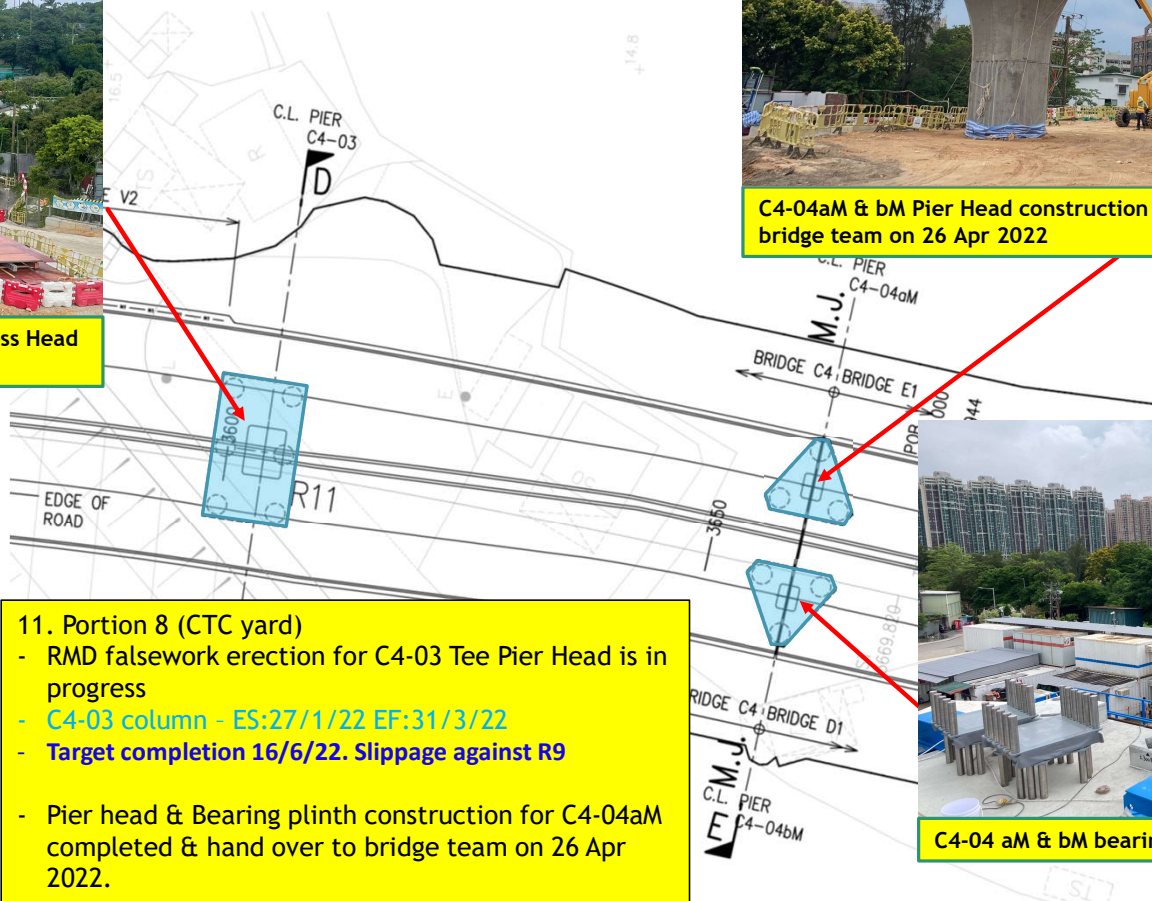
► North Team
Area Highlighted - C4-03 & C4-04



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



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.



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



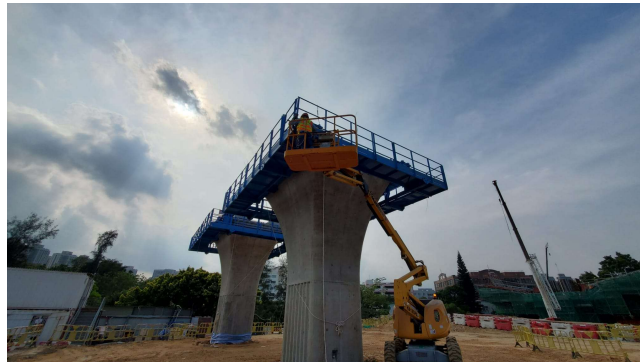
C4-04 aM & bM bearing plinths completed

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 was in progress



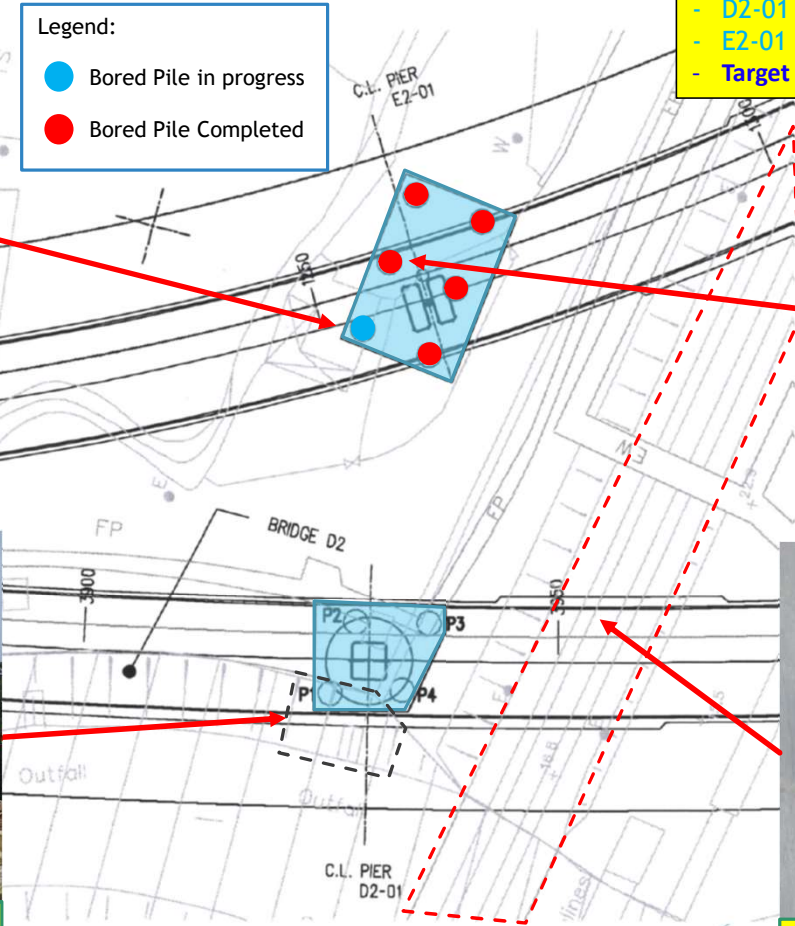
▶ North Team
Area Highlighted - E2-01 and Preparation Works for D2-01



E2-01-P1: RCD Drilling



Concrete block piling platform completed on 7 May 22



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-P6 completed on 21 Apr 22

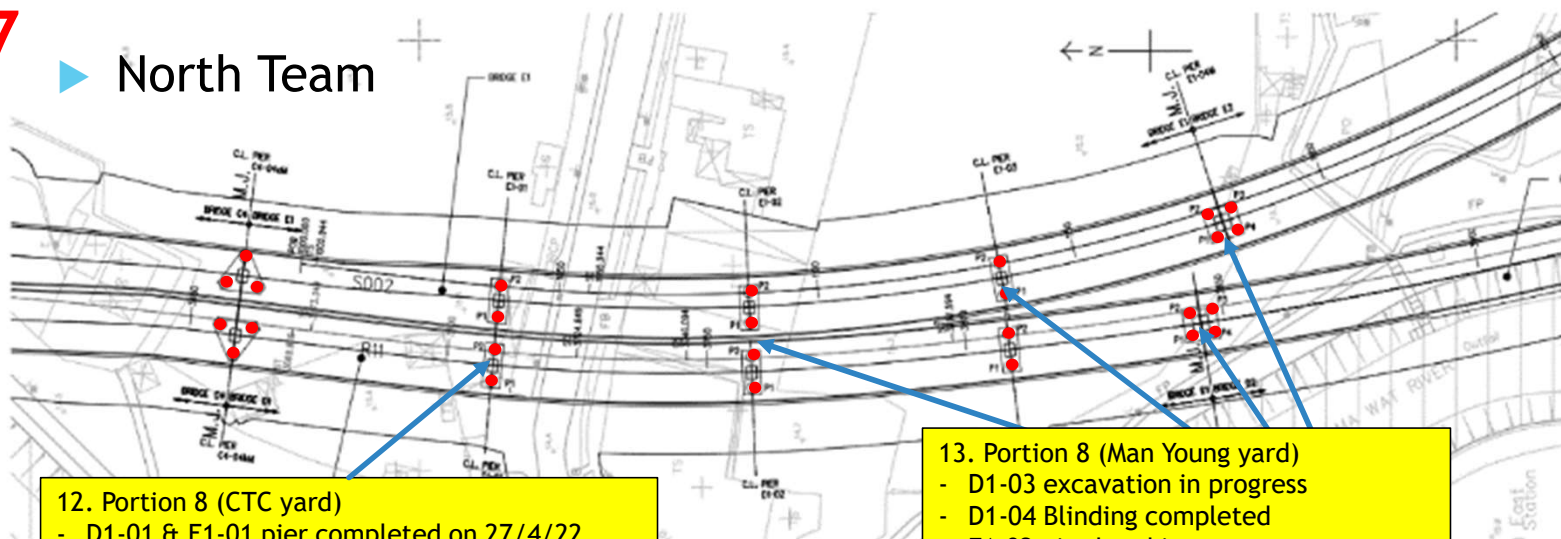


ADMS prisms installation completed on 6 May 22.



7

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)

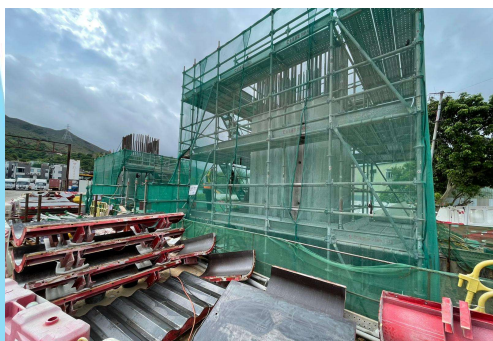
- D1-03 excavation in progress
- D1-04 Blinding completed
- E1-02 pier head in progress
- E1-03 pier in progress
- E1-04 Temporary Stockpiling
- ELS - ES:10/6/22 EF:5/8/22
- On track against R9



D1-04 Pile cap construction in Progress



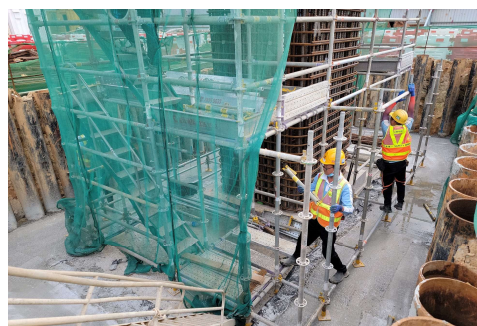
D1-03 ELS excavation in Progress



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

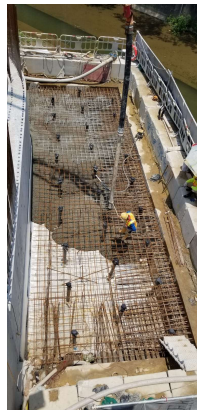
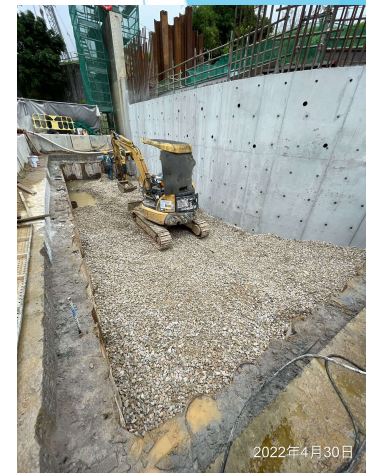


E1-04 Temporary Stockpiling

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

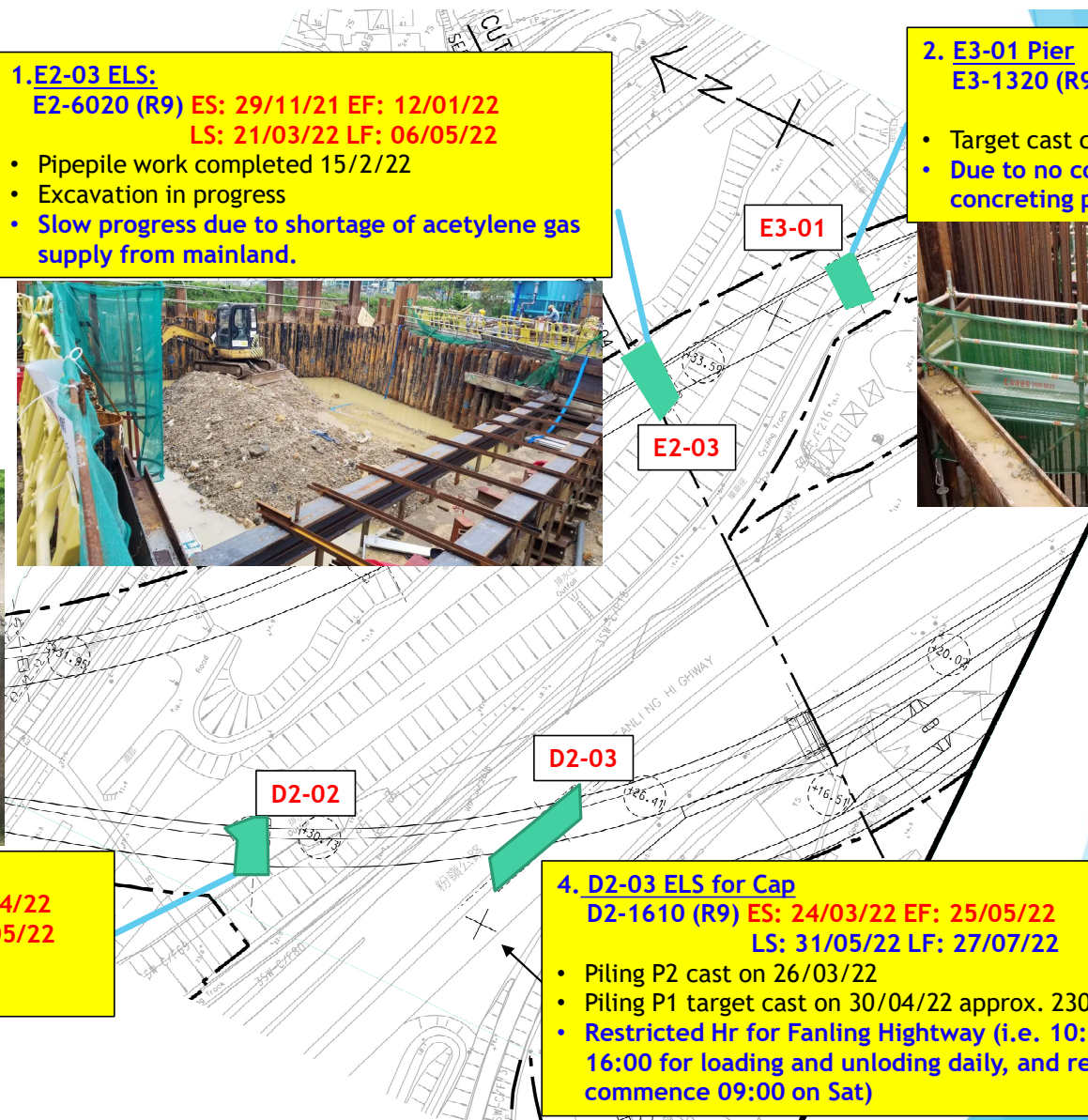
D2-1579 (R9) ES: 01/04/22 EF: 26/04/22
LS: 23/04/22 LF: 16/05/22

- 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 Highway (i.e. 10:00 to 16:00 for loading and unloading daily, and relax to commence 09:00 on Sat)



7 & 11

► Viaduct

Others

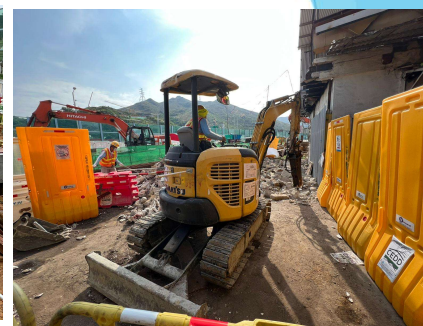
- Mono-strand external PT design of Bridge C1, C2, D2 and E4 was in progress
- Movement joint design drawings preparation was in progress
- Bridge rotation detail design for T-Span E2-01 and D2-01 by YWL was endorsed by ICE and fabrication of rotation system was in progress
- Loading test for 125t gantry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

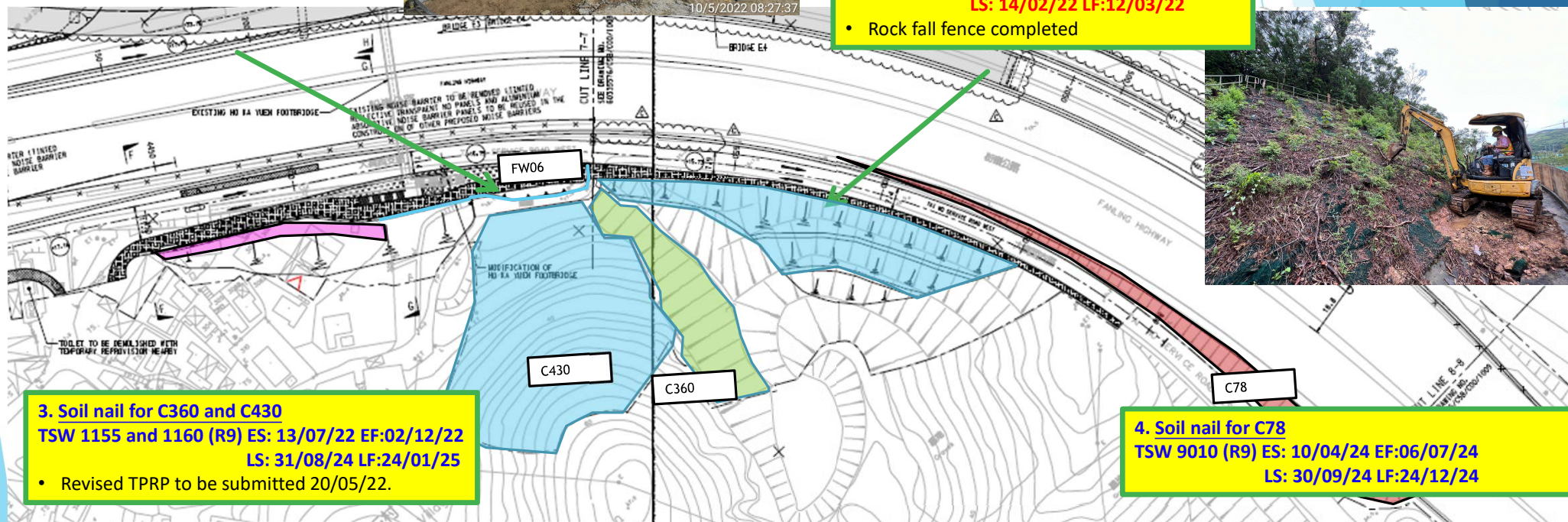
TSW 1135 (R9) ES: 20/01/22 EF: 19/02/22

LS: 14/02/22 LF:12/03/22

- Rock fall fence completed



13/5/2022 08:34:42



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

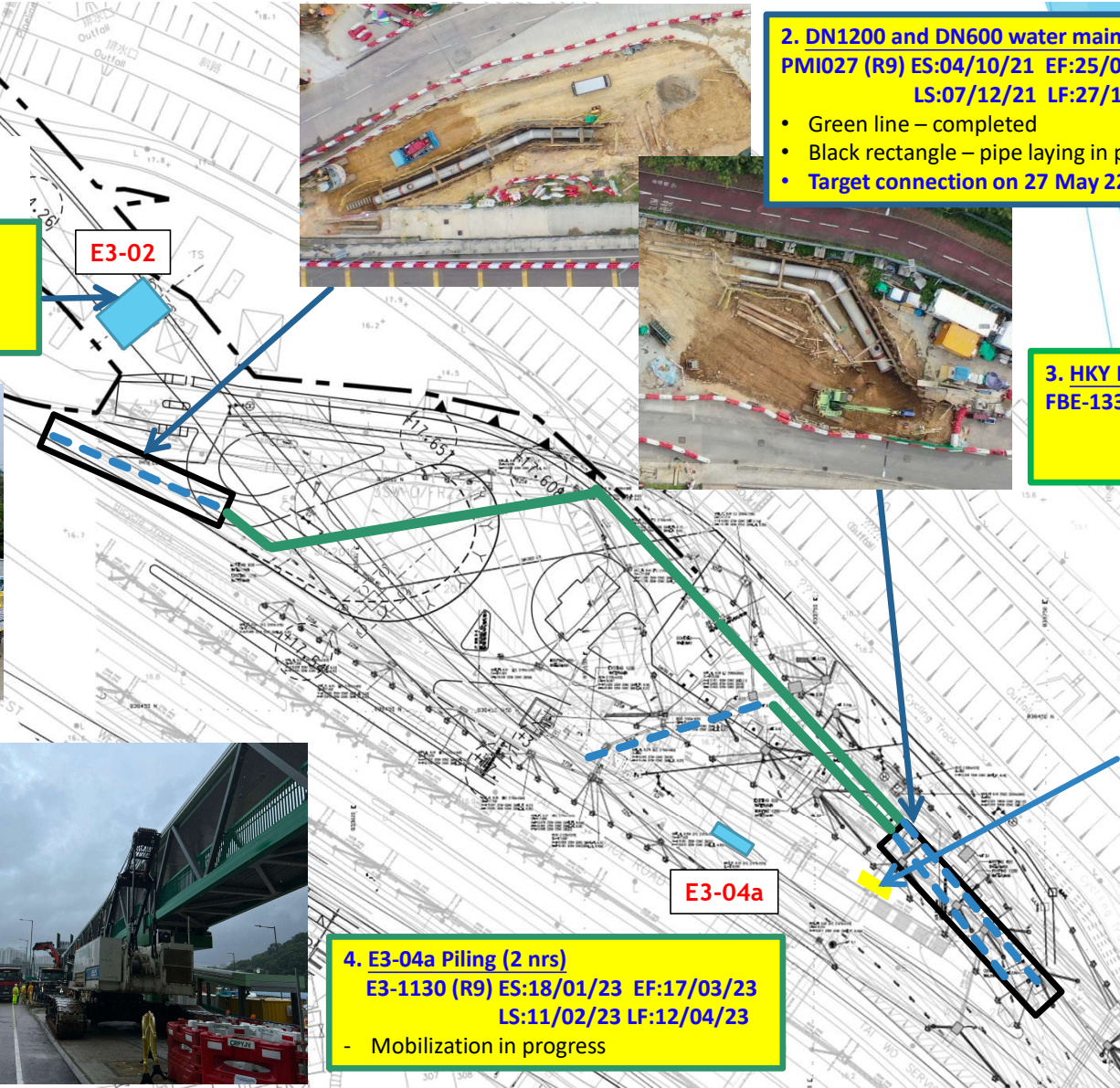
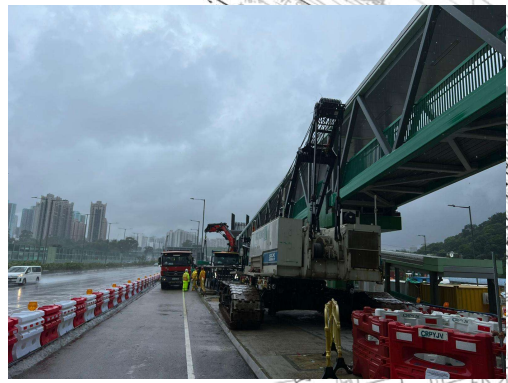
LS: 30/09/24 LF:24/12/24





► 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

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

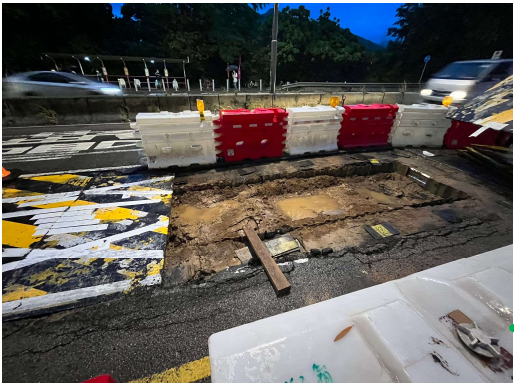
▶ Viaduct

Cast In-situ SOP Construction

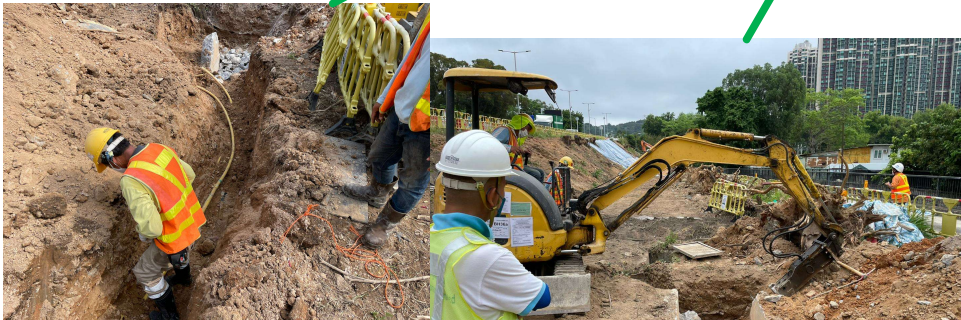
- Falsework and formwork design for cast in-situ SOP was under ICE endorsement. Method statements were submitted to AECOM for acceptance
- Pier E3-03 were handed over to Viaduct Team and commenced SOP construction preparation works
- Pier E2-02 were handed over to Viaduct Team and commenced falsework 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		May	Jun	2022	Jul	Aug	Sep
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works						1416	31-Aug-20 A	30-Aug-24	-244			
Key Dates and Sectional Completion of the Works						85	08-May-22	31-Jul-22	0			
Contractual Sectional Completion of the Works						85	08-May-22	31-Jul-22	0			
KDS1020	Section 2- Completion of site formation and infrastructure works in WorksArea B	0		08-May-22*	-37			◆ Section 2- Completion of site formation and infrastructure works in WorksArea B				
KDS1030	Section 3- Completion of site formation and infrastructure works in WorksArea C	0		31-Jul-22*	0					◆ Section 3- Completion of site formation and infrastructure works in WorksArea C		
Preliminaries, Contractor's Design, Method Statement Submission and Approval						660	30-Dec-20 A	20-Oct-22	197			
General Submission						290	30-Dec-20 A	10-Jun-22	-238			
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	290	30-Dec-20 A	10-Jun-22	-238			Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)				
Contractor's Design Submission and Approval						168	08-Feb-22 A	20-Oct-22	169			
Permanent Works Design						122	01-Jun-22	20-Oct-22	169			
PWD1030	Design for irrigation system	75	01-Jun-22	26-Aug-22	155						Design for irrigation system	
PWD1040	Design for noise barrier panel	90	08-Jul-22	20-Oct-22	169							
Major Temporary Works Design						60	08-Feb-22 A	26-May-22	68			
TWD1050	ELS design for construction of foundation of noise barrier	60	08-Feb-22 A	18-May-22	68			ELS design for construction of foundation of noise barrier				
TWD1055	Time risk allowance for ELS design for construction of foundation of noise barrier	7	19-May-22	26-May-22	68			Time risk allowance for ELS design for construction of foundation of noise barrier				
TWD1060	Formwork design for construction of noise barrier	45	24-Feb-22 A	17-May-22	69			Formwork design for construction of noise barrier				
TWD1065	Time risk allowance for Formwork design for construction of noise barrier	7	18-May-22	25-May-22	69			Time risk allowance for Formwork design for construction of noise barrier				
Major Construction Works Method Statement						60	29-Dec-21 A	23-Jun-22	44			
MS1580	Method statement submission and approval for construction of noise barrier	60	29-Dec-21 A	23-Jun-22	44			Method statement submission and approval for construction of noise barrier				
Tendering and Procurement for Major Subcontractor						250	26-Mar-21 A	31-May-22	169			
TDS1070	Subletting for road works	120	26-Mar-21 A	25-May-22	43			Subletting for road works				
TDS1110	Subletting for irrigation system works	100	05-May-21 A	31-May-22	155			Subletting for irrigation system works				
TDS1140	Subletting for supply and installation of noise barrier post and panels	30	01-Dec-21 A	31-May-22	169			Subletting for supply and installation of noise barrier post and panels				
Tree Works and Submission of the tree survey report and tree preservation and removal pr						102	02-Mar-22 A	15-Jul-22	2			
Tree Works on Ma Sik Road						102	02-Mar-22 A	15-Jul-22	2			
TWS1200	TPRP and Tree felling works (Ma Sik Road) (before Noise Barrier Construction)	80	02-Mar-22 A	25-May-22	44			TPRP and Tree felling works (Ma Sik Road) (before Noise Barrier Construction)				
TWS1210	TPRP and Tree transplanting works at the side of road (9nos) (before noise barrier construction)	80	28-Mar-22 A	15-Jul-22	2			TPRP and Tree transplanting works at the side of road (9nos) (before noise barrier construction)				
Section 1- Site Formation and Infrastructure Works in Area A						291	09-Aug-21 A	14-Sep-22	119			
Site Formation (Portion I- Area A 11042m2)						100	09-Aug-21 A	25-Jun-22	186			
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2						100	09-Aug-21 A	25-Jun-22	186			
S1-SF1011	Erection of hoarding along the site boundary (326m)	100	09-Aug-21 A	25-Jun-22	31			Erection of hoarding along the site boundary (326m)				
S1-SF1051	Ground investigation works (2nos) and trial pit(2nos) (PMI005)	80	30-Oct-21 A	25-Jun-22	186			Ground investigation works (2nos) and trial pit(2nos) (PMI005)				
Site Formation (Portion II- Area A 21900m2)						202	03-Jan-22 A	08-Sep-22	-41			
Site Formation Works in South Part of Portion II						202	03-Jan-22 A	08-Sep-22	-41			
S1-SF1415	Site formation works part 2 (12577m3) and Removal of temporary works, haul road and temporary accesses	75	03-Jan-22 A	08-Jun-22	-41			Site formation works part 2 (12577m3) and Removal of temporary works, haul road and temporary accesses				
S1-SF1417	Site formation works part 3 (12577m3) and Removal of temporary works, haul road and temporary accesses	78	09-Jun-22	08-Sep-22	-41							
Site Formation (Portion III- Area A 4900m2)						45	27-Jun-22	18-Aug-22	31			
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	27-Jun-22	01-Aug-22	31				Erection of hoarding along the site boundary (173m)			
S1-SF1546	Removal of existing feature 3SW-A/F85	15	02-Aug-22	18-Aug-22	31				Removal of existing feature 3SW-A/F85			
Site Formation (Portion IV- Area A 3800m2)						154	23-Dec-21 A	19-Jul-22	87			
S1-SF1765	Erection of hoarding along the site boundary (515m)	40	27-Jan-22 A	13-Jun-22	87			Erection of hoarding along the site boundary (515m)				
S1-SF1780	Site clearance	20	30-Dec-21 A	20-May-22	106			Site clearance				
S1-SF1800	Construction of haul road	21	23-Dec-21 A	20-May-22	106			Construction of haul road				
S1-SF1870	Site formation works(2391m3) (after site formation in Area D)	30	14-Jun-22	19-Jul-22	87			Site formation works(2391m3) (after site formation in Area D)				
Box Culvert BC3 and Outfall 10						97	28-Apr-22 A	01-Sep-22	-36			
Box Culvert BC3 (CH0 to CH168)						97	28-Apr-22 A	01-Sep-22	-36			
S1-BC0940	Backfilling from Bay 11 to Bay 14 (4620m3)	31	10-May-22	15-Jun-22	-157			Backfilling from Bay 11 to Bay 14 (4620m3)				
S1-BC0970	Construction of the box culvert side wall and top slab Bay 8	25	28-Apr-22 A	06-May-22 A			Construction of the box culvert side wall and top slab Bay 8					
S1-BC0980	Construction of the box culvert side wall and top slab Bay 7 (After Bay2)	25	15-Jun-22	14-Jul-22	-161			Construction of the box culvert side wall and top slab Bay 7 (After Bay2)				
S1-BC0990	Backfilling from Bay 7 to Bay 10 (4620m3)	31	15-Jul-22	19-Aug-22	-161			Backfilling from Bay 7 to Bay 10 (4620m3)				
S1-BC1000	Construction of the box culvert side wall and top slab Bay 6	25	04-Aug-22	01-Sep-22	-161							
S1-BC1050	Construction of the box culvert side wall and top slab Bay 2 and inspection chamber	30	10-May-22	14-Jun-22	-161			Construction of the box culvert side wall and top slab Bay 2 and inspection chamber				
S1-BC1052	Backfilling of Bay 2 (1155m3) Before handover of Area B	15	15-Jun-22	02-Jul-22	16			Backfilling of Bay 2 (1155m3) Before handover of Area B				
S1-BC1070	Backfilling of Bay 1 (1155m3) Before handover of Area B	15	10-May-22	26-May-22	-42			Backfilling of Bay 1 (1155m3) Before handover of Area B				
Noise Barrier NB63						100	11-Apr-22 A	05-Sep-22	1			
Noise Barrier NB63(Bay 18 to Bay 21)						72	13-Jun-22	05-Sep-22	-83			
S1-NB1265	Installation of Mini Piles(Bay18-Bay21 18 nos) (CSD) (Original:24nos H-pile,36days)	72	13-Jun-22	05-Sep-22	-83							
Noise Barrier NB63(Bay 13 to Bay 17)						50	11-Apr-22 A	01-Jun-22	-3			
S1-NB1160	Pre-drilling works (Bay13-Bay17) (10nos)	50	11-Apr-22 A	01-Jun-22	-3			Pre-drilling works (Bay13-Bay17) (10nos)				
Noise Barrier NB63(Bay 7 to Bay 12)						40	16-Jul-22	31-Aug-22	1			
S1-NB1170	Pre-drilling works (Bay7-Bay12) (8nos) (after diversion of existing footpath and tree felling & transplanting)	40	16-Jul-22	31-Aug-22	1							
Noise Barrier NB63(Bay 1 to Bay 6)						14	16-Jul-22	01-Aug-22	31			
S1-NB1020	UU detection and trial pit	14	16-Jul-22	01-Aug-22	31				UU detection and trial pit			
Drainage, Sewerage, Waterworks and Road Works						129	01-Mar-22 A	14-Sep-22	89			
Along Ma Sik Road						80	11-Jun-22	14-Sep-22	-191			
TTA -Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary						80	11-Jun-22	14-Sep-22	-191			
S1-CS1240	Implement TTA	10	11-Jun-22	22-Jun-22	-191			Implement TTA				
S1-CS1260	UU detection and trial pit	10	23-Jun-22	05-Jul-22	-191				UU detection and trial pit			
S1-CS1265	Sheetpile works and excavation	60	06-Jul-22	14-Sep-22	-191							
Along Proposed Cycletrack and Footpath						50	01-Mar-22 A	26-May-22	181			
Works in Portion I						50	01-Mar-22 A	26-May-22	181			
Works in Portion I CT74						50	01-Mar-22 A	26-May-22	181			
S1-CS1487	Drainage work (MNH_FL5.61 to MNH_FL5.64 158m)	50	01-Mar-22 A	26-May-22	181			Drainage work (MNH_FL5.61 to MNH_FL5.64 158m)				
Section 2- Site Formation and Infrastructure Works in Area B						72	31-May-22	24-Aug-22	-117			
Site Formation and Infrastructure Works in Area B1 & B2						72	31-May-22	24-Aug-22	-117			
Site Formation Works after trees felled in FL-G14.9						72	31-May-22	24-Aug-22	-117			

- 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-May-22)

Page : 1 of 2

Date	Revision	Checked	Approved
13-May-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	2022				
						May	Jun	Jul	Aug	Sep
S2-SF2378	Handling of site wastes and removal of haul road (After 31 May 2022) (CE102)	14	31-May-22*	16-Jun-22	-117		Handling of site wastes and removal of haul road (After 31 May 2022) (CE102)			
S2-SF2380	Construction of open channel (53m)	35	17-Jun-22	28-Jul-22	-117			Construction of open channel (53m)		
S2-SF2390	Erection of chain link fence (670m),and Removal of temporary works, haul road and temporary accesses (CE102)	43	06-Jul-22	24-Aug-22	-117				Erection of chain link fence (670m),and	
Section 3- Site Formation and Infrastructure Works in Area C						94	10-May-22	29-Aug-22	-25	
Site Formation and Infrastructure Works in Portion IV Area C (10730m2)						94	10-May-22	29-Aug-22	-25	
S3-SF1250	Remaining site formation works and Removal of temporary works,haul road and temporary accesses	30	10-May-22	14-Jun-22	-25		Remaining site formation works and Removal of temporary works,haul road and temporary accesses			
S3-SF1260	Construction of open channel (303m)	43	15-Jun-22	04-Aug-22	-25			Construction of open channel (303m)		
S3-SF1270	Erection of chain link fence (762m)	21	05-Aug-22	29-Aug-22	-25				Erection of chain link fence	
Section 4- Site Formation and Infrastructure Works in Area D						183	04-Feb-22 A	21-Nov-22	-41	
S4-SF1050	Site clearance	40	11-Feb-22 A	01-Jun-22	42		Site clearance			
S4-SF1120	Site formation works(10276m3)	80	04-Feb-22 A	21-Nov-22	-41					
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works						342	09-Nov-21 A	26-Nov-22	-17	
Road L1						342	09-Nov-21 A	26-Nov-22	-94	
Road L1 in Portion I (P700 CH 175 to CH245)						175	05-Jan-22 A	12-Aug-22	-6	
S5-RD1040	Construction of drainage (6nos Manholes 166m)	70	05-Jan-22 A	14-Jun-22	-197		Construction of drainage (6nos Manholes 166m)			
S5-RD1042	Construction of sewerage (2nos Manholes 107m)	30	10-May-22	14-Jun-22	-127		Construction of sewerage (2nos Manholes 107m)			
S5-RD1045	Construction of Irrigation system (168m)	50	15-Jun-22	12-Aug-22	-6			Construction of Irrigation system (168m)		
S5-RD1060	Fresh water main works (168m)	50	15-Jun-22	12-Aug-22	-6			Fresh water main works (168m)		
S5-RD1070	Flushing water main works (168m)	50	15-Jun-22	12-Aug-22	-6			Flushing water main works (168m)		
Road L1 in Portion V (P600 CH 100 to CH194)						172	11-Jan-22 A	05-Sep-22	-180	
S5-RD1275	Site clearance (after tree felled in FL-G14.3)	14	11-Jan-22 A	17-May-22	-87		Site clearance (after tree felled in FL-G14.3)			
S5-RD1315	Site formation works	30	10-May-22	14-Jun-22	-110		Site formation works			
S5-RD1345	Construction of drainage works (8nos Manholes 235m)	80	10-May-22	12-Aug-22	-197			Construction of drainage works (8nos Manholes 235m)		
S5-RD1350	Construction of sewerage works (4nos Manholes)	50	09-Jul-22	05-Sep-22	-197					Cons
Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175)						342	09-Nov-21 A	26-Nov-22	-197	
S5-RD1177	Site formation works	30	09-Nov-21 A	10-Jun-22	-109		Site formation works			
S5-RD1180	Construction of drainage (17nos Manholes 630m)	85	09-Mar-22 A	26-Nov-22	-197					
Road L2						50	10-May-22	08-Jul-22	94	
S5-RD1495	Site formation works	50	10-May-22	08-Jul-22	94		Site formation works			
Noise Barrier NB62						109	10-Feb-22 A	15-Sep-22	43	
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-Jun-22	-83		Installation of pre-bored Mini Piles (Bay 1-Bay 6 28nos)(2 rigs) (Original:36nos H-pile,54days)			
S5-NB1060	Excavation and construction of base slabs and wall stems(Bay 1-bay6)	70	24-Jun-22	15-Sep-22	43					
Section 6-Completion of Preservation And Protection Of Existing Trees						1146	31-Aug-20 A	30-Aug-24	-197	
S6-CS1000	Preservation and protection of trees	1146	31-Aug-20 A	30-Aug-24	-197					

Portion	Legend
I	
II	
III	
IV	
V	


PORTION II

- C&D waste disposal
- Construction of box culvert
- Filling works




PORTION I

- C&D waste disposal
- Drainage works
- Sewerage works
- Filling works
- Waterworks




PORTION V

- Site Clearance
- C&D waste disposal
- Mini piling works
- G.I . Works
- Construction of noise barrier
- Construction of site haul road
- Drainage works
- Sewerage works




PORTION IV

- Site Clearance
- Drainage works
- Sewerage works
- C&D waste disposal
- Filling works
- Tree felling / Disposal of yard waste
- Erection of site hoarding
- G.I. works
- Mini piling works
- Construction of site haul road



PORTION III

- Drainage works
- Sewerage works
- Erection of site hoarding



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: <u>6.1</u> ^[2]	SYR-IS1: <u>6.0</u> ^[2]
SS in mg/L (depth average) ^[1]	SYR-IS1: <u>75.6</u> or 120% of upstream control station, whichever is higher ^[3]	SYR-IS1: <u>83.1</u> or 130% of upstream control station, whichever is higher ^[3]
Turbidity in NTU (depth average) ^[1]	SYR-IS1: <u>48.2</u> or 120% of upstream control station, whichever is higher ^[3]	SYR-IS1: <u>50.9</u> or 130% of upstream control station, whichever is higher ^[3]
Arsenic in µg/L (depth average) ^[2]	SYR-IS1: <u>5.4</u> 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: <u>5.8</u> ^[2] SHST-IS2: <u>7.0</u> ^[2] MWR-IS3: <u>8.6</u> ^[2]	NTR-IS1: <u>5.7</u> ^[2] SHST-IS2: <u>6.8</u> ^[2] MWR-IS3: <u>8.5</u> ^[2]
SS in mg/L (depth average) ^[1]	NTR-IS1: <u>8.9</u> SHST-IS2: <u>4.0</u> MWR-IS3: <u>14.0</u> or 120% of upstream control station, whichever is higher ^[3]	NTR-IS1: <u>9.0</u> SHST-IS2: <u>4.0</u> MWR-IS3: <u>14.4</u> or 130% of upstream control station, whichever is higher ^[3]
Turbidity in NTU (depth average) ^[1]	NTR-IS1: <u>6.0</u> SHST-IS2: <u>4.4</u> MWR-IS3: <u>10.1</u> or 120% of upstream control station, whichever is higher ^[3]	NTR-IS1: <u>6.1</u> SHST-IS2: <u>4.7</u> MWR-IS3: <u>11.1</u> or 130% of upstream control station, whichever is higher ^[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/m³ - 80% of 11.7ng/m ³ – the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented)	11.7ng/m³ - 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 CH ₄ 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**

TEST REPORT

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

Test Report No.:	36404
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2022-05-06

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)	1.129
-------------------------	-------

PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-01	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23807	2203
Calibration Date:	4-Mar-22	4-Mar-22
Location:	Wellab Office (Calibration Room)	

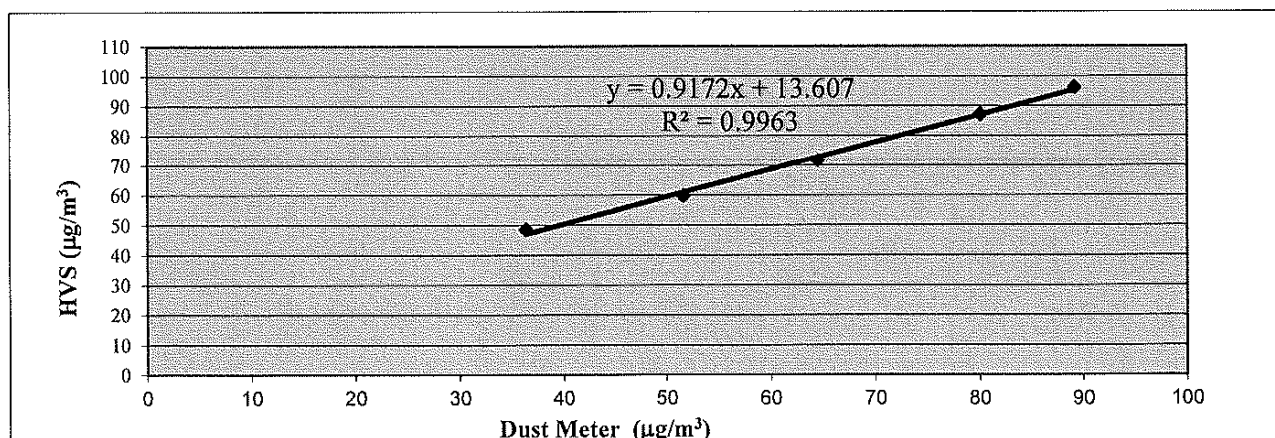
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	36	48
2	52	60
3	65	72
4	80	87
5	89	96
Average	64.4	72.6

By Linear Regression of Y on X
 Slope, mw = 0.9172 Intercept, bw = 13.6072
 Correlation coefficient* = 0.9981

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.6
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	64.4
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = $\left[K = \frac{\text{High Volume Sampler}}{\text{Dust Meter, } (\mu\text{g}/\text{m}^3)} \right]$ 1.129



QC Reviewer: 66 MAN H62 Signature: ke Date: 4/3/22

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

General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-01	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23807	2203
Calibration Date:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	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

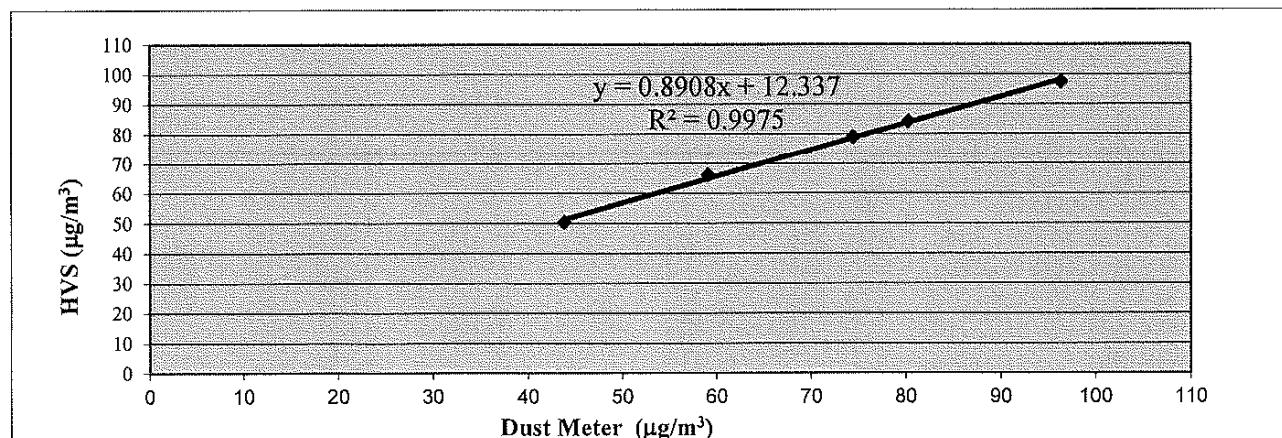
Correlation coefficient* = 0.9987

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	75.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	70.8
Measuring time, (min)	60

Set Correlation Factor, SCF

SCF = $[K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ 1.065



QC Reviewer:

LEE MAN HEI

Signature:

Lee

Date:

6-5-22

TEST REPORT

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

Test Report No.:	36404B
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2022-05-06

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.108
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-03	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23809	2203
Calibration Date:	4-Mar-22	4-Mar-22
Location:	Wellab Office (Calibration Room)	

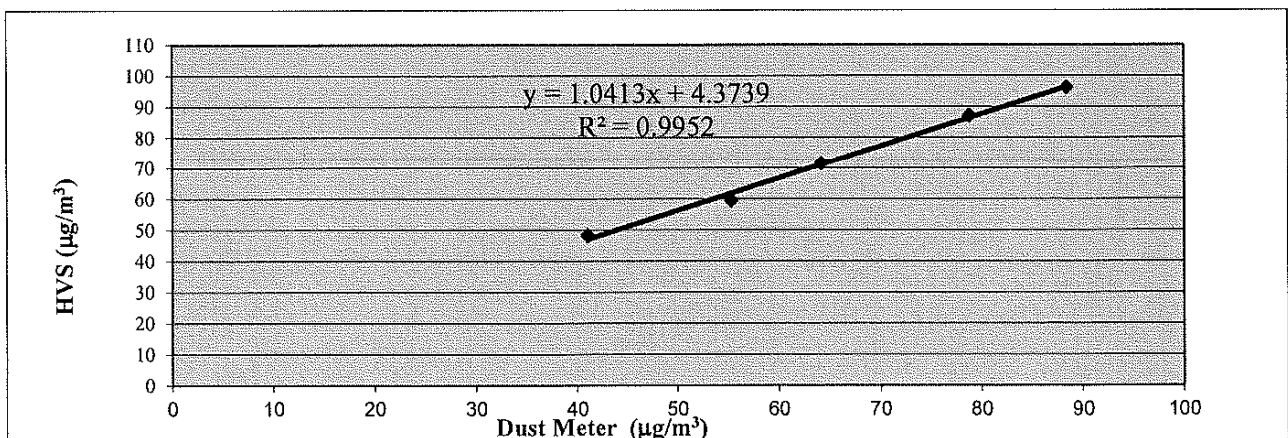
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	41	48
2	55	60
3	64	72
4	79	87
5	88	96
Average	65.6	72.6

By Linear Regression of Y on X
 Slope, mw = 1.0413 Intercept, bw = 4.3739
 Correlation coefficient* = 0.9976

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.6
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	65.6
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.108



QC Reviewer: LJB MAN HJB Signature: hw Date: 4/3/22

TEST REPORT

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

Test Report No.:	36645B
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.	: X23809
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-03

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.091
-------------------------	-------

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


PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-03	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23809	2203
Calibration Date:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

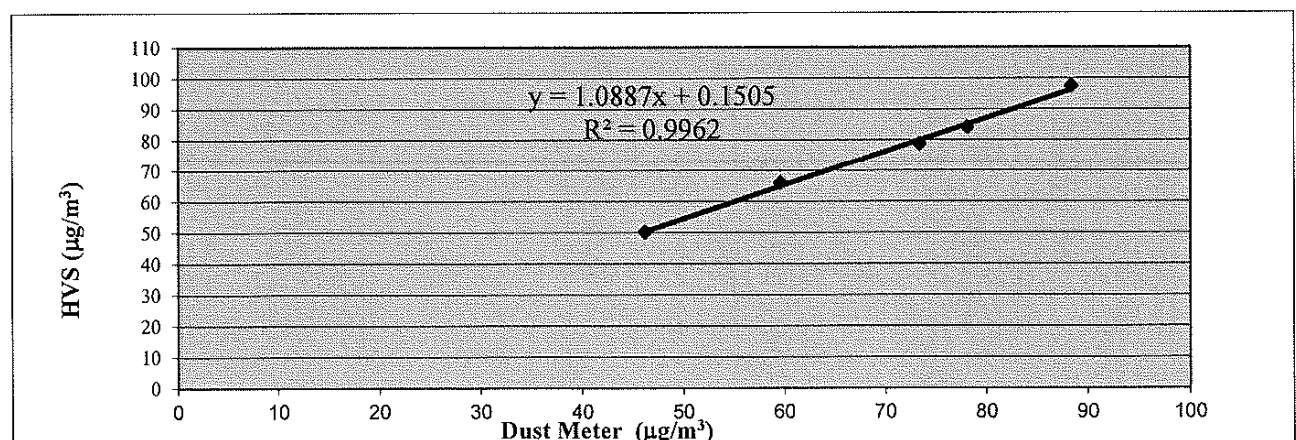
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	46	50
2	60	66
3	73	79
4	78	84
5	88	98
Average	69.1	75.4

By Linear Regression of Y on X
 Slope, $m_w =$ 1.0887 Intercept, $b_w =$ 0.1505
 Correlation coefficient* = 0.9981

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	75.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	69.1
Measuring time, (min)	60

Set Correlation Factor, SCF
 $\text{SCF} = [K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ 1.091



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

TEST REPORT

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

Test Report No.:	36404C
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2022-05-06

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.139
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-04	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23810	2203
Calibration Date:	4-Mar-22	4-Mar-22
Location:	Wellab Office (Calibration Room)	

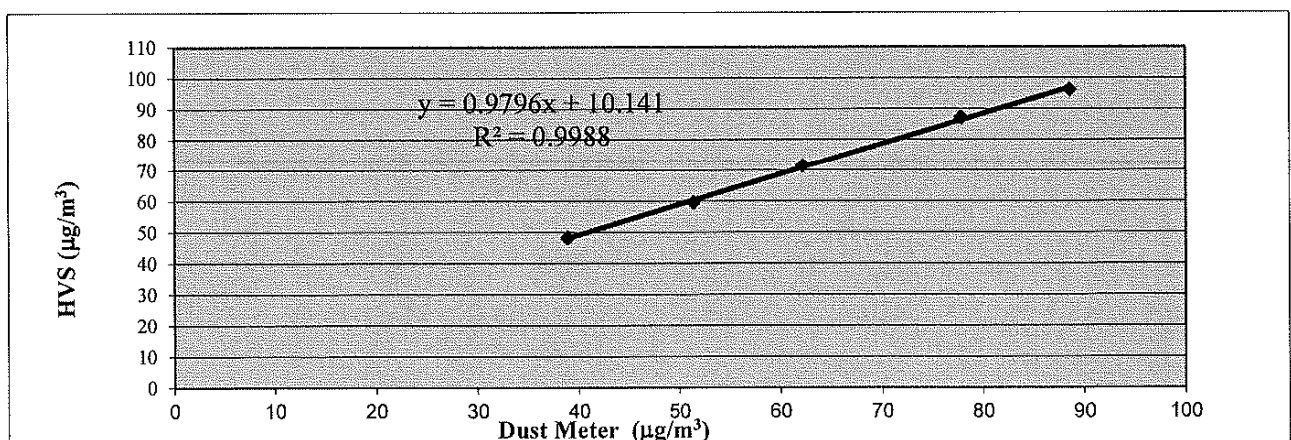
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	39	48
2	51	60
3	62	72
4	78	87
5	89	96
Average	63.8	72.6

By Linear Regression of Y on X
 Slope, mw = 0.9796 Intercept, bw = 10.1407
 Correlation coefficient* = 0.9994

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.6
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	63.8
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = $[K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ 1.139



QC Reviewer: LEE MAN HING Signature: hee Date: 4/3/22

TEST REPORT

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

Test Report No.:	36645C
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.	: X23810
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-04

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.056
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PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

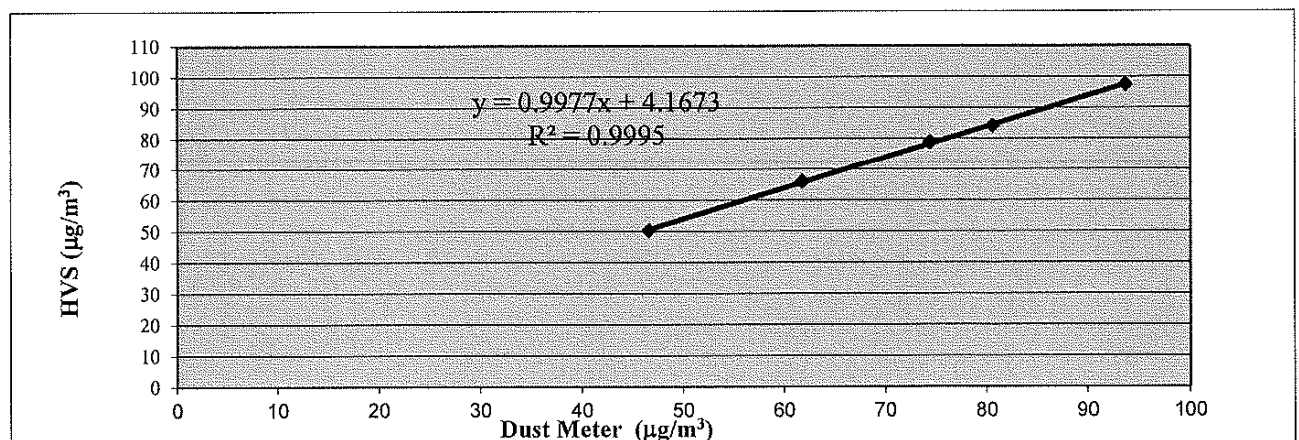
Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-04	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23810	2203
Calibration Date:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	47	50
2	62	66
3	74	79
4	81	84
5	94	98
Average	71.4	75.4
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>0.9977</u> Intercept, bw = <u>4.1673</u></p> <p>Correlation coefficient* = <u>0.9997</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	75.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	71.4
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] <u>1.056</u></p>	



QC Reviewer: LH Mon HBL Signature: her Date: 6-5-2022

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
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PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

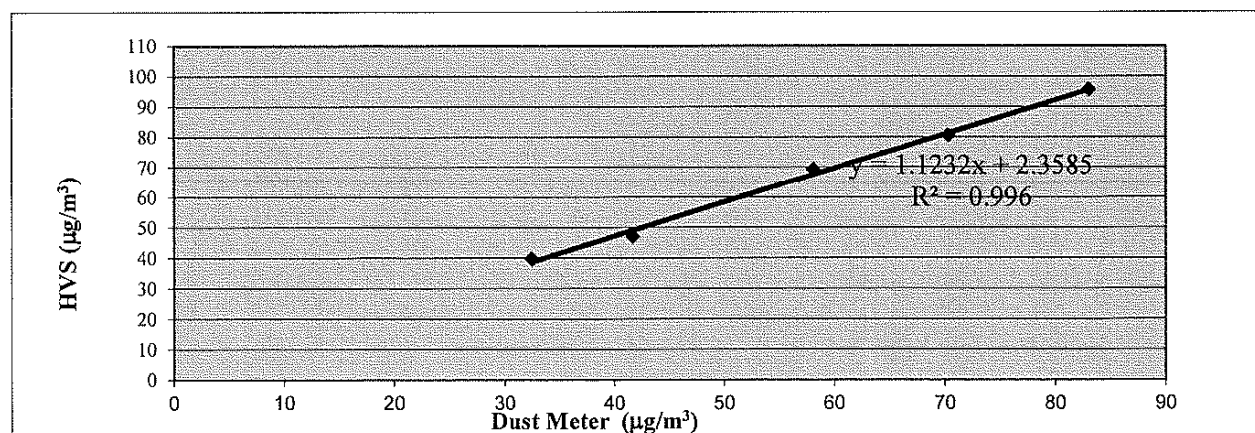
Calibration Report

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

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	33	40
2	42	47
3	58	69
4	70	81
5	83	96
Average	57.1	66.5
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>1.1232</u> Intercept, bw = <u>2.3585</u></p> <p>Correlation coefficient* = <u>0.9980</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	66.5
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	57.1
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] <u>1.165</u></p>	



QC Reviewer:

LEE MAN HEE

Signature:

Lee

Date:

23/4/22

TEST REPORT

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

Test Report No.:	36644A
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.	: X24477
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-06

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.134
-------------------------	-------

PREPARED AND CHECKED BY:

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



PATRICK TSE

General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-06	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24477	2203
Calibration Date:	23-Apr-22	23-Apr-22
Location:	Wellab Office (Calibration Room)	

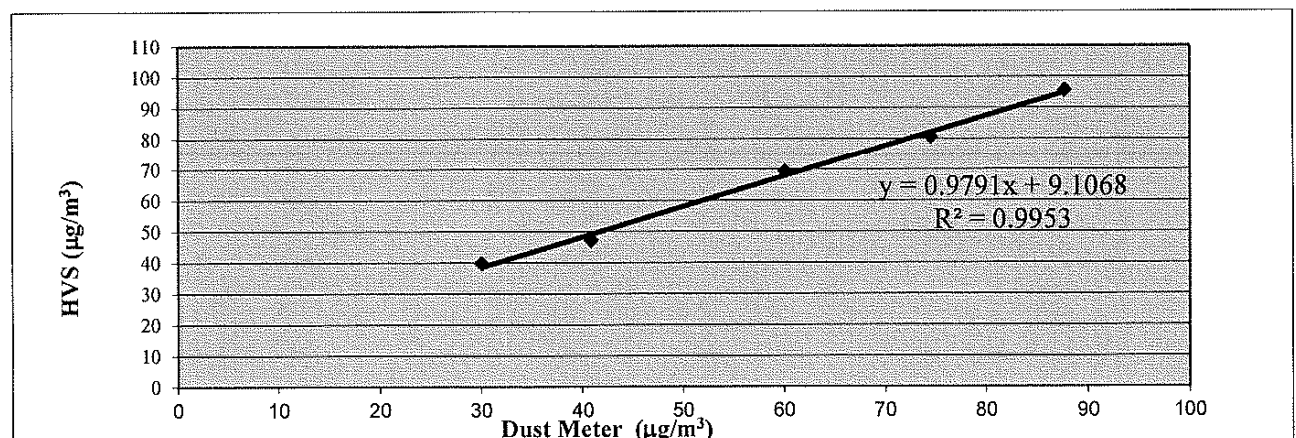
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	30	40
2	41	47
3	60	69
4	75	81
5	88	96
Average	58.7	66.5

By Linear Regression of Y on X
Slope, mw = 0.9791 Intercept, bw = 9.1068
Correlation coefficient* = 0.9977

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	66.5
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	58.7
Measuring time, (min)	60

Set Correlation Factor, SCF
SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.134



QC Reviewer: LZZ MIN H62 Signature: lei Date: 28/4/2022

TEST REPORT

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

Test Report No.:	36404D
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2022-05-06

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24475
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-07

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.090
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PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-07	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24475	2203
Calibration Date:	4-Mar-22	4-Mar-22
Location:	Wellab Office (Calibration Room)	

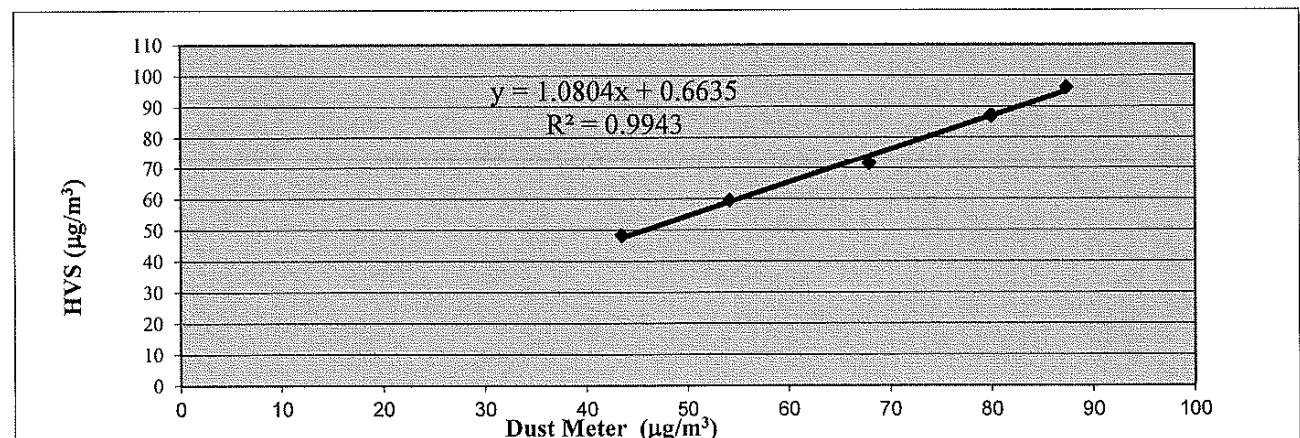
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	44	48
2	54	60
3	68	72
4	80	87
5	87	96
Average	66.6	72.6

By Linear Regression of Y on X
 Slope, $m_w =$ 1.0804 Intercept, $b_w =$ 0.6635
 Correlation coefficient* = 0.9972

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.6
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	66.6
Measuring time, (min)	60

Set Correlation Factor, SCF
 $\text{SCF} = [K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ 1.090



QC Reviewer: LEE MAN HEE Signature: hee Date: 4/3/22

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

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24475
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-07

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.119
-------------------------	-------

PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-07	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24475	2203
Calibration Date:	6-May-22	6-May-22
Location:	Wellab Office (Calibration Room)	

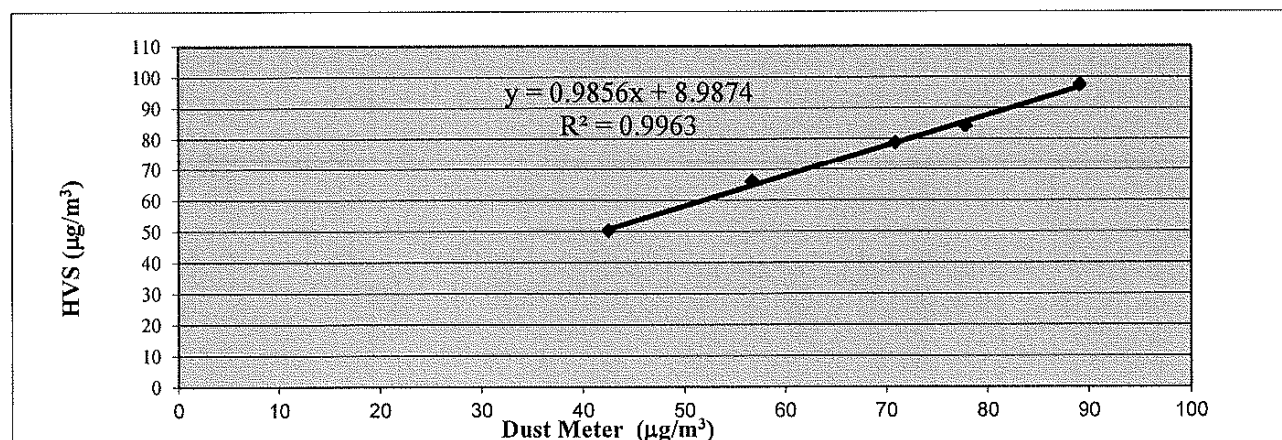
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	43	50
2	57	66
3	71	79
4	78	84
5	89	98
Average	67.4	75.4

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	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	75.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	67.4
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.119



QC Reviewer: LLE MDW KBZ Signature: ku Date: 6-5-2022

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

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)	1.098
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

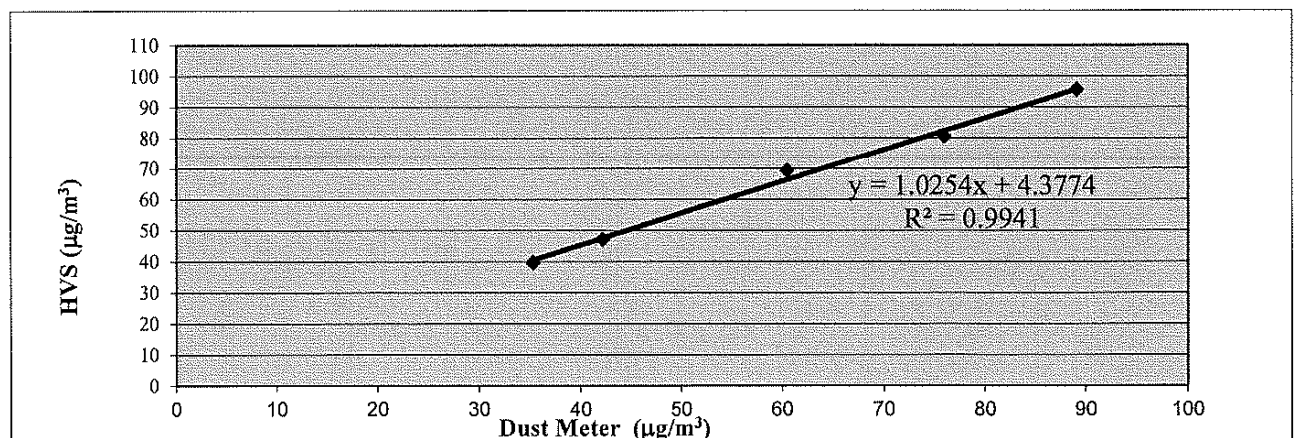
Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	23-Apr-22	23-Apr-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	35	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 = <u>1.0254</u> Intercept, bw = <u>4.3774</u> Correlation coefficient* = <u>0.9971</u>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	66.5
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	60.6
Measuring time, (min)	60
Set Correlation Factor, SCF SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] <u>1.098</u>	



QC Reviewer: LEE MWN HFZ Signature: hee Date: 23/4/2022

TEST REPORT

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

Test Report No.:	36644D
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.	: X24478
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-10

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.145
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

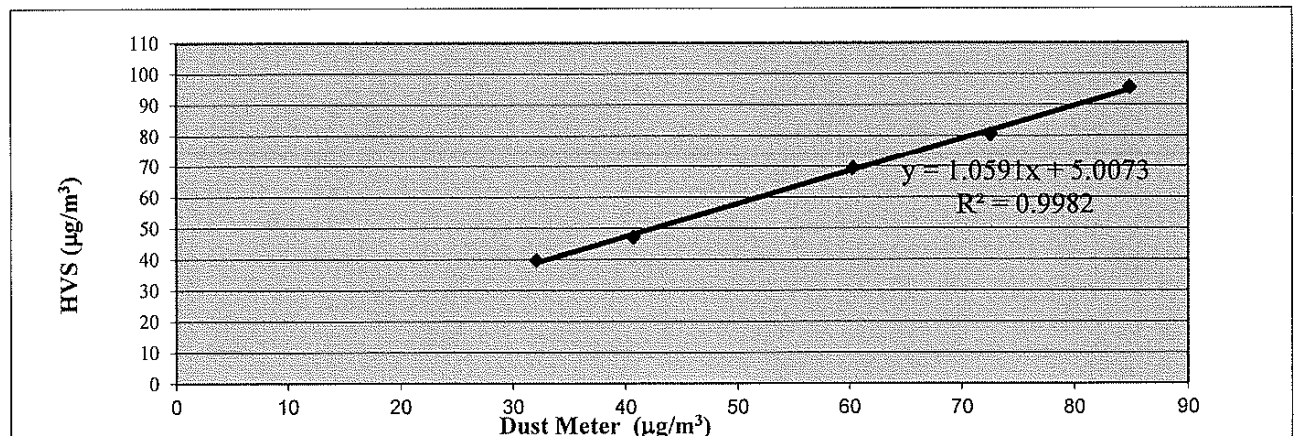
TSP - Total Suspended Particulates (1 hr Dust Meter) Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	23-Apr-22	23-Apr-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	32	40
2	41	47
3	60	69
4	73	81
5	85	96
Average	58.1	66.5
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>1.0591</u> Intercept, bw = <u>5.0073</u></p> <p>Correlation coefficient* = <u>0.9991</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	66.5
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	58.1
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] <u>1.145</u></p>	



QC Reviewer: LEE MIN HEE Signature: hee Date: 23/4/2022

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Station <u>FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark</u>	File No. <u>WMA20002/20/0011</u>
Date: <u>15-Mar-22</u>	Operator: <u>HL</u>
Equipment No.: <u>WA-12-20</u>	Next Due Date: <u>14-May-22</u>
	Serial No. <u>3223</u>

Ambient Condition			
Temperature, Ta (K)	295.2	Pressure, Pa (mmHg)	761.5

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

Calibration of TSP Sampler					
Calibration Point	Orifice			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	10.2	3.21	54.85	7.1	2.68
2	8.6	2.95	50.38	6.0	2.46
3	6.2	2.50	42.80	4.4	2.11
4	4.8	2.20	37.68	3.4	1.85
5	3.6	1.91	32.65	2.5	1.59

By Linear Regression of Y on X

Slope, mw = 0.0488 Intercept, bw = 0.0088
 Correlation coefficient* = 0.9998

*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 = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.39

Remarks: _____

Conducted by: <u>LEE MAN HING</u>	Signature: <u>Lee</u>	Date: <u>15/3/2022</u>
Checked by: <u>Ho Ka Chun</u>	Signature: <u>Ho</u>	Date: <u>15/3/2022</u>

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

Station: FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark File No.: WMA20002/20/0012
Date: 11-May-22 Operator: HL
Equipment No.: WA-12-20 Next Due Date: 10-Jul-22
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	Orifice			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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>4.08</u>	

Remarks: _____

Conducted by: Mr. M. H. H. Signature: Hei Date: 11/5/2022
Checked by: Mr. L. H. H. Signature: Hei Date: 11/5/2022

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

Station FLN-DMS3 - House near Tong Hang
Date: 21-Mar-22
Equipment No.: WA-12-17

File No. WMA20002/17/0011
Operator: HL
Next Due Date: 20-May-22
Serial No. 3218

Ambient Condition			
Temperature, Ta (K)	296	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	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
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	Orifice			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	14.5	3.83	65.33	9.8	3.15
2	11.6	3.42	58.45	7.5	2.75
3	9.6	3.11	53.19	6.6	2.58
4	6.4	2.54	43.46	4.2	2.06
5	3.3	1.83	31.26	2.4	1.56

By Linear Regression of Y on X

Slope, mw = 0.0465

Intercept, bw : 0.0807

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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.28

Remarks: _____

Conducted by: LEE MAN HEE

Signature: _____

Date: 21/3/2022

Checked by: KA OUN

Signature: _____

Date: 21/3/2022

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Station <u>FLN-DMS3 - House near Tong Hang</u>	File No. <u>WMA20002/17/0012</u>
Date: <u>17-May-22</u>	Operator: <u>HL</u>
Equipment No.: <u>WA-12-17</u>	Next Due Date: <u>16-Jul-22</u>
	Serial No. <u>3218</u>

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	Orifice			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

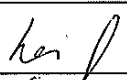
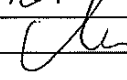
Slope, mw = 0.0463 Intercept, bw = 0.0231

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

Remarks: _____

Conducted by: <u>DL MAM 1/12</u>	Signature: <u></u>	Date: <u>17/5/2022</u>	
Checked by: <u>DL KA 1/12</u>	Signature: <u></u>	Date: <u>17/5/2022</u>	

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

Station KTN-DMS4A - Temporary Structure at Pak Shek Au File No. WMA20002/03/0011
Date: 22-Mar-22 Operator: HL
Equipment No.: WA-11-03 Next Due Date: 21-May-22
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	297	Pressure, Pa (mmHg)	762.6

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	8.05	48.48	48.15	1.36	9.1	1.98
2	6.8	6.85	44.71	44.41	1.26	7.5	1.79
3	5.1	5.13	38.74	38.48	1.09	5.9	1.59
4	3.2	3.22	30.73	30.52	0.86	4.1	1.33
5	2.6	2.62	27.71	27.53	0.78	3.4	1.21

By Linear Regression of Y on X

Slope, mw = 0.0361 Intercept, bw = 0.2132
Correlation coefficient* = 0.9983

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

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
Set Point Flow Rate., SFR	
$SFR = 1.13 \times (760 / Pa) \times (Ta / 298) =$	<u>39.66</u>
Sampler Well - Type Manometer Set Point, SSP	
$SSP = [(mw \times SFR + bw)^2 \times Pa] / (Ta + 30) =$	<u>6.31</u>

Remarks: _____

Conducted by: Lee Hui Hui Signature: Lee Hui Hui Date: 22/3/2022
Checked by: Wong Ka Chun Signature: Wong Ka Chun Date: 22/3/2022

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

Station KTN-DMS4A - Temporary Structure at Pak Shek Au File No. WMA20002/03/0012
Date: 18-May-22 Operator: HL
Equipment No.: WA-11-03 Next Due Date: 17-Jul-22
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) $DEL Hc = \Delta H \times (Pa/760 \times 298/Ta)$
(2) $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\}/mc$ (m3/min)
(3) $Qa = Qstd \times (Ta / Pa) \times (760 / 298)$ (m3/min)

*If Correlation Coefficient < 0.990, check and recalibrate.

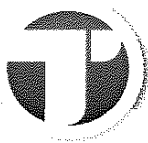
Set Point Calculation	
Set Point Flow Rate., SFR	
$SFR = 1.13 \times (760/Pa) \times (Ta/298) =$	<u>40.31</u>
Sampler Well - Type Manometer Set Point, SSP	
$SSP = [(mw \times SFR + bw)^2 \times Pa] / (Ta + 30) =$	<u>5.82</u>

Remarks: _____

Conducted by: HLL WMA HLL
Checked by: HLL WMA HLL

Signature: HLL WMA HLL
Signature: HLL WMA HLL

Date: 18/5/2022
Date: 18/5/2022



RECALIBRATION

DUE DATE:

January 20, 2023

Certificate of Calibration

Calibration Certification Information

Cal. Date: January 20, 2022 Rootmeter 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)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (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=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
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= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$	

Standard Conditions

Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH: calibrator manometer reading (in H2O)	
ΔP: rootmeter 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

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

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.	: 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

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

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. : 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
General Manager

TEST REPORT

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

Test Report No.: 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

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	36481A
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.	: 580013
Equipment No.	: WN-01-09

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 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

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration**Item for calibration:**

Description : Acoustical Calibrator
Manufacturer : SVANTEK
Model No. : SV30A
Serial No. : 24791
Equipment No. : N-09-04

Test conditions:

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

Methodology:

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

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

APPLICANT: Wellab Limited
(EM&A Department)
Room 1701, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	35909A
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.	: 24780
Equipment No.	: N-09-05

Test conditions:

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

Methodology:

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

Results:

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

PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 36607
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-08-21	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J100882
- EXO Optical DO Sensor, Ti	599100-01	17B102223
- EXO conductivity/Temperature Sensor, Ti	599870	17B100812
- EXO Turbidity Sensor, Ti	599101-01	20J103607
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103628

Test conditions:

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

Test Specifications:

Performance checking for Conductivity, Temperature, pH, Dissolved oxygen (D.O.)
and Turbidity

Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Test Report No.:	36607
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

Page: 2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings ($\mu\text{S}/\text{cm}$)	Acceptance Criteria	Comment
KCl stock solution (12890 $\mu\text{S}/\text{cm}$)	13000	12246-13534	Pass

Temperature performance checking

Reference thermometer- E431 Readings ($^{\circ}\text{C}$)	Instrument Readings ($^{\circ}\text{C}$)	Correction ($^{\circ}\text{C}$)	Comment
20.0	20.001	-0.001	N/A

pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	4.04	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)	Acceptance Criteria	Comment
Zero DO solution	0.08	$<0.1\text{mg/L}$	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
8.02	7.89	Difference between Titration value and instrument reading $<0.2\text{mg/L}$	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.01	9.0-11.0	Pass
50 NTU	50.31	45.0-55.0	Pass
100 NTU	101.0	90.0-110.0	Pass

Depth performance checking

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

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

TEST REPORT

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

Test Report No.: 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

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

Page: 2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings ($\mu\text{S}/\text{cm}$)	Acceptance Criteria	Comment
KCl stock solution (12890 $\mu\text{S}/\text{cm}$)	12900	12246-13534	Pass

Temperature performance checking

Reference thermometer- E431 Readings ($^{\circ}\text{C}$)	Instrument Readings ($^{\circ}\text{C}$)	Correction ($^{\circ}\text{C}$)	Comment
20.0	20.000	0.000	N/A

pH performance checking

	Instrument Readings (pH unit)	Acceptance 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)	Acceptance Criteria	Comment
Zero DO solution	0.05	$<0.1\text{mg/L}$	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
8.02	7.93	Difference between Titration value and instrument reading $<0.2\text{mg/L}$	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.01	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)	Acceptance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass

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

TEST REPORT

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

Test Report No.: 36607C
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-08-89	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	17B100184
- EXO Optical DO Sensor, Ti	599100-01	17A105013
- EXO conductivity/Temperature Sensor, Ti	599870	17A105107
- EXO Turbidity Sensor, Ti	599101-01	17A104096
- EXO pH Sensor Assembly, Guarded, Ti	599701	16J100704

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

TEST REPORT

Test Report No.:	36607C
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

Page: 2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

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

Temperature performance checking

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

pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	3.99	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.84	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)	Acceptance Criteria	Comment
Zero DO solution	0.08	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
8.02	8.10	Difference between Titration value and instrument reading <0.2mg/L	Pass

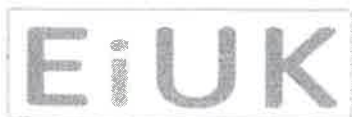
Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.06	9.0-11.0	Pass
50 NTU	50.12	45.0-55.0	Pass
100 NTU	101.7	90.0-110.0	Pass

Depth performance checking

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

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



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

<u>Test References</u>	<u>Model</u>	<u>Serial No.</u>
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.

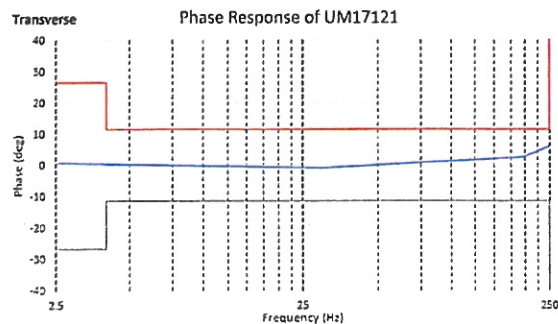
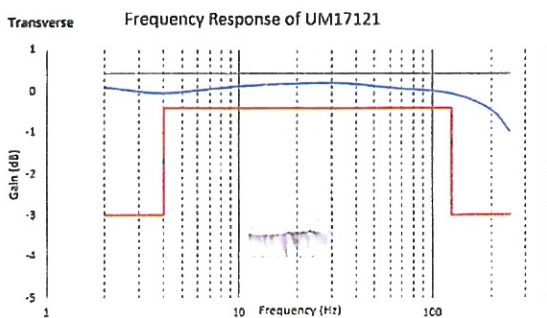
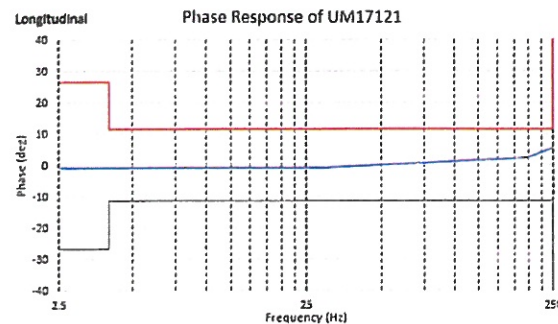
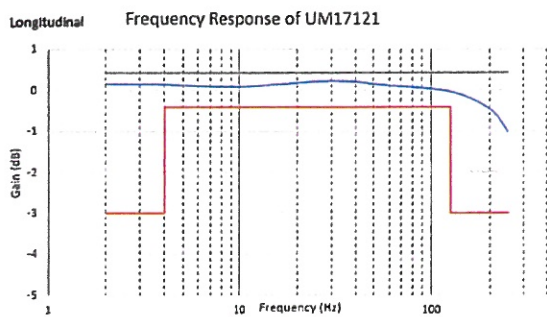
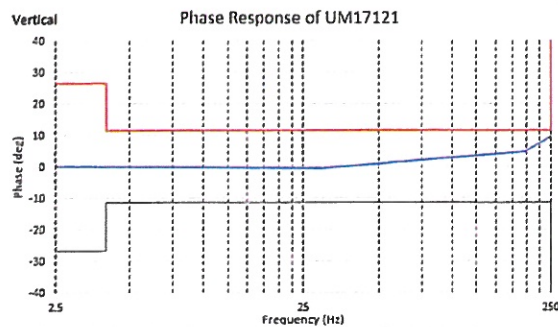
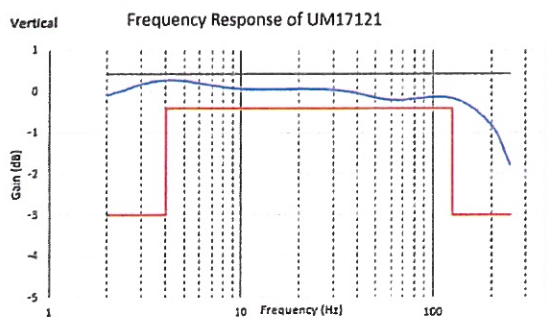
Authorized by: _____



(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17121



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.

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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.

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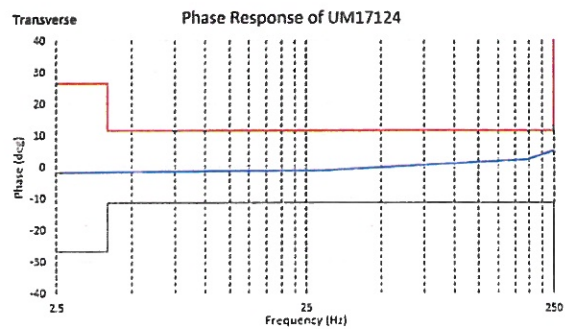
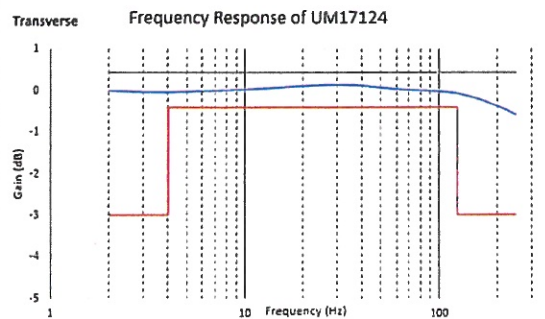
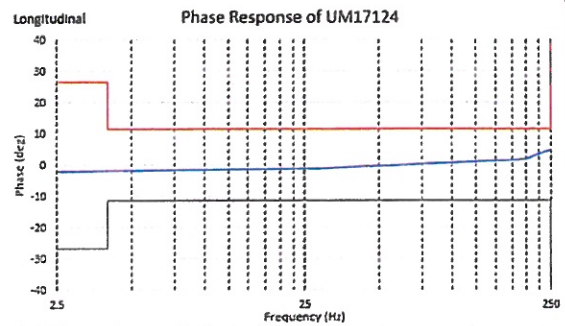
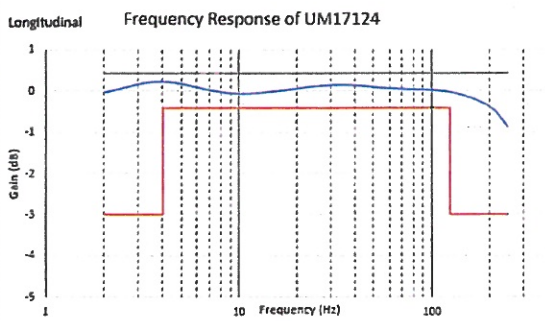
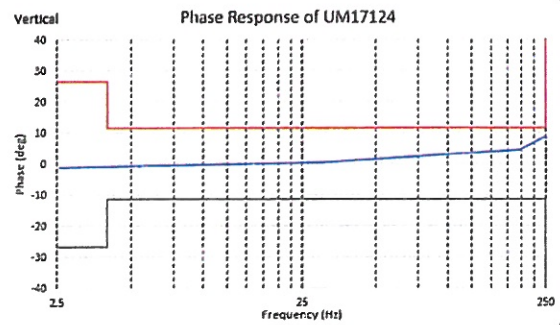
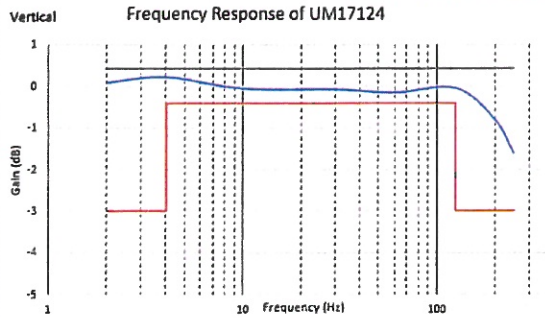
Authorized by: _____



(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17124



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

<u>Test References</u>	<u>Model</u>	<u>Serial No.</u>
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.

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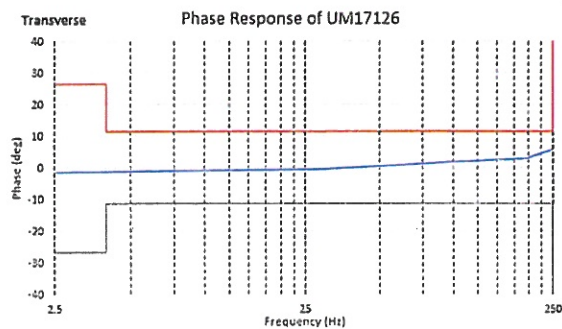
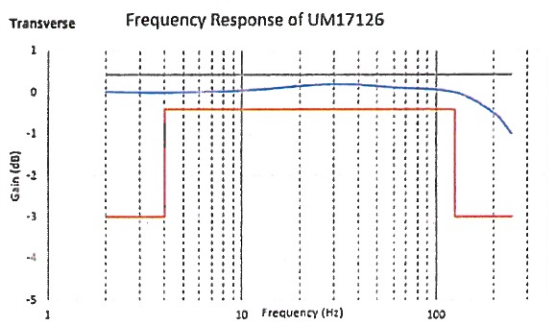
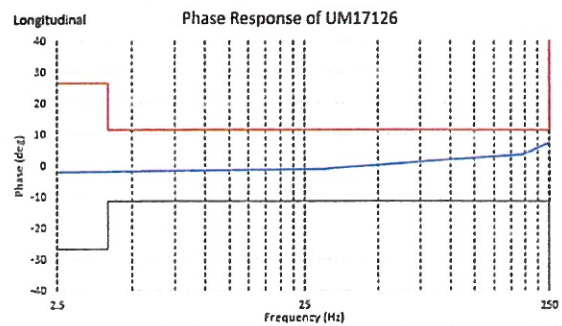
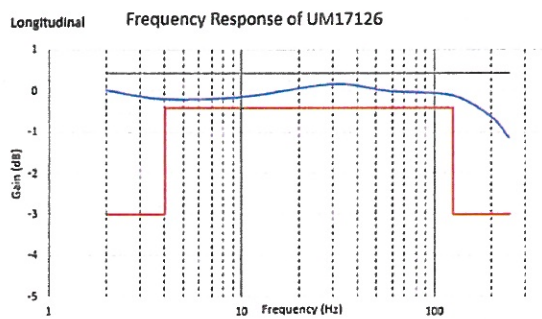
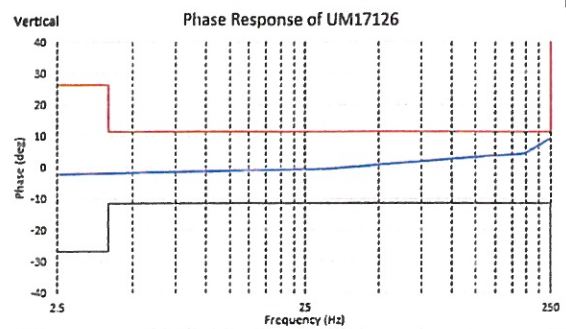
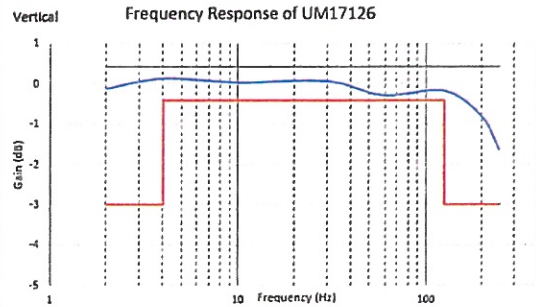
Authorized by: _____



(Anson Kan)

Date: 28 February 2022

Frequency Responses UM17126



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
Brueel & Kjaer Accelerometer*	4370	31474
Brueel & Kjaer Charge Amplifier*	2647	2731339
Brueel & 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

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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 (May 2022)

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

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	--
	ND/2019/04	<u>24hr TSP</u> FLN-DMS5A - Good View New Village	--
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 exceeds 500m. The monitoring station is not applicable to ND/2019/05 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04. 8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.			

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Impact Water Quality Monitoring Schedule (May 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-May	2-May	3-May	4-May	5-May	6-May	7-May
		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
8-May	9-May	10-May	11-May	12-May	13-May	14-May
		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
15-May	16-May	17-May	18-May	19-May	20-May	21-May
	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	
22-May	23-May	24-May	25-May	26-May	27-May	28-May
	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	
29-May	30-May	31-May				
	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	<u>River Beas</u> SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	<u>River Indus and near Siu Hang San Tsuen Stream</u> 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 (May 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-May	2-May	3-May	4-May	5-May	6-May	7-May
		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <u>T1 T2</u> High tide: Start time: 10:00 Low tide: Start time: 16:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 T5</u> High tide: Start time: 10:00 Low tide: Start time: 16:00			
8-May	9-May	10-May	11-May	12-May	13-May	14-May
			Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 T5</u> High tide: Start time: 09:00 Low tide: Start time: 13:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <u>T1 T2</u> High tide: Start time: 09:00 Low tide: Start time: 14:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution <u>T1, T6</u>	
15-May	16-May	17-May	18-May	19-May	20-May	21-May
		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 T5</u> High tide: Start time: 10:00 Low tide: Start time: 15:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <u>T1 T2</u> High tide: Start time: 11:00 Low tide: Start time: 16:00	Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream <u>MS 01 - MS 15</u>		
22-May	23-May	24-May	25-May	26-May	27-May	28-May
		Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution <u>T3, T4, T5</u>		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <u>T1 T2</u> 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 <u>T3 T5</u> High tide: Start time: 10:00 Low tide: Start time: 14:00	
29-May	30-May	31-May				

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 May 2022

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

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Impact Air Quality and Noise Monitoring Schedule (June 2022)

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

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 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	--
	ND/2019/04	<u>24hr TSP</u> FLN-DMS5A - Good View New Village	--
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 exceeds 500m. The monitoring station is not applicable to ND/2019/05 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04. 8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.			

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Impact Water Quality Monitoring Schedule (June 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Jun	2-Jun	3-Jun	4-Jun
			<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream			<u>Water Quality Monitoring</u> 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
	<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> 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
	<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> 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
	<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream	
26-Jun	27-Jun	28-Jun	29-Jun	30-Jun		
	<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream		<u>Water Quality Monitoring</u> River Beas, River Indus and near Siu Hang San Tsuen Stream			

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

Water Quality Monitoring Stations

River Beas: SYR-CS1 - Upstream of river, SYR-IS1 - Downstream of river

River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream,

MWR-IS3 - Water sensitive receiver at near Ma Wat River

Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	<u>River Beas</u> SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	<u>River Indus and near Siu Hang San Tsuen Stream</u> 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 (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 <u>T1 T2</u> 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 <u>T3 T5</u> 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 <u>T1 T2</u> 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 <u>T1, T6</u>	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 T5</u> 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 <u>T3 T5</u> 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 <u>T3, T4, T5</u>	Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream <u>MS 01 - MS 15</u> Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River <u>T1 T2</u> 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 <u>T1 T2</u> 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 <u>T3 T5</u> 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 <u>T3 T5</u> 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 <u>T1 T2</u> High tide: Start time: 10:00 Low tide: Start time: 16:00		

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

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

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Weekly Site Inspection Schedule for 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/2019/04) Site Inspection (ND/2019/07) Site Inspection (ND/2019/03) Site Inspection (ND/2019/06)		
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/2019/05)	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)	
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/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) 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/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)		

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

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

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
5-May-22	8:00	Sunny	120.3
5-May-22	9:00	Sunny	112.4
5-May-22	10:00	Sunny	107.4
11-May-22	9:00	Rainy	61.6
11-May-22	10:00	Rainy	73.3
11-May-22	11:00	Rainy	102.7
17-May-22	9:00	Sunny	59.5
17-May-22	10:00	Sunny	50.3
17-May-22	11:00	Sunny	73.7
23-May-22	9:00	Cloudy	66.3
23-May-22	10:00	Cloudy	71.7
23-May-22	11:00	Cloudy	77.0
27-May-22	13:00	Rainy	66.4
27-May-22	14:00	Rainy	69.2
27-May-22	15:00	Rainy	67.9
Minimum			50.3
Maximum			120.3
Average			78.6

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
5-May-22	13:00	Sunny	120.7
5-May-22	14:00	Sunny	95.5
5-May-22	15:00	Sunny	114.8
11-May-22	13:00	Rainy	51.4
11-May-22	14:00	Rainy	55.9
11-May-22	15:00	Rainy	94.1
17-May-22	9:00	Sunny	72.6
17-May-22	10:00	Sunny	43.3
17-May-22	11:00	Sunny	47.8
23-May-22	13:15	Cloudy	63.2
23-May-22	14:15	Cloudy	59.6
23-May-22	15:15	Cloudy	55.4
27-May-22	13:00	Cloudy	60.7
27-May-22	14:00	Cloudy	62.8
27-May-22	15:00	Cloudy	65.2
Minimum			43.3
Maximum			120.7
Average			70.9

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-May-22	9:00	Sunny	60.8
4-May-22	10:00	Sunny	74.9
4-May-22	11:00	Sunny	65.0
10-May-22	8:30	Cloudy	41.4
10-May-22	9:30	Cloudy	30.4
10-May-22	10:30	Cloudy	28.4
16-May-22	9:00	Cloudy	48.2
16-May-22	10:00	Cloudy	40.5
16-May-22	11:00	Cloudy	62.5
20-May-22	8:30	Sunny	62.6
20-May-22	9:30	Sunny	75.9
20-May-22	10:30	Sunny	102.2
26-May-22	9:00	Fine	42.1
26-May-22	10:00	Fine	39.6
26-May-22	11:00	Fine	36.3
Minimum			28.4
Maximum			102.2
Average			54.1

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-May-22	8:30	Sunny	60.2
4-May-22	9:30	Sunny	60.1
4-May-22	10:30	Sunny	53.8
10-May-22	8:30	Sunny	114.6
10-May-22	9:30	Sunny	125.0
10-May-22	10:30	Sunny	126.0
16-May-22	9:00	Cloudy	36.0
16-May-22	10:00	Cloudy	35.6
16-May-22	11:00	Cloudy	45.4
20-May-22	9:00	Sunny	54.9
20-May-22	10:00	Sunny	68.9
20-May-22	11:00	Sunny	73.7
26-May-22	9:00	Rainy	25.3
26-May-22	10:00	Rainy	24.3
26-May-22	11:00	Rainy	29.2
Minimum			24.3
Maximum			126.0
Average			62.2

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. (µg/m ³)
			Initial	Final		Initial	Final		Initial	Final			
4-May-22	Sunny	295.5	3.5153	3.6562	0.1409	6223.4	6247.4	24.0	1.22	1.22	1.22	1755.8	80.2
10-May-22	Sunny	298.2	3.5010	3.5833	0.0823	6247.4	6271.4	24.0	1.21	1.21	1.21	1743.8	47.2
16-May-22	Rainy	292.9	3.2408	3.2887	0.0479	6271.4	6295.4	24.0	1.23	1.23	1.23	1776.7	27.0
20-May-22	Cloudy	298.1	3.2839	3.4406	0.1567	6295.4	6319.4	24.0	1.22	1.22	1.22	1757.9	89.1
26-May-22	Cloudy	298.6	3.2914	3.3730	0.0816	6319.4	6343.4	24.0	1.22	1.22	1.22	1752.4	46.6
												Min	27.0
												Max	89.1
												Average	58.0

Location FLN-DMS3 - House near Tong Hang

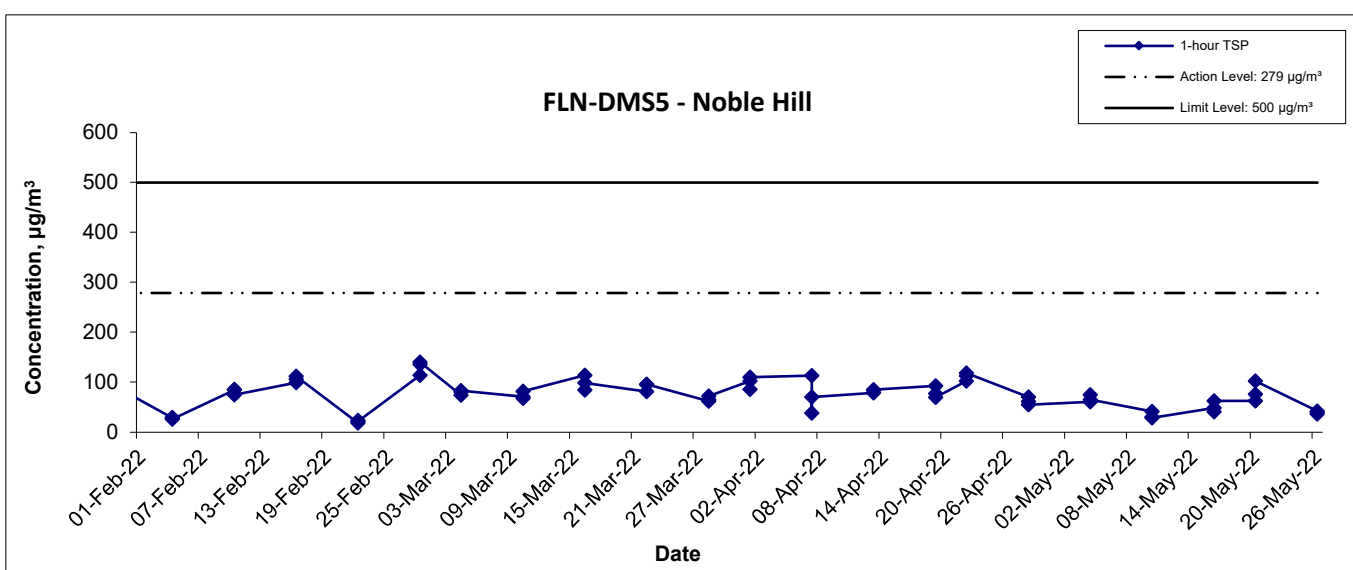
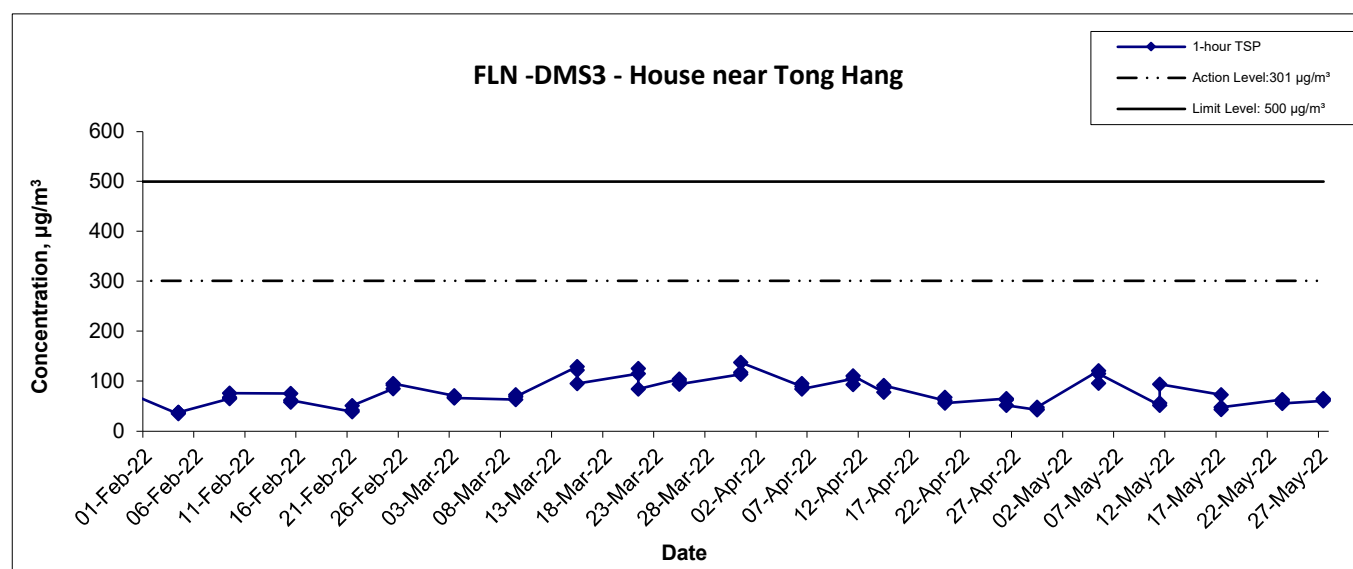
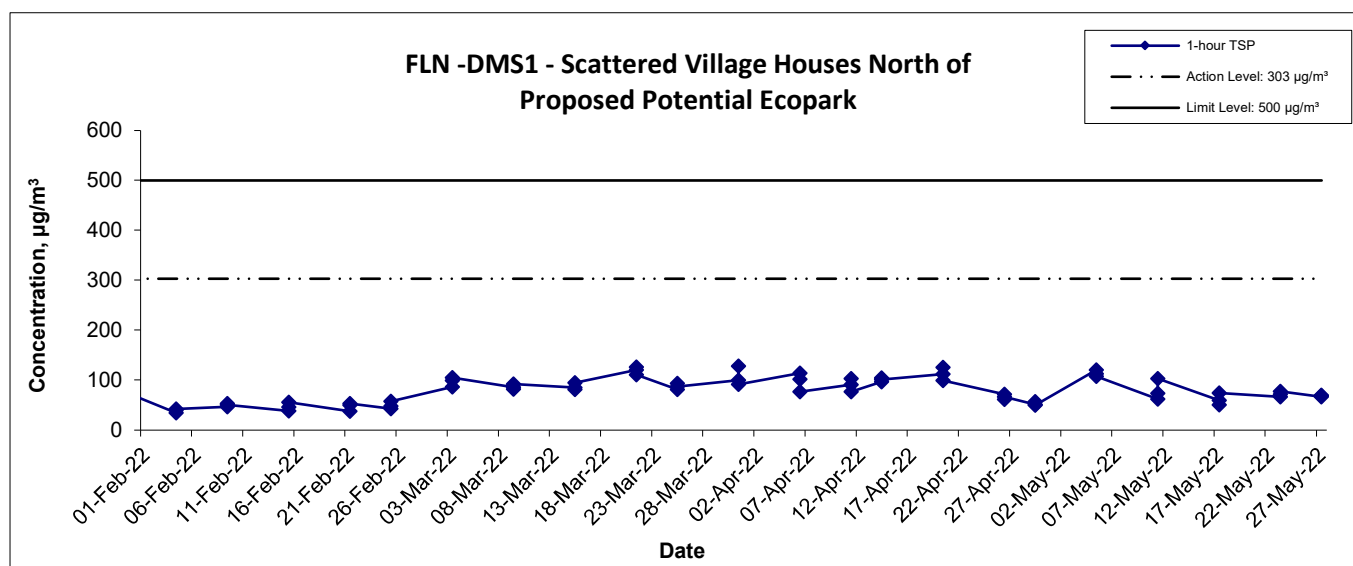
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
			Initial	Final		Initial	Final		Initial	Final			
4-May-22	Sunny	295.5	3.5295	3.7138	0.1843	7266.8	7290.8	24.0	1.22	1.22	1.22	1758.5	104.8
10-May-22	Sunny	298.2	3.4802	3.5472	0.0670	7290.8	7314.8	24.0	1.21	1.21	1.21	1746.1	38.4
16-May-22	Rainy	292.9	3.2319	3.2580	0.0261	7314.8	7338.8	24.0	1.23	1.23	1.23	1765.2	14.8
20-May-22	Cloudy	298.1	3.3323	3.4179	0.0856	7338.8	7362.8	24.0	1.21	1.21	1.21	1739.7	49.2
26-May-22	Cloudy	298.6	3.2951	3.3243	0.0292	7362.8	7386.8	24.0	1.20	1.20	1.20	1734.4	16.8
												Min	14.8
												Max	104.8
												Average	44.8

Appendix E - 24-hour TSP Monitoring Results


Location FLN-DMS5A - Good View New Village			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-May-22	8:30	Sunny	75.3
10-May-22	8:30	Cloudy	142.9
16-May-22	9:00	Rainy	58.4
20-May-22	8:30	Sunny	86.5
26-May-22	9:00	Rainy	60.5
		Minimum	58.4
		Maximum	142.9
		Average	84.7

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-May-22	8:30	Sunny	58.1
10-May-22	8:55	Fine	127.3
16-May-22	9:00	Rainy	36.7
20-May-22	8:45	Sunny	60.3
26-May-22	9:00	Rainy	59.4
		Minimum	36.7
		Maximum	127.3
		Average	68.4

1-hr TSP Concentration Levels

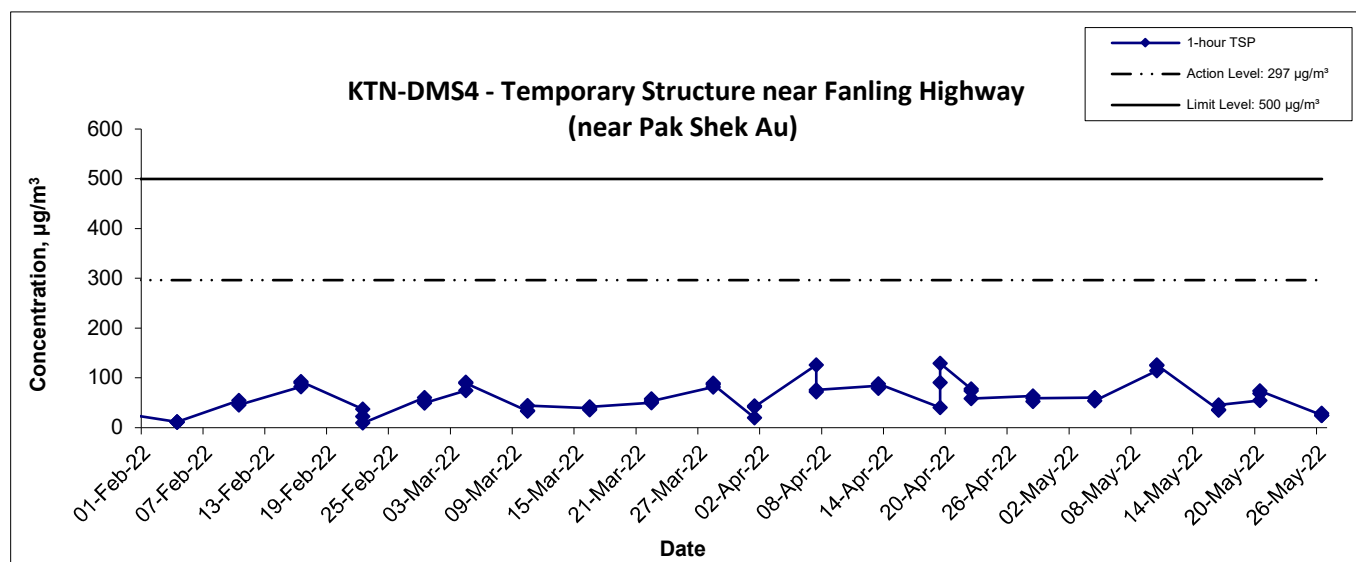



Title	Service Contract No. NDO 04/2019		Scale	Project No.
	Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas		N.T.S	WMA20002
	Graphical Presentation of 1-hour TSP Monitoring Results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



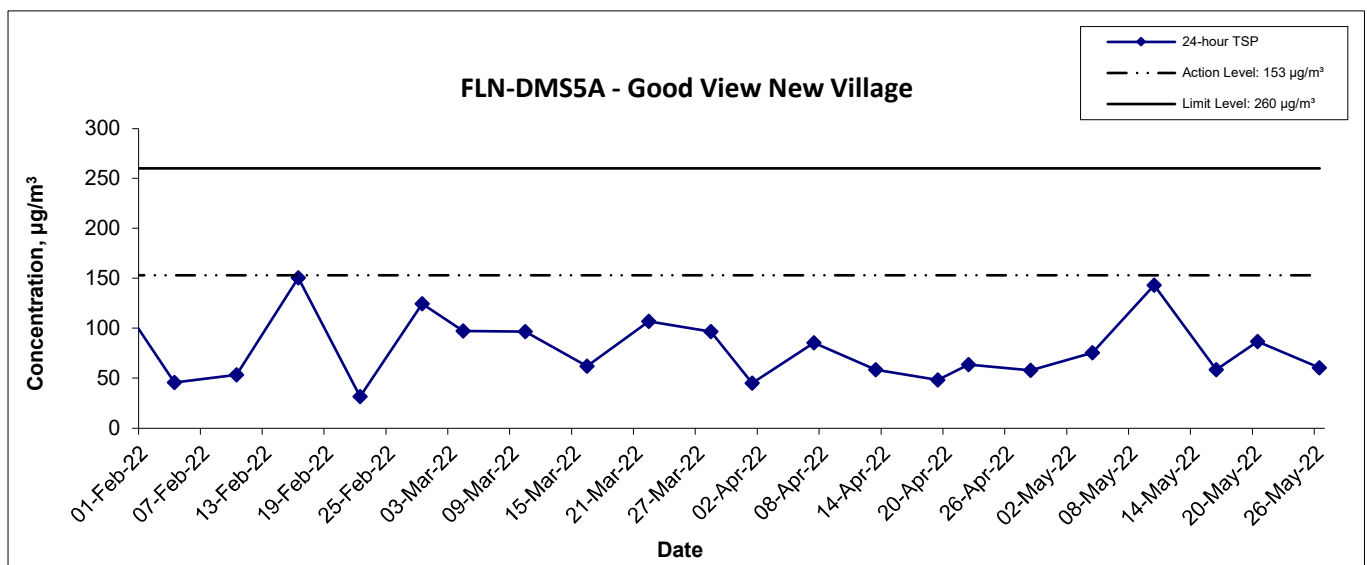
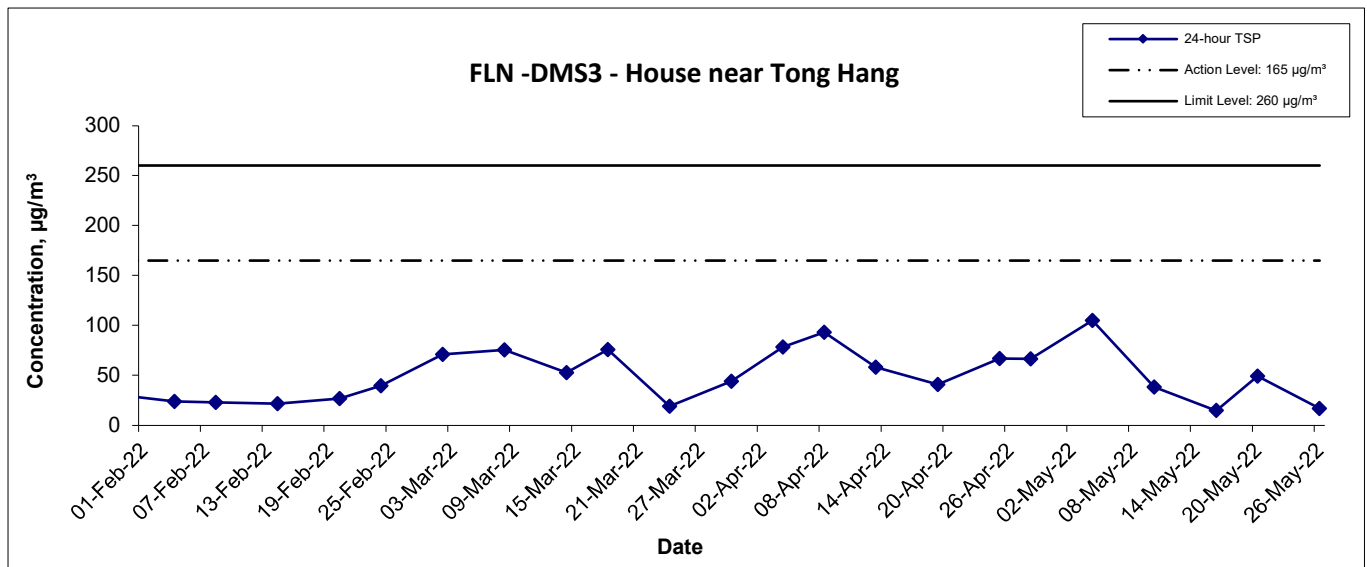
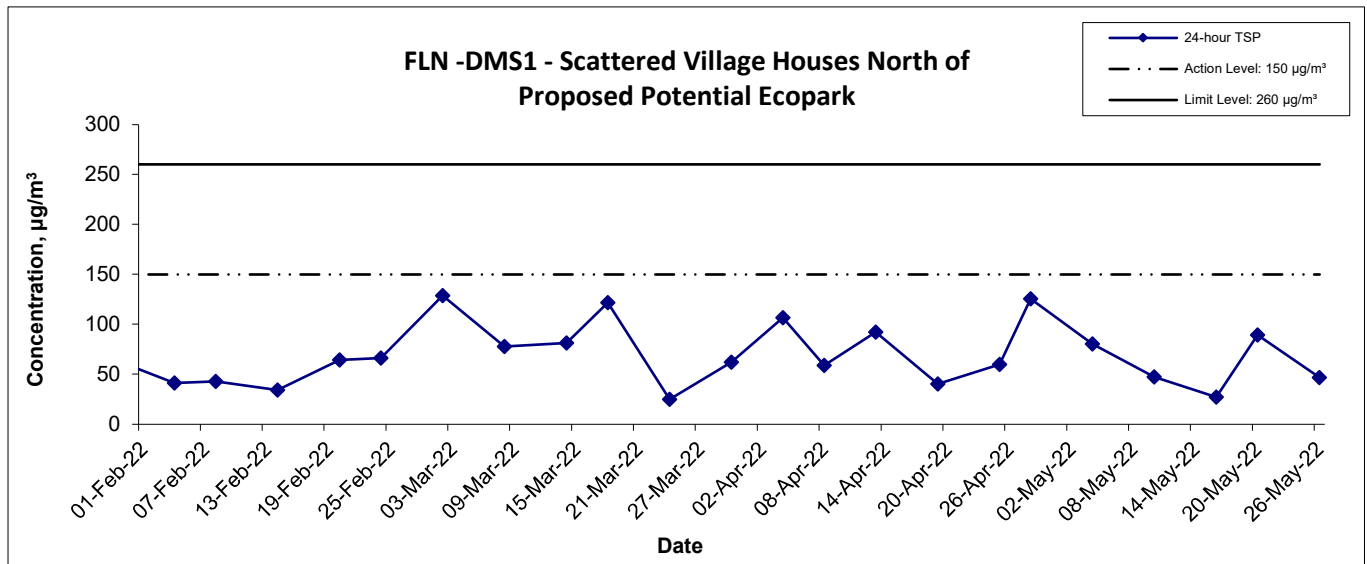
WELLAB 匯力
consulting . testing . research


1-hr TSP Concentration Levels



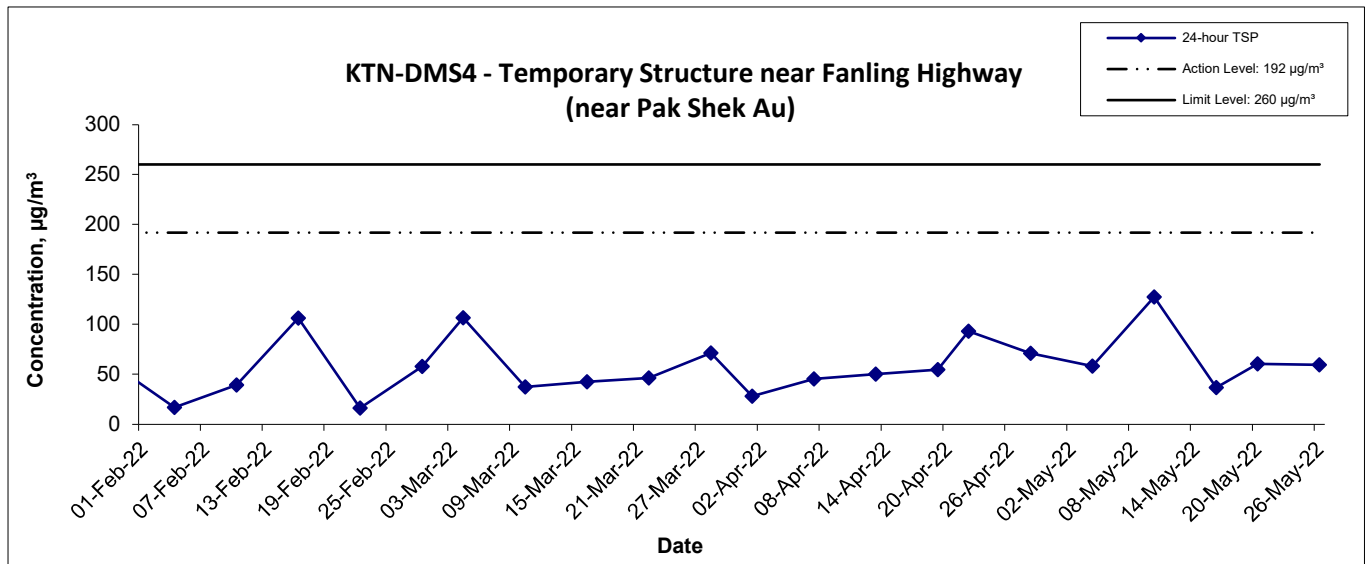
Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA20002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


24-hr TSP Concentration Levels



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

24-hr TSP Concentration Levels

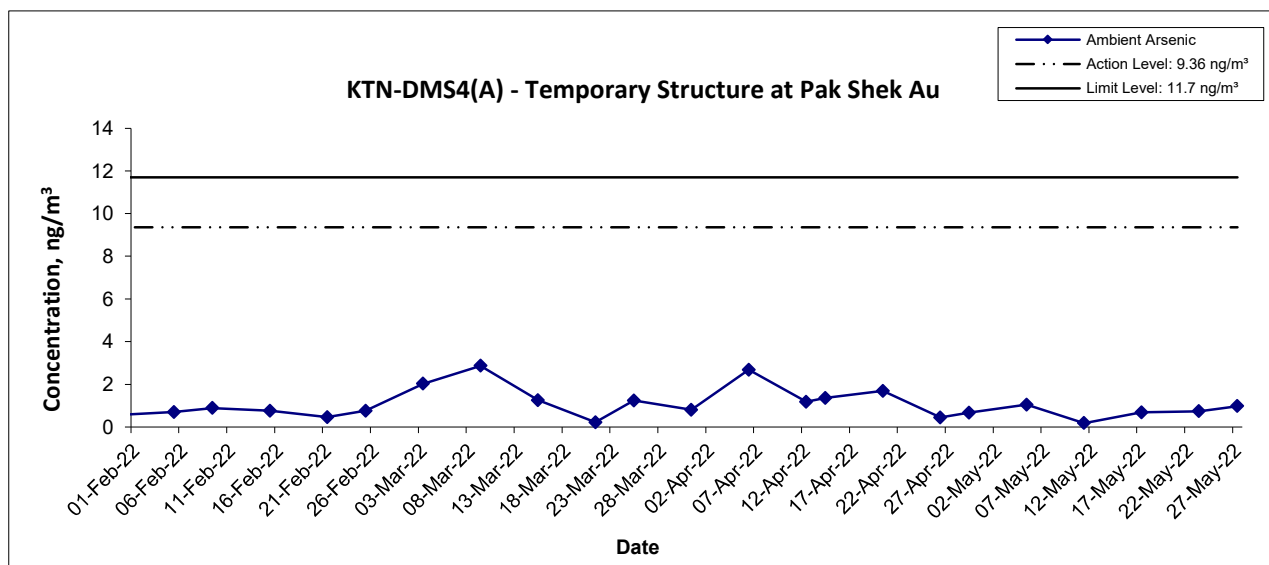



Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA20002	 consulting . testing . research
	Date May 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)
5-May-22	1.7	1613.1	1.05
11-May-22	0.31	1622.3	0.19
17-May-22	1.1	1605.8	0.69
23-May-22	1.2	1632.4	0.74
27-May-22	1.6	1636.6	0.98

Ambient Arsenic



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

TEST REPORT

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

Report No.:	36686
Date of Issue:	2022-05-16
Date Received:	2022-05-10
Date Tested:	2022-05-10
Date Completed:	2022-05-16

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36686
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	210906/038
Sample No.	36686-1
Arsenic (µg)	1.7

Remarks: 1) < = less than

2) Results for the test material reported as received

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 36686
Date of Issue:	2022-05-16
Date Received:	2022-05-10
Date Tested:	2022-05-10
Date Completed:	2022-05-16

ATTN: Ms Ivy Tam

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

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

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	91	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 (%)	95	70-130

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36686

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36686
Date of Issue:	2022-05-16
Date Received:	2022-05-10
Date Tested:	2022-05-10
Date Completed:	2022-05-16

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	94	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	1	RPD \leq 20%

Serial dilution check

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

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36686

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

TEST REPORT

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

Report No.:	36687
Date of Issue:	2022-05-18
Date Received:	2022-05-12
Date Tested:	2022-05-12
Date Completed:	2022-05-18

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36687
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	210906/039
Sample No.	36687-1
Arsenic (µg)	0.31

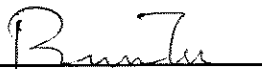
Remarks: 1) < = less than

2) Results for the test material reported as received

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 36687
Date of Issue:	2022-05-18
Date Received:	2022-05-12
Date Tested:	2022-05-12
Date Completed:	2022-05-18

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 (%)	95	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	91	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	95	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36687

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36687
Date of Issue:	2022-05-18
Date Received:	2022-05-12
Date Tested:	2022-05-12
Date Completed:	2022-05-18

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	81	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	9	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	102	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36687

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

TEST REPORT

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

Report No.:	36706
Date of Issue:	2022-05-24
Date Received:	2022-05-18
Date Tested:	2022-05-18
Date Completed:	2022-05-24

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36706
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	210906/040
Sample No.	36706-1
Arsenic (µg)	1.1

Remarks: 1) <= less than

2) Results for the test material reported as received

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 36706
Date of Issue:	2022-05-24
Date Received:	2022-05-18
Date Tested:	2022-05-18
Date Completed:	2022-05-24

ATTN: Ms Ivy Tam

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

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

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	94	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	95	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 (%)	99	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36706

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36706
Date of Issue:	2022-05-24
Date Received:	2022-05-18
Date Tested:	2022-05-18
Date Completed:	2022-05-24

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	93	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	6	RPD \leq 20%

Serial dilution check

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

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36706

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

TEST REPORT

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

Report No.:	36707
Date of Issue:	2022-05-30
Date Received:	2022-05-24
Date Tested:	2022-05-24
Date Completed:	2022-05-30

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36707
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	210906/013
Sample No.	36707-1
Arsenic (µg)	1.2

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

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 36707
Date of Issue:	2022-05-30
Date Received:	2022-05-24
Date Tested:	2022-05-24
Date Completed:	2022-05-30

ATTN: Ms Ivy Tam

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

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

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	94	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 (%)	99	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36707

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36707
Date of Issue:	2022-05-30
Date Received:	2022-05-24
Date Tested:	2022-05-24
Date Completed:	2022-05-30

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	100	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36707

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

TEST REPORT

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

Report No.:	36772
Date of Issue:	2022-06-06
Date Received:	2022-05-30
Date Tested:	2022-05-30
Date Completed:	2022-06-06

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36772
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	210906/042
Sample No.	36772-1
Arsenic (µg)	1.6

Remarks: 1) < = less than

2) Results for the test material reported as received

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 36772
Date of Issue:	2022-06-06
Date Received:	2022-05-30
Date Tested:	2022-05-30
Date Completed:	2022-06-06

ATTN: Ms Ivy Tam

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

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

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	96	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	101	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	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 36772

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36772
Date of Issue:	2022-06-06
Date Received:	2022-05-30
Date Tested:	2022-05-30
Date Completed:	2022-06-06
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	91	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	4	RPD \leq 20%

Serial dilution check

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

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36772

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

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}
5-May-22	Sunny	09:00	69.9	73.4	61.1	68.6	69.9
		09:05	69.3	73.4	58.6		
		09:10	67.7	70.1	61.5		
		09:15	68.5	72.2	59.3		
		09:20	68.3	71.1	60.5		
		09:25	67.5	70.1	63.1		
11-May-22	Cloudy	08:25	66.2	69.7	58.9	68.2	
		08:30	68.9	71.7	59.0		
		08:35	67.5	71.2	54.6		
		08:40	68.4	71.4	62.3		
		08:45	68.0	71.1	62.3		
		08:50	69.3	71.6	64.8		
17-May-22	Sunny	09:00	64.6	68.4	58.1	66.3	
		09:05	65.4	68.0	59.6		
		09:10	66.1	69.5	58.9		
		09:15	64.7	68.0	60.4		
		09:20	67.3	71.1	59.9		
		09:25	68.2	69.3	58.7		
27-May-22	Cloudy	13:05	65.5	67.7	59.9	67.2	
		13:10	68.5	71.6	61.8		
		13:15	66.3	69.2	57.6		
		13:20	67.9	70.8	62.2		
		13:25	67.7	71.0	62.9		
		13:30	66.5	68.0	63.0		

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}
5-May-22	Sunny	10:00	59.4	60.7	58.1	62.6	59.6
		10:05	62.2	64.0	58.2		
		10:10	64.1	65.8	58.3		
		10:15	63.4	65.0	58.4		
		10:20	63.9	65.7	58.5		
		10:25	61.0	63.5	58.0		
11-May-22	Cloudy	13:00	64.9	65.6	64.4	65.5	
		13:05	65.6	66.5	64.8		
		13:10	66.0	66.9	65.1		
		13:15	66.1	66.7	65.3		
		13:20	65.2	65.9	64.5		
		13:25	64.9	65.8	64.1		
17-May-22	Sunny	09:05	62.2	63.9	60.2	62.3	
		09:10	62.4	64.2	60.0		
		09:15	62.4	64.2	59.7		
		09:20	61.4	63.2	59.3		
		09:25	62.6	65.3	59.6		
		09:30	62.4	65.5	58.7		
27-May-22	Cloudy	14:30	58.4	60.2	54.8	58.4	
		14:35	59.6	60.5	55.0		
		14:40	58.1	60.1	54.9		
		14:45	57.9	60.1	54.5		
		14:50	58.6	60.3	54.7		
		14:55	57.4	59.8	54.5		

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}
4-May-22	Sunny	09:00	60.4	62.0	57.6	65.8	58.6
		09:05	58.7	60.4	57.1		
		09:10	70.1	69.3	57.3		
		09:15	57.9	58.7	57.1		
		09:20	64.2	66.9	57.3		
		09:25	68.8	71.5	67.2		
10-May-22	Cloudy	10:30	53.0	55.8	48.5	52.7	
		10:35	53.5	57.3	47.0		
		10:40	52.5	54.7	48.3		
		10:45	54.0	57.6	47.5		
		10:50	48.9	51.1	45.6		
		10:55	52.8	53.9	45.8		
20-May-22	Sunny	13:10	47.5	50.0	40.0	53.7	
		13:15	53.1	58.0	42.0		
		13:20	54.6	59.5	43.2		
		13:25	51.7	56.9	41.0		
		13:30	54.8	56.8	42.9		
		13:35	56.0	56.9	55.3		
26-May-22	Cloudy	09:15	59.4	65.0	45.4	61.6	
		09:20	50.0	52.8	45.6		
		09:25	51.9	53.6	46.2		
		09:30	49.7	52.3	46.5		
		09:35	59.5	62.9	46.6		
		09:40	68.2	67.2	52.0		

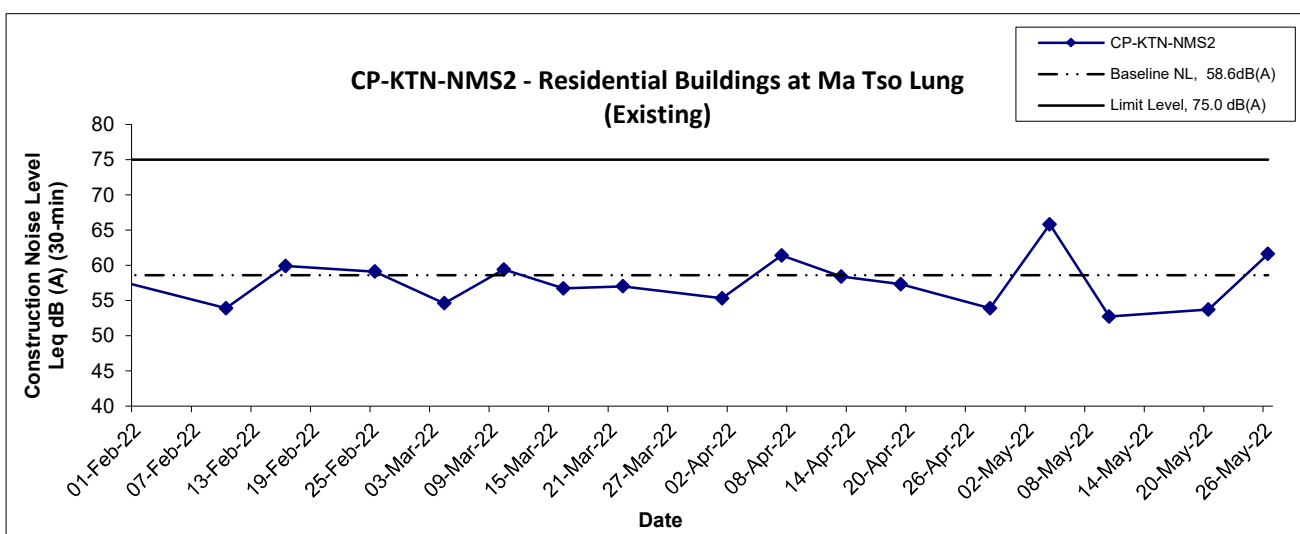
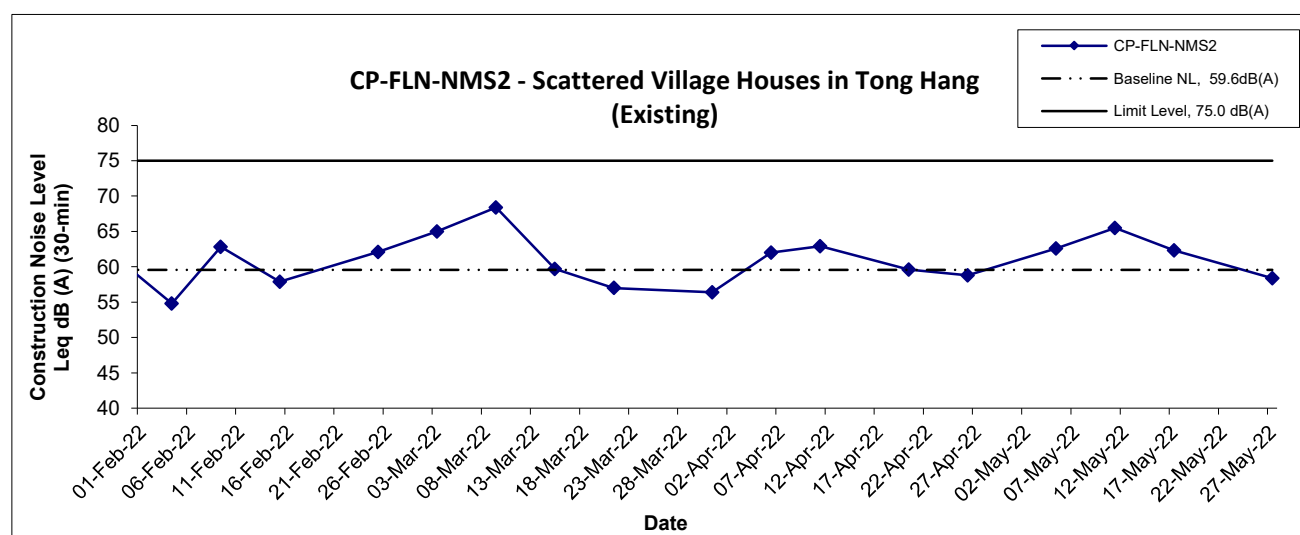
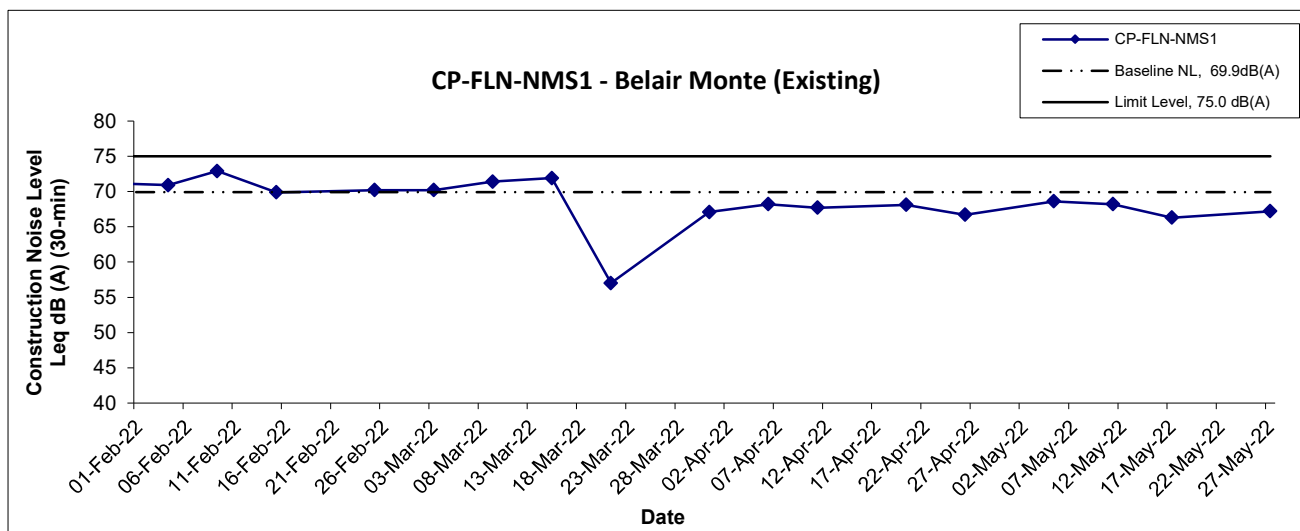
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
4-May-22	Sunny	09:40	55.0	54.1	48.9	54.4	51.6
		09:45	52.4	55.0	48.5		
		09:50	53.0	55.4	48.5		
		09:55	58.0	61.6	48.4		
		10:00	51.8	54.1	48.7		
		10:05	52.3	54.9	48.6		
10-May-22	Cloudy	11:10	51.5	52.3	45.2	54.5	
		11:15	56.4	60.3	46.8		
		11:20	59.1	63.2	44.0		
		11:25	49.2	52.7	43.9		
		11:30	51.3	54.6	44.7		
		11:35	49.8	53.2	43.4		
20-May-22	Sunny	13:55	48.6	51.4	45.2	55.3	
		14:00	49.6	54.6	44.7		
		14:05	46.4	48.0	44.6		
		14:10	62.3	67.2	45.0		
		14:15	49.2	54.5	44.6		
		14:20	45.7	47.6	45.2		
26-May-22	Cloudy	09:55	56.0	56.6	55.4	62.0	
		10:00	64.2	58.7	55.4		
		10:05	55.9	56.9	55.4		
		10:10	61.7	63.4	55.6		
		10:15	66.3	72.8	55.8		
		10:20	55.7	56.1	55.3		


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}
4-May-22	Sunny	13:10	55.0	54.1	48.9	54.6	57.2
		13:15	52.4	55.0	48.5		
		13:20	53.0	55.4	48.5		
		13:25	58.0	61.6	48.4		
		13:30	51.5	54.1	48.7		
		13:35	54.4	58.2	48.6		
10-May-22	Cloudy	14:00	50.3	51.4	48.6	51.4	
		14:05	51.4	52.4	48.3		
		14:10	50.9	52.0	47.9		
		14:15	51.1	52.3	48.4		
		14:20	52.3	53.9	48.4		
		14:25	52.1	52.9	48.6		
20-May-22	Sunny	15:45	64.5	69.2	54.4	59.1	
		15:50	58.0	60.2	54.1		
		15:55	57.2	59.8	53.4		
		16:00	54.9	56.6	51.9		
		16:05	54.3	55.3	52.8		
		16:10	54.3	55.7	52.5		
26-May-22	Sunny	11:30	58.8	58.1	51.3	59.4	
		11:35	55.4	58.0	51.5		
		11:40	53.5	54.8	52.0		
		11:45	53.3	54.8	51.6		
		11:50	65.2	71.0	52.7		
		11:55	55.8	59.1	52.2		

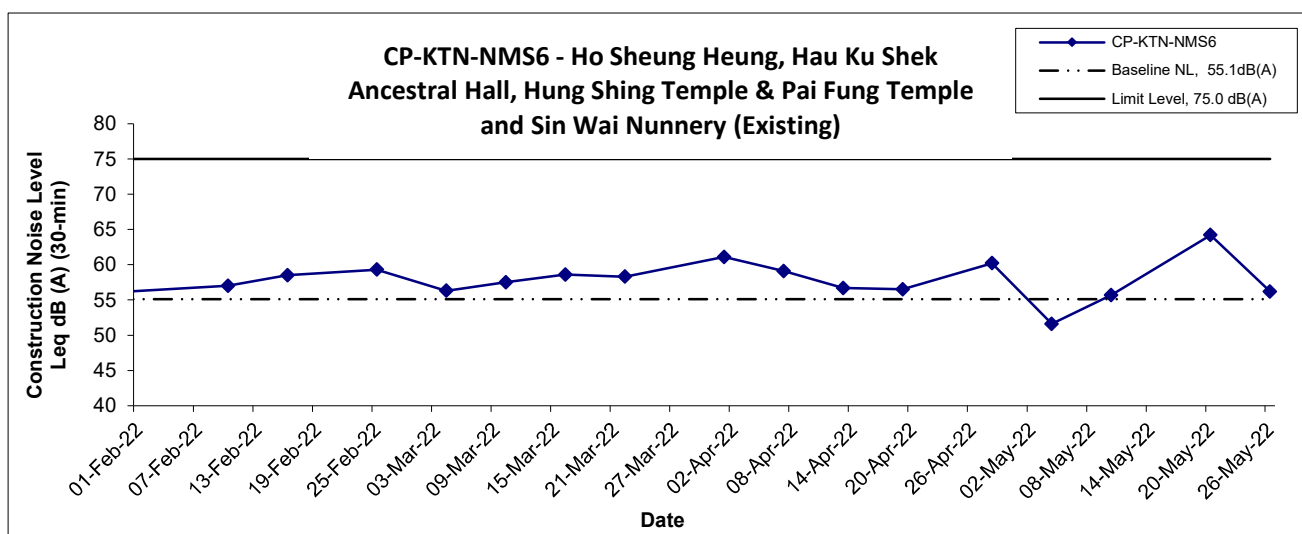
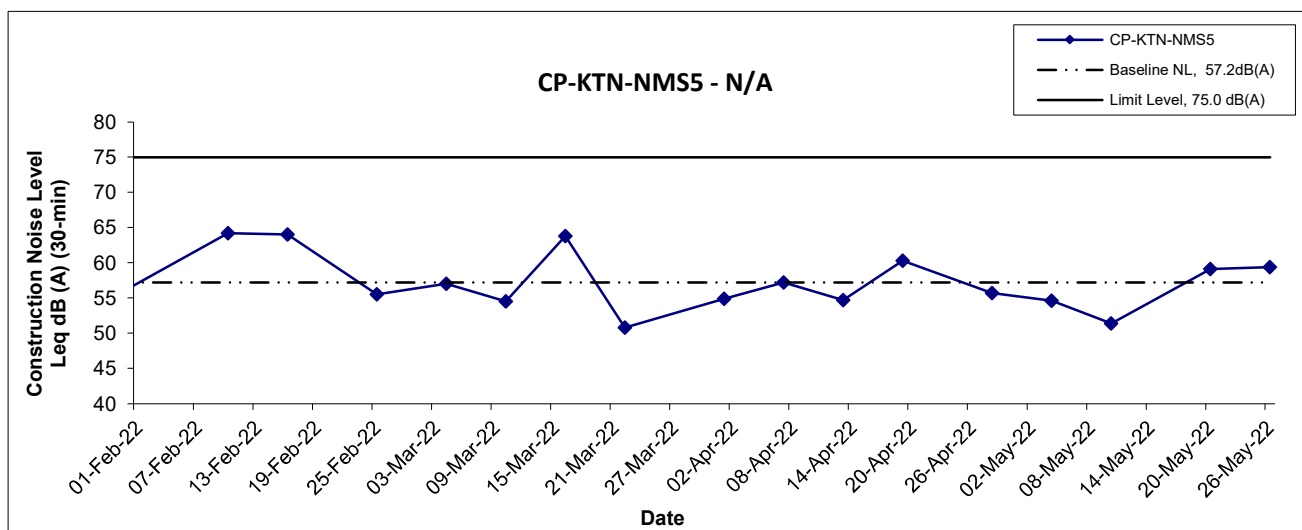
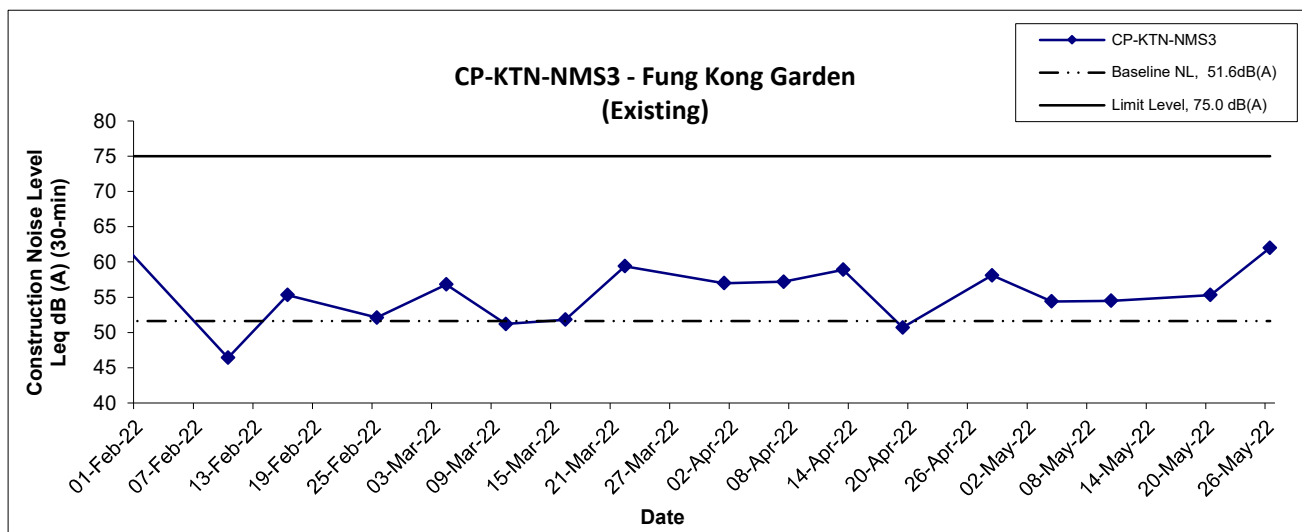
Location CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
4-May-22	Sunny	10:35	51.0	52.0	45.9	51.6	55.1
		10:40	49.4	52.0	45.5		
		10:45	50.0	52.4	45.5		
		10:50	55.0	58.6	45.4		
		10:55	48.5	51.1	45.7		
		11:00	51.4	55.2	45.6		
10-May-22	Cloudy	13:05	55.8	57.2	53.9	55.7	
		13:10	55.8	57.2	53.9		
		13:15	54.7	58.3	53.7		
		13:20	57.4	59.6	54.1		
		13:25	55.7	57.4	54.0		
		13:30	53.6	58.6	54.1		
20-May-22	Sunny	14:50	55.0	58.7	48.8	64.2	
		14:55	61.4	62.2	48.9		
		15:00	67.6	61.6	49.0		
		15:05	60.9	62.1	49.5		
		15:10	62.2	62.3	49.8		
		15:15	67.4	68.7	49.5		
26-May-22	Cloudy	10:40	55.2	57.7	50.1	56.2	
		10:45	60.4	65.2	52.8		
		10:50	55.9	56.6	51.5		
		10:55	53.6	56.1	50.0		
		11:00	53.1	55.3	50.6		
		11:05	53.8	55.8	51.3		


Noise Levels



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

Noise Levels



Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. WMA20002	 consulting . testing . research
	Date May 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
3-May-22	Sunny	10:11	Middle	0.2	21.8 21.8	21.8	7.4 7.4	7.4	0.2 0.2	0.2	77.8 77.7	77.8	6.8 6.8	6.8	8.3 8.3	8.3	8 9	8.5	9 9	9.0
5-May-22	Sunny	10:30	Middle	0.2	25.2 25.3	25.3	8.9 8.9	8.9	0.1 0.1	0.1	67.1 66.8	67.0	5.5 5.5	5.5	8.3 8.0	8.2	11 12	11.5	9 9	9.0
7-May-22	Sunny	11:29	Middle	0.3	27.3 27.3	27.3	7.4 7.4	7.4	0.2 0.2	0.2	81.8 81.7	81.8	6.5 6.5	6.5	4.9 5.0	5.0	14 13	13.5	9 11	10.0
10-May-22	Cloudy	11:00	Middle	0.2	25.0 25.0	25.0	6.9 6.9	6.9	0.2 0.2	0.2	76.5 76.3	76.4	6.3 6.3	6.3	6.7 6.8	6.8	5 5	5.0	9 8	8.5
12-May-22	Rainy	11:41	Middle	0.3	24.2 24.2	24.2	7.2 7.2	7.2	0.1 0.1	0.1	84.1 84.0	84.1	7.1 7.0	7.1	40.8 41.0	40.9	42 40	41.0	9 9	9.0
14-May-22	Cloudy	14:07	Middle	0.3	24.9 24.9	24.9	7.1 7.1	7.1	0.1 0.1	0.1	99.3 99.5	99.4	8.2 8.2	8.2	15.0 15.0	15.0	16 14	15.0	7 7	7.0
16-May-22	Cloudy	17:10	Middle	0.2	21.9 21.9	21.9	7.6 7.6	7.6	0.1 0.1	0.1	93.9 93.8	93.9	8.2 8.2	8.2	8.2 8.3	8.3	7 7	7.0	10 10	10.0
18-May-22	Sunny	12:29	Middle	0.3	23.6 23.6	23.6	7.2 7.2	7.2	0.1 0.1	0.1	87.4 87.4	87.4	7.4 7.4	7.4	5.6 5.6	5.6	7 7	7.0	8 8	8.0
20-May-22	Cloudy	11:10	Middle	0.2	29.9 30.0	30.0	7.5 7.5	7.5	0.2 0.2	0.2	98.8 98.7	98.8	7.5 7.5	7.5	4.0 4.0	4.0	4 4	4.0	8 8	8.0
23-May-22	Cloudy	15:00	Middle	0.2	25.0 25.0	25.0	7.0 7.0	7.0	0.1 0.1	0.1	75.7 75.6	75.7	6.3 6.2	6.3	7.9 7.9	7.9	10 11	10.5	9 8	8.5
25-May-22	Cloudy	15:46	Middle	0.2	26.8 26.8	26.8	7.2 7.2	7.2	0.1 0.1	0.1	82.2 81.8	82.0	6.6 6.5	6.6	4.3 4.3	4.3	8 9	8.5	8 8	8.0
27-May-22	Cloudy	16:05	Middle	0.2	27.6 27.6	27.6	7.3 7.3	7.3	0.3 0.3	0.3	75.5 75.5	75.5	5.9 5.9	5.9	5.1 5.1	5.1	6 7	6.5	7 7	7.0
30-May-22	Sunny	13:26	Middle	0.2	28.6 28.6	28.6	8.0 8.0	8.0	0.2 0.2	0.2	41.2 40.7	41.0	3.2 3.2	3.2	36.2 36.3	36.3	27 29	28.0	8 8	8.0

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: SYR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (µg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-May-22	Sunny	10:26	Middle	0.5	22.8 22.8	22.8	7.3 7.3	7.3	0.2 0.2	0.2	72.5 72.4	72.5	6.2 6.2	6.2	20.7 20.4	20.6	26 21	23.5	3 3	3.0
5-May-22	Sunny	10:48	Middle	0.5	26.2 26.2	26.2	8.5 8.5	8.5	0.3 0.3	0.3	77.9 77.5	77.7	6.3 6.3	6.3	21.3 21.0	21.2	22 24	23.0	4 4	4.0
7-May-22	Sunny	11:46	Middle	0.3	28.5 28.5	28.5	7.4 7.4	7.4	0.3 0.3	0.3	84.6 84.5	84.6	6.6 6.5	6.6	22.8 22.5	22.7	27 24	25.5	4 4	4.0
10-May-22	Cloudy	11:13	Middle	0.3	25.1 25.1	25.1	7.4 7.4	7.4	0.2 0.2	0.2	76.9 78.0	77.5	6.3 6.4	6.4	23.9 23.7	23.8	13 13	13.0	6 6	6.0
12-May-22	Rainy	12:00	Middle	0.5	24.0 24.0	24.0	7.2 7.2	7.2	0.1 0.1	0.1	88.5 87.6	88.1	7.5 7.4	7.5	39.4 41.7	40.6	52 52	52.0	7 7	7.0
14-May-22	Cloudy	14:33	Middle	0.3	25.0 25.0	25.0	6.8 6.8	6.8	0.1 0.1	0.1	77.8 77.7	77.8	6.4 6.4	6.4	13.0 12.5	12.8	14 14	14.0	7 6	6.5
16-May-22	Cloudy	17:32	Middle	0.2	22.0 22.0	22.0	7.4 7.4	7.4	0.1 0.1	0.1	98.0 98.0	98.0	8.6 8.6	8.6	20.8 20.8	20.8	25 26	25.5	11 12	11.5
18-May-22	Sunny	11:54	Middle	0.3	25.2 25.3	25.3	7.3 7.3	7.3	0.3 0.3	0.3	75.6 75.4	75.5	6.2 6.2	6.2	11.7 11.9	11.8	12 14	13.0	4 4	4.0
20-May-22	Cloudy	11:32	Middle	0.3	29.5 29.5	29.5	7.3 7.3	7.3	0.1 0.1	0.1	93.0 92.8	92.9	7.1 7.1	7.1	3.4 3.4	3.4	9 8	8.5	4 4	4.0
23-May-22	Cloudy	14:36	Middle	0.3	26.5 26.5	26.5	7.1 7.1	7.1	0.2 0.2	0.2	77.4 77.1	77.3	6.2 6.2	6.2	10.3 10.1	10.2	13 13	13.0	4 4	4.0
25-May-22	Cloudy	15:06	Middle	0.3	28.8 28.8	28.8	7.7 7.7	7.7	0.2 0.2	0.2	96.5 96.4	96.5	7.4 7.4	7.4	27.6 27.4	27.5	28 35	31.5	9 10	9.5
27-May-22	Cloudy	16:30	Middle	0.3	27.5 27.5	27.5	7.4 7.4	7.4	0.1 0.1	0.1	78.5 78.8	78.7	6.2 6.2	6.2	10.0 10.3	10.2	31 38	34.5	7 7	7.0
30-May-22	Sunny	13:37	Middle	0.3	27.6 27.6	27.6	8.1 8.1	8.1	0.1 0.1	0.1	78.7 78.5	78.6	6.2 6.2	6.2	14.6 14.8	14.7	17 16	16.5	9 8	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: NTR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-May-22	Sunny	11:51	Middle	0.2	26.5 26.5	26.5	7.3 7.3	7.3	0.1 0.1	0.1	113.6 113.8	113.7	9.1 9.2	9.2	7.5 7.6	7.6	15 15	15.0
5-May-22	Sunny	09:15	Middle	0.1	24.1 24.1	24.1	8.4 8.4	8.4	0.1 0.1	0.1	92.3 92.3	92.3	7.8 7.8	7.8	8.7 8.8	8.8	8 10	9.0
7-May-22	Sunny	12:57	Middle	0.2	29.4 29.5	29.5	7.6 7.6	7.6	0.1 0.1	0.1	113.8 114.1	114.0	8.7 8.7	8.7	11.7 11.8	11.8	24 29	26.5
10-May-22	Cloudy	12:35	Middle	0.2	26.1 26.2	26.2	7.0 7.0	7.0	0.1 0.1	0.1	99.1 99.2	99.2	8.0 8.0	8.0	9.9 10.0	10.0	12 10	11.0
12-May-22	Rainy	13:00	Middle	0.3	23.9 23.9	23.9	7.0 7.0	7.0	0.1 0.1	0.1	90.3 90.3	90.3	7.6 7.6	7.6	68.6 67.6	68.1	83 85	84.0
14-May-22	Cloudy	12:55	Middle	0.3	24.1 24.1	24.1	7.3 7.2	7.3	0.1 0.1	0.1	92.8 92.6	92.7	7.8 7.8	7.8	16.6 16.7	16.7	12 11	11.5
16-May-22	Cloudy	16:05	Middle	0.2	21.9 21.9	21.9	7.7 7.5	7.6	0.1 0.1	0.1	93.8 93.5	93.7	8.2 8.2	8.2	10.3 10.3	10.3	9 10	9.5
18-May-22	Sunny	14:43	Middle	0.3	27.8 27.8	27.8	7.0 7.0	7.0	0.1 0.1	0.1	106.1 106.2	106.2	8.3 8.3	8.3	6.2 6.3	6.3	14 12	13.0
20-May-22	Cloudy	13:07	Middle	0.2	28.9 28.9	28.9	7.1 7.1	7.1	0.1 0.1	0.1	75.1 74.9	75.0	5.8 5.8	5.8	5.3 5.2	5.3	12 11	11.5
23-May-22	Cloudy	12:23	Middle	0.2	24.6 24.7	24.7	7.1 7.1	7.1	0.1 0.1	0.1	93.8 93.8	93.8	7.8 7.8	7.8	13.6 13.7	13.7	13 14	13.5
25-May-22	Cloudy	16:54	Middle	0.2	27.2 27.2	27.2	7.0 7.0	7.0	0.1 0.1	0.1	97.1 97.0	97.1	7.7 7.7	7.7	13.9 13.9	13.9	11 13	12.0
27-May-22	Cloudy	17:41	Middle	0.2	27.9 27.9	27.9	7.0 7.0	7.0	0.1 0.1	0.1	85.4 85.4	85.4	6.7 6.7	6.7	8.1 8.1	8.1	9 8	8.5
30-May-22	Sunny	14:48	Middle	0.3	27.3 27.3	27.3	8.0 8.0	8.0	0.1 0.1	0.1	89.6 89.6	89.6	7.1 7.1	7.1	47.5 48.4	48.0	71 73	72.0

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

Location: NTR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-May-22	Sunny	10:58	Middle	0.7	22.8 22.9	22.9	7.3 7.2	7.3	0.1 0.1	0.1	77.4 77.3	77.4	6.7 6.6	6.7	6.4 6.3	6.4	6 6	6.0
5-May-22	Sunny	08:14	Middle	0.7	24.8 24.8	24.8	8.6 8.5	8.6	0.1 0.1	0.1	71.9 71.7	71.8	6.0 5.9	6.0	8.7 8.7	8.7	11 10	10.5
7-May-22	Sunny	12:24	Middle	0.3	27.9 28.0	28.0	7.6 7.6	7.6	0.1 0.1	0.1	78.5 78.4	78.5	6.2 6.1	6.2	7.4 7.5	7.5	11 9	10.0
10-May-22	Cloudy	12:04	Middle	0.4	25.2 25.2	25.2	7.4 7.4	7.4	0.1 0.1	0.1	72.8 72.1	72.5	6.0 5.9	6.0	6.3 6.3	6.3	8 8	8.0
12-May-22	Rainy	12:23	Middle	0.7	23.9 23.9	23.9	7.5 7.5	7.5	0.1 0.1	0.1	95.5 95.4	95.5	8.1 8.1	8.1	65.5 67.1	66.3	87 79	83.0
14-May-22	Cloudy	13:35	Middle	0.4	24.5 24.5	24.5	7.0 7.0	7.0	0.1 0.1	0.1	96.2 96.3	96.3	8.0 8.0	8.0	11.4 11.4	11.4	7 6	6.5
16-May-22	Cloudy	13:34	Middle	0.2	22.2 22.2	22.2	7.2 7.2	7.2	0.1 0.1	0.1	92.7 92.6	92.7	8.1 8.1	8.1	8.7 8.8	8.8	7 9	8.0
18-May-22	Sunny	12:56	Middle	0.4	24.7 24.7	24.7	7.2 7.2	7.2	0.1 0.1	0.1	94.1 94.3	94.2	7.8 7.8	7.8	6.1 6.3	6.2	8 7	7.5
20-May-22	Cloudy	11:56	Middle	0.4	29.3 29.3	29.3	7.2 7.2	7.2	0.2 0.2	0.2	83.9 83.8	83.9	6.4 6.4	6.4	3.0 3.0	3.0	8 7	7.5
23-May-22	Cloudy	13:21	Middle	0.4	24.5 24.5	24.5	7.1 7.1	7.1	0.1 0.1	0.1	82.9 82.8	82.9	6.9 6.9	6.9	5.3 5.3	5.3	6 6	6.0
25-May-22	Cloudy	16:29	Middle	0.4	26.7 26.7	26.7	7.1 7.1	7.1	0.1 0.1	0.1	91.3 91.3	91.3	7.3 7.3	7.3	14.1 13.9	14.0	14 14	14.0
27-May-22	Cloudy	17:06	Middle	0.4	27.7 27.7	27.7	7.5 7.5	7.5	0.1 0.1	0.1	90.7 90.7	90.7	7.1 7.1	7.1	9.3 9.6	9.5	7 8	7.5
30-May-22	Sunny	14:03	Middle	0.7	28.9 28.9	28.9	8.2 8.2	8.2	0.1 0.1	0.1	97.2 97.2	97.2	7.5 7.5	7.5	29.0 28.4	28.7	24 25	24.5

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

Location: SHST-IS2

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-May-22	Sunny	11:14	Middle	0.1	25.5 25.5	25.5	7.2 7.2	7.2	0.1 0.1	0.1	96.2 96.2	96.2	7.9 7.9	7.9	8.1 8.1	8.1	7 6	6.5
5-May-22	Sunny	08:51	Middle	0.2	25.0 25.0	25.0	8.8 8.8	8.8	0.1 0.1	0.1	97.8 97.6	97.7	8.1 8.1	8.1	10.0 9.7	9.9	9 8	8.5
7-May-22	Sunny	12:09	Middle	0.3	28.4 28.4	28.4	7.5 7.6	7.6	0.1 0.1	0.1	94.9 94.8	94.9	7.4 7.4	7.4	13.5 13.5	13.5	14 17	15.5
10-May-22	Cloudy	11:41	Middle	0.3	24.9 24.9	24.9	7.1 7.2	7.2	0.1 0.1	0.1	88.9 88.1	88.5	7.4 7.3	7.4	9.6 9.7	9.7	10 10	10.0
12-May-22	Rainy	12:47	Middle	0.2	24.2 24.2	24.2	7.1 7.1	7.1	0.1 0.1	0.1	96.4 96.4	96.4	8.1 8.1	8.1	76.7 74.5	75.6	86 82	84.0
14-May-22	Cloudy	13:21	Middle	0.3	24.6 24.7	24.7	7.2 7.2	7.2	0.1 0.1	0.1	96.1 96.0	96.1	8.0 8.0	8.0	18.8 18.8	18.8	13 12	12.5
16-May-22	Cloudy	13:16	Middle	0.3	22.1 22.1	22.1	7.5 7.5	7.5	0.1 0.1	0.1	98.7 98.7	98.7	8.6 8.6	8.6	10.1 10.1	10.1	12 10	11.0
18-May-22	Sunny	13:17	Middle	0.3	25.6 25.6	25.6	7.3 7.3	7.3	0.1 0.1	0.1	96.3 96.4	96.4	7.9 7.9	7.9	6.4 6.2	6.3	10 9	9.5
20-May-22	Cloudy	12:23	Middle	0.3	29.0 29.0	29.0	7.4 7.4	7.4	0.1 0.1	0.1	94.6 94.5	94.6	7.3 7.3	7.3	3.5 3.5	3.5	9 8	8.5
23-May-22	Cloudy	13:38	Middle	0.3	24.5 24.5	24.5	7.2 7.2	7.2	0.1 0.1	0.1	91.6 91.7	91.7	7.6 7.6	7.6	15.1 15.1	15.1	15 15	15.0
25-May-22	Cloudy	16:15	Middle	0.3	26.4 26.4	26.4	7.3 7.3	7.3	0.1 0.1	0.1	93.0 92.8	92.9	7.5 7.5	7.5	16.6 16.5	16.6	15 13	14.0
27-May-22	Cloudy	17:19	Middle	0.3	27.8 27.8	27.8	7.2 7.2	7.2	0.1 0.1	0.1	92.3 92.2	92.3	7.3 7.2	7.3	6.9 6.8	6.9	6 6	6.0
30-May-22	Sunny	14:22	Middle	0.2	28.0 28.0	28.0	8.1 8.1	8.1	0.01 0.01	0.01	97.6 97.6	97.6	7.7 7.6	7.7	48.4 48.1	48.3	82 82	82.0

Contract No. NDO 04/2019

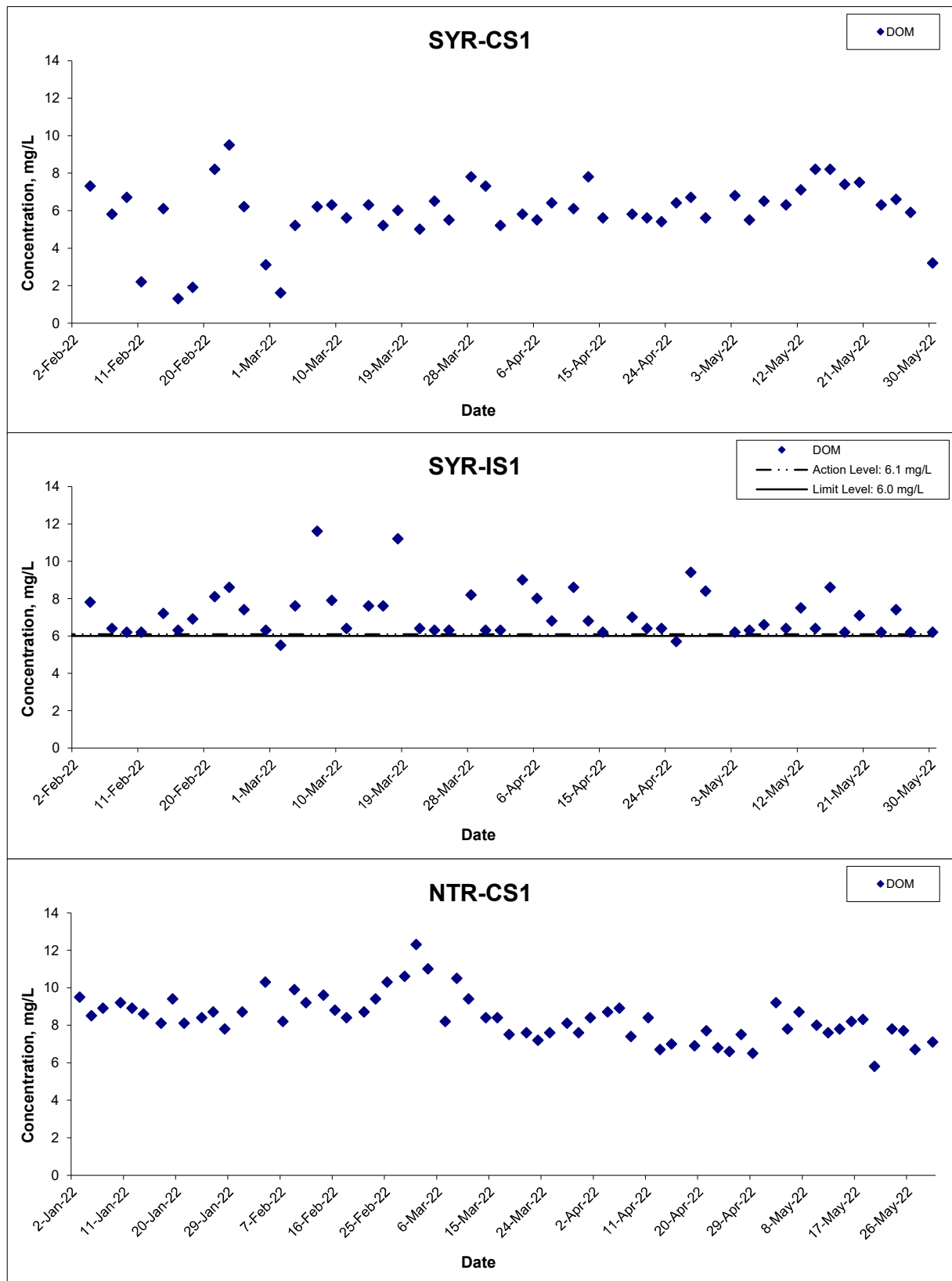
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas


Water Quality Monitoring Results

Location: MWR-IS3

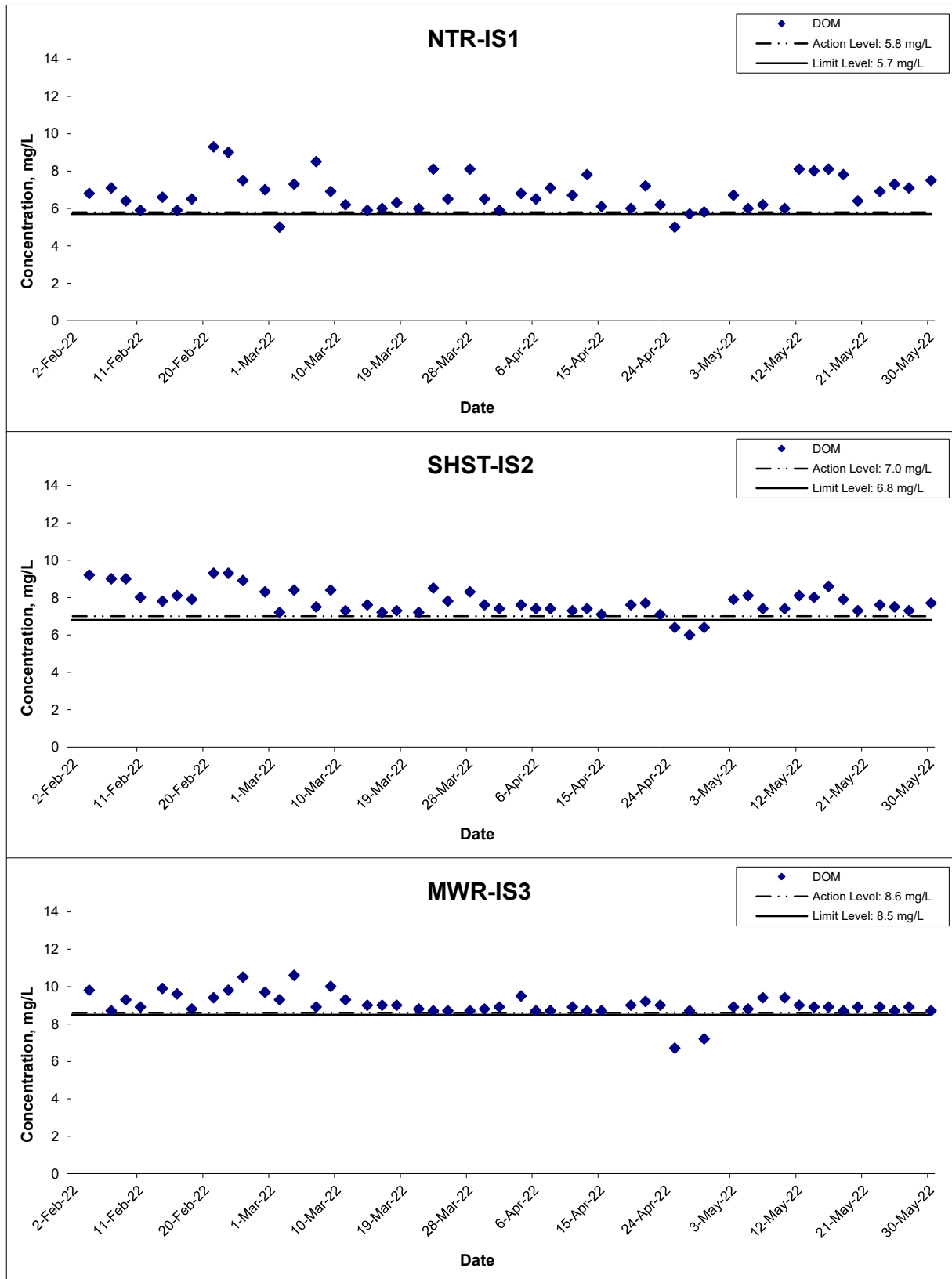
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-May-22	Sunny	11:35	Middle	0.2	26.4 26.4	26.4	7.4 7.4	7.4	0.1 0.1	0.1	110.2 110.3	110.3	8.9 8.9	8.9	7.8 7.9	7.9	12 11	11.5
5-May-22	Sunny	09:02	Middle	0.1	23.8 23.8	23.8	8.8 8.7	8.8	0.1 0.1	0.1	103.5 103.4	103.5	8.8 8.7	8.8	8.1 8.0	8.1	11 10	10.5
7-May-22	Sunny	13:09	Middle	0.2	29.1 29.1	29.1	7.8 7.8	7.8	0.1 0.1	0.1	122.6 122.7	122.7	9.4 9.4	9.4	13.6 13.7	13.7	25 29	27.0
10-May-22	Cloudy	12:47	Middle	0.2	25.8 25.8	25.8	7.3 7.3	7.3	0.1 0.1	0.1	115.1 115.1	115.1	9.4 9.4	9.4	5.9 5.9	5.9	11 9	10.0
12-May-22	Rainy	13:13	Middle	0.3	24.0 24.0	24.0	7.1 7.1	7.1	0.1 0.1	0.1	106.5 106.4	106.5	9.0 9.0	9.0	77.5 77.7	77.6	91 92	91.5
14-May-22	Cloudy	12:39	Middle	0.3	24.5 24.5	24.5	8.7 8.7	8.7	0.1 0.1	0.1	106.7 106.7	106.7	8.9 8.9	8.9	18.4 18.0	18.2	12 11	11.5
16-May-22	Cloudy	16:25	Middle	0.2	21.9 21.9	21.9	7.4 7.4	7.4	0.1 0.1	0.1	101.1 100.9	101.0	8.9 8.8	8.9	10.0 10.0	10.0	11 11	11.0
18-May-22	Sunny	15:08	Middle	0.3	26.8 26.8	26.8	7.2 7.2	7.2	0.1 0.1	0.1	108.8 109.0	108.9	8.7 8.7	8.7	6.7 6.6	6.7	14 13	13.5
20-May-22	Cloudy	13:32	Middle	0.2	29.2 29.2	29.2	7.5 7.5	7.5	0.1 0.1	0.1	115.9 115.2	115.6	8.9 8.8	8.9	5.7 5.7	5.7	12 12	12.0
23-May-22	Cloudy	12:41	Middle	0.2	24.5 24.6	24.6	7.2 7.2	7.2	0.1 0.1	0.1	106.4 105.3	105.9	8.9 8.8	8.9	11.8 11.9	11.9	13 14	13.5
25-May-22	Cloudy	17:15	Middle	0.2	26.9 26.9	26.9	7.2 7.2	7.2	0.1 0.1	0.1	108.5 108.6	108.6	8.7 8.7	8.7	14.3 14.4	14.4	13 12	12.5
27-May-22	Cloudy	17:53	Middle	0.2	28.0 28.0	28.0	6.9 6.9	6.9	0.1 0.1	0.1	114.2 114.1	114.2	8.9 8.9	8.9	7.5 7.5	7.5	11 14	12.5
30-May-22	Sunny	14:37	Middle	0.3	27.7 27.7	27.7	8.1 8.1	8.1	0.1 0.1	0.1	110.8 110.0	110.4	8.7 8.7	8.7	47.4 48.5	48.0	55 66	60.5

Dissolved Oxygen (Middle)



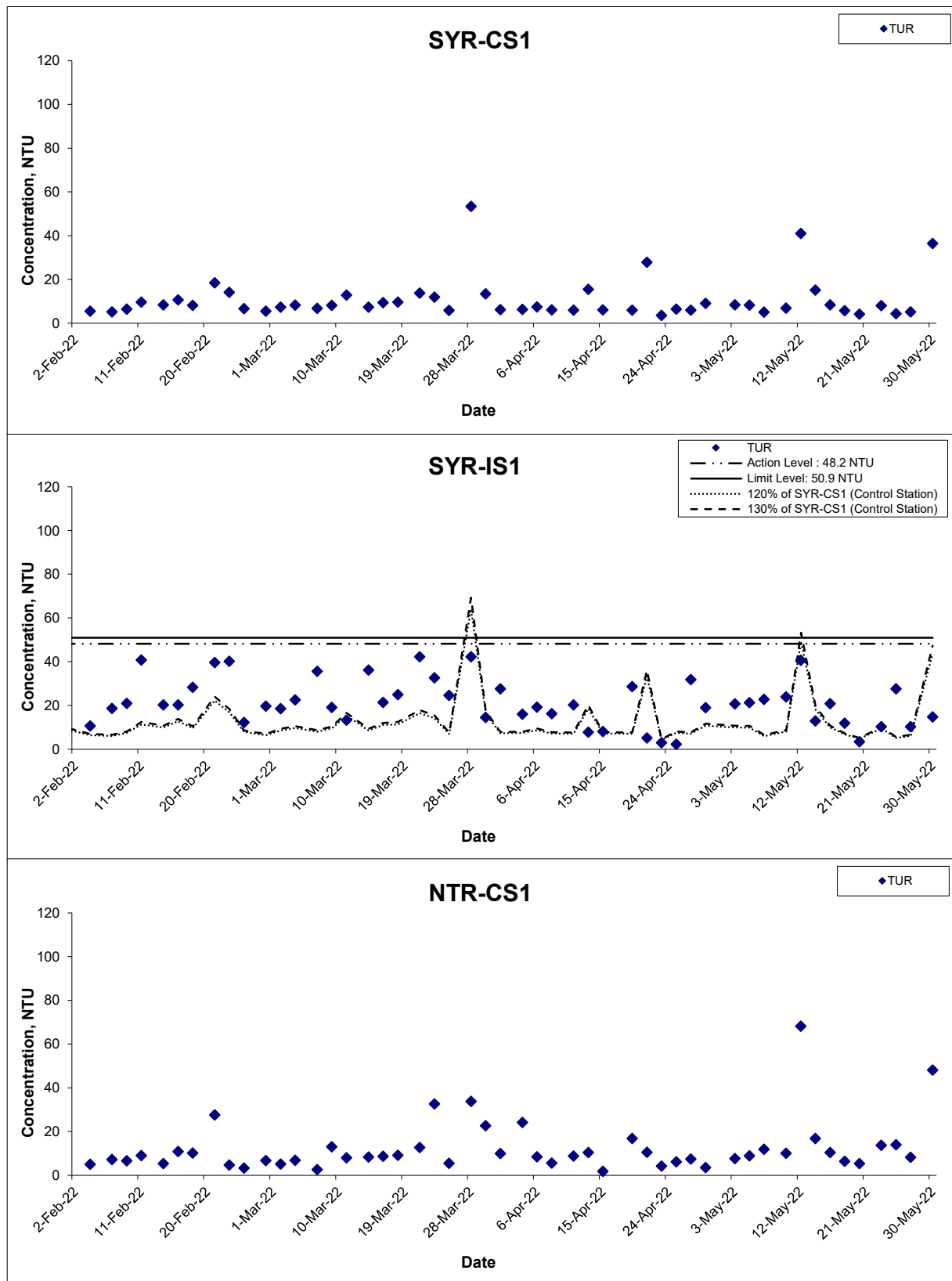
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	 consulting . testing . research
	Date May 22	Appendix G	

Dissolved Oxygen (Middle)



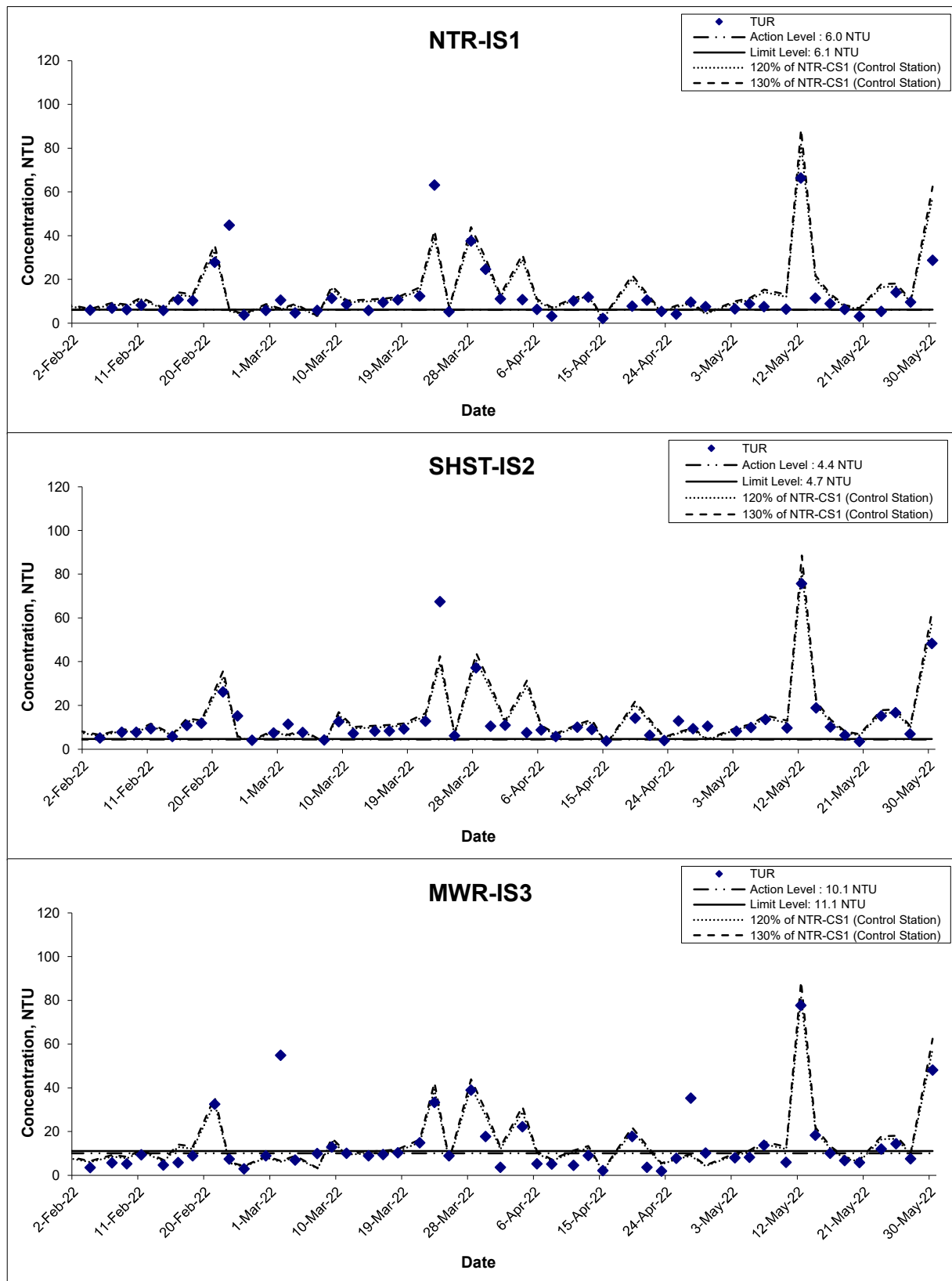
Title	Contract No. NDO 04/2019		Scale	Project
	Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas		N.T.S	No. WMA20002
Graphical Presentation of Water Quality Monitoring Results			Date	Appendix
			May 22	G


Turbidity (Depth-averaged)



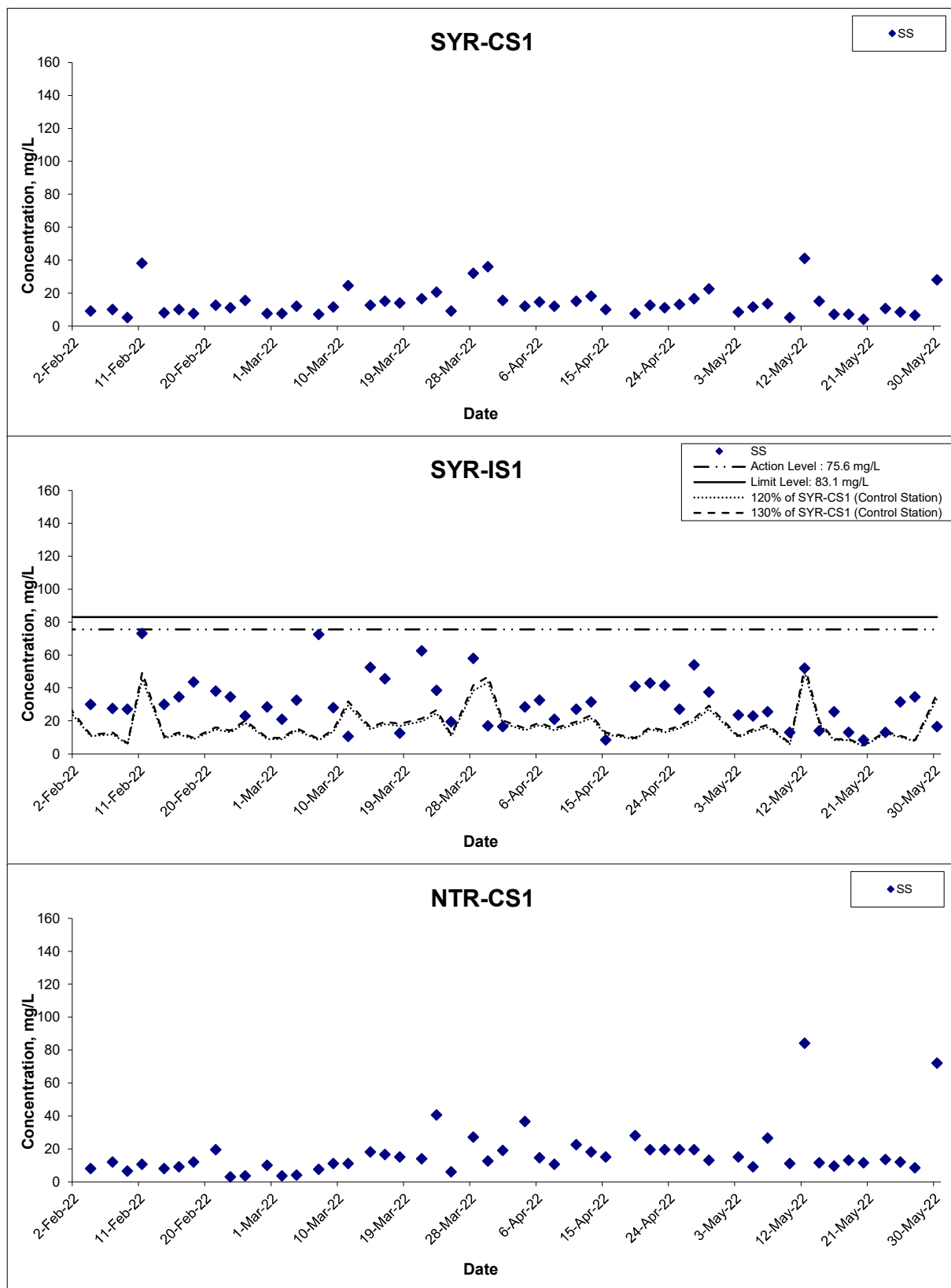
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	Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas		N.T.S	WMA20002
Graphical Presentation of Water Quality Monitoring Results			Date	Appendix
			May 22	G

Turbidity (Depth-averaged)




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

Suspended Solids (Depth-averaged)

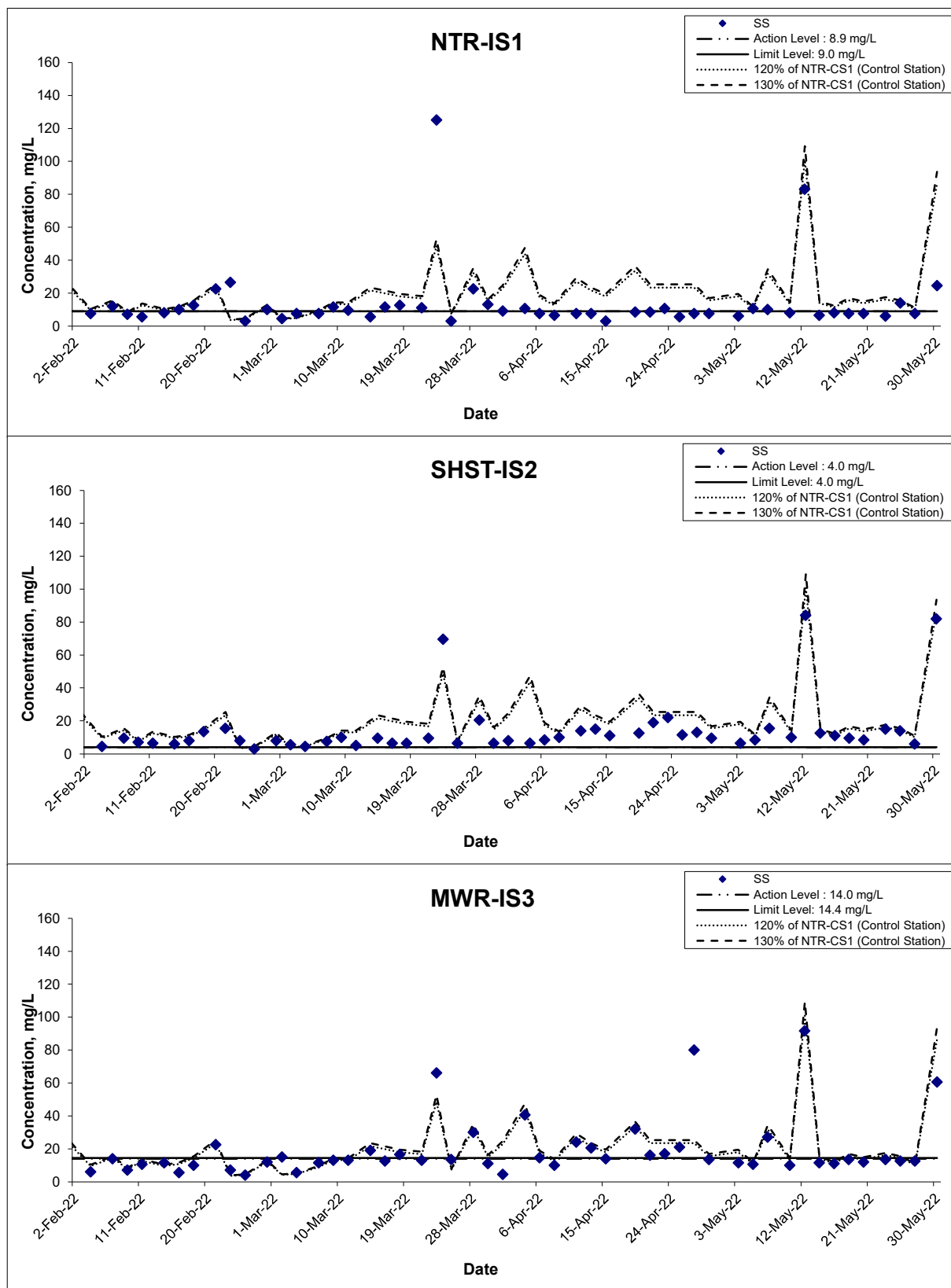


Title	Contract No. NDO 04/2019		Scale	Project
	Advance and First Stage Works of Kwu Tung North and Fanling		N.T.S	No. WMA20002
	North New Development Areas		Date	Appendix
	Graphical Presentation of Water Quality Monitoring Results		May 22	G



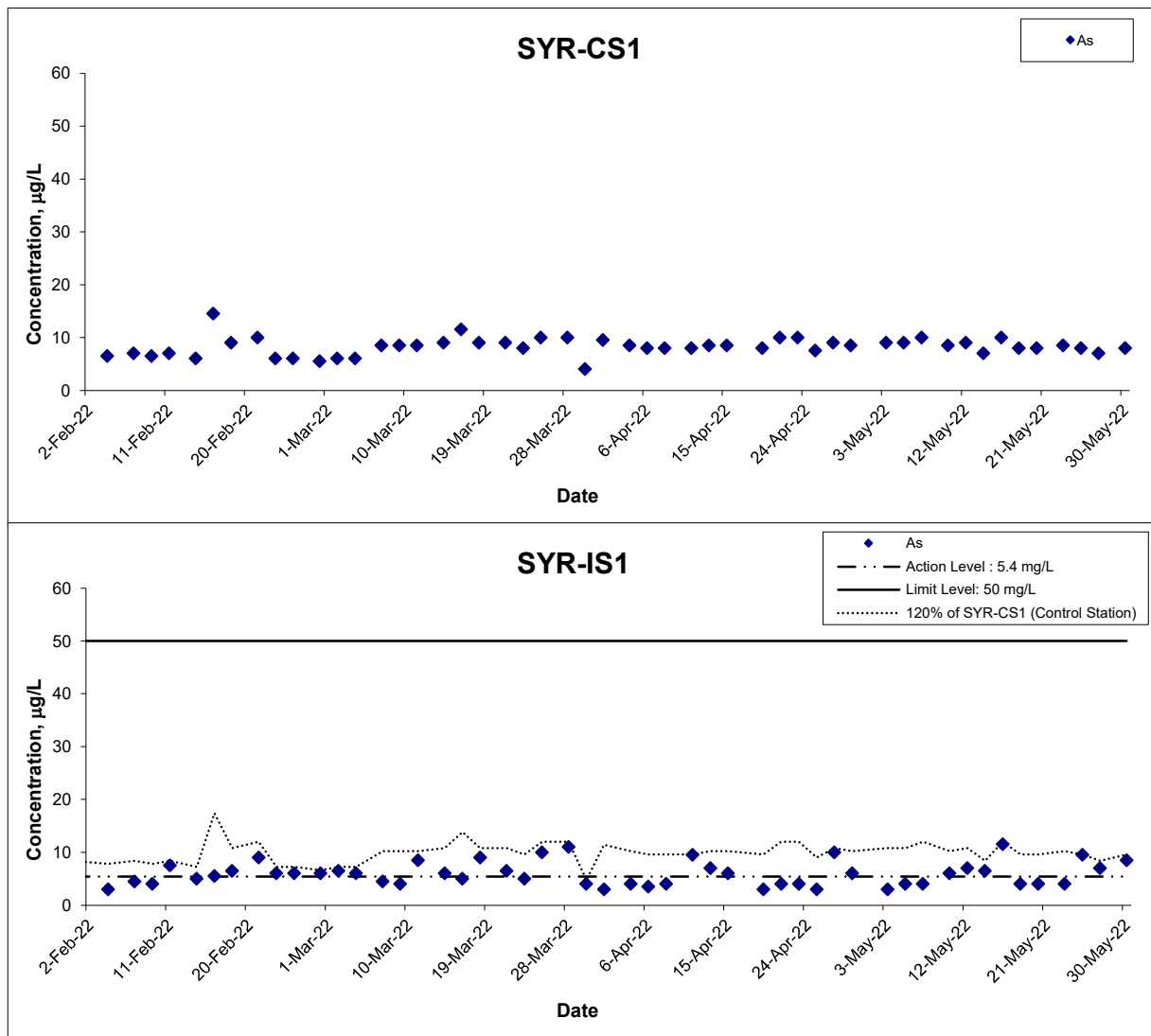
WELLAB 匯力
consulting . testing . research


Suspended Solids (Depth-averaged)



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

APPENDIX H
LABORATORY TESTING REPORTS FOR
LABORATORY ANALYSIS

TEST REPORT

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

Report No.:	36631
Date of Issue:	2022-05-09
Date Received:	2022-05-03
Date Tested:	2022-05-03
Date Completed:	2022-05-09

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36631
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. : WMA20002/220503
Sampling Date : 2022-05-03

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36631-2	36631-3	36631-5	36631-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	9	26	21
Arsenic (µg/L)	9	9	3	3

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	36631A
Date of Issue:	2022-05-09
Date Received:	2022-05-03
Date Tested:	2022-05-03
Date Completed:	2022-05-09

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36631A
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. : WMA20002/220503
Sampling Date : 2022-05-03

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36631-8	36631-9	36631-11	36631-12
Total Suspended Solids dried at 103-105°C (mg/L)	15	15	6	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36631-14	36631-15	36631-17	36631-18
Total Suspended Solids dried at 103-105°C (mg/L)	7	6	12	11

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36635
Date of Issue:	2022-05-12
Date Received:	2022-05-05
Date Tested:	2022-05-05
Date Completed:	2022-05-12

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36635
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. : WMA20002/220505
Sampling Date : 2022-05-05

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36635-2	36635-3	36635-5	36635-6
Total Suspended Solids dried at 103-105°C (mg/L)	11	12	22	24
Arsenic (µg/L)	9	9	4	4

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36635A
Date of Issue:	2022-05-12
Date Received:	2022-05-05
Date Tested:	2022-05-05
Date Completed:	2022-05-12

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36635A
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. : WMA20002/220505
Sampling Date : 2022-05-05

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36635-8	36635-9	36635-11	36635-12
Total Suspended Solids dried at 103-105°C (mg/L)	8	10	11	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36635-14	36635-15	36635-17	36635-18
Total Suspended Solids dried at 103-105°C (mg/L)	9	8	11	10

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.: 36639
Date of Issue: 2022-05-13
Date Received: 2022-05-07
Date Tested: 2022-05-07
Date Completed: 2022-05-13

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36639
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. : WMA20002/220507
Sampling Date : 2022-05-07

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36639-2	36639-3	36639-5	36639-6
Total Suspended Solids dried at 103-105°C (mg/L)	14	13	27	24
Arsenic (µg/L)	9	11	4	4

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.: 36639A
Date of Issue: 2022-05-13
Date Received: 2022-05-07
Date Tested: 2022-05-07
Date Completed: 2022-05-13

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36639A
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. : WMA20002/220507
Sampling Date : 2022-05-07

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36639-8	36639-9	36639-11	36639-12
Total Suspended Solids dried at 103-105°C (mg/L)	24	29	11	9

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36639-14	36639-15	36639-17	36639-18
Total Suspended Solids dried at 103-105°C (mg/L)	14	17	25	29

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.: 36651
Date of Issue: 2022-05-16
Date Received: 2022-05-10
Date Tested: 2022-05-10
Date Completed: 2022-05-16

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36651
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. : WMA20002/220510
Sampling Date : 2022-05-10

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.	36651-2	36651-3	36651-5	36651-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	13	13
Arsenic (µg/L)	9	8	6	6

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36651A
Date of Issue:	2022-05-16
Date Received:	2022-05-10
Date Tested:	2022-05-10
Date Completed:	2022-05-16

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36651A
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. : WMA20002/220510
Sampling Date : 2022-05-10

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.	36651-8	36651-9	36651-11	36651-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	10	8	8

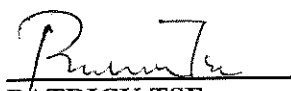
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36651-14	36651-15	36651-17	36651-18
Total Suspended Solids dried at 103-105°C (mg/L)	10	10	11	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36655
Date of Issue:	2022-05-17
Date Received:	2022-05-12
Date Tested:	2022-05-12
Date Completed:	2022-05-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36655
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. : WMA20002/220512
Sampling Date : 2022-05-12

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36655-2	36655-3	36655-5	36655-6
Total Suspended Solids dried at 103-105°C (mg/L)	42	40	52	52
Arsenic (µg/L)	9	9	7	7

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36655A
Date of Issue:	2022-05-17
Date Received:	2022-05-12
Date Tested:	2022-05-12
Date Completed:	2022-05-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36655A
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. : WMA20002/220512
Sampling Date : 2022-05-12

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36655-8	36655-9	36655-11	36655-12
Total Suspended Solids dried at 103-105°C (mg/L)	83	85	87	79

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36655-14	36655-15	36655-17	36655-18
Total Suspended Solids dried at 103-105°C (mg/L)	86	82	91	92

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36661
Date of Issue:	2022-05-17
Date Received:	2022-05-14
Date Tested:	2022-05-14
Date Completed:	2022-05-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36661
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. : WMA20002/220514
Sampling Date : 2022-05-14

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36661-2	36661-3	36661-5	36661-6
Total Suspended Solids dried at 103-105°C (mg/L)	16	14	14	14
Arsenic (µg/L)	7	7	7	6

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36661A
Date of Issue:	2022-05-17
Date Received:	2022-05-14
Date Tested:	2022-05-14
Date Completed:	2022-05-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36661A
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. : WMA20002/220514
Sampling Date : 2022-05-14

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36661-8	36661-9	36661-11	36661-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	11	7	6

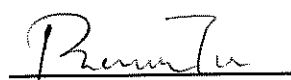
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36661-14	36661-15	36661-17	36661-18
Total Suspended Solids dried at 103-105°C (mg/L)	13	12	12	11

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36675
Date of Issue:	2022-05-18
Date Received:	2022-05-16
Date Tested:	2022-05-16
Date Completed:	2022-05-18

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36675
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. : WMA20002/220516
Sampling Date : 2022-05-16

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.	36675-2	36675-3	36675-5	36675-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	25	26
Arsenic (µg/L)	10	10	11	12

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36675A
Date of Issue:	2022-05-18
Date Received:	2022-05-16
Date Tested:	2022-05-16
Date Completed:	2022-05-18

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36675A
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. : WMA20002/220516
Sampling Date : 2022-05-16

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.	36675-8	36675-9	36675-11	36675-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	10	7	9

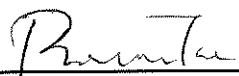
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36675-14	36675-15	36675-17	36675-18
Total Suspended Solids dried at 103-105°C (mg/L)	12	10	11	11

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36679
Date of Issue:	2022-05-24
Date Received:	2022-05-18
Date Tested:	2022-05-18
Date Completed:	2022-05-24

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36679
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. : WMA20002/220518
Sampling Date : 2022-05-18

Tests Requested & Methodology:

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

Results:


Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36679-2	36679-3	36679-5	36679-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	12	14
Arsenic (µg/L)	8	8	4	4

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36679A
Date of Issue:	2022-05-24
Date Received:	2022-05-18
Date Tested:	2022-05-18
Date Completed:	2022-05-24

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36679A
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. : WMA20002/220518
Sampling Date : 2022-05-18

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36679-8	36679-9	36679-11	36679-12
Total Suspended Solids dried at 103-105°C (mg/L)	14	12	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36679-14	36679-15	36679-17	36679-18
Total Suspended Solids dried at 103-105°C (mg/L)	10	9	14	13

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36684
Date of Issue:	2022-05-26
Date Received:	2022-05-20
Date Tested:	2022-05-20
Date Completed:	2022-05-26

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36684
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. : WMA20002/220520
Sampling Date : 2022-05-20

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.	36684-2	36684-3	36684-5	36684-6
Total Suspended Solids dried at 103-105°C (mg/L)	4	4	9	8
Arsenic (µg/L)	8	8	4	4

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36684A
Date of Issue:	2022-05-26
Date Received:	2022-05-20
Date Tested:	2022-05-20
Date Completed:	2022-05-26

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36684A
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. : WMA20002/220520
Sampling Date : 2022-05-20

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.	36684-8	36684-9	36684-11	36684-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	11	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36684-14	36684-15	36684-17	36684-18
Total Suspended Solids dried at 103-105°C (mg/L)	9	8	12	12

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.: 36689
Date of Issue: 2022-05-27
Date Received: 2022-05-23
Date Tested: 2022-05-23
Date Completed: 2022-05-27

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36689
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. : WMA20002/220523
Sampling Date : 2022-05-23

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.	36689-2	36689-3	36689-5	36689-6
Total Suspended Solids dried at 103-105°C (mg/L)	10	11	13	13
Arsenic (µg/L)	9	8	4	4

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36689A
Date of Issue:	2022-05-27
Date Received:	2022-05-23
Date Tested:	2022-05-23
Date Completed:	2022-05-27

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36689A
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. : WMA20002/220523
Sampling Date : 2022-05-23

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.	36689-8	36689-9	36689-11	36689-12
Total Suspended Solids dried at 103-105°C (mg/L)	13	14	6	6

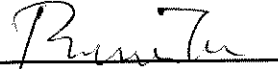
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36689-14	36689-15	36689-17	36689-18
Total Suspended Solids dried at 103-105°C (mg/L)	15	15	13	14

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36693
Date of Issue:	2022-05-27
Date Received:	2022-05-25
Date Tested:	2022-05-25
Date Completed:	2022-05-27

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36693
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. : WMA20002/220525
Sampling Date : 2022-05-25

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.	36693-2	36693-3	36693-5	36693-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	9	28	35
Arsenic (µg/L)	8	8	9	10

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36693A
Date of Issue:	2022-05-27
Date Received:	2022-05-25
Date Tested:	2022-05-25
Date Completed:	2022-05-27

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36693A
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. : WMA20002/220525
Sampling Date : 2022-05-25

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.	36693-8	36693-9	36693-11	36693-12
Total Suspended Solids dried at 103-105°C (mg/L)	11	13	14	14

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36693-14	36693-15	36693-17	36693-18
Total Suspended Solids dried at 103-105°C (mg/L)	15	13	13	12

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36697
Date of Issue:	2022-06-02
Date Received:	2022-05-27
Date Tested:	2022-05-27
Date Completed:	2022-06-02

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36697
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. : WMA20002/220527
Sampling Date : 2022-05-27

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.	36697-2	36697-3	36697-5	36697-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	31	38
Arsenic (µg/L)	7	7	7	7

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.: 36697A
Date of Issue: 2022-06-02
Date Received: 2022-05-27
Date Tested: 2022-05-27
Date Completed: 2022-06-02

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36697A
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. : WMA20002/220527
Sampling Date : 2022-05-27

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.	36697-8	36697-9	36697-11	36697-12
Total Suspended Solids dried at 103-105°C (mg/L)	9	8	7	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36697-14	36697-15	36697-17	36697-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	11	14

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36729
Date of Issue:	2022-06-06
Date Received:	2022-05-30
Date Tested:	2022-05-30
Date Completed:	2022-06-06

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36729
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. : WMA20002/220530
Sampling Date : 2022-05-30

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.	36729-2	36729-3	36729-5	36729-6
Total Suspended Solids dried at 103-105°C (mg/L)	27	29	17	16
Arsenic (µg/L)	8	8	9	8

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36729A
Date of Issue:	2022-06-06
Date Received:	2022-05-30
Date Tested:	2022-05-30
Date Completed:	2022-06-06

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36729A
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. : WMA20002/220530
Sampling Date : 2022-05-30

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.	36729-8	36729-9	36729-11	36729-12
Total Suspended Solids dried at 103-105°C (mg/L)	71	73	24	25

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36729-14	36729-15	36729-17	36729-18
Total Suspended Solids dried at 103-105°C (mg/L)	82	82	55	66

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

**APPENDIX I
QUALITY CONTROL REPORTS FOR SS
AND ARSENIC LABORATORY
ANALYSIS**

TEST REPORT

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

Report No.: QC36631
Date of Issue: 2022-05-09
Date Received: 2022-05-03
Date Tested: 2022-05-03
Date Completed: 2022-05-09

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 (%)	106	106	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 (%)	94	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	3	RPD≤5%
Arsenic (%)	2	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36631.

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

PREPARED AND CHECKED BY:

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


PATRICIA TSE
General Manager

TEST REPORT

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

Report No.:	QC36635
Date of Issue:	2022-05-12
Date Received:	2022-05-05
Date Tested:	2022-05-05
Date Completed:	2022-05-12

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 (%)	103	102	80-120
Arsenic (%)	81	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 (%)	4	3	RPD ≤ 5%
Arsenic (%)	4	N/A	RPD ≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36635.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36639
Date of Issue:	2022-05-13
Date Received:	2022-05-07
Date Tested:	2022-05-07
Date Completed:	2022-05-13

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 (%)	99	110	80-120
Arsenic (%)	102	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	114	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	2	RPD≤5%
Arsenic (%)	6	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36639.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36651
Date of Issue:	2022-05-16
Date Received:	2022-05-10
Date Tested:	2022-05-10
Date Completed:	2022-05-16

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 (%)	97	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 (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36651.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36655
Date of Issue:	2022-05-17
Date Received:	2022-05-12
Date Tested:	2022-05-12
Date Completed:	2022-05-17

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 (%)	97	105	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 (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	0	4	RPD ≤ 5%
Arsenic (%)	2	N/A	RPD ≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36655.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36661
Date of Issue:	2022-05-17
Date Received:	2022-05-14
Date Tested:	2022-05-14
Date Completed:	2022-05-17

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 (%)	99	100	80-120
Arsenic (%)	107	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	0	RPD≤5%
Arsenic (%)	2	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36661.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36675
Date of Issue:	2022-05-18
Date Received:	2022-05-16
Date Tested:	2022-05-16
Date Completed:	2022-05-18

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 (%)	99	97	80-120
Arsenic (%)	100	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 (%)	3	2	RPD ≤ 5%
Arsenic (%)	19	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 36675.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36679
Date of Issue:	2022-05-24
Date Received:	2022-05-18
Date Tested:	2022-05-18
Date Completed:	2022-05-24

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 (%)	99	101	80-120
Arsenic (%)	106	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	98	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	1	RPD ≤ 5%
Arsenic (%)	9	N/A	RPD ≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36679.

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

PREPARED AND CHECKED BY:

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


PATRICIA TSE
General Manager

TEST REPORT

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

Report No.:	QC36684
Date of Issue:	2022-05-26
Date Received:	2022-05-20
Date Tested:	2022-05-20
Date Completed:	2022-05-26

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	101	80-120
Arsenic (%)	88	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	102	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	3	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36684.

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

PREPARED AND CHECKED BY:

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


PATRICIA TSE
General Manager

TEST REPORT

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

Report No.:	QC36689
Date of Issue:	2022-05-27
Date Received:	2022-05-23
Date Tested:	2022-05-23
Date Completed:	2022-05-27

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 (%)	102	99	80-120
Arsenic (%)	104	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	100	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	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 36689.

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

PREPARED AND CHECKED BY:

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


PATRICIA TSE
General Manager

TEST REPORT

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

Report No.:	QC36693
Date of Issue:	2022-05-27
Date Received:	2022-05-25
Date Tested:	2022-05-25
Date Completed:	2022-05-27

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	111	80-120
Arsenic (%)	99	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	97	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	11	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36693.

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

PREPARED AND CHECKED BY:

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


PATRICIA TSE
General Manager

TEST REPORT

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

Report No.: QC36697
Date of Issue: 2022-06-02
Date Received: 2022-05-27
Date Tested: 2022-05-27
Date Completed: 2022-06-02

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	99	80-120
Arsenic (%)	94	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	99	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	1	RPD≤5%
Arsenic (%)	6	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36697.

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

PREPARED AND CHECKED BY:

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


PATRICIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36729
Date of Issue:	2022-06-06
Date Received:	2022-05-30
Date Tested:	2022-05-30
Date Completed:	2022-06-06

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	100	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 (%)	4	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 36729.

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

PREPARED AND CHECKED BY:

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


PATRICIA TSE
General Manager

APPENDIX J
LANDFILL GAS MONITORING
RESULTS

Contract No. ND/2019/01

**Development of Kwu Tung North & Fanling North New Development Area, Phase 1:
Kwu Tung North New Development Area, Phase 1: Site formation & Infrastructure works**

堆填區附近區域(Consultation Zone)每月氣體監察記錄

日期及時間	位置	氣體及安全標準	氧氣 O ₂ >19%	甲烷 CH ₄ <10% LEL	二氧化碳 CO ₂ <0.5%
30-05-2022 10:54	CZ PT 1		20.38	0.00	0.00
30-05-2022 10:46	CZ container 1		20.79	0.01	0.00
30-05-2022 10:48	CZ container 2		20.70	0.01	0.00
30-05-2022 10:50	CZ container 3		20.71	0.00	0.00
30-05-2022 10:52	CZ container 4		20.62	0.00	0.00
30-05-2022 10:44	CZ container 5		20.92	0.00	0.00

Prepared by : Y L Chan (Safety Officer)

Date : 30-05-2022

**APPENDIX K
BUILT HERITAGE MONITORING
RESULTS**

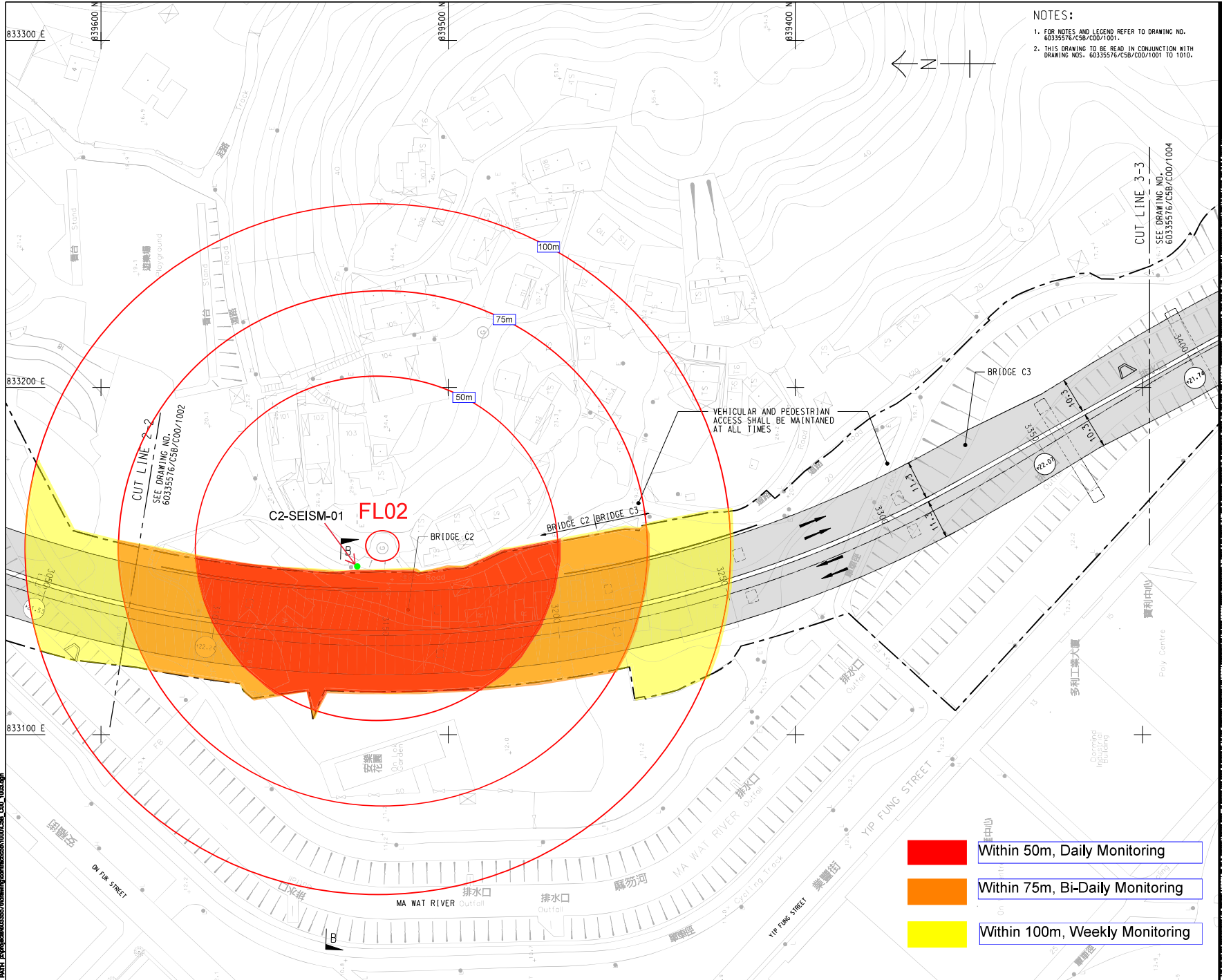
Summary of vibration readings at FL02 (C2-SEISM-01)



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)
03 May 2022	0.446	UM17124
04 May 2022	0.394	UM17121
05 May 2022	0.399	UM17124
06 May 2022	0.338	UM17121
07 May 2022	0.336	UM17121
10 May 2022	0.379	UM17124
11 May 2022	0.387	UM17124
12 May 2022	0.334	UM17121
13 May 2022	0.340	UM17121
14 May 2022	0.452	UM17124
16 May 2022	0.360	UM17124
17 May 2022	0.344	UM17121
18 May 2022	0.319	UM17121
19 May 2022	0.324	UM17121
20 May 2022	0.405	UM17124
21 May 2022	0.417	UM17124
23 May 2022	0.339	UM17121
24 May 2022	0.349	UM17124
25 May 2022	0.298	UM17121
26 May 2022	0.270	UM17121
27 May 2022	0.335	UM17124
28 May 2022	0.324	UM17124
30 May 2022	0.267	UM17121
31 May 2022	0.155	UM17121



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.

- Within 50m, Daily Monitoring
- Within 75m, Bi-Daily Monitoring
- Within 100m, Weekly Monitoring

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
 土木工程拓展署
 Civil Engineering and Development Department

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 2017/06/24

ISSUE/REVISION		
NO.	DATE	DESCRIPTION
1	JUN-19	TENDER DRAWING

STATUS
 2017/06/24

SCALE
 A1 1: 800

KEY PLAN
 A1 1: 70000

PROJECT NO.
 60335576

CONTRACT NO.
 ND/2019/05

SHEET TITLE
 GENERAL LAYOUT

SHEET NUMBER
 60335576/C5B/C00/1003

SHEET 3 OF 10

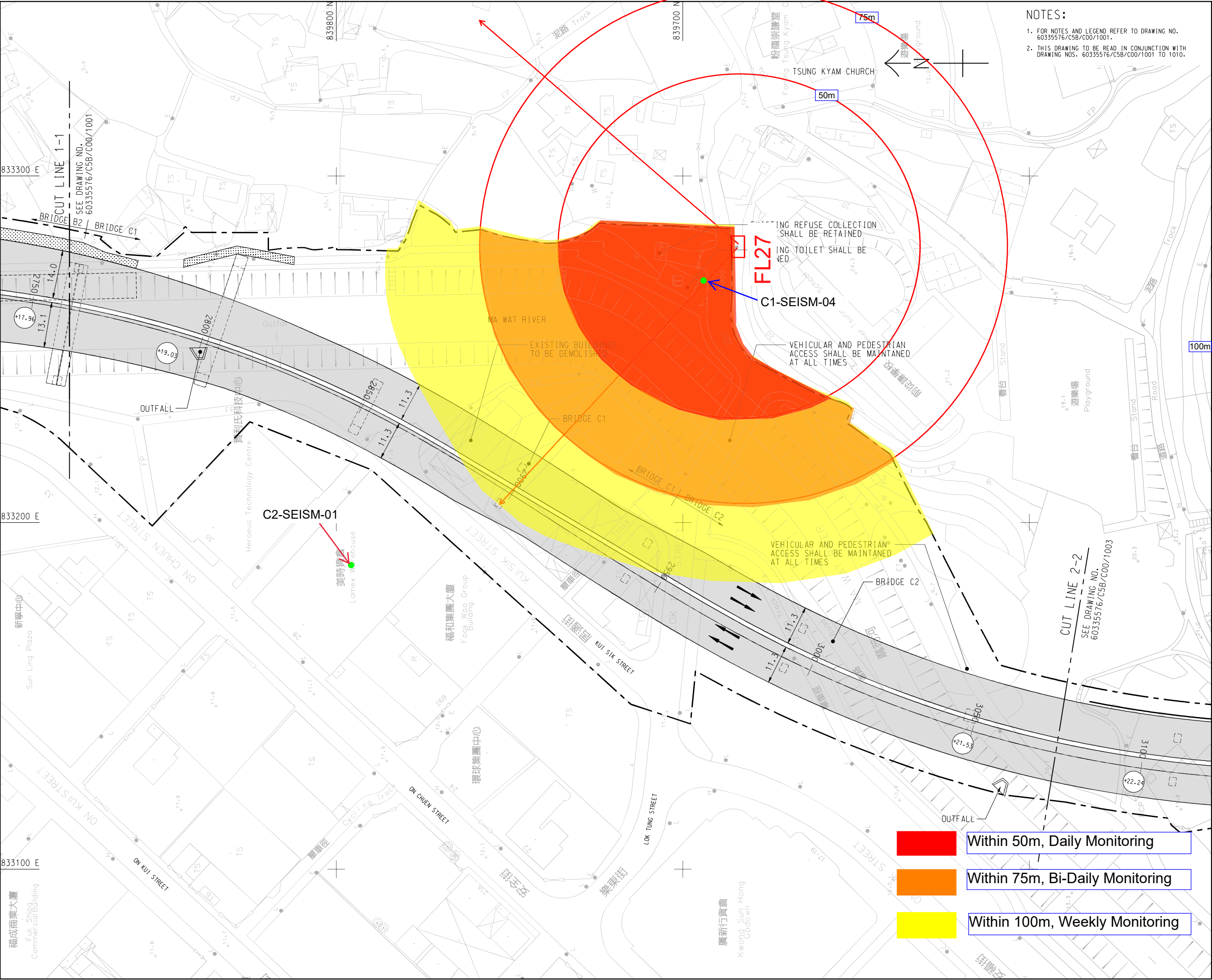
Summary of vibration readings at FL27 (C1-SEISM-04)



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)
03 May 2022	0.598	UM17121
04 May 2022	0.443	UM17124
05 May 2022	0.491	UM17121
06 May 2022	0.742	UM17124
07 May 2022	0.344	UM17121
10 May 2022	0.359	UM17124
11 May 2022	0.175	UM17121
12 May 2022	0.156	UM17124
13 May 2022	0.186	UM17121
14 May 2022	0.173	UM17124
16 May 2022	0.204	UM17121
17 May 2022	0.301	UM17121
18 May 2022	0.235	UM17124
19 May 2022	0.94	UM17124
20 May 2022	0.192	UM17124
21 May 2022	0.148	UM17121
23 May 2022	0.14	UM17124
24 May 2022	0.167	UM17124
25 May 2022	0.135	UM17121
26 May 2022	0.153	UM17121
27 May 2022	0.151	UM17124
28 May 2022	0.223	UM17121
30 May 2022	0.227	UM17124
31 May 2022	0.171	UM17124



NOTES:

- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1001.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1001 TO 1010.

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

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

CONSULTANT
工程顧問公司

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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION			
號次	日期	描述	校核

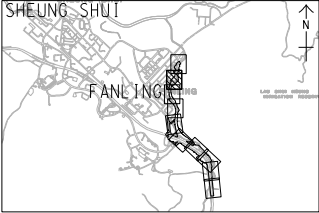
STATUS
階段

SCALE
比例

DIMENSION UNIT
尺寸單位

A1 1: 500 METRES

KEY PLAN 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 NUMBER
圖紙編號

60335576/C5B/C00/1002

SHEET 2 OF 10

APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 3 & 4 May 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				3/5/2022 (T1 & T2), 4/5/2022 (T3 & T5)				
					Weather Condition				Fine, Sunny				
					Tidal Condition				High				
					Tide Level (m)				2.45, 2.38				
					Start Time				1000, 1000				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R									3	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			4	17						3
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV		1								1
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R									10	1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				2	7			1	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	4	2						1
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R				1						
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR				3						8
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM						3				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2					
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			4	3					8	6
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R				2		23				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)			2		1				
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鵲	WV						4				
Large Hawk-Cuckoo	<i>Hierococcyx sparverioides</i>	大鷹鵲	Sv									2	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			3/5/2022 (T1 & T2), 4/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.45, 2.38					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)		4	3		7				5
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R				2		4			1	3
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)			3						
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						6			5	
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鸛	R				1						
Rock Dove	<i>Columba livia</i>	原鴿	R			7						1	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			1	2		21			1	1
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC					4				
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R						1			7	
Total No. of Species					2	6	12	2	11	0	0	10	9
Total No. of Conservation Interest Species					1	2	4	1	3	0	0	1	2
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		3/5/2022 (T1 & T2), 4/5/2022 (T3 & T5)					
					Weather Condition		Fine, Sunny					
					Tidal Condition		High					
					Tide Level (m)		2.45, 2.38					
					Start Time		1000, 1000					
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				
			WAL	DAL	SWH	P	Heard	Flight				
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant;</p> <p>Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.</p> <p>Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>												

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 3 & 4 May 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			3/5/2022 (T1 & T2), 4/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.43					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R				2					2	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv						1				8
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV		1								1
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		1		2		2			1	2
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				7	6				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R						2				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	5	1	1	2				1
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			4	1		3			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM				2						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			3			23				36
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				41					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV						24				49
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R										11
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)				1					
Intermediate Egret	<i>Ardea intermedia</i>	中白鷺	CPM	RC			1						
Large Hawk-Cuckoo	<i>Hierococcyx sparverioides</i>	大鷹鵲	Sv									1	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			3/5/2022 (T1 & T2), 4/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.43					
					Start Time			1600, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	1	39	3	1				
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC									2
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						4				
Oriental Magpie	<i>Pica serica</i>	喜鵲	R										1
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						1			1	
Rock Dove	<i>Columba livia</i>	原鴿	R			5			4				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						7				34
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			1	1		23				3
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV			2							
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						4				
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)					1				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC					1				
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R									10	
Total No. of Species					4	6	8	6	16	1	0	5	11
Total No. of Conservation Interest Species					2	2	3	7	4	1	0	0	2
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		3/5/2022 (T1 & T2), 4/5/2022 (T3 & T5)					
					Weather Condition		Fine, Sunny					
					Tidal Condition		Low					
					Tide Level (m)		1.22, 1.43					
					Start Time		1600, 1600					
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				
WAL		DAL		SWH		P		Heard	Flight			
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant;</p> <p>Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.</p> <p>Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>												

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 11 & 12 May 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)				
					Weather Condition				Rain, Storm				
					Tidal Condition				High				
					Tide Level (m)				1.72, 1.87				
					Start Time				0900, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2								
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				2		8			4
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	2	8	6	3	5			2
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			2			2			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R										8
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				10		14			11
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV						6				
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		4								
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	3	1	3			2			1
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R	LC						2			1
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R				11						36
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	4	1	12	8		20			4
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R		2								
Rock Dove	<i>Columba livia</i>	原鴿	R		6				8				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		5	1							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)				
					Weather Condition				Rain, Storm				
					Tidal Condition				High				
					Tide Level (m)				1.72, 1.87				
					Start Time				0900, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV		2								
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)	1								
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC						3			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R									6	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2								
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鵲	PM	RC				2		8			4
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鵲	R	PRC(RC)	3	2	8	6	3	5			2
Common Greenshank	<i>Tringa nebularia</i>	青腳鵲	PM, WV	RC			2			2			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R										8
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鵲	R, PM	(LC)				10		14			11
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鵯	PM, WV						6				
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		4								
Great Egret	<i>Ardea alba</i>	大白鵲	R, WV	PRC(RC)	3	1	3			2			1
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鵲	R	LC						2			1
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R				11						36
Little Egret	<i>Egretta garzetta</i>	小白鵲	R	PRC(RC)	4	1	12	8		20			4
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R		2								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)					
					Weather Condition			Rain, Storm					
					Tidal Condition			High					
					Tide Level (m)			1.72, 1.87					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Rock Dove	<i>Columba livia</i>	原鴿	R		6				8				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		5	1							
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		2								
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)	1								
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC						3			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R									6	
Total No. of Species					10	4	5	4	3	8	0	1	8
Total No. of Conservation Interest Species					4	3	3	4	1	8	0	0	6
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)				
					Weather Condition			Rain, Storm				
					Tidal Condition			High				
					Tide Level (m)			1.72, 1.87				
					Start Time			0900, 0900				
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				
			WAL	DAL	SWH	P	Heard	Flight				
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSV – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant;</p> <p>Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.</p> <p>Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>												

Appendix L1d. Avifauna Species Recorded for Water Birds Monitoring, 11 & 12 May 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)				
					Weather Condition				Rain, Rain				
					Tidal Condition				Low				
					Tide Level (m)				1.32, 1.06				
					Start Time				1300, 1400				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R								2	4	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				8		6		4	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	1	10	9		2			
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			2			1			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM		2								
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				34				12	
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV				2	3				2	
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1		4			1		2	
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R	LC						2		3	
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				2						
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R				30						
Intermediate Egret	<i>Ardea intermedia</i>	中白鷺	CPM	RC			1						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			2						
Large Hawk-Cuckoo	<i>Hierococcyx sparveriioides</i>	大鷹鵲	Sv								1		
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	1	16	12					

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)					
					Weather Condition			Rain, Rain					
					Tidal Condition			Low					
					Tide Level (m)			1.32, 1.06					
					Start Time			1300, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		3	2							
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV		3								
White-winged Tern	<i>Chlidonias leucopterus</i>	白翅浮鷗	CPM										210
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC	1								
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R									9	3
Total No. of Species					7	3	9	5	0	5	0	3	8
Total No. of Conservation Interest Species					4	2	6	4	0	5	0	0	4
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/5/2022 (T1 & T2), 12/5/2022 (T3 & T5)					
					Weather Condition			Rain, Rain					
					Tidal Condition			Low					
					Tide Level (m)			1.32, 1.06					
					Start Time			1300, 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; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant; Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. 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, 17 & 18 May 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)				
					Weather Condition				Fine, Sunny				
					Tidal Condition				High				
					Tide Level (m)				3.00, 2.92				
					Start Time				1100, 1000				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		2		1					2	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv				6						14
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv						6				
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV				1						1
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		3	1	2						1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC					2	21			
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R						1				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	2	4	3	3	1			
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC						3			
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R		1		1						
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR				3		2				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		2				1			2	7
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				2	18				1
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		8				1				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	1							3

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)						
					Weather Condition			Fine, Sunny						
					Tidal Condition			High						
					Tide Level (m)			3.00, 2.92						
					Start Time			1100, 1000						
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R										1	
Indian Cuckoo	<i>Cuculus micropterus</i>	四聲杜鵑	SSv									1		
Large Hawk-Cuckoo	<i>Hierococcyx sparveriioides</i>	大鷹鵑	Sv			2						2		
Little Bunting	<i>Emberiza pusilla</i>	小鵐	CPM, WV											
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	2	12	10	1	11			2	
Little Grebe	<i>Tachybaptus ruficollis</i>	小鷺鶯	R	LC							2			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R				6		6					
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵲	R				2							
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						3				1	
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R				3		1			3	1	
Rock Dove	<i>Columba livia</i>	原鴿	R		6								5	
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R										5	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		4	2	4		5			1	1	
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV		4	1			1					
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				2					9		
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)									1	
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R						1			6		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)						
					Weather Condition			Fine, Sunny						
					Tidal Condition			High						
					Tide Level (m)			3.00, 2.92						
					Start Time			1100, 1000						
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Total No. of Species					6	11	14	3	15	4	1	8	14	
Total No. of Conservation Interest Species					3	2	2	3	4	4	1	0	4	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			3.00, 2.92					
					Start Time			1100, 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; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant; Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. 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, 17 & 18 May 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.30					
					Start Time			1600, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT, Cap. 586									1
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R				2		1			2	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv				1						2
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv						1				
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R						3			1	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鸛	PM	RC				7	13				
Brown Shrike	<i>Lanius cristatus</i>	紅尾伯勞	CPM, SWV						1				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R				1		1				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1		3		7				2
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU			2						
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R					2					
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						2				1
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R						1				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				3		12				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				2	20	36			12

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.30					
					Start Time			1600, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1		2		1				
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷺	R	LC									1
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			8						
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R										1
Indian Cuckoo	<i>Cuculus micropterus</i>	四聲杜鵑	SSv									2	
Intermediate Egret	<i>Ardea intermedia</i>	中白鷺	CPM	RC				1	2				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	4	2	11	4	8				6
Little Grebe	<i>Tachybaptus ruficollis</i>	小鷺鷥	R	LC				1					
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鷓	R						3				
Oriental Magpie	<i>Pica serica</i>	喜鵲	R				1		1				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵒	R									1	
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						5				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R				1		2				
Rock Dove	<i>Columba livia</i>	原鴿	R		5				20				2
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						22				200
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		2				18				
White Wagtail	<i>Motacilla alba</i>	白鷺鶇	PM, WV		3				1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.22, 1.30					
					Start Time			1600, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R								4		
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R					1			3		
Total No. of Species					6	1	11	6	23	1	0	6	10
Total No. of Conservation Interest Species					3	1	5	5	6	1	0	0	5
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		18/5/2022 (T1 & T2), 17/5/2022 (T3 & T5)						
					Weather Condition		Fine, Sunny						
					Tidal Condition		Low						
					Tide Level (m)		1.22, 1.30						
					Start Time		1600, 1500						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					Heard
WAL	DAL	SWH	P										
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSV – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant;</p> <p>Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.</p> <p>Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>													

Appendix L1g. Avifauna Species Recorded for Water Birds Monitoring, 26 & 27 May 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				26/5/2022 (T1 & T2), 27/5/2022 (T3 & T5)				
					Weather Condition				Rain, Storm				
					Tidal Condition				High				
					Tide Level (m)				1.89, 2.06				
					Start Time				1000, 1000				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		3								
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R				2		4				6
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	R, WV	LC									1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				9		8			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)			8	2	3	5			2
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1			1			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				5						6
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				24					8
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	2	1	4			3			1
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R	LC						5			
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			4						2
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	8	12	4	2	12			4
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R				2		4				
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						2			2	
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R		4								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/5/2022 (T1 & T2), 27/5/2022 (T3 & T5)					
					Weather Condition			Rain, Storm					
					Tidal Condition			High					
					Tide Level (m)			1.89, 2.06					
					Start Time			1000, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Rock Dove	<i>Columba livia</i>	原鴿	R		2				8				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		1		2						
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV		1		2						
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						2	2		1	1
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R						1			3	2
Total No. of Species					7	2	10	4	8	7	0	3	10
Total No. of Conservation Interest Species					2	3	5	4	2	6	0	0	6
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/5/2022 (T1 & T2), 27/5/2022 (T3 & T5)					
					Weather Condition			Rain, Storm					
					Tidal Condition			High					
					Tide Level (m)			1.89, 2.06					
					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; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant; Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond													

Appendix L1h. Avifauna Species Recorded for Water Birds Monitoring, 26 & 27 May 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				26/5/2022 (T1 & T2), 27/5/2022 (T3 & T5)							
					Weather Condition				Rain, Storm							
					Tidal Condition				Low							
					Tide Level (m)				0.81, 0.81							
					Start Time				1400, 1400							
					Abundance											
					Transect Walk											
					T1	T2	T3	T5								
			WAL	DAL	SWH	P	Heard	Flight								
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		1											
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv											23		
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R											2		
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				3		8						
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1		4	4	2	6				1		
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1			1						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		2											
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				31		11				4		
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1		1			2				1		
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R				16							14		
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	1	11	6	3	11				2		
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R				2		4			4				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		2	2	2		3							
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV		2											
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1	2	1			1		3		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/5/2022 (T1 & T2), 27/5/2022 (T3 & T5)					
					Weather Condition			Rain, Storm					
					Tidal Condition			Low					
					Tide Level (m)			0.81, 0.81					
					Start Time			1400, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
White-winged Tern	<i>Chlidonias leucopterus</i>	白翅浮鷗	CPM										2
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R					2				4	1
Total No. of Species					7	2	8	5	6	6	0	3	10
Total No. of Conservation Interest Species					3	1	4	4	2	6	0	0	4
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/5/2022 (T1 & T2), 27/5/2022 (T3 & T5)						
					Weather Condition			Rain, Storm						
					Tidal Condition			Low						
					Tide Level (m)			0.81, 0.81						
					Start Time			1400, 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; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSv – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant;														
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)														
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance														
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)														
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.														
Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)														
WAL: Wet Agricultural Land														
DAL: Dry Agricultural Land														
SWH: Shallow Water Habitat														
P: Pond														

Appendix L1i. Waterbirds Recorded in May 2022

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	LC	T5: In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Black-winged Stilt	<i>Himantopus himantopus</i>	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	<i>Ardeola bacchus</i>	池鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident. Widely distributed in Hong Kong.
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	RC	T3: River bed T5: Wet Agricultural Land, Shallow Water Habitat	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥		T1: River bank, In flight T3: River bank, In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸		T1: River bank T3: River bed T5: Dry Agricultural Land	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐		T5: Wet Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	(LC)	T3: River bank 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	<i>Rostratula benghalensis</i>	彩鷸	LC	T5: Wet Agricultural Land, Shallow Water Habitat, In flight	Locally common resident. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Great Egret	<i>Ardea alba</i>	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸		T3: River bank, River bed	Uncommon passage migrant and winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Shek Kong, Ho Chung.
Grey Heron	<i>Ardea cinerea</i>	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	<i>Ardea intermedia</i>	中白鷺	RC	T3: River bank, In flight T5: Wet Agricultural Land, Dry Agricultural Land,	Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar
Little Egret	<i>Egretta garzetta</i>	小白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	LC	T5: Pond	Common resident. Found in Deep Bay area.
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸻	(LC)	T5: In flight	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	(LC)	T3: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	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.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	(LC)	T1: River bank T5: Dry Agricultural Land, In flight	Common resident. Widely distributed in coastal areas throughout Hong Kong.
White-winged Tern	<i>Chlidonias leucopterus</i>	白翅浮鷗		T5: In flight	Common passage migrant. Found in Deep Bay area, Cheung Chau, Po Toi, Long Valley, Cape D'Aguilar, Lamma Island.
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC	T1: River bank T3: River bank, River bed T5: Dry Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSV – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant;</p> <p>Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.</p> <p>Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p>					

Appendix L1j. Birds Recorded in May 2022

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT, Cap. 586
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv	
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R	
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	R, WV	LC
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC
Brown Shrike	<i>Lanius cristatus</i>	紅尾伯勞	CPM, SWV	
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR	
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM	
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV	
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R	
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R	LC
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV	
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鴿	WV	
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R	
Indian Cuckoo	<i>Cuculus micropterus</i>	四聲杜鵑	SSv	
Intermediate Egret	<i>Ardea intermedia</i>	中白鷺	CPM	RC
Large Hawk-Cuckoo	<i>Hierococcyx sparveroides</i>	大鷹鵒	Sv	
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴿	WV, PM	(LC)
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵒	R	
Oriental Magpie	<i>Pica serica</i>	喜鵒	R	
Oriental Magpie Robin	<i>Copsychus saularis</i>	鵲鴿	R	
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R	
Red-whiskered bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R	
Rock Dove	<i>Columba livia</i>	原鴿	R	
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R	
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)
White-winged Tern	<i>Chlidonias leucopterus</i>	白翅浮鷗	CPM	
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R	
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; ; SpM – Spring migrant; Sv – Summer Visitor; SSV – Spring & Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; M - Spring and Autumn Migrant; Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern.</p> <p>Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002))</p>				

Appendix L2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Occurrence Status	Date: 19 May 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	<i>Pomacea canaliculata</i>	-	Introduced								++	+++	
Atyid Shrimp	<i>Caridina</i> sp.	-	-										
Black Threadtail	<i>Prodasineura autumnalis</i>	-	Native						+				
Black-banded Gossamerwing	<i>Eupjaea decorata</i>	-	Native							+			
Bladder Snail	<i>Physella acuta</i>	-	-				+					+	
Blood Worm	Chironomidae	-	-										+
Bristle Worm	Polychaeta						+						
Chinese River Snail	<i>Sinotaia guangdongensis</i>	-	Native									+	
Common Blue Skimmer	<i>Orthetrum glaucum</i>	-	Native		+								
Crimson Dropwing	<i>Trithemis aurora</i>	-	Native		+								
Damselfly	<i>Copera</i> sp.	-	-						+				
Dragonfly	<i>Libellulidae</i>	-	-		++								
Earthworm	Oligochaeta	-	-										+
Freshwater Snail	<i>Radix plicatulus</i>	-	-			+							
Leech	Hirudinea	-	-						+				
Orange-tailed Sprite	<i>Ceragrion auranticum</i>	-	Native				+						++
Ram's Horn Snail	<i>Biophalaria glabrata</i>	-	Introduced										

	<i>Gyraulus convexiusculus</i>	-	Introduced			++	+						
Red-rimmed Melania	<i>Melanoides tuberculata</i>	-	Introduced								+	+	
River Snail	<i>Sinotaia quadrata</i>	-	Native										
Water Strider	<i>Microvelia</i> sp.	-	-									+	
Yellow featherlegs	<i>Copera marginipes</i>	-	Native				+		+	++			
Total No. of species				0	3	2	5	0	4	2	2	5	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	Occurrence Status	Date: 19 May 2022				
				Weather: Fine				
				Methods: Kick-netting, sweep netting and direct observation				
				Abundance				
				MS_11	MS_12	MS_13	MS_14	MS_15
Apple Snail	<i>Pomacea canaliculata</i>	-	Introduced		+	++		+++
Atyid Shrimp	<i>Caridina</i> sp.	-	-			+++	+++	
Black Threadtail	<i>Prodasineura autumnalis</i>	-	Native					
Black-banded Gossamerwing	<i>Eupjaea decorata</i>	-	Native					
Bladder Snail	<i>Physella acuta</i>	-	-				+	+++
Blood Worm	Chironomidae	-	-					
Bristle Worm	Polychaeta	-	-					
Chinese River Snail	<i>Sinotaia guangdongensis</i>	-	Native			+		
Common Blue Skimmer	<i>Orthetrum glaucum</i>	-	Native				+	
Crimson Dropwing	<i>Trithemis aurora</i>	-	Native				+	
Damselfly	<i>Copera</i> sp.	-	-			+		
Dragonfly	Libellulidae	-	-					
Earthworm	Oligochaeta	-	-				+	
Freshwater Snail	<i>Radix plicatulus</i>	-	-					
Leech	Hirudinea	-	-					
Orange-tailed Sprite	<i>Ceragrion auranticum</i>	-	Native					
Ram's Horn Snail	<i>Biophalaria glabrata</i>	-	Introduced					

	<i>Gyraulus convexiusculus</i>	-	Introduced					+
Red-rimmed Melania	<i>Melanoides tuberculata</i>	-	Introduced			+		+++
River Snail	<i>Sinotaia quadrata</i>	-	Native					+
Water Strider	<i>Microvelia</i> sp.	-	-					
Yellow featherlegs	<i>Copera marginipes</i>	-	Native					
Total No. of species				0	1	5	5	5
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: 19 May 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
Dwarf Snakehead	<i>Channa gachua</i>	-	Native								+		
Mosquito Fish	<i>Gambusia affinis</i>	-	Introduced									+	
Nile Tilapia	<i>Oreochromis niloticus</i>	-	Introduced									+	
Redbelly Tilapia	<i>Tilapia zillii</i>	-	Introduced									+	
Total No. of species				0	0	0	0	0	0	0	1	3	0
Total No. of Conservation Interest Species				0	0	0	0	0	0	0	0	0	0
Note: *: dried-up station 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 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: 19 May 2022				
				Weather: Fine				
				Methods: Kick-netting, sweep netting and direct observation				
				Abundance				
				MS_11	MS_12	MS_13	MS_14	MS_15
Dwarf Snakehead	<i>Channa gachua</i>	-	Native					
Mosquito Fish	<i>Gambusia affinis</i>	-	Introduced			+++		
Nile Tilapia	<i>Oreochromis niloticus</i>	-	Introduced					+
Redbelly Tilapia	<i>Tilapia zillii</i>	-	Introduced					
Total No. of species				0	0	1	0	1
Total No. of Conservation Interest Species				0	0	0	0	0
<p>Note:</p> <p>Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)</p> <p>+: species recorded within the study area (no. of individuals from 1-10)</p> <p>++: species commonly recorded within the study area (no. of individuals from 11-20)</p> <p>+++: most abundant species recorded within the study area (no. of individuals from 21 and above)</p>								

Appendix L4. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 13 & 24 May 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Occurrence Status	Date: 13/5 /2022, 24/5/2022				
						Relative Abundance				
						Transect Walk				
						T1	T3	T4	T5	T6
Domestic Cat	<i>Felis catus</i>	野貓	Uncommon	-	Introduced			+		
Domestic Dog	<i>Canis lupus familiaris</i>	野狗	Common	-	Introduced	+	+	+	++	+++
Japanese Pipistrelle	<i>Pipistrellus abramus</i>	東亞家蝠	Very Common	Cap. 170	Native	+++			+++	
Short-nosed Fruit Bat	<i>Cynopterus sphinx</i>	短吻果蝠	Very Common	Cap. 170, I, NT	Native	+				
Total No. of species						3	1	2	2	1
Total No. of Conservation Interest Species						2	0	0	1	0
<p>Note:</p> <p>Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)</p> <p>NT: Near Threatened in the Red List of China's Vertebrates</p> <p>I: Indeterminate in China Red Data Book Status</p> <p>Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++: dominant species within transect routes</p>										

Appendix L5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 13 & 24 May 2022

Appendix E5: Repteroana Species Recorded for Ecologically Sensitive Habitat Monitoring, 13 & 24 May 2022

Common Name	Species Name	Chinese Name	Conservation Status	Occurrence Status	Date: 13/5 /2022, 24/5/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Amphibian									
Asian Common Toad	<i>Bufo melanostictus</i>	黑眶蟾蜍	-	Native	++	+		+++	
Asiatic Painted Frog	<i>Kaloula pulchra pulchra</i>	花狹口蛙	-	Native	++			+	
Brown Tree Frog	<i>Polypedates megacephalus</i>	斑腿泛樹蛙	-	Native		++		+	
Gunther's Frog	<i>Hylarana guentheri</i>	沼蛙	-	Native				++	
Paddy Frog	<i>Fejervarya limnocharis</i>	澤蛙	-	Native				+	
Reptile									
Bowring's Gecko	<i>Hemidactylus bowringii</i>	原尾蜥虎	-	Native		+		+	
Changeable Lizard	<i>Calotes versicolor</i>	變色樹蜥	-	Native		+			
Long-tailed Skink	<i>Eutropis longicaudata</i>	長尾南蜥	-	Native	+			+	
Total No. of species					3	4	0	7	0
Total No. of Conservation Interest Species					0	0	0	0	0
Note:// (EN): Endangered in Red List of China Vertebrates Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org) +: species recorded within transect routes ++: species commonly recorded within transect routes +++: dominant species within transect routes									

Appendix L6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 13 & 24 May 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Occurrence Stauts*	Date: 13/5 /2022, 24/5/2022				
						Relative Abundance				
						Transect Walk				
						T1	T3	T4	T5	T6
Angled Castor	<i>Ariadne ariadne</i>	波蛱蝶	Common	-	-			+		
Banded Tree Brown	<i>Lethe confusa</i>	白帶黛眼蝶	Common	-	-				+	
Chestnut Angle	<i>Odontoptilum angulatum</i>	角翅弄蝶	--	-	-	+				
Chinese Peacock	<i>Papilio bianor</i>	碧鳳蝶	Common	-	-				+	
Ceylon Blue Glassy	<i>Ideopsis similis</i>	擬旖斑蝶	Very Common	-	-	++				
Colour Sergeant	<i>Athyma nefte</i>	相思帶蛱蝶	Common	-	-			+		
Common Bluebottle	<i>Graphium sarpedon</i>	青鳳蝶	Common	-	-			+		
Common Grass Yellow	<i>Eurema hecabe</i>	寬邊黃粉蝶	Very common	-	-	++	+++	+++		
Common Jay	<i>Graphium doson axion</i>	木蘭青鳳蝶	Common	-	-			+	+	
Common Mormon	<i>Papilio polytes</i>	玉帶鳳蝶	Very common	-	-	+		+++		
Common Sailer	<i>Neptis hylas</i>	中環蛱蝶	Very Common	-	-			+	+	
Common Tiger	<i>Danaus genutia</i>	虎斑蝶	Common	-	-	+				
Dark Brand Bush Brown	<i>Mycalesis mineus</i>	小眉眼蝶	Very common	-	-			+	+	
Five-bar Swordtail	<i>Pathysa antiphates</i>	綠鳳蝶	Common	-	-				+	
Glassy Tiger	<i>Parantica aplea</i>	絹斑蝶	Common			+				

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Occurrence Status*	Date: 13/5 /2022, 24/5/2022				
						Relative Abundance				
						Transect Walk				
						T1	T3	T4	T5	T6
Great Egg-fly	<i>Hypolimnas bolina</i>	幻紫斑蛱蝶	Common	-	-				++	
Great Mormon	<i>Papilio memnon</i>	美鳳蝶	Very common	-	-			+	+	
Great Orange Tip	<i>Hebomoia glaucippe</i>	鶴頂粉蝶	Common	-	-	+				
Indian Cabbage White	<i>Pieris canidia</i>	東方菜粉蝶	Very common	-	-	+++			+++	
Pale Grass Blue	<i>Pseudozizeeria maha</i>	酢漿灰蝶	Very common	-	-	++	+++	+++	++	
Paris Peacock	<i>Papilio paris</i>	巴黎翠鳳蝶	Very common	-	-		+	+	++	
Plum Judy	<i>Abisara echerius</i>	蛇目褐蛱蝶	Very common	-	-		+			+
Red Helen	<i>Papilio Helenus</i>	玉斑鳳蝶	Very common	-	-			+		
Red-base Jezebel	<i>Delias pasithoe</i>	報喜斑粉蝶	Very common	-	-	+++		+		
Total No. of species						9	4	13	11	1
Total No. of Conservation Interest Species						0	0	0	0	0
<p>Note:</p> <p>LC: Local Concern (Fellowes et al., 2002)</p> <p>Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)</p> <p>*Very limited data are available for the occurrence status (being native to Hong Kong) of butterflies</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++ : dominant species within transect routes</p>										

Appendix L7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 13 & 24 May 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Occurrence Status	Date: 13/5 /2022, 24/5/2022				
						Relative Abundance				
						Transect Walk				
						T1	T3	T4	T5	T6
Asian Amberwing	<i>Brachythemis contaminata</i>	黃翅蜻	Abundant	-	Native				+	
Black Threadtail	<i>Prodasineura autumnalis</i>	烏微橋原螳	Abundant	-	Native				+	
Common Blue Jewel	<i>Rhinocypha perforata</i>	三斑陽鼻螳	Abundant	-	Native	+				
Common Blue Skimmer	<i>Orthetrum glaucum</i>	黑尾灰蜻	Abundant	-	Native	+				
Common Red Skimmer	<i>Orthetrum pruinsum</i>	赤褐灰蜻	Abundant	-	Native	+			+	+
Crimson Darter	<i>Crocothemis servilia</i>	紅蜻	Abundant	-	Native				+	
Green Skimmer	<i>Orthetrum sabina</i>	狹腹灰蜻	Abundant	-	Native	+				
Indigo Dropwing	<i>Trithemis festiva</i>	慶褐蜻	Abundant	-	Native				+	
Orange-tailed Sprite	<i>Ceriagrion auranticum</i>	翠胸黃螳	Abundant	-	Native	+			+	
Russet Percher	<i>Neurothemis fulvia</i>	網脈蜻	Common	-	Native				+	
Saddlebag Glider	<i>Tramea virginia</i>	華斜痣蜻	Abundant	-	Native	+				
Variegated Flutterer	<i>Rhyothemis variegata</i>	斑麗翅蜻	Common	-	Native	+		+		

Wandering Glider	<i>Pantala flavescens</i>	黃蜻	Abundant	-	Native	+	+	++		+
Total No. of species						8	1	2	7	2
Total No. of Conservation Interest Species						0	0	1	0	0
<p>Note:</p> <p>LC: Local Concern (Fellowes et al., 2002)</p> <p>Occurrence Status was according to The IUCN Red List of Threatened Species website (https://www.iucnredlist.org)</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++: dominant species within transect routes</p>										

APPENDIX M
WEATHER CONDITION

**APPENDIX M –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD**

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 May 2022	20.7	89	32.4
2 May 2022	18.5	84	23.4
3 May 2022	22.3	62	-
4 May 2022	24.6	63	-
5 May 2022	25.2	73	-
6 May 2022	25.5	76	-
7 May 2022	25.4	77	0.8
8 May 2022	25	70	Trace
9 May 2022	25.6	75	Trace
10 May 2022	25.7	88	1.4
11 May 2022	25	95	61.4
12 May 2022	25.8	91	123.5
13 May 2022	25.5	92	107.1
14 May 2022	24.6	93	5
15 May 2022	22.6	91	26.2

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 May 2022	20	85	4.7
17 May 2022	22.4	72	-
18 May 2022	23.9	52	-
19 May 2022	25.8	64	-
20 May 2022	26.9	76	-
21 May 2022	26.9	78	-
22 May 2022	25	83	0.6
23 May 2022	24	90	11.2
24 May 2022	24.4	93	10.3
25 May 2022	25.3	91	1.3
26 May 2022	26.7	88	2.4
27 May 2022	27.4	89	24.7
28 May 2022	28.7	81	Trace
29 May 2022	29.1	79	Trace
30 May 2022	29.2	78	Trace
31 May 2022	28.2	82	0.1

* 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

	<p>to confirm findings;</p> <p>5. Increase monitoring frequency to daily;</p> <p>6. Discuss with IEC, ER and Contractor on remedial actions required;</p> <p>7. If exceedance continues, arrange meeting with IEC and ER; and</p> <p>8. If exceedance stops, cease additional monitoring.</p>	Implementation of remedial measures.		<p>agreed proposals; and</p> <p>4. Amend proposal if appropriate.</p>
LIMIT LEVEL				
1.Exceedance for one sample	<p>Identify source, investigate the causes of exceedance and propose remedial measures;</p> <p>2. Inform ER, Contractor, IEC and EPD;</p> <p>3. Repeat measurement to confirm finding;</p> <p>4. Increase monitoring frequency to daily;</p> <p>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</p>	<p>1. Check monitoring data submitted by ET;</p> <p>2. Check Contractor's working method;</p> <p>3. Discuss with ET, ER and Contractor on possible remedial measures;</p> <p>4. Advise the ER and ET on the effectiveness of the proposed remedial measures;</p> <p>5. Supervise implementation of remedial</p>	<p>1. Confirm receipt of notification of failure in writing;</p> <p>2. Notify Contractor; and</p> <p>3. Supervise and ensure remedial measures properly implemented.</p>	<p>1. Identify source, investigate the causes of exceedance and propose remedial measures;</p> <p>2. Take immediate action to avoid further exceedance;</p> <p>3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;</p> <p>4. Implement the agreed proposals; and</p> <p>5. Amend proposal if appropriate.</p>

		measures.		
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-2: Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss jointly with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of Contractor's working procedures with the ER and Contractor to determine possible mitigation to be implemented; 6. Inform IEC, ER and Contractor the causes and actions taken for the exceedances;	1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions; 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify the Contractor; 3. Require the Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the ER and copy to the ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problems still not under control; 5. Stop the relevant portion of works as

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	7. Assess effectiveness of Contractor's remedial actions and keep IEC informed of the results; 8. If exceedance stops, cease additional monitoring.		Contractor to stop that portion of work until the exceedance is abated.	determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-3: Event / Action Plan for Water Quality

EVENT	ACTION				
	ET		IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Conduct addition site investigation on the same day;	1. Discuss with ET, ER and Contractor on the implemented mitigation measures;	1. Review proposals on remedial measures submitted by Contractor;	1. Identify source(s) of impact;	
	2. Inform IEC, Contractor and ER;	2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and	2. Discuss with IEC, ET and Contractor on the Implemented mitigation measures;	2. Inform the ER and confirm notification of the noncompliance in writing;	
	3. Check monitoring data, all plant, equipment, Contractor’s working methods and other relative information;	3. Review submit proposal and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	3. Make agreement on the remedial measures to be implemented; and	3. Rectify unacceptable practice;	
	4. Review proposals on remedial measures submitted by Contractor;		4. Supervise the implementation of agreed remedial measures.	4. Check all plant and equipment;	
	5. Discuss remedial measures with IEC and Contractor and ER; and			5. Consider changes of working methods;	
	6. Review submit proposal and ensure the effectiveness of the implemented mitigation measures.			6. Discuss with ER, ET and IEC and submit proposal of remedial measures to ER and IEC; and	
				7. Implement the agreed mitigation measures.	
Action level being exceeded by more than one consecutive sampling days	1. Conduct addition site investigation on the same day;	1. Discuss with ET, Contractor and ER on the implemented mitigation measures;	1. Discuss with ET, IEC and Contractor on the proposed mitigation measures;	1. Identify source(s) of impact;	
	2. Inform IEC, Contractor and ER;	2. Review the proposed remedial measures submitted by Contractor and advise	2. Make agreement on the remedial measures to be implemented; and	2. Inform the ER and confirm notification of the non-compliance in writing;	
	3. Check monitoring data, all plant, equipment,			3. Rectify unacceptable	

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	<p>Contractor's working methods and other relative information;</p> <p>4. Discuss remedial measures with IEC, contractor and ER; and</p> <p>5. Review submit proposal and ensure the agreed remedial measures are implemented</p>	<p>the ER accordingly; and</p> <p>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</p>	<p>3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures</p>	<p>practice;</p> <p>4. Check all plant and equipment and consider changes of working methods;</p> <p>5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and</p> <p>6. Implement the agreed mitigation measures.</p>
Limit level being exceeded by one sampling day	<p>1. Conduct addition site investigation on the same day;</p> <p>2. Inform IEC, Contractor and ER;</p> <p>3. Rectify unacceptable practice;</p> <p>4. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information;</p> <p>5. Consider changes of working methods;</p> <p>6. Discuss mitigation measures with IEC, ER and Contractor;</p> <p>7. Review the submit</p>	<p>1. Discuss with ET, Contractor and ER on the implemented mitigation measures;</p> <p>2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</p> <p>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</p>	<p>1. Discuss with ET, IEC and Contractor on the implemented remedial measures;</p> <p>2. Request Contractor to critically review the working methods;</p> <p>3. Make agreement on the remedial measures to be implemented; and</p> <p>4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.</p>	<p>1. Identify source(s) of impact;</p> <p>2. Inform the ER and confirm notification of the noncompliance in writing;</p> <p>3. Rectify unacceptable practice;</p> <p>4. Check all plant and equipment and consider changes of working methods;</p> <p>5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of</p>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	proposal and ensure the agreed remedial measures are implemented;			notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by more than one consecutive sampling days	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 CH ₄ 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;

	<p>procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p>	<p>their effectiveness and advise the ER accordingly;</p> <p>3. Supervise the implementation of remedial measures</p>	<p>remedial measures to be implemented;</p> <p>4. Supervise and ensure remedial measures properly implemented; and</p> <p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>3. Implement the agreed proposals;</p> <p>4. Resubmit proposals if problem still not under control;</p> <p>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</p>
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Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-6.1 Action and Limit Levels and Responses for Avifauna Monitoring and General Site Inspection in the LVNP during Construction Phase.

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
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.	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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

	<p>2. Immediately inform IEC, Contractor and PP.</p> <p>3. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>4. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>5. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
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Table N-6.2 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
Construction Phase				
Action Level	1. Check monitoring	1. Check monitoring data,	1. Confirm receipt of	1. Check the monitoring

exceeded.	<p>data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>
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Limit Level Exceeded.	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.	<p>data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>
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Limit Level exceeded.	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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).
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Table N-6.3 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna
WMA20002\App N - Event Action Plan

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
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.	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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).

	<p>impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>		
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Table N-6.4 Action and Limit Levels and Responses to Evidence of Declines in the Seasonal Non-aquatic Fauna (Herptofauna, Butterfly and Odonates) in Ecologically Sensitive Habitats

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
Construction Phase				
Action Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p>	<p>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p>

	<p>construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>		<p>3. Supervise the instigated further mitigation measure(s).</p>
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p> <p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s),</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the</p>

	<p>natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
Operational Phase				

Action Level exceeded.	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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).
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Limit Level exceeded.	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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).

	<p>site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>			
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Table N-6.5 Action and Limit Levels and Responses to Evidence of Declines in the Non-seasonal Non-aquatic Fauna (Mammals) in Ecologically Sensitive Habitats

EVENT	RESPONSE			
	ET	IEC	Contractor	Project Proponent
Construction Phase				
Action Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit</p>	<p>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>

	<p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	results to the PP.		
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p> <p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>

	<p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>		
Operational Phase				
Action Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p> <p>2. Review relevant ecological data to</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p> <p>2. Review the remedial measure(s) proposed by the Contractor and</p>	<p>1. Confirm receipt of notification of the exceedance of Action Level in writing; and</p> <p>2. Propose and implement the</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p> <p>2. Discuss the need for increased site inspection/audit</p>

	<p>check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified; and</p> <p>6. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP.</p>	<p>advise the PP accordingly; and</p> <p>3. Conduct necessary site inspections/ audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>remedial measures(s) to mitigate the impact(s) identified.</p>	<p>frequency proposed by ET with IEC and the Contractor; and</p> <p>3. Supervise the instigated further mitigation measure(s).</p>
Limit Level exceeded.	<p>1. Check monitoring data and repeat data analysis to confirm findings;</p>	<p>1. Check monitoring data, analysis and investigation by ET;</p>	<p>1. Confirm receipt of notification of the exceedance of Limit Level in writing;</p>	<p>1. Check the monitoring results and findings from ET and IEC;</p>

	<p>2. Review relevant ecological data to check if the exceedance is due to natural variation or is construction works related;</p> <p>3. Identify potential source(s) of impact;</p> <p>4. Immediately inform IEC, Contractor and PP.</p> <p>5. Discuss with the Contractor on the remedial measure(s) to mitigate the impact(s) identified;</p> <p>6. Discuss with the PP, IEC, and Contractor on the need for further mitigation measure(s); and</p> <p>7. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed</p>	<p>2. Discuss with the PP, ET, and Contractor on the need for further mitigation measure(s);</p> <p>3. Review the effectiveness of the further mitigation measure(s) proposed and implemented by Contractor and advise the PP accordingly;</p> <p>4. Review the remedial measure(s) proposed by the Contractor and advise the PP accordingly; and</p> <p>5. Conduct necessary site inspections/audits to ensure all remedial measures are properly implemented by the Contractor, as agreed with the PP and feedback the audit results to the PP.</p>	<p>2. Discuss with the PP, IEC, and ET on the need of further mitigation measure(s), then propose and implement the further mitigation measure(s); and</p> <p>3. Propose and implement the remedial measures(s) to mitigate the impact(s) identified.</p>	<p>2. Discuss the need for increased site inspection and audit frequency proposed by ET with IEC and the Contractor;</p> <p>3. Discuss and confirm the further mitigation measure(s) required with the ET, IEC, and Contractor; and</p> <p>4. Supervise the instigated further mitigation measure(s).</p>
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	with the PP.			
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APPENDIX O
SUMMARY OF EXCEEDANCE

Appendix O: Exceedance Report**(A) Exceedance Report for Air Quality**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Air Quality	1-hr TSP	0	0	0	0
	24-hr TSP	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0

(B) Exceedance Report for Construction Noise

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Noise	$L_{eq}(30 \text{ min.}) \text{ dB(A)}$	0	0	0	0

(C) Exceedance Report for Water Quality

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Water Quality	DO	0	0	0	0
	Turbidity	0	0	0	0
	SS	0	0	0	0
	Arsenic	0	0	0	0

(D) Exceedance Report for Landfill Gas

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Landfill Gas	O 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	220503
Date	3 May 2022 (Tuesday)
Time	09:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Land Contamination</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landfill Gas Hazard</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>K. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220426), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		3 May 2022
Checked by	Dr. Priscilla Choy		3 May 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	220510
Date	10 May 2022 (Tuesday)
Time	09:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Land Contamination</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landfill Gas Hazard</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>K. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220503), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		10 May 2022
Checked by	Dr. Priscilla Choy		10 May 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	220518
Date	18 May 2022 (Wednesday)
Time	14:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Land Contamination</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landfill Gas Hazard</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>K. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220510), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		19 May 2022
Checked by	Dr. Priscilla Choy		19 May 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	220525
Date	25 May 2022 (Wednesday)
Time	14:00-17:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Land Contamination</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landfill Gas Hazard</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>K. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220518), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		30 May 2022
Checked by	Dr. Priscilla Choy		30 May 2022

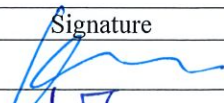

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	220531
Date	31 May 2022 (Tuesday)
Time	09:30 - 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. 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.:220525), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		1 Jun 2022
Checked by	Dr. Priscilla Choy		1 Jun 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	220504
Date	4 May 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	
220504-R01	• Drip tray shall be provided for chemical storage.	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.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220427), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		4 May 2022
Checked by	Dr. Priscilla Choy		4 May 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	220511
Date	11 May 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	
220511-R02	• Vehicles shall be switched off while not in use.	B22
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220511-R01	• Enhance water mitigation measure to prevent surface runoff.	D3
	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	
220511-R03	• The silt curtain should be properly surround the works and ensure it is intact.	H4
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220504), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		12 May 2022
Checked by	Dr. Priscilla Choy		12 May 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	220520
Date	20 May 2022 (Friday)
Time	14:00 – 16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
220520-R02	<ul style="list-style-type: none"> Faded NRMM label shall be replaced. 	B24
	C. Construction Noise Impact	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	D. Water Quality	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	E. Waste / Chemical Management	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	F. Cultural Heritage	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	G. Landscape and Visual	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	H. Ecology	
220520-R01	<ul style="list-style-type: none"> The silt curtain should be properly surround the works and ensure it is intact. 	H4
	I. Permits/Licences	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	L. Others	
	<ul style="list-style-type: none"> Follow-up on previous audit section (Ref. No.:220511), item 220511-R03 was remarked as 220520-R01. Other environmental deficiencies were observed improved/ rectified by the Contractor. 	

	Name	Signature	Date
Recorded by	Antony Leung		23 May 2022
Checked by	Dr. Priscilla Choy		23 May 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	220525
Date	25 May 2022 (Wednesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Ecology</i>	
220525-R01	• The silt curtain should be properly surround the works and ensure it is intact.	H4
	<i>I. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220520), item 220520-R01 was remarked as 220525-R01. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		30 May 2022
Checked by	Dr. Priscilla Choy		30 May 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	220506
Date	6 May 2022 (Friday)
Time	10:00 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape & Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220429), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		6 May 2022
Checked by	Dr. Priscilla Choy		6 May 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	220513
Date	13 May 2022 (Friday)
Time	10:00 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape & Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220506), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		18 May 2022
Checked by	Dr. Priscilla Choy		18 May 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	220517
Date	17 May 2022 (Tuesday)
Time	13:45 – 14:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape & Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
220517-R01	• Green hoarding should be properly maintained.	G1
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220513), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		18 May 2022
Checked by	Dr. Priscilla Choy		18 May 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	220527
Date	27 May 2022 (Friday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape & Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220517), all environmental deficiency was rectified/improved by the contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		1 June 2022
Checked by	Dr. Priscilla Choy		1 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/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	220505
Date	5 May 2022 (Thursday)
Time	14:00-16:00

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	
220505-R01	• To enhance the drainage system and increase the capacity of de-silting facilities. (Portion H)	D1
220505-R02	• To clear the U-channel regularly.	D13i
	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.: 220425), item 220421-R02 was remarked as 220505-R01. Other environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		10 May 2022
Checked by	Dr. Priscilla Choy		10 May 2022


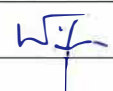
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	220511
Date	11 May 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	
220511-R01	• To enhance the drainage system and increase the capacity of de-silting facilities. (Portion H)	D1
220511-R02	• To clear the U-channel regularly.	D13i
220511-R03	• To clear the muddy debris on piling platform	D17
	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.: 220505), follow-up actions were required for item 220505-R01 and 220505-R02, which were remarked as 220511-R01 and 220511-R02.	

	Name	Signature	Date
Recorded by	Adrian Lam		30 May 2022
Checked by	Dr. Priscilla Choy		30 May 2022

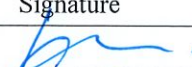

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	220519
Date	19 May 2022 (Thursday)
Time	14:00 - 16:00

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.: 220511), all environmental deficiencies were observed improved/rectified by the contractor during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		23 May 2022
Checked by	Dr. Priscilla Choy		23 May 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/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	220526
Date	26 May 2022 (Thursday)
Time	14:00 - 16:00

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.: 220519), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		31 May 2022
Checked by	Dr. Priscilla Choy		31 May 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/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220503
Date	3 May 2022 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
220503-R01	• Dusty stockpile should be covered by impervious sheeting.	B 2
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220425), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Marco Ma		4 May 2022
Checked by	Dr. Priscilla Choy		4 May 2022

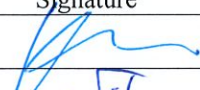

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220510
Date	10 May 2022 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220503), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Marco Ma		11 May 2022
Checked by	Dr. Priscilla Choy		11 May 2022


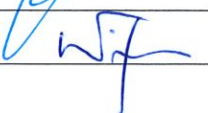
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220516
Date	16 May 2022 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
220516-R01	• Regulated machines should have NRMM label displayed properly.	B 25
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220510), no environmental deficiency was observed during the site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		17 May 2022
Checked by	Dr. Priscilla Choy		17 May 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/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220523
Date	23 May 2022 (Monday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
220523-R01	• Clear the oil stain on the ground.	E13
	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.: 220516), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		24 May 2022
Checked by	Dr. Priscilla Choy		24 May 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/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220531
Date	31 May 2022 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220523), all environmental deficiency was observed improved/rectified by the contractor during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		1 Jun 2022
Checked by	Dr. Priscilla Choy		1 Jun 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/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	220505
Date	5 May 2022 (Thursday)
Time	16:00-16:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220428), no environmental deficiency was identified during site inspection.	



	Name	Signature	Date
Recorded by	Adrian Lam		7 May 2022
Checked by	Dr. Priscilla Choy		7 May 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/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	220511
Date	11 May 2022 (Wednesday)
Time	15:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. 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.: 220428), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		16 May 2022
Checked by	Dr. Priscilla Choy		16 May 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/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	220519
Date	19 May 2022 (Thursday)
Time	15:30-16:00

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.: 220511), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		19 May 2022
Checked by	Dr. Priscilla Choy		19 May 2022

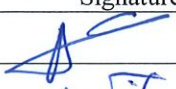
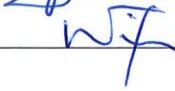
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	220526
Date	26 May 2022 (Thursday)
Time	13:30-14:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220519), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		31 May 2022
Checked by	Dr. Priscilla Choy		31 May 2022

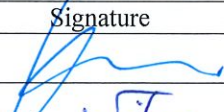
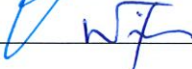
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220506
Date	6 May 2022 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.: 220429), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		10 May 2022
Checked by	Dr. Priscilla Choy		10 May 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	220513
Date	13 May 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	
220513-R01	• To enhance mitigation measures to prevent muddy water overflow after rainstorms.	D 13i
	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.: 220506), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		16 May 2022
Checked by	Dr. Priscilla Choy		16 May 2022

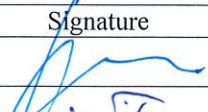

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220520
Date	20 May 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.: 220506), all environmental deficiencies were observed improved/rectified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		23 May 2022
Checked by	Dr. Priscilla Choy		23 May 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	220527
Date	27 May 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.: 220520), all environmental deficiencies were observed improved/rectified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		30 May 2022
Checked by	Dr. Priscilla Choy		30 May 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/m ² to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D3	<p>Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase</p> <ul style="list-style-type: none"> 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	<p>*</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

		<ul style="list-style-type: none"> 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; 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 Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser 					<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>^</p>
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		within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					^
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: <ul style="list-style-type: none"> 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	<p><u>Construction Runoff and Site Drainage</u></p> <p>In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below.</p> <p>where appropriate, should include the following:</p> <p>Stormwater Pollution Control Plan</p> <ul style="list-style-type: none"> 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 8m³ 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	#	#
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		<p>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.</p> <ul style="list-style-type: none"> 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, 					<p>^</p> <p>^</p> <p>^</p> <p>#</p> <p>^</p> <p>^</p>
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		<p>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.</p> <ul style="list-style-type: none"> • 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. • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water 					<p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>^</p>
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		<p>quality impacts.</p> <ul style="list-style-type: none"> 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. 					<p>^</p> <p>^</p>
S5.7	W2	<p><u>Stream Diversion</u></p> <ul style="list-style-type: none"> 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	N/A
S5.7	W3	<p><u>Groundwater from Contaminated Area</u></p> <ul style="list-style-type: none"> 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	<p>N/A</p> <p>N/A</p>

		<p>Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters.</p> <ul style="list-style-type: none"> • 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. 					<p>N/A</p> <p>N/A</p>
S5.7	W4	<p><u>Sewage from Workforce</u></p> <p>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.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.</p>	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
Waste Management (Construction Waste)							

S7.6	WM1	<p><u>Waste Reduction Measures</u></p> <p>Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction:</p> <ul style="list-style-type: none"> • 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	<p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>^</p>
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^
S7.6	WM3	<p><u>Good Site Practice</u></p> <p>The following good site practices are recommended throughout the construction activities:</p> <ul style="list-style-type: none"> • 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	<p>^</p> <p>^</p>

		<p>management procedures and concepts of waste reduction, reuse and recycling;</p> <ul style="list-style-type: none"> • 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; 					<p>^</p> <p>^</p> <p>^</p>
S7.6	WM4	<p><u>Storage of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> • 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	<p>^</p> <p>^</p> <p>^</p>
S7.6	WM5	<p><u>Collection and Transportation of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> • 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	<p>^</p> <p>^</p>

		<p>transportation;</p> <ul style="list-style-type: none"> Obtain relevant waste disposal permits from the appropriate authorities; and Disposal of waste should be done at licensed waste disposal facilities. 					<p>^</p> <p>^</p>
S7.6	WM6	<p><u>Excavated and C&D Material</u></p> <p>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:</p> <ul style="list-style-type: none"> 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; <p>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.</p>	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>^</p> <p>N/A</p>

		Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					^
S7.6	WM7	<p><u>Contaminated Soil</u></p> <p>As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.</p>	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	^
S7.6	WM8	<p><u>Chemical Waste</u></p> <p>If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed 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.</p>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
S7.6	WM9	<p><u>General Waste</u></p> <ul style="list-style-type: none"> 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	<u>Sewage</u> <ul style="list-style-type: none"> 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
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	<p>Treatment of arsenic-containing soil</p> <p>“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.</p>	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	<p>Excavation and Transportation</p> <ul style="list-style-type: none"> 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 banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to 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 ^

		<p>truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season;</p> <ul style="list-style-type: none"> 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	<p>Solidification/Stabilization</p> <ul style="list-style-type: none"> 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 banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and <p>If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.</p>	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	<p>N/A</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

S 8.7.2 and Appendix 8.4	LC9	<u>Safety Measures</u> <ul style="list-style-type: none"> 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 <p>Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.</p>	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	<ul style="list-style-type: none"> 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

		<p>e.g. ventilation of spaces with air to dilute gas, or extraction of gas using fans or blowers.</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>^</p> <p>^</p>

		<p>adverse circumstances, should be present on all worksites throughout the works.</p> <ul style="list-style-type: none"> • 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 premises, 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 						<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
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		<p>potential hazards.</p> <ul style="list-style-type: none"> 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. 					<p>^</p> <p>N/A</p> <p>^</p> <p>^</p>
S10.6	LFG3	<p>Utility Companies</p> <ul style="list-style-type: none"> 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

		<p>when entering enclosed spaces or plant rooms.</p> <ul style="list-style-type: none"> 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. <p>Building Management</p> <ul style="list-style-type: none"> 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 					
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		<p>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.</p> <ul style="list-style-type: none"> 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 					
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		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	<p><u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u></p> <p>Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located in the areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.</p>	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located in the areas within Areas D1-11, A3-5, A3-6, B1-1, and B1-7,	After land resumption but before construction	N/A
S11.6.1	CH2	<p><u>Undertaking Survey-cum-Rescue Excavation</u></p> <p>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</p>	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	<p><u>Undertaking Preservation in-situ for Site 7</u></p> <p>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.</p> <p>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.</p>	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	<p><u>Undertaking Induction Training</u></p> <p>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</p>	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	<p><u>Undertaking Archaeological Impact Assessment before Construction at A1</u></p> <p>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.</p>	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	<p><u>Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9</u></p> <p>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.</p>	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	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>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.</p>	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	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>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</p>	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	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u> Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out 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 commencement of construction works during Schedule 3 study	N/A
S11.6.2	CH10	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u> Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of 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
<i>Cultural Heritage (Construction Phase)</i>							
S11.6.1	CH13	<u>Inform Upon Archaeological Discovery</u> Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	<u>Watertable Monitoring</u> Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	^
<i>Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)</i>							
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

		<p>should be adhered to.</p> <p>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.</p>				<p>all planting, this should be installed as the areas become available, to achieve early establishment</p>	
S.12.9 MM1	LV2	<p>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.</p>	<p>Reduce topographical changes and minimize land resumption</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Throughout NDAs, particularly for reservoirs</p>	<p>Prior to Construction</p>	<p>N/A</p>
S.12.9 MM2	LV3	<p>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</p>	<p>Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape</p>	<p>Detailed Design Consultant</p>	<p>Throughout NDAs</p>	<p>Prior to Construction</p>	<p>N/A</p>

		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 Phase	N/A
S.12.9 MM4	LV6	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. 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

		<p>transplanted straight to their final receptor site and not held in a temporary nursery as far as possible.</p> <p>A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>		Consultant/ Contractor	Otherwise consider offsite locations	Construction Phase & Maintenance in Operation Phase	
S.12.9 MM6	LV8	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow.</p> <p>All slope landscaping works should comply with GEO Publication</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.					
S.12.9 MM7	LV9	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	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

		<p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
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App Q - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

April 2022

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	<p>Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.</p> <p>For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)</p>	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM13 & EIA Annex 13	LV15	<p>Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also)</p> <p>Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.</p>	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM14.1	LV16	<p>Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used.</p> <p>Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.</p> <p>At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)</p>	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S12.9 MM14.2	LV17	<p>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.</p> <p>For the stream at Ma Tso Lung in KTN NDA, the middle and upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream.</p>	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	<p>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.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>	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	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.</p> <p>All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	^
S.12.9 MM17	LV21	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A

<i>Ecology (Prior to Construction Phase or throughout the project)</i>							
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 egretty.	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 egretty. 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 egretty 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: <ul style="list-style-type: none"> 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

		<ul style="list-style-type: none"> 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	<p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8.</p> <p>Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna.</p> <p>No overlap in construction of bridges over main river channels.</p> <p>Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.</p>	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/ Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/ construction phase.	^
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<i>Ecology (Construction Phase)</i>							
S13.9	E12	<p>Compensatory egretty habitat provision and establishment.</p> <p>Review condition and location of egrettries before commencement of works. Formulate and implement additional mitigation measures as appropriate.</p> <p>Phasing of works near and within Man Kam To Road Egretty outside breeding season</p>	<p>Compensate for loss of Man Kam To Road egretty habitat.</p> <p>Avoid mortality of breeding egrets</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor</p>	<p>FLN area A1-7 500m from Man Kam To Road Egretty.</p>	Construction phase.	^
S13.9	E13	<p>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.</p> <p>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)</p> <p>Provision of alternative foraging habitat along main river channels for large waterbirds.</p>	<p>Minimize impacts on rivers and disturbance and fragmentation impacts on fauna</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor</p>	<p>Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers</p>	Detailed design and construction phases.	^

S13.9	E14	<p>Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer.</p> <p>Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road.</p> <p>Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.</p>	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	<p>PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor.</p> <p>(Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)</p>	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	<p>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;</p> <p>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.</p> <p>Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.</p>	<p>Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.</p>	<p>Detailed Design Consultant/ Contractor</p>	<p>Ng Tung, Sheung Yue and Shek Sheung Rivers</p>	<p>Detailed design and Construction phases.</p>	<p>^</p>
S13.9	E17	<p>Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.</p> <p>Erection of a 2m high dull green site barrier fence at the edge of the works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.</p>	<p>Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight- line impacts to birds, especially breeding ardeids.</p>	<p>Contractor</p>	<p>Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3, C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the</p>	<p>Construction phase.</p>	<p>^</p>

					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

		<p>Pre-site clearance check on all construction sites and pre –works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works,</p> <p>Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p> <p>Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.</p>	including adjustments to design, timing of works, transplantation and translocation.				
S13.9	E21	<p>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.</p>	<p>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</p>	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		<p>Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement</p> <p>Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and <i>Sommaniathelphusa zanklon</i>. Capture any <i>Sommaniathelphusa zanklon</i> found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP</p>	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	<p>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.</p> <p>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.</p>		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	<p>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.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. 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.</p>	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	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will</p>	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	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible, otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7- DP2	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9- DP2	Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably	Reprovide areas of woodland to compensate for	Project Proponent/	<i>In areas identified in</i>	Prior to Construction,	N/A

	<p>affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>	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	
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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	<i>On appropriate structures</i>	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	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12- DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural 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	<i>On viaducts or along roads.</i>	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	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary 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	<i>Channelized watercourse, particularly the Ma Wat River Channel Diversion</i>	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/	<i>E1-7 and C1-9 (LVNP) in KNT NDA and generally</i>	Prior to Construction, Construction Phase	N/A

		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Contractor/ Maintenance Authority	<i>throughout NDA</i>	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	<i>Throughout NDAs</i>	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	<i>Throughout NDAs</i>	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	<p>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.</p> <p>Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	<i>All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section</i>	Prior to Construction and Construction Phase	^
S.12.A9 MM4	LV5- DP3	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later</p>	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	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	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit“ should be referred to.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7- DP3	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as</p>	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	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	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments.</p> <p>Required numbers and locations of compensate orytrees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9- DP3	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>,</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p><i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomertus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i>. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.A9 MM9	LV10- DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11- DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around</i>	Prior to Construction, Construction Phase & Maintenance	N/A

			and create a pleasant pedestrian environment		<i>VSRs to contain their view out to the NDA structures.</i>	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	<i>On viaducts or along roads.</i>	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	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River	Minimize the necessity of watercourse modification, protect watercourses where	Government / Detailed Design	<i>Channelized watercourse, particularly the Ma</i>	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	<i>Wat River Channel Diversion</i>	Phase & Maintenance in Operation Phase	
S.12.A9 MM15	LV15- DP3	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i>	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
<i>Landscape and Visual (Construction)</i>							
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	<i>Throughout NDAs</i>	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	<u>Throughout NDAs,</u>	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/	<u>Throughout NDAs,</u> <u>particularly for</u> <u>reservoirs</u>	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	<p>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.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	<p>Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape</p>	<p>Detailed Design Consultant/</p>	<p>Throughout NDAs</p>	<p>Prior to Construction</p>	<p>N/A</p>

S.12.A9 MM4	LV4- DP4	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^
S.12.A9 MM5	LV5- DP4	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite possible. Consider locations where Otherwise offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government Detailed Design Consultant/ Contractor</p>	Onsite	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.A9 MM7	LV7- DP4	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and</p>	Compensate for trees and shrubs lost due to the Project.	<p>Government Detailed Design Consultant/ Contractor</p>	<p>Onsite where possible. Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A

		Rhododendron simsii are suggested..					
S.12.A9 MM8	LV8- DP4	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxylum avicennae, Hibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda.</p> <p>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, Rhamphiolepis indica, and Rhododendron simsii.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of</p>	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
<i>Landscape and Visual (Construction)</i>							
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	<u>Throughout NDAs</u>	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	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent / Contractor/ Qualified Archaeologist	In KTN NDA, for Site 1	After land resumption but before Construction commencement of the zones	N/A
S11.6.1	CH2- DP4	<u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u> Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with 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	<p><u>Undertaking Induction Training</u></p> <p>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.</p>	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	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>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.</p>	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	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project,</p>	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	<u>Relocation of Built Heritages</u> Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
<i>Cultural Heritage (Construction Phase)</i>							
S11.6.2	CH7-DP4	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
<i>DP5- New sewage pumping stations (SPSs) in KTN NDA</i>							
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>							
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

		<p>structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/or elevated, should follow the guidelines stated Construction time frame should also be considered.</p>					
S.12.B9 MM4	LV4- DP5	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of</p>	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	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit“ should be referred to.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM6	LV6- DP5	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011- Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes</p>	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	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments.</p> <p>Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM8	LV8- DP5	<p>Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like</p>	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

		<p>for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus omentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.B9 MM9	LV9- DP5	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.B9 MM10	LV10- DP5	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	<i>On appropriate buildings</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM11	LV11- DP5	Screen Planting – Tall screen/buffer trees and shrubs should be implanted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM14.3	LV12- DP5	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the 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	<u>Channelized watercourse,</u> <u>particularly the Ma Wat River Channel</u> <u>Diversion</u>	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	<i>Throughout NDAs</i>	Construction Phase	N/A
S.12.B9 MM17	LV14- DP5	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<i>Throughout NDAs</i>	Construction and Operation Phases	^
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.	<i>Interface between areas/habitats of ecological importance and works areas (all sides of KTN area F1-2).</i>	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 – Existing trees to be retained within the Project Site should be carefully protected during construction. In	Protect and Preserve Trees	Government / Detailed	<u>Onsite</u>	Prior to Construction and	N/A

		<p>particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>		Design Consultant/ Contractor		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	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV3- DP7	<p>Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated.</p> <p>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.</p>	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	<u>On appropriate buildings</u>	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	<u>Throughout NDAs,</u>	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	<u>Throughout NDAs,</u> <u>particularly for</u> <u>reservoirs</u>	Prior to Construction	N/A
S.12.D9 MM4	LV3-DP10	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction and Construction Phase	^

		<p>shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>					
S.12.D9 MM5	LV4- DP10	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>	Transplant Trees where suitable for transplantation	Government/ Detailed Design Consultant/ Contractor	<u>Onsite where possible. Otherwise consider offsite locations</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.D9 MM6	LV5- DP10	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government/ Detailed Design</p> <p>Consultant/ Contractor</p>	<u>Onsite</u>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.D9 MM7	LV6- DP10	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government/ Detailed Design</p> <p>Consultant/ Contractor</p>	<p><u>Onsite where possible. Otherwise consider offsite locations</u></p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.D9 MM8	LV7- DP10	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the</p>	<p>Reprovide areas of woodland to compensate for those areas of quality woodland lost.</p>	<p>Project Proponent/ Detailed Design</p> <p>Consultant/</p>	<p><u>In areas identified in the EIA Landscape Mitigation Plans</u></p>	<p>Prior to Construction, Construction Phase</p>	N/A

	<p>woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>.</p> <p>In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p><i>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</i></p>		Contractor/ Maintenance Authority	<u>and as agreed with</u> <u>AFCD</u>	& Maintenance in Operation Phase	
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S.12.D9 MM9	LV8- DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM11	LV9- DP10	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government/ Detailed Design Consultant/ Contractor	<u>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9M M12	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	<u>On viaducts or along roads.</u>	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	<u>Channelized watercourse.</u>	Prior to Construction,	N/A

		<p>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.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>	protect watercourses where possible and enhance channelized watercourses	Consultant/ Contractor	<u>particularly the Ma Wat River Channel Diversion</u>	Construction Phase & Maintenance in Operation Phase	
<i>Landscape and Visual (Construction)</i>							
S.12.D9 MM16	LV12- DP10	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	<u>Throughout NDAs</u>	Construction Phase	^
S.12.D9 MM17	LV13- DP10	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p>	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	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.	<u>Throughout NDAs</u>	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.	<u>FLN area D1-3.</u>	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.	<u>Interface between areas/habitats of ecological importance and works areas (all of the north side of the Bypass works areas west of interchange with Sha Tau Kok Road).</u>	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the	To minimize the potential impacts during Construction phase on any identified potential vibration impacted	Contractor.	<u>Identified potential vibration impacted built heritage features</u>	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	<p>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.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A
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S.12.D9 MM4	LV4- DP12	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.D9 MM5	LV5- DP12	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>					
S.12.D9 MM6	LV6- DP12	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow.</p> <p>All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government / Detailed Design</p> <p>Consultant/ Contractor</p>	Onsite	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.D9 MM7	LV7- DP12	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government / Detailed Design</p> <p>Consultant/ Contractor</p>	<p>Onsite where possible.</p> <p>Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A

		Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomyrtus tomentosa</i> , <i>Raphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested.					
S.12.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	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.D9 MM17	LV10- DP12	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	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	0.000										
Sub-total	58.572	0.000	44.894	6.608	7.070	4.831	0.004	0.943	0.004	524.058	10.434
July	0.000										
August	0.000										
September	0.000										
October	0.000										
November	0.000										
December	0.000										
Total	58.572	0.000	44.894	6.608	7.070	4.831	0.004	0.943	0.004	524.058	10.434

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 50,000m³.
(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³
excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³
broken concrete and bitumen = 2.4 tonnes/m³
C&D Waste = 0.9 tonnes/m³
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) (in tonnes)	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill* (e)	Imported Fill (f)	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse#
		(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	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											
Sub-total	14,358.09	0.00	0.00	11,861.02	2,497.07	576.91	0.00	0.00	0.00	0.00	101.22
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	14,358.09	0.00	0.00	11,861.02	2,497.07	576.91	0.00	0.00	0.00	0.00	101.22

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	Chemicals Waste	Others, e.g. general refuse
									(see Note 2)		
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
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	0	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	0	0	0	0	0	0	0	0	0
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	5.28	0	0	1.11	4.16	0	0	0	0	0	0.09

*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

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	5,910.80	0.00	0.00	0.00	5,874.87	0.00	0.00	0.00	0.00	0.00	35.93
June	0.00										
Sub-total	33,601.54	0.00	0.00	0.00	33,476.97	0.00	0.00	0.04	0.00	0.00	124.49
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	33,601.54	0.00	0.00	0.00	33,476.97	0.00	0.00	0.04	0.00	0.00	124.49

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												
Sub-total	18.533	0.000	1.482	0.000	17.051	1.025	98.093	1.921	0.922	171.720	0.000	334.120
Jul-22												
Aug-22												
Sep-22												
Oct-22												
Nov-22												
Dec-22												
Total in 2022	18.533	0.000	1.482	0.000	17.051	1.025	98.093	1.921	0.922	171.720	0.000	334.120
Total of the Project since 2020	48.945	0.000	5.487	0.000	43.458	5.110	115.391	5.131	2.763	672.873	24.882	2412.950

*Approx. estimation for each dump truck is 6m³/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 48.945 (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											
Sub-total	1.907	0.000	0.000	0.000	1.907	20.417	0.000	0.251	0.009	0.000	0.835
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	4.965	0.000	1.514	0.000	3.451	141.436	0.017	1.697	0.023	212.240	5.496

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.
 - (3) Broken concrete for recycling into aggregates.
 - (4) Total Quantity Generated = a+b+c+d..

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)	13 th July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a. Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site. And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11 th November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground. Another EPD inspection was conducted on 26 November 2020 at	The height of temporary water barrier was increased at Portion 4. Sprinklers were installed on bare ground at Portion 4 and on top soil at Portion 7. Manual water spraying were provided regularly. Hydroseeding will be provided on soil surface at Portion 4 for long-term measures. Proper implementation of dust mitigation measures will be continuously reviewed and monitored to avoid potential dust impact on site.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Portion 7 for the dust complaint. During inspection, no obvious dust emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27 th November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7 th January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the <i>Supervisor</i> , ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13 th January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22 nd January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures: 1. Issue a memo to the relevant sub-contractor on restricted working hour. 2. Conduct specific training to sub-contractor frontline supervisor and works. 3. Apply a construction noise permit for the suspected location.	Closed
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28 th January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10	Ad-hoc training was provided to workers on switching off idling engines when awaiting on site. Poster for “Switching off idling engines” was posted at site entrance to alert workers on the	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	
COM-2021-02-01	CTC Storage Yard (ND/2019/05)	4 th February 2021	A complaint was received from EPD call on 2 nd February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1 st February 2021.	The suspected cause of the complaint was the delivery of a rotary drilling rig by a tractor lorry arrived at CTC Storage Yard at around 19:00 at 1 st February 2021. The delivery time was restricted due to the oversized tractor lorry (width >2.4m and length protruded >1.4m at tractor tail). No loading and unloading was conducted during the time of complaint. For follow up action, the Contractor will apply Construction Noise Permit for any foreseeable delivery that may not be finished before restricted hours and will notify possible affected village representatives in advance.	Closed
COM-2021-02-02	CTC Storage Yard (ND/2019/05)	16 th February 2021	A complaint was received from EPD call on 10 th February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7 th February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7 th February 2021 without notification to the Contractor. Sub-contractor has been reminded that any work within site area shall be conducted after instruction by the Contractor and permit-to-work system on restricted hours works shall be strictly followed.	Closed
COM-2021-02-03	CTC Storage Yard (ND/2019/05)	2 nd March 2021	A complaint was received from EPD call on 24 th February 2021 regarding a noise complaint from a Tong Hang villagers about some machinery noise	Further enhancement on erection of acoustics mats and mobile acoustics mat panels was conducted at strategic location at E1-01 for mitigation of the noise impact to the nearby	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			and dust from CTC Storage yard. Joint site inspection of the Contractor, the <i>supervisor</i> and EPD was conducted on the same day for the bored piling at CTC Storage Yard and check on the noise and dust mitigation measures. EPD requested to enhance noise and dust mitigation measures for grabbing operation of the Rotary Drill Rig for construction of piles of E1-01.	sensitive receivers. Regular water spraying has been applied to suppress the dust from grabbing procedure and the skip.	
COM-2021-03-01	Ma Tso Lung Shun Yee San Tsuen (ND/2019/01)	1 st March 2021	A complaint was referred from EPD regarding fly-tipping of C&D waste near Ma Tso Lung Shun Yee San Tsuen and muddy public road.	Under investigation, the suspected site near Shun Yee San Tsuen was out of project site boundary. Internal trip ticket system was properly implemented for dump trucks transported from project site to other approved alternative disposal ground. Also, dump trucks were properly washed and mechanical cover of dump trucks were closed while leaving the site. For follow up action, banners and flags were displayed on site to promote the environmental protection awareness. Regular training was provided to remind the dump truck drivers that illegal dumping is strictly prohibited.	Closed
COM-2021-03-02	CTC Storage Yard (ND/2019/05)	15 th March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9 th March 2021 regarding a dust complaint from a Tong Hang villager. The complainant	For follow up action, the Contractor provided training to remind frontline supervisors and workers to wet the auger before movement when it was dried for preventing any occasional situation that the auger was dried.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			complained that rotary drill rig shall be equipped with enclosure for dust control and rotary drill rig had exhaust disturbance. Also, the complainant requested to improve wheel washing at site entrance.	The Contractor provided training to brief frontline supervisor and the operators to prevent exhaust disturbance. Also, the drill rigs exhaust pipe shall not face to the public area. If it is avoidable, screens shall be arranged to divert the exhaust gas. An additional cut-off drain was constructed and notice signs were erected for notifying drivers to give wheel washing in front of the cut-off drains.	
COM-2021-03-03	Ma Tso Lung Road (ND/2019/01)	9 th April 2021	A complaint was referred from EPD on 23 March 2021 regarding muddy public access road along Ma Tso Lung Road.	The muddy access road was found generated from a nearby private factory where the access road is not hard paved. The Contractor arranged water browser to help clean up the section of road on 24 th and 25 th March 2021 respectively. Also, dump truck were properly washed at project site exit near Ma Tso Lung Road.	Closed
COM-2021-04-01	Long Valley, Kwu Tung (ND/2019/03)	9 th April 2021	A complaint was referred from EPD regarding to associated impacts arising from construction works at Long Valley Nature Park, causing nuisance and affecting the habitat and ecological value in Long Valley.	Construction works for development of Long Valley Nature Park are conducted according to the recommended mitigation measures stated in Habitat Creation and Management Plan. Wetland creation and restoration works are in progress which include provision of paddy field, turning abandoned agricultural lands into wet agricultural land and provision of open water habitat with bird island. Irrigation channel is under construction for provision of reliable water supply to farmland. For construction works, the following significant mitigation measures are implemented: 1. Provide noise barriers to minimize noise nuisance to adjacent field where Greater Painted-	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>snipe was found;</p> <p>2. Arrange concrete pump for concreting works to minimise noise impact;</p> <p>3. Provide water spraying on the exposed earth to dampen the dusty surface;</p> <p>4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found;</p> <p>5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland;</p> <p>6. Provide 2m dull green site boundary fence along Long Valley work areas; and</p> <p>7. Block the main accesses by temporary barrier to avoid human disturbance.</p>	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	23 rd April 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from Ma Wat River near junction of Ma Wat River and Ng Tung River.	<p>Under investigation, muddy water was observed from a small stream of Ma Wat River which is outside project site boundary. Contractor's wastewater treatment facilities and mitigation measures on water quality were checked. Latest discharge monitoring results shows the discharge quality in compliance with the limit stated in the discharge licence.</p> <p>The following mitigation measures will keep implemented and inspected:</p> <p>1. Installation of silt curtain, geotextiles and concrete blocks for excavation works at Ng Tung River with regular inspection;</p> <p>2. Exposed slope paved with concrete to prevent muddy runoff;</p> <p>3. Setting up wastewater treatment plants at</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				several locations of the site area; 4. Bund/seal off works area near river and set up with dewatering system; 5. Spare water pumps and sand bags for emergency use during heavy rain; 6. Regular training to the operators of wastewater treatment facilities; and 7. Regular checking and maintenance of the wastewater treatment facilities and desilting tank.	
COM-2021-04-03	Near Shek Wu San Tsuen, Sheung Shui (ND/2019/04)	28 th April 2021	A complaint was referred from EPD regarding to construction dust arising from dump trucks from construction sites near Shek Wu San Tsuen.	No obvious dust emission was observed during EPD inspection on 28 th and 29 th April 2021, However, potential dust impact may arise from sandy materials found on public road and exposed ground surface. For follow up action, soil debris were removed at public road. Water spraying was provided on the exposed ground surface. Also, all dump trucks are covered properly and wheel wash is provided before leaving site. Implemented of the mitigation measures will keep reviewed and monitored.	Closed
COM-2021-05-01	Near Tong Hang section of Ma Wat River (ND/2019/05)	17 th May 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from construction sites near Ma Wat River.	Under investigation, no pollution from works areas near Ma Wat River was observed. For wastewater pollution control, all wastewater treatment facilities have been setup at discharge points. According to the latest discharge monitoring results on April 2021, no non-compliance to limit set in discharge licence was recorded. Regular maintenance and services of the facilities have been conducted. Close monitoring	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				with checklist has been conducted by operators of the facilities. Mitigation measures such as sealing gaps between concrete blocks/water barriers/pipe pile walls have been implemented to prevent leakage. Implementation of the mitigation measures will keep reviewed and closely monitored.	
COM-2021-09-01	Chau Tau Road near the CLP Chau Tau Substation (ND/2019/01)	2 nd September 2021	A complaint was referred by EPD and an inspection by EPD was conducted on 3 September 2021 regarding a muddy public access road at Chau Tau Road near the CLP Chau Tau Substation.	<p>Ad-hoc site inspection was conducted on 2 Sep 2021 at Chau Tau Road near the CLP Chau Tau Substation, no muddy wheel track or soil deposit was observed. No concrete lorry was observed using the Chau Tau Road near the CLP Chau Tau Substation.</p> <p>Concreting at Portion 5 was observed during EPD inspection on 3 September 2021, wheel washing bay and manual wheel washing was provided at site exit, all vehicles were properly washed and no muddy track was observed at Chau Tau Road.</p> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> • 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)	3 rd September 2021	A complaint was referred by EPD regarding C&D waste stored on site.	<p>Refer to the photos provided by the complainant, the mentioned C&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.</p> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> • 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. <p>Implementation of the mitigation measures will keep reviewed and closely monitored to ensure no adverse impact will be generated from the construction works of the Project.</p>	Closed
COM-2021-11-01	Close to Shek Wu San Tsuen (ND/2019/04)	3 rd November 2021	A complaint was referred from EPD on 22 th November 2021, about various issues including suspected environmental nuisances from the captioned Project from a member of public on 3 rd Nov 2021. He followed-up again on 19 th Nov 2021.	<p>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.</p> <p>Air quality monitoring was carried out at location FLN-DMS1 - Scattered Village</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>Houses North of Proposed Potential Ecopark and Location FLN-DMS5 - Noble Hill near Shek Wu San Tsuen in accordance with the EM&A manual. With reference to the air quality monitoring data collected in Nov 2021, all monitoring data were complied with the action and limit level and no exceedance was recorded.</p> <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> • 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)	13 rd December 2021	AECOM referred to public complaints received by 1823 on 13 December 2021 regarding "中鐵建保華聯營公司粉嶺地盤工人沖建築泥水落河 污染河道。"	<p>Refer to the photo attached in the above complaint, it is suspected that there were bentonite slurry leaking from the flexible pipe joint near works area of pier C2-01 and the cause of incident as blow:</p> <ul style="list-style-type: none"> • 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 <p>The Contractor has been implement following mitigation measure upon received the complaint:</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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)	13 rd January 2022	A complaint was referred from EPD on 14 Jan 2022 from a public member alleged the captioned Project of “我們每個工作天都會受到高噪音和震動的影響，在沒有足夠的保障下，使近距離的民居十分擔心，屋裂有惡化跡象，兒童/長者難有	Contractor have carried out daily noise monitoring and vibration monitoring. No exceedance was recorded. The monitoring results are displayed on the notice board for easy reference. For noise control measures, QPME label are affixed to generators and acoustic noise barriers are mounted on powered mechanical equipments such as	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			寧靜環境，成人在家中工作、兒童做功課在噪雜的環保下，難以適應，我們很希望受到合理的重視和改善，使實際環境不會太差。”	excavators, crawler cranes and vibration hammers and installed along hoarding to minimize noise nuisance to neighborhood. Based on the findings of investigation, no exceedance of noise and vibration monitoring was found. Contractor will ensure that the construction works carried out must comply with the condition stated in the Noise Control Ordinance and to implement mitigation measures proposed in the Project Implementation Schedule.	
COM-2022-01-02	Near Sheung Yue River (ND/2019/02)	28 th January 2022	A complaint was received from 1823 on 28 Jan 2022 regarding “在雙魚河河邊單車徑附近的工程，一個多月來，當工人沒有工作期間，所有機械都沒有熄匙，當機械運作時，產生很大的噪音及很多廢氣。理解工人有工作時，機械運作是正常，但一個月來工人沒工作時，機械依然運作，產生問題嚴重，要求部門跟進及處理。”	Investigation was conducted by contractor on 4 Feb 2022. All plants are turned off when awaiting more than 3 min. Dark smoke monitoring for the powered mechanical equipment had been carried out. No dark smoke was recorded. Based on the findings of investigation, no exceedance of noise and air monitoring was found. Follow-up Actions had been conducted on 4 Feb 2022. Mitigation measures are implemented. Dull green barriers are installed around active works areas to prevent dust emitted to the public. QPME is used to minimize noise nuisance to the neighbourhood. Specific environmental training about Noise and Smoke Control for Plants was provided to frontline staff on 4 Feb 2022. The frontline staff was reminded to switch off idling equipment for	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				preventing recurrence of idling construction equipment awaiting on site, and carry out routine maintenance of plant and equipment for mitigating unwanted noise and air pollutant emissions.	
COM-2022-02-01	Ng Tung River (ND/2019/04)	17 th February 2022	<p>EPD received 2 complaints from members of public about suspected disposal of foam waste and illegal discharge from the captioned Project to Ng Tung River on 13 & 16 Feb 2022 respectively.</p> <p>Details of complaint case received on 13 Feb 2022: 「本人途經唔上水梧桐河近馬屎埔新村附近地盤發現河道有大量懷疑發泡膠影響何到魚類生物, 要求環境保護署或相關部門進行跟進」</p> <p>Details of complaint case received on 16 Feb 2022: 「2022年2月10日下午三時, 發現梧桐河面出現乳白色, 懷疑與附近工程泥漿水有關, 懷疑經雨水渠排出。」</p>	<p>Investigation was conducted by contractor. It is found that no foam has been used on site. No construction works was carried out during 9 Feb to 14 Feb 2022 at A3 piling platform as two suspected close contact cases for A3-02 piling platform team was found. The bored piling works and A3 piling platform welding works was suspended from 9 Feb 2022 and resumed on 14 Feb 2022 after the whole team received negative results.</p> <p>Mitigation measures are implemented, there is a silt curtain enclosing the opened workfronts and the openings of the A3 piling platform. Hence, the platform and other workfronts along the river have no discharge to the river.</p> <p>In addition, it is reported that suspected contaminated water was discharging to Ma Wat River from surrounding industrial buildings near C5 contract site.</p> <p>Based on the findings of investigation, no foam</p>	Closed

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)	2 nd March 2022	A complaint was received from EPD on 8 Mar 2022 from a public member regarding "投訴河上鄉鄉公所附近地盤的機器及吊雞車的難嗅氣味滋擾"	<p>Joint inspection for the issue was conducted by AECOM, Environmental team, Contractor on 9 March 2022 and no source of odour was found during the inspection. There was no major works. The area is for temporary soil storage. Only one excavator is at Portion 11. The excavator is well maintained and no bad smell is emitted. Moreover, all plants are checked before used. As per the contract requirement, project must use Euro V diesel in our plants, which is a cleaner fuel than industrial diesel and shall generate less odour. Project regularly conducts diesel sampling and testing to ensure that the used fuel is Euro V diesel. A diesel sampling for the excavator at Portion11 was also conducted on 9 March 2022.</p> <p>Based on the findings of investigation, all plants are well maintained and checked before use. Cleaner fuel is used for plants onsite. No odour was found. CW-KL JV mitigates air pollution from sources to reduce environmental nuisance to the neighbourhood.</p>	Closed
COM-2022-03-02	Near Ho Sheung Heung (ND/2019/02)	23 rd 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
			<p>有個很大的基建地盤，經常發出很大噪音，包括車輛駛入後停泊時的聲浪，地盤面積有半個摩士公園大，車輛可以泊到其他地方，減少對居民的滋擾，之前亦曾作出相同投訴，有環保署職員跟進，故現堅持要求再次跟進及回覆 "</p>	<p>is for temporary soil storage. A dump truck was at portion 11, but left the site in short time. All dump trucks used in the project would not stay on site overnight and left the site before 6p.m. One excavator and one loader were at Portion 11. No idling crane lorry was at Portion 11. The equipment would be switched off when not in use. Moreover, all our plants are well maintained and checked before used.</p> <p>Noise monitoring around Portion 11 had been conducted on 26, 28 and 29 March 2022 (AM and PM periods) by Contractor with AECOM. The noise levels are lower than the standard of noise requirement for domestic premises (75dB(A)). It was predicted that no noise exceedance would be found at NSRs.</p> <p>Environmental Training related to use of equipment onsite had been provided to site staff to increase their awareness of environmental protection. Posters of mitigating adverse environmental impacts had been fixed at Portion 11 to increase workers' environmental awareness. QR codes for air quality, noise, and water quality monitoring data conducted by Environmental team of the project had been also fixed at Portion 11 for the public's information.</p> <p>Based on the findings of investigation, all plants</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				are well maintained and checked before use. CW-KL JV mitigates noise pollution from sources to reduce environmental nuisance to the neighborhoods. No noise exceedance is predicted to be found at NSRs. Environmental promotion is given to site staff to increase their awareness of environmental protection.	

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				
Contract No. ND/2019/01:		Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works				
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.	*	To be submitted to ET / IEC 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.	*	To be submitted to ET / IEC in June 2022
		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 submitted in June 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				
Contract No. ND/2019/01:		Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works				
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	Traffic Noise Mitigation Plan	Before construction	For Approval	no later than 1 month before the commencement of construction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	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	*	
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				
Contract No. ND/2019/01:		Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works				
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	*	To be submitted to ET / IEC 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	*	To be submitted to ET / IEC in June 2022
		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	To be submitted to ET / IEC on 20 June 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

DP7	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works				
Contract No. ND/2019/01:		Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure 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
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DP5	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area				
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				
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 submitted to ET / IEC by end of June 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
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DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
Contract No. ND/2019/03:		Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park				
Construction commencement date		3 July 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 28 April 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 18 June 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	EPD Approval 29 June 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	N/A	By Contract No. ND/2029/02
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	N/A	By Contract No. ND/2029/02
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	By Contract No. ND/2029/02
2.8	Compensatory Tree Planting Plan	Before construction	For Approval	prior to the commencement of construction	N/A	By Contract No. ND/2019/01
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	

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DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
Contract No. ND/2019/03:		Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park				
Construction commencement date		6 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	Notified 10 August 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 18 September 2020	
2.5	Location Plans	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	Submitted 5 November 2020	EPD approved 9 November 2020
2.7	Egrettry Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	Submitted 20 October 2020	EPD approved 4 November 2020
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	N/A	By Contract No. ND/2019/04
2.9	Traffic Noise Mitigation Plan	Before construction	Approval	no later than 1 month before the commencement of construction	N/A	By Contract Nos. ND/2019/04 and ND/2019/05
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	N/A	By Contract Nos. ND/2019/04 and ND/2019/05
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	N/A	By Contract No. ND/2019/04
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	By Contract No. ND/2019/04
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	

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DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
Contract No. ND/2019/04:		Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)				
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 <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 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	*	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
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DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station				
Contract No. ND/2019/04:		Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)				
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	

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
Contract No. ND/2019/05:		Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)				
Construction commencement date		1 August 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notified 15 June 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
..	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 28 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	EPD Approval 29 June 2020
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	N/A	
2.7	Egrettry 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 <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2020	Pending Approval
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	N/A	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	by Fugro
					Submitted 1 September 2020	for EP Condition 2.10
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	

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
Contract No. ND/2019/05:		Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)				
Construction commencement date		1 August 2020				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		

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				
Contract No. ND/2019/06:		Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products				
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	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